

THE UNIVERSITY OF HULL

DEVELOPING THE APPLICATION OF SYSTEMS THINKING  
WITHIN THE POLICING AND COMMUNITY SAFETY SECTOR :  
AN ACTION RESEARCH STUDY.

being a Thesis submitted for the Degree of Doctor of Philosophy in the  
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by

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# **Developing the application of systems thinking within the policing and community safety sector : An action research study**

## **Abstract**

The increasingly complex, dynamic and pluralistic nature of the policing and community safety environment is presenting a significant challenge to the problem structuring and solving approaches traditionally used by managers in this sector. In light of deficiencies of traditional approaches, developments in the field of systems thinking have sought to tackle problem situations more holistically, employing a variety of systems approaches in combination to improve success in problem situations of greater plurality and complexity. In particular, Critical Systems Thinking (CST) has evolved as a theory and philosophy to support multi-methodology problem solving. This action research focuses on the actual and potential use of systems approaches in the policing and community safety environment.

The opportunity to address prevailing real-life problems through a series of practical systems interventions within a large UK police organisation, producing learning for both practitioners in the sector and for systems thinking more widely is the foundation upon which this action research study is justified and a number of salient findings have emerged that are of relevance to both communities.

This action research has recognised the opportunity to improve the impact of CST through the wider devolution of appropriate capability. A recursive model to reflect upon the deployment of approaches appears to provide a coherent framework for recognising the concurrent existence of CST at different ‘application’ levels and for informing a deeper understanding of the role of the facilitator of CST; be that a specialist, an organisational leader or a member of the workforce involved in change. A particular value is seen in enhancing such development through the employment of culturally acceptable approaches, including the concept of policing problem archetypes that provide a platform for demonstrating the practical value of a diverse range of systems approaches.

The research has identified value in the facilitator gaining and sustaining an appreciation of the landscape of diversity within problem situations and identifying centres of gravity in terms of defining features. It has also emphasised the validity and practical value of employing multi-methodology in parallel in both modes 1 and 2 in problem situations involving a variety of stakeholders that reflect multiple paradigm diversity. As the problem situations encountered in the policing and community safety sector increasingly involve multiple agencies, recognition of an improved capability for deploying such systems thinking is of particular relevance, such as through participative large group processes.

An extensive exploration of the role of the facilitator of CST through the employment of a complexity lens has added clarity to the nature of that role within typically wicked problem situations. Extending the concept of the effective interventionist beyond the boundaries of the facilitator's direct influence and recognising the variety of capability that the facilitator might require to secure improvement in diverse client systems.

The research has also resulted in the development of a heuristic to enhance understanding of the role of the facilitator of CST. This formula identifies the variables that the facilitator of CST might need to handle in order to secure improvement in pursuance of an objective function for optimisation comprising a range of relevant measures associated with a variety of paradigms, subject to the incremental fulfilment of the condition for change reflected in the 'Beckhard' change formula.

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<b>Glossary</b>	
<b>Abbreviation</b>	<b>Description</b>
ACC	Assistant Chief Constable
ACO	Assistant Chief Officer (civilian ACC)
ACPO	Association of Chief Police Officers
ALMO	Arms-Length Management Organisation
ANACAPA	A system for structuring and linking information (named after an island off the west coast of the USA “perpetually shrouded in mist”)
AR	Action Research
ASB	Anti-Social Behaviour
BCU	Basic Command Unit
BTP	British Transport Police
CDRP	Crime and Disorder Reduction Partnership
CPR	Corporate Performance Review (part of WYP’s performance management arrangements)
CSP	Critical Systems Practice
CST	Critical Systems Thinking
CTPD	Command Team Planning Days
DCC	Deputy Chief Constable
DDA	Disability Discrimination Act
DEA	Data Envelopment Analysis
D and C	Discipline and Complaints (a department responsible for professional standards)
FIA	Fairness in Action (an in-force development programme)
HMIC	Her Majesty’s Inspector of Constabularies
HO	Home Office
HST	Hard Systems Thinking
IOM	Integrated Offender Management
IP	Interactive Planning
LCJB	Local Criminal Justice Board
LGI	Large Group Intervention(s)
LUMAS	Learning for a User by a Methodology-informed Approach to a Situation
MS	Management Science
NHS	National Health Service
NPIA	National Policing Improvement Agency
NPT	Neighbourhood Policing Team
OBJ & OBTJ	Offences Brought to Justice
OD	Organisational Development
OR	Operational Research
OPR	Operational Performance Review (part of WYP’s performance management arrangements)
PANDA	Participatory Appraisal of Needs and Development of Action
PCC	Police and Crime Commissioner
PFI	Private Finance Initiative
POLKA	Police On-Line Knowledge Area (NPIA’s knowledge management system)
PPO	Prolific and other Priority Offender
QUEST	Home Office sponsored lean process improvement programme in the police service
SARA	Police problem solving model (Scanning, Analysis, Response, Assessment)

<b>Abbreviation</b>	<b>Description</b>
SAST	Strategic Assumption Surfacing and Testing
SMF	Senior Managers Forum
SMT	Senior Management Team
SNA	Social Network Analysis
SODA	Strategic Options Development and Analysis
SOSM	System of Systems Methodologies
SRO	Senior Responsible Officer
SSM	Soft Systems Methodology
STS	Socio-Technical Systems
TSI	Total Systems Intervention
VIM	Visual Interactive Modelling
VSD	Viable Systems Diagnosis
VSM	Viable Systems Model
WYP	West Yorkshire Police

## **Disclaimer**

The content of this thesis comprises the author’s interpretation of evidence collected during the research process and does not necessarily reflect the views of WYP.

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# **PART I – Research Context**

This part of the research thesis provides a background to the study in order to establish its theoretical and practical context. It comprises of four chapters:

**Chapter 1** - Introduction – to provide an overview of the research background, the research process and the structure for the thesis.

**Chapter 2** - Policing and Community Safety Business Context – to present the current operating environment and challenges facing the business sector.

**Chapter 3** - The Evolution of Systems Thinking and its Application in Policing and Community Safety – to explore the development of systems thinking, its application within the sector and the potential to extend learning in these areas.

**Chapter 4** - Research Methodology – describing the justification and process for undertaking the research.

# Chapter 1: Introduction

## 1.1 Background

The definition of the policing and community safety sector referred to throughout this research centres upon those services that the police have a significant responsibility for delivering. However, the sector extends to a wide variety of partner agencies and stakeholders both nationally and locally who share responsibility for delivering 'policing' services, including (but not limited to) local authorities, criminal justice partners, health services, voluntary sector, business communities and users of the services including the general public.

Change in the policing and community safety business environment has been considerable and fast paced over recent years (Chapter 2). Significant shifts have been seen in service emphasis characterised by tensions between local accountability and central control; a continually evolving drive for service improvement and efficiency; greater involvement of partners in joint service delivery; increased interest in addressing problem causes and effects; political short-termism; a drive for service quality; and a growing focus on a diverse customer base to name but a few.

Very often the management problem solving approaches advocated and applied within the sector are limited in their ability to meet these new challenges (Chapters 2 and 3). The increasingly complex, dynamic and plural nature of the policing and community safety environment demands a different way for managers to deal with the problems they now face and to possibly benefit from the more holistic approaches offered by systems thinking (Chapter 3). There is an emerging need within the sector to learn whether some systems approaches might be more effective than others and to understand why by studying practical combinations of approaches in action and recognising relevant contextual factors (Chapter 3).

Systems thinking has evolved in response to changing environmental requirements and through reflection upon its application in practice and the discipline now encompasses approaches that are better able to address the diverse problem situations encountered by problem solvers (Chapter 3). More recently, critical systems thinking (Jackson, 2003) has emerged as a theory and philosophy to guide problem solving in situations of increased complexity and plurality. The tradition of developing critical systems thinking (CST) through reflection upon its deployment in practice has led to the development of a meta-methodology known as critical systems practice (Jackson, 2003) to support problem solvers in the employment of systems methodologies, methods and techniques in combination to better respond to the diverse problem situations they face. The continued development of CST through practice has identified the potential for exploration of leadership in the facilitation process; understanding the challenge of responding to multiple paradigm diversity in problem situations; learning more about the impact of diversity, plurality and mode of application of CST; and in recognising the influence of cultural barriers to the successful deployment of systems approaches (Chapter 3).

A co-evolutionary research agenda has emerged with a consistency in the prevailing needs of the business sector as well as the field of CST. The opportunity to address real life problems and produce learning for both practitioners in the sector and for systems thinking more widely is the foundation upon which this research is justified (Chapter 3).

## 1.2 Research purpose

The co-evolutionary research agenda described in the previous section for the policing and community safety sector and for systems thinking more generally raises the following questions (Chapter 4):

- (i) Can the application of critical systems thinking improve the success of joint problem solving within the policing and community safety sector?
- (ii) Are there combinations of systems methodologies, methods and techniques that are found to be particularly successful in meeting the challenges of service improvement, identifying the features that are influential in effective engagement of stakeholders and actors in joint service improvement interventions?
- (iii) How do these systems interventions address the challenge of handling the multiple philosophical assumptions (paradigms) that underpin the problem situations and systems approaches employed?
- (iv) What is the influence of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed?
- (v) Can effective processes be established to improve the capability of problem solvers in the sector (and beyond) to successfully select and employ systems thinking, through a more informed appreciation of the impact of systems approaches in prevailing problem contexts?

Central to the aim of this research is the role of the facilitator of CST and drawing upon the tradition of action research, relevant practical and theoretical context, the commitments of CST and meta-structure of CSP; the role of the facilitator of CST can be modelled to inform target areas for an action research programme and its means of evaluation.



The purpose of the research is to address the research questions and evaluate their achievement against a set of underpinning objectives, employing a research design targeted upon appropriate evolving intervention opportunities and this will be described in the next section.

### **1.3 Research design**

The researcher is employed by a UK police organisation and, as a systems thinker, has been responsible for implementing a wide range of organisational change initiatives within the police service for over 20 years. As the police have an on-going requirement to implement change in a wide variety of problem situations, a platform is provided for action research to address real life problems and produce learning for both practitioners in the sector and for systems thinking more widely.

Taking systems thinking as the philosophical basis, an iterative action research programme is designed, employing CSP as a guiding structure and where the research questions and target interventions are refined based upon learning captured from each iteration. Following the tradition of action research, this study is judged upon the two broad criteria relating to the actions taken in the problem situation and the learning from each application using a generic evaluation structure. The holistic dimensions of performance presented by CSP are used to evaluate individual interventions, drawing upon qualitative views of individuals involved, supplemented with quantitative data where appropriate to provide context, insight and to triangulate the findings.

Given the action research design for this study, its credibility is judged upon its ability to address the challenges offered by Greenwood and Levin (1998) of workability, sense making and transcontextual credibility and Checkland and Holwell's (1998) criterion of recoverability.

## 1.4 Thesis outline

The following research thesis comprises eleven further chapters:

- Chapter 2** provides an assessment of the policing and community safety business context based upon a literature review guided by the personal experience of the researcher. This review identified an increasingly complex and dynamic policing and community safety environment with significant shifts in service emphasis characterised by some conflicting tensions. In the light of this the appropriateness of traditional management approaches to problem solving are questioned and the potential value of a more considered emphasis on systems thinking is identified.
- Chapter 3** explores the evolution of systems thinking and its application within policing and community safety based upon a review of relevant literature. It identifies an opportunity for a co-evolutionary research agenda with consistency between the prevailing needs of policing and community safety as well as the potential to create learning within the field of CST.
- Chapter 4** distils the findings from the previous two chapters and constructs a design to address a set of research questions, taking systems thinking as its philosophical basis and drawing upon key influences including: action research; critical systems thinking and practice; an analysis of the role of the facilitator of CST; and a contextual analysis. An iterative action research programme evolved from this design to address prevailing problem situations in the sector and to derive learning that stands up to the tests of workability, sense making, transcontextual credibility and recoverability.
- Chapters 5 to 10** document the series of action research interventions that are targeted upon prevailing real life problem situations, evaluating their contribution to the research objectives and identifying any implications for subsequent interventions as well as providing evidence for the overall interpretation of research findings.

**Chapter 11** draws upon the series of action research interventions, which each identify a range of findings relevant to the research objectives and questions and a synthesis of these findings here enables a reflection upon the role of the facilitator of CST from a practical perspective to contrast with that derived from theory. The salient features of the research are then identified to inform a concluding reflection upon the original research questions.

**Chapter 12** reflects upon the outcomes of the research and assesses the degree to which the original research questions and objectives have been achieved, along with the research validity, reliability and generalisability. The reflection identifies the contribution the research findings and processes have made, based upon their practical value within the business sector as well as their contribution within the field of critical systems thinking and practice. Future potential directions for related research have also been incorporated within this discussion.

## **1.5 Conclusion**

The current operating environment of policing and community safety is presenting new challenges to problem solvers within the sector who face situations that are becoming more complex, dynamic and pluralistic. An opportunity to better respond to these challenges is presented in the evolving field of systems thinking. The action research outlined here offers a unique co-evolutionary opportunity to address real life problems within the policing and community safety sector through involvement in situations prevailing within a major UK police organisation and in doing this to further develop learning within the field of CST through reflection upon systems thinking in practice.

# Chapter 2: The Policing and Community Safety Business

## Context

### 2.1 Introduction

A broad intention of the research is to support development in the application of systems thinking that helps, in a practical way, policing and community safety service stakeholders and partner organisations to fulfil their purposes. This chapter will set out the business context for the research by describing key features of the increasingly complex, plural and dynamic policing and community safety business environment. However, before exploring this environment further it is worth briefly reflecting here upon the role of the police in society. The purpose of the police service is captured in The Statement of Common Purpose and Values for the Police Service:

*“The purpose of the police service is to uphold the law fairly and firmly; to prevent crime; to pursue and bring to justice those who break the law; and to keep the Queen's Peace; to protect, help and reassure the community; and to be seen to do all this with integrity, common sense and sound judgement. Newburn (2003, p.87).*

While widely accepted within the service as a means of capturing the role of policing, the ‘common values’ presented are very much a statement of intent from the perspective of the police, not necessarily reflecting those of the wider society in which they operate and the feasibility of fulfilling this purpose is largely dependent upon that society’s perception of police legitimacy. ‘Policing by consent’ is the principle upon which the police service is founded, where the public accepts officers exercising their powers in the interests of society and without this support the police service would be unable to function effectively. The importance of this consent is highlighted by a study undertaken by the NPIA to explore what factors motivated people to co-operate with the police and not break the law (NPIA, 2011e). This research found the most important factor to be that of the legitimacy of the police, this having a stronger effect than the perceived likelihood of being caught and punished. The study found that trust and

shared values were key aspects of legitimacy, underpinned more by the perception of police fairness rather than police effectiveness. This reflects research undertaken by Tyler (Tyler, 2004; Tyler and Fagan, 2008), finding that institutional trust in the police service was central to people obeying the law and co-operating with the police. Herbert (2006) saw the quest for police legitimacy to be dynamic and dependent upon individuals' personal perceptions. Herbert identified three modes of the state-society/police-citizen relation: subservience – where officers serve the needs of the public; separation – with officers operating as autonomous and authoritative agents, distinct from the public; and generativity – the cultural and procedural influences upon the perceived validity of information and the moralistic frames through which officers view society. As there is a degree of tension between these modes, the pursuit of police legitimacy in itself might be seen as complex, plural and dynamic.

## **2.2 Policing and community safety business environment**

This section aims to identify the most significant issues that have and continue to impact upon the policing and community safety business sector that have a particular relevance to the research intent stated in the introduction. The environmental influences within the sector are continually shifting in emphasis and a reinvention cycle has been observed where the emphasis placed on policing shifts between a community focus and an enforcement focus on a cyclical basis (Newsome, 2008). It would be insufficient to describe the sector environment in such simple terms as it comprises numerous changing variables, however, recognising its dynamic nature certainly justifies consideration of the sector's environment over a period of time rather than simply taking a snapshot of the current political, economic, social and technological context. Further, it should be noted that the sector environment has changed somewhat during the course of the research, most significantly in terms of the political landscape, with a change in government and in terms of a significantly changed economic situation, where public service resourcing has experienced significant pressure.

Many of the influencing factors are closely interrelated and sometimes difficult to separate into distinct categories. The assessment here opens with a brief review of

recent developments in police reform before focusing on some of the key themes that have emerged from this.

### 2.2.1 Police reform

Successive national governments have sought to reform policing to improve service performance in terms of its effectiveness, efficiency, accountability and equality (Home Office, 1993, 2001, 2004a, 2008c, 2010b, 2011). Like other public services, the police have been encouraged to develop a more ‘business like’ approach, often referred to as new public management (Barton and Barton, 2011). Several of the most recent publications are employed here to capture the main features of the landscape of police reform.

In February 2008 Sir Ronnie Flanagan published his review of policing in England and Wales (Flanagan, 2008). The report reflected upon many of the pressures influencing the police service and made recommendations for change in a number of areas. The key elements of this extensive review of policing can be summarized under a number of themes:

- **A vision for policing** – Are the right people, in the right places, at the right times, doing the right things, in partnership for the benefit of the public? Police leaders should be entrepreneurial and innovative, leading a risk conscious rather than risk-averse organisation.
- **Threat, harm and risk** – Challenge to deploy resources between 3 fundamental but often conflicting objectives: 1) Minimising threats to the public; 2) Reducing the harm crime causes; 3) Having contingencies in place to manage risk.
- **Central structures** – A need for clarity around roles and responsibilities of bodies involved in policing to reduce overlaps and duplication and review how each best contributes to the delivery of overall police performance.
- **Performance management** – Needs to be less bureaucratic, reflecting local differences flexibly and activity based costing (ABC) should be replaced.

- **Funding** - Resources need to better match prevailing threat and demand with a more extensive use of funding formulae and exploitation of business opportunities in a more entrepreneurial approach to policing.
- **Improving performance** – Improving productivity and processes, employing innovative approaches and wherever possible exploiting new technology with greater recognition of the value of corporacy in some aspects of service procurement and deployment.
- **Workforce development** – A need for a longer term strategy for workforce reform with a focus on service outcomes.
- **Bureaucracy (discretion and accountability)** – A need to address the systematic drivers of bureaucracy, such as heavily prescriptive processes leading to a decrease in professional discretion and an absence of effective personal accountability.
- **Crime recording** – A need for a more proportionate approach to crime recording to reduce bureaucracy and avoid unnecessary criminalisation.
- **Inspections** – A need for streamlined and proportionate inspection regimes to reduce the amount of time police forces spend servicing them.
- **Criminal justice system** – A need for more streamlined processes without conflicting targets and making better use of police powers.
- **Partnership working and neighbourhood policing** – Local flexibility in achieving the desired outcomes of visibility and accessibility, involvement of public in priority setting and joint working with partners. Cultural change being required to move from response policing to a joint problem solving approach.
- **Governance and accountability** – The current tripartite arrangements no longer reflect the world of policing, which is characterised more by the growing work with partners, local community involvement and regional shared service accountability.

Building on the findings of the independent review of policing by Sir Ronnie Flanagan, the Home Office published a Police Green Paper (Home Office, 2008c), outlining a strategic vision for delivering improvements in police performance, focusing on:

- **Local accountability** –improving arrangements at both the very local neighbourhood and the strategic/police force level.

- **Performance management** – a reduction in targets (‘public confidence’ to be the only nationally mandated target) underpinned by reliable performance measurement, recognising partner roles and responsibilities (see section 2.2.2).
- **Leadership** – attracting the best applicants getting the best from the policing family.
- **Workforce** – ensuring that warranted officers are free to do those jobs which only they can, and should do, supported by the effective use of civilian roles.
- **Subsidiarity** – a clearer model for which decisions should be taken at which level.
- **Collaboration** – in terms of proving better protective services and where collaboration can deliver efficiency and productivity gains.
- **Customer service** – focused on delivering a clear commitment to the public about what they can expect from their police service.
- **Bureaucracy** – building on the recommendations from Sir Ronnie Flanagan’s Final Report and exploring options for going further.
- **Processes** – highlighting the importance of the efficiency and productivity strategy (Home Office, 2008b) and building on the successes of Operation QUEST (Home Office, 2009a).
- **Counterterrorism policing** – recognising the importance of incorporating this work into mainstream policing.

The change in national government in May 2010 brought with it a new emphasis in police reform and a consultation paper, ‘Policing in the 21<sup>st</sup> Century: Reconnecting Police and the People’ (Home Office, 2010b) that saw the following problems as central to the need for change:

- (a) A service accountable to Whitehall not the public;
- (b) Disempowered professionals;
- (c) Visibility and availability; and
- (d) Tightening resources.

In response, the government strategy sought to:



- **Empower the public:** introducing directly elected Police and Crime Commissioners (PCC) who will give the public a voice and strengthen the bond between the public and the police through greater accountability and transparency.
- **Empower the police:** removing bureaucratic accountability, returning professional responsibility and freeing up officers' time to get on with their jobs, out and about in local communities and not tied up in paperwork or meetings.
- **Shift the focus of national government:** ensuring the police are effective in dealing with serious crimes and threats that cross force boundaries or national borders, but in the end impact on local communities. Make the police at force, regional and national levels more efficient so that frontline local policing can be sustained.
- **Empower the Big Society:** reforming the wider approach to cutting crime, making sure everyone plays their full part in cutting crime in a Big Society (wider criminal justice and community safety partners, the voluntary and community sector and individuals themselves).

(Home Office, 2010b).

In March 2011 the Home Secretary outlined a new approach to fighting crime to include:

- (a) Local accountability.
- (b) Increased transparency.
- (c) Engaged and active communities.
- (d) Local, professional discretion.
- (e) Improving efficiency of police.
- (f) Prevention as well as cure.
- (g) Criminal justice system reform.
- (h) A new focus on serious and organised crime.

(Home Office, 2011).

Despite a shift in emphasis following the most recent change in government and the significant reductions in public service funding that have followed, the themes included in the recent published assessments provide a broad consistency in terms of the

challenges facing the sector and the remainder of this chapter will consider the features identified here which have been clustered into the following themes:

- (i) Accountability.
- (ii) Service improvement and efficiency.
- (iii) Workforce development.
- (iv) Service focus.

### **2.2.2 Accountability**

‘Policing by consent’ is the principle upon which police accountability is built, where the public accepts police officers exercising their powers in the interests of society and for them in turn to be accountable for their actions. Accountability is provided through what is known as a tripartite system of governance that balances the interests of the national government (Home Office), local government (police authorities) and police forces (local chief constable). The various roles of the parties involved are divided so that national direction and service requirements are set by the Home Secretary; local community interests and requirements are established by police authorities and the operational response is the responsibility of the chief constables. Although this arrangement appears to work well in the main, there are situations where the boundaries overlap somewhat, such as that experienced in the aftermath of the English riots of August 2011, where the line between operational and political decision making can become blurred, (BBC, 2011).

A range of governance arrangements have been employed to set national and local policing strategies, plans and structures (Home Office, 2007a, 2007b, 2009, 2010b) with underpinning performance arrangements through which police forces and partner agencies have been held to account. The most recent government proposals aim to reduce the national government role in the tripartite arrangement except for more serious and strategic requirements and to boost local representation through the introduction of directly elected commissioners who will hold the chief constable to account and in turn be held to account by the local electorate (Home Office, 2010b).

Coupled with this is an undertaking from central government to reduce the wide variety of national performance targets for the police to a single objective of cutting crime.

It has become widely recognised that policing is not the sole responsibility of police forces and a number of arrangements exist to support the delivery of policing more widely, such as:

- Crime and Disorder Reduction Partnerships (CDRPs, now referred to as community safety partnerships) – a range of agencies within a local government district responsible for reviewing crime and disorder in their local area and implementing a strategy for tackling issues arising, including local government, police, probation, fire service and health service in liaison with a range of other public, local private, voluntary and community groups including members of the public. (Home Office, 2007c).
- Youth Offending Teams (YOTs) – Established as a statutory partnership to prevent and reduce offending amongst young people, involving local authorities, police, probation service and health authorities, supported by other relevant agencies. (Home Office, 1998).
- Local Strategic Partnerships (LSPs) – a single body bringing together at a local level the different parts of the public and private sector as well as the community and voluntary sectors to encourage a consistency amongst different initiatives and services.
- Local Criminal Justice Boards (LCJBs) - bringing together chief officers from the relevant agencies to co-ordinate activity and share responsibility for delivering criminal justice in their areas.
- Integrated Offender Management (IOM) - Building on the successes of the Prolific and Priority Offender (PPO) and Drug Intervention Programme (DIP) schemes and learning from Multi Agency Public Protection Arrangements (MAPPA), IOM takes a wider concept of offender management involving multiple agencies and demonstrating that offenders may be effectively managed outside the traditional framework of statutory supervision. (Home Office, 2011a). See Chapter 6 for a more detailed exploration of these partnership arrangements.

Until recently, each of these bodies was held to account through complex performance regimes largely built upon Public Service Agreements (PSAs), (Parliament, 2005) and Local Area Agreements (LAAs), (DCLG, 2010) and informed by a comprehensive range of performance indicators. Over recent years there has been increasing emphasis on embedding a performance culture within the police service and developing effective performance management tools and frameworks to support performance management. Typically, coupling qualitative HMIC baseline assessments (HMIC, 2005), alongside quantitative performance data to determine how well police forces performed in comparison with their most similar forces.

A performance framework known as the Policing Performance Assessment Framework (PPAF) was introduced by the Home Office and partners in October 2005, containing a wide range of performance data, including the relevant Statutory Performance Indicators (SPIs) through which to hold forces to account, (Home Office, 2011b). With the increasing importance of partnership involvement in service delivery, the performance framework was extended and from April 2008 a new performance regime known as ‘Assessments of Policing and Community Safety’ (APACS) was introduced to monitor the role of policing and community safety in delivering the Public Service Agreements, (Home Office, 2011c).

More recently, in March 2010 the Police Report Card (HMIC, 2010) was introduced by HMIC to provide to the public, information about the risk of crime and anti-social behaviour, the performance of police forces and how much this costs.

Although this performance regime is now largely dismantled by a government intent on reducing the burden of performance management and inspection (Home Office, 2010b), with the shift in responsibility for holding the police service to account, it is unclear what arrangements will need to exist locally to enable the new Police and Crime Commissioners to fulfill their obligations. In line with the agenda to place more policing information in the hands of the public, a new national information portal, “[www.police.uk](http://www.police.uk)” is currently in development and will include crime mapping, comparative performance data and contextual information for each police force in the

UK. This information is likely to provide only part of the new commissioners' means to reliably monitor and diagnose police performance in their areas.

The influence upon the police service of prevailing political preferences has been significant over recent years. Evaluating the change in police service performance regimes between 1992 and 2004, Collier (2006) noted the influence of political preference and the limitations of the performance regimes in accommodating the complexity of policing while introducing inconsistency in changed priorities and their means of measurement. Collier (2006) concluded that the short term refocusing of what is 'important' leads to short term initiatives in the police service aimed at achieving quick results within political time horizons and thereby neglecting service improvements that may have a sustainable long term impact.

### **2.2.3 Service improvement and efficiency**

For some time public services in the UK have been subject to scrutiny from a value for money perspective. Various mechanisms and initiatives have been implemented to contribute towards securing value for money, including over a number of years - Compulsory Competitive Tendering, Best Value (Boyne, 1999), activity based costing (Home Office, 2003), the Audit Commission's police use of resources (PURE) assessments (Audit Commission, 2012) and more recently, the Efficiency and Productivity Strategy for the Police Service 2008-11 (Home Office 2008b), Working for the Public Productivity Framework (Home Office, 2010d), Valuing the Police - Policing in an age of austerity (Home Office, 2010e) and Sustaining Value for Money in the Police Service (Audit Commission, 2010), thereby emphasising the importance national government has traditionally placed upon productivity and efficiency in the police.

Flanagan's (2008) review of policing identified the potential for embedding a culture of continuous improvement within the police service through deployment of lean process improvement approaches, such as the Home Office QUEST initiative (Home Office, 2009a). QUEST is a lean process approach involving front line staff in the redesign and improvement of their services, employing lean principles and recognising the impact of

delivery upon cost and performance. Support for this approach also featured in Jan Berry's review of bureaucracy in policing (Berry, 2009a, 2009b). Although QUEST has not received universal approval, (Cauklin, 2011), there has been considerable interest within the police service regarding approaches to support continuous improvement and in particular the employment of lean thinking which is evident in various forms across the 43 police forces in England and Wales. (See also Chapter 7). The process emphasis taken for these initiatives lends itself to improvement of services that have traditionally been seen as the responsibility of an individual agency and improvement initiatives are more frequently being seen as part of a wider system such as in the streamlining of the criminal justice processes involving police, the Crown Prosecution Service and the courts (Home Office, 2010b) or the multi-agency management of offenders referenced in 2.2.2.

Back in September 2005, the national government's reform programme focused on the structure of police forces in England and Wales following the publication of the report by Her Majesty's Inspectorate of Constabulary (HMIC) 'Closing the Gap: A Review of the Current Structure of Policing in England and Wales' (Home Office, 2005a) that sought to strengthen the capability and capacity of what have been termed 'protective services' by merging 43 forces in England and Wales into 10 larger 'strategic forces'. Protective services are a set of specialist policing activities encompassing response to counter-terrorism and extremism, serious organised and cross-border crime, civil contingencies and emergency planning, critical incident management, major crime, public order, strategic roads policing and protecting vulnerable people. Although the merger plans were postponed in July 2006, police forces are now working on alternative ways to collaborate to improve protective service provision. With the increased financial pressures on public services, collaboration is also seen as an important means of realising efficiency gains and maintaining a viable policing service with reduced budgets and the current government are continuing to encourage collaboration with the elected commissioners being seen as taking a lead role in moving this agenda forward (Home Office, 2010b).

Following the government announcement regarding cuts to police budgets in June 2010, HMIC published an assessment of the preparedness of the service for change, noting that:

*“Leadership of business change has had limited recognition, is poorly defined and even less well supported. Operational delivery and excellence appear to take precedence over increasing the efficient use of resources”* (Home Office 2010e, p.26).

The report concluded that:

*“Incremental cost savings driven by an annualised planning cycle will not be enough. Transformation of police forces and the wider system surrounding them is essential in order to deliver public expectations for policing in the years ahead.”* (Home Office 2010e, p.27).

#### **2.2.4 Workforce development**

Approximately 80% of the police service budget is spent on the workforce so determining the optimum mix of staff , skills and the practices necessary to provide professional policing is significant and a particular challenge in the new operating environment characterised by a complex combination of influences including customer focus, value for money, more responsive and better quality services.

In 2004 the Home Office set out their vision of a police service for the 21<sup>st</sup> century (Home Office, 2004a) in which they described what they wanted to achieve in terms of building a new workforce:

- Further modernisation of the police workforce to reinforce neighbourhood policing and build a more responsive, citizen-focused police service.
- Increased use of police staff to get officers back on the front line; maximising the effectiveness of community support officers.
- Enhancing and professionalising the roles of police officers and staff.

- Opening the service to new talent – by entry for those with valuable skills at levels above constable.
- Strengthening leadership at all levels.
- Making faster progress on diversity.

(Home Office, 2004a, p.76).

Also in 2004, the HMIC set out the characteristics they considered a modernised police organisation required:

- Is an integrated service with a clear vision regarding its future direction and the people and skills required to deliver this.
- Has a clear focus on improving operational performance.
- Engages effectively with local communities.
- Recognises and rewards the skills and professionalism of the entire workforce.
- Is representative of staff from diverse backgrounds with diverse skills.
- Has flexible entry and exit points.
- Operates flexible and integrated reward structures and terms and conditions.
- Is locally managed but within enabling national frameworks and standards.
- Has an inclusive culture.
- Benefits from effective leaders at all levels with the vision, time and resources to drive modernisation activity, both within the service and across organisational and professional boundaries.
- Works effectively in partnership with other organisations.
- Is not fixated with internal boundaries and functional silos.

(Home Office, 2004b).

In 2008 a framework for people management was constructed by the NPIA to help guide police forces in their workforce development, with high-level strategic aims for establishing:

- (a) A well-led and managed workforce;
- (b) A citizen-focused workforce reflective of the community it serves;
- (c) A workforce with a modern structure;
- (d) A healthy, engaged and empowered workforce;



- (e) A skilled and capable workforce;
- (f) A resilient and flexible workforce;
- (g) A highly performing workforce;
- (h) A workforce appropriately recognised and rewarded.

(NPIA, 2008).

Together, these provided a background to a series of initiatives across the police service to explore alternative ways of improving workforce utilisation (Loveday et al., 2008; Home Office, 2010c).

The relationship between workforce development and service improvement (section 2.2.3) is inextricable. The Flanagan Review of Policing (Flanagan, 2008) saw unnecessary bureaucracy that diverts officers from their core responsibilities as often being the result of risk aversion and he saw the need to address the systemic drivers of bureaucracy:

*“These drivers include risk aversion in society at large, increasing reliance on heavily prescriptive processes inside the service, a subsequent decrease in professional discretion, and an absence of effective personal accountability amongst officers.”*

(Flanagan, 2008, p.49).

Flanagan saw the tendency for the well-intentioned focus on single issues without due regard to overall impact as leading to processes designed for the ‘worst case scenario’ that have a negative impact on the majority of applications. Recognising value in process and doctrine for learning, particularly as *“the police service mission is both widening and deepening – the role is becoming both broader and more complex at the same time”* (Flanagan, 2008, p.51), there appears to be a tendency for staff to feel they have to rigidly follow these regardless of circumstances, thereby over-engineering responses and driving bureaucracy.

It is not solely an internal ‘just in case’ mentality that contributes, so too the influence of the public, media, and politicians who are unwilling to accept error, expecting the

police to anticipate events and incidents beyond their control and then when things go wrong impose new systems to neutralise all potential hazards which are modelled on worst case scenario and inappropriate for the volume tasks on a daily basis. This issue has been recognised by national government for attention in forthcoming police reform (Home Office, 2010b, 2011):

*“...restoring the independence of the police to allow them to use their discretion and professional judgement”* (Home Office, 2011, p.1).

However, the response of central government to prevailing high profile events might present conflicting messages. For example, the English riots of August 2011, leading the Home Secretary to call for:

*“... clearer information to be provided to police forces in England and Wales about the size of deployments, tactics, when it is appropriate for other police forces to provide help and ‘an appropriate arrests policy’.”* (BBC, 2011a).

### **2.2.5 Service focus**

The focus of policing is influenced by a range of political, economic, social and technological factors and as identified in the introduction to this chapter, the service emphasis tends to shift over time and has done so during the course of this research. Although new crime fighting structures are currently being introduced (Home Office, 2010b), the previous government’s national crime strategy, ‘Cutting Crime – A New Partnership 2008-2011’ (Home Office, 2007a; 2009) provides a sufficiently broad idea of service responsibilities to demonstrate the diversity of typical demands. This strategy includes:

Crime reduction objectives of:

- (a) Tackling anti-social behaviour.
- (b) Securing homes and protecting property.
- (c) Tackling violent crime.
- (d) Countering organised crime.
- (e) Countering terrorism.

Crime reduction approaches of:

- (a) Preventing crime.
- (b) Reducing reoffending.
- (c) Delivering responsive, visible justice.
- (d) Public engagement.
- (e) Taking action at the right level (including local and national partnerships).

Over recent years there has been an increased citizen focus in the delivery of public services and citizen-focused policing, reflecting the needs and expectations of individuals and local communities, has become much more prominent in police decision making and service delivery. For the police service, citizen focus necessitates an improvement in service user experience, particularly for victims and those at risk. This requires effective community engagement in terms of consultation, marketing and communications to improve local accountability and understanding. One of the main steps in this development has been the rolling out of neighbourhood policing. The Home Office White Paper – Building Communities, Beating Crime (Home Office, 2004a) sets out an aspiration for policing to be accessible and responsive to citizens' needs. Neighbourhood policing is typically provided by teams of locally knowledgeable police officers and Police Community Support Officers (PCSOs), special constables, local authority wardens, volunteers and other partners who are able to build relationships with communities to respond to and prevent crime, from 'low level' anti-social behaviour to more serious crime, terrorism and violent extremism. Neighbourhood policing was seen as a key component of a wider Police Reform Programme and the importance of this emphasis is still seen to be relevant (Home Office, 2010b).

The customer groups that have the most direct contact with the police service are victims and witnesses and recognising this, the Office of Criminal Justice Reform published good practice guidance (OCJR, 2007) to help police forces to improve their service performance for these groups. However, it should be recognised that the diversity of policing services identified above also brings with it a diverse customer base and variety in needs and expectations for those directly engaged in services as well as those in the wider community who may be indirectly affected. Customer focus aspirations require both operational and cultural changes to make services more responsive and fit for purpose and both staff and customers are considered to be a key part of effective service development and continuous improvement.

The police service has attempted to demonstrate its commitment to delivering quality of service through the publication of a Quality of Service Commitment (Home Office, 2006). This was seen as an important step in creating a greater degree of citizen-focus in service development and delivery, reflecting the needs and expectations of individuals and local communities. The commitment describes service levels that the public could expect in their dealings with the police service in the following areas:

- Making it easy to contact the police, providing accessible and responsive services.
- Providing a professional and high-quality service, including the provision of appropriate help and advice.
- Dealing effectively with initial enquiries from the public.
- Keeping people informed, providing contact details and updates.
- Ensuring the public has a say in how their area is policed.
- Providing support for victims.
- Listening and responding to the concerns and complaints of the public.
- Responding appropriately to requests for information.

The continued emphasis placed upon neighbourhoods, citizen engagement and customer focused quality of service remain a cornerstone of the modern police service and public services more widely, most recently reflected in the government's 'Big Society' aspirations (Cabinet Office, 2011).

### **2.3 An interconnected environment**

Very often management approaches employed to implement change in response to environmental demands are insufficient to deal with such a diverse and complex whole system and as such are ‘fixes’ that seek to find a ‘best solution’ to a specific problem, ignoring the interconnected nature of the environment in which they are applied, (Jackson, 2000). For example, policing interventions aimed at reducing crime by targeting the illegal drug trade can initially result in an apparent success in terms of reducing availability of drugs but a consequence of this might be an increase in the price of the limited supply of drugs to an addicted population who then need to commit a greater amount of acquisitive crime to fund their addiction, (Levin et al., 1975). Such fixes are often insufficient for situations that are complex, constantly changing and diverse. The attractiveness of quick fixes that ignore complex and (sometimes delayed) whole system impacts is understandable given the fast changing, busy, political and complex environment of policing and community safety but it is the very nature of this type of environment that lends itself to the more holistic approaches offered by systems thinking.

If policy makers nationally and locally do not recognise or understand the nature of the system they are operating within, their interventions can often lead to unintended consequences such as creating new problems or where apparently solved problems subsequently resurface elsewhere in the system. This situation is not confined to the sector (Lane et al., 1998) and indeed fixes in partner organisations might equally impact upon service demand in the police service and vice versa. The natural response to this type of situation is often the launching of further initiatives to solve the new problem. Typically, special teams along with their associated supporting infrastructures and monitoring mechanisms are allocated to respond to such initiatives and in doing this they introduce waste and reduce the organisation’s ability to achieve its purpose, (Seddon, 2008).

This experience is typified by the recent policy emphasis placed on neighbourhood policing that was referred to in the previous section. Over recent years there has been a shift in emphasis towards local community policing in response to local and national pressures. This is not a new trend, in fact it is possibly reflecting a particular phase of a 'reinvention cycle' (Figure 2.1) that has been observed in the police service by the Association of Chief Police Officers (Newsome, 2008).



**Figure 2.1:** The neighbourhood policing reinvention cycle (courtesy of ACPO)

## 2.4 Conclusion

As evidenced within this chapter, change in the policing and community safety business environment has been considerable and fast paced over recent years, resulting in an increasingly complex, plural and dynamic context. There have been significant shifts in service emphasis characterised by conflicting tensions typical of those shown in Table 2.1.

- |   |
|---|
| <ul style="list-style-type: none"><li>(a) local accountability <b>V</b> central government control</li><li>(b) customer focus and quality of service <b>V</b> centrality of cost-effectiveness</li><li>(c) primacy of neighbourhood policing <b>V</b> emergency response and specialist crime</li><li>(d) national <b>V</b> regional <b>V</b> local service responsibilities</li><li>(e) the need to tackle problem causes as well as effects <b>V</b> political short-termism (e.g. being ‘tough on crime’)</li><li>(f) greater involvement of partners in joint service delivery <b>V</b> limited understanding of increasingly complex business interdependencies</li><li>(g) an urgency for service improvement leading to initiative overload <b>V</b> continually revisiting the same problems following numerous failed initiatives</li><li>(h) increased devolvement of responsibility within the workforce <b>V</b> risk aversion and imposition of doctrine</li></ul> |
|---|

**Table 2.1:** Tensions within the policing and community safety sector

The ability of traditional management approaches employed in the service to accommodate such a complex system is in question and the potential value of a more considered emphasis on systems thinking suggested. There is already evidence of some systems thinking in the policing and community safety sector and its nature and impact is considered further in the next chapter.

# **Chapter 3: The Evolution of Systems Thinking and its Application in Policing and Community Safety**

## **3.1 Introduction**

The last chapter described the prevailing business context of policing and community safety and closed with an argument that the increasingly complex, plural and dynamic nature of the policing and community safety environment demands a more considered systems approach to problem solving.

This chapter will briefly review the evolution of systems thinking and explore how this has been reflected in its application within the policing and community safety sector before identifying those influential factors from a literature review that together will shape the research design.

## **3.2 The evolution of systems thinking**

### **3.2.1 Introduction**

Rene Descartes has been credited with introducing mathematical reasoning into philosophy and argued in his Discourses Part V, originally published in 1637, that the world could be understood through the study of its separate components, which when aggregated, could provide an understanding of the whole. This approach, known as reductionism, featured in much of early management science but was later challenged by systems thinkers who saw it as problematic in that the whole system often displays emergent properties that only arise through the aggregation of its parts, with often complex and indeterminate interactions between components being significant. An alternative way to study systems is to consider the complex whole as the important entity, with its parts and their interrelationships contributing to its nature and where the whole may display properties which are meaningless in terms of the individual parts that make it up (Checkland, 1981). This view, known as holism, found considerable favour with systems thinkers who were concerned about the inability of traditional



approaches to address problems of complexity, diversity and change and where system behaviour is emergent and cannot be simply understood from the properties of its parts, (von Bertalanffy, 1968).

The evolution of thinking about systems as wholes has stemmed from developments in a range of fields (Jackson, 2003), including:

- western philosophy, with Aristotle and Plato's early exploration of holistic understanding, which was later developed in the 18<sup>th</sup> and 19<sup>th</sup> centuries by Hegel and Kant, (Russell, 2004);
- biology, where the perspectives of open and closed systems have been particularly influential, spawning the development of the trans-discipline 'general systems theory' (von Bertalanffy, 1968);
- engineering, particularly through the influence of Norbert Wiener who emphasised the importance of communication and control in the study of systems, (Wiener, 1948);
- management theory, with the development of systems thinking as it relates to purposeful human activity systems and the influence of multiple perspectives, culture, power and politics (Checkland, 1981; Checkland and Scholes, 1990);
- physical science, with developments in the field of complexity, (Gleick, 1987).

The interest in applying systems approaches to everyday problems grew significantly after World War 2 when 'Operational Research' (OR) methodologies found favour within management applications. For example, the wartime comparison of flying hours put in by Allied aircraft to the number of U-boat sightings in a given area and the subsequent redistribution of aircraft to more productive patrol areas had clear transferability to peacetime targeting of resources to optimise returns through techniques such as George Dantzig's simplex method for linear programming published in 1947. Scientific methodologies, collectively known as 'hard systems thinking' (HST), were seen as a means of optimising performance in relation to a clearly defined and widely accepted objective, addressing management problems such as co-ordination, queuing, inventory, routing or resource allocation. Although HST approaches made a significant impact on management problem solving as evidenced by the early activities

of the RAND Corporation (Gass and Harris, 2001), they struggled to cope with many real life problem situations, particularly those displaying complexity or where those involved in problem situations had different perceptions, values and motivations (Checkland, 1981). It was becoming apparent that it was not possible to define problems, their causes and effects in the absolute terms required by the HST methodologies and it was also increasingly important to reflect the multiple perceptions of stakeholders.

Systems thinking has developed in response to these challenges and the discipline now encompasses approaches that are better able to address the diverse problem situations encountered by problem solvers. In 1984 a framework called the ‘System of Systems Methodologies’ (SOSM) was developed by Jackson and Keys (1984) to classify the various systems methodologies in terms of the problem contexts in which they possessed particular strengths. An ‘ideal type’ grid of problem contexts was constructed with the two axes of the grid reflecting the degree of complexity of the systems being encountered in one dimension and the degree of divergence of the perceptions of participants in the problem situation in the second (Figure 3.1).

		<b>Participants</b>		
		Unitary	Pluralist	Coercive
<b>Systems</b>	Simple	Simple-Unitary	Simple-Pluralist	Simple-Coercive
	Complex	Complex-Unitary	Complex-Pluralist	Complex-Coercive

**Figure 3.1:** Jackson’s extended version of ideal type grid of problem contexts

The grid presents ‘ideal types’ of problem context assumptions embedded in systems methodologies rather than suggesting that real life problems can be simply categorised in this way. The SOSM will be used here as a reference framework for comparing and contrasting the development of systems methodologies described in the following sections.

### **3.2.2 Systems methodologies and SOSM**

Systems approaches have been developed in response to a broadening perception of problems reflected in the SOSM grid, moving along both axes to address increasing complexity and plurality (Jackson, 2003). It should be recognised that it is not appropriate to strictly confine systems approaches to certain ideal type problem contexts; assignment is dependent upon an individual's reading of the methodologies (Taket and White, 2000, p.58). Nor is it appropriate to view the movement along these dimensions as implying 'better' or 'worse' approaches, rather recognising that approaches have different potential strengths in providing support in the different problem contexts reflected in the grid. Experienced practitioners may adapt approaches to accommodate different contexts and may find they can successfully deploy their approaches in a range of contexts. However, the SOSM offers a coherent framework for considering the development and application of systems methodologies and for considering their particular areas of strength. Consequently, it will be used in the following sections for this purpose by briefly introducing some of the systems methodologies that are relevant to the various SOSM problem contexts.

#### **(i) Simple-Unitary**

The underlying assumption of HST introduced in section 3.2.1 is that it is most suited to problem situations possessing clear goals that are shared by all participants and within SOSM, HST approaches would be classified as simple-unitary. Mathematical modelling OR approaches such as linear programming, queuing theory, discrete event simulation and resource scheduling (Taha, 1976) have traditionally demonstrated significant strength in optimising performance in relation to clear goals and these techniques might typically be employed as part of a HST intervention methodology.

As problem situations were encountered where such clear goals could not be defined due to their complexity and the diversity of stakeholder perceptions, systems methodologies needed to be adapted to meet this challenge and systems approaches now extend in both dimensions of SOSM.

## **(ii) Complex-Unitary**

In terms of complexity, the number of variables, the uncertainty about how they interact and the potential for hidden relationships can quickly limit the value of traditional HST. Here, we need to abandon the belief that systems approaches are able to reliably predict outcomes but they can help to understand the underlying patterns and structures of system behaviour and identify key factors that can be manipulated to influence system performance.

This approach to viewing problem situations is known as ‘structuralist’ and systems methodologies that aim to tackle complex-unitary problems aim to improve understanding of complex adaptive systems, designing these in a way that makes them capable of operating in a changing environment in pursuit of a recognised goal. Typical systems approaches displaying strength in these contexts might include system dynamics (Forrester, 1961), complexity theory (Gleick, 1987) and organisational cybernetics (Beer, 1972).

## **(iii) Simple-Pluralist**

The development of what is known as ‘soft systems thinking’ started to provide a means for systems thinkers to work in problem situations where there exist more than one perception of the purpose of the system and its goals. In such contexts systems approaches might seek to recognise the importance of the culture and politics in problem situations, to help surface the various world views present and to find consensus or accommodation among parties to move forward in an acceptable way. Methodologies such as strategic assumption surfacing and testing (Mason and Mitroff, 1981) have been recognised as possessing such strength.

## **(iv) Complex-Pluralist**

Complex-pluralist contexts demand approaches that can handle simultaneously the plurality of multiple stakeholders described in the previous section and problem situations of significant complexity. Checkland’s soft systems methodology (Checkland, 1981) has had a significant influence on the development of systems thinking in pluralist contexts and interactive planning (Ackoff, 1981) has also provided

an effective methodology in this context, emphasising the importance of learning and adaptation.

**(v) Simple-Coercive**

In terms of participation, extending beyond a plurality of perceptions of participants lie problem contexts that are seen as coercive, where participants might be controlled or constrained in some way. The soft systems methodologies designed to support improvement in situations through consensus among participants are less effective in coercive situations. Here, systems approaches will need to support emancipation of participants and methodologies such as critical systems heuristics (Ulrich, 1983) provide a mechanism for their empowerment.

**(vi) Complex-Coercive**

In these contexts problem complexity and inherent coercion mean that the paths to improvement are unclear and the systems methodologies that possessed strength in other contexts are less suitable here. However in response to this concern, postmodern systems approaches such as Taket and White's PANDA framework (Taket and White, 2000), are seen to be of particular strength by encouraging diversity and providing a voice for suppressed views, enabling contingent local improvement.

### **3.2.3 Systems thinking in practice**

Jackson (2003) has identified four types of systems approach based upon the primary orientation of their application in addressing typical managerial challenges characterised by their dominant sociological paradigms. Figure 3.2 presents these aligned to the SOSM grid along with some examples of systems methodologies with strength in different contexts (Flood and Jackson, 1990; Jackson, 2003; Jackson et al., 2008), the success of which might be measured in a variety of dimensions (Table 3.1). These four contexts will be briefly introduced in the following sections as they provide a basis for introducing some common sociological paradigms that will inform further discussion in section 3.2.5. Also, as these contexts are considered to represent the most common problem situations facing managers (Jackson, 2003) they will be used to structure the

presentation of examples of the application of systems thinking in policing and community safety (section 3.4).

		Participants		
		Unitary	Pluralist	Coercive
Systems	Simple	<ul style="list-style-type: none"> <li>• Hard Systems Thinking</li> <li>• Lean Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Strategic Assumption Surfacing and Testing</li> <li>• Interactive Planning</li> <li>• Soft Systems Modelling</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Systems Heuristics</li> <li>• Team Syntegrity</li> </ul>
	Complex	<ul style="list-style-type: none"> <li>• Socio-Technical Systems</li> <li>• System Dynamics</li> <li>• Organisational Cybernetics</li> <li>• Complexity Theory</li> </ul>		<ul style="list-style-type: none"> <li>• Postmodern Systems Thinking</li> </ul>

**Figure 3.2:** Examples of systems approaches with particular strength in different problem contexts

Primary Orientation	Sociological Paradigm	Aim	Measure of Performance
Improving Goal Seeking and Viability	Functionalist	Improve prediction and control	<ul style="list-style-type: none"> <li>• Efficiency</li> <li>• Efficacy</li> </ul>
Exploring Purpose	Interpretive	Promote mutual understanding	<ul style="list-style-type: none"> <li>• Effectiveness</li> <li>• Elegance</li> </ul>
Ensuring Fairness	Emancipatory	Eliminate power that might suppress fairness	<ul style="list-style-type: none"> <li>• Emancipation</li> <li>• Empowerment</li> </ul>
Promoting Diversity	Postmodern	Improve diversity and creativity	<ul style="list-style-type: none"> <li>• Exception</li> <li>• Emotion</li> </ul>

**Table 3.1:** Primary orientation of systems approaches and measures of performance

(i) **Improving goal seeking and viability** – involving systems approaches that support optimisation to clear goals and building the underpinning organisational capacity to ensure viability and effective goal seeking. Here, problem contexts are taken as unitary and for simple systems HST (Jackson, 2003) typically provides a strong basis for optimisation; lean systems (Seddon, 2008) and socio-technical systems (Mumford, 2006) might offer support in situations with increasing complexity and plurality; and the ‘structuralist’ approaches of organisational cybernetics (Beer, 1972), system dynamics (Forrester, 1961) and complexity theory (Gleick, 1987) present particular strength in exploration of underlying mechanisms that determine behaviour in

systems of greater complexity. In terms of sociological paradigm, these systems approaches are 'functionalist' in character and performance might be measured in terms of the efficacy and efficiency of solutions.

**(ii) Exploring purposes** – involving systems approaches that help identify and explore the underlying purposes of the various stakeholders within problem situations. Methodologies with strength in these contexts might include strategic assumption surfacing and testing (Mason and Mitroff, 1981), interactive planning (Ackoff, 1974) and soft systems methodology (Checkland, 1981). In terms of sociological paradigm, these systems approaches are 'interpretive' in character, necessitating a response to the limitation of functionalist approaches to accommodate different world views in situations exhibiting greater plurality and with success potentially being judged by the effectiveness and elegance of solutions.

**(iii) Ensuring fairness** – employing 'emancipatory' systems approaches that support the disadvantaged to ensure fairness in the design and operation of systems. Critical systems heuristics (Ulrich, 1983), encouraging full participation of those affected or team synteegrity (Beer, 1994), establishing democratic infrastructures that facilitate fairness in decision making, might provide systems approaches that possess strength in such situations. In terms of sociological paradigm, these approaches are 'emancipatory' in character, necessitating a response to the limitation of functionalist and interpretive approaches to secure appropriate participation and empowerment of those affected. The success of interventions in such contexts might be measured in terms of emancipation and empowerment.

**(iv) Promoting diversity** – in problem situations that are seen as particularly complex, coercive and diverse, where there is significant doubt that interventions will prove successful, postmodern systems approaches such as PANDA (Taket and White, 2000) are seen as a more fitting means of supporting improvement. In terms of sociological paradigm these approaches are 'postmodern' in character, in contrast to the other (modernist) paradigms that try to impose order and the success of interventions

here might be measured in terms of exception (recognition of marginalised viewpoints) and emotion.

### 3.2.4 Wicked problems

Rittel and Webber (1973) introduced the concept of ‘wicked’ problems’ to describe situations facing managers responsible for developing social policy in a pluralistic society, where the notion of deriving scientific ‘optimal solutions’ is less relevant. Rittel and Webber identified a range of features typical of wicked problems (Table 3.2).

1. No definitive formulation.
2. No stopping rules.
3. Solutions not true-or-false, but better or worse.
4. No immediate and no ultimate test of a solution.
5. Solution is a "one-shot operation"; no opportunity to learn by trial and error and every attempt counts significantly.
6. Do not have enumerable (or exhaustively describable) set of potential solutions, no set of permissible operations to employ.
7. Every wicked problem is essentially unique.
8. Every wicked problem can be a symptom of another problem.
9. Wicked problem can be explained in numerous ways. Choice of explanation determines the nature of the problem's resolution.
10. No right to be wrong (planners liable for consequences of actions).

**Table 3.2:** Typical features of ‘wicked’ problems

The policing and community safety business context described in the previous chapter, typically possessing complex and plural or coercive characteristics, might be considered to reflect many of the ‘wicked’ features presented here. Also, the variety of typical managerial challenges and systems methodologies presented in the previous section might be considered relevant in reflecting upon the diversity and complexity encountered in wicked contexts.



### 3.2.5 Critical systems thinking and multi-methodology

Over recent years developments in systems thinking have led researchers to look at the potential for using systems approaches creatively in combination to view problem contexts from different perspectives, in what has become known as critical systems thinking or multi-methodology. Employing systems thinking in this way is seen as being particularly beneficial as the various systems approaches, each with strength in different problem contexts, can be used creatively in combination to better match the challenges of complexity and diversity in problem situations (Jackson, 2003, p.275). Table 3.3 summarises the principles of critical systems thinking in three commitments (Jackson, 2003, p.303).

- |  |
|--|
| <ol style="list-style-type: none"><li>1. critical awareness (of the theoretical basis, strengths and weaknesses of systems approaches and of the social and organisational environment that defines the problem context).</li><li>2. improvement (in whatever terms are seen relevant to the problem situation).</li><li>3. pluralism (using different systems approaches in combination).</li></ol> |
|--|

**Table 3.3:** The commitments of critical systems thinking

Mingers and Brocklesby (1997) identify three different types of problem associated with the employment of multi-methodology:

- (i) Philosophical – paradigm incommensurability.
- (ii) Cultural – the extent to which organisational and academic cultures militate against multi-paradigm work.
- (iii) Cognitive – the problems of an individual agent moving easily from one paradigm to another.

A broad concept of these problem headings is employed here to capture a brief discussion on some key issues surrounding multi-methodology and related features of relevance to this research.

### **(i) Multi-methodology and paradigm incommensurability**

The debate surrounding paradigm and ‘incommensurability’ has been a dominant theme in the development of multi-methodology. The sociological paradigm is essentially a way of viewing the world based upon a set of ideas, assumptions and beliefs (Jackson, 2003, p.37) presenting a view that “*reveals certain aspects but is completely blind to others*” (Mingers, 1997, p.9). Paradigms are therefore often considered to be irreconcilable or incommensurable.

Much of the debate surrounding paradigm incommensurability within organisational theory stems from Burrell and Morgan’s (1979) outline of four paradigms they claimed to be incommensurable due to the incompatibility of their underlying assumptions (functionalist, interpretive, radical humanist and radical structuralist). Differing views have been offered for addressing problem situations where different paradigms might be considered relevant and in employing systems approaches to secure improvement. Schultz and Hatch (1996) argue three alternative meta-theoretical positions for undertaking multi-paradigm research:

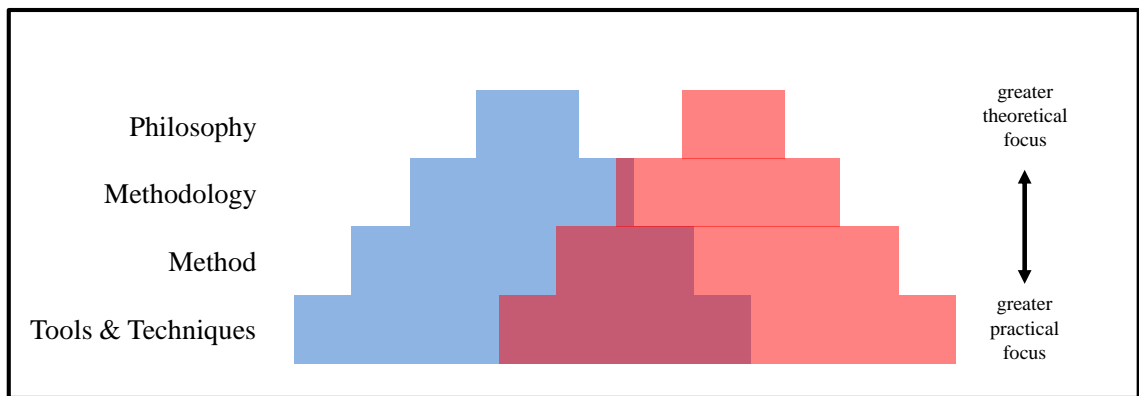
- (a) Paradigm incommensurability.
- (b) Paradigm integration.
- (c) Paradigm crossing.

The last of these is where most of the multi-paradigm research attention is focused, where an individual researcher engages different paradigms. Here, Schultz and Hatch suggest there are several strategies for crossing paradigms that might be applied, including:

- (a) Sequential – moving from one to another paradigm in turn.
- (b) Parallel – concurrently and on an equal basis but preserving the differences between paradigms.
- (c) Bridging – viewing boundaries between paradigms as more permeable and providing transition zones between paradigms.
- (d) Interplay – simultaneous recognition of contrasts and connections rather than differences between paradigms.

Pidd (2004) provides a similar representation, describing the relationship between soft and hard paradigms, identifying four alternative ways to view the situation, including: incommensurability; hard and soft feeding off each other; soft subsuming the hard; and soft and hard intertwined together.

Pollack (2006) presents an alternative way to view paradigms, rather than taken as consistent wholes, being viewed as comprising different layers, from theoretical to practical, of: philosophy; methodology; method; and tools and techniques as a hierarchical pyramid. Here, theory and practice feed off each other to differing extents at each layer and at the lower levels of the pyramid there is an increasing overlap of approaches that may be of relevance to different paradigms while accepting a separation at the philosophical level (Figure 3.3).



**Figure 3.3:** Areas of incommensurability and areas of ambiguity

Employing this lens reflects the view that the employment of tools, techniques and methods flexibly in the service of different paradigms at their more practical level is entirely feasible without the constraint of their theoretical underpinnings (Jackson, 2006). The need for further research has been recognised in testing the diversity of tools available in the service of different rationalities (Jackson, 2010, p.138).

Mingers (1997) describes eight different possibilities for combining methodologies in wholes and in parts from the same and different paradigms and a number of avenues for

multi-methodological development have emerged that take a different approach to handling multiple paradigms, including:

- (a) Multi-methodology (Mingers, 1997, 2006) – proposes critical realism as a new pluralist paradigm to encompass and synthesise the other paradigms, mapping management science methods to support different phases of an intervention (Mingers, 2006).
- (b) New paradigm (Midgley, 1997) – for an intervention a new paradigm is created and methods are selected for combination in an evolving process based upon a set of research questions.
- (c) Individual paradigm (Gregory, 1996) – seeks to recognise “*differences, otherness and alterity of alien paradigms or traditions*” (Gregory, 1996, p.623). Here the different perspectives are seen as supplementing one another and assisting in providing a richer understanding of the problem situation.
- (d) Virtual paradigms (Yolles, 1996) – where paradigm is seen as a group phenomenon operating within a culture of its own which “*will enable situations to be described in a way which is implicitly understood by the paradigmatic group from within its common culture .....it is a group affair rather than an individual one*” (Yolles, 1996, p.551).
- (e) Pragmatic pluralism (White and Taket, 1997; Taket and White, 2000) – taking a postmodern or poststructuralist position, mixing methods with incompatible ontological or epistemological assumptions does not present a problem as the question of how to accord precedence to any set of ontological/epistemological assumptions is regarded as unanswerable (Taket and White, 2000, p.71).
- (f) Critical systems practice (Jackson, 2003) – Based upon learning from early applications of Total Systems Intervention (Flood and Jackson, 1991) and other

multi-methodology theory and practice, critical systems practice emerged as a meta-methodology to support the flexible use of different methods, tools and techniques in combination to enrich insight into problem situations, accepting the four commonly held paradigms (section 3.2.3) as equal partners (Jackson, 2011); and able to accommodate further paradigms “*if they offer radically different ways of seeing and acting*” (Jackson, 2003, p.306).

- (g) Process-structures (Bowers, 2011) – Accepting paradigm incommensurability, this framework directs a multi-paradigmatic investigation by taking the four commonly held paradigms (section 3.2.3) in turn to encourage exploration of the problem situation from a variety of diverse perspectives and to critically reflect on the ‘big picture’ generated.

This list is in no way intended to represent a comprehensive catalogue of approaches to multi-methodology or imply a better or worse approach but aims to present an indication of the scope of the different perspectives in the field and some of the prominent features.

Some challenging questions have been raised regarding the value of paradigm based theorising (Zhu, 2011). The apparent feasibility of working successfully in different paradigms within interventions has been widely recognised in practice (Ormerod, 2001; Munro and Mingers, 2002; Pollack, 2009; Eden et al., 2009; Zhu, 2011). In one such practical example, Pollack (2009) describes the use of two forms of multi-methodology - one form that is applied in series and one that is applied in parallel, with the latter being considered to be of particular relevance in ‘wicked’ problem contexts (section 3.2.4). Pollack (2009, p.163) notes that paradigms should be understood independent of methodologies, tools and techniques and parallel employment provides the opportunity to adapt the paradigm applied in a situation independent of the technique in use at the time; thereby enabling flexibility in how the approaches are interpreted and deployed in response. Further, Pollack notes:

*“parallel multi-methodology seems suited to turbulent contexts, where it is not clear in advance when particular approaches will be needed, and where project phase changes are stimulated by a changing external context. This approach allows for a dynamic combination of paradigms and their associated methodologies, and is suitable for situations that can not be clearly planned prior to the project”* (Pollack, 2009, p.164).

In considering how best soft and hard modelling approaches might work together, rather than seeking ‘the truth’, it has been suggested that the journey of reflection upon practice might be more important than the destination (Pidd, 2004) and the combining of approaches from different traditions in practice rather than theory might be the best that can be achieved (Eden et al., 2009; Jackson, 2009) and a “practical middle ground” (Pidd, 2004) seems to exist. The practical employment of multi-methodology in actual problem situations and then reflecting upon their impact would appear to present a valid basis for action based learning about critical systems thinking in practice.

Despite the questions surrounding the value of paradigm theorising, it appears to be accepted that paradigms “have *done a significant service in enlarging the vision of the OR community*” (Zhu, 2011, p.795) and an awareness and consideration of their potential relevance should feature in any exploration of multi-methodology and maybe help to inform the debate further.

## **(ii) Culture**

Kotiadis and Mingers (2006) note in management science there are communities that appear more hard-OR focused as many working in the field emerge from a variety of positivist disciplines and this is likely to affect the nature of projects undertaken. Thompson and Purdy (2009) recognise a ‘deep structure’ that sustains an organisation’s self-definition, comprising of values, beliefs and practices that operate in the collective unconscious of the organisation and such cultural features are seen to limit the acceptance and sustainability of innovation. Given the strong cultural identity within the police service, such resistance to innovation is considered to present a particular

challenge to facilitators of systems thinking. Barton (2003) saw occupational culture as the most significant impediment to change in the police service, observing:

*“Recognising the complexity of policing it is understandable that given such a strong occupational culture, attempts to change the traditional ways of doing things is going to be difficult”.*

As resistance to change is seen as a significant factor influencing the successful employment of systems thinking in the police service, a change formula referred to throughout this research as the ‘Beckhard’ formula, offers a valuable mechanism for reflecting upon this challenge presented to the interventionist. Although Beckhard and Harris (1977, p.25) give the credit for the formula to David Gleicher, Beckhard and Harris (1977) provides a formal reference to its existence. In its original form the formula was presented as:

$$C = (ABD) > R$$

[change occurs when dissatisfaction with status quo X clear desired state X practical first steps to desired state > cost of change]

Dannemiller and Jacobs (1992) presented the change formula in its now more common form of:

$$DVF > R$$

[change occurs when dissatisfaction with organisational system X vision of organisational goals for the future X clear first steps towards the vision > resistance to change]

This change process is consistent with Kurt Lewin's (Lewin, 1958) three phases of change: present state; transition state; and desired state. Here, Lewin sees the two prerequisites for successful change from one state to another to be:

- A critical mass of information that justifies breaking from the status quo (the pain).
- Desirable, accessible actions that would solve the problem or take advantage of the opportunity afforded by the current situation (the remedy).

The remedy assumes a desired future state is identified and for prolonged change both elements must work together.

Although the formula has become associated with large group processes, Jacobs (1994, p.122) notes that the formula is applicable to any change and it is this view that is of particular interest within this research.

The police service is built upon a formally structured rank hierarchy through which police officers progress over the course of their careers, largely within the same organisation (Loveday et al., 2008). Officers work together in operational environments that may present danger as well as requiring utilisation of specialist skills that build a strong occupational culture (Turnbull, 1992). Whilst there has been a gradual introduction of more professional 'civilian' support over a number of years, the organisational leadership of the different police forces in the UK is largely dominated by police officers who have all passed through the ranks and undertaken similar development paths over their careers. The resultant organisational design presents strength in operational command and control and a cohesive sense of common purpose as well as a strong organisational culture.

Like many other organisations, the discipline of systems thinking has not been seen as a core capability in organisational development within the police service and where such roles exist, professionally competent facilitators of systems thinking have been employed as part of the civilian staff in police forces or hired on an ad-hoc consultancy basis. The limited exposure of police officers to a wider concept of multi-paradigm systems thinking has the potential to limit its understanding, cultural acceptance and



influence within police organisations, particularly where it is seen as an innovation or where it is introduced by facilitators who might be operating outside of the traditional occupational culture and with limited credibility. Successfully demonstrating the value of such approaches in supporting police managers' decision making is vital in overcoming any cultural barriers.

This lack of profile of systems thinking within the police service is consistent with the observations of Sodhi and Tang (2008) who note an unclear identity of OR/MS leading to poor levels of access at high levels. They also note a disconnect between research and practice, recommending a stronger connection with end users and more practice driven research to strengthen the researcher/practitioner/end user and educator/practitioner/end user links.

### **(iii) Facilitator of problem solving**

It should be noted that throughout the research the role of 'problem solver' will be referred to at different points as 'internal consultant', 'facilitator of CST', 'change agent' or 'interventionist' but all will relate to those individuals responsible for the deployment of systems thinking to support organisational change interventions.

Mingers and Brocklesby (1997) identify a challenge for an individual agent working between different paradigms and the skill, knowledge, personal style and experience this requires. Reflecting also on the previous discussion regarding 'culture', the position of the problem solver within the problem situation, their credibility and relationship with participants, their competency and the way they deploy the systems approaches will all have an influence on the success of an intervention.

Given the centrality of the facilitator of problem solving to this research, a brief review of facilitation is warranted at this point.

*"The concept of facilitation and facilitators is as old as the tribes. Alaskan natives report this kind of role in ancient times."* (Kaner et al, 1998, p.ix).

Meeting facilitation started to become more prominent as a formal process in the late 1960's and it is now a widely employed means of problem solving. It emerged from the practice of learning - facilitation, focused upon building awareness and enabling learning which was adopted in the business environment to help people work together more effectively to solve problems and take group decisions. The role of the task oriented facilitator evolved to serve these needs as well as the new approaches to organisational change and renewal that were developing in the late 1970's. (Kaner et al, 1998).

Carl Rogers was an eminent psychotherapist, who has been credited with the spread of professional counselling and psychotherapy beyond psychiatry and psychoanalysis to all the helping professions, including education. (Kirschenbaum and Henderson, 1989). Writing on "The interpersonal relationship in the facilitation of learning" in 1967, Rogers proposed the goal of education should be the facilitation of change and learning, with an emphasis on learning how to learn rather than being taught. Rogers believed:

*"Changingness, a reliance on process rather than upon static knowledge, is the only thing that makes any sense as a goal for education in the modern world."*

(Kirschenbaum and Henderson, 1989, p.304).

He saw an important feature in this process being the relationship between facilitator and learner and identified a set of facilitative attitudes to be necessary, including:

1. Realness in the facilitator on a personal level that allows them to share the same feelings as the group.
2. Prizing, acceptance and trust by the facilitator of the learner.
3. Empathetic understanding to see the world from others' viewpoints.

In the words of Rogers:

*“Those attitudes that appear effective in promoting learning can be described. First of all is a transparent realness in the facilitator, a willingness to be a person, to be and live the feelings and thoughts of the moment. When this realness includes a prizing, a caring, a trust and respect for the learner, the climate for learning is enhanced. When it includes a sensitive and accurate empathic listening, then indeed a freeing climate, stimulative of self-initiated learning and growth exists”.* (Kirschenbaum and Henderson, 1989, p.321).

Understanding the requirements for effective interventions when the targets are human social systems led Argyris (1970) to identify three primary tasks for interventionists as helping to secure:

1. Valid and useful information – regarding those factors and interrelationships that create a problem for the client.
2. Free Choice – by the client system as a whole to select the alternative with the highest probability of success.
3. Internal commitment – through choice that is internalised by each member to engender on-going ownership and monitoring.

These primary tasks became the core features of a model to improve organizational effectiveness through the enhancement of human activity, responsibility, self-actualisation and learning developed by Argyris and Schon (1974). Two models were identified to describe theories in use in organisational settings. In model 1, four governing variables were identified that actors try to satisfice (Argyris and Schon, 1974, p.66):

1. Define goals and try to achieve them.
2. Maximise winning / minimise losing.
3. Minimise generating or expressing negative feelings.
4. Be rational and objective, not emotional.

The associated action strategies in model 1 include:

1. Design and manage environment unilaterally (and use power to avoid redesign).
2. Own & control the task.
3. Unilaterally protect self.
4. Unilaterally protect others (withhold information, suppress emotions, give false sympathy etc.).

Where model 1 is evident there is little testing of the theory in use within decision making groups and this tends to result in a self-sealing process devoid of public challenge to underlying assumptions and thereby encouraging a 'business as usual' mentality. Model 1 is based upon a series of assumptions that encourage learning that preserves the governing variables and behaviours (single loop learning) which prevents people discovering its ineffectiveness and inhibits exploration of behaviour according to different assumptions (Argyris and Schon, 1974, p.80).

In contrast, model 2 is based upon Argyris' (1970) 3 primary tasks with associated action strategies:

1. Design an environment where participants can be origins and can experience high personal causation.
2. Task is controlled jointly.
3. Protection of self is a joint enterprise and oriented towards growth.
4. Bi-lateral protection of others.

In such an open environment where communication is directly observable rather than inferred, underlying assumptions can be explored, theories tested publically, double loop learning achieved and long run effectiveness increased (Argyris and Schon, 1974, p.87).

These early developments to help improve the learning environment provided the foundations upon which much of the current concept of facilitation and facilitator are based. A variety of models and methods have been developed to help the facilitator structure and effectively tackle a diversity of problem situations and it is not the

intention here to provide a comprehensive assessment of alternative facilitation models but it is worth briefly considering some examples to provide an idea of their nature.

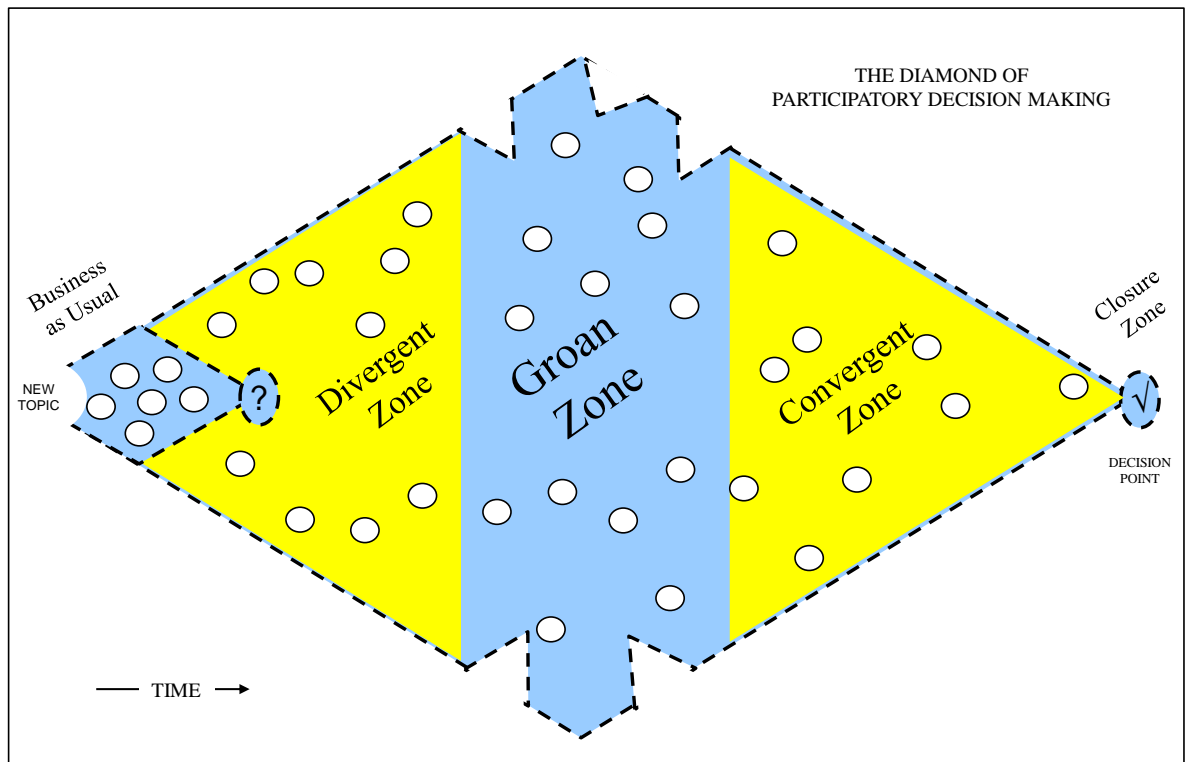
Heron (1989) identified six dimensions of facilitation - different basic issues in relation to which the facilitator can influence the learning process (planning, meaning, confronting, feeling, structuring and valuing); and three modes of facilitation - the different ways in which the facilitator can handle decision-making within each dimension (hierarchical, co-operative and autonomous). Heron stressed that an effective facilitator would be able to use all three modes within each of the six dimensions with flexibility of movement between each depending on the needs of the situation and group (Heron, 1989, p.17).

*“The effective facilitator, who wants to provide conditions for the development of autonomous learning, is one who can move swiftly and elegantly, as the context requires, between three political modes: making decisions for learners, making decisions with learners, and delegating decisions to learners.”* (Heron, 1989, p.10).

Considering Hackman’s (1987) three factors to contribute to group effectiveness of group process, group structure and organisational context, Schwarz (1994, p.21) developed another supporting framework. This took the form of a group effectiveness model for considering the facilitator’s role intervening through a group process and enabling the group to consider and change its process, structure and organisational context, supported by a variety of guidance and techniques for the facilitator to utilise.

The core foundations of thinking in relation to group learning facilitation can be seen within a variety of contemporary facilitation models. For example, employing Kaner et al’s (1998, p.20) model (Figure 3.4) the dynamics of decision making are seen to comprise of two sets of processes related to divergent and convergent thinking. During early rounds of thinking the tendency is to employ conventional thinking and cover familiar territory and at this point, if decisions are made, they tend to converge on familiar options, akin to Argyris and Schon’s (1974) ‘model 1’. Where the group is able to break out of the narrow band of familiar options and increase diversity of

thought and introduce new and challenging perspectives that uncover more effective outcomes, the group behaviour is more akin to Argyris and Schon's (1974) 'model 2'. Kaner et al's participatory decision making core values of full participation, mutual understanding, inclusive solutions and shared responsibility, owe much the early foundations of group learning facilitation.



**Figure 3.4:** Dynamics of group facilitation

More recently, developments in the field of large group processes (Bunker and Alban, 1997) have introduced approaches that facilitate participatory problem solving amongst groups of significant size and diversity and which are particularly relevant in multi-agency settings. Again, the core values of these processes are also seen to reflect many facets of the early developments of group learning facilitation and the importance of understanding the facilitator's role in the deployment of methods in multi-agency settings has been seen to be lacking in many approaches (Taket and White, 2000, p.57).

More specifically, in relation to the facilitation of systems thinking, following a 10 year research programme, Eden et al. (2009) identified the significance of leadership in the

successful facilitation of a wide ranging multi-method approach and the significant demands this places on managers and facilitators. They saw facilitators requiring a combination of skills and abilities to execute several roles, including soft skills, modelling skills and technology skills with a dynamically shifting emphasis as the intervention progresses. Similarly, Franco and Montibeller (2010), observe that since the 1980's the operational researcher has been required to perform the role of both analyst and facilitator to the client. Franco and Montibeller (2010) consider increasingly complex and strategic problem situations to be more suited to OR consultancy being deployed in a 'facilitated' mode rather than an 'expert' mode. Reflecting upon Eden et al. (2009), Jackson (2009), notes that leadership is crucial in conducting reflective conversations to switch between and explore paradigm diversity and that becoming multi-methodology literate requires a detailed understanding of the different philosophies underpinning the various management science approaches. Jackson (2009) considers there to be much for critical systems thinkers to learn about leadership and facilitation from Eden et al. (2009).

One further consideration that is warranted in this brief reflection on the role of the facilitator of CST and how systems approaches are employed, relates to the 'mode' of their deployment. Following more than 10 years of action research, Checkland and Scholes (1990) identified a 'spectrum' of applications of soft systems methodology (SSM), with at one extreme the 'mode 1' application - where a problem situation is investigated from the outside using SSM to structure the enquiry and at the other extreme the 'mode 2' application - where SSM is internalised by the problem solver and used to aid thinking about and making sense of events as they unfold from within the problem situation. Jackson (2003, pp.314-315), notes the lack of attention CSP has given to this aspect of systems thinking. There is limited evidence within academic journals specifically exploring the application of different modes of systems thinking other than that applied within SSM applications (Checkland and Scholes, 1990; Gold, 2001).

### 3.3 Potential for the development of systems thinking

It is not the purpose of this research to debate the variety or relevance of different paradigms in the development of systems thinking. The researcher has accepted from documented evidence that different and potentially incompatible paradigms might be perceived to varying degrees within problem situations and that employing combinations of approaches with strength in different paradigms is an acceptable means of addressing such situations. This research might instead seek to focus on:

- (i) The flexible deployment of combinations of systems approaches in series and parallel that support effective problem solving in practice and that have been shown to be of particular value within wicked problem contexts as noted in sections 3.2.4 and 3.2.5. Considering the experience elsewhere (section 3.2.5), reflecting upon the impact of such critical systems thinking in practice would appear to present a valid basis for learning through action research.
- (ii) Critical systems practice as an approach that has evolved through the experience gained from practical applications of CST would appear to offer consistency with the emerging aspirations of this research. Avenues for developing practice in relation to CST have been identified in relation to the development of an appreciation of the impact of different modes of the application (Jackson, 2003, pp.314-315) and in testing the diversity of tools available in the service of different rationalities (Jackson, 2010, p.138).
- (iii) The influence of organisational culture upon the deployment of multi-methodology and the credibility of facilitators of CST are also recognised as potential barriers (Mingers and Brocklesby, 1997; Kotiadis and Mingers, 2006). Such cultural issues are seen to prevail within the police service (Barton, 2003; Loveday et al., 2008) and resistance to change of particular relevance to the interventionist (Thompson and Purdy, 2009; Beckhard and Harris, 1977). Such barriers are seen to be heightened by a disconnect between research and practice, requiring a stronger connection with end users and there has been a call for more practice driven research in this regard (Sodhi and Tang, 2008).



- (iv) The practitioner of multi-methodology is seen to hold a ‘pivotal role’ (Mingers and Brocklesby, 1997, p.506), requiring appropriate skills, knowledge, personal style and experience and the importance of leadership in the facilitation process in the successful deployment of CST has been recognised (Eden et al., 2009; Jackson, 2009). Further, the understanding of the facilitator’s role in the deployment of systems approaches has been noted to be lacking in methods employed in multi-agency settings (Taket and White, 2000). This has led to the identification of requirements for further research into facilitation leadership, cognitive and cultural obstacles to the deployment of multi-methodology (Mingers and Brocklesby, 1997, p.507; Taket and White, 2000; Jackson, 2010).

Having reflected here upon the development of systems thinking from a theoretical perspective, areas with potential for further exploration have been identified. However, before these are taken forward, a reflection upon the application of systems thinking within the policing and community safety sector is seen as a valuable means of recognising potential for further exploration from more of a practical perspective.

## **3.4 The application of systems thinking in policing and community safety**

The employment of systems thinking is evident within the policing and community safety business sector though its area of application and prominence is varied and often confined to 'hard' systems approaches. This section will provide an overview of typical applications of systems thinking to gain an appreciation of its prominence and form within policing and community safety. It is structured upon the four orientations introduced in section 3.2.3, that are considered to reflect the most common situations faced by managers (Jackson, 2003) and gathered from published evidence to provide a broad indication of the prominence of systems thinking rather than a comprehensive catalogue.

### **3.4.1 Type A – Improving goal seeking and viability**

#### **(i) Hard systems thinking**

##### **(a) Mathematical modelling – resource deployment**

Some of the earliest examples of the application of systems thinking within policing and community safety relate to the application of mathematical modelling to support deployment decisions. Early examples of the application of HST are typified by the work undertaken by the RAND Institute with the New York Police Department where queuing models and linear programming were employed to support the scheduling of patrol vehicles in order to maintain service standards at different times of day and to achieve efficiency in the use of resources (Kolesar et al., 1975). Queuing models have been used for identifying shift patterns, determining the number and nature of beats and then evaluating their impact on performance (Kwak, 1984). This type of model not only provides a means of identifying efficient allocation of resources but also enables managers to consider alternative deployment policies, for example double and single crewing of patrol vehicles, affecting the availability of vehicles to dispatch to incidents (Green, 1984; Chelst, 1981). Manpower management has also benefited from the

application of probabilistic modelling to help understand staff service expectations and wastage of resources over time using Markov models (Leeson, 1981).

**(b) Mathematical modelling - efficiency of policing activity**

It has long been an interest of government to be able to measure the value of their policing investments in terms of the impact upon crime problems and the relative efficiency of police organisations. This has been demonstrated in successive Comprehensive Spending Reviews and in the aborted statutory Best Value duty placed upon police authorities (Boyne, 1999). The economic impact of crime has also been the subject of a number of studies (Home Office, 2005b) but the main attention of modellers has related to establishing relative efficiency of service delivery units.

Historically the police have allocated resources in line with their operational requirements – “*with most resources being distributed in response to demand, and on the basis of the likelihood of success rather than cost*” (Stockdale et al., 1999). With demands for greater transparency and to demonstrate value for money, police forces have increasingly needed to analyse the impact of different courses of action in terms of the cost of their inputs and evaluation of the resultant outputs, particularly in terms of monetary value. Various approaches have been employed, such as cost effectiveness analysis that relates outputs of activity to the costs of achieving these, comparing options on the basis of the input costs per unit of output. The potential to employ more sophisticated systems approaches in this area has been explored, typically through use of Data Envelopment Analysis (DEA). In 2000 the ‘Spottiswoode Report’ (Public Services Productivity Panel, 2000a) offered the government a means of assessing the relative efficiency of the police service through the modelling techniques of Stochastic Frontier Analysis (SFA) and DEA. The Spottiswoode work built upon earlier experience of the application of DEA in support of an Audit Commission study on crime management (Thanassoulis, 1995). This study had applied DEA at a police force level to help the Audit Commission identify “good” forces. Here the use of DEA was seen as a tool to corroborate a more extensive use of ‘simpler’ analyses such as regression.

Although some pilot activity to further test these approaches was undertaken, no formal adoption of the techniques within the service followed. Stone (2002) in his article entitled “Can Public Service Efficiency Measurement be a Useful Tool of Government? The Lesson of the Spottiswoode Report” concluded that:

*“..the (Spottiswoode) report went down something of a technical cul-de-sac and that in doing so neglected alternative approaches. Whether or not there is any way of usefully aggregating performance measures into ranking of police forces that would serve the overall public interest is a question yet to be resolved.”* Stone (2002, p.38).

And it still is today.

Having decided not to adopt the Spottiswoode approach the government has pursued alternative, less technically complex, means of comparing relative efficiency of police forces in terms of selected performance variables. In early 2003 the Home Office published one such approach in the form of ‘Performance Radars’ which plot performance along one of five axes on a diagram, to provide a means of visualization of aggregate performance for a force that can be compared with its most similar forces elsewhere in England and Wales. The attempts to introduce ‘simpler’ comparisons of performance are not without their own limitations and have been considered to produce misleading assessments of police performance (Drake and Simper, 2005).

As outlined in the previous chapter, value for money and the reduction of bureaucracy continue to dominate the police service agenda (Berry, 2009a, 2009b) and there is little sign that the demand for analytical support in this regard will decline.

### **(c) Discrete event simulation modelling**

One of the most widely used HST systems modelling approaches employed within the police service is that of discrete event simulation. Almost all of the 43 police forces in England and Wales have employed this modelling approach in one form or another and there is evidence of the application of simulation modelling in the police service over 30 years ago when simulation was seen as an expensive but valuable means of testing the

validity in the real world of the preferred ‘simple analytic models’ (Ignall et al., 1978), such as the queuing models described earlier.

During the 1990’s developments in the field of computer based modelling software, in particular visual interactive modelling (VIM) has made this type of technique much more accessible to practitioners and this together with the nature of policing processes and the ready availability of data has contributed to the significant growth of its application within police forces over this decade. The processes of call management (Günal et al., 2008), emergency resource deployment, forensic support and custody management (Greasley, 2001) have all featured prominently though practically all aspects of service have been touched in one form or another.

An interesting recent development in this field took place in 2002 when the Home Office and the Association of Chief Police Officers sponsored the development of a simulation model for the end-to-end forensic identification process. The resultant model, known as the Scientific Work Improvement Model (SWIM), became a generic application for deployment in 41 out of 43 police forces in England and Wales for forensic process optimisation where it is claimed to have secured significant efficiency and performance improvement in the field of forensic support (Police Review, 2007). Generic models to make the simulation modelling of core policing functions more accessible are becoming more prevalent. (‘PRISM’ (Lanner, 2011), presents just one example of this).

Simulation has also been seen as a suitable partner to other systems methods and techniques. As discrete event simulation is concerned with the modelling of systems that can be represented by a series of events, process modelling is the ideal prerequisite to its use (Greasley, 2006).

#### **(d) Crime network and offender modelling**

Analytical systems approaches also offer valuable means of developing a better understanding of often complex patterns of offending for both discrete operational and strategic management purposes. In terms of operational applications, one of the most

extensively used is that of intelligence analysis where information related to a policing situation is captured, linked and interpreted. A system known as ANACAPA has been employed since the 1960's to analyse intelligence (Grover, 2000). Originally a paper based system of information analysis employing visual mapping of relationships and association matrices, since the widespread availability of computers these techniques have become more accessible and powerful. Social and behavioural science has been employed by criminologists in an extension to relational analysis in what has become known as social network analysis (SNA). SNA has been successfully employed in the analysis of organised crime networks but its full potential might still to be realised as part of standard policing practice (Coles, 2001). Although applied in this way they are aimed at addressing specific operational issues, they can also be used to identify patterns in networks that might improve a more strategic understanding of underlying behaviour and address problems of greater complexity.

A range of mathematical modelling approaches have featured in exercises to gain insights that could support management policy. Game theory has been utilised to explore the dynamics of crime and how certain policy decisions might trigger unintended consequences (Cressman et al., 1998) and mathematical modelling has also been used to project criminal careers and the potential impact of incarceration (Blumstein, 2007).

Recognising the importance of improving understanding in the evolution of crime and offending, a study by the Research, Development and Statistics Directorate of the Home Office in 2003 attempted to bring together a range of innovative practices to stimulate expert debate regarding their usefulness in policy making (Home Office, 2003). The study concluded that there is still much development potential in modelling the causes and patterns of crime in order to shape criminal justice policy and elaborate HST continues to support this exploration (Curtin et al., 2010; Porter, 2011).

## (ii) Lean systems

The prominence of ‘lean thinking’ has grown in the police service over the past few years as it has become more accessible to the service sector. The early development of lean thinking has been credited to Taachi Ohno of Toyota who developed the Toyota Production System (Ohno, 1988) between 1948 and 1975. The key feature of lean is the delivery of what matters to the customer in the most efficient way.

Although there are variations, the main steps of lean include:

- **Specify value** from the customer’s perspective.
- Identify the steps across the whole **value stream** (process) and remove waste.
- Design the new value stream so that the activities that create value **flow**.
- Work is **pulled** through the system in accordance with customer demand.
- Continually strive for **perfection**.

The principles of lean can be readily deployed in a variety of ways, including socio-technical approaches (section 3.4.1, (iii)) and through the application of a range of methods and tools such as statistical process control, value stream maps, six sigma, and ‘Total Quality Management’ concepts (Ahire, 1997).

There are numerous examples of the use of lean approaches within the police service, such as the Local Criminal Justice Boards in Grampian and West Lothian who have used lean to improve their summary justice system (Vanguard, 2006). However, the momentum to employ lean process improvement within the police service has grown significantly over recent years following the Home Office sponsorship of a lean process improvement methodology entitled QUEST that they developed and piloted in the service (see Chapter 7). Following the initial success of the pilots the NPIA built national and regional networks of ‘continuous improvement’ practitioners to encourage the sharing and development of lean thinking within the service and developed methodologies, tools and techniques and disseminated these through formal training programmes in order to improve policing efficiency (NPIA, 2011). There are now a

variety of lean approaches deployed across the service, supported both by external consultants and by police forces' own staff.

### **(iii) Socio-technical systems design**

Socio-technical systems design is an approach to organisational design that recognises the importance of its social and technical features, their interconnectedness and the need for their joint optimisation. It emerged during the 1960's through the work of Eric Trist, Ken Bamforth and Fred Emery, who were working as consultants at the Tavistock Institute in London (Pasmore, 1988). The underpinning principles including the importance of democracy, minimum critical specifications, boundary recognition and multi-functionality were developed through a programme of action research. STS recognises the importance of involving in change those affected by systems design and a number of approaches to its deployment, including some process improvement methodologies, place a great emphasis upon the involvement of workforce. West Yorkshire Police initiated a programme of cross functional process improvement in 1995 which applied a socio-technical model of change to a number of its core processes (Mumford, 1999, pp.63-67). The methodology drew upon a range of systems approaches including Future Search (Weisbord and Janoff, 1995) and The Conference Model (Axelrod, 1999) to support the core process improvement methodology (Rummler and Brache, 1995) and found great benefit in extending the approaches with large groups of the workforce (Mumford, 2003, pp.203-206).

### **(iv) System dynamics**

Staying within the 'unitary' dimension of the SOSM but now clearly shifting focus onto areas of significant complexity, where underlying problem structures and interrelationships between components are not as explicit, we move on to look at the use of system dynamics (Forrester, 1961), examples of which can be found in many facets of the criminal justice system. However, in the main these applications have been made by 'external' policy makers and academics rather than by policing and community



safety agencies themselves. Three typical groups of system dynamics applications include:

- (a) Inter-agency criminal justice policy.
- (b) Dynamic modelling of drug problems.
- (c) Performance and strategy management.

**(a) Inter-agency criminal justice policy**

One of the most significant examples of inter-agency modelling was a project to construct a model of the criminal justice system in England and Wales using a system dynamics model (Boyle et al., 2006). The model was used to test alternative policies to determine the impact on different, mutually dependent government departments whose decisions could affect each other. A model of the whole criminal justice system was developed to help determine capacity issues, costs and bottlenecks in the flow of individuals through the criminal justice system. The model provided a practical means of enabling policy makers to understand the impact of their decisions and promoted co-operation between departments, providing data to support HM Treasury's spending review.

A number of system dynamic applications targeted upon the prison service outside of the UK have been undertaken (McCold, 1993; Lee, 1981; Bernstein, 1998; Hernandez, 2001). These projects have explored the key influences on prison populations and the impact of policies such as those related to offender rehabilitation, length of sentence and resource levels. The challenge of understanding the wider criminal justice process as a whole system is something that remains high on the political agenda today and 'Integrated Offender Management' across all partner agencies is something that will be returned to in Chapter 6.

**(b) Dynamic modelling of drug problems**

The field of drug use has provided a rich source for modelling applications over a number of years. One of the most extensive texts on this subject is an early study by Levin, Roberts and Hirsch (Levin et al., 1975) where system dynamics was used to

build a computer model of heroin addiction and the crime it is associated with. The computer models were then used to generate alternative 25-year futures predicting outcomes using different assumptions under various policies. Although over 30 years old, the models and learning from the study are just as relevant for understanding the drugs problems of today. The UK government has built upon this early work in their ‘Drug Futures 2025?’ research (Office of Science and Technology, 2005). Part of this initiative utilised a system dynamics model of the transmission of hepatitis C among intravenous drug users. The model explores the probability of infection through sharing syringes to improve understanding around the impact of interventions and which specific groups should be targeted.

### **(c) Performance management**

The balanced scorecard has been widely utilised as a strategic management system in many business sectors, with the aim of enabling organisations to manage their strategy and operations over the longer term (Kaplan and Norton, 1996). Its use requires the linking of organisational activity to support the achievement of corporate aspirations and establishing a sufficient and balanced set of lead and lag measures to inform strategic management. By seeking to model the linkage between cause and effect in performance variables the approach has utilised system dynamics modelling and influence mapping (Wolstenholme, 1998). The approach has been implemented in a number of police Forces in recent years, typically by Dumfries and Galloway Constabulary in Scotland where it was used as part of a strategic policing initiative (Wisniewski and Dickson, 2001).

More recently, attempts have been made to employ alternative systems approaches to better understand the interconnections between cause and effect in achieving performance outcomes. One police force has employed system dynamics as a means of studying the complex feedback system of interconnected performance variables where objects interact with one another in a series of cause–effect relationships (Newsome, 2008). System dynamics was employed in this way by West Yorkshire Police to model the basic structure of the policing system as they saw it in order to help them understand the behaviour it can produce over time and the impact this has on performance

outcomes. Assisted by causal loop diagrams, senior managers were able to develop resourcing policies that recognised the unintended consequences of simply chasing crime targets. The tension between the supply of police officers and the demands placed on those officers was also the subject of a study by Howick and Eden (2011) who describe an intervention to support strategic conversations among senior police leaders through the development of quantitative system dynamics models.

#### **(v) Organizational cybernetics**

The operating environment in which policing and community safety finds itself means that organisational structures are continually under review. Very often the restructuring processes are largely shaped by ‘professional judgement’ and do not benefit from the support of formal systems thinking. However, this is not always the case and Stafford Beer’s viable systems model (Beer, 1972, 1985) has been found to offer an effective means of applying systems thinking within the police service to better understand viable organisational design, the necessary structures and interrelationships between organisational components and with their environment (Bond, 1988). Bond’s study noted a lack of systems thinking in police organisation design, finding that police management use relatively simple models of police organisation which do not account for environmental complexity:

*“Policing is an activity of great complexity in an age of complexity. Little is known of the organisational models used by police management. Little is also known of the basis upon which police managers make organisational decisions”, (Bond, 1988).*

There are other examples of the application of the VSM in the design of police organisational structures, most recently Brocklesby (2012) who applied VSM to the complex problem of transnational organised crime. Focussing on multiagency collaborative arrangements, the paper identifies a need for more informed debate that can account for the complexity of the challenge and points towards more holistic and integrated solutions through utilisation of the VSM to recognise the complex agency structures at multiple organisational levels.

### **3.4.2 Type B – Exploring purposes**

In 1992, SSM was used to inform the restructuring of the West Yorkshire Police force through the development of a primary task conceptual model derived from a series of root definitions provided by key stakeholders, (Wilson, 2001). The resultant models provided a comprehensive analysis of the activities necessary to fulfil the force's new purpose and were used to ensure all aspects of service provision were considered in the restructuring.

SSM's role as a supporting methodology, particularly in the field of information systems design, is also seen in the policing and community safety sector. SSM was used to analyse a call handling function of the Metropolitan Police as part of a multi-methodological approach (Rowe, 2002). Here SSM was used to structure the intervention and the resultant policy changes led to an improved performance and consistency of operation.

A contrasting application of SSM in the police service is described by Lea et al. (Lea et al., 1998) where SSM was used to reflect upon and diagnose the Hillsborough Disaster, being seen as an appropriate methodology for accommodating the divergent human opinions and attitudes that dominated this problem situation.

A further example of SSM within this sector also emerged from the application of CST in developing a multi-agency counselling service to be employed in the event of a disaster in a study undertaken by Gregory and Midgley (2000). Within this study a version of SSM was developed and applied within a series of workshops with partner agencies to help them work together to plan services.

### **3.4.3 Types C and D – Ensuring fairness and promoting diversity**

There is less evidence in published material regarding the application of systems approaches to deal with coercive situations within the policing and community safety

sector. Evans (2007) documents several examples of the use of open space technology (Owen, 1997) and critical systems heuristics (Ulrich, 1983) within Hertfordshire Police to support internal consultation processes and information sharing between emergency service partners.

The growing interest in the provision of community safety in partnership presents a challenge to systems practitioners with the potential to increase the prevalence of these types of problem contexts. A number of government reports have studied the structures and organisational arrangements for the local delivery of crime prevention, providing guidance for adoption locally in community safety partnerships (Liddle and Gelsthorpe, 1994(a), 1994(b), 1994(c); Home Office (2003)). Although it is accepted that partnership working offers significant benefit, there are many potential barriers to success and the guidance available largely focuses on individual aspects of the partnership rather than taking a holistic view to support joint working and problem solving and overcoming barriers to the achievement of joint responsibilities.

Despite limited published material there is evidence of practice in employing innovative systems thinking to support more complex and coercive situations within policing and community safety outside of formal publication. For example, an exploration of alternative strategies for supporting collaboration and bridging organisational cultures featured in September 2009 within the Operational Research Society Conference, Criminal Justice stream presentations (ORS, 2009).

#### **3.4.4 Multi-methodology**

Although there are examples of systems methodologies and techniques being used in combination, a special case of this pluralism is seen in the application of total systems intervention (Flood and Jackson, 1991) which is a formal meta-methodology for the considered application of systems methodologies in combination. There are several examples of TSI being employed in the police service, for example within North Yorkshire Police during the 1990s (Green, 1992; Green, 1993; Ellis, 2002). One of these interventions was used to develop a corporate strategic planning process involving

relevant stakeholders where the application of TSI led to the application of the VSM and interactive planning in combination (Jackson, 2003).

More recently Kinloch et al. (2009) developed a generic framework combining SSM and VSM to assist information system planning and integration with spatial analysis capabilities of a geographical information system. The implementation of this approach within a UK police Force resulted in an enhanced information provision which contributed to its investigative processes and performance monitoring mechanisms.

### **3.4.5 Unpublished evidence**

Sections 3.4.1 to 3.4.4 include evidence of the variety of systems thinking within the policing and community safety sector, from its roots in HST there appears to be a gradual growth in the application of systems approaches to address problem contexts of greater complexity and plurality. Although this evidence is limited within published material, systems thinking capabilities might actually be more widespread than it appears from these sources as practitioners may not always be motivated to publish their applications. The prevalence of practical application examples included in the OR Society conference streams and special interest group activities as well as within the police service continuous improvement networks would probably confirm this. A dedicated criminal justice stream has featured in each of the past seven years of OR Society annual conferences; an OR Society criminal justice special interest group has met regularly over the past six years to share examples of practical applications; and police service specific networks, such as the POLKA (Police On Line Knowledge Area) continuous improvement community which has facilitated the sharing of practical applications of improvement activity, including examples of systems approaches such as lean, over the past two years.

### **3.5 Potential for development of systems thinking within policing and community safety**

The researcher's position as a systems thinker and facilitator of problem solving within a large police force has enabled reflection upon the practical application of approaches to the improvement of services over a twenty year period. This experience has led the researcher to seek an improved understanding of the nature and impact of different approaches to problem solving and in particular the employment of systems thinking and operational research. The continued outward predominance of HST and other unitary approaches in this sector evidenced in the literature review resonates with the researcher's own experience. This predominance is influenced in part by the regulatory and governance arrangements surrounding the strategic management of public services which necessitates and encourages the application of such approaches through the pursuit of greater efficiency. In common with other sectors, there seems to be a greater degree of interest in applying approaches for the purpose of prediction and control rather than improving understanding and organisational learning (de Geus, 1994). This has been apparent over recent years in the central government's interest in and advocacy of selected systems approaches to be applied locally, such as the support for the use of simulation and lean process improvement in the police service, mirroring the experience of other public services (Jackson et al., 2008). Although the emphasis is now extending beyond HST, the majority of approaches employed tend to reflect in the main a unitary philosophy.

As outlined in Chapter 2, the business context for the emergency services and public service generally has been changing to one where problem situations are becoming more complex and plural in nature, typified by the growing importance of 'non-emergency' services delivered in partnership with other agencies that recognise the importance of diverse customer needs, such as the widespread adoption of integrated offender management (sections 2.2 and 6.2). The aspiration for an increasingly inclusive approach to complex problem solving can take much from the field of systems thinking, which for some time has recognised and responded to the emergence of such challenges. Ackoff (1974, p.137) observed the predominant attitude towards the crime

problem in the 1970's as 'reactivist' and he contrasts this with "preactivists and interactivists (who) believe that crime is a joint product of the individual and society". This view of the crime problem context is clearly now more prevalent, where solutions are not seen to be solely the responsibility of the police service.

As the types of problem to be addressed have evolved there appear to be an increasing number that are complex and plural in nature and that might be considered to be characterised as 'wicked' problems (section 3.2.4) where police managers are increasingly required to respond to high variety problem contexts. The pre-eminence of traditional, low variety problem solving approaches such as HST, has led the researcher to question whether the approaches traditionally used to help managers in this new environment are still sufficient. The researcher has noted developments in the field of systems thinking as providing a theoretical framework for reflection upon the challenge being faced within the sector and the potential for coupling this with the practical research platform presented by prevailing problem situations encountered by the researcher.

Reflecting upon the theoretical developments summarised in section 3.3, the researcher recognises the variety in systems thinking and the perceived strengths and weaknesses of alternative approaches and considers that the prevailing complex and diverse operating environment must be matched by variety in the spectrum of approaches employed in response and in the manner of their facilitation. A research platform that enables the exploration and derivation of learning from such a variety of relevant perspectives is seen as an important theoretical determinant of the research design. However, recognising a limitation upon his ability to fully control the nature of problem situations encountered and in recognising the practical constraints on the form of the resultant interventions, the researcher considers a careful balance must be struck between practical and theoretical aspirations to facilitate the selection of a series of interventions that inform an evolving learning process. The researcher's boundary judgements, consistent with Ulrich's (1983) boundary issues, have necessitated a balance between:



- The overarching motivation for the research.
- The preferences of those in positions of power (e.g. organisational leadership).
- The limitations and opportunities presented by available expertise.
- The needs of affected stakeholders.
- Theoretical rigour and practical value.

Recognising this careful balance, an appropriate research design can be derived that exploits the potential for development of systems thinking within policing and community safety. A more detailed description of the resultant research programme features in Chapter 4.

### **3.6 Conclusion**

Based upon the literature review of systems thinking in policing contexts described in section 3.4, there is considerable evidence within the policing and community safety sector of effective employment of HST as well as some evidence of approaches to tackle greater complexity such as system dynamics or viable systems modelling. Although there is evidence of application within more plural contexts, this is limited and there is less documented evidence of the employment of approaches with strength in coercive contexts or in the use of multi-methodology. A more comprehensive analysis of relevant publications was undertaken by Simpson and Hancock (2009), who reviewed 50 years of OR in emergency response, categorising the type of methodologies employed. Although this analysis included all emergency services, the small proportion of applications employing ‘soft’ methodologies amounting to just 3%, implies a disproportionately high utilisation of methodologies with strength in the unitary SOSM domain and this seems to mirror the experience of the policing and community safety sector.

Reflecting upon Chapter 2, the policing problem environment has become accepted as one of greater plurality and complexity or one which might be considered to be more 'wicked'. Considering the developments in systems thinking that have been identified in this chapter, leading to the introduction of approaches that might possess strength in complex and plural situations, there is little evidence that systems approaches deployed in the sector have developed at the same pace.

The emphasis placed upon systems approaches that might not possess the strength to address the new environment of policing and community safety problems not only runs the risk of failing to tackle problems effectively but also undermines the value of systems thinking in the eyes of stakeholders. Further, it compounds the limited understanding of alternative systems thinking approaches within the sector and reduces the motivation to build the necessary capability locally to view problem situations from a number of perspectives, supported by a wider variety of systems approaches. This situation presents a challenge to the business sector and systems thinkers in terms of improving the application of systems thinking in the policing and community safety sector to better meet the requirements of the new operating environment. To help respond to this challenge, there is a need to learn whether some combinations of systems approaches and means of deployment within the sector are more effective than others and understand why this is the case in order to improve future application in new contexts. This will require consideration of the practical combinations of approaches themselves, those involved in their deployment and the organisational situation in which they are being applied in order to better understand the impact of contextual issues, such as organisational culture as identified in Chapter 2.

Systems thinking has evolved in response to changing environmental requirements and through reflection upon its application in practice. The exploration of systems thinking, in particular CST, included earlier in this chapter has identified some areas with potential for further development (outlined in section 3.3), in summary comprising:

- (i) Exploring further the practical feasibility of responding to multiple paradigm diversity in problem situations through the employment of multi-methodology in series and parallel that supports effective problem solving in practice and in testing the diversity of tools available in the service of different rationalities (section 3.3, (i) and (ii)).
- (ii) Developing an appreciation of the impact of different modes for the application of CST (section 3.3, (ii)).
- (iii) Understanding the influence of organisational culture and the credibility of facilitators upon the successful deployment of CST (section 3.3, (iii)).
- (iv) Exploration of skills, knowledge, personal style, experience and the importance of leadership in the facilitation process in the successful deployment of CST (section 3.3, (iv)).

And there has been a call for more practice driven research with a particular emphasis upon these areas (section 3.3 (iii)).

This situation presents a potential co-evolutionary research agenda with consistency between the prevailing needs of the business sector as well as the potential to create learning within the field of CST. The opportunity to address real life problems and produce learning for both practitioners in the sector and for systems thinking more widely forms part of the research design to be considered in the next chapter.

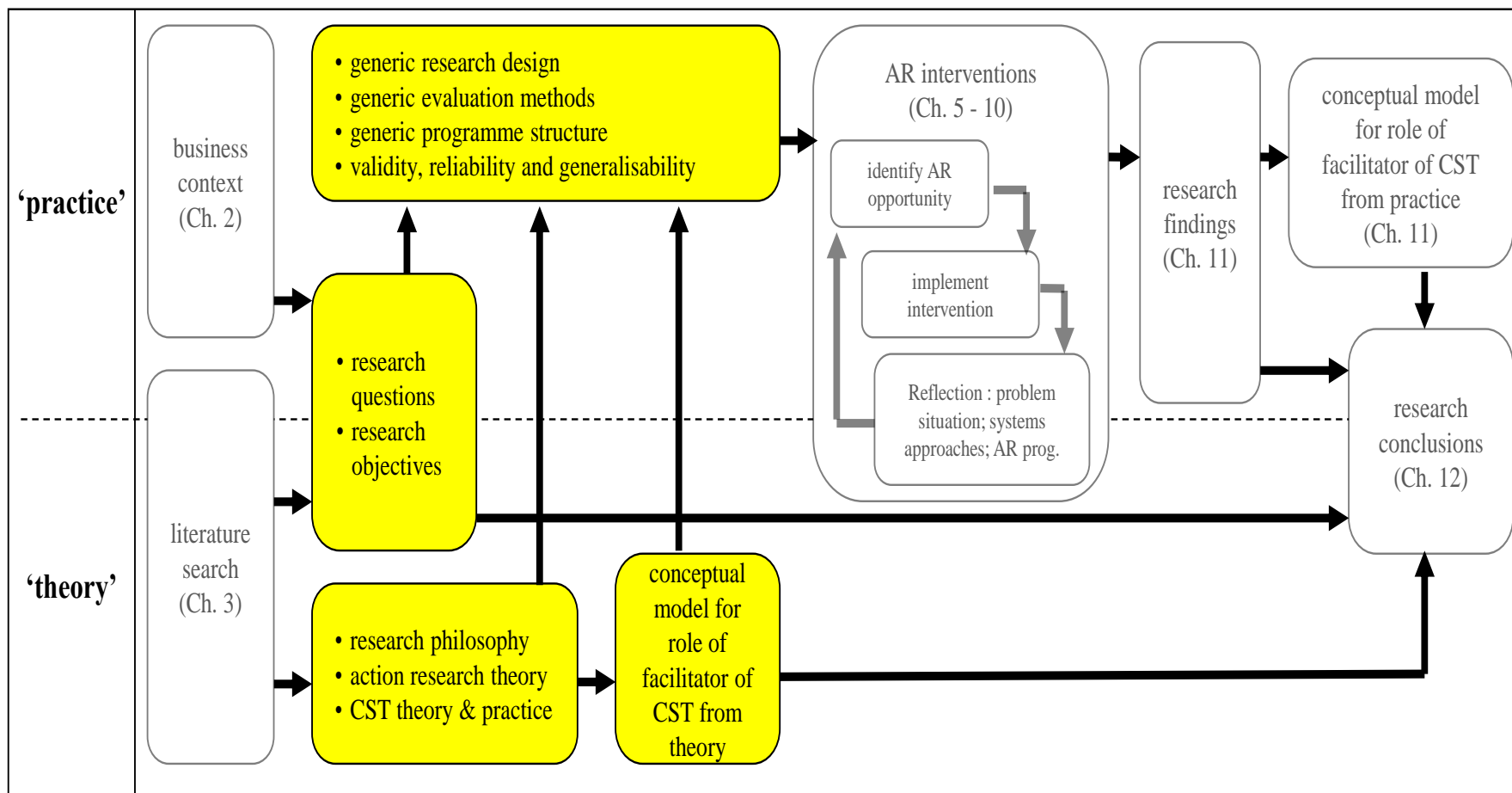
# Chapter 4: Research Methodology

## 4.1 Introduction

This chapter aims to reflect upon the challenges captured by Saunders et al (2003) in responding to the practical and theoretical observations noted in the previous chapters to construct and justify a research design that forms a robust basis for this study.

Drawing upon the review of the business context (Chapter 2) and relevant literature (Chapter 3), a number of influential theoretical and practical elements have been identified which provide a basis for exploratory research in this field. These strands of context, summarised in the concluding section of Chapter 3, are drawn together in this chapter with reference to research philosophy, action research theory, CST theory and practice, along with a reflection upon the role of the facilitator of CST derived from relevant theory, to shape a research purpose, design and programme of interventions. The series of action research interventions within this programme separately identify a range of findings relevant to the research objectives and these are analysed in turn in each of the Chapters 5 to 10. A synthesis of these findings is then undertaken in Chapter 11 through a clustering of all intervention findings to identify new insights and to inform a reflection upon the role of the facilitator of CST from a practical perspective, as well as identifying the salient features of the research to inform a reflection upon the original research questions and objectives in Chapter 12.

This research process is summarised in Figure 4.1, which shows how relevant theoretical and practical components are integrated into the study design. Those components specifically related to the research methodology design are highlighted in Figure 4.1 and these are the subject of a more detailed description in the remaining sections of this chapter.



**Figure 4.1:** Research process

## **4.2 Research questions and objectives**

Chapter 2 outlined the prevailing policing environment, typified by a series of challenges that demonstrate a heightened complexity and plurality of context, as shown in Table 2.1. Drawing upon the conclusion of Chapter 3, a co-evolutionary research agenda was proposed with consistency between the interests of the business sector and the field of CST. From these contextual analyses a set of five practical and theoretical research questions have been identified along with a set of associated research objectives to provide a basis for the research design and these are presented in Table 4.1.

**Table 4.1:** Research questions and linked objectives

Context	Research Questions	Linked Research Objectives
<p>The challenge presented by the current operating environment (Chapter 2) and the limited evidence for the application of critical systems thinking within the business sector (section 3.4). In order to improve future application in new contexts consideration of the practical combinations of approaches themselves, those involved in their deployment and the organisational situation in which they are being applied will all be relevant.</p>	<p>1. Can the application of critical systems thinking improve the success of joint problem solving within the policing and community safety sector?</p>	<p>1. Determine whether the application of critical systems thinking can bring about significant improvement in the effectiveness of joint service provision and its management.</p>
	<p>2. Are there combinations of systems methodologies, methods and techniques that are found to be particularly successful in meeting the challenges of service improvement, identifying the features that are influential in effective engagement of stakeholders and actors in joint service improvement interventions?</p>	<p>2. Identify and implement practical and informed combinations of systems approaches that help policing service stakeholders fulfil their purposes in relation to joint problem solving. 3. Determine the features of approaches that are found to be influential in successfully supporting multi-paradigm problem solving, recognising contextual factors that might affect transferability.</p>
<p>Chapter 3 proposed that this research might focus on the deployment of combinations of systems approaches in series and parallel that support effective problem solving in practice through an action research programme. The exploration of systems thinking identified some areas for development where there has been a call for more practice driven research (section 3.6), comprising:</p> <p>(i) Exploration of skills, knowledge, personal style, experience and the importance of leadership in the facilitation process in the</p>	<p>3. How do these systems interventions address the challenge of handling the multiple philosophical assumptions (paradigms) that underpin the problem situations and systems approaches employed?</p>	
	<p>4. What is the influence of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of</p>	<p>4. Determine the impact of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator</p>

Context	Research Questions	Linked Research Objectives
<p>successful deployment of CST;</p> <p>(ii) Developing an appreciation of the impact of different modes of application of CST;</p> <p>(iii) Understanding the influence of organisational culture and the credibility of facilitators upon the successful deployment of CST;</p> <p>(iv) Exploring further the practical feasibility of responding to multiple paradigm diversity in problem situations through the employment of multi-methodology in series and parallel that supports effective problem solving in practice and in testing the diversity of tools available in the service of different rationalities.</p>	<p>the facilitator and how the systems approaches are deployed?</p>	<p>and how the systems approaches are deployed, identifying those factors that are particularly influential.</p>
<p>The learning from the research should be of practical value and inform future application in the sector and beyond.</p>	<p>5. Can effective processes be established to improve the capability of problem solvers in the sector (and beyond) to successfully select and employ systems thinking, through a more informed appreciation of the impact of systems approaches in prevailing problem contexts?</p>	<p>5. Derive learning from interventions to support the development of systems thinking more generally.</p> <p>6. Develop guidance to assist sector practitioners successfully select and employ systems thinking in problem situations through a better appreciation of the impact of systems approaches.</p>

**Table 4.1:** Research questions and linked objectives



### **4.3 Research philosophy and theory**

The following section draws upon a variety of influential theoretical perspectives which are brought together in section 4.4 to derive an appropriate research design for the study.

#### **4.3.1 Research philosophies**

The philosophical position taken by the researcher determines what is considered to constitute knowledge in relation to the research subject and this in turn influences the underlying research design that is constructed to elicit appropriate evidence. Although there are numerous philosophical positions and variants purported in literature, Easterby-Smith et al. (1991) identify two extremes of philosophical position that can be usefully employed to reflect on the research approach, with at one extreme, positivism and at the other phenomenology.

Positivism sees the social world as existing externally and measurable by objective methods. Augustus Comte was influential in this view and believed that real knowledge was based upon observed fact (Comte, 1853). Although there is no single universally accepted set of characteristics, taking this view the researcher sees ‘truth’ as logical, linked and predictable and believes it is possible to derive and understand it through objective mathematical logic and scientific methods. Quantitative methods are seen as the most reliable tools to derive knowledge in an objective world (Neuman, 2000). Phenomenology on the other hand views the world as socially constructed and given meaning by people rather than being objective and external (Husserl, 1946).

Research paradigms are the underlying beliefs about how the research field fits together and how we can understand it. Taking the two extremes of positivism and phenomenology, Easterby-Smith et al. (1991) identify some key features of each paradigm (Table 4.2).

	<b>Positivist Paradigm</b>	<b>Phenomenological Paradigm</b>
<b>Basic beliefs:</b>	<ul style="list-style-type: none"> <li>• The world is external and objective</li> <li>• Observer is independent</li> <li>• Science is value free</li> </ul>	<ul style="list-style-type: none"> <li>• The world is socially constructed and subjective</li> <li>• Observer is part of what is observed</li> <li>• Science is driven by human interests</li> </ul>
<b>Researcher should:</b>	<ul style="list-style-type: none"> <li>• Focus on facts</li> <li>• Look for causality and fundamental laws</li> <li>• Reduce phenomena to simplest elements</li> <li>• Formulate hypotheses and the test them</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on meanings</li> <li>• Try to understand what is happening</li> <li>• Look at the totality of each situation</li> <li>• Develop ideas through induction from data</li> </ul>
<b>Preferred methods include:</b>	<ul style="list-style-type: none"> <li>• Operationalising concepts so they can be measured</li> <li>• Taking large samples</li> </ul>	<ul style="list-style-type: none"> <li>• Using multiple methods to establish different views of phenomena</li> <li>• Small samples investigated in depth or over time</li> </ul>

**Table 4.2:** Key features of positivist and phenomenological paradigms

### 4.3.2 Action research (AR)

The relevance of AR to this study is captured by Pedler and Trehan (2008), who note that holistic action oriented research has the capability to address real world ‘wicked’ problems in a way that traditional approaches might not. It has already been noted in section 3.5 that the problem situations being faced within the policing and community safety business sector are reflecting many characteristics of ‘wicked’ contexts, where problem situations are diverse and essentially unique, thereby limiting the ability to assemble data to compare one problem situation with another on a consistent basis. Further, traditional approaches in scientific research, taking a positivist stance, seek complete independence of researcher from the problem situation; however in social science it is sometimes difficult or undesirable to secure complete independence of researcher from subject. In response to this challenge, the tradition of AR has emerged as an appropriate social research approach where a researcher and members of an organisation or community seek to improve their situation by broad participation in the

research process leading to desired action and learning in relation to the problem situation (Greenwood and Levin, 1998).

AR was conceptualized by Kurt Lewin during the 1940s (Lewin, 1946) and has been developed by other behavioral scientists. Lewin's original model comprised a cycle of: planning; action; and fact-finding about the result of action (Lewin, 1958). In common with General System Theory, AR can be seen to challenge the traditional scientific view that social facts can stand alone rather than being part of interconnected systems. Both take a holistic view of the world and recognise that social systems are dynamic, interconnected and historical (Greenwood and Levin, 1998, p.71).

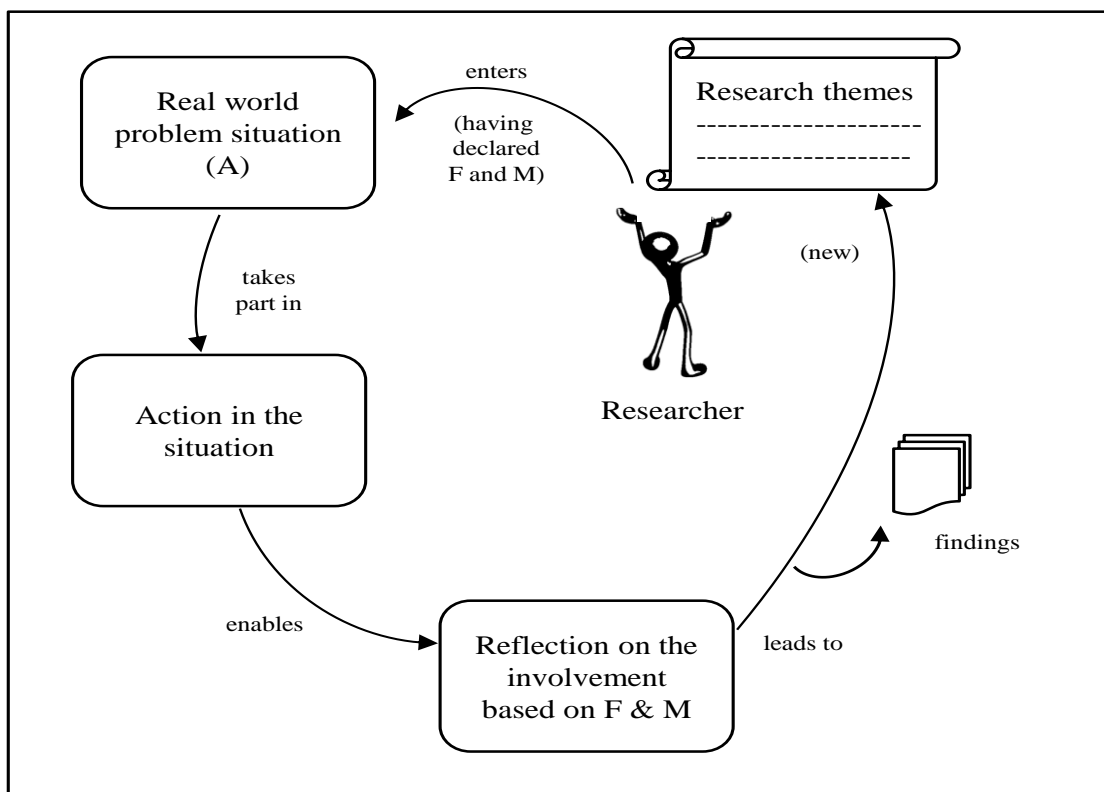
The philosophical movement of pragmatism also recognises this more complex view of science, in particular, John Dewey's pragmatic philosophy set out an action approach to science as a form of human inquiry. Dewey viewed scientific knowing as a continuous cycle of action and reflection with solutions only being the best possible given the situation at that time (Dewey, 1991).

Based upon their understanding of General System Theory and pragmatism, Greenwood and Levin (1998, p.75) identify a set of core characteristics for AR:

- AR is context bound and addresses real life problems.
- AR is inquiry where participants and researchers co-generate knowledge through collaborative communicative processes in which all participants' contributions are taken seriously.
- AR treats the diversity of experience and capacities within the local group as an opportunity for the enrichment of the research-action process.
- The meanings constructed in the inquiry process lead to social action, or these reflections on action lead to the construction of new meanings.
- The credibility-validity of AR knowledge is measured according to whether actions that arise from it solve problems (workability) and increase participants' control over their own situation.

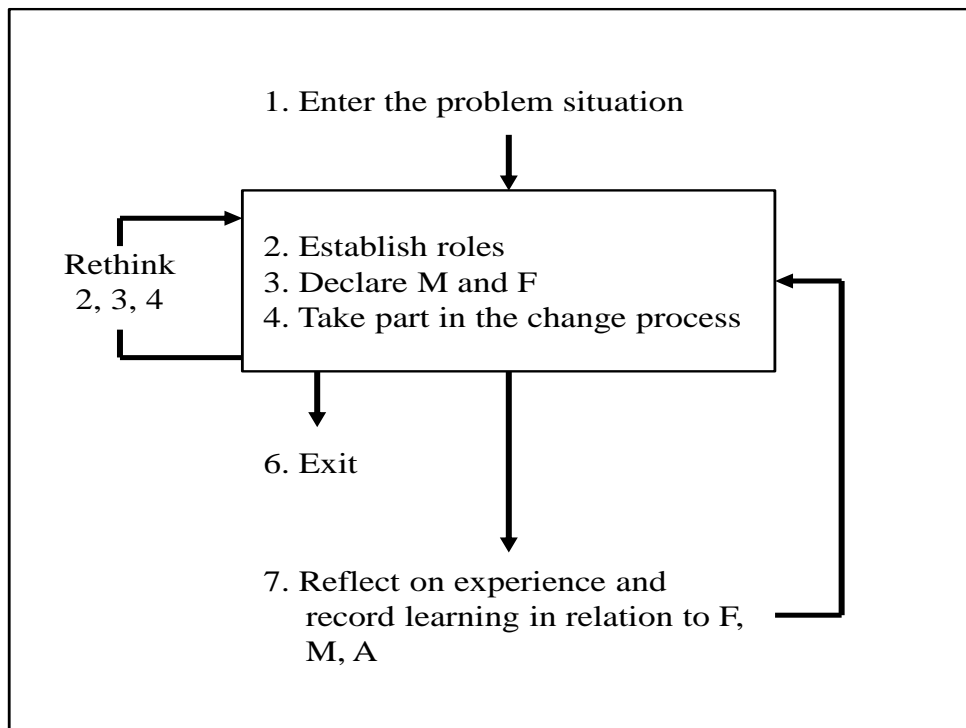
Barton et al (2009) note that positivist science can only confirm hypotheses under strictly controlled conditions and when hypotheses are acted upon in the context of an open system they meet the challenge of changing contexts, values, and interactions between research subjects. However, their paper concludes that both the closed system thinking of positivist science and the open system thinking of AR are essential to any scientific approach. This is consistent with Argyris and Schon's (1974) 'model 2' double loop learning which encourages reflection upon action in an open system where context and environment are not fixed.

Checkland and Holwell (1998, p.13) present a model to represent the elements relevant to any research, where a framework of ideas (F) are embodied within a methodology (M) to investigate an area of interest (A), yielding learning about the area of interest, the methodology and the framework of ideas. Checkland and Holwell (1998, p.15) go on to represent this model within the cycle of AR (Figure 4.2).



**Figure 4.2:** The cycle of AR in human situations (adapted from Checkland and Holwell, 1998)

Drawing upon these concepts, the process of AR can be represented as the iterative process depicted in Figure 4.3.



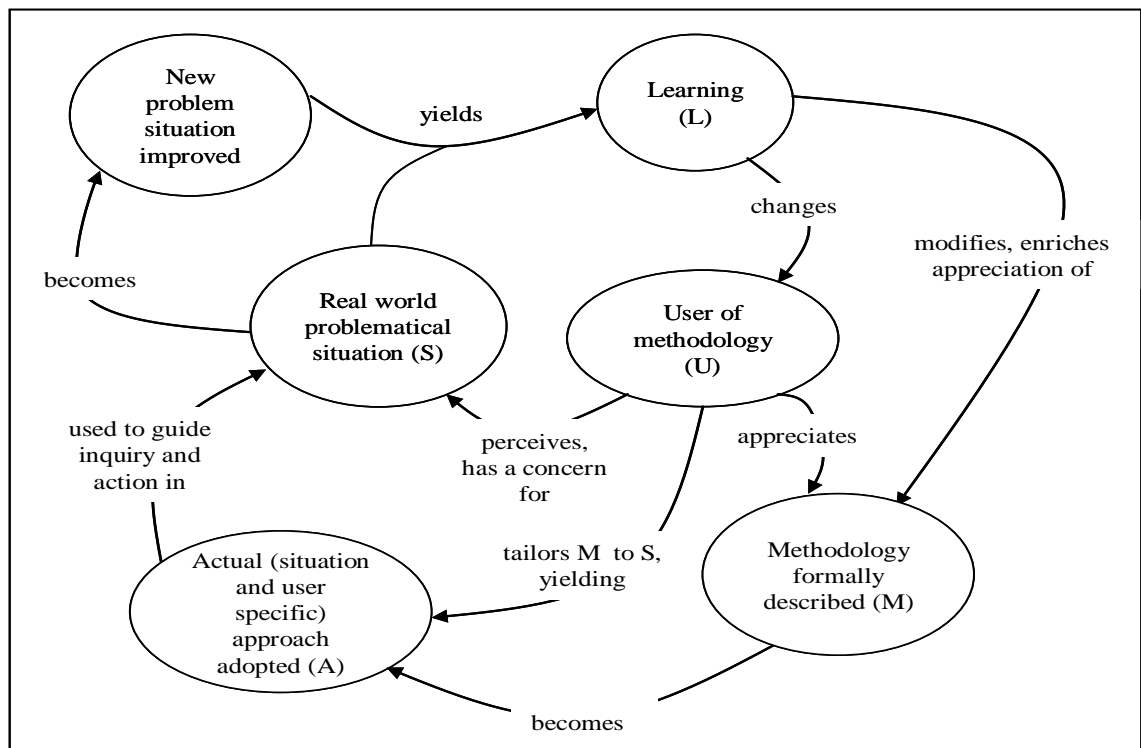
**Figure 4.3:** The process of AR (Checkland and Holwell, 1998)

It is noted that AR cannot produce the law-like generalisations and repeatability of traditional science but according to Checkland and Holwell (1998), AR knowledge acquisition can be judged upon a different truth criterion of ‘recoverability’ where the advance declaration of methodology (F and M) make the process recoverable by any interested party. Recognising the challenge presented, Checkland and Holwell (1998, p.16) identify a series of questions that support the development of a researcher’s AR process, including:

- (i) What exactly is being researched? (F, M and A related to the research themes).
- (ii) Who is the researcher, who the participant?
- (iii) How did you know when to stop?
- (iv) How can results be conveyed to others or transferred to other situations?

Checkland and Poulter (2006, p.19) demonstrate how this iterative approach supported the development of SSM as an evolutionary process over many iterations through a

model known as LUMAS - standing for Learning for a User by a Methodology-informed Approach to a Situation. Here a user (U) perceives a problem situation (S) and appreciating a methodology (M) adapts the methodology to the situation to develop an approach (A) to be applied and this application aims to improve the situation and produce learning (L). Figure 4.4 presents the LUMAS model. It is noted that LUMAS, as a generic model, can be used for making sense of any real world application of any methodology.



**Figure 4.4:** The LUMAS model (Checkland and Poulter, 2006)

Champion and Stowell (2003) advocate an extension to the FMA model as a means of structuring an AR study by introducing consideration of the ‘manner’ in which the inquiry is conducted, advocating the use of the ‘PEARL’ mnemonic (Participation, Engagement, Authority, relationships, and Learning outcomes) to provide the action researcher with a framework to reflect on the nature and authenticity of the inquiry process as it unfolds. Such an assessment might consider:

- (a) Participation – choice and criteria for inclusion/exclusion of participants.
- (b) Engagement – the methods employed to engage people in the process.
- (c) Authority – the nature of authority to shape and act upon the research.
- (d) relationships – planned and developing relationships characterised by undeclared assumptions and beliefs that might cause conflict, misunderstanding, synergy and acceptance.
- (e) Learning – a methodical capture of emerging research learning.

An analysis of the traditions of AR and CST by Levin (1994) noted that although not the same, many parallel issues could be identified in both traditions, such as their recognition of: diverse understanding and interest among participants; the need to challenge organisational members' traditional models; and interacting with participants owning the problem in order to increase participants' control over their own situation. A recognition of the consistency between AR and CST leads to a brief reflection upon the relevance of CST in the following section.

### **4.3.3 Critical systems thinking and practice**

CST as a theory and philosophy, summarised in the three commitments presented in Table 3.3, can be 'operationalised' through the meta-methodology of critical systems practice (Jackson, 2003), an approach that has evolved through experience gained from practical application of CST.

The CSP meta-methodology is designed as an AR approach comprising of four phases:

- Creativity – to identify concerns, issues and problems.
- Choice – to select the most appropriate systems approaches to address the problem.
- Implementation – to develop and implement desired change.
- Reflection – to create learning about the problem situation, the systems approaches employed and the meta-methodology itself.

Recognising the perspectives presented by four commonly held sociological paradigms of functionalist, interpretive, emancipatory and postmodern (section 3.2.3):

*“CSP sees its job as to protect paradigm diversity and to encourage critique between the paradigms. This needs to take place during each of the phases of the meta-methodology”* (Jackson, 2010).

Section 3.3 recognised that the aspirations of CST and CSP were consistent with the aims of this research; encouraging an awareness of alternative paradigms and a flexibility in responding to these.

#### **4.3.4 Facilitator of CST**

Central to the aims of this research is an exploration of the role of the facilitator of CST based upon a limited number of interventions addressing prevailing real-life problem situations. In order to ensure the target interventions and research methods provide sufficient breadth of coverage to fully explore the facilitator role, a model has been developed to describe the main features of the role of the leader of CST and used to ensure the research design encompasses all relevant features. Drawing upon the tradition of AR, the commitments of CST and the meta-level structure provided by CSP, a conceptual model has been constructed to reflect upon the role of the leader or facilitator of CST derived from a SSM root definition:

*“An intervention facilitator owned system to successfully achieve the variety of improvement outcomes desired by intervention stakeholders through pluralism in the employment of contextually appropriate systems approaches for creative problem exploration and change implementation with relevant participants, while being critically aware of the strengths and weaknesses of systems approaches and the social and organisational environment of the problem situation.”*



Where the ‘CATWOE’ features are considered to be:

**C** = Intervention stakeholder(s)

**A** = Intervention participants

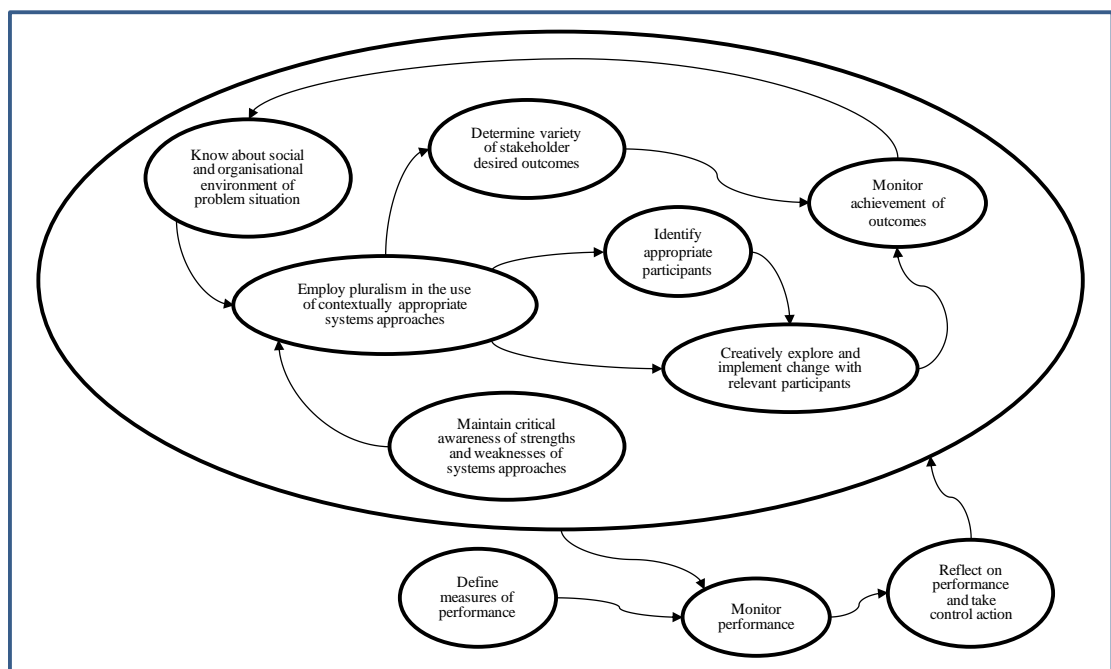
**T** = Variety of stakeholder desired outcomes achieved

**W** = That the variety of stakeholder desired outcomes can be successfully achieved through pluralism in the employment of contextually appropriate systems approaches informed by a critical awareness of their strengths and weaknesses

**O** = Intervention facilitator

**E** = The social and organisational environment of the problem situation

Figure 4.5 presents a conceptual model derived from the root definition.



**Figure 4.5:** Conceptual model of the role of the facilitator of CST

Table 4.3 presents an analysis of how the role of the leader of CST might be explored within an AR programme, drawing upon the exploration of systems thinking included in Chapter 3 and in particular those aspects warranting deeper consideration (section 3.6). The implications for the research design included in Table 4.3 have been used to shape the research programme structure (denoted by ‘S’ in Table 4.3) and the research

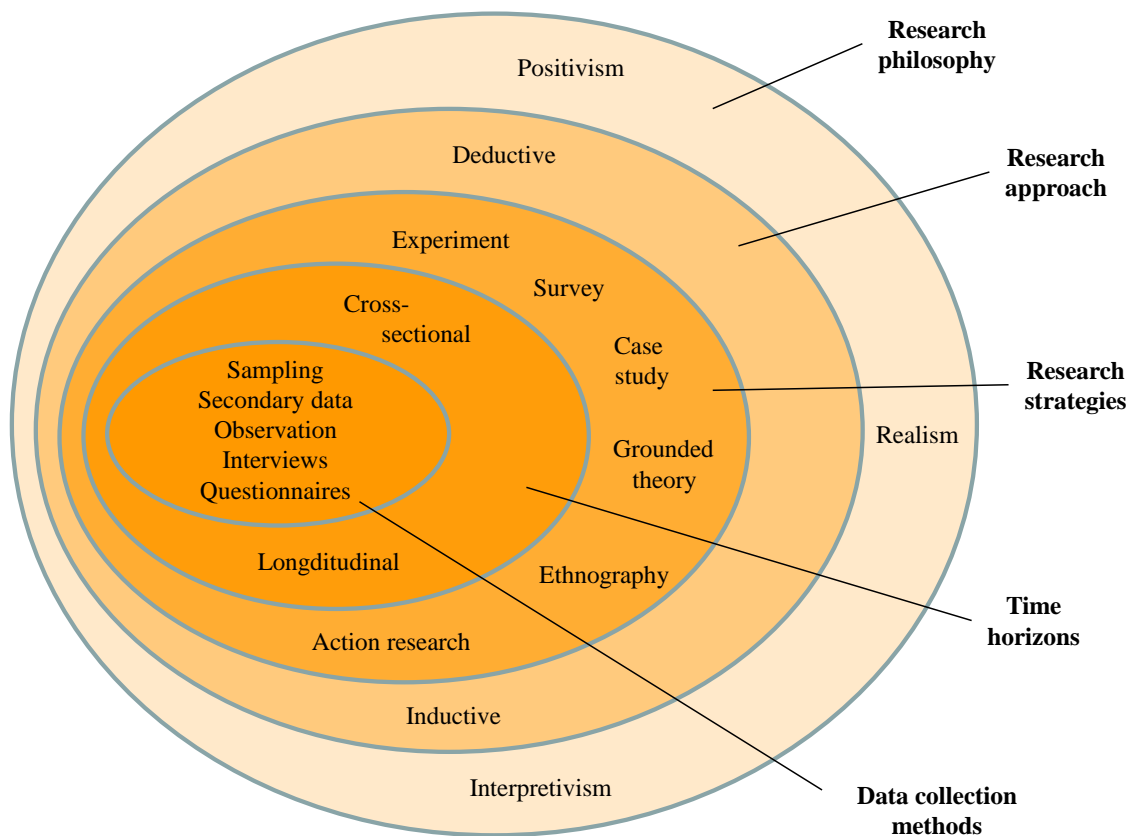
evaluation methods (denoted by ‘E’ in Table 4.3) which are described in the next two sections. The overall evaluation of findings in Chapter 11 will contrast all of the activities identified in this theoretical model of the facilitator role with the activities identified as relevant to the role of the facilitator that emerged from the practical findings of the research (section 11.8.5 (iii)).

Activity	Implication for AR design	
Know about social and organisational environment of problem situation	Research interventions to recognise: <ul style="list-style-type: none"> <li>• variety of problem contexts;</li> <li>• organisational constraints (e.g. political, cultural, capability/position of participants etc.)</li> </ul>	S E
Maintain critical awareness of strengths and weaknesses of systems approaches	Interventions to identify strengths and areas for improvement in applications of systems thinking	E
Employ pluralism in the use of contextually appropriate systems approaches	The nature of pluralism in systems thinking to be explored through analysis of approaches to deployment, for example, recognising serial and parallel as well as mode 1 and mode 2 employment	S
Determine the variety of stakeholder desired outcomes	Consider a range of different potential sociological paradigms or world views of stakeholders	S E
Identify appropriate participants	Reflect on actual participants as well as potential/ideal participants	E
Creatively explore and implement change with relevant participants	Reflect on success of exploration and change implementation in each intervention	E
Monitor achievement of outcomes	Capture relevant stakeholder perceptions and any other performance data	E
Define measures of performance	Performance here relates to the overall intervention and the facilitator’s role. This should reflect a breadth of performance relevant to a diverse range of paradigms, such as the ‘8 E’s of CSP	E
Monitor performance	To be captured within documentation of each intervention	E
Reflect on performance and take control action	Reflection on each intervention as well as aggregate research findings and conclusions	E

**Table 4.3:** Analysis of the role of the facilitator of critical systems thinking

## 4.4 Generic research design

In designing an appropriate research methodology the researcher must be cognisant of a variety of facets relevant to the research subject under consideration; from its underlying philosophy, through the approaches, strategies, time horizons and data collection methods employed. Saunders et al (2003) capture this challenge through the concept of a research process ‘onion’ (Figure 4.6), where the researcher needs to peel away and consider the various layers underlying the eventual choice of data collection methods.



**Figure 4.6:** The research process ‘onion’ (Saunders et al., 2003)

This model is used in the following sections to structure a reflection upon the research design.

#### **4.4.1 Philosophy**

The increasingly complex, plural and dynamic context summarised in section 2.4, describes a situation where problems cannot be simply categorised and analysed in predetermined ways. Given this context, the holistic nature of CST is seen as presenting a more fitting approach for meeting the challenge presented to problem solvers in the policing and community safety business sector.

Although individual research interventions or aspects of these might be more clearly aligned to positivist or interpretive philosophies, the overarching philosophy for the research programme must be capable of accommodating complexity and diversity of perspective. Any research design that aims to learn from the practical exploration of diverse systems thinking in practice must therefore be capable of matching the variety of philosophical perspectives that might be relevant within the research problem domain. As philosophical pluralism is a central feature of CST, critical systems thinking in itself is seen as providing the philosophical basis for the research.

In a study to identify leverage points to improve business performance through e-learning, Korpel (2005) argued the validity of systems thinking as a research philosophy as it provided appropriate beliefs and assumptions to guide the research objectives, process and design through provision of a holistic perspective that was capable of handling complex underlying problem structures.

#### **4.4.2 Approach**

Saunders et al (2003) present induction and deduction as alternative approaches for building a theory or testing a theory but it is recognised that this is not an either/or decision and a research design can encompass both approaches as appropriate.

Barton et al (2009, p.476) note the value the pragmatist system of inquiry defined by CS Peirce (1877, 1878) and in particular the articulation of three modes of inference: abduction (the formulation of hypotheses), deduction and induction. Barton et al considering this to provide “*a broader logic to the scientific method and opens the door to define action research as scientific method applicable to open systems*”. The abductive form of inference takes an outcome and seeks to identify a potential cause and Peirce saw this as the only form of inference that extended knowledge, with deduction simply developing logical results from hypotheses and induction using data to quantify and test arguments (Barton et al, 2009, p.483). Barton et al consider abduction to be the dominant mode of inference within AR.

The research design from this study sees as relevant all these forms of inference at different phases, for example initially following an inductive form of inquiry to identify emerging findings from individual interventions, developing hypotheses through abduction and then taking a deductive approach in evaluating these to identify theoretical as well as practical learning.

#### **4.4.3 Strategy**

The research strategy provides a general plan of how the research questions will be answered, including clear objectives derived from these as well as the sources of evidence to test the objectives (Saunders et al, 2003). The research questions and related objectives are included in Table 4.1 and from an epistemological perspective the sources of knowledge for the study are seen to be informed by a series of AR interventions reflecting a variety of positivist as well as interpretive characteristics and where data gathering methodologies involve a mixture of qualitative and quantitative

approaches. Section 4.4.5 presents further detail regarding the evidence gathering methods.

The consistency between CST and AR is noted (Levin, 1994) and therefore AR is seen as providing an important influence in the design for this research, providing a generic framework that can accommodate the CST philosophical position stated in section 4.4.1, providing the necessary flexibility to respond to prevailing real life ‘wicked’ problems as defined by relevant stakeholders, facilitating improvement in the problem situations and facilitating learning that can be transferred to new applications. As AR is context bound, the transferability of the learning relies on understanding both the original contextual situation and the context of any new situation to determine its applicability and this is considered further in section 4.5. The research objectives presented in Table 4.1 aim to address both real life problems and produce wider learning in a way that is consistent with the potential offered by an AR design that is focused upon a series of prevailing problem situations.

#### **4.4.4 Time horizon**

As an iterative process of AR over a period of time the study will involve an element of charting change over time in relation to some variables (longitudinal). However, the objectives of the study are seeking to provide an exploration of diverse problem situations so as to contrast alternative approaches and in doing this the research will also take a cross sectional perspective.

#### **4.4.5 Data collection methods**

The complex, plural and dynamic context confronting would-be problem solvers in the policing and community safety business sector do not provide the scientifically controlled and testable conditions required of a solely positivist research philosophy. The move from a positivist research domain to an AR domain means it has to be judged upon two broad criteria relating to the actions taken in the problem situation and the learning from each application.

Checkland and Scholes (1990, p.182) suggest that:

*“Action research, not being based upon the hypothesis-testing model from natural science (which is so slippery a concept in the investigation of social phenomena) has to be judged by the even application of two criteria which relate, respectively, to the ‘action’ and the ‘research’: practical achievements in the problem situation and the acquisition of process knowledge concerning problem solving”*

The research questions presented in Table 4.1 formed the basis for a set of objectives relating to the ‘action’ and the ‘research’ that are addressed and evaluated iteratively. Although the evaluation methods are adapted to the specific interventions and will encompass a mixture of quantitative and qualitative elements, a generic structure forms the basis of all these, recognising the aspirations of AR (Greenwood and Levin, 1998), its validity (Checkland and Holwell, 1998), the commitments of CST (Jackson, 2003), as well as the implications of the analysis of the role of the leader of critical systems thinking presented earlier in this chapter (denoted by ‘E’ in Table 4.3) and recognition of the contextual analysis drawn from Chapters 2 and 3, summarised in Table 4.1. The evaluation methods are presented in Table 4.4 and the generic link between research questions, objectives and evaluation methods is summarised in Appendix 1, section 1.

The holistic dimensions of performance introduced in the previous chapter (see Table 3.1) will be used to evaluate individual interventions. Qualitative views and experiences of individuals will be used to evaluate findings as well as shape the direction of (subsequent) research iterations. Qualitative assessment is supplemented as appropriate with quantitative data where this is seen to provide context and insight and to triangulate the findings.

**Table 4.4:** Research evaluation methods

Research Objectives	Evaluation Method
<p>1. Determine whether the application of critical systems thinking can bring about significant improvement in the effectiveness of joint service provision and its management</p>	<p>Overall evaluation of research findings, against original research questions and an assessment against the conceptual model of leadership in CST.</p>
<p>2. Identify and implement practical and informed combinations of systems approaches that help policing service stakeholders fulfil their purposes in relation to joint problem solving</p> <p>3. Determine the features of approaches that are found to be influential in successfully supporting multi-paradigm problem solving, recognising contextual factors that might affect transferability</p>	<p>For each problem intervention:</p> <p>(I). Identify the perception of key stakeholders (including sponsors, managers, facilitators and workforce) involved in the problem situation through interviews and focus groups, specifically in relation to:</p> <ol style="list-style-type: none"> <li>1. Usefulness of different approaches: in meeting stakeholders' interests, including whether the arising actions solve their perceived problems/intervention aims; increase participants' control over their own situations; and support and balance effective multiple participant engagement throughout the intervention</li> <li>2. Impact upon problem situation in relation to:               <ol style="list-style-type: none"> <li>(i) prediction and control, measured by the efficacy and efficiency of solutions;</li> <li>(ii) mutual understanding, measured by the effectiveness and elegance of solutions;</li> <li>(iii) ensuring fairness, measured by emancipation and empowerment within the problem situations;</li> <li>(iv) promoting diversity and creativity, measured by exception (marginalized viewpoints recognised) and emotion within the problem situation</li> </ol> </li> <li>3. Usefulness of approaches in terms of :               <ol style="list-style-type: none"> <li>(i) supporting creativity</li> <li>(ii) facilitating informed choice of tools</li> <li>(iii) implementation, including:                   <ul style="list-style-type: none"> <li>• impact of deployment approaches</li> <li>• practicality and feasibility</li> <li>• accessibility and understandability</li> <li>• cultural acceptability</li> </ul> </li> <li>(iv) facilitating learning about the problem and systems approaches employed</li> </ol> </li> </ol>



Research Objectives	Evaluation Method
4. Determine the impact of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed, identifying those factors that are particularly influential.	4. Impact of role/position/capability of participants in problem situation (e.g. sponsors, managers, facilitators and workforce)  (II). Evaluation of any supplementary performance data related to the intervention objectives (e.g. efficiency/productivity data)
5. Derive learning from interventions to support the development of systems thinking more generally  6. Develop guidance to assist sector practitioners successfully select and employ systems thinking in problem situations through a better appreciation of the impact of systems approaches	1. Theoretical value of learning derived from research 2. Sufficiency of documentation of research thinking and activity to enable 'recoverability' (Checkland and Holwell, 1998)  • Appropriateness and practicality of guidance based upon perception of practitioners locally and nationally* (interviews and focus groups)  *It is envisaged that this evaluation could involve a variety of practitioners within the host organisations at local and national levels.

**Table 4.4:** Research evaluation methods

#### 4.4.6 Generic research programme structure

The AR will take the form of a series of interconnected interventions, where learning from each engagement will be captured to inform subsequent iterations. As the various interventions will involve different groups of participants, the continuity at a programme level between interventions will be provided by the researcher. While participants involved in individual interventions will be involved in reflection upon their project-specific experiences, the researcher will provide the reflection between all interventions and upon the focus of the AR programme as a whole.

The four phases of CSP provide a core structure to each AR intervention with the critical reflection phase and the identification of (new) AR opportunities being guided by Checkland and Holwell's (1998) and Champion and Stowell's (2003) frameworks to support the development of a researcher's AR process (section 4.3.2). An initial assessment of these frameworks is included in Table 4.5 but this reflective assessment is revisited in the concluding and introductory sections of each intervention in Chapters 5 to 10 to inform subsequent AR iterations.

<b>AR consideration</b>	<b>Initial assessment</b>
<b>Research focus</b> – & new directions?	The initial broad focus for the research is defined by the objectives included in Table 4.1.
<b>Participation</b> – researcher, sponsors and participants	The researcher's position as a facilitator of systems thinking within WYP enables direct involvement in the AR interventions and appropriate access to information and relevant stakeholders within the Force and partners at a national and local level. The researcher has had a unique opportunity to apply systems thinking within a diverse range of high profile corporate projects and to derive learning with the potential to have a significant impact upon service improvement as well as learning within the business sector and within systems thinking more generally. Participation of stakeholders will vary from project to project but in line with the research objectives, participation of relevant stakeholders will be a key feature of each intervention. The main participants include the researcher, internal consultants, organisational leadership and members of the workforce from within affected service areas.
<b>Engagement</b> – methods employed with participants in research	Engagement and the methods employed will differ from project to project but all participants will be engaged to differing degrees in terms of deploying systems approaches and some participants will be more directly involved in some aspects including consultation and reflection upon experiences in relation to individual interventions.
<b>Authority</b> – the nature of authority to shape and act upon the research.	The implementation of systems approaches within target areas has been shaped by the needs and constraints of the prevailing client system (such as their timeframes) and the course of the research has been influenced by the changing business environment and the prevailing problems and opportunities. Although the researcher has been in a position to interact closely with the research subject and to target relevant interventions in support of the research objectives, some constraints have been evident in terms of full access to stakeholders, relevant information or preferred approaches to problem solving and thereby limiting some potential research intervention opportunities.

**Table 4.5:** Initial AR assessment (continued over)

<p><b>relationships</b> – planned and developing relationships amongst research participants</p>	<p>A variety of relationships exist amongst those participating in and influencing the research and these are likely to change from intervention to intervention. The most significant on-going relationship is likely to be the positive professional link between researcher and internal consultants in WYP who are called upon to become involved in most interventions and who possess a wide range of experience of different systems approaches. Also, the largely constructive relationship between researcher and organisational leadership is important as this group are likely to be sponsoring the various interventions. In each intervention, the participants will in the main be work colleagues from within the same service areas.</p>
<p><b>Learning</b> – a methodical capture of emerging learning</p>	<p>The evidence from each intervention is captured against the standard evaluation framework included in Table 4.4 which is reflected in the documentation of each intervention (Chapters 5 to 10). Documentation of interview schedules in a consistent format along with supplementary data is included in Appendices 2 to 7.</p> <p>A synthesis of the key themes emerging from the various AR interventions in a more holistic sense to identify salient findings that capture the defining features of this research is included in Chapter 11. The observations extracted from each separate intervention were clustered to identify broad categories of key concepts from the viewpoint of the researcher, grouping together those observations that were closely linked based on the observation narrative and this resulted in the identification of seven broad categories. This process is described in section 11.1 and the detailed analysis documented in Appendix 8.</p>

**Table 4.5:** Initial AR assessment

The research has been undertaken over several years in accordance with the work breakdown structure shown in Table 4.6 and comprises of a series of real life problem situations that presented opportunities that were consistent with the evolving direction of the research. Table 4.3 identified (denoted by ‘S’) a need for the selected AR interventions to include:

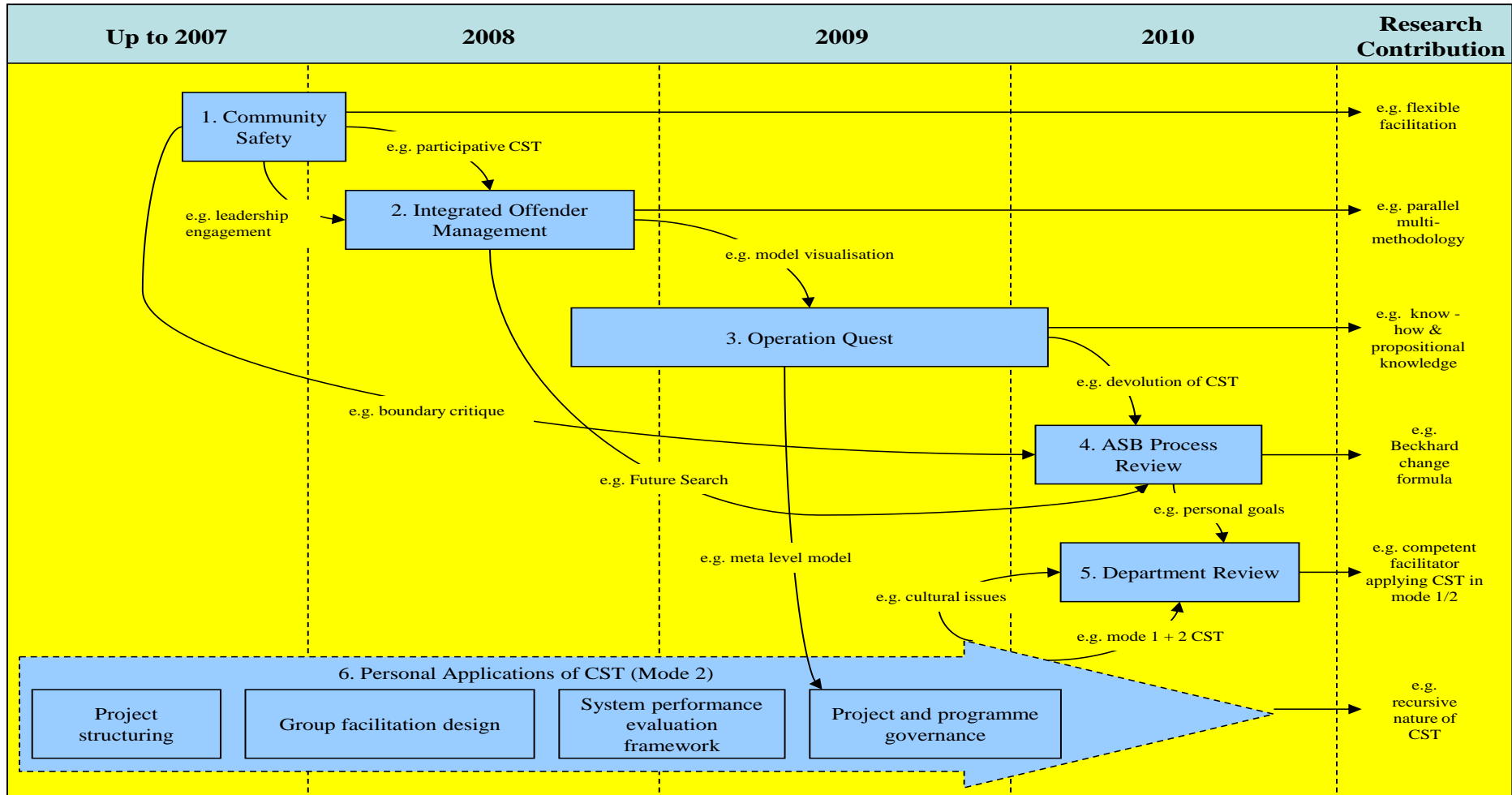
- a range of different problem contexts and sociological paradigms;
- exploration of different approaches to deployment of CST, including serial and parallel as well as mode 1 and mode 2 employment.

The selected interventions comprising the research programme have sought to accommodate these requirements and the resultant programme is captured in Figure 4.7, showing how examples of intervention findings inform subsequent iterations.

Activity	Dates
1. Undertake initial research into problem context, theory and practice	03/2007 to 12/2007
<p>Iterate:</p> <p>2. Identify intervention opportunities:</p> <ul style="list-style-type: none"> <li>(a) monitor the organisational business context to identify problem areas with potential for service improvement consistent with prevailing research focus.</li> <li>(b) research and monitor the development and application of systems theory and practice offering potential to improve services. This will consider both applications within policing and community safety as well as theory and practice from other sectors.</li> <li>(c) in consultation with stakeholders, identify problem areas offering intervention opportunities with authority to intervene.</li> </ul> <p>3. Intervene in selected problem area:</p> <ul style="list-style-type: none"> <li>(a) <b>Creativity</b> - Based on the current research experience and in consultation with stakeholders, identify concerns, issues and problems and their relationships.</li> <li>(b) <b>Choice</b> – Select the most appropriate systems approaches to address the problem, acquiring any necessary capability to undertake intervention.</li> <li>(c) <b>Implementation</b> – Develop and implement desired intervention.</li> </ul> <p>4. <b>Reflection</b> – Create learning about the problem situation, the systems approaches employed and the AR programme.</p> <ul style="list-style-type: none"> <li>(a) Monitor/collect data from the intervention.</li> <li>(b) Analyse and evaluate data in terms of its impact upon the problem situation and achievement of the research objectives.</li> <li>(c) Re-formulate research understanding and target subsequent intervention(s): <ul style="list-style-type: none"> <li>(i) Is the research complete?</li> <li>(ii) What is now being researched?</li> <li>(iii) What is the nature of involvement of researcher and participants?</li> </ul> </li> </ul>	09/2007 to 03/2011
5. How can results be conveyed to others or transferred to other situations?	
<ul style="list-style-type: none"> <li>(a) Interpretation of aggregate research findings in relation to the research objectives and design requirements.</li> <li>(b) Document research.</li> </ul>	09/2010 to 09/2011

**Table 4.6:** Research project work breakdown structure

**Figure 4.7:** Intervention programme structure



#### **4.4.7 Research resources**

##### **(a) Academic**

Access to appropriate literature, advice and expertise has been facilitated through key academic staff, resources, training and relevant professional networks. University libraries and on-line access (mainly via ProQuest and EBSCO), has facilitated access to a wide variety of academic literature.

##### **(b) Business**

The researcher's position as a facilitator of systems thinking within WYP has enabled direct involvement in the AR interventions and appropriate access to information and relevant research stakeholders within the Force and partner organisations. A key element of the research has been the engagement with relevant national and regional police service continuous improvement networks, as both consultees and customers of some emerging research products (such as the policing problem archetypes). The police service online knowledge area 'POLKA' has been utilised along with the Police Staff College Library to access documented information within the police service nationally.

##### **(c) Professional**

On-going engagement with the Operational Research Society through participation in the annual conference stream concerned with Criminal Justice and as chair of the OR Society Criminal Justice Special Interest Group, has facilitated presentation of and consultation upon emerging findings from the research with OR professionals from a variety of traditions.

## 4.5 Research validity, reliability and generalisability

Validity, reliability and generalisability are factors that determine whether the research will stand up to external scrutiny and the meaning of these factors will be affected by the philosophical viewpoint adopted by the researcher. In line with the philosophical discussion of section 4.3, Table 4.7 presents Easterby-Smith et al.'s (1991) summary of the alternative viewpoints for the positivist and phenomenologist positions in this regard.

	Positivist viewpoint	Phenomenological viewpoint
Validity	Does an instrument measure what it is supposed to measure?	Has the researcher gained full access to the knowledge and meaning of informants?
Reliability	Will the measure yield the same results on different occasions (assuming no real change in what is to be measured)?	Will similar observations be made by different researchers on different occasions?
Generalisability	What is the probability that patterns observed in a sample will also be present in the wider population from which the sample is drawn?	How likely is it that ideas and theories generated in one setting will also apply in another setting?

**Table 4.7:** Questions of reliability, validity and generalisability

A positivist viewpoint might claim that without hard quantitative data and methodological rules, the research cannot stand up to scrutiny. However, Greenwood and Levin (1998, p.81) contrast the conventional social researchers belief that credibility is created through generalising and universalising propositions with their preferred AR model, believing instead that only knowledge generated and tested in practice is credible.

As this project has taken the form of AR, Greenwood and Levin's challenges of credibility warrant consideration. They see the research credibility needing to stand up to challenge in terms of:

- ‘workability’ – whether the resultant actions provide solutions to the problem;
- ‘sense making’ – how to make sense out of the tangible results of the AR by way of a meaning construction process that creates new knowledge; and
- ‘transcontextual credibility’ – based upon a historical and contextual analysis, reliable judgements can be made regarding the possibility of applying knowledge from one situation to another.

These last two challenges are complemented by experience gained through the development of SSM. Checkland and Holwell (1998) identify a challenge for AR in terms of establishing a ‘truth criterion’. To them the ‘repeatability’ criterion of natural science is seen as inappropriate for social situations and they suggest instead that the criterion of ‘recoverability’ should be the aim. Making explicit the research thinking and activity is seen as necessary to enable others to follow the research process and understand how the outcomes were achieved. They emphasise the importance of an advance declaration of the framework of language in terms of which knowledge will be defined (in their case the carefully defined language of SSM).

As stated in section 4.3, the research has adopted a CST philosophical paradigm and its validity, reliability and generalisability needs to consider the different perspectives relevant to a diversity of paradigms depending on the nature of the individual interventions tackled. In addition, to enhance the credibility of the AR process, Checkland and Holwell’s (1998) and Champion and Stowell’s (2003) frameworks have been utilised to guide the programme of AR, with these frameworks being revisited following each individual intervention to capture relevant features of the evolving research and thereby supporting its recoverability.

Given the AR design for this study, ultimately the programme’s credibility must be judged upon its ability to address the challenges offered by Greenwood and Levin. Some of these challenges are addressed explicitly in the stated evaluation criteria (such as ‘workability’) and others will need to be judged on the basis of the quality of research intervention evidence and its interpretation as well as on the adherence to relevant methodological standards for approaches applied during the study. It is also



considered that Checkland and Holwell's 'recoverability' criterion provides a valuable aspiration for all interventions and it has consequently been explicitly reflected in the generic evaluation (Table 4.4). The synthesised research findings have been assessed against these criteria in Chapter 12.

## **4.6 Ethical issues**

In accordance with the "Ethical Principles For Researchers and Lecturers in the Hull University Business School" and the University's "Ethical Approval Policy" a series of ethical considerations have been drawn up to guide the research and these are included in Appendix 1. Not all project participants have been specific subjects of the research but where specific individuals' views and involvement has been sought and used in the research, then specific consent has been obtained on a project by project basis (an example research consent form is included at Appendix 1). It has been considered that seeking general consent of other project participants or to promote the research project to those participants not directly affected would have undermined the credibility and success of the projects themselves and has consequently been avoided.

The AR design has been based within a live work situation where research findings have been derived from the researcher's observations of a series of projects in action and the collection of relevant information from these. The data collected seeks to make generalised findings on experiences rather than relating to individuals involved to protect confidentiality and it should be noted that some of the research data is a by-product of project activity that would have been generated regardless of the research (e.g. published performance data).

In order to preserve the confidentiality of research subject contributions, the attribution of perception data to individual participants has been removed from the thesis.

## 4.7 Research methodology conclusion

This chapter has presented a research design considered appropriate to exploit the potential for development of systems thinking within the business sector and more widely as identified in Chapter 3 (sections 3.5 and 3.3 respectively). A series of research questions, objectives and ethical evaluation methods have been described that underpin the design.

Key influences in the research design have included:

- Action research
- CST & CSP
- The role of the facilitator of CST
- Contextual analysis (Table 4.1)

All of which were considered to be of particular importance given the requirements of the sector, the aspirations of CST and the specific needs of the various problem contexts.

An iterative AR programme evolved from this design to address prevailing problem situations in the sector and to derive learning that stands up to the tests of workability, sense making, transcontextual credibility and recoverability.

Part II of this thesis describes in more detail the various AR interventions that comprised the programme.

## **PART II - Action Research Interventions**

In accordance with the design described in the previous chapter, the research programme is based upon a series of AR interventions targeted upon prevailing real life problem situations. The chapters comprising Part II of this thesis document each intervention, evaluating their contribution to the research objectives and identifying any implications for subsequent interventions as well as providing evidence for the overall interpretation of research findings that is undertaken in Part III of the thesis.

Figure 4.7 presented the programme structure, demonstrating how the series of interventions are linked, with learning from each intervention informing subsequent iterations. The programme described in Part II comprises of six ‘interventions’:

**Chapter 5** - Intervention 1, explores the application of systems thinking to support a large group process within a cross organisational community safety partnership;

**Chapter 6** - Intervention 2, employs a variety of systems approaches in supporting a complex cross-organisational partnership improve its integrated offender management programme;

**Chapter 7** - Intervention 3, concerns a cross functional lean process improvement initiative involving the workforce in the improvement of operational policing processes;

**Chapter 8** - Intervention 4, extends the previous intervention to explore the devolvement of systems thinking capabilities within the workforce;

**Chapter 9** - Intervention 5, explores the employment of systems thinking within a departmental restructure where the personal impact of change was significant and a flexible approach to the employment of systems approaches was required;

**Chapter 10** - Intervention 6, comprises of a series of ‘personal applications’ of critical systems thinking in order to explore the impact of ‘mode 2’ style applications.

It should be noted that it has not been possible to include a detailed account of the application of systems approaches within each intervention and instead the documentation here provides an overview of the applications with a focus upon key aspects of relevance to the research aims.

The evaluation of interventions 1 to 5 draws upon key stakeholder interviews to provide research evidence. The detail of this evidence is included in the relevant section of the appendices associated with each intervention. Within those appendices’ sections, relevant evidence from individual interview scripts is captured in the ‘Evidence’ column and this has been used to create a series of numbered summaries that capture the salient points. The evidence and summaries are then reflected in the intervention evaluation sections within the body of Chapters 5 to 9 and where specific evidence is referred to in these intervention chapters, it is referenced in parentheses by the appendix number, section number and summary evidence numbers, e.g. (Appendix 2; 4; 1, 2, 5).

In accordance with the generic intervention evaluation structure (Appendix 1), the specific contribution of each intervention can be seen as a set of emerging findings stemming from the research iteration for consideration and further refinement in subsequent AR cycles. It should be noted that research objectives 1 and 5 relate to the overall research outcomes and these aggregate findings are considered in Chapter 11, while emerging findings from each intervention are presented within the following chapters for objectives 2 to 4 only.

A comprehensive analysis of the findings from each intervention is included in Appendix 8.

## Chapter 5

### **Intervention 1: Involving a District Community Safety Department in cross-organisational partnership service planning, December 2007**

#### **5.1 Problem situation**

As previously outlined in section 2.2.2, the Police service is increasingly required to work in partnership with other agencies at a local, regional and national level in order to tackle problems that are now recognised as being the responsibility of more than one body. As a consequence of the 1998 Crime and Disorder Act, Crime and Disorder Reduction Partnerships (CDRPs) have been established in all Local Authority districts to provide a focus for such activity at a local level. The CDRP relevant to this intervention lies within the West Yorkshire Police Force area. The partnership holds a vision for people to be able to live without fear for their own safety or the safety of others and their overall aim is to secure sustainable reductions in crime and disorder, and to address fear of crime in the district. The police force, local authority, police authority, fire authority and primary care trust share responsibility within the partnership.

The partnership is supported by over 100 dedicated staff within the district's Community Safety Department, who are engaged in a wide range of community safety activities. The staff are drawn from the various partner organisations, bringing with them a range of organisational aims and cultural styles reflecting their personal and organisational backgrounds. Given the mixture of backgrounds and the interdependency of the work of all the partners, it is important for all parties to be able to see themselves as part of a cohesive team, appreciating the contribution of others within the team and to hold a consistent view of the future direction of the partnership. With the aim of improving the effectiveness of the department's services in meeting

customer needs and to help build a consistent view within the team of its future direction, in November 2007 the department's management team sought to employ some appropriate organisational development consultancy from one of the partner organisations, West Yorkshire Police, as they were known to have an established team of internal consultants who were experienced in systems thinking and in facilitating large group problem solving events. This team will be referred to as 'the facilitators' for the remainder of this chapter.

Following initial discussions with the head of the department, the following aims were agreed:

- To engage the whole Community Safety Department in a one day event that improves understanding and appreciation of individual and team roles and perspectives on the purpose of the Community Safety Department.
- To appreciate the perspectives of key community safety stakeholders.
- To provide a learning environment that is considered to be 'fun' for individuals.
- For participants to feel they can openly and freely contribute to improving how the Community Safety Department operates in future.

The initial discussion between the facilitators and management team provided a rough outline for an interactive event which was later refined by the facilitators to provide a detailed design that drew upon appropriate systems thinking and their experience of previous interventions.

## **5.2 Relevant metaphors**

Creative thinking about problem situations can be enhanced through the use of appropriate metaphors and Morgan (1986, 1997) has identified eight metaphors, to which Jackson (2003) adds a further metaphor of the 'carnival' (from Alvesson and Deetz, 1996).

Following concern regarding the cultural acceptability of employing metaphor analysis openly in discussion with relevant stakeholders, the researcher drew upon the initial intervention aims to personally reflect upon the initial design and identify any creative opportunities for improvement by way of a metaphor analysis. Using the intervention aim of creating an environment that is ‘fun’ the most interesting and relevant insight was considered to be provided by the metaphor of the ‘carnival’, and considering the aim of ‘improving understanding’ the metaphor of the ‘culture’ was also seen as relevant. A summary of the metaphor analysis is shown in Tables 5.1 to 5.3.

- The problem in question presents a situation where a team (Community Safety Department) has been constructed from a diverse community, all potentially with quite distinct and different purposes and ways of working.
- It was perceived that some staff may experience difficulty or a lack of willingness to participate in certain workshop activities, potentially feeling intimidated or marginalised.
- To challenge operating practices and identify better ways of working as individuals, teams and as a whole in the future.
- The sponsor wished to challenge current thinking and working practices, particularly in relation to the understanding of customer needs.
- Something that the problem sponsor emphasised as being very important for the intervention was for the experience to be ‘fun’, ‘challenging’ and ‘different’ – the carnival metaphor certainly introduces a view that contrasts the traditional approach to addressing situations within the sponsoring body.

**Table 5.1:** Features making the carnival metaphor relevant

The carnival provides an environment where:

- free and open expression of individual and group views is possible;
- participants can show their preferences to others or hide in the crowd;
- competition, prizes and incentives may be an attraction;
- side-shows may emerge and hold the interest of some;
- there may be shocking/challenging performances or images on display;
- colourful displays – visually or verbally may take place;
- people can come and go as they wish;
- participation can be positive or negative;
- the overall aim of the carnival is usually to have ‘fun’;
- however chaotic events might be, the carnival is usually designed to serve a specific purpose or occasion and therefore a broad organisation and design for the event, culminating in some form of end product might still feature to meet sponsor requirements.

**Table 5.2:** Creative ideas offered by the carnival metaphor

- The organisation’s activities and ‘corporate culture’ is likely to differ from the norms and values of individuals and groups that make it up.
- The intervention was seen as a means of drawing together the contributions of a set of distinct teams, all with their own values and norms.
- How can we align the norms and values of different groups?
- Can norms and values be changed?
- There was a need to appreciate the different contributions of individuals and teams
- There was a need to build common ground amongst teams for the future direction of the department.

**Table 5.3:** Creative ideas offered by the metaphor of culture



### **5.3 Intervention methodology**

The facilitators' knowledge and experience of systems methodologies enabled the intervention design to reflect relevant theory while the skills and experience of the facilitation team, who all had considerable experience in the application of participative systems approaches, was drawn upon to build a practical and theoretically sound design.

Considering the sponsor's intervention aims, several sociological paradigms might be considered particularly relevant. The aim of improving understanding is consistent with the interpretive paradigm; the aim of openly and freely contributing may be more aligned to the emancipatory paradigm and; the aim for creating an environment that is 'fun' seemed to reflect a postmodern paradigm. Taking into account the intervention aims and in particular the desire to challenge and uncover different perspectives in a complex organisation during an event involving staff in a flexible and interactive way, a systems approach with strength in the postmodern paradigm was seen to be appropriate. The PANDA framework (Taket and White, 2000) was considered to have sufficient flexibility to accommodate the range of intervention aims and was used to guide the intervention design. The PANDA framework and the way it was applied within this problem situation are described in sections (i) to (iv).

#### **(i) PANDA**

The PANDA framework (Participatory Analysis of Needs and Development of Action) was developed by Ann Taket and Leroy White as a vehicle for putting into practice their theoretical principles of 'pragmatic pluralism' (Taket and White 1996). PANDA is seen by its creators as a framework linking families of approaches and methods to guide multi-methodological practice rather than a methodology in itself, (Taket and White, 1998). The framework seeks to work holistically and pragmatically to handle diversity and uncertainty within problem situations, particularly those involving multiple agencies.

PANDA avoids prescribing methods and techniques to be employed in given situations. Interventions are characterised by the mixing of diverse perspectives, recognising differences and contradictions and responding flexibly to the situation as experienced. These characteristics influence the methods and techniques that might be appropriate to a problem situation and the selection of specific approaches to shape the intervention is informed by practical experience. Although PANDA cannot be applied in a prescriptive way, it places great emphasis on detailed planning up-front in preparation for the many potential paths the intervention might need to take and follows four generic phases with nine tasks to be considered during any intervention as shown in Table 5.4.

<b>Phases</b>	<b>Tasks</b>
Deliberation I	Selecting participants
	Defining purpose/objectives
	Exploring the situation
Debate	Identifying options
	Researching options
	Comparing options
Decision	Deciding action
	Recording decisions
Deliberation II	Monitoring/evaluating

**Table 5.4:** Phases and tasks of PANDA

In line with its postmodern basis, a central feature of PANDA is pluralism and this is summarised in Table 5.5.

**(ii) Employment of PANDA within the intervention**

In the spirit of the framework, some of the generic PANDA phases and tasks introduced in the previous section are reflected throughout the intervention rather than being followed strictly and in sequence. The intervention centred upon a one day workshop; the agenda and description of specific workshop activities are included at Appendix 2 (section 5), and a summary of PANDA’s application within the intervention is shown in Table 5.6.

In the nature of the client	<p><b>Critical</b> - to gain a diversity of stakeholder views a critical perspective is needed</p> <p><b>Consent</b> – recognising that consensus is not always possible and consent may be necessary</p> <p><b>Contingent</b> – recognition that solutions will only be relevant under the prevailing local circumstances</p>
In the methods and techniques used	<p><b>Mix</b> – using different methods in whole or part throughout the process</p> <p><b>Modify</b> – adapting methods to suit the prevailing situation</p> <p><b>Multiply</b> – use different methods for the same task to broaden insight</p> <p><b>Match</b> – selecting methods that suit the intervention participants, including facilitators and the current circumstances</p>
In the facilitation process	<p><b>Flexibility</b> – adaption of the process in the light of prevailing circumstances</p> <p><b>Forthrightness</b> – challenging and intervening as necessary</p> <p><b>Focus</b> – keeping the intervention on track to meet its purpose</p> <p><b>Fairness</b> – ensuring fair access to participation for all parties</p>
In the modes of representation employed	<p><b>Verbal</b> – the use of language as lists of words or linked concepts</p> <p><b>Visual</b> – the use of icons, diagrams, maps etc.</p> <p><b>Vital</b> – the physical forms of representation such as using drama to reflect aspects of problem situations</p>

**Table 5.5:** PANDA’s pluralism

**(iii) PANDA’s principles of pluralism applied within the intervention**

In the spirit of post-modernism, Taket and White advocate pluralism throughout the course of an intervention. They identify four key areas where pluralism is essential and these are described in Table 5.7 along with their application within the intervention. This analysis also provides an evaluation of the intervention against the PANDA principles advocated.

**Table 5.6:** Application of PANDA within the intervention

PANDA Phase	PANDA Task	Application within Problem Situation
Deliberation I	Selecting Participants	In line with the intervention objectives a decision was made early on that all members of the CS department should be invited to participate in work time. All apart from a limited number of CCTV operatives were able to attend. In terms of introducing an external stakeholder challenge, due to the sensitivity of such relationships, involvement had to be limited to two distinct sessions where specific individuals who had experienced different aspects of selected CS services were invited to present their views. In consultation with the CS management team, to provide an appropriate element of challenge, the two stakeholders selected were a perpetrator and a victim of domestic violence.
	Defining purpose and objectives	The purpose of the intervention was developed with the CS management team by way of a series of interviews between the intervention sponsor and the 3 process facilitators, followed by open discussion within the management team. Following several iterations the sponsor and management team agreed upon a one-day workshop, supported by experienced facilitators but where the participants are afforded as much freedom to shape the discussions as possible, while following a broad agenda. Although a rigid workshop design was considered to be inappropriate, the underlying structure aimed to provide the opportunity to address the objectives described in section 5.1.
	Exploring the situation	<ul style="list-style-type: none"> <li>• To help participants initiate the exploration of the problem situation in a way that allowed everyone to actively contribute to a common data set, the facilitators decided to employ a ‘timeline’, a technique drawn from the Future Search methodology (Weisbord and Janoff, 1995). Two large walls were covered with plain ‘butchers’ paper upon which were displayed a timeline of dates over the past 20 years. Participants were invited to write on the paper those experiences they considered relevant to the problem situation and which they wished to share within the workshop, be they personal or work related. This approach was considered attractive as it enabled all attendees to decide for themselves if and when they offered data and the form of that data. The age range and experience of attendees varied significantly and it was felt that the chosen use of the timeline allowed all individuals to participate on an equal footing by making all contributions of equal relevance. Although the facilitators suggested that ideas be written in a way others could read and understand, there was no restriction on format and some drawing was included.</li> <li>• A second phase of exploration enabled participants to listen to sensitive and impactful experiences of selected customers. A victim of domestic violence and a perpetrator of domestic violence openly presented their experiences</li> </ul>

		<p>quite graphically and emotionally. This provided a rare opportunity for participants to see services through the eyes of key customers, appreciating customer perceptions and at the same time challenging their own world views. An open ended question and answer session allowed participants to explore further underlying perceptions and experiences.</p> <ul style="list-style-type: none"> <li>• A third phase of exploration introduced a challenge to the way individuals and teams can become too focused on the task. A video was used to provide a light-hearted means of challenging the way individuals and teams can become too task-focused.</li> </ul>
Debate	Identifying options	Once timeline data had been captured on the walls, individuals and groups were invited to study the content to identify and share themes, patterns or key features that they felt had contributed positively to CS successes. This was considered relevant in identifying a sound platform to build upon for the future. Individuals and groups self-facilitated this activity and ‘brainstormed’ ideas based upon individuals’ interpretation of the timeline.
	Researching /consulting upon options	A major requirement of the workshop was to encourage participants to develop creative visions of the future for CS using the ideas generated from the earlier workshop activities. Participants were invited to place themselves 3 years in the future and describe what success looked like in relation to a particular community safety theme. Using any creative means they wished, groups developed a picture of their ‘ideal future’ describing how CS was successful in relation to the allocated topic. A number of approaches were employed by individuals and groups to develop their options including collage, drama, poetry, song and dance.
	Comparing options	No explicit evaluation of options was undertaken during the workshop. However, the common themes were summarised during the plenary and a prize was provided for the ‘most creative’ presentation.
Decision	Deciding action	No explicit actions were identified during the workshop. However, options and ideas developed during the workshop were fed into subsequent CS planning processes.
	Recording decisions	See above.
Deliberation II	Monitoring/ evaluating	Evaluation and reflection on the intervention has been undertaken by way of a short questionnaire circulated to participants and the commissioning management team as well as an interview with the intervention sponsor. A summary of the questionnaire responses is included in Appendix 2, sections 1 and 2.

**Table 5.6:** Application of PANDA within the intervention

**Table 5.7:** Pluralism within Intervention 1

<b>PANDA Pluralism</b>		<b>Featured in Intervention</b>
In the nature of the client	Critical	By involving all team members in the intervention it was possible to encompass the multiple views of all internal stakeholders. This was extended further by introducing challenging (e.g. customer) perspectives. This design enabled the introduction of a ‘critical’ perspective.
	Consent	The intervention design has avoided the aim of reaching consensus on a way forward – rather to appreciate the different views and ‘consent’ to the existence of alternative ways forward.
	Contingent	One of the aims of the intervention was to make people feel involved and the ‘journey’ (participation) was more important than the ‘destination’ (products). The experience on the day was recognised to be an end in itself and the products may not have as much relevance and importance beyond the immediate future. The carnival metaphor had emphasised the importance of ‘fun’ during the event and features such as prizes for best presentation and the quiz were included to enhance the experience on the day.
In the use of methods	Mix	Elements of different methods and methodologies were built into the intervention. Most notably, the ‘timeline’ adapted from Weisbord’s Future Search method (Weisbord and Janoff, 1995). This was mixed with creativity exercises drawn from previous experiences and the ‘fishbowl’ element of Axelrod’s (Customer) Conference Model (Axelrod, 1999) where customers are observed by service providers presenting their experience of services.
	Modify	See above. For the practicalities of time and nature of the participants the style of the Future Search was significantly compressed and adapted.
	Multiply	Different approaches were encouraged for participants to present their desired futures. The same task was tackled differently by each group and each offered its own unique value.
	Match	Methods were designed to enable participants to choose the approaches that best matched their own preferences. Also, the facilitators possessed a wide range of experience that matched the approaches used in the intervention.
In modes of representation	Verbal	Groups self-facilitated themselves during each exercise and chose their own means of representation – using bulleted lists on flip charts in the main but maps of ideas were also used. The timeline encouraged individuals to write key experiences they wished to share – recognising this may have restricted some expression, the use of written text was seen as a ‘common medium’ to enable others to read and understand those experiences for themselves.
	Visual	The workshop environment provided wall-space to allow participants to present their ideas in a wide range of visual

		ways. Post-Its (including hexagons and Post-It flip charts), coloured pens, magazines and glue for collage were provided to each group and large sections of the walls were covered with ‘butcher paper’ to allow a wide variety of visual representations to be employed. A video clip was utilised to provide a means of easing participants back into process following the lunch break. The video aimed to provide a light-hearted means of challenging the way individuals and teams can become too task focused.
	Vital	Participants were encouraged to engage in creative and physical activity to express their views. Participants responded in a variety of ways, including drama, song, dance and poetry. The workshop was concluded with a light hearted quiz which included the awarding of a number of prizes.
In the facilitation process	Flexibility	The facilitators involved were all widely experienced in a range of approaches that they could confidently introduce and adapt depending upon circumstances. Session timings were adapted to match the energy and progress of events.
	Forthrightness	The basis for the workshop design was very much to present as relaxed and open an environment as possible. A broad set of working ‘ground rules’ were described at the outset to help events run smoothly, particularly as many aspects were self-facilitated. This approach meant there was less control over events and in handling sensitive issues that may emerge. However, areas of potential sensitivity were constantly being monitored to avoid inappropriate situations developing. Participants were invited to absent themselves from any aspects of events they might find uncomfortable (e.g. the presentations by domestic violence perpetrator and victim). The facilitators took the role of floor walking during the self-facilitated sessions, introducing an element of challenge to the various group activities.
	Focus	Although events were designed to be flexible, the ‘carnival’ was designed to serve a purpose and a broad agenda was maintained in order to achieve the sponsor’s aims.
	Fairness	The facilitators undertook constant floor walking and discussion with participants, particularly those who seemed less engaged with the process to encourage participation and adapt events to meet individuals’ preferences. Typically, in a group exercise where an individual could not agree to the group’s chosen means of expressing their views, encouraging the individual ‘do their own thing’ and present an alternative way forward.

**Table 5.7:** Pluralism within intervention 1

#### **(iv) Intervention logistics**

Taket and White (2000) outline a series of facilitative, participation and logistical requirements to support their decision making processes. A number of the facilitation and participation issues have been mentioned already and it is worth considering some key logistical aspects of the intervention.

- The intervention was designed and facilitated by a team of three facilitators experienced in a wide range of participative problem solving methodologies.
- The workspace was designed to provide as much free movement as possible. Where group work was required, tables were set out ‘cabaret’ style (90 participants, 8 per table), with a mixed team seating plan and one table for the management team.
- Wall space was used extensively and an essential component was the use of ‘butcher paper’ to provide a ‘blank canvas’ for participants to express their views.
- Materials to support creative thinking and presentation is a key requirement, including: magazines, glue, ‘Post-its’, sticky dots, flipcharts, scissors, sticky tape and coloured pens for each table.
- To provide flexibility for timings and individuals’ preferences, refreshments were made available to take at any point throughout the day.

### **5.4 Intervention evaluation**

The evaluation of this intervention has been based upon a short questionnaire circulated to all participants and subsequent interviews with selected stakeholders. The following sections present some key findings from this evaluation to inform an assessment of the intervention’s contribution to the research objectives in section 5.5.

#### **5.4.1 Participant questionnaire feedback**

This section summarises the key findings from the participant survey and Appendix 2, section 1 includes more detail regarding this consultation. The survey was distributed by the Community Safety management team to gain voluntary and anonymous feedback



about the success of the event. It was distributed during the week following the event to all participants via email and a resultant response rate of 13 out of 80 attendees was achieved.

It is recognised that the questionnaire for participants had been primarily designed to gain feedback on the administration of the event for the management team, rather than to generate learning about the techniques and process employed. Also, the number of responses limits the strength of inference that can be derived from the data. However, the qualitative value of the feedback is still relevant to the research objectives and relevant aspects are presented in Table 5.8.

- As might be expected, the aspects of the intervention that were considered useful, were enjoyed or that participants would like to do differently varied considerably. The main feature identified as being particularly useful or enjoyable included the sessions with the perpetrator and victim of domestic violence, the networking opportunities and the creativity exercise.
- It should be noted, in contrast, that a small number of participants viewed both the sessions with the perpetrator and victim of domestic violence and the ‘creativity’ exercise in the afternoon negatively.
- All responders considered that they had been afforded the opportunity to have their say and to listen to others.
- Opinion was equally divided on whether participants felt they learnt anything new during the workshop activities.
- The majority of responders felt they had a better appreciation of other team members and customer views since the workshop.
- The majority of responders felt they had a clearer picture of where the district Community Safety needs to head over the next three years.

**Table 5.8:** Summary of participant feedback

### 5.4.2 Management team questionnaire feedback

This section summarises the key findings from the management team survey and Appendix 2, section 2, includes further detail. The survey was distributed to members of the management team by the facilitators in order to determine whether the intervention had succeeded in meeting its aims. Four out of the six management team provided a response and the main findings are included in Table 5.9.

- All managers felt the intervention aims had been met.
- The customer viewpoints, creativity and timeline activities were identified as ones that worked well.
- Time keeping was identified as an area for improvement.
- All respondents felt it had helped improve mutual understanding among participants.
- The management team acknowledged some real creativity and different thinking with good ideas for inclusion in next year's plan.
- The approach taken in the workshop was considered to be very inclusive and was accessible and understandable for all.
- Managers were evenly divided in their view as to whether they had learnt something new about their teams' perceptions and future directions.

**Table 5.9:** Summary of management team feedback

### 5.4.3 Stakeholder interviews

A series of detailed interviews were carried out with the intervention sponsor and facilitator and the findings from these interviews are included in Appendix 2, section 4.

## 5.5 Contribution to Research Objectives

### (i) Research Objective 2

*Identify and implement practical and informed combinations of systems approaches that help policing service stakeholders fulfil their purposes in relation to joint problem solving.*

Based upon feedback from the intervention sponsor, management team and participants (Appendix 2; 4; 1-5), the intervention was generally considered to have been successful in meeting its stated aims though participants had mixed views on certain aspects of the workshop and this assessment is justified in the remainder of this section. It should be noted that this assessment is based upon the experiences of the intervention workshop planning and implementation and it has not been possible to determine to what extent the intervention resulted in positive change for managers and staff back in the workplace.

Reflecting upon the specific aims of the workshop:

*To engage the whole Community Safety Department in a one day event that improves understanding and appreciation of individuals' and teams' roles and perspectives on the purpose of the Community Safety Department.*

In terms of engagement with participants, there is strong evidence that the approach was considered inclusive and accessible with everyone having good opportunity to contribute as they wished (Appendix 2; 4; 3). For example, the majority of participants felt they had a better appreciation of other team members' views since the workshop and all management team respondents felt it had helped improve mutual understanding among participants and that the workshop activities had been easy for everyone to follow.

*To appreciate the perspectives of key Community Safety stakeholders.*

The intervention provided the opportunity for participants to interact and gain a better appreciation for others' perspectives, both within the team and externally. The majority of participants who responded to the questionnaire felt they had a better appreciation of other team members' and customer views since the workshop (Appendix 2; 4; 5, 8).

*To provide a learning environment that is considered to be 'fun' for individuals.*

Though not explicitly assessed, judging by the degree of participation, interaction and energy during the workshop this aspect was achieved at least in part. An element of competition was introduced by distributing prizes for the most creative presentations also helped to introduce an element of fun into the proceedings. Although this is evidenced through the feedback of the management team and sponsor, some of the participant feedback indicated negative as well as positive views on the value of the event.

*For participants to feel they can openly and freely contribute to improving how the Community Safety Department operate in future.*

The intervention design afforded significant freedom for participants to take responsibility for their own contributions and the range of alternative means of contributing seemed to provide a way for the vast majority to participate positively, though a small number were unclear on the purpose or value of some aspects. All participants who responded to the questionnaire considered that they had been afforded the opportunity to have their say and to listen to others (Appendix 2; 4; 3, 4).

The management team were co-located in one group and undertook the group activities together while the remaining staff could self-select the groups they wanted to join. The separation of the management team from the other participants was seen as a way of reducing any constraining influences that might have been perceived by participants and increasing their empowerment. It is interesting to note that some participants viewed this negatively and felt that a feature of the intervention should be for management to

get to know the staff by involvement alongside them in the exercises and thereby improve mutual understanding (Appendix 2; 4; 3, 9). This approach to increasing empowerment (as desired by the management team) seemed to be at odds with some participants' perception of improving mutual understanding.

In line with the generic evaluation structure (Appendix 1), evaluation of the interventions can also be assessed against a range of criteria relevant to four common sociological paradigms. Based on the consultation feedback, the impact of this intervention upon the problem situation can be measured against improvement in relation to three of the four sets of criteria:

- Enhancing diversity and creativity - there was considerable evidence of both, with creative new perspectives being introduced by staff at all levels and on the evidence of the range of highly animated presentations there was a good degree of emotion underpinning these (Appendix 2; 4; 7). All of the management team respondents to the evaluation questionnaire felt the workshop had successfully enabled creative thinking from their teams.
- Ensuring fairness – Despite the lack of specific activities to eliminate the barriers to appropriate participation by the disadvantaged, all participants who responded to the consultation considered that they had been afforded the opportunity to have their say and to listen to others. All the management team felt the approach had not excluded or favoured any individuals or groups.
- Improving the mutual understanding of participants (amongst themselves and with their customers) – the majority of respondents felt they had a better appreciation of other team members' and customer views since the workshop, although no particular consensus was sought in relation to issues identified. (Appendix 2; 4; 3, 8).

In summary, reflecting on research objective 2 - PANDA is a form of multi-methodology, described by its originators as 'pragmatic pluralism' (Taket and White, 2000, p.68). As a framework to address problem situations of great complexity and diversity and where the aspirations of those concerned with the problem situation are

consistent with the strengths of the approach, then participative large group processes guided by the principles of PANDA would appear to provide effective practical combinations of methods and techniques to improve joint problem solving in the sector.

**(ii) Research Objective 3**

*Determine the features of approaches that are found to be influential in successfully supporting multi-paradigm problem solving, recognising contextual factors that might affect transferability.*

The intervention involved a range of participants, many of whom had quite different perspectives on the problem situation and different desires for what they wanted from the intervention. The approach used for the intervention had to be sufficiently flexible to accommodate these differing requirements concurrently. However, as discussed in section 3.2.5, sometimes the problem contexts perceived by participants are so different they may be considered to be mutually exclusive or ‘incommensurable’. The diversity of view regarding problem context within this intervention is evident from some of the participant feedback (Appendix 2; 4; 10) and this presents a challenge in selecting the most appropriate systems approaches to employ as they each possess strength in different contexts. In order to respond to the needs of the diverse stakeholders, the systems approach employed needed to be sufficiently flexible to accommodate the variety of perspectives.

It is not just the diversity of perspectives possessed by the participants that is relevant, so too is the sponsor’s aspiration for the intervention of promoting diversity and creativity, ensuring fairness and improving mutual understanding, which spanned three of the four most common sociological paradigms (section 3.2.3). To the sponsor these aspirations for the intervention did not appear to be seen as mutually exclusive and indeed were probably considered complementary. The intervention methodology as designed did not set out to fully respond to the different and potentially ‘incommensurable’ paradigms, however, as evidenced in the previous section it was possible to see some perceived improvement in the measures associated with the

different contexts. It has not been possible in this intervention to explore further how the sponsor, managers and participants might formally define their different aspirations and how consistent their use of terminology might be. Further formal exploration in this regard may find their definitions were different to those described in 3.2.3 and some in reality may not actually be considered incommensurable.

In terms of being able to develop systems approaches to problem solving that match the problem contexts, having sufficient prior knowledge about the perceptions of key stakeholders in relation to the paradigms appears important (Appendix 2; 4; 12, 17). Accepting the limitation identified in the previous paragraph, within this intervention the sponsor's views were known and this helped to shape the intervention design. However, the range of perspectives of other participants were not identified prior to the workshop so there was an element of uncertainty regarding how well the intervention would meet the needs of those participants. Given the sponsor's broad aims, there would be a good chance that some of the participants' aims might also fall within these domains but others certainly would not. For example, participants may have concerns regarding optimisation in relation to a particular goal they hold or in achieving consensus in relation to an aspect of a problem situation. It has been noted that these aspects are difficult to accommodate within a postmodern framework (Jackson, 2003, p270) and alternative strategies may be required to deal with this type of situation. In relation to this intervention, enhanced exploration of purpose with staff prior to the workshop to build greater understanding may have helped refine the workshop design as well as gain commitment and manage the expectations of participants.

Although participants did not need to know the underlying theory associated with the intervention, in order to engage they needed to see a clear and acceptable purpose for the event with relevant workshop activities that could be seen to help achieve the purpose (Appendix 2; 4; 13). In situations with diverse groups of participants it is more difficult to achieve this aim. Where participants do not have an obvious common purpose or cannot see their inter-connectedness, the challenges of achieving intervention objectives are greater. The challenge for successful implementation here was to instil some sort of common purpose amongst quite disparate sub-groups within

the team. This was attempted through the development of a shared database which was then used to generate ideas for the future direction of the whole team. Despite this attempt, some participants still questioned the point of workshop activities (Appendix 2; 1). Reflecting on Beckhard and Harris (1977, pp.24-27), the situation encountered here demonstrated an apparent importance for participants to feel their problem solving efforts are making clear progress towards their view of a desirable future state (Appendix 2; 4; 3, 10) and to be making tangible progress in this regard. The systems approaches used within this intervention needed to support participants' diverse perceptions of these variables.

The selected methodology, PANDA, is considered to possess strength in postmodern problem contexts (Jackson, 2003) but its flexibility as a guiding framework appeared to enable this intervention to address stakeholder aspirations that might be more closely associated with an interpretive or emancipatory paradigm (Appendix 2; 4; 8, 9). However, even with this flexibility it was apparent that not all stakeholder needs had been addressed (Appendix 2; 4; 8, 10).

Early deliberation with the sponsor and management team was used to get a good feel for the problem situation and to help identify the sort of intervention design that might address their needs. It also helped build their confidence in the facilitation team and buy-in to the approaches being developed. To quote the intervention sponsor:

*“It was important for the managers to understand in a certain degree of depth the underlying methodology being suggested to allow them to make informed comment about the proposals.”*

Logistical planning and preparation for the workshop were seen as significant determinants of success to ensure participants' needs and workshop activities could be accommodated along with flexibility to adapt to changing circumstances (Appendix 2; 4; 13).



The diversity of the groups necessitated a flexibility within the design that facilitated on-going engagement with diverse stakeholders and responding to their differing interests in real time without the support of any formal analyses. At the same time, there was a need to preserve a clear structure to achieve the intervention purpose.

The cultural acceptability of some aspects of the intervention was challenging (Appendix 2; 4; 13). It was important to be practical in tailoring the approaches to suit the prevailing situation and culture but to do this in a considered way to avoid erosion of methodological validity. For example, the Future Search timeline exercise was adapted but in a way that aimed to preserve its power in collecting and sharing a common data set interactively in a large group. From the review of systems thinking within the sector (Chapter 5) it is clear there is traditionally a greater interest in systems approaches that support goal seeking and optimisation. However, the researcher has observed that pragmatic approaches to problem solving, typically involving some of the techniques featured in this intervention, seem to appeal to practitioners and participants in the sector (Appendix 2; 4; 13). The degree of acceptance of the techniques could be influenced by their accessibility, not appearing to necessitate a deep theoretical understanding or expertise amongst practitioners and participants to start applying them and the techniques themselves, would appear to be acceptable and accessible. Given the aim of staff engagement and a need to be able to do this within a tight timescale, it was important for the activities to appear relevant and accessible by a diverse group. Some participant feedback indicated a negative perception of certain activities, such as the creativity exercise, but the vast majority felt they were able to contribute (Appendix 2; 1). The management team all considered the workshop activities as being easy for participants to follow (Appendix 2; 2).

Due to the facilitator's concern regarding the cultural acceptability of undertaking a creativity exercise with the management team to help inform intervention design, a metaphor analysis was undertaken by the facilitator in more of a 'mode 2' style, where it was used to reflect upon and make sense of the initial intervention design. Used in this way it was more a retrospective check than something that creatively shaped the design. However, the employment of systems approaches in this mode by an

experienced practitioner still needs to be recognised as a valuable way of supporting interventions through supplementary systems thinking (Jackson, 2003, p.314), particularly when a more formal application is impractical. The employment of creativity techniques early in the design process, involving the facilitators and representation from the management team might have been advantageous in improving understanding in relation to the problem context but at the time there was limited opportunity to develop a more culturally acceptable approach to facilitate this.

A risk with an intervention such as this where the workshop products are contingent, is that any positive outcomes may have a short 'shelf life' back in the workplace (Appendix 2; 4; 14) . An on-going focus and engagement with staff would be necessary to build on the workshop foundations and ideally this is a long term feature requiring local capability in systems thinking with ownership in the hands of staff locally in the absence of further specialist support.

### **(iii) Research Objective 4**

*Determine the impact of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed, identifying those factors that are particularly influential.*

In terms of this intervention, leadership can be considered in two regards, the leadership of the department subject to the intervention and the leadership of the professional problem solving resources. Both aspects are worthy of consideration in evaluating the intervention.

The importance of having an intervention sponsor who had experience of systems approaches was significant in securing support for the design. Working with the local management team in the planning stages meant that the senior team were positively

bought into the approach and were able to champion the intervention amongst their staff (Appendix 2; 4; 15).

The lead facilitator was a professional systems practitioner with experience in the application of a wide range of systems approaches and knowledge of relevant systems theory, methodology and techniques with strength in different problem contexts. The intervention was designed and implemented by a team of experienced internal consultant/facilitators who also had considerable knowledge and experience of running large scale events. This meant that the development of the intervention methodology had a sound practical and theoretical basis. This team was also equipped to make sound adaptations to the approach as required during the workshop.

A positive relationship between sponsor(s) and facilitator/problem solvers was seen to be critical (Appendix 2; 4; 15). The sponsor needs to be confident that the facilitator has the credibility and capability to deliver what is required and in this intervention the sponsor was well aware of the facilitation team's knowledge of systems approaches and their skills and experience in delivering previously.

The flexible nature of the intervention design demanded a considered facilitation and reflecting upon PANDA's pluralism in the facilitation process (Table 5.5), care was needed to balance flexibility and fairness with focus and forthrightness. During the intervention it became clear there was some tension between empowering participants and meeting other intervention aims (Appendix 2; 4; 13). A typical criticism was the facilitators not sticking to the agenda and times allocated to each activity with some attendees preferring more direction from the facilitators. The intervention lead needs to be alive to changing dynamics and atmosphere during an intervention and be aware of the opportunities to refine the approach through an informed selection and application of appropriate methods and techniques. Again, while the flexibility of PANDA enabled refinement to match the prevailing intervention conditions, it placed a much greater responsibility on the facilitators to understand the strengths and weaknesses of potential alternative systems approaches and decide how to respond to emergent situations without a more formal structure to fall back on.

## 5.6 Implications for subsequent research iterations

This intervention has identified a number of learning points and some of these raise questions for further consideration in future interventions and this section summarises these along with an outline of how they are accommodated in future research iterations.

*How reliably can we identify the variety in problem context and effectively respond to multiple paradigms within an intervention? What is the balance between the perceptions and requirements of the sponsor and other participants in defining problem context?*

If it is defined solely by the sponsor it would be necessary to accept that the diverse aspirations of all participants within the problem situation might not be addressed, risking the marginalisation of contributions and the resultant ‘solutions’ may be sub-optimal. Further, as the solutions may not address the concerns of participants, they are more likely to fail on implementation (Appendix 2; 4; 14). Constraining relevant context to merely the view of the sponsor would fall short of the commitments of CST (Table 3.3) and the primary tasks of an interventionist (Argyris, 1970).

Reflecting upon the discussion in section 3.2.5, although there is considerable debate surrounding incommensurability and the variety of approaches to accommodation of alternative paradigms, the validity of recognising alternative paradigms appears clear. Appreciation of paradigm diversity within problem situations rather than imposition of a design that favours a preferred paradigm is central to CSP and the critical systems practitioner is required to recognise these different perspectives and work with them concurrently. As Jackson (2006, p.877) observes:

*“Pursuing a variety of purposes simultaneously and seeking pragmatic trade-offs between efficiency, effectiveness, mutual understanding, fairness and diversity are part of the everyday life of managers. It is to this process that critical systems thinking tries to bring light.”*

CSP recognises and aims to protect paradigm diversity, encouraging challenge and seeking to support the flexible use of multiple methods that have the potential to respond to the relevant paradigms. In this intervention the initial assessment of problem context led to the selection of a set of methods that were considered appropriate at the outset. However, during implementation within such a diverse group it became apparent that the changing context evolved in sometimes unpredictable ways and the intervention leaders needed to recognise this and respond in an appropriate way. This situation presents a challenge to the systems practitioner generally as it means that in such contexts approaches cannot be predetermined and the practitioner requires a degree of flexibility and competency in the contingent deployment of different systems approaches in series and parallel that for practical reasons (in this intervention it was within the time constraints of an on-going workshop) cannot always be informed by a formal set of culturally acceptable analyses. This reflects the discussion in section 3.2.5 where Pollack (2009) observed that multi-methodology in parallel has the potential to provide significant benefits to projects in political, changing, or ‘wicked’ contexts that multi-methodology in *series* cannot. It was observed in section 3.2.4 that the problem situations the sector is facing are becoming increasingly ‘wicked’ and the practitioner might benefit from greater employment of a parallel approach and this is something to be considered further in the next intervention.

The question posed at the start of this section might now be more appropriately:

***How does the intervention facilitator balance and respond to the landscape of diverse and dynamic contexts as seen by the sponsor, key stakeholders and other participants and manage their expectations throughout?***

Accepting that the problem context is defined by all participants with concurrent diversity of paradigm and that this may change as the intervention progresses, the identification of dominant contexts is a real challenge.

Accepting that during real time deployment of systems approaches there may be limited opportunity to deploy formal analyses, it is recognised here that there is benefit in

developing a better appreciation of the ‘landscape’ of paradigm diversity within problem situations and gaining a feel for the ‘centres of gravity’. To this end, there may be value in the development of a culturally acceptable instrument that can be deployed where feasible at any stage of an intervention to identify in a practical way the relative prominence of the paradigms within problem situations.

Such an instrument would need to help expose potentially marginalised and diverse views and as such a systems approach with strength in the emancipatory context would seem relevant. Consequently, the boundary critique of critical systems heuristics (Ulrich, 2005) is considered to offer a valuable contribution. This is consistent with the observations of Midgley (2000) who sees the employment of boundary critique as the first stage of a process to better understand and set the extent of the system and thereby help to establish the context for an intervention. This exploration of views is seen as providing a basis to help select and employ appropriate systems approaches within the intervention. As such, the exploration would benefit from the recognition of features that define the paradigms that typically characterise management problem situations and the constitutive rules for CSP (Jackson, 2003, pp.308-311) might provide guidance in the interpretation of views. An instrument developed along these lines will feature in a subsequent intervention.

***Can the facilitator improve the success of CST through better engagement with intervention sponsors and leadership?***

In seeking to accommodate the requirements of the wider client system beyond those of the intervention sponsor, a further challenge is presented to intervention facilitators who need to be capable of responding positively to intervention sponsor requirements and managing their expectations while accepting the responsibility of preserving the commitments of CST outlined in Table 3.3. It is considered that close engagement with intervention sponsor and relevant management throughout the project will be influential in the successful deployment of systems approaches in subsequent interventions.

As suggested in section 5.5 (ii), encouraging diversity and creativity within the management team from an early stage in the design process, might have been advantageous in improving understanding in relation to the problem context. It is considered that improved engagement with the intervention sponsor and management, particularly during the planning phase of the intervention, may help to encourage a broader view of problem context during the intervention.

## 5.7 Conclusion

As a framework to address problem situations of great complexity and diversity and where the aspirations of those concerned with the problem situation are consistent with the strengths of the approach, then PANDA would appear to provide effective guidance in the application of practical combinations of methods and techniques to improve joint problem solving.

In line with the generic research design (section 4.4), a reflection upon the status and direction of the AR programme is summarised in Table 5.10.

**Table 5.10** Intervention 1 AR reflection

<b>AR consideration</b>	<b>Current assessment</b>
<b>Research focus</b>	Further areas for exploration have been identified (section 5.6): <ul style="list-style-type: none"> <li>• How does the intervention facilitator balance and respond to the landscape of diverse and dynamic contexts as seen by the sponsor, key stakeholders and other participants and manage their expectations throughout?</li> <li>• Can the facilitator improve the success of CST through better engagement with intervention sponsors and leadership?</li> </ul>
<b>Participation</b>	No change to generic design.
<b>Engagement</b>	Increased engagement required with leadership sponsoring interventions.
<b>Authority –</b>	No new issues.

<b>relationships</b>	No new developments.
<b>Learning</b>	<ul style="list-style-type: none"> <li>• An apparent importance in participants feeling their problem solving efforts are demonstrating clear progress towards their view of a desirable future state and to be making tangible progress in this regard. PANDA went some way to achieving this.</li> <li>• The degree of acceptance of the techniques could be influenced by their accessibility, not appearing to necessitate a deep theoretical understanding or expertise amongst practitioners and participants to start applying them.</li> <li>• The diversity of the groups necessitated a flexibility within the design that facilitated on-going engagement with diverse stakeholders and responding to their differing interests. At the same time, there was a need to preserve a clear structure to achieve the intervention purpose.</li> </ul> <p>Together with other findings and questions emerging from this intervention (Appendix 8), these will be used to inform future applications within this research and will be drawn together in Chapter 11 with learning from other interventions to inform a synthesis of findings.</p>

**Table 5.10** Intervention 1 AR reflection



## Chapter 6

### **Intervention 2: Integrated offender management, a multi-agency partnership approach to improve the management of offenders within the criminal justice system in West Yorkshire, February 2008 – October 2008**

#### **6.1 Introduction**

This intervention has been selected as part of the AR programme as it provided an opportunity to work within a multi-agency change programme where diverse organisational aspirations presented a significant challenge to the successful implementation of change. It also presented a complex problem situation involving numerous change initiatives that had no clear and co-ordinated path to joint improvement.

The previous intervention identified an emergent research question:

- Can the facilitator improve the success of CST through better engagement with intervention sponsors and leadership?

This intervention has also been used to explore further this challenge.

#### **6.2 Background to Integrated Offender Management (IOM)**

Integrated Offender Management (IOM) aims to provide a coherent structure to target partner resources upon those offenders of most concern to the community. The initiative involves partner organisations comprising criminal justice agencies (police, probation, prisons, and courts), government departments, the NHS, local authorities and partners in the private and third sector (voluntary and community organisations; social enterprises; and cooperatives and mutuals).

The aim of IOM is to help local partners to:

- Reduce crime and reoffending, improve public confidence in the criminal justice system and tackle the social exclusion of offenders and their families.
- Address potential overlaps between existing approaches and programmes to manage offenders and address gaps.
- Align the work of local criminal justice agencies and their partners more effectively, expanding or improving on partnerships that already exist at the local, area and regional level.
- Simplify and strengthen governance to provide greater clarity around respective roles and responsibilities.

(Home Office, 2010a).

### **6.3 IOM in West Yorkshire**

West Yorkshire was one of the IOM pilot sites which were launched by the government in July 2008. Each pilot site established its own organisational structure as well as its own portfolio of projects under the auspices of IOM and within West Yorkshire the initiative is overseen by the multi-agency West Yorkshire IOM Strategic Delivery Board. The partnership has the broad purpose:

*To create safer environments by reducing crime and protecting the public of West Yorkshire, improving outcomes for offenders, offenders' families and local communities, through the development, delivery and monitoring of an Integrated Offender Management scheme.*

The foundations of IOM can be found in a number of offender initiatives including The Prolific and Other Priority Offender Strategy (PPO Strategy). This strategy was introduced in 2004 to provide end-to-end management of the small group of offenders who were responsible for the majority of crimes (Home Office, 2010f).

The PPO Strategy was structured around three strands of activity that reflected the different types of intervention that partner agencies might be focused upon:

- Prevent and deter
- Catch and control
- Resettle and rehabilitate

The main principle underlying IOM is the channelling of relevant offenders into multi-agency management arrangements, particularly those who present the highest level of risk and social need, such as prolific and other priority offenders (PPOs). To do this it was recognised that joined up commissioning of services, while applying criteria that are dynamic and locally owned, required a remodelling of the services in order to be able to deal with the throughput of offenders.

During February 2008 the Strategic Delivery Board commissioned the internal consultancy services of the West Yorkshire Police to provide support in the remodelling process and to help improve the joined up nature of the partnership activities to support the Board's purpose as expressed in its terms of reference (Table 6.1). The consultancy team engaged comprised of between two and four members experienced in a variety of systems and group facilitation approaches.

Following discussion with the Board members the following objectives for the intervention were agreed:

- Development of a model of IOM at a corporate level where the key activities of all partner agencies can be reflected.
- To determine if these activities are linked in a mutually supportive way to best achieve the aggregate aspirations of IOM.
- To target local improvement activity that identifies the most effective and efficient processes to achieve the IOM aspirations and clarifies roles and responsibilities of all partner agencies involved.
- To build on existing good practice and enable practitioners across the partnerships to improve their own local processes to suit local needs.
- Deliver and evaluate the remodelling products by October 2008.

- Act as a professional expert group to the five local Crime and Disorder Reduction Partnerships (CDRPs), West Yorkshire Local Criminal Justice Board (LCJB), agencies and districts to promote, develop and manage Integrated Offender Management in West Yorkshire.
- Contribute to the development of IOM strategic and delivery plans and oversee progress against agreed objectives.
- Account for funding and resources as appropriate, providing reports and information as required.
- Ensure the development of IOM is co-ordinated across West Yorkshire, taking account of district priorities.
- Oversee the development and agreement of models, standards and good practice for the implementation of IOM and recommend these to local strategic partnerships, the LCJB, CDRPs, agencies and districts.
- Act as a conduit for the communication of the aims and achievements of IOM and for consultation across wider networks.
- Drive process and performance improvement in the delivery of a Premium Service within IOM, including the improvement of outcomes related to Public Service Agreements and national indicators, through identifying good practice and offering opportunities for increasing efficiency and effectiveness in partnership, in particular commissioning across agency or district boundaries.
- Identify gaps in provision and actively seek opportunities to address.
- Keep West Yorkshire at the forefront of IOM development by seeking creativity and innovation in tackling barriers to progress.
- Influence the national agenda by providing advice to, and maintaining, a mutually beneficial relationship with the national IOM Board.

**Table 6.1:** IOM Strategic Delivery Board terms of reference

## 6.4 IOM intervention outline

Given the scale and complexity of the IOM processes and the number of agencies involved in different initiatives, the facilitator in discussion with the IOM lead concluded that the development of a reliable and comprehensive end to end model would be extremely difficult given the complexity and uncertainty surrounding the nature of the interconnectivity between the wide variety of partners and services involved. The problem situation displayed significant dynamic complexity and despite holding common aims, a degree of plurality existed among partners in terms of how the IOM system might be viewed and improved. Reflecting on the relative strengths of different systems approaches, it was considered that the problem situation would benefit from the employment of an approach:

- To help the partnership improve its shared understanding of what success might look like.
- To start to learn about the structure of the complex IOM processes and how they dynamically influence each other.
- To target priority areas for optimisation where the greatest positive impact on local delivery of IOM aspirations might be made through employment of a lean process improvement approach.

To this end, a cross section of partner agencies were involved in a series of facilitated events to build a model of the IOM process to try and understand the structure of the interconnected strands of activity and the outcomes they were aiming to achieve, followed by a further series of workshops to develop improved processes in selected business areas.

**(i) High Level Model of IOM in West Yorkshire**

Following discussion with the IOM Strategic Delivery Board it was envisaged that the development of a high level concept of the IOM process that all parties could buy into would form a useful basis for improving the joined up management of IOM. It was proposed that the concept should clearly link the on-going initiatives in which partner agencies were already involved and be developed through involvement of all agencies. In parallel with this, once a draft high level model for IOM had been developed a linked process was initiated to develop a set of shared outcomes for IOM from the perspectives of the different partner agencies and this is described in the next section (6.4 (ii)).

The consultancy team facilitated two workshops to map the links between the various initiatives from the perspectives of the different partners and very quickly it became clear how much these were clustered around the three strands of IOM – prevent/deter, catch/control and resettle/rehabilitate. Although the clusters showed commonality between initiatives, they did not provide clear linkage between them to demonstrate how the initiatives might influence each other over time. At this point, based upon previous experience of employing system dynamics modelling with stakeholders to improve understanding of problem situations (Newsome, 2008), participants were

introduced to the concept of stock and flow (Sherwood, 2002) as a means of representing the dynamic linkage between the initiative clusters through the common denominator of the offenders' flow through the different phases of IOM. The workshop participants identified a number of state changes an offender may experience as they 'progress' through the IOM processes. The flow of an offender between the various states was seen to be influenced by the different IOM initiatives – in terms of the stock and flow diagram, these initiatives were seen as the 'taps' that regulated the flow of an offender from one state to another. Figure 6.1 shows the stock and flow diagram and where the clusters of initiative examples (supporting activity) were considered to impact upon an offenders' career and mutually support achievement of the IOM aspirations.

The relatively simple model provided a common language upon which management discussion could be structured and decisions made. The complexity of activity surrounding IOM led to difficulty in gaining a clear and acceptable concept of the initiative from diverse perspectives and the high level model provided a visual representation of the IOM system that was acceptable to the cross functional workshop participants and subsequently the IOM Strategic Board. The model enabled the contribution and linkage between the existing activities under the three strands of IOM to be clearly demonstrated without attempting to define detailed, specific cause and effect linkage. Viewing the system in this way enabled the group to debate simple feedback loops and unintended consequences of action at points in the process such as the failure to properly rehabilitate offenders causing rework for agencies elsewhere. This level of model resolution was considered by the facilitator to be the best possible at that stage given the complexity and plurality of the situation and previous experience of similar dynamic modelling.

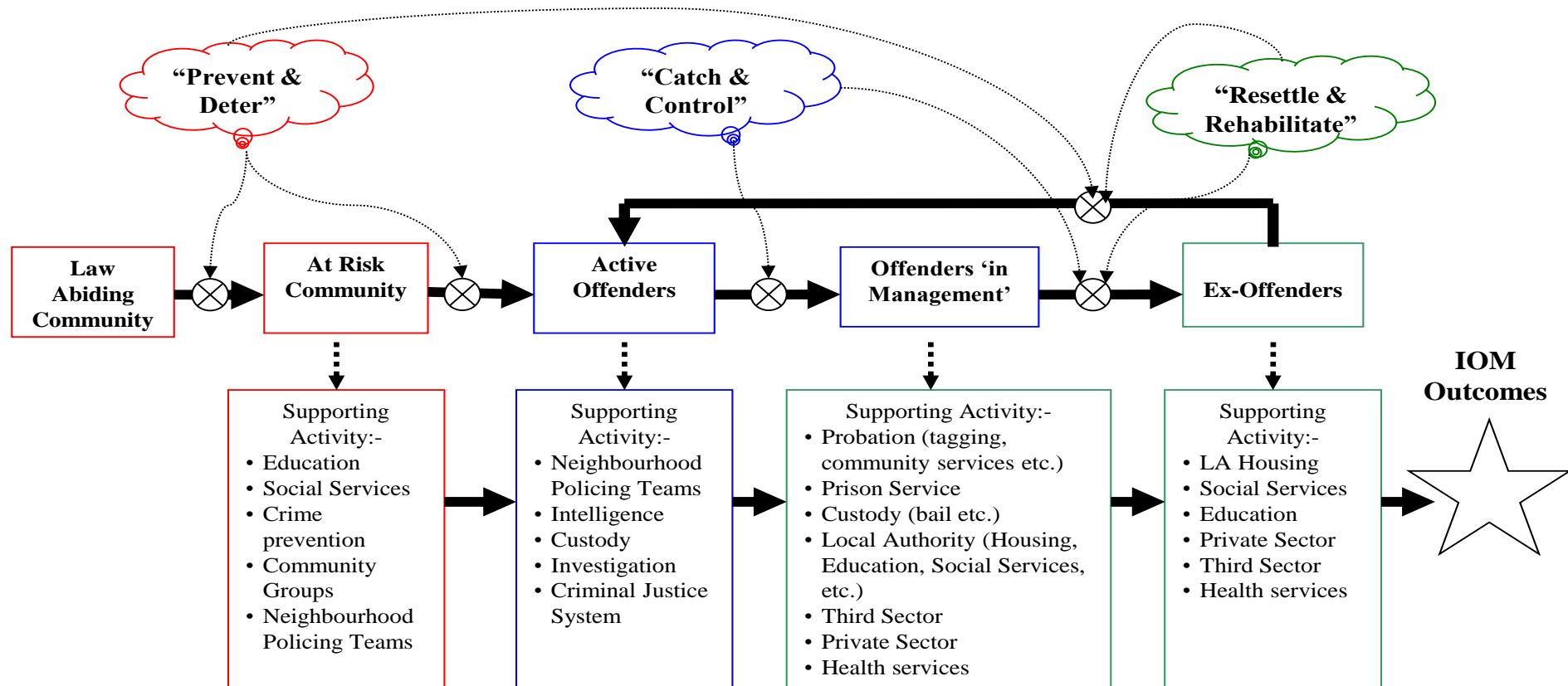
In addition to improving understanding about the structure of IOM, another key aim of the intervention was to improve the efficiency of the IOM processes and consequently there was an interest within the group in the identification of inefficiency across the IOM system. Despite the high level nature of the offender flow model, it was possible to use it at this stage within the group to also demonstrate some structures that might reflect inefficient practice. The lean systems approach (Womack and Jones, 2003) is

extensively used for the identification and eradication of perceived waste in processes. Drawing upon their definitions of waste and reflecting upon the model utilised (Figure 6.1), the flow of ex-offenders back to become active offenders can be seen as a form of re-work waste, the scale of which is influenced by the treatment of offenders in management as well as their resettlement post release. The lean systems concepts were also employed at a later stage of the intervention when looking in more detail at selected IOM processes.

## **(ii) Shared IOM Outcomes**

The intervention objectives required improvement in corporate and local IOM processes to meet the aggregate aspirations of IOM but at the outset of the intervention there was no explicit statement of the desired IOM outcomes that were shared amongst the diverse partner agencies. It soon became clear that successful IOM meant quite different things to the agencies involved. For example, from a health service perspective an emphasis on protecting offender health may require quite different and potentially conflicting processes when compared to a police service perspective where the success might be seen as convicting offenders.

A visioning workshop involving a cross section of partner agencies and facilitated by two experienced internal consultants from WYP formed the basis for the development of a concise set of shared outcomes. The workshop enabled individual partners to identify and record on hexagon shaped 'Idons' (Hodgson, 1992), what success meant from their own perspectives and these were then shared within the group for clarification and clustered to identify common themes and linkage. Following discussion and clarification among workshop participants, a draft form of words was developed to describe the various clusters in terms of desirable outcomes. These drafts were further refined through interviews with key partner stakeholders before being presented to the IOM Strategic Delivery Board for sanction. The outcomes derived through this process in conjunction with the high level IOM model (Table 6.2) were used in the next phase of the intervention for focusing efforts to optimise IOM process performance.



NOTE : Supporting activity illustrates cross-cutting functions and processes that might predominate but not be confined to the key stages.

**Figure 6.1:** High level IOM process stock and flow diagram



- Minimise offending and reoffending, improving local quality of life and promoting safer communities.
- Minimise crime, criminality, fear of crime and of anti-social behaviour.
- Maximise effectiveness and the potential for efficiency savings within integrated partnership services.
- Maximise community confidence and enhance social inclusion.
- Minimise harm to individuals, communities, victims and potential victims.

**Table 6.2:** IOM Strategic Delivery Board desired outcomes.

### **(iii) IOM Process Improvement**

The high level IOM stock and flow model and the shared outcomes for IOM formed the basis of a debate with the IOM Strategic Delivery Board to help target process improvement activity in the areas that would have the greatest impact upon achieving IOM aspirations. Through this the discussion was focused upon the key points within the high level model where the offenders flowed between the different stocks and where the opportunities existed for controlling such flows. The Board considered that the most significant intervention points were the flows into and out of the ‘Offenders in Management’ stock (Figure 6.1) and the main processes impacting here included:

- Prisoner Release Process – from before point of release through 48 hours post release.
- IOM Custody Process – from point of arrest through 48 hours.

In order to draw in the diverse expertise of relevant agencies it was agreed that the intervention should employ participative approaches to involve cross partnership stakeholders in the improvement of these two processes with a view to optimising their efficacy and efficiency in relation to the desired IOM outcomes.

All the intervention events described in the following sections were designed and facilitated by a team of WYP internal consultants who were experienced in the employment of participatory large group processes and in lean process improvement.

They drew upon their previous experience of working with large groups of partner agencies and in particular their work within the Community Safety Department described in the first intervention (Chapter 5).

#### **(iv) Prisoner Release Process**

The first process to be considered was that of prisoner release and this was undertaken by way of a cross partnership workshop facilitated by three experienced WYP facilitators.

Prior to the workshop the facilitators met with the prison service lead for IOM who was a senior prison service manager, to plan this phase of the intervention, identifying:

- The boundaries of the process – the first and last steps.
- The constraints of the process (e.g. mandatory requirements such as legislation, cost, resources, etc.).
- The key stakeholders and functions involved in and influencing activities that take place within the defined boundaries of the process.
- The key participants for the process mapping workshop (the design team).  
These individuals should comprise a cross section of stakeholders who have a detailed and practical knowledge of the current process and activities that take place in relation to prisoner release.

During this meeting the workshop objectives were agreed to include:

- The identification of the desired shared outcomes for the prison release process (to be consistent with those agreed for the wider IOM processes).
- Produce the current process map ('is' map) and identify the problems being experienced and opportunities available.
- Produce a desirable future process map ('should' map) to identify an improved process which address as many of the identified issues as possible and reflects the principles of lean systems design (Womack and Jones, 2003) such as designing to customer value (as defined here by the desired shared outcomes).

The workshop, comprising of representatives from the prison service, police, probation, health service, the National Treatment Agency, local authority housing and the third sector, was opened by the prison service IOM lead who outlined the objectives and format for the day. This was followed by a presentation of the high level IOM model, the desired outcomes for IOM and an outline of the boundaries being considered for the prisoner release process.

Using the IOM outcomes as a guide, participants were asked to identify the outcomes they considered to be important in relation to the prison release process. These were used to focus the subsequent mapping activities and to reflect upon the final process design. The workshop determined the sequence of activities that took place within the current process and identified any associated problems or opportunities in current practices and working within the constraints identified at the outset, along with the shared desired outcomes from the earlier exercise, participants developed an improved process, identifying changes that overcame the perceived problems and supported lean principles (e.g. removal of waste and improvement of flow).

Recommendations for change were developed from the revised 'should' map and all of these were successfully implemented by a cross functional team comprising the affected organisations.

#### **(v) Custody Process Re-design**

As the custody process spanned five different local government authority areas and involved a wide range of partner agencies, the facilitators proposed a rapid series of connected events to meet the requirement for any designs to be locally relevant within broad corporate principles and to do this within challenging timescales. Drawing on previous experience of large group processes and the potential offered by these to support CST as identified in the first intervention, the facilitators developed a participative process that combined elements of Future Search (Weisbord and Janoff, 1995) and The Conference Model (Axelrod, 1999).

The first event (also referred to here as the ‘Cedar Court event’) was a cross-organisational design conference with over 80 participants from relevant IOM partner agencies across all five local authority areas to identify:

- The desired shared outcomes for the custody process (consistent with those of the wider IOM processes).
- The features of an ‘ideal’ custody process.
- Key custody process activities, both generic (corporate) and locally specific.

The conference was divided into a series of participative exercises:

**(a) Identification of desired IOM custody process outcomes.** Here participants worked within their stakeholder groups (e.g. Police, Health, Voluntary Sector, Probation, etc.) reflecting on the overall desired outcomes of IOM, to identify a concise list of outcomes for the custody aspect and prioritise these from their stakeholder perspectives.

**(b) Presentation of Prioritised Outcomes.** A consolidated, prioritised list of outcomes across all stakeholder groups was collated and presented back to the next conference session and challenge invited, particularly in relation to any gaps and differences between groups. The product of this session was considered in a plenary discussion to be an acceptable set of outcomes to guide the remainder of the workshop. Table 6.3 presents this consolidated list of outcomes.

**(c) Identification of ideal custody process (part 1).** Here participants worked in district groups, considering the prioritised outcomes identified earlier, to place themselves 2 and a half years in the ideal future and determine, by the year 2010:-

- What **barriers** did we have to overcome?
- What **opportunities** did we have to take?

Key corporate outcomes required from the Police Custody +48 Hours Processes:

1. Revision of legislation and / or improved application of that currently available.
2. Custody suite re-design – To be fit for purpose for staff from all agencies and to meet the needs of offenders (e.g. health, social, welfare).
3. Improved information / data sharing through the development of integrated IT systems across all Agencies (software, databases) to support the integrated IOM approach.
4. Improved capacity and capability of all persons involved in the delivery of a fully integrated IOM approach which also addresses issues of individual agency / organisational cultures.
5. Further development of a rigorous, partnership-focussed initial offender assessment / screening process that ‘travels’ with the offender (based on risk, need etc.).
6. Retain integrity of investigative processes.
7. IOM to be a 24hr service across all agencies.

**Table 6.3:** Custody design conference desired outcomes

**(d) Identification of key process activities (part 2).** Remaining in district groups, considering the discussion in the previous exercise, identify for the end-to end IOM custody process, what we now need to:-

- **Stop** doing
- **Start** doing
- **Continue** doing

Over the next two months facilitated events were organised with local IOM representatives to develop improved local custody processes for the five districts, drawing upon the outcomes from the design conference. New processes and associated assumptions and requirements were developed to clearly identify the activities and changes required to ensure improvements in, and successful delivery of, IOM across the

districts in recognition of any relevant local context. Each district had the freedom to develop a process that best matched the local context while preserving the corporate outcomes for the custody process redesign and to implement these under the co-ordination of the IOM Strategic Board.

## **6.5 Intervention evaluation**

In line with the research design, the evaluation draws upon key stakeholder perceptions and these are included in Appendix 3, section 2. Although there was only limited opportunity to gather views from a range of stakeholders during the intervention, it was possible to draw upon the views of one of the senior managers in the partnership who had been closely involved in all aspects of the intervention.

Section 6.6 draws upon this evaluation to determine the contribution of the intervention to the research objectives.

## **6.6 Contribution to research objectives**

### **(i) Research Objective 2**

*Identify and implement practical and informed combinations of systems approaches that help policing service stakeholders fulfil their purposes in relation to joint problem solving.*

Reflecting upon the specific objectives of the intervention included in section 6.3, the approaches employed in the intervention appeared to meet the immediate needs of the stakeholders as described in the intervention objectives but the implementation of findings was less successful (Appendix 3; 2; 1). In terms of prisoner release the aims were met in full but for the custody process implementation was only partially achieved.

The products of the visioning and high level offender flow model were well received (Appendix 3; 2; 1, 3). and these were still in use at the time of writing (over 2 years on),

whereas the more detailed process improvements to develop efficient processes had a shorter life span and these had been only partially implemented (Appendix 3; 2; 1). The Partnership Development Manager observed that the Prison Service saw the benefits of seconded staff being fully involved in the work and then taking back into their service the lessons learned (Appendix 3; 2; 10). Although the police custody process had not seen the same success, it was observed that some real practical progress has been made in this area resulting in new resource commitments volunteered by agencies. For example, work on repeat presenters to custody generated insights in relation to health treatment that could be applied elsewhere in IOM with the consequence of reducing subsequent service demands (Appendix 3; 2; 1).

It appeared that on-going support was required to maintain momentum either in the form of on-going consultancy or for the agencies to dedicate capable resources to participate in solution development and continue through to implementation (Appendix 3; 2; 1).

The approach taken to development within the intervention was aimed at engaging a representative and wide range of stakeholders where all contribution was recognised and used to shape the intervention findings. The process improvements were specifically aimed at developing locally relevant solutions that matched the immediate needs and capabilities of each district within a corporate framework.

**(ii) Research Objective 3**

*Determine the features of approaches that are found to be influential in successfully supporting multi-paradigm problem solving, recognising contextual factors that might affect transferability.*

The generic evaluation structure (Appendix 1) utilises four common sociological paradigms identified within CSP and these have been drawn upon here to reflect upon the impact of the approach taken within this intervention.

In relation to the postmodern and emancipatory paradigms, the visioning activity and custody design conference sought to fully engage all partner agencies in order to draw in perceptions that might have traditionally been marginalised. A senior partnership manager observed that:

*“The visioning event allowed staff from all sides to see the custody process from new perspectives and there was a change in cultural thinking as a result. The event attempted to create the opportunity to draw in creative thinking from diverse groups who may not normally have been considered as being part of the custody process and might have traditionally been marginalised for them to feel comfortable to contribute. For example, drawing upon third sector involvement in the design of police custody processes”.*

Although no methodologies were specifically employed with the aim of developing mutual understanding, this was seen to be a product of the visioning activity and in the joint development of the high level offender flow model (Appendix 3; 2; 2, 3). The offender stock and flow model was of particular value in its ability to provide an acceptable high level underlying structure for the problem situation (Appendix 3; 2; 2). It also helped stakeholders to start reflecting on the potential for waste to be generated in the shared processes, both these purposes responding to the functionalist paradigm. The subsequent detailed lean process improvement activity was very much aimed at optimising the process flows to meet stakeholder requirements as defined by the desired shared outcomes and again this aspect responded more to the functionalist paradigm.

In the view of a senior partnership manager the work undertaken to view IOM as an interconnected whole and then look in more detail at processes provided a better understanding of each other’s businesses and provided a means of optimising the process flows to meet stakeholder requirements (Appendix 3; 2; 2). As such she made no particular distinction between the various facets of the intervention in terms of primarily attending to a specific paradigm. The custody event for example was seen as a means of allowing staff to see the custody process from new perspectives, to draw in creative thinking from diverse groups and start to work on improving processes to better



meet shared process outcomes (Appendix 3; 2; 3) and this aspect of the intervention appeared able to respond concurrently to different sociological paradigms.

The various components of the intervention were not laid down in a linear fashion and development of the vision and high level model progressed in parallel; the custody design conference event concurrently addressed a range of paradigms; and the process efficiency optimisation activity followed afterwards. The complexity and plurality of this intervention meant that facilitators saw benefit in employment of approaches in parallel to provide flexibility in attending to different paradigms concurrently. This is consistent with Pollack's (2009) observation that projects in political, changing, or 'wicked' contexts benefit from the employment of multi-methodology in parallel (section 3.2.5). Based on the experience of this project it would certainly appear feasible to employ systems approaches within the sector in this way.

### **Methodology features**

In the view of a senior partnership manager the approach taken was quick and this was perceived to be a good thing. It was seen as important to keep up the impetus and quickly get events moving to show clear progress. This need for clear and quick progress towards multiple stakeholder goals echoes the findings of the previous intervention. (Appendix 3; 2; 7).

Although no formal creativity tools were employed by the facilitators to view the problem situation, the mapping exercise with stakeholders facilitated an improved understanding of the problem context and this helped the facilitators identify appropriate systems approaches to employ, such as the offender stock and flow model (Appendix 3; 2; 4). The visualisation provided by the jointly developed model seemed to provide for the first time a means to help diverse partner organisations build a common concept of the joined up system they were operating in (Appendix 3; 2; 5). A senior partnership manager observed that:

*"In multi-agency situations where we are looking for efficiency, in particular we need something to help see the interconnections and this had been missing in IOM."*

The use of models to join up the thinking between participants in such problem situations is something that Pollack (2009) observed while model building with stakeholder groups:

*“Models acted as a lingua franca, something which was accessible to end users, management and IS professionals.”* (Pollack 2009, p.162).

Despite the variety of partners involved, the range of systems approaches employed during the intervention all appeared to be culturally acceptable (Appendix 3; 2; 6, 8).

### **(iii) Research Objective 4**

*Determine the impact of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed, identifying those factors that are particularly influential.*

Leadership here can be considered in two regards, the leadership of the affected organisation and the leadership of the professional problem solving resources. Both aspects are worthy of consideration in evaluating the intervention.

#### **Organisational leadership**

There was a good buy-in and interest in the intervention at a senior level despite the wide range of partner organisations involved. The IOM leadership was highly supportive of the approach taken during the intervention and clearly demonstrated confidence in and support for the specialists facilitating the activities. (Appendix 3; 2; 9).

All agencies fully engaged in the activities and where their leadership was willing to dedicate resources to the role, they could benefit from quickly putting into practice any improvements identified (Appendix 3; 2; 10).

### **Facilitator leadership and client interaction**

The specialist facilitators were given the freedom to develop intervention activities and they were able to draw upon their wide ranging experience of the employment of systems techniques and methodology in similar problem situations to select, adapt and deploy approaches to suit. Involving independent specialists with professional expertise and the flexibility to bring in ideas and resources as necessary to help structure the work and stimulate new thinking was considered to be of real value. (Appendix 3; 2; 11).

Due to the participative nature of the systems approaches employed, the staff were closely involved in their deployment and this helped gain buy-in, enthusiasm, motivation, a shared understanding and ownership of the outcomes. However, theoretical and complex content was kept to a minimum by the facilitators and based on their previous experience they deliberately avoided unnecessary detail for non-specialists, for example in retaining a high level stock and flow model, and the approaches appeared to be accessible and well received. (Appendix 3; 2; 6, 10). They managed to achieve this through a less overt use of approaches, such as system dynamics' stock and flow structure and in the employment of mode 2 systems thinking, for example using lean system's concept of waste to explore inefficiency.

Vennix et al. (1994, p.31) recognise the value of divergent thinking during problem formulation and conceptualisation to elicit information and within this intervention group workshops and visioning were employed to clarify the problem boundaries, model resolution, key variables, stocks and flows, relationships, feedback and dynamic hypotheses. Convergent thinking to explore courses of action also features in these phases and Vennix et al. have found that with a considered facilitation structure, generic facilitation skills are better for directing the group process rather than a skilled system dynamics modeller. The facilitators involved in the IOM intervention had experience of both building system dynamics models with groups (Newsome, 2008) as well as more

general group facilitation and this broad and flexible skill base was seen to be influential in the successful development of the model here. The facilitators were careful to clearly build participant ideas into the model to improve ownership and not to simply impose an expert modeller's view of the problem. The recognition of the need for the consultant to balance their expertise with clients' ownership is something that has been recognised by Lane (1994) in relation to group model building:

*"...the consultant should offer a process in which the ideas of the team are brought out and examined in a clear and logical way. The knowledge that is generated derives from the discussion of the team's ideas. The consultant's role is then to provide a set of tools for representing clearly the ideas of the team members. It is this activity in which the consultant is an expert."* (Lane, 1994, p.93).

*"...the consultant has a duty to provide tools that are easy to pick up and that express powerful ideas quickly"* (Lane, 1994, p.97).

As well as aiming to build the group ownership of the model, benefit was realised through the facilitators' introduction of some systems concepts such as system dynamics' feedback and lean systems' waste, to challenge and further develop the group's thinking. Some of this thinking, such as the concept of waste, was clearly in more of a 'mode 2' style (Checkland and Scholes, 1990) and used to help think about the prevailing situation and generate ideas to move the intervention forward rather than being used to intervene in the problem situation itself. The exposure of participants to broader critical systems thinking through an experienced facilitator was seen to be of benefit in looking at the problem more creatively, such as through introducing the idea of system dynamics' feedback while developing the high level model for IOM. These ideas were necessarily introduced in real time during the workshops and employed concurrently with the other approaches rather than being part of a pre-defined facilitation structure and this required the facilitators to possess a broad expertise in systems thinking with strength in different paradigms as well as group facilitation skills. At the same time, the experienced facilitator needed to be careful to avoid introducing

unnecessarily complex theory such as that underlying the custody design event. (Appendix 3; 2; 6) to ensure the group retained ownership of the products.

## **6.7 Implications for subsequent research iterations**

This intervention has identified a number of learning points as well as a number of questions to be addressed in future AR iterations. The questions to be tested further are included in this section.

*How significant is the relationship between the facilitator and senior stakeholders in the successful buy-in to the application of systems approaches?*

The first intervention recognised the importance of better engagement with leadership and questioned whether this could influence the success of CST. During this intervention the close working relationships between the facilitators and leaders across a range of agencies was explored further and it appeared to be influential in securing buy-in and ownership of the intervention outcomes. (Appendix 3; 2; 6, 9).

Ranyard and Fildes (1998) undertook a series of studies into the success and failure of OR groups and they identified various critical success factors for the survival of internal consultancies, including the development of good relationships with senior management who understood and appreciated the value of OR and through having high quality staff who could respond positively to clients' needs across a range of problem areas by providing access to a wide range of approaches (Ranyard and Fildes, 1998). This, along with Lane's (1994) consideration of the extent to which the leadership should be exposed to and understand the systems approaches being employed in order to buy-into and benefit from their application, might usefully be considered further in a subsequent intervention.

***Can the utilisation of large group processes improve the successful engagement of multiple stakeholders in the deployment of critical systems thinking?***

In the first intervention it was noted that in participative problem solving the systems approaches used needed to support participants' diverse perceptions of what constituted clear progress towards a (vision of a) desirable future state and to be seen to be making tangible progress, very much reflecting the components of the Beckhard change formula (Beckhard and Harris, 1977). Based upon the success of the participative large group process employed in the IOM intervention which appeared to concurrently attend to a range of paradigms (Appendix 3; 2; 3), there is value in exploring further the impact of large group processes on the successful deployment of CST during a future intervention where it is feasible to do so.

***How important is the ability of developing system visualisations to help build shared understanding of problem situations?***

The development of a visual representation of the system was seen to be of considerable value in building a shared understanding of the interconnected system in which the various stakeholders operated (Appendix 3; 2; 2, 5). The value of taking a systems view of an organisation to better understand how work really gets done, recognising customer, product and flow of work through cross functional processes has been recognised by Rummler and Brache (1995). They advocate the viewing of organisations as adaptive systems where their component parts are viewed as processing systems converting inputs into outputs within a wider operating environment in order to meet some goal. They view the model useful because:

*“...it enables us and our clients to understand the variables that influence performance and to adjust the variables so that performance is improved on a sustained basis.”*

(Rummler and Brache 1995, p.14)

Further, within this intervention a senior partnership manager observed (Appendix 3; 2; 5) that:

*“In multi-agency situations where we are looking for efficiency, in particular we need something to help see the interconnections and this had been missing in IOM. For example, recognition that tasking resources in one part of the process has an impact further down the line.”*

The value of employing means to help stakeholders better understand the interconnected system they operate within is something that will be considered further in the next intervention.

## 6.8 Conclusion

In line with the generic research design (section 4.4), a reflection upon the status and direction of the AR programme is summarised in Table 6.4.

**Table 6.4:** Intervention 2 AR reflection

<b>AR consideration</b>	<b>Current assessment</b>
<b>Research focus</b>	Further areas for exploration have been identified (section 6.7): <ul style="list-style-type: none"> <li>• How significant is the relationship between the facilitator and senior stakeholders in the successful buy-in to the application of systems approaches?</li> <li>• Can the utilisation of large group processes improve the successful engagement of multiple stakeholders in the deployment of critical systems thinking?</li> <li>• How important is the ability of developing system visualisations to help build shared understanding of problem situations?</li> </ul>
<b>Participation</b>	No change to generic design.
<b>Engagement</b>	Increased engagement required with leadership sponsoring interventions. Further consideration of large group engagement opportunities required but no further change to generic nature of engagement.

<b>Authority –</b>	No new issues.
<b>relationships</b>	No new developments.
<b>Learning</b>	<p>This intervention has identified a number of emerging findings in relation to systems approaches and how they are deployed, including:</p> <ul style="list-style-type: none"> <li>• Aspects of the intervention, such as the visioning event, were clearly able to respond concurrently to different sociological paradigms.</li> <li>• The various systems approaches within the intervention successfully progressed in parallel and attended to a range of paradigms in what was considered a ‘wicked’ problem context.</li> <li>• Leadership was highly supportive of the approach taken during the intervention and clearly demonstrated confidence in and support for the specialists facilitating the activities.</li> <li>• The facilitators were careful to clearly build participant ideas into the model to improve ownership and not to simply impose an expert modeller’s view of the problem.</li> </ul> <p>Together with other findings and questions emerging from this intervention (Appendix 8), these will be used to inform future applications within this research and will be drawn together in Chapter 11 with learning from other interventions to inform a synthesis of findings.</p>

**Table 6.4:** Intervention 2 AR reflection



## Chapter 7

### **Intervention 3: Operation QUEST, A Process Improvement and Cultural Change Programme in a Basic Command Unit, November 2008 – January 2010**

#### **7.1 Introduction**

This intervention was selected as part of the AR programme as it provided a platform to evaluate the application of systems thinking in a major organisational change project of local and national importance. The QUEST initiative presented an opportunity to build on earlier research intervention findings relating to the involvement of cross functional teams in improving their own work processes and presented a unique opportunity to explore the potential for successful skills transfer to staff involved in the change project whilst working alongside specialist facilitators.

The previous intervention identified some emerging research questions:

- How significant is the relationship between the facilitator and senior stakeholders in the successful buy-in to the application of systems approaches? (from IOM).
- How important is the ability of developing system visualisations to help build shared understanding of problem situations? (from IOM).

This intervention has been used to explore further these challenges.

#### **7.2 Background to QUEST**

QUEST is a Home Office process improvement initiative in partnership with management consultants, with the objective of delivering transformational change within police forces across England and Wales (Home Office, 2009a). The approach

has gained considerable profile within the police service following early success in applications within forces and the subsequent publicity gained through the Review of Policing by Sir Ronnie Flanagan (Flanagan, 2008), the Policing Green Paper (Home Office, 2008c) and Jan Berry's Reducing Bureaucracy in Policing (Berry, 2009a).

QUEST places a joint Home Office and management consultant team in participant police forces for 6 months, working alongside operational staff within a selected policing process. The QUEST methodology is a variant of lean process improvement, seeking to optimise process performance in relation to agreed, clearly defined and quantifiable goals to meet customer requirements while improving efficiency through the removal of waste. A secondary aim of the approach is to build the organisation's own capability in undertaking similar reviews and embed this approach into core business to deliver sustained benefits and achieve continuous improvement over the longer term through 'skills transfer' and the establishment of monitoring and management arrangements.

### **7.3 QUEST in West Yorkshire Police**

During 1995 WYP established its own programme of process improvement, utilising a socio-technical approach based in the main upon a methodology devised by Rummler and Brache (Rummler and Brache, 1995) and supplemented by the Conference Model (Axelrod, 1999). Following several years of application and with the arrival of a new government initiative and statutory requirement for the police service to undertake Best Value Reviews of their functions (Home Office, 1999), the Force suspended its process improvement work in favour of an approach to functional reviews that were perceived to more closely meet the new Best Value legislative requirements.

Despite suspending its process improvement programme, the force retained the capabilities it had gained in employing its process improvement approach and utilised them over the next decade within other organisational change projects so when the Home Office QUEST initiative became available to forces, WYP was well placed to recognise the potential benefit of the approach. The Home Office encouraged the take

up of QUEST through promotion of its perceived success in improving performance and realising efficiencies within pilot forces and by subsidising the cost of the initial consultant support. With an increasingly bleak financial outlook, in 2008, WYP successfully applied to participate in QUEST, commencing in November 2008 in one of West Yorkshire's 8 Basic Command Units (BCUs, which are policing divisions that provide operational policing services to a specific geographic area). This initiative is referred to here as QUEST BCU and a dedicated, full-time, multi skilled project team co-located within the BCU was established to undertake the intervention. The team consisted of external consultants, staff from the BCU, WYP's own internal consultants and a range of operational specialists from relevant functions of the force such as call handling, criminal justice support, finance and human resources.

Following the completion of the pilot intervention a Force-wide roll out of the identified process improvements was initiated utilising a mixture of staff from the pilot and local staff from each of the Force's other BCUs, supported by Force WYP internal consultants.

**(i) QUEST BCU intervention aims**

The QUEST initiative in West Yorkshire aimed to improve the service to local communities and make better use of our resources. Its twin focus being:-

- To ensure that policing services are effective in delivering a quality service to the public of West Yorkshire in line with the Policing Pledge (Home Office, 2009b).
- To ensure that any savings identified through more efficient processes are re-invested in policing local neighbourhoods to improve confidence and satisfaction.

The QUEST initiative also aimed to achieve this through placing the skills, understanding and motivation to improve the way that operational policing is delivered to the community in the hands of police officers and staff at all levels. This was seen as a way of providing a local capability for sustaining performance improvement in the future.

**(ii) Further QUEST initiative within the criminal justice process**

Following the success of the QUEST BCU project and with the growing recognition locally and nationally that significant performance efficiencies could be realised through process improvement within the end to end criminal justice system, during the summer of 2009 WYP were invited to become involved in a further government sponsored QUEST project, this time looking at the cross-organisational criminal justice process, involving Her Majesty's Court Service and the Crown Prosecution Service. The project involved a different team of external consultants working alongside staff from the partner organisations but there was no initial involvement of any staff who had gained experience during the first QUEST project. This second QUEST project set out with the challenge of employing the QUEST approach across different organisations, each with their own purposes and contexts.

Although this intervention exploration is focused in the main upon the QUEST BCU project, reference is made to the experiences gained during the second QUEST project (hereafter referred to as QUEST CJ) gained from those consultees who became involved in both projects as this provides useful and contrasting insights to help shape the course of the AR.

## 7.4 Intervention methodology

In general terms, the QUEST methodology can be considered to be an approach to process improvement based upon collaboration between specialist consultants and key members of the workforce in a targeted area of business, applying aspects of lean systems approaches, (Seddon, 2008; Womack and Jones, 2003) and placing significant emphasis on data collection to realise efficiency in processes and improvement in relation to identified process goals. The application within WYP sought to identify efficiencies in a range of policing processes and redirect resources and attention to meet the ultimate aim of improving customer satisfaction and public confidence. In terms of sociological paradigm, the methodology could be considered to possess particular strength in a functionalist context, with its emphasis on improving goal seeking and viability.

### (i) Project phases



**Figure 7.1:** The four phases of the QUEST methodology

The QUEST approach in this project comprised a four phase methodology (Figure 7.1), guided by the stated aims of customer satisfaction and service efficiency. The main activities in each phase included:

#### 1. Opportunity assessment

- 1.1. Map current processes and identify issues
- 1.2. Conduct workshops and interviews with operational personnel to understand the issues and assess the implications on normal business
- 1.3. Assess existing performance and process level datasets
- 1.4. Prioritise opportunities for development of business cases

## **2. Business case development**

- 2.1. Complete detailed analysis of costs and benefits for the opportunities
- 2.2. Conduct outline project planning
- 2.3. Complete high-level design of potential solutions
- 2.4. Benefits calculations documented in a 'Data-book' spread sheet
- 2.5. Create quantified business cases for each of the short listed opportunities

## **3. Solution design**

- 3.1. Define new processes and protocols in detail and assess operational impacts
- 3.2. Create 'Operating Model' reference documents to support the new processes
- 3.3. Define key performance indicators and collect baseline data
- 3.4. Develop training packages and communications materials
- 3.5. Assess impact on roles (e.g. staff numbers, shift rotas and role descriptions) and consult with staff affected by the new processes

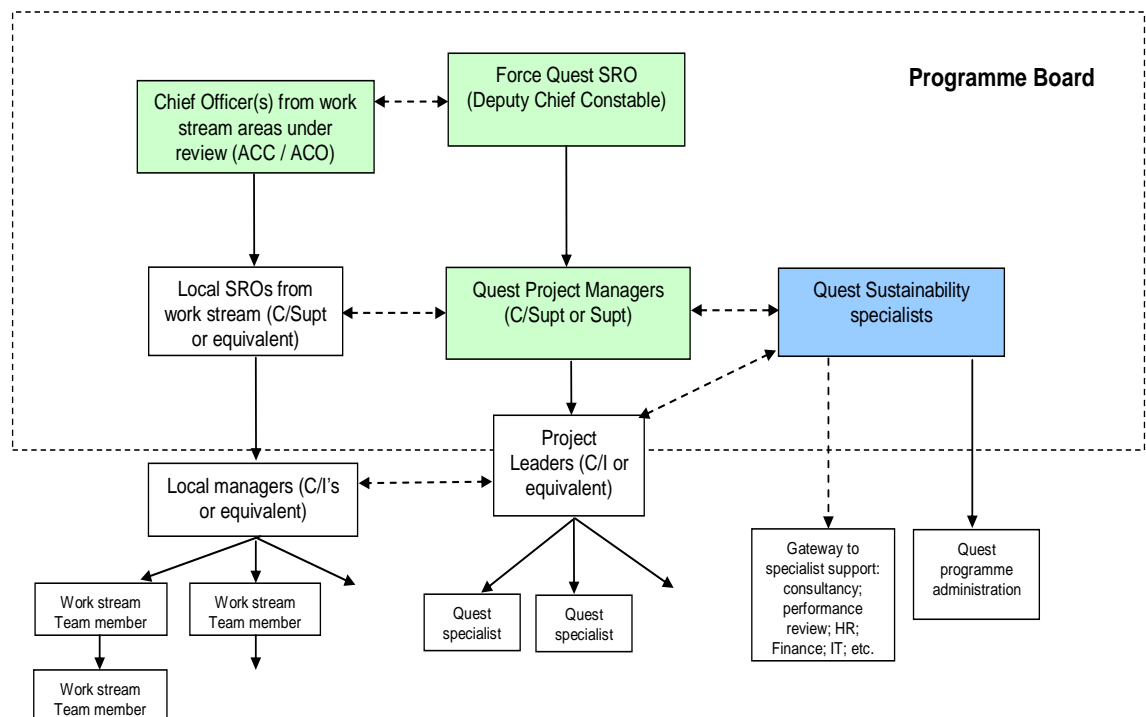
## **4. Implementation**

- 1.1. Deliver training and communications to affected staff
- 1.2. Establish relevant infrastructure and equipment to support the process changes
- 1.3. Intensive monitoring and intervention to resolve 'teething problems' and emerging issues post 'go-live'
- 1.4. Establish regular (weekly) monitoring of key performance indicator and benefits data.

Within this intervention there was limited scope to formally select systems approaches that best matched the evolving problem context as the QUEST methodology was mandated as part of the Home Office agreement. However, although the methodology had been developed through a series of pilot applications, its form within this intervention was adapted to better respond to a locally perceived need to better engage staff in the development and ownership of their own processes and drew upon the previous experience of the WYP internal consultants in applying socio-technical process improvement, to develop process maps and employ 'walk-through' presentations to broaden ownership of the solutions (Axelrod, 1999).

**(ii) Resourcing and governance**

Involvement and participation throughout relevant business units is a key feature of the methodology in order to achieve its aims of building a local capability (section 7.2). Specialist consultants (in this application both internal and external consultants were involved) guided a team of local staff with experience of the relevant operational processes to work intensely on the project, consulting relevant stakeholders and subject matter experts as required. Active involvement and buy-in at a senior leadership level is a significant component and the project lead at a Force level (Senior Responsible Officer) is selected as a member of the senior command team and in the case of this intervention it was the Deputy Chief Constable. A formal project governance structure (Figure 7.2) is a key feature of the approach to ensure the project is delivered in line with the methodology within an agreed timeframe (Figure 7.3). Here, senior representation from the affected functions and the internal specialists responsible for sustainability, appraise chief officers (board level) of progress and on-going performance outcomes.



**Figure 7.2:** QUEST governance structure

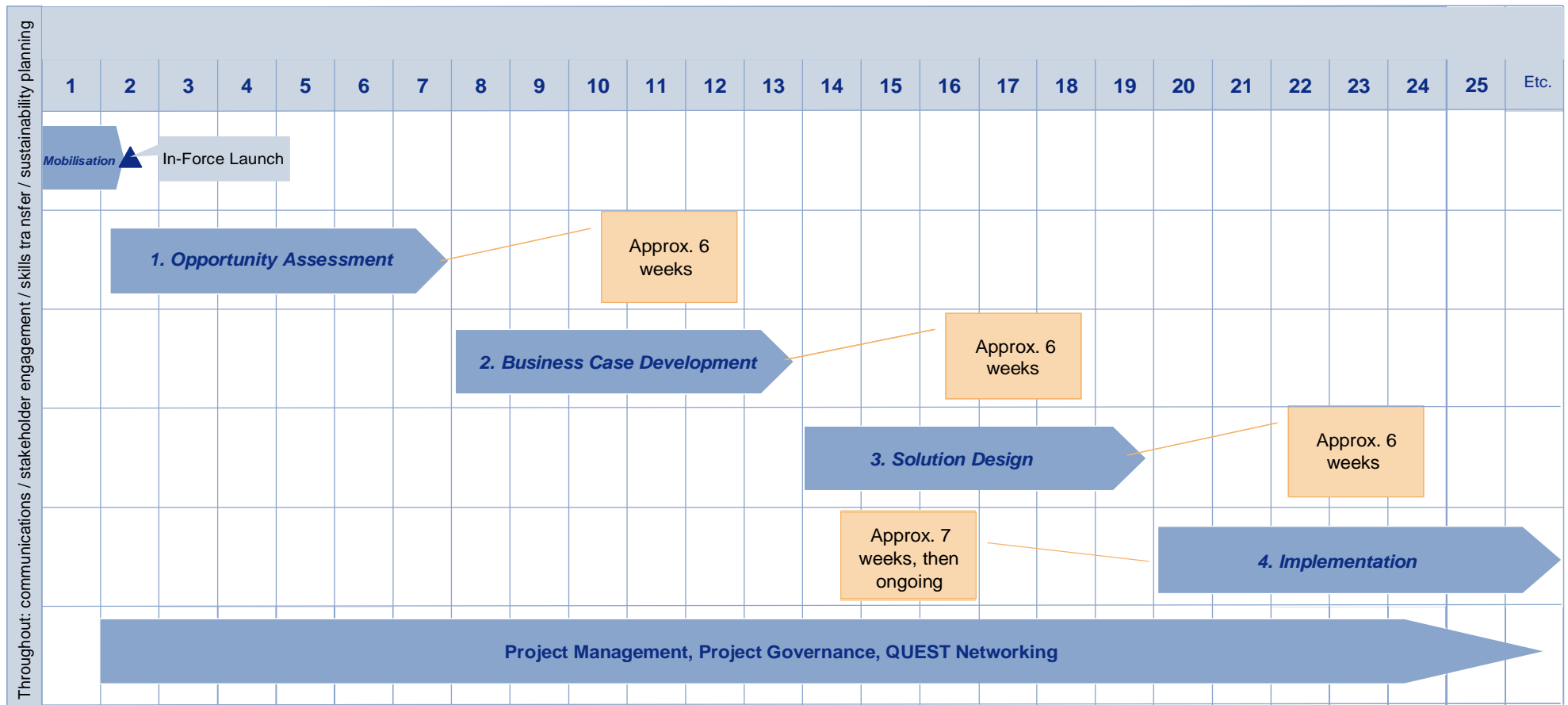
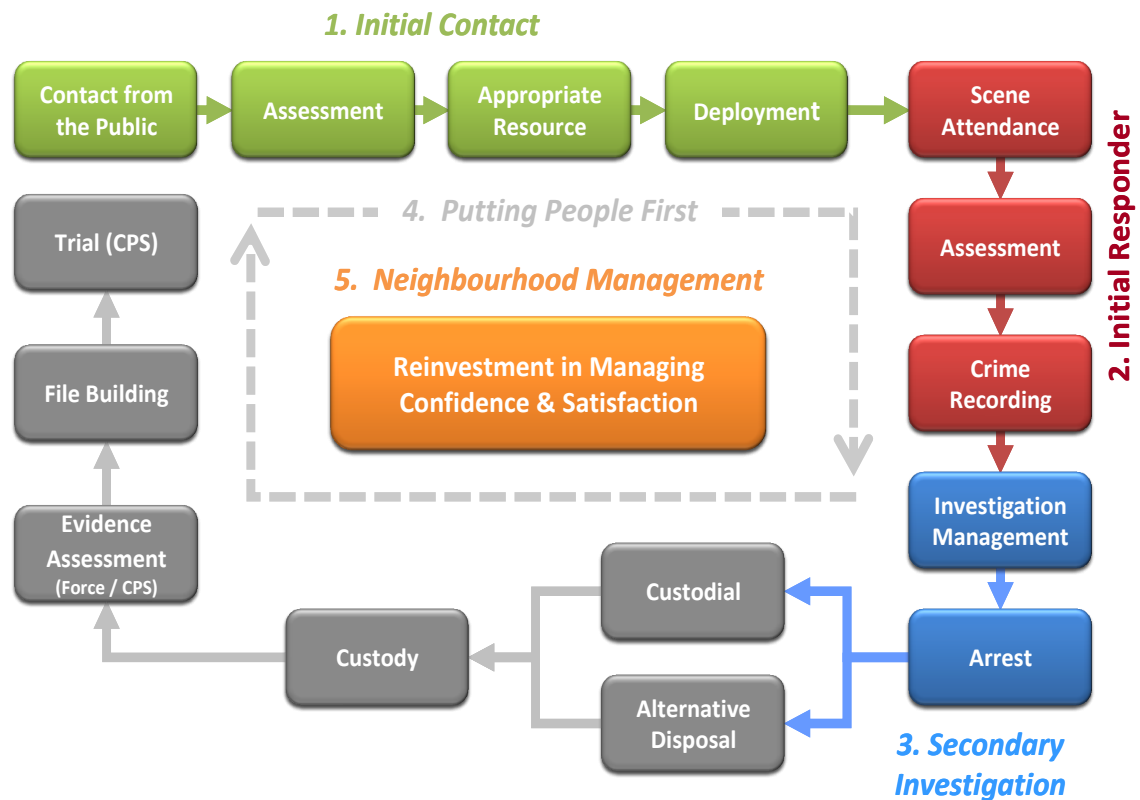


Figure 7.3: QUEST week by week timeline for typical 6 month project (courtesy of WYP)



**(iii) QUEST racetrack**

The QUEST approach utilises a high level representation of the main interconnected policing processes and this is referred to as the ‘racetrack’ (Figure 7.4). The racetrack presents a visual framework that provides a powerful means of communication between stakeholders and upon which the intervention can be structured. The value of this type of process visualisation had already been observed as a powerful means of building and communicating understanding around problem situations within the IOM intervention and its use here was seen to offer similar potential. The version developed through this intervention identified 5 key components considered as being key to delivering effective and efficient customer focused service and these were used to structure the intervention.



**Figure 7.4:** QUEST racetrack (courtesy of WYP)

To achieve the intervention aims the QUEST initiative focused on improving those aspects of service that matter most to service customers, namely:

- The initial contact;
- The response provided, including a quality initial investigation; and
- A thorough investigation by the right person and regular contact with the victim.

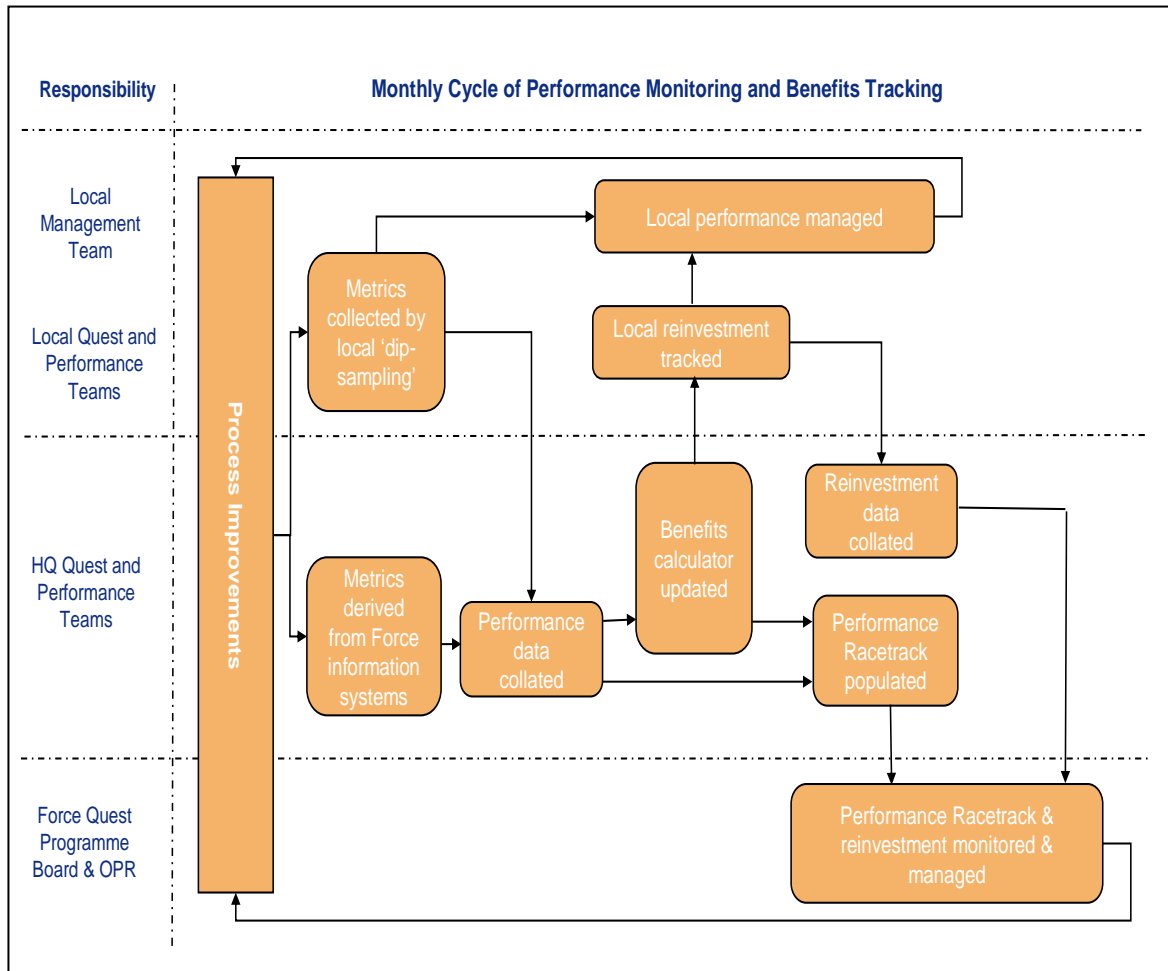
The aims also necessitated a strong emphasis on the ‘re-investment’ into neighbourhood policing of the resources saved and working in partnership to deliver effective neighbourhood management. These components are shown as 1 to 3 and 5 in Figure 7.4. As the process stages following secondary investigation involve significantly more partner agencies, the senior command considered these to be beyond the scope of this particular project.

#### **(iv) Sustaining improvements and benefits**

An integral part of the QUEST approach to sustaining improvement is the establishment of a performance framework that encourages goal achievement, supports diagnosis of performance fluctuations and secures benefit realisation. To achieve this, key metrics were developed to ensure that processes were effectively monitored and the benefits realised, with both local and HQ teams sharing the responsibility for supporting the monitoring process (Figure 7.5).

For this project, the ‘performance racetrack’ presented data on a monthly basis and an example racetrack is shown in Figure 7.6. The racetrack was supported by a ‘benefits calculator’ to determine the amount of time saved by the process changes and made available for reinvestment in neighbourhood reassurance activity along with details of how the time had been reinvested.

The corporate governance structure (Figure 7.2) provided a means for force and local management to sustain the delivery of process performance improvements and to realise the identified benefits, ensuring full accountability for their effective re-investment.



**Figure 7.5:** Performance monitoring and benefits tracking

## 7.5 Intervention evaluation

In line with the research design, evaluation is based upon the perceptions of key stakeholders and in the analysis of any supplementary performance data related to the intervention objectives. Sections (i) to (iii) include a range of outcomes relating to the intervention objectives and section (iv) introduces the perceptions of a range of stakeholders involved in the intervention.

**(i) Intervention outcomes**

The high level outcomes from the intervention included:

- A citizen focus in the re-design of working practices, providing the public with a much better quality of service aligned to individuals' needs.
- A process perspective that enabled a detailed understanding of the nature and scale of demands being placed upon the Force, its flow and interaction between value adding activities throughout key areas of policing to better align with customer needs.
- Staff empowerment that ensured greater discretion and ownership when responding to the needs of the public and that the right person was sent to the right job.
- Through removal of waste, an increase in the resources available to target upon issues of concern to local neighbourhoods.

The main changes that were implemented included:

- 1) A new Call Grading Policy, taking into account local priorities identified by local people.
- 2) The empowerment of call handlers to grade incident logs based on vulnerability and intelligence.
- 3) Ensuring that those who attend appointments are those who will investigate the crime through to its conclusion, improving the personal approach with the public.
- 4) Improving the initial standards of investigation by front-line officers to better meet the needs of the victims and to investigate crime in accordance with clear solvability factors.
- 5) Supplementing the Neighbourhood Policing Teams (NPT's) with dedicated Neighbourhood Investigators and improving the focus on neighbourhood crimes, priorities and problems.

These changes made an impact upon both the public of West Yorkshire and amongst police officers.

*“What QUEST has really achieved for us is breathing life back into a Contact Management Unit that has been battered by lack of value and lack of focus. Now it has both and you can see it in their faces. What this ultimately means is that they have really started to deliver for the public” - BCU Chief Inspector.*

*“The youths were in the park today so I called your number at 9.40 pm. At 10.25 pm, I got a call back from the Police Station to say that a patrol had come out and moved the youths on. I just want to say how impressed I have been throughout this issue with the responses from your organisation. Hopefully, the matter will not re-occur but if it does, I do have the confidence in you” - Member of the Public.*

## **(ii) Key performance benefits**

The QUEST initiative realised a range of operational benefits and significant service efficiencies. The BCU pilot performance position 9 months into implementation (as at February 2010), are summarised in Figure 7.6 and included:

- An 88% improvement in keeping customers informed of incident re-grading.
- The deployment of the most appropriate resource first time in 99% of all deployments.
- A 98% reduction in the errors and omissions made by the initial Attending Officer.
- A 100% rate of revisit or re-contact to a victim.
- A 34% reduction in the average number of days taken to investigate a crime.
- A 33% saving in Neighbourhood Policing Teams’ time to reinvest in tackling local issues.
- Projected savings of £2,205,904 pa within the BCU.

*“The time freed up allows every one of the 128,000 households to be visited in person by the NPT Staff every 3 months. This is some achievement because thanks to QUEST, this can be done in normal time over a 4 week period. We have also executed 70 Search Warrants this month with the NPT’s targeting local drug dealers as opposed to just 10 in the month prior to QUEST” - BCU Superintendent*

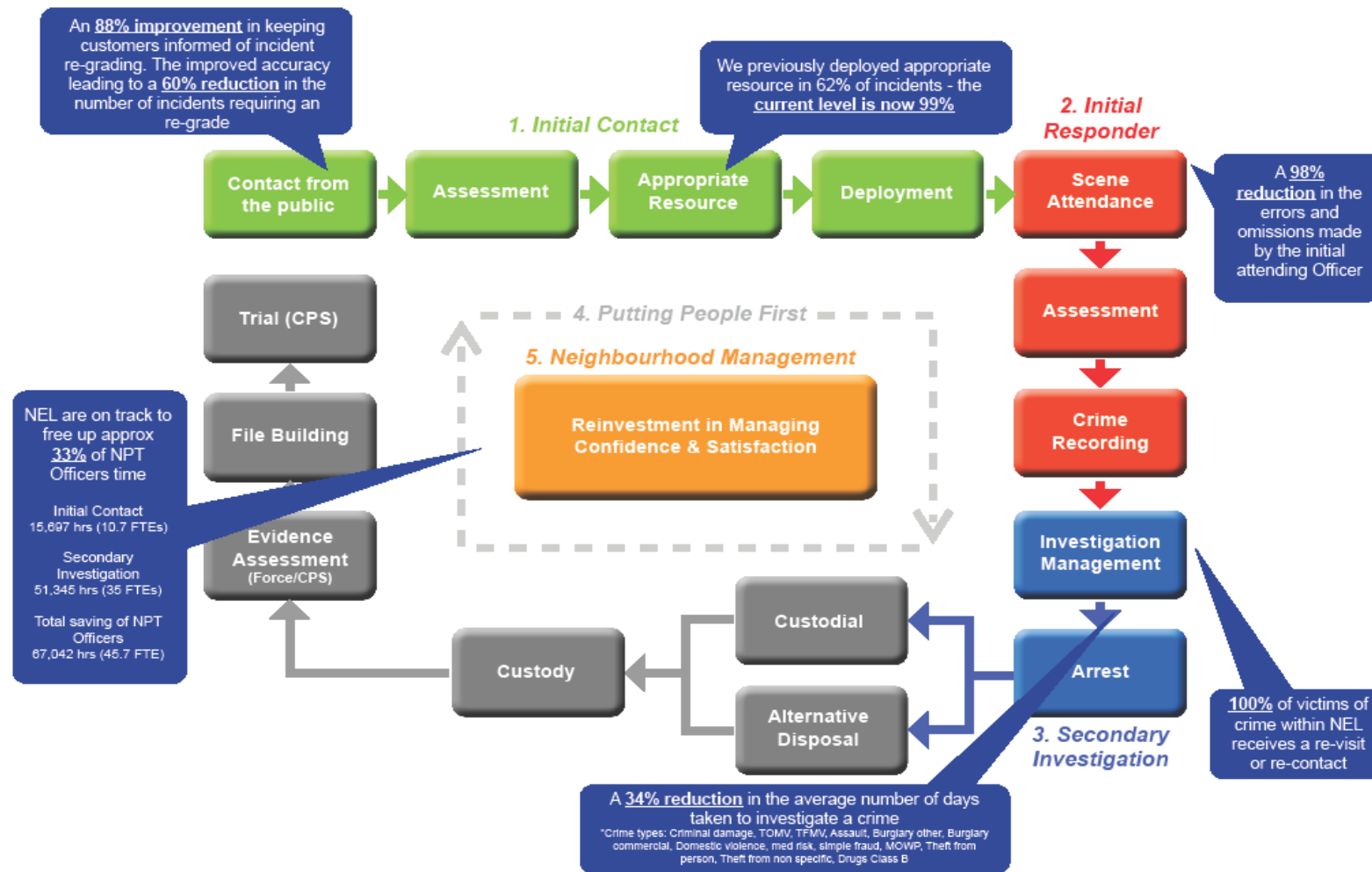
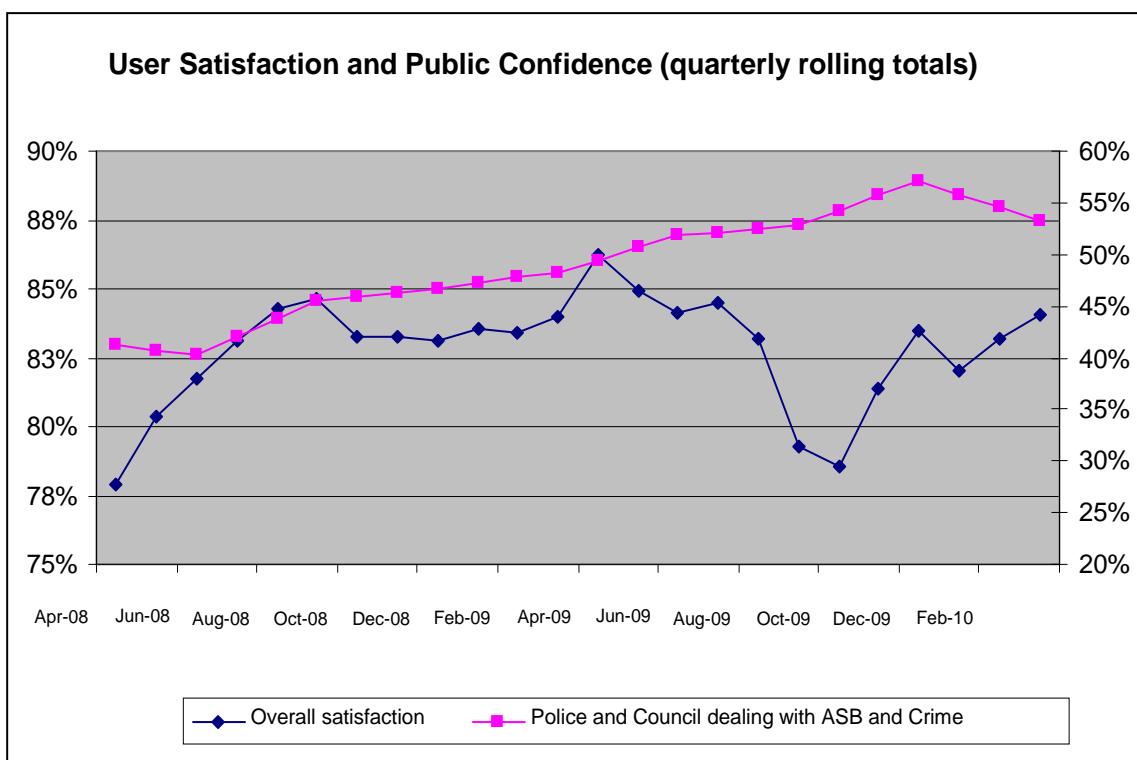


Figure 7.6: Performance improvements as at February 2010, (courtesy of WYP)

One of the key intervention objectives sought to improve confidence and satisfaction through improved neighbourhood policing. Although these service outcomes are influenced dynamically by a wide range of factors and the contribution of the QUEST initiative cannot be accurately calculated, the Force's on-going survey programme can be used to chart the change in confidence and satisfaction level since implementation.

Figure 7.7 presents the overall satisfaction of service users (victims of crime) and the public confidence in policing (police and council dealing with ASB and crime) before and since the implementation of the QUEST changes in the BCU.



**Figure 7.7:** User satisfaction and public confidence (April 2008 - March 2010) (courtesy of WYP)

As can be seen from these figures, the satisfaction of service users declined over the period immediately post implementation of QUEST (circa May 2009) while public confidence continued to increase. It should be noted that there is a lag of up to 3 months in data collection, meaning that process changes implemented in May 2009 might not be fully reflected in the survey experiences until August 2009. Although it is

not the purpose of this research to explore the detail of changes in performance outcomes, a more in-depth analysis of underlying reasons for the decline in satisfaction identified that some of the QUEST process changes to save time dealing with incidents might have contributed to the reduced satisfaction. However, it should be noted that these figures were in decline prior to the QUEST initiative and the lack of on-going contact with victims after the initial contact has been identified as a significant contributor to this. Whatever the source of dissatisfaction, one of the benefits of regular monitoring of the performance racetrack was the early identification of these performance impacts and subsequent remedial action through awareness and development.

### **(iii) Force-wide BCU roll-out**

Following the success of the Pilot, it was agreed that the 3 work-streams of Initial Contact, Initial Responder and Crime Investigation would be rolled out to the remaining 7 BCU's within West Yorkshire. This was seen as key in ensuring that the momentum for change was maintained and that the benefits and performance improvements were realised Forcewide.

As at February 2010, performance improvement from the roll-out included:-

- One BCU had achieved appropriate resource despatch to 99% of incidents.
- One NPT found its average length of secondary investigation reduce from 40 days to 3.
- Projected total time savings generated by the roll-out amounted to £8.5M, equating to 22,000 staff hours per month that could be re-invested into frontline and neighbourhood focused policing activities to improve community confidence and satisfaction.



#### **(iv) Stakeholder interviews**

In line with the research design, the evaluation draws upon an analysis of key stakeholder perceptions and this is included in Appendix 4, section 2. Section 7.6 draws upon this evaluation to determine the contribution of the intervention to the research objectives that can be considered at this stage.

### **7.6 Contribution to research objectives**

In accordance with the generic intervention structure (Appendix 1) and the evaluation presented in Appendix 4, the specific contribution of this intervention can be seen as a set of emerging findings which are presented here against the relevant objectives.

#### **(i) Research Objective 2**

*Identify and implement practical and informed combinations of systems approaches that help policing service stakeholders fulfil their purposes in relation to joint problem solving.*

The objectives for this particular intervention included:

- 1. To ensure that policing services are effective in delivering a quality service to the public of West Yorkshire in line with the Policing Pledge.*
- 2. To ensure that any savings identified through more efficient processes are re-invested in policing local neighbourhoods to improve confidence and satisfaction.*

In terms of these objectives, the process changes resulted in the improvements described in section 7.5 which at that time appeared to be generally positive.

3. *To place the skills, understanding and motivation to improve the way that operational policing is delivered to the community in the hands of police officers and staff at all levels. This was seen as a way of providing a local capability for sustaining performance improvement in the future.*

The resulting changes were considered to be significant, not just in terms of the process changes but also in terms of the impact the approach had on the workforce involved on the project who had become more empowered to improve their work processes in the future. (Appendix 4; 2; 4).

There was some question about whether widespread cultural change in the workforce had actually occurred. There was concern that the challenge of established culture and processes might threaten the intended service outcomes and that the change may become diluted over time without on-going commitment and understanding among the workforce about the underlying principles of responding flexibly to meet customer needs. However, the BCU Commander did see the initiative as the start of a cultural change where this type of thinking will become more widely accepted. (Appendix 4; 2; 5).

Some project team members considered their newly developed skills could be employed within the workplace to tackle future problem situations. However, it was also observed that insufficient local skills transfer had occurred to support self-sufficiency and a local capability with specialist expertise being provided by the centre was seen as one way forward in future. (Appendix 4; 2; 26).

**(ii) Research Objective 3**

*Determine the features of approaches that are found to be influential in successfully supporting multi-paradigm problem solving, recognising contextual factors that might affect transferability.*

### **Prediction and control**

The approach was strong in this regard, largely based upon data to quantify and predict the impact of change and to improve efficiency. The use of ‘dip sampling’ of process data was seen as a powerful way to confidently clarify the problem situation, provides evidence and demonstrates this to others, though there was a need to ensure the right things were being measured. The governance structures established to monitor and manage process performance provided an effective means of control. (Appendix 4; 2; 9).

### **Mutual understanding**

The approach was less focused on improving mutual understanding though it did help here to some extent. The involvement of staff provided a means of empowering the workforce and the process workshop format helped surface issues to improve mutual understanding. It was perceived that the participative mapping activities clarified responsibilities and the impact of activities on the wider process. (Appendix 4; 2; 10). The use of diagramming to build shared understanding was something that Eden et al. (2009) observed:

*“..the group to move from individual meanings to a meaning increasingly shared by the group. The group is able to build a model encapsulating robust causal thinking to enable agreement..”* (Eden et al., 2009, p.6)

In QUEST CJ the stakeholder management, involving several organisations, was more challenging and as a consequence less effective and the partner organisations were not all bought into the project in the same way. The methodology did not appear to have any formal means of helping the partners work together to gain mutual understanding or to challenge perspectives. This experience is consistent with the observations of Jackson et al. (Jackson et al., 2008), where it was noted that a key determinant of the success of lean systems approaches is the degree of unity of stakeholder purposes. (Appendix 4; 2; 10).

## **Fairness**

Widespread workforce involvement in the initiative was seen as a means of improving fairness and diversity of view, however, the project leadership had a challenge to ensure all relevant views were considered and not to just reflect the sponsor's view. (Appendix 4; 2; 11).

Engagement of the workforce was seen to be effective in terms of taking participant views seriously and the approach taken reassured local management that they could influence the direction of the initiative and that solutions were not simply being imposed upon them. (Appendix 4; 2; 3, 31). However, there was some tension between the desire to preserve corporate solutions and the freedom to develop change that was locally relevant. The methodology offered only a limited support to overcome this situation, allowing flexibility to design detail within corporate parameters rather than providing a formal means to support participants' challenge to these constraints. (Appendix 4; 2; 6).

## **Creativity and diversity**

Participants were given the opportunity to be creative in their solutions within some given corporate principles but this wasn't a key feature of the approach as there wasn't much time for 'blue sky' thinking. In QUEST CJ there was less creativity apparent and the methodology and approach taken to deploy it did not appear to support this or help to surface marginalised viewpoints. (Appendix 4; 2; 12).

## **Methodology accessibility and practicality**

The simple formal structure of the approach was generally seen as accessible, practical and adaptable to local circumstances as they arose as long as it was applied in the right way (Appendix 4; 2; 1, 32). Simple graphical representations of each stage of the project helped the teams quickly understand the approach without needing to overload them and the 'racetrack' visualisation of the system was a very powerful means of building understanding of all those affected. (Appendix 4; 2; 14). This reflects the experience of previous lean studies where simple diagrams and scoreboards have been found to provide everyone with a clear sense of what's happening without the need for

them to possess any special skills (Womack and Jones, 2003, p.264). The IOM intervention raised a question regarding the value of developing system visualisations to help build shared understanding of problem situations and this intervention has confirmed the potential for a high level model of system interconnectivity to help stakeholders see their contribution within a wider system.

The approach taken was considered as being flexible enough to be adapted to respond to some issues that emerged during the intervention (Appendix 4; 2; 1). However, competent practitioners were required to understand the underlying approach and to be able to employ the best response to meet local circumstances as the methodology provided little formal support for the selection of different tools (Appendix 4; 2; 15). Despite this, applied successfully, it felt connected to operational work and not too theoretical and this is a feature of 'lean' that has been observed in previous studies. Gregory (2007, p.1510) noted that theoretically well-developed approaches were more demanding and less appealing, in contrast to lean systems which had a more immediate appeal.

Feedback from management within this intervention advocated building an approach to change that was based upon a set of key principles, providing flexibility for adaption to suit the problem situation as being more appropriate than having to slavishly follow an advocated methodology (Appendix 4; 2; 32). This aspiration seems to be consistent with Jackson's observations (Jackson, 2006, p.877), where he sees CSP:

*“to be much more flexible in the use of methods, models and techniques. It is happy to see these disconnected from the methodologies with which they are traditionally associated and used in new combinations in support of the generic systems methodologies that are applied in the intervention”*

Also, a number of approaches to problem solving that have become popular within the police service have been based upon a simple structure such as SARA (Schmerler et al., 2006) with its stages of 'scanning' to identify and select a problem, 'analysing' the selected problem, 'responding' to the problem and 'assessing' the impact of the

response. This practical model which possesses a structure not dissimilar to CSP, has been used extensively in the police service to solve problems in partnership and as such appears to be culturally acceptable.

Effort was needed up front to plan and get the initiative on the right course, involving the right people to get a clear vision of the aspirations of key stakeholders and participants (Appendix 4; 2; 17). As identified within Interventions 1 and 2, there appears to be significant importance for participants to feel their problem solving efforts are demonstrating clear progress towards a desirable future state and to be making tangible progress in this regard (Beckhard and Harris, 1977, pp.24-27).

Although stakeholder engagement throughout was an important feature of the methodology, there was no formal method used to support this, particularly at the outset in the formative stages of the project, other than good consultant practice. This led to problems that were apparent in the QUEST CJ project where a more formal exploration of diverse stakeholder perceptions at an early stage might have overcome weaknesses in the engagement. (Appendix 4; 2; 17).

Particular strength was seen in QUEST's hard data and evidence gathering. Due to the extensive evidence gathering the changes proposed were defensible in a way that appealed to the Force. The pace and intensity of the project activities also matched the 'can-do/emergency' culture of the service. It was noted that pace was a challenge for change initiatives generally because solutions tend to erode over time so need to be embedded quickly and continually revisited. (Appendix 4; 2; 18). These experiences echo the findings of Eden et al. (Eden et al., 2009), where an AR programme to evaluate the use of systems approaches within complex and dynamic public problems confirmed that methods employed needed to reflect the sometimes conflicting requirements of being: inclusive in terms of content knowledge, stakeholders and skills; analytic to ensure wider system impacts were understood; and quick so that they could be employed by busy managers. Bryson, (Bryson, 2003) had previously identified these requirements within the field of public strategic planning and management as inclusivity, speed and systems thinking.

The implementation of change in this intervention was confronted by the challenge of reluctance to change culturally familiar ways of operating instead of continually monitoring and revisiting the problem situation to sustain solutions using appropriate approaches. Any erosion of success here might be viewed as a failure of the improvement method rather than the organisational barriers it faced, thereby risking the introduction of another initiative to take its place. The pressure of initiative overload in the service was seen as detracting from the likelihood of long term success. (Appendix 4; 2; 33).

### **Local involvement, credibility and sustainability**

Establishing a project team comprising local staff with credible experience of working within the affected processes and possessing a mix of local operational knowledge alongside competent specialists was seen to be important. The QUEST BCU initiative benefitted from the targeting and involvement of capable and credible police managers and internal consultant support. It was also seen to be advantageous to base the team locally to improve their visibility and to develop a real appreciation of the problem and for them to own and see the work through into implementation. This helped ensure the project team had credibility as well as building solutions that were relevant and this encouraged local ownership and buy-in. (Appendix 4; 2; 20).

A key component was the project team's on-going interaction with senior stakeholders which helped to build their credibility. Their visibility and accessibility and use of 'hard data' helped to secure buy-in and ownership of outcomes by the senior management team. Establishing effective local involvement and communication with the wider workforce was also seen as important in this regard. (Appendix 4; 2; 2, 13, 20, 24). In their aforementioned research, Eden et al. (Eden et al., 2009, p.7) noted:

*“Managing strategic change involves having good ideas worth implementing and the coalition of support necessary to adopt the changes and to protect them during implementation. Coming up with good ideas and the necessary coalition of support*

*typically are connected, since people are likely to feel more ownership of, and commitment to, ideas they helped develop.”*

This was very much the experience of QUEST BCU where the dynamic operating environment means that problems do not stay solved for long and a local capability is seen as vital to sustainability of improvements. Local understanding of the problem situation and ownership of solutions was key to its success in overcoming any organisational barriers to change. The importance of developing a local capability to be involved in delivery and sustainability of improvements needs to be recognised, rather than simply imposing change devised by external ‘experts’. However, the value of involving specialists was seen as vital to the development of professionally sound interventions and for the introduction of an external challenge. (Appendix 4; 2; 25).

The failure of previous attempts within WYP to widely deploy new business improvement skills through widespread training programmes was noted and the maintenance of skills, knowledge and buy-in through direct involvement in change and then effective networking to sustain and build capability was seen as more effective. It was also suggested that this sort of initiative would build a pool of practitioners who could work with confidence on future projects. (Appendix 4; 2; 27).

### **(iii) Research Objective 4**

*Determine the impact of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed, identifying those factors that are particularly influential.*

Leadership here can be considered in two regards, the leadership of the affected organisation and the leadership of the professional problem solving resources. Both aspects are worthy of consideration in evaluating the intervention.



## **Organisational leadership**

Organisational leadership was seen as critical to the success of the initiative, at a Force level, at a local management team level and within the project team. The IOM intervention raised a question regarding the significance of the relationship between organisational leadership and the facilitator and this intervention identified that effective engagement between interveners and management was important in building senior management understanding of the problem situation and in gaining their support and commitment through establishing trust in the credibility of the project team and in the approach being taken. Where leadership had previous exposure to successful use of systems thinking, the buy-in was seen to be more effective still. (Appendix 4; 2; 28). This experience was also reflected in Read and Tilley's (Read and Tilley, 2000) research into the use of problem solving within the police service, where they identified that when senior officers were knowledgeable and directly involved with their staff, effective problem solving was more prevalent. This finding suggests a value in organisational leadership development through exposure to a wider variety of systems thinking approaches to tackle the problems they face, through practical experience as well as specialist training. This would not only help increase the understanding and deployment of systems thinking but might also encourage greater variety in the way problem situations are viewed and tackled. This is vital if the police service is to improve its capability of matching the rapidly increasing variety of problem situations it is facing, consistent with the aspirations of Argyris and Schon's double loop learning model 2 (1974, p.87).

The positive attitude of the local management team in this initiative was clearly influential in the successful deployment of the approach and facilitated a close, knowledgeable working relationship between leadership and the project team, enabling real time decision making at key stages which maintained project momentum. (Appendix 4; 2; 28).

A positive leadership at a Force level with visible and active commitment was seen as key to organisation wide buy-in and the commitment of the local management team was seen as essential to instil ownership of the end product rather than it being seen to be

‘dumped’ on the BCU. (Appendix 4; 2; 13). This also provided a local guardianship for successful implementation and similar lean systems interventions have found that the commitment of senior managers is vital for sustaining successful change of this nature. Jackson et al. (Jackson et al., 2008) observed:

*“Where they (senior managers) are fully supportive, become ‘converted’ to the new, systems way of thinking, and are willing to extend projects to new areas, the chances of long-term success are excellent.”* (Jackson et al., 2008, p.194)

This was very much the experience of the QUEST BCU initiative.

### **Facilitation leadership**

Following two separate applications of the same QUEST methodology, it was noted that the difference in success between the projects was more about having a suitable ‘professional’ capability than the methodology itself (Appendix 4; 2; 23) and the importance of having capable consultants as part of the project team was recognised. The inclusion of professional facilitators/consultants on the project was seen as vital for effective stakeholder management, to maintain a focus in the methodology and for the successful selection, adaption and employment of a range of specialist methods and techniques. Facilitators were seen as needing to possess the skills to hide complex aspects in participative projects while ensuring participants feel the change is being done with, rather than to them. Some of the workforce representatives in the project team who did not possess previous business improvement experience needed more task level help without the theoretical underpinnings. (Appendix 4; 2; 22, 29).

In problem situations like this there appears to be a need for a co-existence in the facilitator of the ability to ‘keep it simple’ and practical for the majority of participants while also providing credible and theoretically sound guidance and challenge to leaders. Rittel and Webber (1973, p.156) suggested that many of the ‘wicked’ problem situations then being experienced required greater participation and ‘back room’ experts were no longer acceptable. This observation is even more valid given the growing plurality and complexity of problem situations. Systems methodologies that best match

plural situations are likely to be more participative and hence more visible to those involved. Here the facilitation leadership skills are crucial to maintain credibility of the approach through the careful balancing of practical application and a degree of exposure to underlying theory and methods that might not be as agreeable.

The QUEST CJ project was much more challenging despite the application of the same methodology and this was probably due to the increased complexity and plurality of the problem situation. It was also perceived that this was partly due to the facilitators relying on the application of the methodology as given, without challenge or adaption. (Appendix 4; 2; 8).

The external perspective introduced by the facilitators/consultants was also considered valuable in providing a challenge to the normal way of thinking but the right blend of facilitators and local staff was seen as important in understanding operational policing and developing solutions that were relevant. (Appendix 4; 2; 29). Capable in-house specialists were seen as providing expertise, organisational knowledge and a critical eye for the potential to introduce appropriate tools as the project unfolded and not needing to be totally reliant upon the external consultant lead. (Appendix 4; 2; 21). In the first project the QUEST methodology was adapted by experienced practitioners, for example in relation to building a better understanding of processes before pursuing data to 'optimise' performance. The internal consultants were also seen as key to sustainability in employing and developing the methodology further in future. (Appendix 4; 2; 7, 20).

The combination of internal and external consultants worked well in providing a diverse range of complementary specialist experience and capabilities to use at different points as well as in injecting enthusiasm and confidence in the project team. The external consultants employed in the QUEST BCU initiative built a great deal of credibility within the Force through their capability and their preparedness to adapt their approaches and were seen by managers as very much part of a WYP team. It was observed that the external consultant involvement made senior management take more notice of the proposed changes and that much of the change might have been delivered solely through internal specialists if they possessed the same credibility. (Appendix 4;

2; 29, 30). There appears to be a challenge here for internal consultants in building and maintaining the confidence of the senior organisational leadership.

### **National Business Improvement Working Group**

In recognition of the potential business benefits offered by initiatives such as QUEST, during the Autumn of 2009 the Association of Chief Police Officers (ACPO) established a working group to consider how best to preserve the learning from QUEST and similar initiatives. As part of this process, the working group sought to develop a set of 'hallmarks of success' for QUEST initiatives. The learning from this intervention contributed to the working group the following influential factors:

- Strong leadership engagement, understanding and buy-in at a Force and local level;
- Enabling stakeholders to see the interconnected system they are working in;
- Involvement of credible, capable and operationally knowledgeable staff who work within the process alongside credible, capable and accessible specialist facilitators working closely with organizational leadership;
- Evidence based upon sound numerical data;
- Lean process emphasis;
- Optimisation of performance to clearly articulated and measured outcomes (customer value);
- Excellent communications and relationships between staff, consultants and leadership locally and Forcewide.

## **7.7 Implications for subsequent research iterations**

This intervention has identified a number of learning points as well as a number of questions to be addressed in future AR iterations. The questions to be tested further are included in the following section.

***To what extent can the workforce really develop the capabilities and become empowered to deploy systems thinking and improve their own processes in future through participation in and exposure to improvement initiatives such as QUEST?***

Placing the skills, understanding and motivation to improve the way that operational policing is delivered to the community in the hands of police officers and staff at all levels was an aim of this intervention and as such was seen as a way of providing a local capability for sustaining performance improvement in the future. Consultation from this intervention has presented a varied picture as to the success of meeting this aim (Appendix 4; 2; 4, 19). It was also observed that previous attempts at the widespread training of staff in problem solving methodologies had been largely unsuccessful (Appendix 4; 2; 27).

A future intervention will be used to test the ability of a project team, comprising staff members who had been involved in this intervention, to deploy a similar systems intervention themselves with just ad-hoc and remote specialist support from internal consultants in relation to methodology knowledge, skills and experience.

***Is it possible to build the capability of problem solvers to deploy systems thinking with greater success through the development of a combination of propositional knowledge and know how?***

This intervention clearly demonstrated the value of involving capable and experienced facilitators who were able to apply systems approaches flexibly to meet the needs of a changing problem situation. A question arises as to what mechanisms can be developed that might help facilitators preserve, select and share experience from which to learn

about future application and to support and encourage a broader range of systems thinking in the sector through improved awareness of the potential offered by alternative systems approaches.

A challenge for an individual agent working between different paradigms and the skill, knowledge, personal style and experience this requires was presented in 3.2.5 (iii). The scale of this challenge is not trivial in the current environment where most problems might be considered as wicked, where problem contexts are increasingly complex and plural (section 3.2.4). Rittel and Webber (1973, p.164) suggest that every wicked problem is essentially unique and despite similarities, every problem situation will have distinguishing properties that are of overriding importance and solutions cannot therefore be categorised. However, accepting the uniqueness of such problem situations, it is considered of value to reflect here on the observations of Mingers and Brocklesby (1997, p.500), where they consider the ability of facilitators to move from one paradigm to work in another requires them to assimilate two types of knowledge:

*“First, rule-based 'propositional' knowledge that applies to pre-defined bounded situations, and which can be acquired through instruction. Second, it requires 'commonsense' knowledge-- or know-how - for situations that are more ambiguous. This latter capability is preconscious, or instinctive, and it arises out of the accumulated lived experience of certain kinds of activity.”*

It would appear that despite the challenge of learning from propositional knowledge through attempting to categorise unique wicked problems, there is real value in exploring the potential of learning through a combination of ‘common sense’ ‘propositional’ knowledge through both direct involvement in problem solving and also in sharing archetypal, practical case studies and examples of practice amongst practitioners without them being seen as advocating ‘best practice’ in essentially unique problem situations.

Accepting this situation within the detail of individual projects, it has been observed within this intervention that the employment of a practical, generic structure to tackling

problem situations that is based upon a set of key principles, providing the flexibility to adapt to suit the problem in hand, at a ‘meta-level’, might be culturally acceptable within the police service (section 7.6, (ii)). CSP provides one such structure and the potential for employing this type of generic model will be tested within a subsequent intervention.

***Is it possible to improve the success of future systems interventions within the sector through better recognising and managing the plurality of participant perceptions from the outset?***

Eden et al. (2009, p.7) identified that traditional stakeholder analysis is insufficient in complex, feedback systems and there is a need to discover and include ‘derivative’ stakeholders (those groups or individuals who can either harm or benefit the organization) and taking their interests into account can increase the likelihood of a successful intervention and this links to the earlier point from this study regarding the need to build a coalition of support. This is an experience echoed within the QUEST intervention (Appendix 4; 2; 17) and builds upon the finding from the first intervention regarding the potential for employing boundary critique (Ulrich, 2005) at the outset of the initiative to improve recognition of diversity in problem situations. Additionally, on the evidence of the first two interventions, the value of identifying and engaging a diverse group of stakeholders in the development of a shared vision for the change initiative at an early stage is considered as offering a powerful means of building a coalition of support that addresses some of the weaknesses identified in QUEST. The successful employment of elements of Future Search (Weisbord and Janoff, 1995) within the first two interventions suggests a potential for enhancing the lean process improvement of QUEST through combination with large group processes and it is proposed this development features in a future intervention.

## 7.8 Conclusion

The initial QUEST project was particularly successful in meeting its aims and engaging a diverse cross section of the organisation in the improvement of its processes and had a number of strengths outlined in the findings section. However, extending the application of the approach in QUEST CJ to a broader group of stakeholders with less specialist support, the methodology appeared to be lacking in some respects, such as in helping to establish a common vision of success, supporting mutual understanding or a formal means of encouraging participant creativity and without experienced practitioners it would be difficult for the approach to help users respond to these requirements and select supplementary techniques to employ as the need arose in problem situations. (Appendix 4; 2; 16). In fact, it was perceived that those involved rather than the methodology itself was considered to be one of the most important determinants of success (Appendix 4; 2; 23).

In line with the generic research design (section 4.4), a reflection upon the status and direction of the AR programme is summarised in Table 7.1.

**Table 7.1:** Intervention 3 AR reflection

<b>AR consideration</b>	<b>Current assessment</b>
<b>Research focus</b>	<p>Further areas for exploration have been identified (section 7.7):</p> <ul style="list-style-type: none"> <li>• To what extent can the workforce really develop the capabilities and become empowered to deploy systems thinking and improve their own processes in future through participation in and exposure to improvement initiatives such as QUEST?</li> <li>• Is it possible to build the capability of problem solvers to deploy systems thinking with greater success through the development of a combination of propositional knowledge and know how?</li> <li>• Is it possible to improve the success of future systems interventions within the sector through better recognising and managing the plurality of participant perceptions from the outset?</li> </ul>



<b>Participation</b>	No change to generic design.
<b>Engagement</b>	<ul style="list-style-type: none"> <li>• Improved and more formal engagement with intervention stakeholders to determine diversity of perceptions from the outset of the intervention.</li> <li>• More consideration of devolution of systems capabilities among workforce for local deployment.</li> </ul>
<b>Authority –</b>	No new issues.
<b>relationships</b>	The stakeholder involvement in this intervention has established a network of staff with a greater degree of awareness of systems approaches and it is considered that this may affect the success of engagement involving these staff in any future interventions.
<b>Learning</b>	<p>This intervention has identified a number of emerging findings in relation to systems approaches and how they are deployed, including:</p> <ul style="list-style-type: none"> <li>• Facilitators were seen as needing to possess the professional skills to select, adapt and employ a range of systems approaches and to hide complex aspects in the participative projects while ensuring participants felt it was being done with, rather than to them.</li> <li>• There appears to be a challenge for internal consultants in building and maintaining the confidence of the senior leadership where the internal consultant wants to preserve the principles of critical systems thinking in situations where leadership holds a strong view on a problem situation and how it should be tackled.</li> <li>• The development of skills and knowledge through direct involvement in change and then effective networking to sustain and build capability was considered appropriate..</li> </ul> <p>Together with other findings and questions emerging from this intervention (Appendix 8), these will be used to inform future applications within this research and will be drawn together in Chapter 11 with learning from other interventions to inform a synthesis of findings.</p>

**Table 7.1:** Intervention 3 AR reflection.

## Chapter 8

### **Intervention 4: District Anti-Social Behaviour Process Improvement, January 2010 – November 2010**

#### **8.1 Introduction**

The previous intervention aimed to place the skills, understanding and motivation to improve the way that operational policing is delivered to the community in the hands of police officers and staff at all levels. That project was led by a team of specialist facilitators who employed a formal lean process improvement methodology as well as possessing the expertise to adapt and introduce alternative systems thinking to supplement the methodology as required by the problem. The District Anti-Social Behaviour Process Improvement intervention involved a multi-agency project team, some of whom had been drawn from operational staff who had previously been engaged in intervention 3.

This intervention has been selected as part of the AR programme as it naturally flows from the previous intervention, providing an opportunity to explore the potential for cascading a capability in systems thinking within the sector and to further explore the potential for CST to support a multi-agency change project where diverse organisational aspirations, internal politics and limited specialist support presented a significant challenge to the successful implementation of change.

Previous intervention iterations have identified a series of emergent research questions that are explored further in this intervention:

- (i) How does the intervention facilitator balance and respond to the diverse and dynamic contexts as seen by the sponsor, key stakeholders and other participants and manage their expectations throughout? (Community Safety).

- (ii) Can the facilitator improve the success of CST through better engagement with intervention sponsors and leadership? (Community Safety).
- (iii) Can the utilisation of large group processes improve the successful engagement of multiple stakeholders in the deployment of critical systems thinking? (IOM).
- (iv) To what extent can the workforce really develop the capabilities and become empowered to deploy systems thinking and improve their own processes in future through participation in and exposure to improvement initiatives such as QUEST? (QUEST).
- (v) Is it possible to build the capability of problem solvers to deploy systems thinking with greater success through the development of a combination of propositional knowledge and know how? (QUEST).
- (vi) Is it possible to improve the success of future systems interventions within the sector through better recognising and managing the plurality of participant perceptions from the outset? (QUEST).

## **8.2 Background to the district anti-social behaviour process**

There has been a heightened interest in tackling anti-social behaviour (ASB) as a result of high profile cases such as the inquest into the deaths of Fiona Pilkington and her 18 year old daughter Francesca Hardwick, who were found dead after having suffered years of anti-social behaviour (BBC, 2010). Both the local council and the police were criticised for their failure to share information and respond appropriately.

The lessons from this case are relevant to all police forces and within the district in question it was recognised that local processes were not always joined up in the best way, with different organisations and departments having responsibilities for different aspects of ASB. In response to this, the council, WYP and partner agencies including local housing providers agreed to conduct a comprehensive review of partner agency protocols and processes currently in place to respond to and tackle ASB.

At the time the district experienced approximately 46,000 ASB incidents per year and this equates to 60 incidents for every 1000 residents. In terms of public confidence,

only a minority, 48.5%, of residents felt the police and council were dealing with crime and ASB issues that matter locally (British Crime Survey data as at August 2010).

A governance board comprising senior leaders of partner agencies was established to provide strategic direction and authority to a review of ASB and to secure broad partnership commitment to the review. The multi-agency district Community Safety Department was identified as the owner of the initiative, taking responsibility for providing any necessary resources to the project team.

### **8.3 Intervention objectives**

Initial governance board discussions led to the development of the following objectives:

- (i). All review partners will need to demonstrate a commitment to, and support for, the ASB process review, identifying and ensuring the active participation of staff delegated to the review team, throughout the duration of the review.
- (ii). The process review team will aim to identify all strengths, weaknesses, opportunities and threats to ASB service provision, with the primary objective of identifying improvements to frontline services, developing a high quality service to ensure partnership response is expedient, appropriate and efficient.
- (iii). The process review team will aim to develop a co-ordinated and streamlined cross-organisational process whereby partners respond to ASB with clarity of purpose and in accordance with jointly agreed minimum standards. The developed process should seek to improve the customer experience for all service users, ensuring that victims of ASB are appropriately and adequately supported, whilst perpetrators of ASB are given the opportunity to change their behaviour for the better, through effective and consistent use of all current ASB tools and powers.
- (iv). Furthermore, the review team will also aim to identify any scope to realise efficiencies within a sustainable ASB process, through more effective and joined up use of all partners' resources.

Subsequent feedback obtained through a visioning event (section 8.4 (ii)) and key stakeholder interviews (section 8.4 (iii)) added context to these, identifying 10 priority themes to guide the review:

1. Ensuring partners work in a joined up way with a joined up approach.
2. Improving communication within each partner agency and between agencies.
3. Developing a cross agency understanding and definition of ASB.
4. A need to improve community engagement and ownership.
5. A need to understand the causes of ASB and the availability of interventions to prevent ASB.
6. Improved information sharing through robust cross agency protocols.
7. Ensure resources and finance are used efficiently.
8. Ensure ASB services and products fit for purpose, used appropriately and ensure victims are supported.
9. Partners should make effective use of media management opportunities to combat negative publicity.
10. Partner agencies need robust ASB evaluation processes to measure performance.

## **8.4. Intervention outline**

### **(i) Intervention design and methodology**

The researcher was invited to attend a meeting with representatives from the partner agencies in order to establish how best to help them to achieve their aims to improve the delivery of ASB services. The findings from earlier interventions had started to shape the researcher's approach and in particular key outcomes from the Community Safety, IOM and QUEST interventions were relevant (listed in section 8.1 (i) to (vi)).

At this stage of the intervention the researcher wanted to take the opportunity to work with the stakeholders to explore the features of the problem situation that were relevant to the partnership. To do this a set of high level prompt questions were employed to help structure discussion during this meeting (Table 8.1).

1. What is the purpose of the intervention?
2. Who is the customer?
3. Who else has a stake in the service and what is the nature of their influence/control?
4. How clear and consistent is the purpose among stakeholders?
5. How clear and stable are the problem boundaries and constraints?
6. What is the relative mix of the aims of the intervention - optimisation V build mutual understanding V ensure fairness V promote diversity and suppressed views?
7. What are the measures of success?
8. Who or what condition would guarantee success?
9. Is quantification important?
10. Is the problem environment and interdependencies clear or is there complexity and hidden interdependency?
11. Is there dynamic complexity?
12. Who is considered an expert in the improvement of the service and needs to be involved?
13. To what extent do we want participation of staff in providing data/expertise?
14. To what extent do we want involvement of those affected by (but not directly involved in) the intervention?

**Table 8.1:** Questions employed with intervention sponsors to inform selection of relevant systems approaches

The first intervention suggested (section 5.6) that an instrument might be developed to help better understand and set the extent of the system, exposing potentially marginalised and diverse views through employment of Ulrich's boundary critique and interpreting the features that define the paradigms that typically characterise management problem situations through Jackson's constitutive rules for CSP. It was considered that exploration of these components might help to establish a set of practical and culturally acceptable questions that would help the facilitator explore the

context for an intervention and provide a basis to help select and employ appropriate systems approaches within an intervention. The QUEST intervention added to this (section 7.7) by noting the importance of such an approach in identifying and including derivative stakeholders in building a coalition of support for an intervention. Considering and adapting the questions offered by boundary critique (Table 8.3, Appendix 5) and supplementing these with components to inform comparison with CSP's constitutive rules (Table 8.2, Appendix 5) produced a set of questions of practical relevance that might help the facilitator identify the boundaries and relative prominence of different problem features and thereby help identify the types of systems approach that might be of value during an intervention. Following some resistance amongst internal consultants to the employment of boundary critique (see section 8.6 (iii)), a set of questions were constructed using components and language that would be more recognisable within the sector to support an exploration of context with stakeholders. It was considered these would overcome any cultural resistance that might be experienced by attempts to employ alternative approaches such as metaphor analysis (Jackson, 2000).

The prompts included in Table 8.1 were used to stimulate discussion at a launch meeting involving senior representatives from the various partner agencies and as might be expected, there was no single answer to each prompt but the following features were identified to be the most prominent themes:

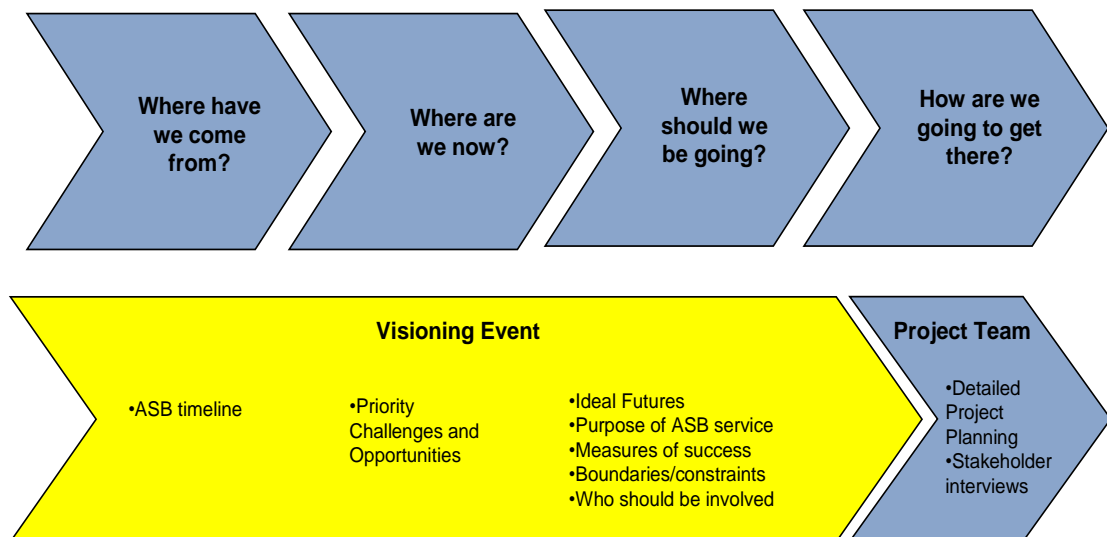
- The ultimate purpose should be to improve the confidence of local communities through delivering better quality services that are joined up and more efficient.
- Also, to better understand each partner agency's position to improve the joining up of services.
- The use of a proven approach that can provide quantifiable evidence to give confidence in decision making.
- Exploration of diverse views of partner agencies and other stakeholders to scope the ASB process, the issues being faced and what might be done in response (specific participants were identified during the meeting).
- Build a cross partnership support and buy-in to any change.

It was clear, particularly from the police stakeholders, that a data driven, evidence based approach was seen as desirable but some other partners were equally interested in exploring more about what constituted ASB and what different agencies might have to contribute to the process. All seemed to agree that an open exploration of diverse views surrounding ASB would be a valuable component of the intervention.

An influential view, partly due to the perceived success of the ‘QUEST’ lean process improvement methodology employed within West Yorkshire Police (see previous intervention), was for this project to employ a similar approach. However, drawing upon the wider discussion at the meeting and building upon the experience of the use of QUEST within WYP, some changes were proposed to the approach for this project due to the involvement of a wide range of partner organisations as it had previously been perceived that the QUEST methodology on its own did not place sufficient emphasis on handling diversity of perception. Previous experience of cross partnership work, including work with the Community Safety Partnership (first intervention) and the IOM initiative (second intervention), had identified the use of large group processes (LGIs) as providing strength in working concurrently with a significant number of stakeholders and it was proposed to again use an LGI in combination with the QUEST process improvement approach. Earlier interventions had also identified the potential for improving understanding surrounding the problem situation through the use of boundary critique and a structured interview was developed for the project team to employ with key stakeholders, drawing upon some boundary critique questions.

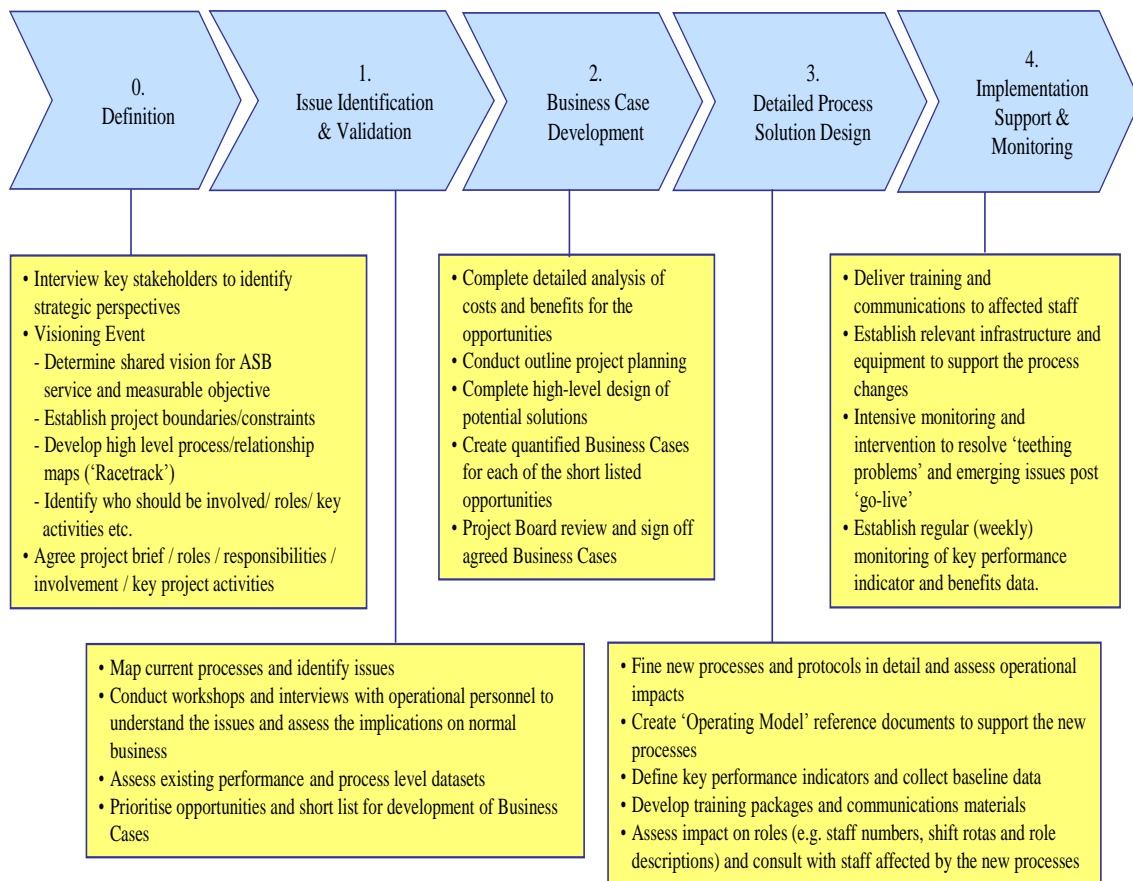
These additional components introduced a more considered definition phase to the process improvement methodology and this enhancement is shown in Figure 8.1.





**Figure 8.1:** Enhanced definition phase – visioning event and stakeholder consultation

A dedicated, full-time, multi-agency process review team was established, consisting of police officers who had been involved as participants in the WYP QUEST projects, council employees from various functions including members of the council’s social housing management teams, (Arm’s Length Management Organisations, referred to as ALMOs). Unlike the previous QUEST work, the review team did not include any specialist consultants. However, internal consultants from WYP provided some high level guidance on the methodology and also undertook some specialist support at key stages. In line with the observations in the IOM intervention (6.6 (iii)), the lack of dedicated specialist support meant that there would be limited opportunity to employ systems approaches in parallel as this would require a significant degree of specialist capability throughout the project. Consequently, the different systems approaches were employed in series with a greater degree of specialist support in the early phase of project definition and then at key stages of the intervention. In the absence of dedicated specialists within the team, there was a great deal of reliance upon the capabilities of the police project manager who had previously been involved in a WYP QUEST BCU project and in drawing upon some generic high level guidance on the methodology steps provided by the internal consultants. Figure 8.2 summarises the methodology steps applied during the intervention.



**Figure 8.2:** Intervention methodology steps (courtesy of WYP)

The project was initiated with an ambitious aim of completing the review within 6 months, a project timeline that was taken from the WYP QUEST projects that had been supported by a dedicated team of specialists working within a single organisation.

**(ii) Visioning event**

Following discussion with partner representatives the purpose of the visioning event was to establish the following:

1. An awareness of past experience in relation to ASB issues and service delivery.  
The information generated enabling an appreciation of:-
  - Our history in relation to ASB
  - Changes that we have experienced
  - What we have in place to build on

2. To identify themes and issues that have shaped our views based upon past experience. This will establish a context for a shared view of the future.
3. To discover what we collectively perceive to be the key themes and issues from our particular perspectives.
4. Reflecting upon the key themes and issues, to imagine the future we want to work towards.

The visioning event was held over a full day in a large local venue and was designed to be highly participative, involving self-managed group activities to develop a visual common database of issues, themes and ideal futures relevant to the problem situation, encouraging creativity and diversity of views. The event drew upon Weisbord and Janoff's (1995) Future Search methodology and a more comprehensive outline of the activities this incorporated is included in Appendix 5, section 4.

Participation involved a 'diagonal' cross section of 140 stakeholders with an interest in the ASB process, including representatives from:

- Council departments (housing, libraries, social services, education etc.)
- Emergency services (WYP, BTP, fire service)
- Tenant associations
- Transport services
- ALMOs

The event was designed and supported by a team of WYP internal consultants who had extensive experience of systems approaches including employment of LGIs and was facilitated by an experienced WYP facilitator who possessed extensive operational experience of working with partners in relation to ASB and who was familiar with LGIs.

The event helped to construct a timeline of stakeholder experiences related to ASB and this formed a common database from which participants individually and in groups could identify priority themes and issues and this provided a shared context from which they could develop views of an ideal future for ASB.

The outcomes of the event included:

- Exploration of experience of ASB issues and service delivery from the diverse stakeholder perspectives.
- Clarification of common ground on the vision and outcomes of an ideal ASB process.
- Identification of ASB review objectives.
- Determination of where the expertise lay for further participation in the review.

### **(iii) Stakeholder interviews**

A final phase of consultation to shape the project took the form of key stakeholder interviews. Methodologies such as SODA (Eden, 1989) and Critical Systems Heuristics (Ulrich, 1983) deliberately set out to discover organisational forces at work for which the facilitator needs to account. Within this research, the first intervention had identified the potential to improve engagement with stakeholders from the outset to overcome marginalisation and suggested that boundary critique might help in this regard. To this end the project team were provided with a concise set of interview questions (Figure 8.3), drawing in some elements of boundary critique but in a language that would be more familiar to the project team and stakeholders alike, alongside more traditional project definition features. As the questions were to be posed by project team members with no formal background in the application of CST, great care was taken to develop a concise set of culturally acceptable questions that they could understand sufficiently to adapt to utilise with different stakeholders.

1. What are the biggest problems and opportunities facing the delivery of ASB services?
2. Who should be seen as the customers of the ASB service (e.g. victims, general public etc.) and what would a good service outcome look like to them?
3. What accomplishments would you like to see in place by the end of this Review?
4. What specific objectives would you like to see established for the Review?
5. What specific areas do you think could be improved in terms of efficiency, effectiveness and quality?
6. What constraints / boundaries need to be accommodated within the Review (e.g. policy, timescale, costs etc.)?
7. Are there any specific groups or individuals you think we should consult (e.g. experts, victims, public, those with influence etc.)?
8. Would you recommend any other organisations to approach for comparison and / or benchmarking e.g. good practice?
9. Are there any other projects or developing areas of work that we need to be aware of?

**Figure 8.3:** Key stakeholder interview questions

## 8.5 Intervention evaluation

In line with the research design, the evaluation draws upon supplementary performance data and key stakeholder perceptions and this section summarises these findings.

### (i) Intervention outcomes

As a result of the intervention, the Governance Board approved the following process changes:

- Establishment of co-located multi-agency ASB teams with centralised specialist support.
- Consistent recording of ASB incidents and data collected from callers across all agencies.
- Adoption of shared standards of service.
- Shared process for ASB, clarifying responsibilities and procedure.
- Improved support to victims, witnesses and alleged perpetrators through on-going assessment of need.
- Adoption of formalised problem solving processes.
- Multi-agency intelligence flow for pro-active deployment of most suitable resource.
- Improved IT systems and training support.

As in the previous QUEST projects a performance racetrack was developed to provide a visual representation of interconnected performance variables to help build and communicate understanding in relation to the ASB process. Figure 8.4 includes an example of the racetrack structure excluding operational data. The racetrack provides a concept of how the partnership saw it's joined up responsibility in relation to improving ASB performance.

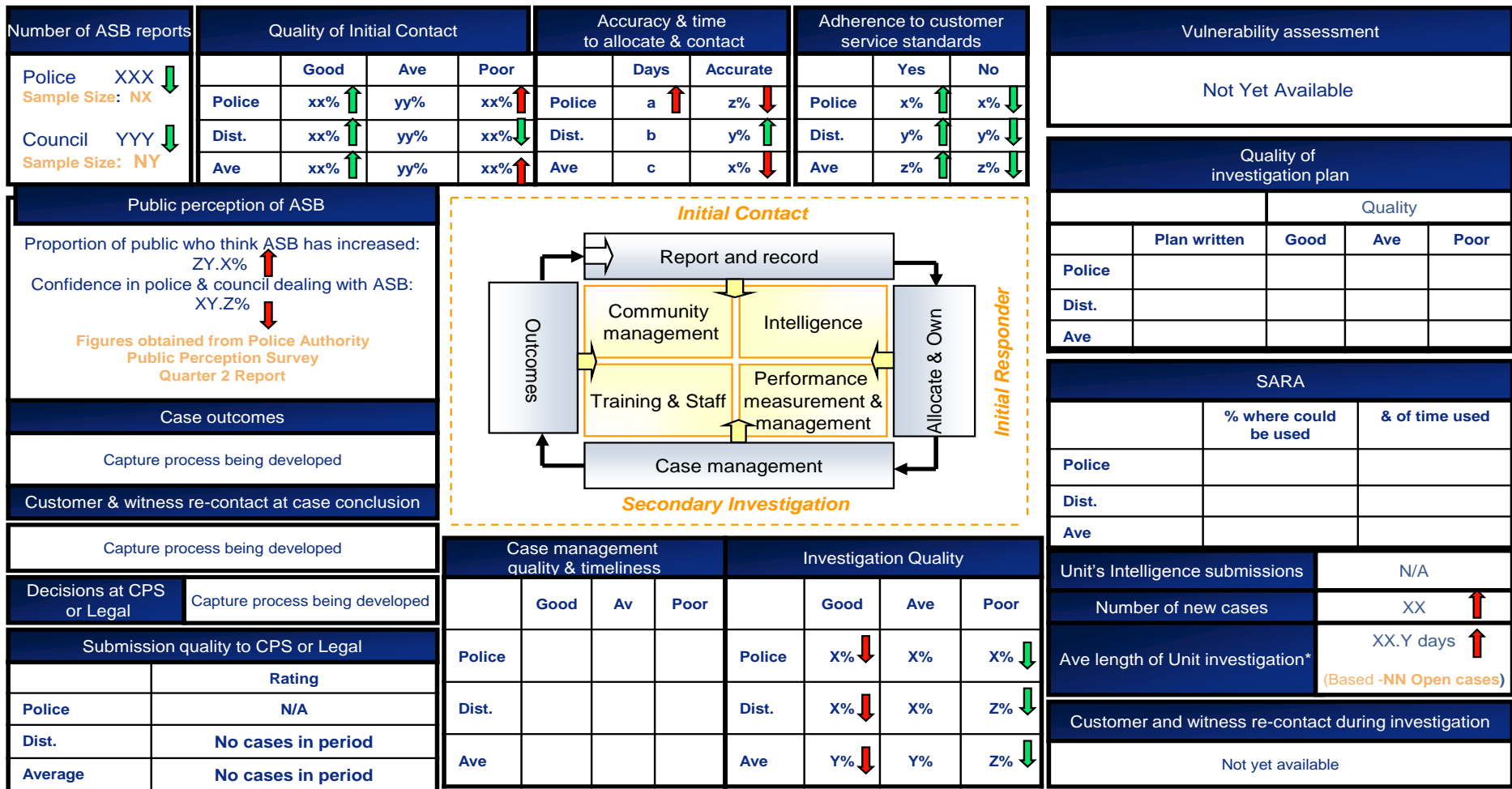


Figure 8.4: Structure of ASB racetrack (courtesy of WYP)

## **(ii) Stakeholder interviews**

In line with the research design, the evaluation draws upon an analysis of key stakeholder perceptions and this is included in Appendix 5, section 3. Section 8.6 draws upon this evaluation to determine the contribution of the intervention to the research objectives that can be considered at this stage.

## **8.6 Contribution to research objectives**

### **(i) Research Objective 2**

*Identify and implement practical and informed combinations of systems approaches that help policing service stakeholders fulfil their purposes in relation to joint problem solving.*

Reflecting upon the specific objectives of the intervention listed in section 8.3, the project outcomes included in 8.5, (i) and the stakeholder interviews included in Appendix 5, the following observations are considered relevant.

Judging by the project outcomes, the majority of the original objectives might be considered to have been delivered and all parties indicated the project had provided real benefit. However, although the police stakeholders considered the objectives to be delivered, the council representative had concerns that the deliverables could have been better if the approach had been more flexible (Appendix 5; 3; 1, 2). The police representatives also felt that more could have been delivered but they did not put this down to a weakness in the methodology, rather to a cultural difference between organisations. They perceived that recommendations had been watered down to accommodate cultural differences in how change should be portrayed. While the police were more prepared to be openly critical of existing processes the council were more sensitive to this. (Appendix 5; 3; 3).



There were concerns about the degree to which the recommendations would be successfully implemented due to the difficulty co-ordinating and securing buy-in from all partners. It was also perceived that there may be conflicts of interest and reluctance to change current arrangements if there was no real benefit to individual partners. The requirement for participant (organisations) to see the change clearly addressing their own objectives before buying into implementation might ultimately limit success. (Appendix 5; 3; 4).

**(ii) Research Objective 3**

*Determine the features of approaches that are found to be influential in successfully supporting multi-paradigm problem solving, recognising contextual factors that might affect transferability.*

**Prediction and control**

The main basis of the QUEST component of the approach was very much aimed at predicting and then controlling performance to meet agreed objectives. Typically, the ‘dip sampling’ was considered to be useful in gaining understanding of processes, particularly by the police who give such data much weight as part of their decision making processes. (Appendix 5; 3; 5). Although these ‘HST’ tools were seen as valuable when aimed at optimising clear processes, they were considered by both police and council staff to be unsuitable for some of the complexity faced in the intervention, in particular in accommodating other partners’ perceptions and handling multiple processes concurrently. (Appendix 5; 3; 15). As one participant put it:

*“...it was difficult getting everyone to view the problems and the ways to tackle them in a similar light”.*

For example, the process mapping that had previously worked well in similar projects was found to be lacking due to the complexity and diversity of view in this particular problem. In the end, the team worked around the problem by breaking the group mapping activity into smaller sub-groups and then adding the separate parts together to build the whole process. The limitation of utilising an approach that did not match the

problem led to a reductionist ‘work-around’ that in itself might have led to further problems in assuming the optimisation of the process component parts would aggregate to improve the process as a whole. (Appendix 5; 3; 10).

### **Mutual understanding**

Whereas the QUEST components were considered lacking in their ability to support mutual understanding (Appendix 5; 3; 15), the visioning event was seen as a positive means of building appreciation and accommodation of other partner viewpoints at the early stage. However, this is where it seemed to end and an on-going involvement with a wider group of stakeholders might have been valuable. (Appendix 5; 3; 6).

### **Ensuring fairness and promoting diversity**

Although the intervention facilitated the challenge of existing practices, there was significant frustration, particularly amongst some police stakeholders who perceived that power and politics within the council were becoming barriers to the successful implementation of change that had been agreed at the governance board. It was not just the police who perceived power at play, council staff felt that the police members of the project team possessed more knowledge about the approach and with an urgency to progress the review, were taking things over and marginalising others. (Appendix 5; 3; 7).

It became clear as the review moved into implementation that some key agencies appeared to have been excluded from the process, despite extensive consultation with stakeholders to identify who needed to be involved. For example, at a post review workshop with partner agencies it became apparent that housing associations representing private sector tenants felt excluded from process as the project team had seen the ALMOs as representative of all tenants despite private tenants forming the largest part of the rental sector. Although some residents associations had been represented in the visioning event, there was a concern that those affected by the review were not represented as well as they might have been. It would have been beneficial for the facilitators to revisit their initial boundary assessment at key stages to ensure the unfolding problem context was fully recognised. (Appendix 5; 3; 6, 7).

## **Methodology and techniques**

The structured question framework developed for use with the intervention sponsors helped to identify key defining characteristics of the problem situation and assist in selection of appropriate responses. It also informed the development of structured stakeholder consultation (see later in this section). (Appendix 5; 3; 8, 13).

The methodology was considered by those participants interviewed to be appropriate for optimisation of clear processes if it was employed by competent practitioners. The components of dip sampling and process mapping were perceived as accessible to non-specialists and potentially useful but there were questions over the validity of some applications of these. (Appendix 5; 3; 14). There was a perception from all parties that the approach was not suited to the complexity of the problem being faced and did not help build mutual understanding or offer support to address issues of power. (Appendix 5; 3; 7, 15).

Broad guidance on methodology was provided to the team by experienced internal consultants who were also available to advise the project team as required. On occasions, additional specialist help was sought but the majority of the time the project team employed the approaches for themselves. Post-review feedback from the project team universally recognised that although the broad methodology guidance was useful, as all projects are different, you need to be able to adapt a basic structure to suit the problem and to do this not only pragmatically but also with professional competence and confidence. (Appendix 5; 3; 16). The police project manager considered that he had adapted the methodology from what he had previously employed in the QUEST project to suit the new circumstances but he was concerned to preserve its integrity. Despite the pragmatic changes, the council project manager still considered the approach to be lacking as he saw the methodology placing its emphasis on evidence gathering while the council wanted to place more emphasis on the building of relationships and understanding of different organisations and he felt that if there had been more emphasis on this aspect it would overcome the barrier to the development of more valid data collection. (Appendix 5; 3; 18).

It was perceived that the team needed to be better able to stand back and look holistically at what they were dealing with and then to challenge and reflect more. (Appendix 5; 3; 19). The team worked hard to adapt the given approaches and managed to make some progress. It is noted however, that without the knowledge or competence to introduce alternative approaches as required, the adaption of the approach could not benefit from the introduction of components that might have been more suited. (Appendix 5; 3; 16). The police project manager considered that:

*“The approach taken was helpful in building a joined up process to meet clear objectives but we did have to work hard to achieve this in quite a messy process.”*

*“..there was nothing particularly wrong with the methodology, it was more about how it was used – what had been a hard sell in previous projects needed to be a softer sell in the ASB review”.*

Further, the clearly diverse partner requirements, were described in the words of a council participant as:

*“The police have a strict hierarchical structure and just go ahead and mechanistically change what they see rather than recognising the cultural elements. The council wanted to bring more partners on board and saw things more about understanding and accommodation”.*

and in the words of a police participant as:

*“The time spent building relationships across the partner organisations detracted from the effort to build process maps and collect data”.*

These may have been better addressed through the employment of diverse systems approaches in parallel given the diversity of perception.

## **Consultation and involvement**

The visioning event was considered to be valuable, particularly for staff from the range of council departments affected but not central to ASB and it helped them better appreciate the different impacts of ASB and how their services might contribute to an ideal future process for tackling ASB. The event helped to gain buy-in from a disparate group of agencies whose diverse viewpoints might have been difficult to take on board concurrently otherwise. (Appendix 5; 3; 8).

The event provided clarity around the strategic vision for the review and these quickly became the basis upon which the review was built. It appeared there was a degree of consensus at the event as to what success would look like and a willingness at that stage from participants to progress service improvement in a range of areas. Despite a good start, the subsequent engagement with stakeholders was less notable and based upon feedback; this was seen as a weakness in securing successful implementation. (Appendix 5; 3; 6, 7, 8). Reflecting upon the 'Beckhard' change formula (Beckhard and Harris, 1977), the initial stages of the review appeared to attend adequately to the variables that would support successful change but as the review progressed this state was not maintained with changes in participants and problem contexts.

White (2002) identifies two broad reasons why organisations might employ LGIs – deficiency of representativeness and an inability to respond to turbulence and uncertainty. The use of LGI in this intervention was initially seen more as a means of tackling the first of these aspirations but as the review progressed the complexity of the situation became apparent and beyond the visioning event the methodology employed did not help deal with this.

Members of the project team considered the structured stakeholder interviews linked well with the visioning event to capture views in a consistent way. (Appendix 5; 3; 8). However, it is not clear how much was obtained from the interviews to add to the visioning event. One of the key aims of the consultation was to identify those who had a stake in the process and to bring them into the process but it became clear towards the end of the project that some key partners had been excluded. (Appendix 5; 3; 7).

It is possible that these two elements of involvement were seen as one-off stages rather than part of an on-going requirement, providing a platform for wide participation and as providing a sufficiently diverse collaborative capacity to be able to respond to a breadth of issues in the interests of improving the process as a whole. (Appendix 5; 3; 6).

### **Culture**

In the view of others, the police seemed to have a culture of urgency to progress the work to very tight timescales and this prevented the project team getting up to speed with the approach and being able to work together with a similar degree of buy-in and understanding. Council staff feedback suggested that opportunities were missed due to this urgency but by way of contrast, the police staff felt that the council's slower pace of change would lead to an erosion of the change recommendations. (Appendix 5; 3; 9).

The police seemed more inclined to be critical of practices and they considered the culture of the council to be risk averse with a fear of presenting anything that might appear critical. The difference in culture was also reflected in the council perception. Their representative considered that a more diplomatic or reconciliatory approach was needed, believing it should not be about finding blame for aspects requiring improvement but unfortunately that was sometimes what it felt like to them. (Appendix 5; 3; 9, 25).

Council feedback highlighted the fact that the police have a strict hierarchical structure and take a mechanistic approach to changing what they see rather than recognising the cultural elements. The council wanted to bring more partners on board and saw things more about improving understanding and accommodation of views. The police were also seen as wanting to take over control and again this may be a cultural trait, where the service is traditionally very much about maintaining order and controlling situations. (Appendix 5; 3; 9).

### **Personal impact and involvement**

The buy-in to change appeared, not surprisingly, to be closely related to its degree of impact upon the individual participant. For example, the council staff were accused of looking at the changes from a personal perspective and how it would affect their own

roles, as if they could detach themselves from the situation for the purpose of the intervention. (Appendix 5; 3; 20). The personal impact of change is of particular relevance in participative processes as it will influence individuals' goals and behaviours within the problem solving process. The importance of individuals' perceptions in such problem situations and how these can be accommodated is recognised in methodologies such as:

- Participatory Appraisal, where accessible tools are employed to represent participant perceptions;
- SODA (Eden, 1989), where individuals' perceptions are mapped and combined to help decide collective and individual action; and
- PANDA, where plurality forms the foundation of the methodology and where individuals' perspectives and intent can be synthesised.

*“Understanding that multiple ‘socially constructed’ realities may vary in any given situation has been the key reason for the development of our participatory approach” (Taket and White, 2000, p55).*

In this intervention, where individuals' needs were not recognised and accommodated, there was a feeling of exclusion and a perception that potentially valuable knowledge and expertise had been lost. Further, the lack of buy-in to any subsequent change proposals would reduce the chance of a successful implementation particularly where those involved have a longer term stake in the processes and where their buy-in is the key to sustaining improvement. (Appendix 5; 3; 24, 26).

### **(iii) Research Objective 4**

*Determine the impact of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed, identifying those factors that are particularly influential.*

Leadership here can be considered in two regards, the leadership of the affected partner organisations and the leadership of the professional problem solving resources employed. Both aspects are considered in evaluating the intervention.

### **Organisational leadership**

One of the critical success factors identified in the QUEST intervention was the importance of securing senior leadership buy-in, confidence and visible support for the change initiative. For a multi-agency intervention with a joint leadership responsibility such as this one, the challenge of achieving this success factor is even greater. Here there is a need for a united leadership who understand the approaches and potential benefits and who have confidence in their project team to deliver. Their active and visible support for the initiative is a vital part of maintaining its profile and commitment amongst participating staff and stakeholders.

Within this project the visioning event had brought real clarity at a strategic level but active communication of this vision amongst those affected was weak thereafter. The number of partners involved in the project, each with different lines of accountability, made it particularly difficult to develop and share clear communications at all levels. (Appendix 5; 3; 22).

The variety of organisations involved in the leadership of the project made the lines of authority and decision making unclear and at times ineffective. There appeared to be reluctance or a lack of agreed authority to commit to decisions within the project, leading to protracted timeframes and a concern that change recommendations might erode in the meantime. (Appendix 5; 3; 23). This was in contrast to the previous application of the methodology within Intervention 3 where the ability to make decisions at all levels seemed to benefit from the involvement of a single organisation as well as the formal rank structure of the police.

The importance of securing appropriate decision making capability in multi-agency problem situations is not unique. Generally, it has been found that in an inclusive or partnership decision making group a common weakness is the assumption that



participants come with the authority to commit their own organisations (Friend, 1990, p.19).

The findings of this intervention have emphasised the importance of organisational leadership possessing a broad understanding of the systems approaches being employed within the intervention (Appendix 5; 3; 29). This confirms the findings of intervention 3, which related mainly to the employment of lean process improvement within a single organisation. Although it has not been the intention here to explore the leadership of multi-agency initiatives generally within this intervention, opportunities offered by systems thinking to assist leaders to successfully implement multi-agency change have been identified.

### **Facilitation leadership**

Part of the purpose of this intervention was to see how well systems capabilities can be cascaded within the workforce through active participation in projects. The police lead for this intervention was an employee who possessed no formal training in systems thinking but who had previously been involved in a project that employed a similar methodology within WYP under the guidance of specialist facilitators. The facilitation leadership for this intervention will therefore be considered in terms of the project team leadership as well as the specialist guidance provided by the internal consultants.

### **Project team**

The methodology employed in this intervention was intended for application by practitioners with an understanding and experience of lean process improvement. The justification for the method of deployment chosen here was based on the belief that sufficient capability was obtained by the police project lead through involvement in a previous project to enable him to competently lead the application of the approach for himself with limited specialist professional support. Feedback from the police project manager stressed the importance of an ability to draw in specialists for the more technical analyses as required and to help challenge the team's approaches and suggest reliable alternatives. He felt that these specialists should have a more strategic overview of the methodology and how to adapt approaches from an independent and professional position. It became clear through consultation with other participants that they felt that

the project needed the involvement of specialists as part of the team rather than accessing this from afar as it was perceived that access to such support had been insufficient. The absence of capable specialists led to a limited capability to adapt techniques and introduce new approaches as appropriate in response to changing intervention needs. (Appendix 5; 3; 10, 28). There had been instances in the project when problems had emerged where the team introduced a pragmatic work-around rather than utilise specialist support. For example, in the previously mentioned process mapping exercise where the team introduced a reductionist work around, an experienced critical systems thinker would have recognised the situation as requiring approaches that might be able to accommodate plurality and complexity rather than trying to force fit a less suitable technique. (Appendix 5; 3; 10).

Issues also arose with the perceived marginalisation of stakeholders, despite the employment of techniques to identify and involve these (visioning event and stakeholder consultation). This raises a question about the depth of understanding that the project team possessed regarding the purpose and employment of the techniques and whether the involvement of an experienced systems thinker would have improved the success in this regard. Given the complex nature of this particular intervention where organisational politics were clearly present, the responsibility placed on the facilitators was heightened further. (Appendix 5; 3; 7, 10, 15, 16). The momentum built during the visioning was difficult to maintain. The need to maintain awareness and continually attend to different stakeholder aspirations and be alive to the diverse requirements of the situation presents a challenge to facilitators no matter how experienced. This intervention presents an example of multi-methodology in series, with distinct methodology phases following in sequence as opposed to the employment of approaches concurrently, addressing different facets at the same time. It has been recognised elsewhere (Pollack, 2009) that the employment of multi-methodology in parallel requires experienced facilitator support. The decision to employ a serial application of multi-methodology in this intervention was necessary to enable less experienced facilitators to employ the approaches themselves. The downside to this was a classic approach of moving from 'soft' to 'hard' systems thinking at a prescribed point (e.g. moving from the visioning exercise to the hard data collection and not reflecting back) and in doing so leaving some partners behind as a result of not

continually responding to their individual aspirations (Appendix 5; 3; 6, 26). This is consistent with observation from research undertaken by Pollack:

*“The most common way of combining hard and soft OR methodologies is in series. This is generally a movement from soft to hard approaches in a project”* (Pollack, 2009, p.158)

*“...such an approach can result in aspects of the project being ‘finalized’ early in the project life cycle, closing off options for development which in a turbulent environment might later become necessary for ensuring project success.”* (Pollack, 2009, p.164).

Having identified areas where the project manager and team might have benefitted from a broader and deeper understanding of CST, it should be noted that the project manager was leading an intervention with significant challenges, ones that many experienced internal consultants would have found similar difficulties dealing with and this point is picked up in the following section. Further, it is worthy of note that participants who provided feedback on their experiences in the project, to their credit, could see the weaknesses of the methodology and how it might be improved. It was clear that the project manager felt more confident in using the approach in this project because of his previous exposure to it through participation in the QUEST BCU initiative and similar views were expressed by other members of the project team. (Appendix 5; 3; 26). One of the emergent questions to be considered in this iteration was to establish whether the workforce could develop the capabilities and become empowered to deploy systems thinking and improve their own processes in future through participation in and exposure to improvement initiatives such as QUEST. Recognising the progress achieved by the project team in this application, it would appear that developing capability through such practice alongside specialists is feasible within limits and consideration might be given to this approach in parallel with participation in relevant networks and through formal training.

### **Specialist support**

A number of learning points for facilitation have already been identified in the previous section but further observations specifically relevant to specialist facilitators are included here.

It was observed by the researcher during this particular intervention that there was a degree of resistance from specialist facilitators to support interventions in this ad-hoc way. This may have been due to them feeling they were giving up some of their expertise and responsibility to others less capable or they felt that offering their expertise would be lost on implementation by inexperienced staff. It may also have been simply too difficult to package generic support of particular relevance in a problem situation that was complex and dynamic. This would be consistent with the earlier observation of one of the project team members about the value of including the specialist as part of the project team and thereby providing the ability to flexibly deploy systems thinking as required by the problem situation. (Appendix 5; 3; 10, 28).

Another form of resistance was observed amongst the specialist facilitators when it was suggested they develop their familiar approaches to better accommodate marginalised viewpoints. Considerable effort was made by the researcher to heavily disguise the elements of boundary critique introduced into the stakeholder consultation to overcome resistance to the introduction of what the internal consultants saw as components that appeared too theoretical and inappropriate for the police culture. Whether these concerns were unfounded or whether the challenge to familiar and established practices and capabilities was a real issue is not clear but there is likely to be an element of truth in both. This is not a unique situation and it is worth reflecting on experience gained elsewhere.

The review of literature in Chapter 3 recognised a series of challenges in relation to the employment of multi-methodology (section 3.2.5). Two of these challenges are of relevance here:

- Cognitive – the problems of an individual agent moving easily from one paradigm to another.
- Cultural – the extent to which organisational and academic cultures militate against multi-paradigm work.

In relation to the first of these challenges, earlier interventions identified the value of facilitators being able to work in multiple paradigms (section 6.6 (iii)). This intervention, typical of many multi agency projects, displayed many features of ‘wicked’ contexts, thereby emphasising the validity of employing multi-methodology in parallel in these situations. Coupling the benefit of employing approaches in parallel with the specialist facilitator competency required to work in multiple paradigms, would suggest that the utilisation of capable specialists within multi-agency projects will be key to success and this might explain some of the shortfalls experienced in this intervention. The internal consultants available to support the ASB project individually possessed a variety of experience and knowledge regarding the employment of a range of different approaches and it is possible that a combination of facilitators drawn upon as required would have better matched the challenge of individual facilitators shifting between paradigms, particularly where there was an unfamiliarity with or resistance to certain components. It has been suggested elsewhere that employing more than one facilitator each with expertise in different paradigms can overcome the practical difficulties of working in different paradigms at the same time (Belton *et al.*, 1997, pp.128–129). It might also be possible to broaden the capabilities of individual facilitators through such involvement and exposure.

The second challenge relates to the possibility that the institutionalised culture that the facilitators operate in might be constraining in some way, Mingers and Brocklesby (1997, p.498) note:

*“While it is by no means impossible to extricate oneself from the constraints imposed by a particular culture, this can present difficulties. Ultimately, it is probably fair to say that the degree of difficulty depends upon the strength of one's attachment to a particular institutionalized 'way of doing things', combined with the strength of one's desire to 'do things differently'.”*

The degree to which this institutionalisation can be mitigated is unclear and this may need to be a longer term aspiration for the service. In this intervention it was observed that better equipping the workforce to understand their business from an early stage in their careers would be advantageous (Appendix 5; 3; 21). The findings of intervention 3 suggested the development of a framework to improve learning through the sharing of practice and this may also be a suitable platform to start to address some of the cultural barriers observed here.

## **8.7 Implications for subsequent research iterations**

This intervention has identified a number of learning points as well as a number of questions to be addressed in future AR iterations. The questions to be tested further are included in this section.

*Can a recursive model be developed to help reflect upon the employment of CST and to develop a viable approach to CST deployment at the methodology, meta-methodology and activity levels?*

This intervention sought to test the ability to devolve responsibility for the application of some aspects of systems thinking to the wider workforce within a project to implement a chosen methodology and to then provide supporting processes to assist that implementation. Jackson (2003, p.109) notes that the Viable System Model (Beer, 1985) offers the manager a solution to the problem of understanding organisational centralisation versus decentralisation and enables essential business units and their necessary support services to be determined. It is considered that the potential offered by the VSM to improve structural insight in this situation is worthy of further exploration to provide a valuable means of analysing and developing a viable deployment of CST at all these levels.

***To what extent do diverse personal objectives of stakeholders affect the successful deployment of systems thinking in problems involving multiple participants?***

This intervention identified that the buy-in to change appeared to be closely related to its degree of impact upon the individual participant. (Appendix 5; 3; 20). The personal impact of change is of particular relevance in participative processes as it will influence individuals' goals and behaviours within the problem solving process. In this intervention, where individuals' needs were not recognised and accommodated, there was a feeling of exclusion and a perception that potentially valuable knowledge and expertise had been lost. Further, the lack of buy-in to any subsequent change proposals would reduce the risk of a successful implementation particularly where those involved have a longer term stake in the processes and where their buy-in is the key to sustaining improvement.

Recognising the impact of diverse personal aspirations upon the successful deployment of systems thinking might help the facilitator to better understand and attend concurrently to a range of diverse stakeholder needs and thereby achieve greater success in the achievement of wider intervention aims. This warrants further consideration in a future intervention.

***Does the importance of attending to a variety of contexts concurrently confirm the need to employ multi-methodology in parallel to achieve the aspirations of CST in multi-agency situations and can the Beckhard change formula be usefully employed to help represent this situation?***

Jackson (2003) puts forward a case for multi-methodology that requires the facilitator of CST to attend to a range of contexts, the success of which might be judged against a variety of measures. Dependent upon the particular situation, the problem might reflect a variety of sociological paradigms with the degree of divergence of viewpoints and complexity determining how much attention needs to be placed by the change agents upon the various contexts. Given this concurrent variety of context, there will be no prescribed or determinate point when a shift of attention to a new paradigm is universally appropriate or required. It has been argued elsewhere that combining

methodologies across paradigms leads to increased implementation of study results in practice (Pollack, 2009, p.162) and that the parallel application of multi-methodology is more appropriate for tackling wicked problems. Section 3.2.4 argued that multi-agency problems might well be considered to be ‘wicked’ and consequently parallel applications would seem appropriate in theory, based on the literature referenced here, as well as in practice, based on the evidence of interventions within this research.

The relevance of Beckhard’s change formula (Beckhard and Harris, 1977) has been recognised in each of the previous interventions, identifying questions for further research iterations. The formula attempts to describe the conditions required for successful change to occur and if it is considered in conjunction with the parallel application of multi-methodology there is potential for the formula to be extended to represent the aspirations of a CST intervention and consequently the aspirations of the CST change agent/facilitator.



## 8.8 Conclusion

Interventions 3 and 4 have charted a journey over 3 linked participative projects:

1. Intervention 3, QUEST BCU, explored the efficient delivery of service to agreed customer needs within a single organisation where systems approaches provided a clear contribution to optimisation.
2. Intervention 3, QUEST CJS, explored the efficient delivery of service but with the challenge of involving different stakeholder interests across three criminal justice organisations and here, systems approaches needed the additional ability to reconcile plurality.
3. Intervention 4, ASB Process Improvement, explored the efficient delivery of services but with the challenge of different stakeholder perceptions and an increased political dimension across multiple organisations. Here, systems approaches needed the additional ability to deal with plurality of views as well as politics and power.

In line with the generic research design (section 4.4), a reflection upon the status and direction of the AR programme is summarised in Table 8.4.

**Table 8.4:** Intervention 4 AR reflection

<b>AR consideration</b>	<b>Current assessment</b>
<b>Research focus</b>	<p>Further areas for exploration have been identified (section 8.7):</p> <ul style="list-style-type: none"> <li>• Can a recursive model be developed to help reflect upon the employment of CST and to develop a viable approach to CST deployment at the methodology, meta-methodology and activity levels?</li> <li>• To what extent do diverse personal objectives of stakeholders affect the successful deployment of systems thinking in problems involving multiple participants?</li> <li>• Does the importance of attending to a variety of contexts concurrently confirm the need to employ multi-methodology in parallel to achieve the aspirations of CST in multi-agency</li> </ul>

	situations and can the Beckhard change formula be usefully employed to help represent this situation?
<b>Participation</b>	No change to generic design.
<b>Engagement</b>	The relevance of participants’ personal objectives and how that affects engagement within the interventions needs recognition.
<b>Authority –</b>	Cultural differences between organisations becoming more apparent where no single body possesses authority to act in all areas.
<b>relationships</b>	Some issues between internal consultants became apparent through the introduction of culturally unfamiliar approaches.
<b>Learning</b>	<p>This intervention has identified a number of emerging findings in relation to systems approaches and how they are deployed, including:</p> <ul style="list-style-type: none"> <li>• Implementation was seen to be at risk unless participant (organisations) could see the change clearly addressing their own objectives in order to buy in to implementation.</li> <li>• It was considered that development of a framework to improve learning through the sharing of practice may be a suitable platform to address some of the cultural barriers.</li> <li>• This intervention displayed all features of ‘wicked’ contexts, thereby emphasising the validity of employing multi-methodology in parallel and coupling this with the specialist facilitator competency required to work in multiple paradigms, would suggest that the utilisation of capable specialists within multi-agency projects will be key to success.</li> </ul> <p>Together with other findings and questions emerging from this intervention (Appendix 8), these will be used to inform future applications within this research and will be synthesised in Chapter 11 with learning from other interventions</p>

**Table 8.4:** Intervention 4 AR reflection

## Chapter 9

### Intervention 5: Departmental Review, June 2010 – December 2010

#### 9.1 Introduction

This intervention has been selected as part of the AR programme as it provided an opportunity to work with a diverse group of police managers with a variety of interests on a project of considerable sensitivity where participants' personal objectives and the police culture were likely to be influential. It provided an ideal opportunity to respond to some of the research questions that had emerged from previous iterations:

- How does the intervention facilitator balance and respond to the diverse and dynamic contexts as seen by the sponsor, key stakeholders and other participants and manage their expectations throughout? (Community Safety).
- How influential is the police culture in the successful implementation of CST and can the critical systems thinker overcome practical challenges to the deployment of CST through considered employment of different modes of CST? (Personal Applications which are documented in Chapter 10).
- To what extent do diverse personal objectives of stakeholders affect the successful deployment of systems thinking in problems involving multiple participants? (ASB).

This intervention has been used to explore further these challenges.

## **9.2 Background to Departmental Review**

As a result of increased economic pressure on the UK government's funding of the public sector, significant cuts to police service budgets were widely anticipated during 2010. In view of these impending cuts, in June 2010 the WYP senior command team commissioned a review of their central services to identify savings that would help protect front line policing. This review was one of many that were initiated concurrently to achieve similar aims and affecting all functions of the organisation.

## **9.3 Intervention objectives**

The following objectives for the review were established by the force command team:

- Identify ideas for delivering the services of four diverse specialist departments that realise 50 % efficiency savings over four years.
- Provide resilience in current services of the affected departments.
- Consider links to other internal departments and regionally.
- Include a single oversight body for standards for all staff.
- Include a better Force knowledge management capability.
- Ensure service provision is joined up to avoid creating a collection of disconnected service areas.
- Recognise relevant on-going work elsewhere and savings plans.

The WYP command team also provided an idea of the areas in which they would particularly welcome ideas for improvement, including: increasing flexibility and multi-skilling of staff; cutting the cost of compliance; and accepting some organisational risk but minimising risk to the public.

## **9.4 Intervention outline**

### **(i) Selection of approaches**

The researcher, based in one of the affected departments was asked to join a small, part time project team comprising management representatives from each of the departments. The nature of the project team meant that involvement in the work was largely ad-hoc, with the researcher providing some focus and continuity in terms of the approach taken to complete the review.

The project sponsor, an Assistant Chief Constable (ACC) who already had the responsibility for oversight of two of the four affected departments was identified as the chief officer who would be responsible for the new department. The existing oversight arrangements meant that on a day to day basis the senior management within one of the affected departments had direct contact with the ACC and this was used for the majority of communication upwards and downwards throughout the project.

Taking the initial objectives for the review, the project team met on several occasions over the first few weeks to informally discuss concerns and clarify a way forward. The researcher was involved in all these discussions to help identify an approach for the successful implementation of the review. Through these discussions some defining features of the problem situation were identified to help clarify context and inform selection of relevant systems approaches and these are included in Table 9.1, captured against the framework of questions developed during the ASB intervention (Table 8.1).

Based upon this assessment the researcher drew upon a wide experience of systems thinking to make an assessment of the problem situation and identify an acceptable way to support the review aims through appropriate systems thinking. The defining features of the problem context that were particularly influential included:

- Identification of efficient new structures to deliver services;
- Gaining mutual understanding regarding relevant services and their interconnections;
- Some limited involvement of staff to explore ideas but not as formal consultation on options.
- Limited access to senior leadership (sponsor).
- Time and specialist resource limitations.

**Table 9.1:** Defining features of the Departmental Review problem context

Question	Response
1. What is the purpose of the intervention?	<ul style="list-style-type: none"> <li>• Identify a new structure that realises 50% efficiency savings while providing effective services of the new department</li> </ul>
2. Who is the customer?	<ul style="list-style-type: none"> <li>• ACC with ultimate functional responsibility</li> </ul>
3. Who else has a stake in the service and what is the nature of their influence/control?	<ul style="list-style-type: none"> <li>• Senior managers in affected departments with specialist responsibilities and personal stakes in the new structure (initially)</li> <li>• All staff in affected departments with specialist responsibilities and personal stakes in the new structure (eventually)</li> <li>• Other Force functions supported by the departments</li> </ul>
4. How clear and consistent is the purpose among stakeholders?	<ul style="list-style-type: none"> <li>• Overall purpose of review relatively clear and consistent</li> <li>• Purpose of new functions less clear and consistent (e.g. organisational learning)</li> </ul>
5. How clear and stable are the problem boundaries and constraints?	<ul style="list-style-type: none"> <li>• Relatively clear boundaries (subject to above) but uncertain about stability as reviews are being implemented elsewhere in the organisation</li> <li>• Consistency with existing organisational policies, e.g. personnel and finance</li> <li>• Limited resources to support review (part of ‘day-job’)</li> <li>• Limited access to ACC sponsor on day to day basis to respond to emerging issues</li> </ul>
6. What is the relative mix of the aims of the intervention - optimisation V build mutual understanding V ensure fairness V promote diversity	<ul style="list-style-type: none"> <li>• Main aim is optimisation of new structures</li> <li>• Some building of mutual understanding required to identify relevant services and potential interconnections</li> <li>• Some interest in fairness (as defined by</li> </ul>

and suppressed views?	<p>organisational change policies)</p> <ul style="list-style-type: none"> <li>• Some interest in identifying diverse ideas</li> </ul>
7. Is there an ultimate test of 'rightness'?	<ul style="list-style-type: none"> <li>• For some aspects, such as efficiency saving target there is a right answer</li> <li>• Other aspects do not have a single right answer and perception and interpretation will be influential</li> </ul>
8. What are the measures of success?	<ul style="list-style-type: none"> <li>• Identification of 50% savings</li> <li>• Resilience of service provided</li> <li>• Review complete by Command Team Planning Day (December 2010)</li> </ul>
9. Who or what condition would guarantee success?	<ul style="list-style-type: none"> <li>• Achievement of feasible savings without compulsory loss of staff (e.g. redundancy)</li> <li>• ACC and senior force command buy-in (primarily)</li> <li>• Senior department management buy-in</li> <li>• Buy-in of (remaining) members of the department</li> </ul>
10. Is quantification important?	<ul style="list-style-type: none"> <li>• Yes, to determine efficiency savings</li> </ul>
11. Is the problem environment and interdependencies clear or is there complexity and hidden interdependency?	<ul style="list-style-type: none"> <li>• Relative clarity over environment but some exploration of interconnectivity may be required</li> </ul>
12. Is there dynamic complexity?	<ul style="list-style-type: none"> <li>• No, for the purposes of the intervention the variables can be treated as relatively static</li> </ul>
13. Who is considered an expert in the improvement of the service and needs to be involved?	<ul style="list-style-type: none"> <li>• Senior management of affected departments</li> <li>• Staff of affected departments</li> <li>• Finance and Personnel specialists for advice</li> <li>• Internal change consultancy specialists</li> </ul>
14. To what extent do we want participation of staff in providing data/expertise?	<ul style="list-style-type: none"> <li>• Due to exploratory nature of the review great care would be required in the involvement of staff to avoid compromising organisational change policies (this would not form part of the formal consultation stage for organisational change)</li> <li>• Expertise of staff in terms of generating ideas about specific services but not at this stage in detailed work</li> <li>• Specialist change consultancy staff are part of the affected department so their involvement cannot be in the capacity of change agents.</li> </ul>
15. To what extent do we want involvement of those affected by (but not directly involved in) the intervention?	<ul style="list-style-type: none"> <li>• None initially</li> </ul>

**Table 9.1:** Defining features of the Departmental Review problem context

Based upon this assessment the researcher suggested an initial approach to take the following lines:

- Establish a project governance structure to enable the project team to engage with the sponsor on a regular basis via the senior management representative who had contact on a day to day basis.
- Explore the nature and purpose of the new cluster of departments with senior managers using elements of SSM to identify those activities necessary to meet the service requirements and areas where activity might better join up.
- Explore ideas and opportunities to deliver services more efficiently with staff through interactive facilitated workshops and management challenge.
- Develop viable structures from exploratory ideas.
- Develop analytical models to project costed options for structuring a new department that meet efficiency targets.

It was envisaged that other intervention aspirations might be addressed during the implementation when the senior command had indicated a preference for an exploratory option.

The researcher's previous experience of some cultural resistance to the employment of systems approaches such as SSM (section 10.7 (ii)), the limited resources available and the urgency to progress matters led to the researcher planning to employ systems approaches in a less overt manner, both in a mode 1 and mode 2 style. For example, SSM was used in a mode 1 style to help structure the inquiry without overtly exposing its use to participants. The approaches used in the exploratory workshops with staff and the optimisation modelling were more overt but the costed option modelling was by necessity kept confidential to senior management to avoid compromising formal organisational change policies. Other systems approaches were employed as the requirement arose during the project and these were employed in more of a mode 2 style.

A brief outline of the approaches employed is included in the following sections.



## **(ii) Structuring the enquiry**

The two most prominent sociological paradigms evident from the analysis of the problem's defining features were the functionalist perspective of developing an optimised structure that was efficient and the interpretive perspective, responding to the aim of improving mutual understanding. To help accommodate these features, SSM's learning cycle (Checkland and Poulter, 2006, p.13) was used to provide a structure for the inquiry that enabled some exploration of purpose alongside a set of hard and viable systems approaches to help optimise a new design. The inquiry included the following stages:

1. Find out about the real world problem situation.
2. Develop purposeful activity models relevant to the situation.
3. Use the models to identify desirable and feasible change to the real world situation.
4. Define and take action to improve the situation.

Given the time and resource constraints it was necessary to develop an approach that would enable the four departments to quickly undertake such an inquiry for themselves, individually and jointly, using an accessible and consistent language. The approach developed comprised the following four stages:

**WHY** – Each department to clarify and make explicit in simple language its purpose in a series of concise bullet point statements that cover the responsibilities the department should be fulfilling within the current environment, including any new service requirements. These statements could then be clustered and merged to come up with agreed aggregate clusters of responsibilities across the four departments.

**WHAT** - From the agreed set of responsibilities, identify the services and activities each department contributes. Not all departments would contribute to each responsibility, particularly where these relate to specialisms so there would be a set of generic service areas and a set of areas specific to each department.

**HOW - Now** - Using the list of generic and specific service areas, for each department identify how they currently fulfil the activity, including an idea of the resources assigned where available. This stage would audit how the departments currently meet the requirements and show where there is overlap of activity, gaps in capability and also where there is historic and maybe redundant activity.

**HOW - Future** - Using the same structure as stage 3, challenge and find better ways of delivering the responsibilities while also meeting the objectives of the review (e.g. more efficiency). There may be different options to deliver the full set of responsibilities but for each of the future options selected, some assessment of the wider impact of the proposals should be included (e.g. risk or impact on other service areas etc.).

The implementation of these stages was not strictly sequential, with some stages being undertaken concurrently and some iteratively, for example by looking concurrently at what should be done in the future while thinking about what is being done now. The standard of the data produced was variable and dependent upon the resources available to apply within each department but by aggregating the assessments and revisiting weaker responses, it was possible to develop a sufficient picture of service provision to identify areas for improvement.

Following an initial assessment of the 'WHY' element, a senior team workshop led by the ACC sponsor and involving senior managers from each department was held to assess the validity and feasibility of clustering services. Following this discussion the ACC proposed a high level set of activity clusters to provide the basis for an organisational structure to be considered in subsequent analyses. Further, the force command team proposed that these clusters were to be encompassed within a single department, to be headed by a Chief Superintendent and to have a senior manager to head each cluster. The high level clusters formed 3 'pillars' within a single department.

Regular project team meetings were held to track progress and debate emerging ideas and individual meetings between the managers and the researcher were held as required to help complete the analysis in a way that matched the individual department's capability. For example, some departments had little or no data on the resources

employed in each of its activities and existing proxy data sources were used as appropriate.

Additional approaches were employed to help inform the thinking about the future, two of which were applied overtly in a mode 1 style in each department's assessment:

- Interactive workshops with staff from all levels of the affected departments
- Service challenge and modelling

These are described along with supporting mode 2 applications in the following sections.

### **(iii) Interactive workshops**

Although the exploratory nature of the initiative was not part of a formal consultation process, a series of workshops were organised for staff from all areas of the affected departments to provide a platform to gather views. Reflecting on the assessment shown in Table 1, this was seen as desirable because:

- Staff provide expertise in their particular specialist fields to provide informed views and generate ideas for change.
- There was an opportunity to build some mutual understanding between departments through mixed team workshops.

Four workshops were organised with clusters of similar functions from across the departments and involving a representative mix of staff working within these areas and run by independent facilitators drawn from the experienced force team. Half day workshops were held for staff involved in the four clusters of: project management; performance management; strategy and planning; and information management.

The objectives of the workshops were:

- To explore staff views about the services the four departments provide, particularly in relation to the service area cluster in question.
- To respond to a series of service challenge questions.
- To identify ideas for how services might be provided in future.
- To identify issues for consideration in the review.

The format for each workshop sought to meet these objectives through the following structure:

1. Introduction by a senior manager, describing the background to the review and the current position, the force command team's vision and objectives for any change, the purpose of the workshops and the role of participants.
2. Clarification of current service provision in the given cluster, led by a facilitator.
3. Service challenge to the current arrangements:
  - Why do we have to do it (what is our added value)?
  - If we have to do it, how could we do it in the most cost effective way?
  - What would be the consequence of any change?
4. Any other issues for consideration.

The information generated through the workshops was utilised by the relevant management team members to inform their assessment of how they might provide services in future. The quality of data generated in this way was limited due to time pressures to make for a comprehensive discussion and there was naturally a degree of sensitivity regarding the challenge element where participants might have felt that their value and future existence was under question. (Appendix 6; 2; 9).

#### **(iv) Service challenge and modelling**

As there was little time or resource for the project team to proactively collect service challenge data it was proposed that managers of each service area should challenge their own practices in as consistent a way as possible and make an assessment of resource requirements to work within the new high level structure. Working with a member of

the WYP internal consultancy who contributed extensive experience of employing lean process improvement methodologies, a simple framework was developed that drew in some of the lean principles but in a simple way that could be employed by managers to challenge their current service provision arrangements for themselves. This framework is included in Table 9.2.

<ul style="list-style-type: none"> <li>• Agree purpose of business area(s) with senior stakeholder(s)</li> <li>• Identify activities that are required to meet the purpose (to a useful level of detail)</li> </ul> <p><b>For these activities:</b></p> <ul style="list-style-type: none"> <li>▪ Are they mandatory or discretionary?</li> <li>▪ If discretionary, what is the value add (e.g. contribution to Force objectives etc.)?</li> <li>▪ Could others provide or collaborate (region, force, agency, other provider)?</li> <li>▪ What is the volume/frequency of activity/demand and do you control this level?</li> <li>▪ How many resources are employed (officers, staff, other)?</li> <li>▪ How has productivity (demand/resources) changed over recent years?</li> <li>▪ Are police powers required?</li> <li>▪ What are the structural requirements (e.g. number of teams, supervision etc.)?</li> <li>▪ What are the minimum resources required for a basic level of service provision?</li> <li>▪ How do we compare with others? (benchmarking, ‘best’ practice etc.)</li> <li>▪ How could the services be better delivered? (E.g. changes in working practices, sequence or removal of activities, working hours, space utilisation etc.)</li> <li>▪ Where do the resources need to operate from (how much potential for remote working)?</li> <li>▪ What are the potential savings from any changes?</li> <li>▪ What is the impact on performance and risk (to public and organisation)?</li> <li>▪ What are the interdependencies and impacts on other service areas/initiatives?</li> </ul>
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**Table 9.2:** A simple framework to challenge activity

The managers of the relevant service areas took the products of this process to inform their assessments of how services could be provided in the future.

Once the ideas and options had been identified by managers, projected savings phased over a four year period were modelled within linked spread sheets before being presented to the project board to see if the options were considered to be sufficiently challenging and where further savings may be required or risks mitigated to meet the goals of the review.

The cost modelling of exploratory options necessitated a shift in the emphasis of the review from an exploration of purpose to the optimisation of structures to fulfil the service requirements. Despite all options being largely speculative and exploratory, in order to meet the stakeholder's requirements for options that could demonstrate the feasibility of saving 50% of the budget, a degree of hard data was required to back up the calculations.

In December 2010 the exploratory options were presented to the WYP senior command team, including high level structures, projected potential savings, risks and proposing the construction of a detailed implementation plan in co-ordination with other on-going change projects within the force.

#### **(v) Supporting systems thinking**

The four stages of the inquiry were informed by local analyses which were dependent upon local capabilities and data. The assessment of one of the original affected departments and then the development of one of the new department 'pillars' fell to the researcher to co-ordinate and he was able to employ further systems thinking to complete this in a more robust manner. Two main components were used by the researcher, firstly he was able to employ SSM to develop the **WHY, WHAT** and **HOW – Now** components and then use the products of this within the new pillar to explore interconnectivity between functions as part of the **HOW-Future** stage. Secondly, to help reflect on the **HOW-Future** initial high level structures, a mode 2 employment of the Viable Systems Model (Beer, 1985) was employed by the researcher.

**WHY** – A root definition, or purpose statement, for the current department written in a form that could be readily shared with others less familiar with the SSM language was developed by the researcher.

*A Deputy Chief Constable owned portfolio responsible for the efficacious, efficient and effective operation of the Force in relation to its purpose through:*

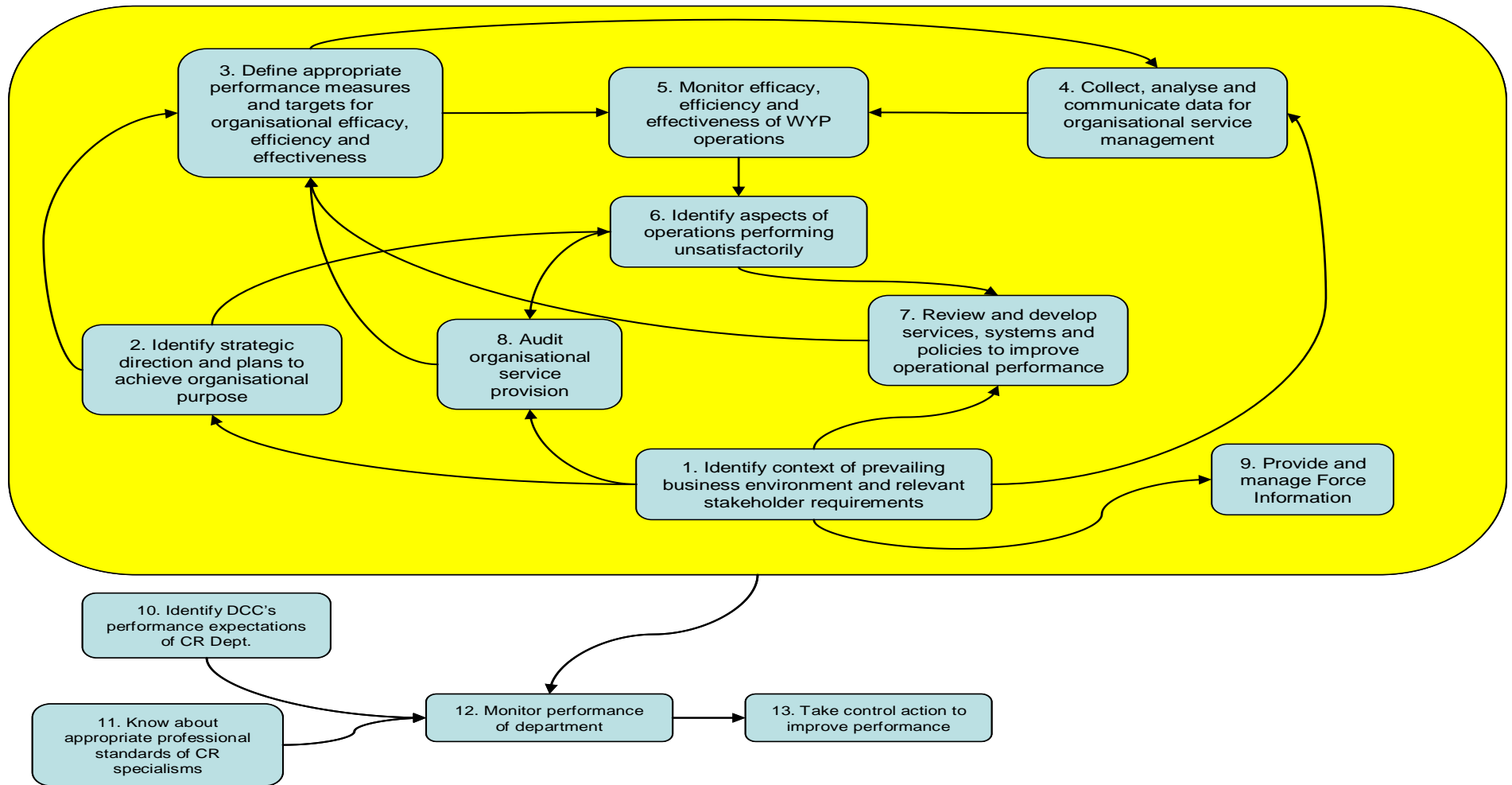
- *the identification of strategic direction and plans;*
- *the review and development of services, supporting systems and policy;*
- *the audit of organisational service provision;*
- *the provision and management of appropriate Force information; and*
- *the collection, analysis and communication of data to inform organisational service management;*

*and to fulfil this to an appropriate professional standard in the context of the prevailing business environment and relevant stakeholder requirements*

From **WHY** to **WHAT** – A conceptual model was developed from this statement to identify the activities that would be required to fulfil the system purpose. This is shown in Figure 9.1.

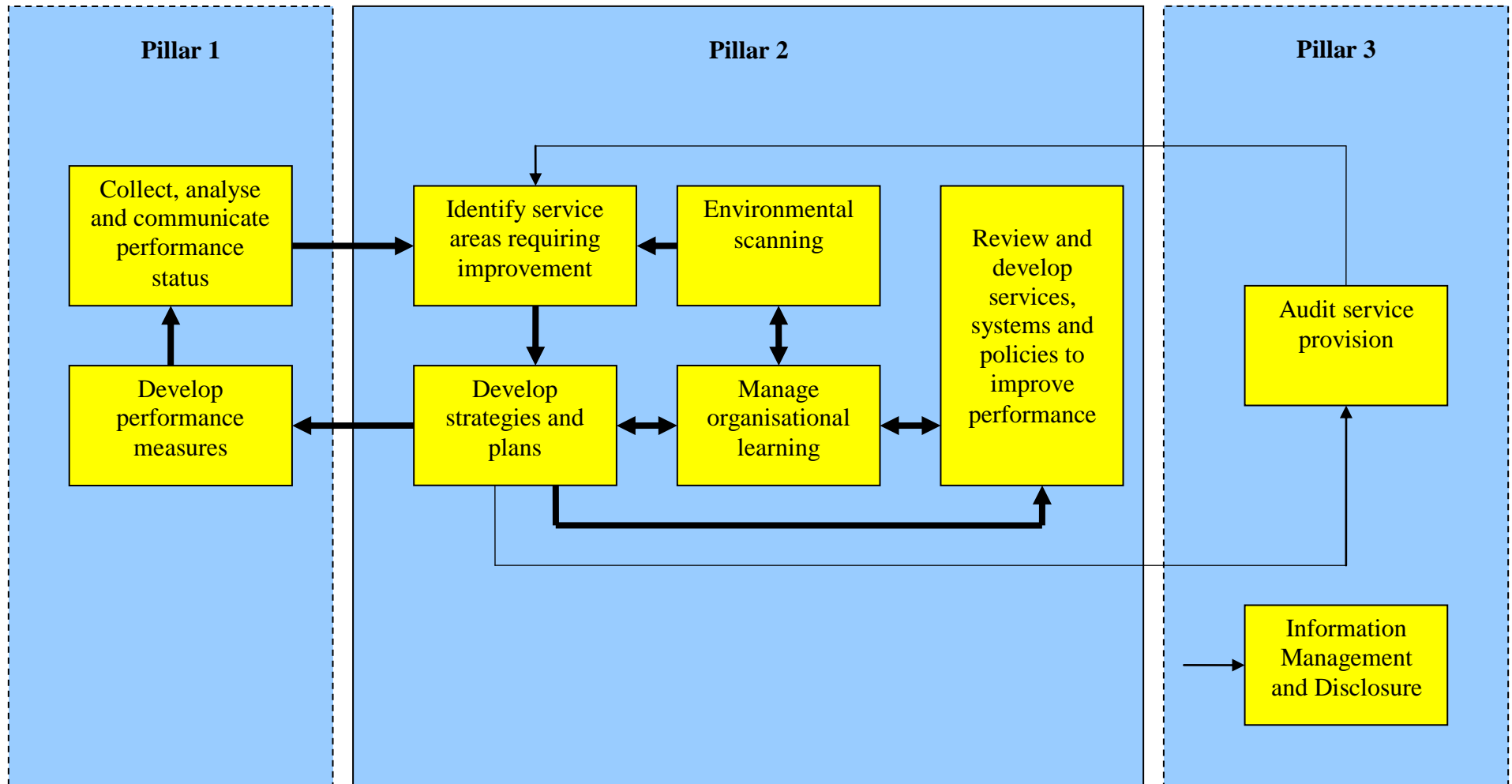
**HOW – Now** – The activities derived from the conceptual model were used to complete an audit of the current activities of the department which helped to inform the service challenge exercise.

**HOW- Future** – The conceptual model developed for the department was used to reflect on the interconnectivity between the main functions in the future departmental structure and inform the service challenge element. Figure 9.2 shows how this was used to try and think about the strength of linkage between current functions and identify potential weaknesses in any new design by mapping the activities onto the three broadly defined pillars that had been advocated by the Command Team. The strength of linkage in this figure is denoted by the thickness of the connecting lines.



**Figure 9.1:** Conceptual model of the current department





**Figure 9.2:** Department's service linkage within the new pillar structure

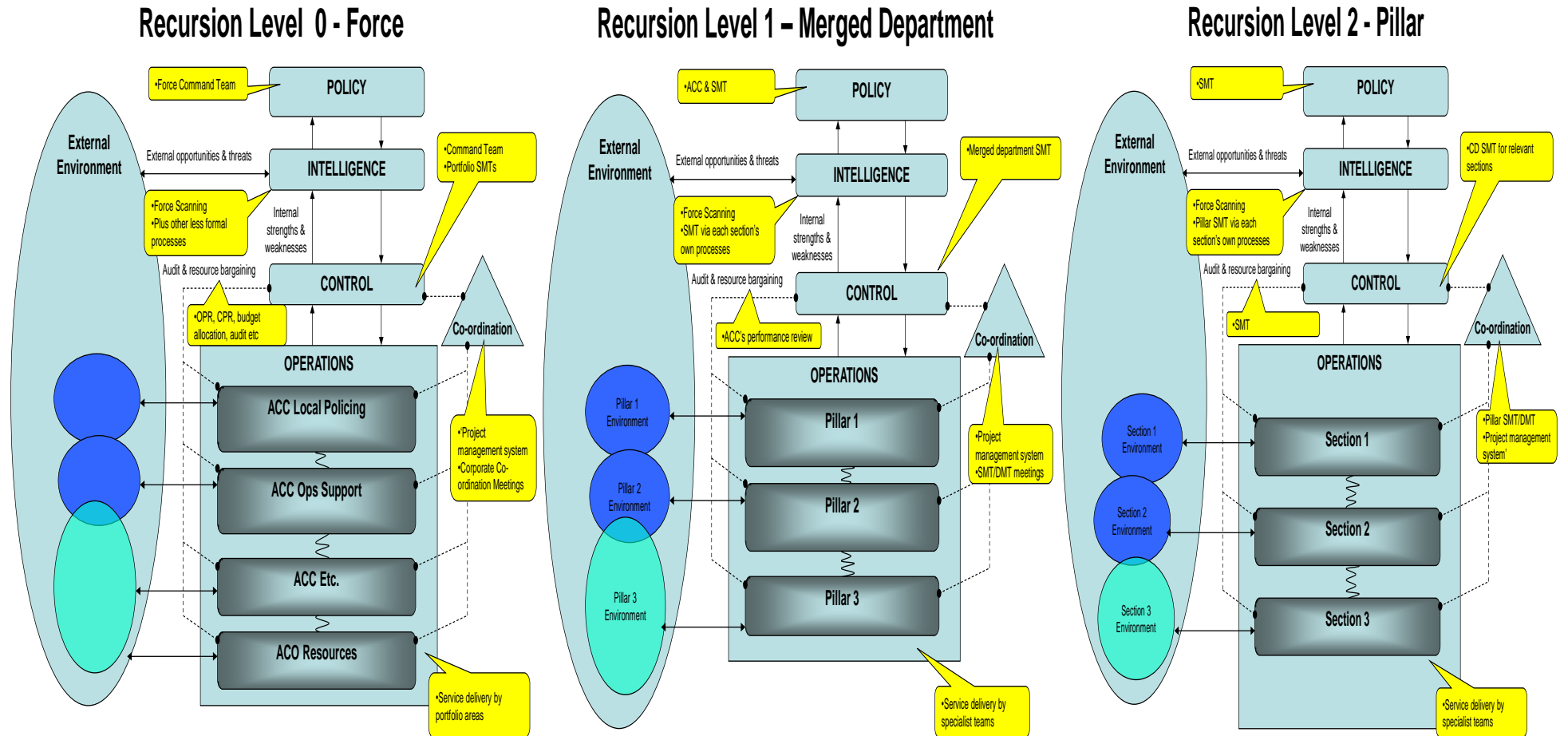
Given the requirement to identify a viable organisational structure for the new department comprising the 3 pillars and residing in the environment of the wider organisation, it was considered that the potential offered by the VSM to improve structural insight would be valuable in identifying a reliable, efficient and defensible structure. The researcher drew upon his knowledge of VSM to construct a diagram of the proposed service delivery options with the new department being the system in focus at recursion level 1 and then reflected on elements of the Viable Systems Diagnosis (Flood and Jackson, 1991) to evaluate the options for 'pillar 2' emerging from the earlier modelling. Figure 9.3 includes the VSM diagram with the new department as the system in focus, showing how the new department and pillars (recursion level 2) proposals might fit within the wider force context (recursion level 0). Informally assessing the design against some of the VSD elements and considering the service linkage diagram it was noted for example, that within pillar 2:

- The strong interdependence with other teams currently in the same department but potentially residing within different 'pillars' in the future structure, such as the performance function, is something that would have to be recognised and carefully managed in any new arrangements.
- Specialist professional knowledge, capability and supporting systems would be required for the services to operate effectively within a significantly slimmed down and 'consultancy led' structure.
- The nature of a system to help co-ordinate work within the pillar, between the other pillars and across the wider organisation is made clearer.

A more comprehensive reflection on the VSD questions can be seen in Appendix 6, section 3.

Due to the service challenge being undertaken by the separate section leads, none of whom possessed any formal experience or capability in employing CST (in mode 1 or 2), it was not possible to employ a similar reflection in those areas of the new department at this exploratory stage.

**Figure 9.3:** VSM diagram with the current department as the system in focus



## **9.5 Intervention evaluation**

In line with the research design, evaluation is based upon the perceptions of key stakeholders and in the analysis of any supplementary performance data related to the intervention objectives.

### **(i) Intervention outcomes**

The overall outcome of the intervention was the presentation to the force command in December 2010 of exploratory but feasible options for the provision of the services of the four original departments under a new single department, identifying the potential for 50% savings on April 2010 budget levels amounting to approximately £5M. Several new responsibilities were encompassed and potential savings had been identified in service areas with less negative impact on operational policing. Due to the limited opportunity to engage with staff at all levels in the development of these, there was a degree of uncertainty regarding the ultimate feasibility of the proposals should they be adopted and further engagement on implementation was recommended.

### **(ii) Stakeholder interviews**

In line with the research design, the evaluation draws upon an analysis of key stakeholder perceptions and this is included in Appendix 6, section 2. Section 9.6 draws upon this evaluation to determine the contribution of the intervention to the research objectives that can be considered at this stage.

## **9.6 Contribution to research objectives**

### **(i) Research Objective 2**

*Identify and implement practical and informed combinations of systems approaches that help policing service stakeholders fulfil their purposes in relation to joint problem solving.*

In terms of addressing the formal objectives for the intervention, the approach taken seemed to be effective and the explicit aims set out by the command team were largely achieved. The combination of different modes of systems thinking and being cognisant of an appropriate degree of exposure of more complex elements of selected approaches, appeared to have helped to achieve at least some of the explicit aims (Appendix 6; 2; 20). Initial discussion amongst the senior representatives of the affected departments gave rise to the identification of a range of defining features (Table 9.1) that exposed some implicit aims and these too seemed to be addressed in part at least by the combination of systems approaches employed. In the words of one of the managers:

*“The aim of the review was to clarify a collective purpose for the new department and make sense of a complex environment, while recognising the different needs and expectations of those affected. Our approach therefore aimed to provide a framework that we could all sign up to and the systems thinking employed allowed us to look at areas of commonality and how best to join these together as a cohesive whole.”*

(Appendix 6; 2; 1).

This view emphasises a desire to develop a collective purpose and to recognise different needs and expectations of those affected and although there was some attendance to development of improved understanding, the recognition of the needs of those affected was not a defining feature of the approach.

The analysis of defining features that gave rise to these additional insights helped the facilitator to reflect upon problem context, the selection of appropriate systems approaches and how these might be deployed. However, its application might have benefitted from a more formal discussion with the sponsor and key stakeholders to develop a richer view of the client system rather than the piecemeal capturing of different informal discussions (Appendix 6; 2; 6).

Although limited in the main to the senior management of each department, participant engagement at this level was positive due in part to the well-established relationship between managers involved and also by their ‘hands-on’ involvement in the analysis of

options, necessitated by the limited support available to the project (Appendix 6; 2; 4, 15, 37). This was supported by the adapted systems approaches which seemed to be both accessible and acceptable to those involved (Appendix 6; 2; 3). However, it was apparent at different stages as the intervention progressed that some stakeholders were less engaged, for example where they felt excluded from key decisions (Appendix 6; 2; 2, 10, 31) or where the review was developing in a way that was not consistent with individuals' preferences. In these circumstances personal agendas appeared influential. Here there appeared to be resistance to progressing the review on the part of individuals, such as resisting participation in the agreed data collection activities and several private meetings with senior decision makers took place at different stages to address concerns and these seemed to satisfy affected individuals temporarily at least. (Appendix 6; 2; 2, 5, 31, 45). This resistance to change is consistent with Guth and Macmillan (1986) who observed the impact of middle management self-interest on the implementation of strategy. They noted (p.314) that a lack of commitment could result in significant 'upward' intervention by middle management during formulation or implementation of the strategy, by either taking a position during the decision making process or through resistance to decisions after the event. They considered managers to be motivated more by their perceived self-interest rather than the organisational interest, unless they coincided. It was considered therefore, that gaining middle manager commitment was a prerequisite for effective implementation.

There was a view amongst those consulted that there was a need to recognise the personal agendas of those participating to fully understand what was happening and that people tend to look after their own position first and then the wider organisation second (Appendix 6; 2; 2, 45). This was observed within the intervention where it appeared that some workshop events were used to promote personal goals and the facilitators needed to be able to understand this and help manage such agendas alongside the overall aim of the intervention. It was further suggested that individuals will not personally buy-in to continually changing unless they can see it as positive progress (Appendix 6; 2; 45) and that they need to be persuaded about the need for change and the benefit it will bring so as to overcome their resistance. It is possible that in this kind of intervention where participants might be personally and significantly affected,

individuals' own goals and interests are brought out more obviously. In these situations we are not dealing with an objective detached entity but often a complex web of personal aspirations and in this project some participants were facing challenges to their livelihoods. Radford (1990) considers the situation in which two or more participants hold different preferences with regard to an outcome within a problem. Here, Radford presents a model for decision support in complex problems comprising of three stages of: information gathering; analysis; and interaction. During the interaction stage participants persuade or coerce others to arrive at an outcome. Radford sees a major task in complex decision making as the on-going analysis of participants' individual preferences, objectives and desired outcomes and then supporting the achievement of a final outcome following iteration of analysis to gradually move forward.

In these circumstances the role of the systems thinker would appear to be to manage such complexity and overcome resistance to change through effective deployment of CST that attends to the requirements of the whole client system. This is also consistent with Schwarz's (1994, p.20) criterion for facilitators securing an effective group process, where:

*"The group experience, on balance, satisfies rather than frustrates the personal needs of group members".*

## **(ii) Research Objective 3**

***Determine the features of approaches that are found to be influential in successfully supporting multi-paradigm problem solving, recognising contextual factors that might affect transferability.***

### **Problem solving approach**

Although the overarching aim of the intervention was to derive efficiency savings, other supporting aims were evident in terms of seeking improved mutual understanding and fairness. Clearly, a range of paradigms were relevant within the problem situation, all of which might have benefited from the employment of systems thinking. As the

ultimate aim of the intervention was to derive efficiency savings, the approaches used to achieve this were focused upon optimisation, using calculators to project aggregate costs of alternative scenarios and developing organisational structures sufficient to control the delivery of functions and these were the components most visible to the sponsor and senior stakeholders. Where employed, the systems approaches were effective in supporting these aims, with spread sheet modelling and VSD being put to good effect. (Appendix 6; 2; 7-10). However, it was not possible to determine to what extent the various components had influenced the decision making process, particularly for those components that were employed in mode 2 or less overtly.

The use of SSM provided a broad structure for the inquiry as well as helping participants share views and trying to accommodate these in the structural options. The staff workshops attempted to provide a voice for the affected staff to air their views, challenge practices and to improve their appreciation of other perspectives, attending to elements of fairness and mutual understanding.

The various systems approaches were not used sequentially or in a linear fashion, rather with movement between different components and iteration as the need and opportunity arose. The use of mode 1 and mode 2 thinking in conjunction was seen by the researcher to be an effective way of employing parallel multi-paradigm multi-methodology, for example, through the use of VSD in mode 2, both informed by and informing aspects of the SSM which was employed in a less overt mode 1. There was no grand design for the introduction of the different mode 2 aspects, rather their selection was emergent within a broad inquiry structure. Also, the employment of the inquiry structure provided by SSM, which was picked up and put down by the different managers as they saw relevance in its use and through the encouragement of the researcher. As the components had been introduced and adapted in a flexible way in response to the needs of the intervention at the time, what was delivered was a pragmatic solution to a prevailing requirement that incrementally moved the intervention onto its next phase, recognising the changing circumstances and constraints. (Appendix 6; 2; 11). It was not ideal but was seen as the best that the team could do at the time. For example, the mode 2 systems thinking to support option development was only feasible



in one part of the new department where the skills were available. The lack of general awareness of systems approaches amongst managers was a limiting factor but only temporarily and partially.

This evolutionary approach to the progression of the intervention could learn from the experience of Friend and Hickling's Strategic Choice approach (1987), which introduced the concept of a commitment package of incremental steps in a continuing decision process. Here, acceptable immediate actions are balanced with more exploratory ones which may be more sensitive or complex to deal with immediately. This is consistent with Taket and White's 'system of consent' (2000, p.90) where it is considered more realistic to seek participants' consent to decision areas rather than their consensus. The Strategic Choice framework is used to incrementally move forward where most progress can be made. Strategic Choice recognises the concept of group uncertainty, where participants cannot agree on assumptions and it handles these via incremental commitment packages. This reflects the observations of Lindblom (1959) who introduced the concept of disjointed incrementalism as an approach to facilitating change. In complex situations instead of trying to identify and encompass all relevant variables, the problem solver would disregard most variables outside of their immediate interest, thereby ignoring many related values and consequences of policies and then focusing only a limited number of alternatives. He sees policy not being made once and for all, rather it is made and remade endlessly in a process of successive approximation to some desired objectives in which what is desired itself also continues to change. Lindblom (1979), reflecting on the progress of disjointed incrementalism, noted the potential for fragmentation of analytical work to many participants and the process of partisan mutual adjustment. He observed:

*“Partisan mutual adjustment, found in varying degrees in all political systems, takes the form of fragmented or greatly decentralized political decision making in which the various somewhat autonomous participants mutually affect one another.... In many circumstances their mutual adjustments will achieve a coordination superior to an attempt at central coordination, which is often so complex as to lie beyond any coordinator's competence” (Lindblom, 1979, pp.522-523)*

Without a formalised project plan and governance structure to co-ordinate and direct the review, fragmentation of participation in problem solving was a feature of this intervention and in situations of great complexity this approach is likely to be more prevalent. The reliance on self-organisation rather than central co-ordination in such circumstances provides a potentially useful lens through which to view the role of the facilitator of CST in these situations. Accepting that the problem situations being addressed by the facilitator of CST will not lie at the extreme of decentralised and autonomous decision making, some assistance in helping achieve positive progress among fragmented participants might be necessary. The more considered employment of concepts such as Strategic Choice's commitment package might provide a valuable means for the facilitator of CST to support the incremental progression in complex interventions.

Problem solving models that the police are familiar with, such as the Conflict Management Model (NPIA, 2011a) and SARA (Schmerler et al., 2006), both provide similar high level structures to aid operational problem solving and these are considered by police managers to provide a useful way of encouraging officers to think before they act and avoid the traditional approach of jumping from information to action without analysis or reflection (Appendix 6; 2; 16). When dealing with less concrete issues where there is no 'right answer' it was perceived that alternative problem solving models also warranted consideration (Appendix 6; 2; 21).

However, the police managers interviewed considered that formal methodology can get overtaken by events and that the urgency to deliver results is a particular challenge for these sort of problem solving approaches and careful management of their use is important to avoid participants finding they get in the way of decision making, particularly if they appear complex (Appendix 6; 2; 17, 18). One manager noted that leaders often feel frustration in evidence gathering efforts that open up the challenge of alternative views and the message is often "go away and make it happen". (Appendix 6; 2; 32).

*“We often go through the pretence of objectivity when the senior officer has the outcome they want in mind and they merely want the evidence to support it.”* (Senior police manager, Appendix 6; 2; 31).

There was a concern among some affected staff that senior management already had a preferred answer in mind or that they were making decisions outside the formal process and the intervention was merely seeking the evidence to justify these (Appendix 6; 2; 31). The existence of diverse perceptions in problem situations presents a real challenge to leadership who must resist this temptation and encourage diversity exploration (Appendix 6; 2; 32). Reflecting on the role of the critical systems thinker in this situation, it presents a particular challenge in terms of raising awareness and balancing alternative perspectives. Section 3.2.5 (iii) reflected upon Argyris’ (1970) primary tasks for the interventionist - to help secure valid and useful information, free choice and internal commitment. It is clear from these primary tasks that if the critical systems thinker is to be an effective interventionist they cannot merely attend to the demands of the senior leadership and this is clearly consistent with the stated commitments of critical systems thinking (Table 3.3).

In this intervention it was considered that initiatives needed to gain a critical mass of support and maintain momentum by proving that things are actually changing positively in order to maintain credibility (Appendix 6; 2; 22). This is consistent with the views expressed in the QUEST intervention (Chapter 7) where problem solving approaches that were seen to be inclusive, analytic and quick appeared to be attractive. It was suggested by one of the police managers that QUEST was certainly not viewed as *“pink and fluffy”* and it therefore appealed to the police, whereas the theory and methodology in itself did not (Appendix 6; 2; 27).

*“The culture is not really one of reflecting, it tends to get drilled out of you – this is how you do it, don’t think about it, just follow the procedure.”* (Senior police manager, Appendix 6; 2; 28).

It was perceived that officers prefer action to reflection and in contrast to the experience of this intervention:

*“Our culture is full of linear step by step action plans with an end point and we rarely go round the loop of reflection and review, we are always looking to the next task”*  
(Senior police manager, Appendix 6; 2; 28).

Police managers observed that management problem solving such as that featured in this intervention, deals with less concrete issues and in these situations it is unclear if a ‘right solution’ is being identified (Appendix 6; 2; 21). Working within highly formalised structures within the police service, officers’ development in relation to problem solving approaches appears to be more procedural than strategic. There appears to be a cultural issue in the service regarding acknowledgement of validity of alternative approaches to tackle problems and it was suggested that at this organisational level there may be a requirement to build some understanding amongst leadership regarding different models for problem solving and the underlying theory while recognising that their apparent complexity might be a barrier to acceptance. (Appendix 6; 2; 19, 28, 33, 34, 36).

### **Culture**

One of the questions asked of this intervention was for an exploration of the influence of police culture on the successful implementation of CST and the police manager consultees were specifically asked about this. Cultural issues have already been touched upon in relation to the problem solving approaches employed but there are further issues for the police service to consider regarding engagement with others in problem solving.

The police familiarity with a command structure hierarchy and their ultimate responsibility for controlling situations, perceiving their role as the ‘24/7’ agency of last resort when partner agencies do not have the same commitment, encourages their taking charge of problem situations in which they are involved (Appendix 6; 2; 23). An

example of this was seen in the ASB intervention where this was perceived negatively by partner agencies (section 8.6 (ii)).

Consistent with observations in relation to emergency management more generally (Drabek, 1987), there was a view amongst the police managers consulted that the success of partnership work is largely down to individuals as a result of their own interpersonal skills rather than technical skills and as the police service tends to move individuals on relatively quickly to their next posts, they have limited time to build these relationships and expertise in the role (Appendix 6; 2; 24).

*“While partners tend to be more permanent appointments, our officers rapidly move through roles and their instant expertise in a new appointment possibly frustrates others.”* (Senior police manager)

It is not just between agencies that the police culture can be influential, it was observed by the police officers interviewed to also impact upon the civilian ‘police staff’ who work in the same organisation and in particular with those internal consultants involved in organisational change initiatives. These employees do not hold a formal authority and this was seen to impact on their credibility as a professional change agent. (Appendix 6; 2; 25). As one police officer commented:

*“They do not have a proven background and police culture so interaction with them is different. For police officers, all staff have come through a similar development path, starting as constables and working up through the ranks. They build a shared knowledge, language and background through the same experiences and possess a credibility in the eyes of their officer colleagues. Civilian staff do not come with this and they can rub against police officer culture.”* (Senior police manager).

Another senior police officer identified a credibility issue for civilian specialists because they do not wear a uniform and have no authority whether they have a recognised profession or not (Appendix 6; 2; 26). Having served in three police forces of differing sizes the officer noted that this problem appears worse in larger forces. In smaller

forces it seemed possible to build relationships and for civilians to demonstrate their worth through practical action, whereas in larger forces with officers moving quickly between quite different posts there is less opportunity to do this. Here, the familiarity of rank to measure worth is more likely to be relied upon. This officer perceived the apparent success of the external consultants' involvement in the QUEST initiative to be down to the weight of well-respected senior police officers being behind them. (Appendix 6; 2; 26).

This echoes the experience of a review of the role of civilian staff in the police service undertaken by HMIC (Home Office, 2004b), where significant cultural barriers to effective working were identified. The review identified a perception that civilian staff were less capable and that typical practices devalued their professional expertise and experience (Home Office, 2004b, p.54). There are clear messages here for the professional facilitator of CST, no matter how capable they may be, they need to be able to quickly establish their credibility in the eyes of influential leaders or else the strong organisational cultural may be overriding.

Organisational familiarity with the police service formal rank hierarchy presents further considerations with regard to problem solving. One police manager put it:

*“We have to do what the boss wants, not necessarily what’s right and you rarely find people who are prepared to go against rank. Respect for rank is also a useful ‘cop-out’ for decision making when it’s easier to refer upwards and avoid risking the selection of a ‘wrong’ decision in what’s often seen to be a ‘blame culture’....In a world of ‘black and white’ there is a greater fear of making the wrong decisions.”* (Senior police manager, Appendix 6; 2; 29, 30).

It was suggested that leadership needs to recognise the importance of taking responsibility rather than passing decision making onto others (Appendix 6; 2; 33). Awareness of alternative ways to support decision making such as through a wider understanding of CST might be seen as a way to help leaders become more confident in their decisions but such development would need to ensure it is seen as relevant and

connected to the real job and that the learning will help them in their future careers (Appendix 6; 2; 35, 36).

**(iii) Research Objective 4**

*Determine the impact of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed, identifying those factors that are particularly influential.*

Leadership here can be considered in two regards, the leadership of the affected partner organisations and the leadership of the professional problem solving resources employed. Both aspects are considered in evaluating the intervention.

**Organisational leadership**

The senior project team member who had access on a regular basis to the sponsor, saw this as helping to build a positive relationship and gain buy-in to the project's progress and sustaining the confidence of the sponsor was seen as a key determinant of success (Appendix 6; 2; 12, 13). However, the access was limited to one or two project team members and although the researcher was responsible for developing and sustaining the project methodology, he did not have ready access to the sponsor to help gain buy-in or to identify and respond to changing requirements.

More generally, gaining senior level buy-in to the approach both internally with senior police leadership and externally with senior partners, was seen to be the most important factor in multi-agency change projects according to the police managers consulted (Appendix 6; 2; 24, 38). It was perceived that there was a need to identify those key stakeholders who hold the power and influence for core engagement (Appendix 6; 2; 39). This view implies support for the employment of an analysis at an early stage of the engagement such as that provided by boundary critique (Ulrich, 2005) or the analysis of defining features used in this intervention. It was suggested that senior

officers need to be exposed to this sort of organisational change environment and stay in it long enough to fully understand its nature through participation. This was also seen as helping build the credibility of the specialists they work alongside, who they might be more likely to understand and subsequently respect and trust (Appendix 6; 2; 34).

The value of parallel multi-methodology for responding to wicked problems has already been argued in the Community Safety and IOM interventions and in the personal applications (Chapter 10) it was suggested that the use of mode 2 systems thinking could provide a significant opportunity to deploy parallel multi-methodology. It was further suggested that the ability to employ CST in mode 2 might have the most significant impact if it became part of the organisational leadership development. This intervention, where only certain functions benefitted from a local CST capability, has added some weight to the argument for leadership to benefit from wider exposure to systems thinking and thereby improve the potential to employ for themselves mode 2 CST.

### **Facilitation leadership**

Closely linked to the observations regarding the police culture, those managers interviewed emphasised a challenge for any specialists, particularly where these individuals are civilian police staff or consultants, to demonstrate results or a sales pitch very quickly to win over the sponsoring organisation and with a risk averse culture this is more significant as there is a tendency to stick with what is known and trusted. Specialists are not seen as the experts and their experience and accreditation may not be recognised initially at least. This was considered particularly significant where the specialist might be challenging the existing authority and the defence is often “what do they know about it?” (Appendix 6; 2; 40, 41, 42).

The skill of the specialist facilitator was seen to be in using “*terminology that pushes the right buttons and avoids theoretical elements*” or “*employing the theory without the managers realising it.*” Having an ‘operational’ credibility with a track record of successful change was also seen to be an important characteristic of the facilitator (Appendix 6; 2; 41, 44). It was observed that facilitators need to be able to read the



audience and possess a range of approaches to use that match the prevailing needs of the problem rather than relying on a single methodology (Appendix 6; 2; 43). The value of employing multi-methodology in parallel through the use of mode 2 systems thinking requires the facilitator to possess a degree of expertise in a variety of systems approaches. Within this intervention the researcher noted that limited availability of specialist capability in systems thinking in a devolved problem solving environment reduced the potential for employing mode 1 and 2 CST to support the initiative.

Mayon-White, (1990, p.80) describes the different roles the facilitator can take within an intervention. He recognises the progress that can be made by a capable team of middle managers who bring a range of skills and experience to the task and that the facilitator can take the role of adviser as well as being able to contribute as a team member. The situation described was reflected in this intervention and the role of the facilitator here was less about directing review activity and more about supporting the team in their management of change. With less emphasis on the facilitator structuring the inquiry, there will be a greater focus and reliance on CST in mode 2 to reflect on and respond to the unfolding problem situation in this form of intervention.

It is worth reflecting further on Argyris' Intervention Theory here too. Argyris (1970, p.56) observes where problems are routine, which is usually at lower levels in the organisation, the interventionists' support is not normally required and local capability might suffice. The interventionist is more likely to be required to support situations where problems relate to innovation, where information is potentially threatening or where internal commitment is required, usually occurring at higher levels in the organisation. These situations might be viewed as more complex and plural, or wicked. The contrasting application of CST at different levels in an organisation has already been recognised and a recursive structure proposed to explore this further (section 8.7). Argyris' observation here notes a clear distinction between the role of the problem solver at higher and lower levels in the organisation and this is something that should add to the proposed recursive exploration.

## 9.7 Implications for subsequent research iterations

This intervention has identified a number of learning points as well as a number of questions to be addressed in future AR iterations. The questions to be tested further are included in this section.

*Is the Beckhard resistance to change formula applicable to change interventions involving any number of stakeholders as a means of describing the condition for change for the critical systems thinker?*

From this intervention it would appear that the role of the systems thinker might be viewed as managing complexity and overcoming resistance to change through effective deployment of CST that attends to the requirements of the whole client system. It may be useful here to reflect on the ‘Beckhard’ change formula (section 3.2.5 (ii)) which is traditionally associated with large group interventions and the relevance of which has already been recognised in earlier interventions within this AR programme. Reflecting on the experience of this intervention in terms of individuals’ resistance to change and in individuals not being prepared to buy-in to continually changing unless they can see it as positive progress, the change formula would appear relevant in situations with any number of stakeholders. If the formula sufficiently describes the variables that might influence the resistance to change in a given problem situation and also reflecting on Lindblom’s disjointed incrementalism, then it is of relevance to the facilitator of that change who should seek to influence the variables so as to achieve positive incremental progress. Taken in this way the formula might be seen as providing the condition for change for the critical systems thinker to achieve through awareness of the prevailing problem context and utilisation of appropriate systems approaches that recognise the variety of stakeholder requirements throughout the intervention.

This development might usefully add to the exploration of the role of the facilitator of CST introduced in section 4.3.4.

*Can the role of the critical systems thinker be usefully viewed through a complexity lens, with the responsibility for managing complexity and overcoming resistance to incrementally change through effective deployment of critical systems thinking that attends to the requirements of the whole client system?*

At various points in the AR there have been clear linkages between the role of the critical systems thinker and complexity. For example, within this intervention a number of findings point in this direction:

- Where participants might be personally and significantly affected, individuals' own goals and interests are brought out more obviously and here we are not dealing with an objective, detached entity but often a complex web of personal aspirations.
- The role of the systems thinker would appear to be to manage the complexity and overcome resistance to change through effective deployment of critical systems thinking that attends to the requirements of the whole client system.
- The employment of concepts such as Strategic Choice's commitment package might provide a valuable means for the facilitator of CST to support incremental progression in complex interventions.
- The reliance on self-organisation rather than central co-ordination in highly complex problem environments provides a potentially useful lens through which to view the role of the facilitator of critical systems thinking.

The personal application examples also found that:

- The opportunity to employ CST is often emergent, particularly in complex situations and if systems thinking is to be of value in such circumstances the selection and implementation of an approach needs to be immediate and contingent.
- Can the role of the critical systems thinker be better understood through consideration of a recursive structure?

The ASB intervention raised the question regarding:

- The development of a recursive model to help reflect upon the employment of CST and to develop a viable approach to CST deployment at the methodology, meta-methodology and activity levels.

The community safety intervention raised the question regarding:

- How the intervention facilitator balances and responds to the landscape of diverse and dynamic contexts as seen by the sponsor, key stakeholders and other participants.

Axelrod and Cohen (2001) identify a framework to help think through complex settings and take advantage of complexity to generate new possibilities. Taken together with the findings of the various research iterations that have recognised relevance in employing a complexity lens to reflect upon the role of the facilitator of CST, such a framework might help to identify strategies for employment by the facilitator in wicked problem situations.

***Can the analysis of defining features be further developed to provide a reliable means of helping the facilitator better understand problem context and how they might respond?***

The first intervention raised a question as to whether a better appreciation of the ‘landscape’ of paradigm diversity within problem situations and a feel for the ‘centre of gravity’ may be facilitated through an instrument to employ with intervention stakeholders to improve understanding of problem context. The ASB intervention tested this and found that the structured question framework developed for use with the intervention sponsors helped to identify key defining characteristics of the problem situation and assist in selection of appropriate responses. This framework was used again in this intervention to identify defining characteristics of the problem situation and it was found that it helped reflect upon problem context, the selection of appropriate systems approaches and how these might be deployed but it was also felt that it might have benefitted from a more formal discussion to develop a richer view of the client system.

## 9.8 Conclusion

In line with the generic research design (section 4.4), a reflection upon the status and direction of the AR programme is summarised in Table 9.3.

**Table 9.3:** Intervention 5 AR reflection

<b>AR consideration</b>	<b>Current assessment</b>
<b>Research focus</b>	<p>Further areas for exploration have been identified (section 9.7):</p> <ul style="list-style-type: none"> <li>• Is the Beckhard resistance to change formula applicable to change interventions involving any number of stakeholders as a means of describing the condition for change for the critical systems thinker?</li> <li>• Can the role of the critical systems thinker be usefully viewed through a complexity lens, with the responsibility for managing complexity and overcoming resistance to incrementally change through effective deployment of critical systems thinking that attends to the requirements of the whole client system?</li> <li>• Can the analysis of defining features be further developed to provide a reliable means of helping the facilitator better understand problem context and how they might respond?</li> </ul> <p>Having considered the variety and depth of data gathered from the AR programme to date it is considered that the synthesis of findings will generate significant learning and no further AR iterations are necessary.</p>
<b>Participation</b>	<p>No change to generic design but degree of participation was limited within this intervention.</p>
<b>Engagement</b>	<p>Cultural issues regarding deployment of some approaches limited aspects of engagement and more emphasis was placed upon researcher employing approaches with less direct involvement of participants in a mode 2 style for some aspects. Also, personal impact of the change affected the nature of engagement of some parties.</p>

<b>Authority –</b>	Organisational hierarchy and authority influenced the nature and course of the intervention more than other iterations, with less freedom for participants to shape the outcomes.
<b>relationships</b>	The influence of culture and power had clear influence on the approach to deployment within this intervention and the researcher’s ability to work against this was limited. However, positive relations between senior stakeholders and the researcher helped secure effective deployment of systems approaches.
<b>Learning</b>	<p>This intervention has identified a number of emerging findings in relation to systems approaches and how they are deployed, including:</p> <ul style="list-style-type: none"> <li>• The use of mode 1 and mode 2 thinking in conjunction was seen to be an effective way of employing parallel multi-paradigm multi-methodology.</li> <li>• Where participants might be personally and significantly affected, individuals’ own goals and interests are brought out more obviously and here we are not dealing with an objective, detached entity but often a complex web of personal aspirations.</li> <li>• The role of the systems thinker would appear to be to manage the complexity and overcome resistance to change through effective deployment of critical systems thinking that attends to the requirements of the whole client system.</li> </ul> <p>Together with other findings from this and previous interventions (Appendix 8), these will be drawn together in Chapter 11 to inform a synthesis of the overall research findings.</p>

**Table 9.3:** Intervention 5 AR reflection

## Chapter 10

### Personal Applications of Critical Systems Thinking: To December 2010

#### 10.1 Introduction

The research methodology design was informed by a reflection on leadership in the facilitation of CST and this helped to identify an intervention programme structure that would fully address the research objectives. The programme structure recognises the importance of considering the different modes for the deployment of systems thinking and the following selection of informal, personal applications has been selected as part of the AR programme as they provide a range of typical examples of a commonly applied mode of systems thinking that might often go unnoticed due to its nature as a more informal and internalised application. As a consequence, the aim here is to make explicit some ‘tacit’ knowledge regarding the use of different modes of CST and to help reflect upon this, the commitments of CST will be considered within the evaluation.

Following more than 10 years of action research, Checkland and Scholes (1990) identified a ‘spectrum’ of applications of Soft Systems Methodology (SSM), with at one extreme the ‘mode 1’ application - where a problem situation is investigated from the outside using SSM to structure the enquiry and at the other extreme the ‘mode 2’ application - where SSM is internalised by the problem solver and used to aid thinking about and making sense of events as they unfold from within the problem situation. This concept is shown in Table 10.1. Jackson (2003, p.314) identifies the potential for further extending research into the mode 2 application of CST more generally.

<b>Mode 1</b> (intervention mode)	<b>Mode 2</b> (interaction mode)
<ul style="list-style-type: none"> <li>• Investigate from outside using SSM to structure</li> <li>• Framework of systems ideas embodied in SSM used to enquire into and improve real world</li> </ul>	<ul style="list-style-type: none"> <li>• From within flux use SSM to make sense of experience</li> <li>• Knowledge of SSM used to reflect on flux of events and ideas to learn ways of purposeful improvement</li> </ul>

**Table 10.1:** Mode 1 and 2 SSM ‘ideal types’

In this chapter the application of systems thinking that is nearer the ‘mode 2’ end of the spectrum will be explored. The following examples of ‘mode 2’ CST have been selected for inclusion here as providing a range of typical applications in which the researcher has been personally involved:

1. Project structuring
2. Group facilitation design
3. System performance evaluation framework
4. Project and programme governance

Due to the nature of these applications, the value of the approaches taken is largely based upon the individual practitioner’s own view and the evidence gathered to support evaluation here differs somewhat from the previous interventions and in this case it is based upon the researcher’s own experience and interpretation. No attempt is made here to comprehensively document the use of the systems approaches as their application was largely informal. Neither is there an attempt to document the outcome of the overall intervention where the approaches were employed and as a consequence the description and evaluation of each is relatively brief. However, more explicit evidence of the applications is provided where specific products of the research add insight.

It is also worth reflecting here on the AR design as outlined in section 4.5. Here it is proposed that the research credibility needs to stand up to challenge in terms of Greenwood and Levin’s (1998) criteria for credible AR:



- ‘workability’;
- ‘sense making’; and
- ‘transcontextual credibility’.

These criteria will be of particular importance in reflecting upon the success of the personal applications given the nature of the evidence available for these interventions.

## **10.2 Project Structuring**

A common requirement of systems practitioners and managers generally is for their development and implementation of activity or work breakdowns in order to achieve one or more particular objectives. These requirements might be explicitly specified through a given project statement and associated objectives or more loosely specified as a broad requirement to respond to an issue or theme. Particularly where there is less explicit specification of requirements managers need to draw upon their experience to think about the problem presented to better understand how they might respond. This first example of a personal application of systems thinking draws upon a typical situation of this nature and although the work was undertaken prior to the commencement of the action research, it is included here as typical of a situation that managers might encounter.

### **(i) Problem background**

The introduction of the Disability Discrimination Act (DDA) brought the requirement for public bodies to rethink the way they provided their services so as to make reasonable adjustments to improve accessibility to the community living with disability. Within WYP a committee was established with the responsibility for responding to the DDA and implementing service change and improving access to police buildings so as to be fully compliant by the DDA’s October 2004 deadline for service providers to make ‘reasonable adjustments’ in relation to the physical features of their premises to overcome physical barriers to access.

The Disability Rights Commission (2003) introduced a set of Codes of Practice to help clarify the various responsibilities of organisations in relation to the DDA. Section 3.16 of this guidance summarised the steps that service providers should consider in order to be able to comply with their duties under the DDA and prevent their employees from discriminating against disabled customers. This checklist is included in Figure 10.1.

The researcher was given the responsibility for co-ordinating the Force response by chairing a committee comprising representatives from a variety of internal WYP departments and some external charitable agencies representing the community living with disability.

- establishing a positive policy on the provision of services to ensure inclusion of disabled people and communicating it to all staff;
- informing all staff dealing with the public that it is unlawful to discriminate against disabled people;
- training staff to understand the service provider's policy towards disabled people, their legal obligations and the duty of reasonable adjustments;
- monitoring the implementation and effectiveness of such a policy;
- providing disability awareness and disability etiquette training for all staff who have contact with the public;
- addressing acts of disability discrimination by staff as part of disciplinary rules and procedures;
- having a customer complaints procedure which is easy for disabled people to use;
- consulting with disabled customers, disabled staff and disability organisations about the accessibility of their services;
- regularly reviewing whether their services are accessible to disabled people;
- regularly reviewing the effectiveness of reasonable adjustments made for disabled people in accordance with the Act, and acting on the findings of those reviews;
- and
- providing regular training to staff which is relevant to the adjustments to be made.

**Figure 10.1:** Disability Rights Commission Code of Practice - What steps should a service provider consider?

**(ii) Response**

The researcher wanted to find a way to identify a coherent structure for a project that needed to respond to a variety of broad requirements that were presented in the codes of

practice. The researcher viewed the codes of practice as presenting different perspectives on the requirements and was concerned that if the committee merely tried to implement the list of codes individually their response as a whole may be sub-optimal, disjointed and potentially inconsistent. Also, it was clear that the steps listed overlapped somewhat, for example three out of the eleven steps relate to training staff for different purposes and the steps did not seem to provide a particularly clear structure on face value. In response, a means was sought to accommodate the different perspectives as a more coherent holistic package that could be implemented in a structured programme of change.

The researcher's previous experience of SSM provided an understanding of its potential to accommodate different perspectives and he drew upon this to help think about the situation. The researcher was reluctant to engage the committee in a formal SSM exercise due to a lack of time, resource and availability of the different stakeholders and as the committee's purpose was in effect defined by the codes of practice, the researcher decided to employ aspects of SSM in more of a mode 2 style to help think about a way forward. Taking each of the steps included in the relevant codes of practice (Figure 10.1), the researcher constructed two composite root definitions from which conceptual models were built. The researcher considered these two definitions were sufficient to capture all of the relevant components, the first relating to the Force's responsibility to prepare for DDA compliance (e.g. establish policy and awareness) and the second relating to the achievement of compliance through review of services. The researcher used these elements of SSM to think about the problem with the root definitions in effect providing a project statement and the conceptual model providing a work breakdown for the activities that would need to be formally sequenced if the Force wanted to respond appropriately to the variety of guidance. Developing the work breakdown in this way introduced only those activities necessary and sufficient to fulfil the purpose statements and avoid the duplication in the code of practice. The draft work breakdown structures were presented to the cross functional committee for consideration as a means of shaping their work programme and following some minor refinement the committee agreed an acceptable way forward.

The use of SSM seemed to move between a reflective mode 2 form, to think about how progress might be made and then to more of a mode 1 style to start to structure the intervention through the conceptual model's activity lists. The researcher was not conscious of the particular points when the move between modes was taking place but reflecting on the process, there is evidence of both modes being used interchangeably.

The resultant work breakdown demonstrated clear visibility of the original codes of practice but through employment of the conceptual model the activities could be presented in a more coherent and joined up package. Consequently the approach was readily accepted by the committee as providing a structure through which they could effectively and efficiently deliver their responsibilities. The two composite root definitions are included in Figure 10.2 and the work breakdown is shown in Appendix 7, Table 10.2.

- |  |
|--|
| 1. A Command Team owned system to ensure inclusion of disabled people in the provision of services through the establishment of a positive policy that incorporates acts of disability discrimination as part of disciplinary rules and procedures, that is communicated to all staff, with particular emphasis on the training of staff who have contact with the public in disability awareness and etiquette, so that staff understand the policy, the legal obligations and the duty of reasonable adjustment and update training is effected wherever adjustments are required. |
| 2. A Command Team owned system to review services to ensure they are accessible to the disabled and that reasonable adjustments are effective, through a process of consultation with disabled customers, staff and organisations and a customer complaints procedure that is easy to use.   |

**Figure 10.2:** Root definitions used to derive a conceptual model (not included here)

## **10.3 Group facilitation design**

### **(i) Background**

The WYP internal consultancy is responsible for co-ordinating a team of in-house facilitators from various functions across the organisation, all of whom are trained in a range of group problem solving approaches. On a regular basis experienced facilitators are engaged in the design and implementation of consultation processes within the WYP's Senior Managers Forum (SMF) and the researcher is a regular facilitator of this forum. The nature of these events requires the selected facilitation team to design simple consultation processes for short interventions, usually of an hour's duration to help to identify issues and explore options around a chosen theme. Over a number of years the format of the events had followed a similar pattern, with the facilitated sessions breaking the forum into 3 or 4 smaller groups of between 10 and 20 people discussing issues and identifying options as a group before sharing these back with the wider SMF. Although the sessions appeared to generate useful data, it was noted on a number of occasions that gaining contribution from all participants was difficult, leading to a concern that diverse viewpoints may not always be heard.

### **(ii) Response**

On occasions different approaches to capturing and developing ideas had been introduced to help to stimulate contributions from the diverse group of managers, comprising operational officers and civilian support staff from a range of functional specialisms. The experienced facilitators involved in the SMF all had the ability to work with mixed groups and encourage participation of different group members. However, despite the introduction of alternative approaches to working with the groups, it rarely seemed possible to draw in contribution from all the diverse groups of participants and on occasions significant numbers of participants resisted the approaches employed. There were continual calls to introduce something different but each change seemed to result in limited participation. Examples of alternative approaches used included nominal group technique (Rickards, 1990), group mind

mapping, multi criteria decision analysis (Rickards and Moger, 1999) and even the use of drama supported by specialist consultants (Geese Theatre Company, 2011).

Having been exposed to the potential of PANDA (Taket and White, 2000) in responding to complex problem situations with a high degree of diversity, during one particularly challenging forum the researcher was able to instantaneously reflect upon the principles of plurality advocated by PANDA and their relevance to the prevailing difficulties of engaging the forum's diverse range of stakeholders. PANDA was developed as a framework for linking families of approaches and methods to guide multi-methodological practice and its structure is described more fully in Chapter 1. PANDA seeks to mix diverse perspectives, recognising differences and contradictions and responding flexibly to the situation as experienced. A central feature of PANDA is pluralism (Table 5.5) and plurality in the modes of representation employed appeared to be particularly relevant in this problem situation.

Extracting this facet of systems thinking and relating it to the experience of the SMF helped the researcher in 'real time' to recognise a weakness in the approach taken to the forum design and although not overtly applying the PANDA framework, this aspect helped to make sense of a recurrent problem and consider whether the variety of representation matched the preferences of participants. It was recognised that although alternative approaches to gathering views had been employed by experienced facilitators, they had largely been applied independently and had greater concurrent variety of representation been supported then improved participation may have been achieved. Although it was not possible to make an immediate change to that particular forum and there was only limited opportunity to employ a wide variety of modes of representation concurrently at future forums, the facilitation design for future events was able to recognise potential weaknesses and alert facilitators to a requirement for flexibility in their practices.

## 10.4 System performance evaluation framework

### (i) Background

In April 2010, following a twelve month pilot of remote working within the force's IT Department, the researcher was invited to undertake an evaluation of the pilot with a view to building a generic evaluation framework to guide future implementation of remote working in other parts of the force.

The force's strategic aim for remote working was to provide cost effective customer focused services that are accessible, making maximum use of appropriate technology, accommodation and systems to create substantial efficiency and productivity gains.

An initial evaluation of the pilot by the IT Department's own management considered the 12 month pilot to be successful in terms of:

- The staff 'take-up' in relation to the opportunity to work remotely.
- Integrity of IT and the security of data.
- The ability for staff to maintain regular contact with colleagues and for managers to maintain contact with staff.
- Customer perception and staff survey results showed an increase on their index.
- Reduced staff sickness in relation to the remote working group.
- Staff being able to work more effectively and efficiently whilst undertaking remote working, which had led to an increase in staff performance and service quality.
- Staff stated they felt less stressed due to less commuting, leading to less sickness and an increased feeling of well-being.

## **(ii) Response**

The IT Department had been selected as the force pilot due to the interest and previous experience of the senior management of the department in this way of working and the nature of their work lent itself to working remotely. However, following initial consultation with some other department heads regarding the potential to extend remote working to other functions across the force, it became apparent that the wider support of management for this approach to working was not universal and there was concern about how appropriate it might be to extend the approach within the force. As a consequence, the force senior command requested that the researcher quickly undertake a broader evaluation of remote working on behalf of the organisation as a whole prior to any further implementation.

Due to a limited time and resource commitment, there was little opportunity to directly engage the various stakeholders in the development of an evaluation framework so the researcher employed more of a ‘mode 2’ application of systems thinking to help reflect on the problem situation. As the WYP comprises a diverse variety of functions, such as operational response policing, neighbourhood reassurance, crime investigation, call handling, intelligence management and administrative support to name but a few, a significant diversity of perceived value of remote working was anticipated.

Considering the potential range of measures against which stakeholders might judge remote working, the researcher wanted to start to construct a holistic evaluation framework that would be relevant to a wide variety of different viewpoints and Jackson’s (2003) framework (section 3.2.3) was utilised. The researcher’s intention was to use this guiding framework to think about the range of potential ways diverse stakeholders might view remote working and see if a set of practical measures could be derived to encompass a range of management requirements. This process resulted in the researcher identifying three broad dimensions:



- Service performance dimension – measuring service efficacy, effectiveness and elegance.
- Resource usage dimension – measuring service efficiency.
- People dimension – measuring empowerment, equality, exception, emotion and ethicality.

These dimensions were selected as they provided a simple structure and language that still encompassed a wide variety of evaluation criteria reflecting different paradigmatic concerns. A variety of CSP's 8E's were used to stimulate thinking about the potential coverage of measurement but the structure was not used prescriptively. For example, the efficiency measurement was elevated into its own separate dimension and elegance and emotion are less obvious in the eventual evaluation framework due to their relative prominence in the culture of the organisation. Also, ethicality was introduced to reflect the environmental impact of remote working and this merged into the 'People' dimension. Although ethicality might be considered a measure of fairness and therefore reflected in the 'equality' E, the term used was familiar to the organisation and traditionally seen as different from equality. Coupling the theoretical diversity of measurement provided by the lenses of the different sociological paradigms with the practicality of what measures were culturally acceptable and actually available or possible to capture, resulted in the development of the evaluation matrix shown in Table 10.3.

The matrix was used to provide a more holistic assessment of the IT pilot of remote working backed up by actual data as well as providing a framework against which the potential for future target departments could be assessed.

**Table 10.3:** Remote working generic evaluation criteria

Dimension	Objective	Comments	Data Source	Measures
Service Performance (efficacy, effectiveness)	Increase overall satisfaction of service users	Policing Plan target	Internal customer survey	<ul style="list-style-type: none"> <li>Customer satisfaction index</li> </ul>
	Improve overall quality of services	Overall perception of service quality	Internal customer survey	<ul style="list-style-type: none"> <li>Aggregate perception of service quality</li> </ul>
	Improve quality of aspects of services specific to each function (IT Dept specific ones shown in this example)	Run and support Force IT and Communication systems that are accessible and reliable.	Internal customer survey	<ul style="list-style-type: none"> <li>Perception of service quality</li> </ul>
		Maintain an effective IT system performance that meets operational needs.	Internal customer survey	<ul style="list-style-type: none"> <li>Perception of service quality</li> </ul>
		Provide an effective process for the ordering and delivery of goods from the IT Service Catalogue	Internal customer survey	<ul style="list-style-type: none"> <li>Perception of service quality</li> </ul>
		Provide an effective IT 'Request Handling System' to process new requests for IT services	Internal customer survey	<ul style="list-style-type: none"> <li>Perception of service quality</li> </ul>
		Provide an accessible and supportive IT Service Desk Service	Internal customer survey	<ul style="list-style-type: none"> <li>Perception of service quality</li> </ul>
		Provision of Advice and Guidance on service developments with an IT component.	Internal customer survey	<ul style="list-style-type: none"> <li>Perception of service quality</li> </ul>
		Provide information tools that support the Force and make staff more effective.	Internal customer survey	<ul style="list-style-type: none"> <li>Perception of service quality</li> </ul>
		Improve service accessibility		Internal customer survey Call handling data
	Maintain service resilience		Business continuity	tbc

	Maintain or improve operating practices		Interviews with dept.'s service managers and staff	<ul style="list-style-type: none"> <li>Perception of effectiveness of operating practices</li> </ul>
Resource Usage (efficiency)	Deliver efficiency and productivity gains	Policing Plan target	eMIS	<ul style="list-style-type: none"> <li>Productivity (work completed /staff)</li> <li>Office space required</li> <li>Utility costs</li> <li>Cost of office equipment and consumables</li> </ul>
People (empowerment, equality, ethicality)	Maintain or reduce the proportion of working hours lost to sickness	Policing Plan target	eMIS	<ul style="list-style-type: none"> <li>Working hours lost to sickness</li> <li>Certified V non cert.</li> <li>Distribution of duration</li> </ul>
	Reduce staff turnover		tbc	<ul style="list-style-type: none"> <li>Retention rates</li> </ul>
	Improve staff satisfaction		Internal staff survey	<ul style="list-style-type: none"> <li>Staff survey index</li> </ul>
	Improve equality and diversity		Equality Impact Assessment	<ul style="list-style-type: none"> <li>Any contra-indicators identified</li> </ul>
	Increase empowerment	Force vision	Internal staff survey	<ul style="list-style-type: none"> <li>Perception of empowerment "I am encouraged to use my initiative to solve work related problems"</li> </ul>
	Reduce travel time and cost		Travel to work survey	<ul style="list-style-type: none"> <li>Aggregate commuting distance</li> <li>Carbon emissions</li> </ul>

**Table 10.3:** Remote working generic evaluation criteria

## 10.5 Project and programme governance

### (i) Background

The West Yorkshire Police command is based upon a group of portfolios, each headed by a 'chief officer', namely a Deputy Chief Constable (DCC), an Assistant Chief Constable (ACC) or an Assistant Chief Officer (ACO). Within the portfolios the chief officer is responsible for a number of departments and divisions with associated projects and programmes of work. Over a number of years the increased demands placed upon the organisation had created an increasingly complex set of interconnected responsibilities that had led to a number of concerns, including:

- An ever growing range of programme boards, project boards, steering groups and meetings, arising as each new demand emerged. This meant that not only chief officer diaries becoming extremely busy, but there was also the potential for overlap and duplication.
- There was no comprehensive oversight of the programmes and projects which were in place. This could lead to duplication of effort or for gaps to emerge, but there was also little co-ordination or prioritisation of activity.
- There was no corporate approach to the control and functioning of programme/project boards and meetings, with some Chief Officers chairing projects and others delegating such tasks.

The WYP internal consultants, including the researcher, were invited to identify a means of tackling this problem.

The QUEST intervention (Chapter 7) had identified an emerging question:

- Is it possible to build the capability of problem solvers to deploy systems thinking with greater success through the development of a combination of propositional knowledge and know how?

One of the underlying reasons for asking this had been the attractiveness of employing a practical, generic structure that is based upon a set of key principles at a meta-level that

might be culturally acceptable within the police service. It was observed that CSP provided such a structure and the potential for employing this type of generic model will be further considered in this personal application example.

## **(ii) Response**

Initial discussion with the force command confirmed that greater structure was required to support the delivery of the complex range of activities comprising a broad hierarchy of strategic programmes and projects covering all critical business areas to meet the force vision. It also became apparent that:

- There was a desire for a greater involvement of managers in shaping the delivery of activities.
- A need for the flexibility to devolve responsibility for management and delivery to suit local capability but for this to have a corporate consistency.
- For the standard of delivery to be controlled through existing project and performance management processes before becoming ‘business as usual’.
- A need for greater central co-ordination of activity.
- An improved prioritisation of new demands linked to the strategic planning processes.

The researcher’s previous experience of a wide variety of systems thinking immediately recognised the potential for the employment of approaches with strength in handling complexity and providing structural insight. The Viable Systems Model (Beer, 1985) is one such approach that seemed to offer particular strength as it:

- Identifies key requirements for an organisation to operate as a viable system in pursuit of a defined purpose.
- Facilitates empowerment in operations to enable an organisation to effectively respond to its environment.
- Ensures a management infrastructure sufficient to support but not hinder operations;
- Facilitates the identification of gaps in capability as well as redundant functions.
- Its ‘recursive’ structure enables organisation to be considered as part of the wider system in which it operates.

Given the VSM's apparent complexity to inexperienced practitioners, including some of those within the WYP internal consultancy and because of the researcher's previous experience of employing systems approaches with senior managers in the sector, the researcher decided there was no realistic possibility of employing such a methodology in any formal sense in this particular situation. However, the researcher considered there to be value in using elements of the VSM in an informal way to help structure his thinking in more of a mode 2 application. The researcher utilised the VSM's high level system components and recursive nature to start to think about the problem situation and how the requirements of the force command could be tackled, taking the Force level delivery governance as recursion level 0, portfolio level governance as recursion level 1 and project level governance as recursion level 2.

The models included in Figures 10.3 to 10.5 were developed to help describe a potential delivery structure to senior management and identify features that required further development. The models included components that were recognisable by management but for those familiar with the VSM, its influence in the proposed solution is clear. Culturally acceptable diagnostic questions (Table 10.4), loosely derived from a viable systems diagnosis (Flood and Jackson, 1991), were used by the researcher to prompt further discussion with the force command alongside issues that had been identified in the consultation process. The discussion points numbered in Table 10.4 correspond to those shown in Figures 10.3 and 10.4 and these were used to facilitate a discussion with the senior command to explore their approach to the strategic management of change programmes.

1	What mechanism should be used for prioritisation and is this linked to Force vision and objectives?
2(a)	Are ‘Strategic Analysis’ activities seen as a useful vehicle for informing Strategic Direction and Prioritisation and does it draw together sufficient internal and external data to inform policy decisions (including updates on Strategic Programmes)?
2(b)	Is there representation and participation at the policy/direction level (e.g. role of SMF)?
3(a)	Is there a need for a DCC chaired steering group(s) for Control and Co-ordination?
3(b)	Are co-ordination activities evident/sufficient and facilitating rather than interfering?
3(c)	Do ‘Control’ activities effectively implement the strategic direction through an effective tasking process?
3(d)	Does the Corporate Performance Review (CPR) process secure accountability for delivery across all functions?
4	Who/what should facilitate Co-ordination activity?
5(a)	Do the programmes cover all the portfolio responsibilities?
5(b)	Do we want to make the distinction between projects and programmes?
5(c)	Are the programmes the sum of the projects and are any projects missing or redundant?
5(d)	Are there any gaps or overlaps
5(e)	Will updates on Strategic Programmes provide a more comprehensive assessment of progress towards the force vision?
6(a)	Are projects/meetings devolved to right level of management?
6(b)	Do subsidiarity principles apply?
6(c)	Does the recursive nature of the delivery model also provide a means of thinking about consistency at ‘higher’ (e.g. regional or national) and ‘lower’ (e.g. divisional) levels?

**Table 10.4:** Delivery structure discussion points

In order to operationalise the model and address the requirement to better engage senior managers in shaping the delivery, it was decided that a clear process was needed to sustain the model. As with the performance framework application, the researcher was presented with a number of constraints, such as integration with existing strategic management and consultation processes that required accommodation in any solution. Here again, the researcher drew upon his experience of a variety of systems approaches to identify a way of helping the force select appropriate interventions and approaches. Recognising this as a ‘meta-level’ process to support selection and implementation of approaches, the researcher informally employed the structure of CSP (Jackson, 2003) to

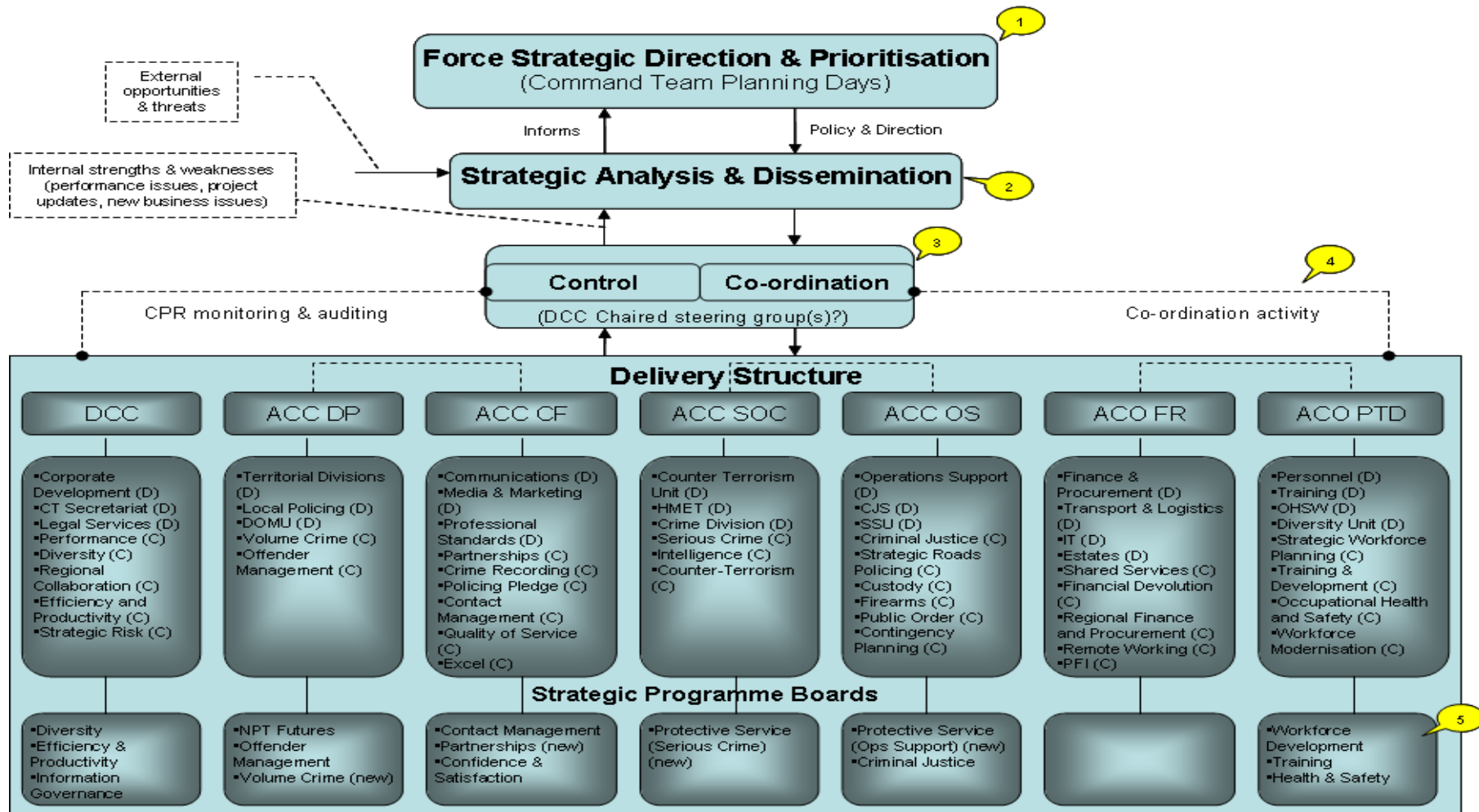
help to think about a more holistic framework that could help operationalise the delivery structure models but presenting this in a format that could be recognised by senior management. This framework is included in Table 10.5.

Again, although there is no explicit use of CSP in a mode 1 style, CSP's high level structure (creativity, choice, implementation and reflection) and some of its principles (e.g. pluralism and involvement) are clearly recognisable to the experienced practitioner. The employment of CSP here in more of a mode 2 style helped the researcher reflect on the prevailing requirements of the senior command and to introduce some new thinking as a result. For example, the role of the Senior Managers Forum and how it could provide a platform for some creative thinking about how to respond to issues.

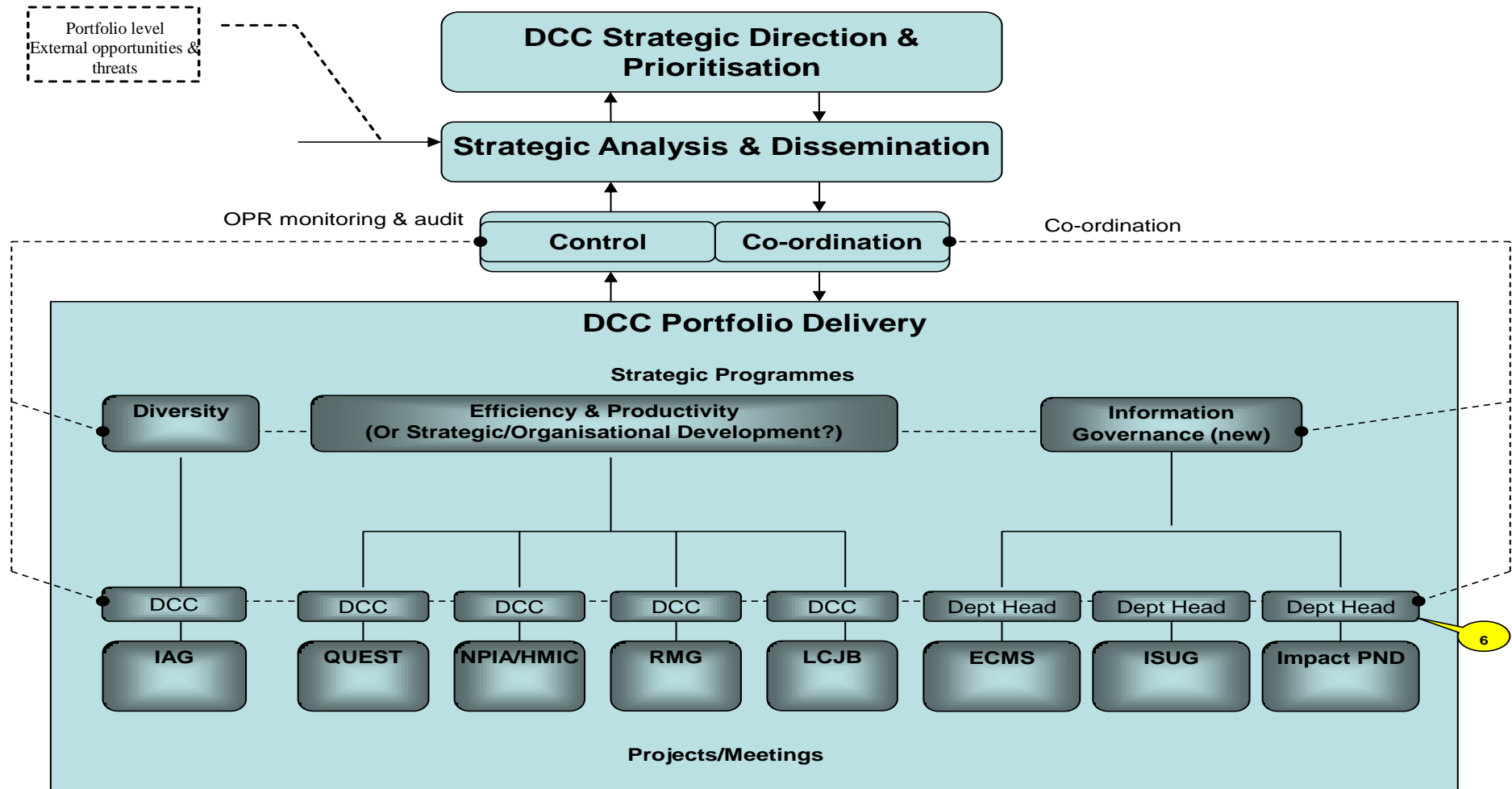
The delivery structures and co-ordination process developed through this intervention were well received by the senior command and formed the basis of the approach subsequently adopted by the Force. Although the structures provided by the VSM and CSP were not formally used to build and communicate the approach, the systems principles and components they provided helped the problem solver to think about the situation being encountered by the force and to informally relate some aspects of systems theory to a practical situation.



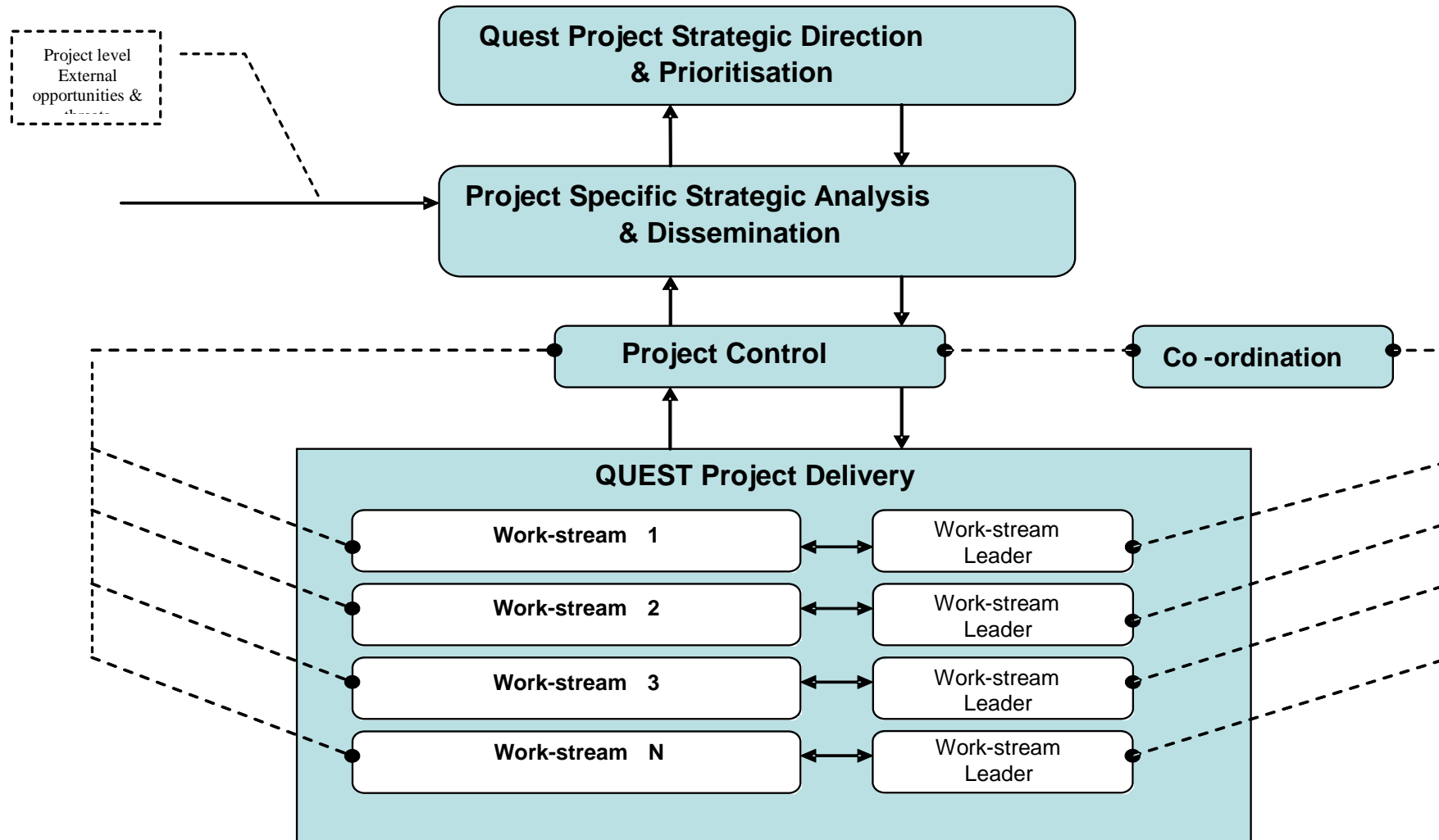
Figure 10.3: Force level delivery structures



**Figure 10.4:** Portfolio level delivery structures



**Figure 10.5:** Project level delivery structures (QUEST project example)



	<b>What</b>	<b>How</b>	<b>Where/Who</b>	<b>When</b>
1	Strategic direction setting	Annual Review of Strategy	Command Team Planning Days (CTPD)	Annually
2	Issue identification and prioritisation	Strategic Intelligence Analysis and Control Strategy refresh	Crime Division and Corporate Review	Quarterly
		Informed discussion	CTPD	Quarterly
		Prevailing demands	All Force functions	On-going
3	Exploration of creative responses	Facilitated discussion	Senior Managers Forum	Quarterly
		Analysis of response options	Corporate Review Department utilising: <ul style="list-style-type: none"> <li>• What works database</li> <li>• Corporate Review methodology knowledge</li> <li>• Force Project System</li> </ul>	Quarterly
4	Choice of intervention approach	Consideration of: <ul style="list-style-type: none"> <li>• Prioritisation</li> <li>• Option analysis</li> <li>• Prevailing demands</li> <li>• Resource availability</li> </ul>	Corporate Co-ordination Meeting	Bi-monthly
5	Implementation of intervention(s)	Undertake intervention in line with appropriate standard	Host department	On-going
		Manage and monitor progress	Project board	As scheduled
			Corporate Co-ordination Meeting	Bi-monthly
			CTPD	Quarterly
			Corporate or Operational Performance Review processes (CPR, OPR)	Quarterly
Corporate Review using Force Project System	On-going			
6	Reflection	Gather organisational knowledge and learning for dissemination	<ul style="list-style-type: none"> <li>• What works database</li> <li>• Corporate Review methodology knowledge</li> <li>• Force Project System</li> </ul>	On-going

**Table 10.5:** Corporate co-ordination process

## 10.6 Intervention evaluation

Recognising the limited data available to assess these personal applications the evaluation is based upon the reflections of the researcher and drawing in findings from other interventions within this research and elsewhere.

The findings are presented against the relevant research objectives in the following sections.

## 10.7 Contribution to research objectives

### (i) Research Objective 2

*Identify and implement practical and informed combinations of systems approaches that help policing service stakeholders fulfil their purposes in relation to joint problem solving.*

In each of the examples included here the researcher implemented combinations of systems approaches that were judged to have been successful in helping stakeholders address their problems, based upon the fact that in all instances they were accepted and implemented by the relevant stakeholders. The approaches were also seen to be practical by definition as they were shaped to meet the requirements of the researcher without necessarily having to conform to a formal methodological standard. In doing this it was possible to balance elements of systems theory against what would work in a particular situation. In these circumstances a practitioner can adapt approaches in any way that matches their own circumstances and the problem context as they see it, such as to accommodate the culture of an organisation.

A typical example was the remote working evaluation, coupling the theoretical diversity of measurement provided by the lenses of different sociological paradigms with the practicality of what measures were actually available and understood by the organisation. So too in the project and programme governance intervention, where the

principles and components provided by the VSM and CSP helped the problem solver to think about the situation being encountered by the force and to informally relate some aspects of systems theory to a practical situation while avoiding the difficulty of formally applying and communicating the approach. In the DDA project structuring application the resultant work breakdown was readily accepted by the diverse committee as providing a structure through which they could effectively and efficiently deliver their responsibilities.

Reflecting upon the AR criterion of ‘workability’, each application presented here might be considered as demonstrating success.

## **(ii) Research Objective 3**

*Determine the features of approaches that are found to be influential in successfully supporting multi-paradigm problem solving, recognising contextual factors that might affect transferability.*

### **Multi-paradigm problem solving**

Despite the systems approaches being used informally in these interventions, it was still possible for an experienced practitioner to combine elements of relevant systems thinking to reflect multiple paradigm diversity, introducing different approaches with strength in particular contexts as necessitated by the problem situation encountered. For example, the project structuring intervention required the accommodation of different perspectives (interpretive paradigm) and this was considered to have been successful as a result of all parties accepting that the product provided an ‘effective’ means for them to fulfil their responsibilities. The subsequent development of a formally structured project plan to meet the committee’s shared aims could be seen as a goal seeking structure (functionalist paradigm) which might again be judged successful as it was clearly ‘efficacious’ and provided an ‘efficient’ way of delivering their responsibilities.

The remote working evaluation example demonstrates this more overtly through building a framework that attempts to accommodate all four of the commonly

recognised sociological paradigms and employing the 8 E's to start to construct a holistic evaluation framework that would be seen as relevant from a wide variety of perspectives.

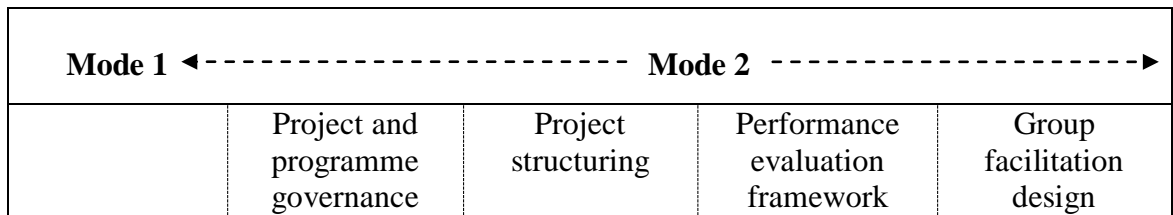
### **Modes of application**

The research methodology design was informed by a reflection on leadership in the facilitation of CST and within these personal applications to make explicit some 'tacit' knowledge regarding the use of mode 2 critical systems thinking and to help reflect upon the potential for mode 2 systems thinking to effectively support CST, the commitments of CST (Table 3.3) are used here as part of the evaluation.

The first commitment, critical awareness, was reflected throughout but particularly apparent in the project structuring intervention where the interpretive and functionalist paradigms were recognised within the problem situation; the second commitment, improvement, was reflected in all but the group facilitation example where no change was implemented that could demonstrate improvement; the third commitment, pluralism, again was reflected in all but the group facilitation example, for example the project structuring intervention employed aspects of SSM and project management in combination and in the project and programme governance example VSM and the CSP meta-methodology were employed together. It might be concluded therefore that it is possible to demonstrate CST in mode 2 applications although its nature might differ from that of mode 1 applications.

In order to identify situations where this form of CST might be considered more appropriate and successful in comparison to a more formal mode 1 application, it is useful to reflect upon why a mode 2 style application was selected. Checkland and Scholes (1990) identified a spectrum of applications of SSM, with the mode 1 application at one extreme and the mode 2 application at the other extreme. These extremes represent 'ideal types' between which the majority of applications will fall. Table 10.1 presents these ideal types as expressed by Checkland and Scholes in relation to SSM. Using these distinctions and replacing SSM with CST, the examples of

personal applications included here can also be seen as being part of such a spectrum and Figure 10.6 presents the researcher's subjective assessment of this.



**Figure 10.6:** Spectrum of personal applications of CST

In making this subjective assessment, it is worth recognising some of the determinants of placement on the scale. A key determinant of where an application was placed upon the scale was the ‘starting point’ at which the opportunity to employ systems thinking was feasible and recognised, determining the scope for employment of systems thinking to shape the intervention. For the group facilitation application, the employment of CST was triggered during a facilitated event and this helped the facilitator make sense of what was happening at that immediate moment. This immediacy placed the application at the most extreme mode 2 end of the spectrum. Although the performance evaluation framework was developed over a period of time, the problem boundaries were already well defined and further constrained in terms of time and resource to intervene. The opportunity for mode 1 systems thinking was limited and an application in more of a mode 2 style provided new perspectives to build into the design but their influence is quite visible in the end product.

The project structuring and project and programme governance examples were both judged to be closer to the mode 1 style of application. They both employed significant aspects of CST though not formally to enquire into and improve the real world situation. The visibility or evidence of the overt use of aspects of systems thinking was also more apparently shaping the intervention rather than supporting reflection upon it. However, there was limited opportunity to employ the approaches formally in a mode 1 style given time constraints, cultural resistance to apparently over-theoretical approaches and the need for specialist capability as well as involvement of key stakeholders. Here the



researcher was less conscious of operating in any particular mode and there was evidence of iteration between modes as required.

In all examples documented here there were particular time pressures and a limited opportunity to engage the right resources to undertake a more formal application (e.g. specialist expertise or formal stakeholder engagement). Also, the potential for employment of different systems thinking only fully emerged as the interventions progressed and the complexity unfolded, thereby constraining further the ability to introduce a formal mode 1 application of the variety of approaches required. Again emphasising that often the opportunity to employ systems thinking is emergent and if systems thinking is to be of value in such circumstances the selection and implementation of an approach needs to be immediate and contingent. Mode 2 CST provides a valuable means of fulfilling this requirement.

This experience is consistent with Kilmann and Mitroff (1979, p.29) who noted that the later a consultant enters a problem situation, the greater the chance of a 'type 3' error occurring (solving the wrong problem). They advocate the need for the consultant to be involved from an early stage to help shape problem definition. However, in many applications in practice this may be particularly difficult as has been shown in the examples presented here, where a limitation was placed on the critical systems thinker to fully explore the problem situation through mode 1 applications. In many circumstances therefore, where early entry is not feasible, the critical systems thinker may resort to a greater use of mode 2 CST to avoid such type 3 errors.

Figure 10.7 summarises the key contextual determinants emerging from these examples.

- The desired purpose of (aspects of) systems thinking - to structure intervention in the situation or to reflect on the prevailing situation.
- The ‘starting point’ for intervention – from inside or outside the problem situation and how much scope there is for the facilitator of CST to employ systems thinking to shape the intervention.
- The nature of objectives, boundaries and constraints in the given problem situation
- The cultural acceptability of systems approaches.
- The complexity of the requirement and the time available to respond.
- Access to appropriate resources (e.g. expertise or formal stakeholder engagement).

**Figure 10.7:** Contextual determinants

This list has emerged from the experience of this limited research and is not presented as exhaustive or definitive. It should also be recognised that the assessment of components will not provide discrete or mutually exclusive values (e.g. the purpose of systems thinking might be to both shape the intervention as well as reflect on the prevailing situation). However, these determinants might be considered as providing a means for transferring the learning about the application of mode 2 approaches from one situation to another and thereby satisfying the ‘transcontextual credibility’ requirement of successful AR as outlined within section 4.5.

In reality there is likely to be a more dynamic relationship where the practitioner might move between modes at different stages of an intervention both consciously and unconsciously as evidenced in the project structuring example. It is also evident here that mode 1 and 2 can operate in parallel, for example with one form of systems thinking predominantly in mode 1, supported by a variety of systems thinking in more of a mode 2 form, similar to the relationship between dominant and dependent methodologies of TSI (Flood and Jackson, 1991). This was evidenced in the second intervention where lean system’s concept of waste was introduced in a mode 2 style to help think about the prevailing situation and generate ideas about how to view reoffending rather than being used specifically to intervene in the problem situation, supporting the parallel mode 1 use of a system dynamics stock and flow model.

Accepting the inherent difficulty in determining the actual nature of mode 2 systems thinking, based upon the evidence in this study in any given problem situation involving CST aware practitioners it is likely that mode 2 CST will be present among the various participants both in series and parallel. If mode 2 CST is considered as being both prevalent and a valid means of deploying systems thinking, then it is probable that most problem situations of this nature will feature multi-methodology in series and parallel in modes 1 and 2 without it being overtly expressed. This aspect will be discussed further in section 11.6.4.

### **Culture**

It is worth discussing further the cultural dimension at this point too. The decision to employ systems thinking in a more formal sense often requires a more overt application of methods and although these can be deployed in a discrete manner by a competent practitioner, there is likely to be an increased exposure to participants of the underlying theory in a mode 1 application.

From the review of systems thinking within the sector presented in Chapter 3, it is clear there is traditionally a greater interest in systems approaches that support goal seeking and optimisation. There are notable examples of the successful employment of a broader range of systems approaches and a recognition of the potential value of leadership broadening its approach to become more confident in their decision making (Appendix 6; 2; 33). Feedback from senior police managers during the Department Review intervention suggested that leadership would lose confidence if approaches employed appeared complex or their value was unclear (Appendix 6; 2; 19) and that leadership buy-in was the most important determinant of a successful application (Appendix 6; 2; 38).

Friend (1990, p.92) notes a trade-off between the complexity of models that specialists develop and the value to the manager who can grasp them and act on them. In effect there is a trade-off between complexity (understandability/accessibility) and delivery of value. Friend suggests an open technology where methodology and deployment need to

be accessible to the experts and members of the group alike. Consequently, there is a need to develop an appreciation of the limits to the application of some systems approaches in group settings where there may be severe organisational inhibitors and the facilitator needs to understand this and utilise alternative approaches. This could mean employing certain systems approaches less overtly or taking greater advantage of mode 2 applications for such approaches.

An example of this can be seen in the experience of employing SSM within WYP. SSM was used in a less overt mode 1 style as part of an organisational review during 1992 (Wilson, 2001). In this example, Wilson worked closely with a small group of internal consultants including the researcher, to formally employ SSM and the products were adapted to the style and requirement of the wider project team. In this initiative the employment of SSM appeared to have been successful and the products of the exercise were readily accepted by the senior stakeholders who commissioned and contributed to the work. This experience can be contrasted with a subsequent application of the same methodology but this time in an overt mode 1 style with a diverse multi-organisational project team representing several police forces who were exploring the potential for improving joint service provision. In this situation there was significant resistance to the methodology, particularly in terms of its perceived complex theoretical nature and as a result the intervention did not meet all of its objectives. Although there were more complicating factors in the second project, such as the challenge of managing the requirements of several independent organisations as well as the politics that this created, the overt use of mode 1 SSM was influential. This particular experience was also highlighted by one of the police managers during the Department Review intervention consultation (Appendix 6; 2; 19).

Based upon this experience, subsequent use of SSM in diverse group situations has been restricted to combinations of a mode 2 style, such as the project structuring personal application included in this chapter, or less overt mode 1 applications such as the Department Review intervention (Chapter 9). These examples demonstrate how systems thinking can help to shape an intervention without risking its compromise due to cultural barriers if it is adapted in an informed and considered way.

**(iii) Research Objective 4**

*Determine the impact of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed, identifying those factors that are particularly influential.*

Leadership within the interventions can be considered in two regards, the leadership of the affected organisations and the leadership in terms of facilitating appropriate problem solving approaches. As these applications largely relate to mode 2 applications, the main findings from the research relate to any leadership in terms of employing the systems approaches but there are also implications for organisational leadership.

The nature of mode 2 systems thinking is difficult to assess as it is by definition an internalised process that is personal to the practitioner and as such is not as open to evaluation and challenge.

Checkland and Scholes (1990, p.285) observe:

*“extreme ideal type mode 2 as a purely internal mental process, is publically untouchable by testing against Constitutive Rules of any kind.”*

This less formal and less overt employment of systems thinking presents a challenge in determining if systems approaches are being put to best use. Jackson (2009) observes:

*“Becoming multi-methodology literate depends on a detailed understanding of the different philosophies underpinning the various management science and systems approaches. Soft systems methodology, to take an example, is employed in a radically different fashion by someone who grasps its subjectivist assumptions than by an analyst who tries to reconcile it with an unchallenged objectivist mindset.”*

Clearly the successful employment of any systems thinking will be influenced by the individuals' knowledge, experience and abilities in the employment of systems thinking. The knowledge and experience of systems approaches is largely influenced by formal training, study and practical application. Gold's (2001) action research study into the use of mode 2 SSM to help managers make sense of their experiences from within the flux of everyday life was preceded by formal training of the affected managers in the employment of SSM. Clearly, the knowledge and experience of theory and practice of systems thinking is a key determinant of value in a practitioner's successful employment of both mode 1 and mode 2 systems thinking, though this is more evident in a mode 1 application where methodology use is more visible.

The success of any employment of mode 2 systems thinking will also be influenced by the practitioner's ability to deploy the approaches, making informed contextual judgements regarding the selection and deployment of approaches across the mode 1 - 2 spectrum, particularly when these will be used in combination with other systems approaches.

Jackson (2003, p.196) recognises that mode 2 SSM is more easily incorporated by managers in their daily working lives and this may be due to its accessibility, there being less overt formal structure to constrain its employment and the immediacy of its access. It may also be seen as a safer way to employ such thinking as it is less open to challenge. Whatever the underlying reason might be, this form of systems thinking has the potential to be more prevalent than it appears on the surface. Influencing the ability of managers (and indeed the wider workforce) to employ (mode 2) systems thinking in a more informed way to assist their day to day management might have a more significant impact on the use of systems thinking in the service than an equivalent effort to improve the capability of specialists to improve their capability in working with systems thinking (in modes 1 and 2).

The importance of the relationship between organisational leadership and facilitation leadership has been discussed in previous interventions within the research; in particular

the IOM and QUEST interventions and this relationship must be recognised again here. If mode 2 systems thinking is seen as a valuable mechanism to help leaders think about day to day problems it might also provide a broader understanding of systems thinking that the facilitation leader can draw upon to secure understanding and buy-in to the wider employment of mode 1 systems thinking using methodologies that might not have traditionally been overt in the service.

## **10.8 Implications for subsequent research iterations**

*Can the development of systems thinking amongst senior organisational leadership lead to a disproportionately greater impact on the successful deployment of CST across the service than focusing on the development of specialist internal consultants?*

The findings from the personal applications along with other interventions have identified the value of mode 2 systems thinking, employed alone or in combination with mode 1 systems thinking. It is possible that mode 2 thinking provides a larger platform from which to deploy systems thinking than the mode 1 applications led by specialists as the truly reflective leader is likely to be employing mode 2 systems thinking on an on-going basis. The value and quality of the mode 2 thinking is difficult to judge but if the knowledge, skills and abilities of leaders can be enhanced, the value from its deployment must follow. As Jackson (2010, p.138) suggests, for managers:

*“(Another) vital element is the establishment of more educational and training programmes that embrace the challenges of critical systems thinking and practice.”*

Although it is unlikely that this question can be answered through this particular AR programme, its product will go some way to informing further research in this regard. The interest in developing decision makers in a variety of disciplines through a more comprehensive recognition of systems thinking is becoming more widely recognised. Atwater et al. (2008) undertook a study to evaluate the prevalence of systems thinking development in business leaders of the future through a survey of faculty at the leading

graduate business schools in the United States. Their study concluded that if business academia wants to better prepare students for the complexity they will face as leaders then a comprehensive treatment of systemic thinking should be a primary ingredient. The need to equip leaders with a broader concept of problem context and the importance of enabling them to deal with increased complexity and plurality is also consistent with the observations of Snowden and Boone (2007, p.76) and there may be equivalent lessons for developing the police business leaders of the future too.

***How influential is the police culture in the successful implementation of CST and can the critical systems thinker overcome practical challenges to the deployment of CST through considered employment of different modes of CST?***

The experience of this limited set of personal applications has identified the value of mode 2 systems thinking and it would appear to be a valid means of deploying systems thinking while preserving the commitments of CST, particularly recognising the cultural barriers to the overt use of some mode 1 approaches. It has also been shown that the contingent use of CST within the personal applications helped to successfully respond to the prevailing and evolving problem situation and this has an influence on the approach to CST that can be practically (rather than theoretically) applied. Eden et al. (2009, p.6) reflected upon the difficulties of combining methodologies from different paradigms thus:

*“Perhaps managing the tensions in practice, and not in theory, is the best that can be done.”*

It would appear from these examples that mode 2 (and mode 1) CST can be employed flexibly to accommodate prevailing and evolving contexts. However, the nature of CST and the role of the critical systems practitioner will differ depending on the problem situation and the position of the practitioner. For example, the choice of CST mode may be influenced by the type of ‘contextual determinants’ identified earlier (Figure 10.7).



A number of issues have been identified relating to the cultural impact on employment of CST through the various interventions to date. Although the broad structure of CSP has appeared to be culturally acceptable, the embracing of the underpinning theory and philosophy of CST within the police culture is less apparent in the interventions to date. The potential to secure effective CST in the face of cultural barriers through the employment of different combinations of modes of CST has been recognised in some of the personal applications and there appears to be real potential to secure improvement in the application of systems thinking through its considered use by an experienced practitioner. This aspect has been explored further in the Department Review intervention of Chapter 9.

## 10.9 Conclusion

In line with the generic research design (section 4.4), a reflection upon the status and direction of the AR programme is summarised in Table 10.6.

**Table 10.6:** Intervention 6 AR reflection

<b>AR consideration</b>	<b>Current assessment</b>
<b>Research focus</b>	Further areas for exploration have been identified (section 10.8): <ul style="list-style-type: none"> <li>• Can the development of systems thinking amongst senior organisational leadership lead to a disproportionately greater impact on the successful deployment of CST across the service than focusing on the development of specialist internal consultants?</li> <li>• How influential is the police culture in the successful implementation of CST and can the critical systems thinker overcome practical challenges to the deployment of CST through considered employment of different modes of CST?</li> </ul>
<b>Participation</b>	No change to generic design but due to the nature of the intervention applications in ‘mode 2’ the degree of participation was limited.

<b>Engagement</b>	Engagement was limited by the mode of application with more emphasis upon the researcher employing approaches with less direct involvement of participants in a mode 2 style.
<b>Authority –</b>	No issues.
<b>relationships</b>	No new developments.
<b>Learning</b>	<p>This set of personal applications has provided some key insight into the employment of different modes of systems thinking, identifying a number of emerging findings in relation to its value as a systems approach and how it is deployed, including:</p> <ul style="list-style-type: none"> <li>• The possibility for an experienced practitioner to combine elements of relevant systems thinking in mode 2 to reflect multiple paradigm diversity.</li> <li>• The opportunity to employ CST is often emergent, particularly in complex situations and if systems thinking is to be of value in such circumstances the selection and implementation of an approach needs to be immediate and contingent and mode 2 CST might provide a valuable means of fulfilling this requirement.</li> <li>• There is possibly a dynamic relationship between mode 1 and 2 applications, where the practitioner might move between modes at different stages of an intervention both consciously and unconsciously</li> </ul> <p>Together with other findings from this and previous interventions (Appendix 8), these will be drawn together in Chapter 11 to inform a synthesis of the overall research findings.</p>

**Table 10.6:** Intervention 6 AR reflection

## **PART III - Findings**

This concluding part of the research thesis provides a synthesis of the research findings, reflecting on their implications and drawing conclusions. It comprises of two chapters:

**Chapter 11 - Research Findings** – providing a synthesis of the findings drawn from the separate interventions, triangulating the AR evidence with documented theoretical and practical evidence from elsewhere, to derive a more holistic insight regarding the salient themes.

**Chapter 12** – Conclusion – drawing upon the aggregate research findings and reflection upon the research questions and objectives, the theoretical and practical contribution of the research is considered.

# Chapter 11 : Research Findings

## 11.0 Introduction

Reflecting upon the research process described in Chapter 4, the purpose of this chapter is to synthesise the key themes emerging from the various AR interventions in terms of the observations and questions that have emerged from each, to analyse these in a more holistic sense and identify those salient findings that capture the defining features of this research. This will inform a subsequent reflection upon the role of the facilitator of CST as well as the original research questions and objectives.

## 11.1 Synthesis of findings

To help achieve this synthesis, the 146 observations extracted from each separate intervention were clustered to identify broad categories of key concepts from the viewpoint of the researcher. There were no a-priori categories, rather an emergent set derived from an iterative clustering process, involving the researcher grouping together those observations that were closely linked based on the observation narrative and this resulted in the identification of seven broad categories. It was noted that some observations were closely related to more than one cluster and in these situations the observations were replicated in more than one cluster so that the subsequent analyses could draw upon all relevant linked observations. A comprehensive list of observations is presented in Appendix 8, section 1, showing the intervention in which they were identified and the clusters that each observation helped to define. Here it can be seen that some of the observations were relevant to more than one cluster. The observations within each cluster were then analysed to identify the themes that appeared to capture the essence of each cluster (Appendix 8, section 2) and these were then used to construct a matrix of the 63 key themes (Appendix 8, section 3) that summarise the research observations. It should be noted that the number of observations, themes and clusters does not reflect the prominence of each within the research as they represent the variety of findings rather than the number of observations that were distilled to form

their definition. The theme reference numbers within each cluster are presented in no particular order.

The resultant clusters comprise:

1. Organisational leadership
2. Organisational culture
3. Capable facilitation
4. Devolved capability
5. Boundary management
6. Methodological features
7. Change variables

This chapter provides a reflection upon the content of each cluster to derive a set of 32 salient findings which capture the defining features of this research. These salient findings are summarised in Table 11.5 (Appendix 8, section 5) and also Table 12.1.

In order to provide some sense of the practical value of each theme and its potential for improvement, the summary matrix was presented to a group of ten internal consultants within WYP who were asked to rate each theme in terms of:

1. Its ability to influence the success of interventions with multiple stakeholders.
2. Its potential for improvement in the current operating environment.

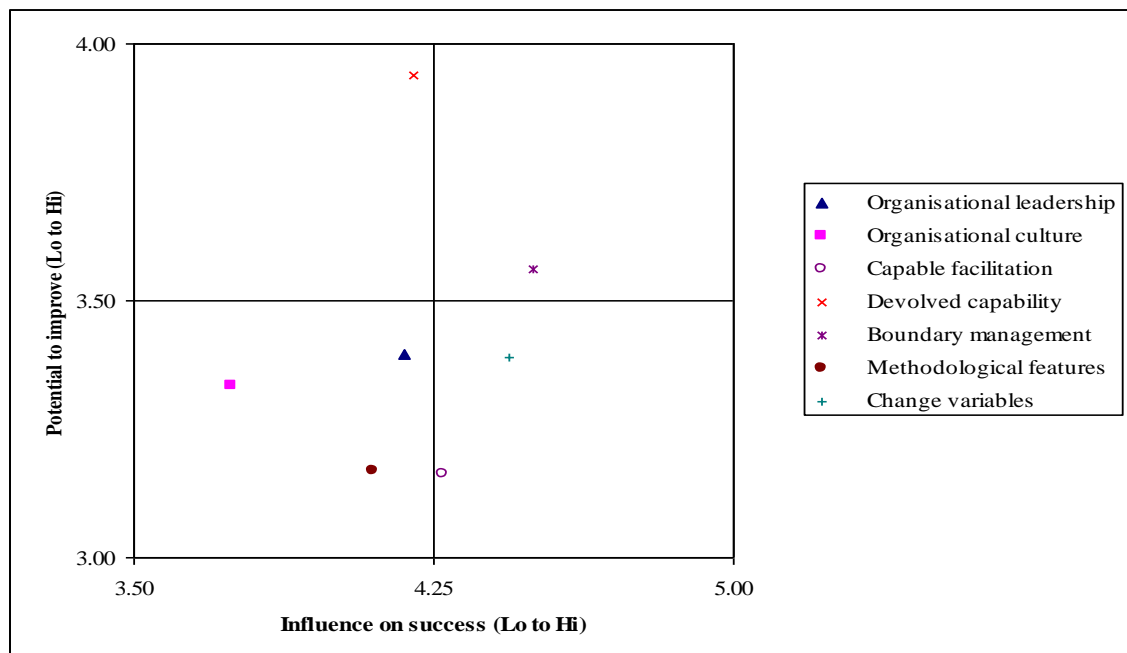
Following a discussion about the research process and its emerging findings the internal consultants were invited to score each theme using a sliding scale, with the extreme values as shown in Table 11.1.

Rating	Influence on success	Potential for improvement
1	Little influence	Little potential
2	• .	• .
3	• .	• .
4	• .	• .
5	Significant influence	Significant potential

**Table 11.1:** Rating scores

The assessments of the eight internal consultants who chose to respond to the anonymous survey are presented in Appendix 8, section 3 as average scores against each theme. The purpose of this process was to gain a sense of the practical relative importance of the findings as perceived by practitioners, thereby providing a means by which to validate the set of key themes. It should be recognised that this practical assessment is limited to the perspective of the WYP internal consultants and no attempt is made to infer statistical validity in the wider population.

The average scores for each cluster that emerged from this consultation are included in Figure 11.1.



**Figure 11.1:** Relative importance of clusters

The overall average scores of 4.2 and 3.3 respectively confirm a high importance of the themes to influence the success of interventions and a moderate potential for improvement in relation to these. This presentation is intended to provide a sense of where attention might be best focused to achieve optimal improvement in relation to the clusters, being employed in a similar vein to Mason and Mitroff's (1981, p.103) employment of an importance/certainty graph for the purpose of analysing stakeholder assumptions and identifying priority actions. In the analysis of findings here, the relative scores are considered for each cluster in turn to give a sense of priority areas for attention from the perspectives of a group of internal consultants.

Although the majority of the "*Implications for subsequent research iterations*" that arose from each intervention were addressed within a subsequent iteration, a significant number were not specifically explored in this way and these are identified in Appendix 8, section 4 where the 'Response' column indicates 'Findings'. The remainder of this chapter reflects upon the key themes (Appendix 8, section 3) along with any outstanding questions from the "*Implications for subsequent research iterations*" (Appendix 8, section 4), to identify the salient findings within the cluster headings identified above. The clusters are presented in a sequence that leads to a concluding analysis of their impact upon the role of the facilitator of CST, followed by a concluding summary.

It should be noted that the variety of themes are not mutually exclusive and some are reflected in more than one cluster but the discussion here has tried to bring out the salient points in the most appropriate section. For example, if a theme has emerged under the leadership cluster that also has relevance to the methodological cluster, an attempt has been made to avoid repetition within the analysis unless it brings out a new perspective. Further, wherever possible the reiteration of some of the more detailed analysis of findings that has already featured in earlier sections of the AR interventions will be avoided unless it helps support a new or more general finding.

The discussion under each cluster sub-heading commences with a statement of the salient findings of the research emanating from that cluster and these are presented in bold italic text, followed by a summary of relevant supporting evidence. Where specific intervention observations are presented as evidence they are referenced in parentheses by the appendix number, section number and table reference numbers or cluster references. E.g. (Appendix 8; 1; 11, 12, 25) for individual observations or (Appendix 8; 2; 2.1) for a cluster of observations ('Organisational Leadership' in this example).

## **11.2 Organisational leadership**

The term 'organisational leadership' is taken here to refer to senior management within the organisation who possess considerable influence and decision making authority, typically as sponsors of intervention projects. The average scores within the organisational leadership cluster most closely reflect the average scores for the clusters in aggregate, with the highest influence scores relating to the involvement of capable and credible police managers and gaining buy-in to the approaches used.

Lane (1994, p.91) observed that managers will not enact a solution that he/she does not understand, whose proponent does not have their confidence or that does not solve their real problem. These three factors have been employed to help reflect on the research findings in this cluster.

### **11.2.1 Understanding the approach**

*Leadership developing an understanding of, and confidence in, alternative systems approaches that build the variety necessary to match the complex, plural and evolving operating environment, via active engagement throughout interventions as well as formal management development.*

*The potential for sharing and developing practice and understanding of alternative systems approaches through the employment of culturally relevant problem archetypes.*



Chapter 3 concluded that in an increasingly complex and diverse operating environment, the traditional approaches to problem solving employed by police managers were no longer adequate and this AR has explored the potential of alternative approaches. The importance of leadership establishing confidence in alternative systems approaches through gaining a better understanding of their potential value and relevance in addressing their problems was typically reflected in the Department Review intervention (Appendix 6; 2; 21, 34), but has also been observed in the police service elsewhere (Read and Tilley, 2000).

The QUEST intervention identified the potential for specialist facilitators to learn through gaining ‘propositional knowledge’ as well as ‘know how’ (Mingers and Brocklesby, 1997, p.500) to improve their ability to work in different paradigms (section 7.7). This is a concept that can be usefully extended to organisational leadership more generally. The research findings highlighted the value of organisational leadership gaining development through exposure to a wider variety of systems thinking approaches to tackle the problems they face, through both practical experience as well as specific training and these two facets are considered in this section.

(i). In relation to development through practical experience, organisational leadership engagement was seen as critical to the success of all interventions and this was also reflected at a local management team level and within the leadership of the project teams. Previous sections of this thesis describing individual interventions have presented examples of this (sections 5.5; 7.6; 9.6).

Effective engagement between interveners and leadership, particularly at the planning stage, was seen to be important in building senior management understanding of the problem situation and in gaining their support and commitment through establishing trust in the credibility of the specialists, project team and in the approach being taken. Such involvement was found to provide valuable leadership development and where leadership had previous exposure to successful use of systems thinking the understanding and buy-in to subsequent interventions was seen to be more effective

still. This experience was also reflected in Read and Tilley's (Read and Tilley, 2000) research into the use of problem solving within the police service, where they identified that when senior officers were knowledgeable and directly involved with their staff, effective problem solving was more prevalent. Jackson et al. (Jackson et al., 2008) observed similar experiences among managers involved in lean systems initiatives, becoming 'converted' to the new, systems way of thinking.

(ii). In relation to the specific training, the following outstanding research question is relevant:

*Can the development of systems thinking amongst senior organisational leadership lead to a disproportionately greater impact on the successful deployment of CST across the service than focusing on the development of specialist internal consultants?*

The research identified the value of mode 2 systems thinking, employed alone or in combination with mode 1 systems thinking (this is discussed further in section 11.6.4). The personal applications discussion proposed that mode 2 thinking might provide a larger platform from which to deploy systems thinking than the mode 1 applications led by specialists and that the truly reflective leader would be likely to be employing mode 2 systems thinking on an on-going basis. The value and quality of any mode 2 thinking is difficult to judge but if the knowledge, skills and abilities of leaders can be enhanced, the value from its deployment must follow. As Jackson (2010, p.138) suggests, for managers:

*“(Another) vital element is the establishment of more educational and training programmes that embrace the challenges of critical systems thinking and practice.”*

The Personal Applications intervention discussion (section 10.8) noted the interest elsewhere in developing decision makers in a variety of disciplines through a more comprehensive recognition of systems thinking (Atwater et al., 2008). The potential to develop leadership understanding of systems thinking through formal training is something that the Police service is pursuing in different forms, through for example the

National Policing Improvement Agency's (NPIA) High Potential Development Scheme (NPIA, 2011b) where elements of systems thinking such as lean systems and optimisation techniques such as data envelopment analysis are becoming more prevalent. The NPIA has a broad responsibility for leadership development and a range of its modules lend themselves to greater consideration of systems thinking (NPIA, 2011d) at a variety of levels, including senior leadership, specialist change agents and the wider workforce.

Although it must be recognised that the question posed at the head of this section cannot be completely answered through this particular AR programme, the product of the research will go some way to informing further development in this regard and some positive change has already progressed within the police service and this is discussed further in the following paragraphs.

In recognition of the potential business benefits offered by initiatives such as the QUEST intervention (7.6), during the Autumn of 2009 the Association of Chief Police Officers (ACPO) established a working group to consider how best to preserve the learning from QUEST and similar initiatives and to disseminate this across the wider service. As part of this process, the working group sought to develop a set of 'hallmarks of success' and guiding principles for similar initiatives and the emerging learning from the research into the QUEST intervention (Chapter 7) contributed to the working group a number of influential factors relating to the importance of leadership, staff involvement, whole systems approaches and an evidence basis. The NPIA have drawn upon the working group findings to build development programmes for staff at all levels to support business improvement.

The QUEST intervention recognised the value of involving capable and experienced facilitators and suggested that mechanisms might be developed to assist facilitators preserve, select and share experience from which to learn about future application and to support and encourage a broader range of systems thinking in the sector through improved awareness of what is possible from alternative systems approaches (section 7.7). Recognising the challenges presented by Rittel and Webber (1973) and Mingers

and Brockelsby (1997) discussed in section 7.7, it is considered that there might be real value in exploring the potential of combining learning through ‘know how’ with learning through propositional knowledge by the sharing amongst practitioners and leadership of archetypal case studies based upon the police service’s actual practice. Building problem archetypes that introduce different problem contexts and paradigms that might be readily recognised within the police service from a practical perspective facilitates learning through sharing practical experiences.

Jackson (2000) compared the critical systems practitioner with a holistic doctor, presenting a gradually unfolding diagnosis of a patient’s situation. This commonly understandable analogy was seen as a means of introducing a range of different perspectives that a systems thinker might consider in taking a holistic approach to organisational and societal problems (Jackson, 2010). It is considered that a similarly accessible scenario, set within a policing context might provide a culturally acceptable platform for presenting practical examples of policing problems with distinctly different characteristics that might typify different problem contexts. Accepting that some may view the holistic doctor metaphor as “*prescribing how problem solvers should use methodologies*” (Zhu, 2010), it is used here as a means of sharing practical experiences in a culturally acceptable and recognisable form rather than a prescription. Drawing upon the Cynefin framework’s problem domains of simple, complicated, complex and chaotic as presenting an increasing scale of ‘wickedness’ in problem situations, it has been suggested that practice might be considered as ‘best’, ‘good’, ‘emergent’ and ‘novel’ respectively in these domains (Snowden and Boone, 2007). Recognising such a classification of practice, in problem situations that might be considered to be wicked, such as those encompassed within this research, the sharing of practice becomes one of learning rather than one of prescribing ‘how to do it’ and by sharing practical experiences, avoiding unnecessary theoretical debate about correctness and thereby reducing resistance to the employment of new thinking.

To this end, a draft set of six typical problem situations or archetypes that appeared relevant to the police service were developed, drawing upon a variety of real life practical examples that police managers might readily recognise. The archetypes were

not distinguished by labels, rather portrayed through a succession of distinct and increasingly wicked policing problem situations introduced through a series of refinements to a relatively simple initial problem. The typical responses to these situations, reflecting real life examples were largely derived from actual experiences drawn from this AR programme, in particular the first four of the interventions, as well as previous interventions in which the researcher had been involved.

In June 2011 a draft set of archetypes were presented to a group of police officers who were participating in the police service's High Potential Development Scheme, a process to support and encourage highlighted officers' advance within the service, as part of that scheme's Operations and Performance Management module at Warwick University Business School. The presentation reflected upon an increasingly wicked policing environment and drew upon the six typical policing problem situations, providing examples of potential responses to the increasingly wicked scenarios based upon practice. Using this familiar platform, some theory relevant to wicked problems and CST was briefly introduced, followed by a reflection upon the typical characteristics of such problems. Although there was no opportunity to obtain formal feedback from participants on this scheme, the researcher was invited to contribute its content to the national Senior Leadership Programme, a development programme designed for the development of Superintendents in their current role, and for those aspiring for promotion to Chief Superintendent and ACPO, addressing modern challenges faced by today's senior officers. (NPIA, 2012).

Reflecting upon the draft policing problem archetypes and considering the features of different problem contexts drawn from the literature review including Rittel and Webber (1973), Jackson (2003), Snowden and Boone (2007) and Pidd (2010) a first attempt was made to identify a practical set of problem features that might resonate with police managers, helping to identify the potential to draw upon alternative systems approaches that had demonstrated value in practice. In September 2011 the archetypes (Figure 11.2) and an emerging set of practical characteristics that differentiated the six archetypes (Figure 11.3) were presented to the OR Society Conference Criminal Justice Stream.

Although the problem archetypes are in an early stage of development, further exploration of their form might warrant consideration of developments elsewhere. Pidd (2010) identified a spectrum of model use with four archetypes, against which typical approaches might be presented:

- (i) Decision automation;
- (ii) Routine decision support;
- (iii) Modelling for investigation and improvement and;
- (iv) Modelling to provide insights.

Pidd (2010) suggests that such archetypes might form the basis for a theory of model use and calls for further empirical work to lead to a consistent theory of model use with categories that are operationally useful based upon practice. The emerging findings from this research might be considered to add to such a development.

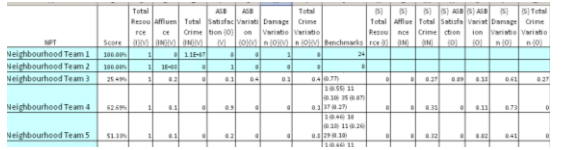
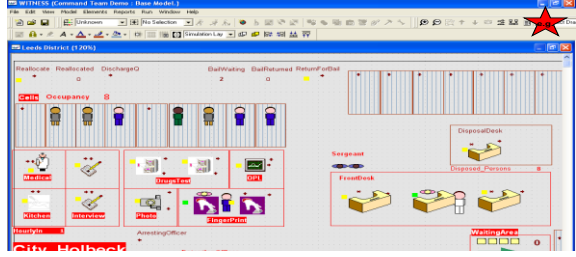
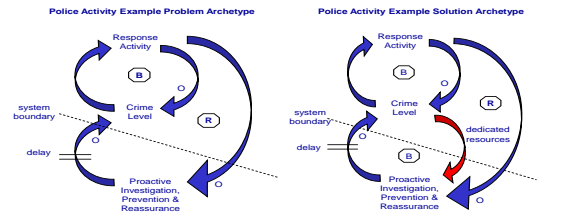
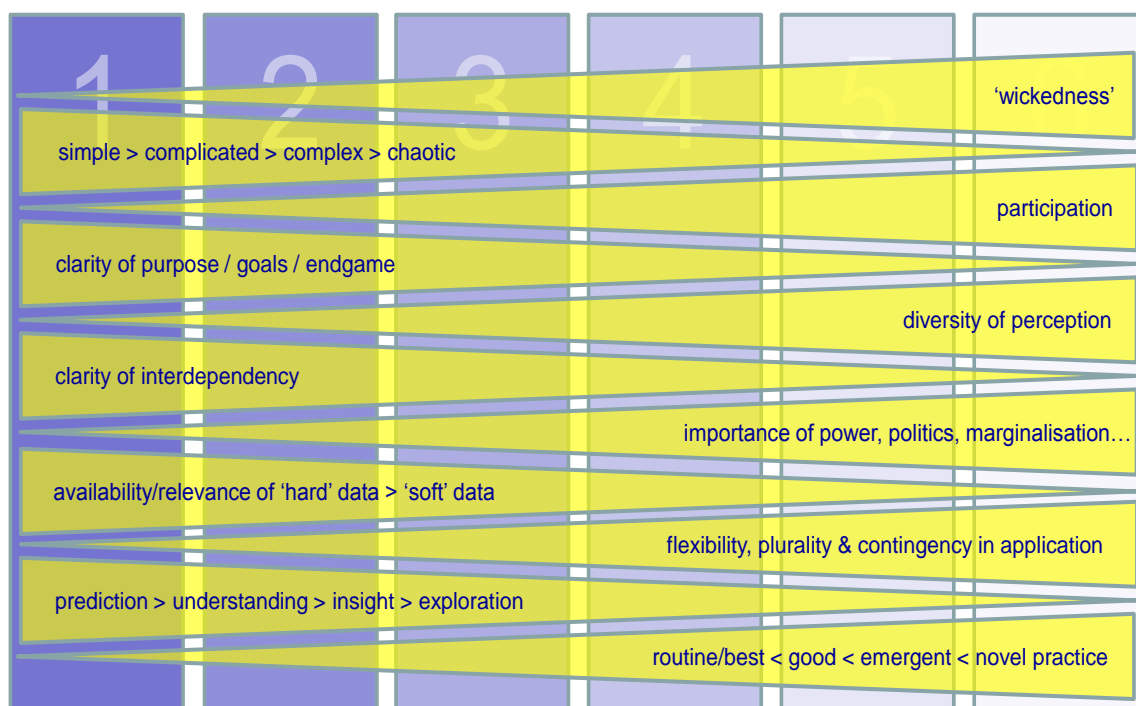
	Typical Situation	Example
1	<ul style="list-style-type: none"> <li>Initial problem situation <i>"An urgency within a police force to respond to a concern regarding poor performance in terms of community perception of ASB"</i></li> <li>Optimise match between availability of resources &amp; ASB demand – e.g. do shift patterns correspond?</li> <li>Involve application of approaches that optimise performance to a clear goal, such as:               <ul style="list-style-type: none"> <li>A 'best fit' comparison of resources on duty compared with demand (e.g. regression); or</li> <li>A more sophisticated mathematical modelling of resource usage (e.g. DEA)</li> </ul> </li> </ul>	<h3 style="text-align: center;">DEA Application to Neighbourhood Policing</h3> 
2	<ul style="list-style-type: none"> <li>Merely matching resources to demand does not resolve</li> <li>Better understanding needed of how different resources involved in ASB are actually used</li> <li>Analyse impact of different activities in ASB process through exploration of system interconnectivity</li> <li>Process resources efficiently optimised to meet perceived customer requirements using lean process improvement &amp; simulation</li> </ul>	
3	<ul style="list-style-type: none"> <li>Initially successful, but a delayed ASB deterioration</li> <li>Now look to better understand complex underlying system structure</li> <li>System dynamics model identifies lean solution has had unintended consequence of reducing preventive activity</li> <li>Now propose to protect through better investment of partner resources in diversionary activity</li> </ul>	<h3 style="text-align: center;">'Shifting the Burden'</h3> 
4	<ul style="list-style-type: none"> <li>Despite increased partner resourcing, problem persists</li> <li>Working with partner agencies now necessitates understanding problem from different perspectives</li> <li>Interpretive approaches identify agencies hold different and conflicting objectives</li> <li>Housing occupancy targets V individuals' health V reduce occurrence of ASB, etc.</li> <li>Soft systems methods help gain understanding &amp; consensus around shared problem to improve alignment of partner processes</li> </ul>	<h3 style="text-align: center;">An audit of regional policing</h3> <ul style="list-style-type: none"> <li>'Protective service' gap audit</li> <li>4 forces, 4 views of what 'protective service' entails &amp; 4 ways to provide 'how'</li> <li>SSEM to provide consensus on 'what' to enable consistent audit of 'how'</li> <li>.....</li> </ul>
5	<ul style="list-style-type: none"> <li>Better aligned service reduces conflict in activities but agreed improvements not realised</li> <li>Emerges that some customers and key local agencies excluded from decision making processes</li> <li>Opportunity to draw in contribution from these marginalised partners missed</li> <li>Approaches to surface marginalised views now used, identifying key partner contributions to divert potential perpetrators</li> </ul>	<h3 style="text-align: center;">ASB stakeholder analysis</h3> <p>Guided by elements of Boundary Critique (Ulrich, 1983)</p> <p><b>Beneficiary</b> - beneficiary / purpose / measures of success  <b>Owner</b> - controller / conditions for success under their control  <b>Professional</b> - expert / expertise utilised / guarantor of success  <b>Witness</b> - those affected / opportunity to challenge / underlying 'world view'</p> <ul style="list-style-type: none"> <li>"What would success look like to customers of ASB service?"</li> <li>"What organisational constraints must be accommodated?"</li> <li>"Who do we need to get 'on side'?"</li> <li>"Who should we consult &amp; get involved (e.g. experts, victims, public)"</li> <li>.....</li> </ul>
6	<ul style="list-style-type: none"> <li>All partners fully engaged &amp; ASB much improved but same problem emerges elsewhere</li> <li>Previous approach not easily transferred to new situation</li> <li>Additional flux in operating environment:               <ul style="list-style-type: none"> <li>private housing association feels excluded &amp; mistrusts local authority housing department;</li> <li>health agency national restructuring refocuses community services;</li> <li>CJ system placing greater emphasis on alternative sentences &amp; treatments;</li> <li>25% cuts in resources across all public sector agencies, requiring immediate reconsideration of priorities; and</li> <li>grant funded agencies in the partnership now need to compete for a reduced budget</li> </ul> </li> <li>Problem now more complex; fast changing; significant conflict between objectives; and potential for power to significantly influence position of participants</li> <li>Requires an approach for situation of significant complexity, diversity of perception and issues of power</li> <li>Unclear how any real progress can be made but need to support some positive engagement amongst partners</li> <li>Participative processes provide platform to share views and experiences, identifying contingent actions that partners consent to as a positive movement</li> </ul>	<h3 style="text-align: center;">Partnership Development</h3> <ul style="list-style-type: none"> <li>Large multi-agency Community Safety Partnership</li> <li>Diverse organisational aims &amp; culture</li> <li>Participative approaches:               <ul style="list-style-type: none"> <li>Shared database using Future Search timeline (Weisbord &amp; Janoff, 1995)</li> <li>Conference Model 'fishbowl' (Avelrod, 1999) - impactive experiences of selected customers - victim &amp; perpetrator of domestic violence</li> <li>Exploring diverse &amp; creative futures</li> <li>Flexible &amp; plural approaches to meet needs of moment</li> </ul> </li> </ul>

Figure 11.2: Draft problem archetypes - An increasingly wicked policing problem



**Figure 11.3:** Some archetype characteristics

Given the profile provided through Jan Berry's Reducing Bureaucracy initiative (Berry, 2009a, 2009b), there has been an increased interest amongst police leadership in awareness and understanding of the benefits of this particular form of systems thinking. Although the definition of systems thinking in common use within the service, largely based on 'lean systems', is narrower than that employed by the wider systems community, there is a real opportunity for this interest to be used as a springboard for wider development. As in other sectors (Atwater et al., 2008), the more formal inclusion of systems thinking as a core component of police leadership development could provide benefit within the service at all levels. Such development would not only help increase the deployment of successful systems thinking but might also encourage greater variety in the way problem situations are viewed and systems thinking deployed, which is vital if the police service is to improve its capability of matching the increasing variety of problem situations it is facing. Further, it is considered that CST-capable leaders would also mitigate the perception of an inward facing occupational culture and the limited diversity of skills and knowledge noted by Winsor (Winsor, 2012) which has



resulted in the call for direct entry of police managers from external organisations with specialist skills. It is argued by opponents to the direct entry of police officers at more senior ranks, that such weaknesses can be overcome by improved leadership training without the costs and risks of direct entry (Winsor, 2012, p.175; Police Federation, 2011). Developing CST-capable leaders within the police service may provide a more viable alternative to achieving this aim.

### 11.2.2 Confidence in facilitators

*Facilitators quickly establishing and building their credibility with the organisational leadership across all relevant agencies through visibility and close engagement during and outside of interventions, while carefully balancing rigour and relevance of approaches employed.*

On the basis of this AR the following factors appear influential to organisational leadership's confidence in facilitators:

- (i). Organisational culture.
- (ii). Leadership understanding of approaches employed.
- (iii). Facilitator capability.
- (iv). Facilitator engagement with leadership.

The first three of these factors feature in their own right in earlier and later sections but the last factor will be discussed further here.

A key component of all but the Personal Applications intervention has been the project teams' on-going interaction with senior stakeholders, helping to build confidence and credibility (Appendix 8; 1; 11, 22, 51-53, 64, 104, 108, 109). The QUEST intervention demonstrated the importance of the facilitators' visibility and accessibility which helped to secure buy-in from senior management. It also appeared that the external consultants involved here brought with them a degree of credibility despite them not having an established relationship with the organisational leadership and research elsewhere has noted the value in police organisations' engagement with external researchers (Bayley,

2008; Wood et al, 2008). It is possible that this is partially due to the reputation of the external consultant organisation, the opportunity for a new perspective to be brought to bear on a problem that was seen to persist in the organisation and that internal consultants might not have resolved previously, or indeed because of the capability of the individuals involved. It is also possible that the external consultants are less constrained by the internal hierarchical structures and thereby recognised for their contribution rather than position. The perceived benefit of introducing an external capability is not confined to internal consultants and is reflected at other levels in the police service and possibly the wider public services. This was demonstrated in the aftermath of the English riots of August 2011 when the Prime Minister invited Bill Braton, a US "supercop", to advise the government in addressing violence in English cities and this was not well received by senior police leadership (BBC, 2011).

The Departmental Review intervention noted that professional internal facilitators of CST, no matter how experienced they may be, needed to be able to quickly establish their credibility in the eyes of senior leaders. There appears to be a challenge here for internal consultants who are facilitators of CST in building and maintaining the confidence of the senior leadership and the wider workforce. The difficulty of achieving this is heightened by the internal consultant who wants to preserve the principles of CST (Jackson, 2003, p.303) in situations where leadership holds a strong view on a problem situation and how it should be tackled. Schwarz (1994) considers the issue of facilitators colluding with leadership and concludes that it is inconsistent with the facilitator's role, because:

*"..it requires the facilitator to withhold valid information and consequently prevents free and informed choice for certain group members and it places the interests of some group members above the interests of the group as a whole."* (Schwarz, 1994, p.15).

The critical systems thinker has to balance the temptation to simply administer the leadership requirements for change against the need to use their expertise and experience to preserve the commitments of CST (Table 3.3) and recognising the whole client system, exposing leaders to a diversity of possibilities. Checkland and Scholes

(1990, p.44) identify a ‘cultural stream of analysis’ within SSM that provides insight into the intervention, the social and the political context to help understand and respond to influential features and this might be seen as a valuable guide to inform the facilitator’s understanding of the situation.

There is a careful balance to be struck between rigour and relevance when seeking to preserve theoretical validity and the commitments of CST while helping the leadership achieve their practical goals. There is also likely to be a trade-off between complexity of models that specialists develop and the value of these to the manager who can grasp them and make practical use out of them (Lane, 1994, p.92).

The importance of careful management of the client consultant relationship is recognised in situations where a more facilitated mode of consultancy is employed (Eden and Ackermann, 2004). The facilitator needs to carefully balance their role as a critical systems thinker alongside their relationship building amongst an often quickly changing senior team who may have little time to develop into their roles. This is heightened in multi-agency settings where the consultant may need to quickly establish their credibility amongst a diverse group with whom they may have little opportunity for contact. The IOM intervention presented an example of such a situation that necessitated close working relationships between the facilitators, leaders and staff across a range of agencies and this appeared to be influential in securing buy-in and ownership of the intervention outcomes. This is consistent with the challenge presented to a CST aware facilitator who is striving to reflect Carl Rogers’ ideal facilitative attitude of “realness in the facilitator on a personal level” (Kirschenbaum and Henderson, 1989, p.305) while at the same time being expected to challenge the underlying assumptions in groups to test the theory in use and encourage ‘double loop learning’ (Argyris and Schon, 1974, p.87). This will be considered further in section 11.3.

The findings in relation to confidence in facilitators that have been derived from this research are consistent with findings from elsewhere. Ranyard and Fildes (1998) undertook a series of studies into the success and failure of OR groups and they

identified various critical success factors for the survival of internal consultancies, including the development of good relationships with senior management who understood and appreciated the value of OR and through having high quality staff who could respond positively to clients' needs across a range of problem areas by providing access to a wide range of approaches.

Based upon the evidence of five of the six interventions it is considered that close engagement with intervention sponsors and relevant management during projects as well as outside of projects has an overriding influence upon the successful deployment of systems approaches in the sector.

### **11.2.3 Buy-in to practical solutions**

*The facilitator of CST instilling client ownership of solutions through enablement of free and informed choice.*

To secure successful change within policing, an importance has been recognised in the involvement of far sighted or enlightened police leadership (Bayley, 2008; Toch, 2008) and in organisational leadership commitment and senior management support (Wood et al, 2008). Within this AR a positive leadership of interventions at an organisational level with visible and active commitment was seen as key to securing a 'coalition of support' (Eden et al, 2009, p.7) for organisation wide buy-in and the commitment of the local management team was seen as essential to instil ownership of the end product and a guardianship for successful implementation, (Appendix 8; 2; 2.1). This was particularly apparent in the QUEST intervention and in common with similar lean systems initiatives, the commitment of senior managers has been seen as being vital for sustaining successful change of this nature. Jackson et al. (Jackson et al., 2008) observed:

*"Where they (senior managers) are fully supportive, become 'converted' to the new, systems way of thinking, and are willing to extend projects to new areas, the chances of long-term success are excellent."* (Jackson et al., 2008, p.194)

An influential factor in securing buy-in within this AR was found to be the facilitators ensuring they clearly built in participant contributions to improve ownership and not to simply impose an expert's view of the problem (Appendix 3; 2; 6). The recognition of the need for the consultant to balance their expertise with clients' ownership is something that has been recognised by Lane (1994) in relation to group model building thus:

*“The consultant's role is then to provide a set of tools for representing clearly the ideas of the team members. It is this activity in which the consultant is an expert.”* (Lane, 1994, p.93).

The challenge of gaining senior police leadership buy-in to culturally and politically acceptable approaches through balancing participation and expert direction has been noted in previous interventions (Jackson, 2000, p.44; Howick and Eden, 2011). The careful balance required of the facilitator in helping leadership and participants to develop practical solutions, recognising the needs of the whole client system has already been identified and Argyris' Intervention Theory (Argyris, 1970) provides a valuable guide for the critical systems thinker acting as change agent who should seek to instil client ownership of solutions facilitated through free and informed choice. This requirement will be picked up again in section 11.9.

### **11.3 Organisational culture**

The average scores within the organisational culture cluster were the lowest of any cluster in terms of their perceived impact on the success of interventions, whereas the potential to improve was typical of the overall average.

The themes related to organisational culture will be considered in two parts, comprising issues related to:

- (i) Police service formal structures.
- (ii) Preferred approaches to problem solving.

### 11.3.1 Police service formal structures

*Encouraging exploration of diversity through free and open contribution across the whole system by overcoming cultural and structural limitations to improve variety and success in problem situations.*

Research undertaken by Skogan (2008) identified a series of obstacles to change in police organisations, attributing much to internal processes related to the career and bureaucratic interests and managerial outlook of the parties involved. The police service is built upon a highly formalised rank structure where all officers start their careers at the lowest rank and more senior staff have all passed through the same hierarchy and where the service's "*quasi-military origins are still evident*" (Leishmann and Savage, 1993, p.11). Familiarity with the structure and control that this system provides appears to be of significance in shaping the problem-solving culture of the organisation. Leishmann and Savage suggest that this is unique in the public sector, presenting:

*"an apparently egalitarian meritocracy in which all confirmed constables could be said to have the opportunity to aspire to senior management positions"* (Leishmann and Savage, 1993, p.5).

However, the value of the single entry point for all levels of police officer management has been questioned, most recently evidenced in the Winsor Review of Policing (Winsor, 2012, p.68), with a call for direct entry to higher ranks based upon capability and to:

*"contribute new ways of thinking and bring to the service the benefits of different methods and experiences"* (Winsor, 2012, p.12).

This programme of AR has noted that the highly formalised rank structure appeared to have a significant impact on decision making processes and there was still a certain degree of reluctance to challenge the authority of senior ranks (Appendix 6; 2; 29, 30)

despite the success of the QUEST intervention in this regard (Appendix 8; 1; 31). This experience is not unique. Sklansky and Marks (2008) noted that the dominant mindset of those thinking about policing perceived the need for strong, top-down management and for staff to follow established rules, rather than genuinely engaging staff in ‘bottom-up’ change. It is considered that this approach risks the limitation of Argyris & Schon’s (1974, p.63) model 1 of theories in use, where organisational assumptions remain unchallenged, double loop learning is restricted and group norms are developed to support the model, such as in the form of organisational policies, structures and performance control systems that reinforce the culture. This is of particular relevance within multi-agency situations, where the existence of diverse perceptions in problem situations presents a real challenge to police leadership, with the risk of limiting the variety offered by partnerships through preferring culturally familiar control that might fail to fully exploit partnership opportunities to improve the success of joint ventures, as was evidenced in the ASB intervention (Appendix 5; 3; 9, 25), (Appendix 6; 2; 23, 24).

The police familiarity with command structures and for controlling situations in which they are involved can create a tendency to seek to impose similar structures in non-operational problem situations too. Although this has particular strength in certain contexts, where partner agencies are involved in joint problem solving, it may also present difficulties. (Appendix 5; 3; 9, 25), (Appendix 6; 2; 23, 24). Where interventions involve partner organisations there is a potential for a conflict of culture that might limit the success of any initiative and despite its successes, this was observed within the ASB intervention (Appendix 5; 3; 9, 25). This reflects the findings of research undertaken by Herbert (2006) who saw the police officers’ desire for authority to be deeply functional and understandable given the nature of the operational situations faced by police officers. However, Herbert saw the desire for situational authority as becoming more widely ingrained and thereby extending beyond the operational situations where it may be understandably justified. Waugh and Streib (2006) make a similar observation and question whether command and control systems favoured by the emergency services are appropriate for dealing with certain problem situations:

*“where authority is shared, responsibility is dispersed, resources are scattered, and collaborative processes are essential”*. (Waugh and Streib, 2006, p.131).

The challenge of exercising control in organisational arrangements that require flexibility and diversity of response to different needs while limiting the risk this may present, was the focus of research undertaken by Simons (1994a, 1995a, 1995b).

Simons identified a variety of complementary controlling mechanisms available to managers to support both evolutionary and revolutionary change that in combination could strike a balance between empowerment and control, comprising of ‘diagnostic’, ‘belief’, ‘boundary’ and ‘interactive’ control systems (Simons, 1995a, p.162).

Achieving the right balance between such systems presents a particular challenge to the management of diverse partnership arrangements, where different organisational cultures and control systems may be influential and where a dominant organisational approach might risk constraining partnership success. This was reflected in the ASB intervention where it was considered that the police wanted to exercise more control within the partnership and this was perceived to be a cultural trait. (Appendix 5; 3; 9).

It is not just between agencies that the police culture can be influential, it was observed to also impact upon the civilian ‘police staff’ who work in the same organisation and in relation to this research, particularly with those internal consultants involved in organisational change initiatives. Within this research these employees were seen to face challenges in establishing their credibility as professional change agents (Appendix 6; 2; 25). Carl Rogers (Kirschenbaum, 1989, p.306) noted the need for the facilitator to possess, on a personal level, a ‘realness’ that allows them to share the same feelings as the group in order to be accepted. Taking this lead, the acceptance of the facilitator by the wider group cannot be taken for granted and as identified in this research, any perceived cultural barrier might present a significant challenge to the establishment of credibility and trust in the facilitator. Research elsewhere (Barton, 2003) has found that over police officers’ careers a strong occupational culture is established which builds loyalty and solidarity amongst officers. Barton observes:



*“Police officers exist within a particular social subsystem where they learn from one another’s work habits, strengths, weaknesses and preferences. Loyalty and solidarity provide the cultural foundations for the social identity of the police as they interact with other social groups.”* (Barton, 2003, p.350).

Civilian police staff, both internal and external to the police service, do not always appear to possess the same degree of reciprocal understanding with their police officer colleagues, whether they possess a formally recognised profession or not (Loveday et al., 2008); (Appendix 6; 2; 25)). This was seen to be more of a challenge in larger organisations where there is less opportunity to build relationships and for civilians to be able to demonstrate their worth through practical action, and in the words of one senior police officer – *“the familiarity of rank to measure worth is more likely to be relied upon”*. (Appendix 6; 2; 26). Wood et al (2008), referring to Greenhill (1981), noted a similar relationship with academics working in the police service:

*“the lack of ‘cultural fit’ between police and academics is relational with police wanting to uphold mystifications of their ‘unique’ profession.”* (Wood et al, 2008, pp.76-77).

In 2004 Her Majesty’s Inspectorate of Constabulary undertook a review of the ‘police staff’ (civilian) role within the police service (Home Office, 2004b) and found that although there had been significant improvement, culture still presented a barrier to effective working for police staff, observing:

*“The inspection team found many practices which police staff perceive as devaluing their professional expertise and experience and which they saw as suggesting they were less capable than officers”* (Home Office, 2004b, p.54)

Reflecting on the American experience, Skogan (2008) observed:

*“Police are sceptical about programs invented by civilians. This is partly a matter of police culture. American policing is dominated by a ‘we versus they’, or ‘insider versus*

*outsider' orientation that assumes that the academics, politicians and community activists who plan policing programs cannot possibly understand their job. Police are particularly hostile to programs that threaten to involve civilians in defining their work or evaluating their performance.” (Skogan, 2008, p.26).*

The introduction of the Police and Crime Commissioners in England and Wales from November 2012 (section 2.2.2) who will have responsibility for developing a Police and Crime Plan to hold police forces to account, might raise the profile of this potential tension within the management of change.

The familiar police service formal rank structure that provides a widely accepted and effective organisational control structure in operational problem situations can present a challenge in a non-operational problem solving environment where it may have less relevance and where it may risk limiting innovation. Sometimes the respect for rank can restrict the free and open contribution in problem solving and has also been seen to encourage a risk-averse deferment of decisions to more senior officers. (Appendix 6; 2; 29, 30, 31, 32, 33, 36). The culture of the police service has been described as “*closed, defensive and inward-looking*” (Winsor, 2012, p.176), presenting a barrier to innovation and development and leading to a call to change the single point entry system in order to attract high calibre recruits with diverse skills and knowledge (Winsor, 2012, p.176). However, awareness of alternative ways to support decision making, such as through a wider understanding of CST, might be seen as an alternative means of addressing this issue, particularly if it is possible for such development to be seen as practically relevant to police managers' future careers.

The observations made here that specifically relate to problem solving approaches are drawn together in the following section.

### 11.3.2 Preferred approaches to problem solving

*The acceptance of systems approaches and their successful implementation is influenced by their accessibility and the necessary exposure of participants to unfamiliar theory or expertise in their deployment.*

*Managers and facilitators of CST recognising the risk of limiting their effectiveness in complex problem situations as a consequence of employing low variety, institutionalised approaches to problem solving.*

*The employment of culturally acceptable systems approaches that are both practically based and theoretically sound, such as a high level structure to guide problem solving with flexibility for an informed adaption of detail to match the prevailing needs of an appropriately diagnosed problem context.*

In all interventions it was found important for experienced facilitators to be practical in tailoring the approaches to suit the prevailing situation, such as organisational culture but to do this in a considered way to avoid erosion of methodological validity (Appendix 8; 2; 2.3). For example, in the Community Safety intervention where PANDA's pluralism (Taket and White, 2000) was in evidence and approaches such as the Future Search timeline were adapted in a way that aimed to preserve their power in collecting and sharing a common data set interactively in a large group. The researcher observed that pragmatic approaches to problem solving, typically involving some of the large group techniques featured in this intervention, seem to appeal to practitioners and participants in the sector. The degree of acceptance of the techniques and the resultant products appears to be influenced in part by their accessibility, not appearing to necessitate a deep theoretical understanding or expertise amongst practitioners and participants to start applying them (Appendix 8; 2; 2.6). The Department Review and QUEST interventions recognised the apparent complexity of problem solving approaches such as SSM might be a barrier to their acceptance (Appendix 6; 2; 19, 28, 33, 34, 36); (Appendix 4; 2, 14).

Police organisations comprise of formal hierarchies with clear command and control structures and in such an environment less relevance might be seen in approaches that do not appear to share the same philosophy. This presents a challenge to those problem solving approaches that accept a concurrent diversity of perception and the uncertainty present in complex situations; in contrast to approaches that appear to support a clearly structured pursuit of optimal solutions. This research found the preferred problem solving approaches to be described as linear, mechanistic and task focused, where less emphasis is placed upon exploration and reflection (Appendix 6; 2; 28, 32); (Appendix 5; 3; 9). Wood et al (2008) make a similar observation and perceive police to be:

*“pragmatists who want to get things done in ways that are known to work and experimenting is often seen as resource wasting”*. (Wood et al, 2008, p.83).

In relation to systems thinking, this approach to problem solving is demonstrated in the current interest in documenting prescribed methodologies and ‘tool-kits’ to support the successful implementation of problem solving, such as through the NPIA’s continuous improvement network (NPIA, 2011c). Although this focus is providing a basis for real improvement in approaches to problem solving, it also presents a new challenge to the successful deployment of systems thinking given the observations in the first intervention of the need for contingent flexibility in deployment of approaches and the limitation of rigid, predefined methodology steps or ‘best practice’ in responding to increasingly wicked problems (Rittel and Webber, 1973; Snowden and Boone, 2007).

There is also a risk of facilitators becoming wedded to a ‘best’ or an institutionalised way of working and being reluctant to introduce different and unfamiliar approaches as noted within the ASB intervention (section 8.6) and this sort of limitation presents a challenge to the preservation of the commitments to CST. This perceived weakness is consistent with observations of Mingers and Brocklesby (1997) who considered this challenge to be influenced by the strength of the individual’s attachment to the institutionalised way of doing things and their desire to do things differently. This may explain why the internal consultants’ perception of the impact of organisational culture on the success of interventions was relatively low, being affected by both the challenge

of handling that culture within problem situations as well as being part of the culture themselves.

Jackson (2003, p.280) recognised the risk to informed pluralism of ‘isolationism’ (where one preferred methodology is always employed), ‘imperialism’ (where different methodologies are incorporated within a favoured systems theoretical orientation) and ‘pragmatism’ (where a toolkit is built up from what works in practice without any theoretical basis for learning). If the institutionalised way of operating reflects one of these characteristics there is a real risk to the effectiveness of the facilitator of CST. Given the apparent resistance to using or being exposed to methodologies that are not familiar, easily accessible or understood, and it is undeniable that many systems methodologies require a degree of experience and specialist knowledge to employ effectively, the exposure of police leadership to a wider variety of systems thinking may be limited. Accepting this at a methodology level, as evidenced in Intervention 1 it is possible to employ those parts of approaches that can be readily understood without a depth of knowledge, for example the well-received Future Search timeline technique (Weisbord and Janoff, 1995) as part of a considered intervention structure. This reflects observations of Jackson (2006) who notes that systems methods and techniques can be readily employed without the extent of theory that underpins systems methodologies and hence making those components more accessible to non-specialists. Friend (1990, p.92) notes a trade-off between complexity of models that specialists develop and the value to the manager who can grasp them and act on them. The lean process improvement of the QUEST intervention was an example of this. Applied successfully, it felt connected to operational work and not too theoretical (Appendix 4; 2; 15) and this is a feature of a ‘lean’ approach that has been observed in previous studies, (Gregory, 2007, p.1510).

Feedback from management within this research advocated the employment of a high level model to guide problem solving, providing the flexibility to adapt the approach to suit the problem in hand and that this might be culturally acceptable within the police service. A number of approaches to problem solving that have become established within the police service have been based upon a simple structure, such as the Conflict

Management Model (NPIA, 2011a) or SARA (Schmerler et al., 2006) with its four stages of ‘scanning’ to identify and select a problem, ‘analysing’ the selected problem, ‘responding’ to the problem and ‘assessing’ the impact of the response. These approaches are considered by police managers to provide a useful way of encouraging officers to think before they act and avoid the traditional approach of jumping from information to action without analysis or reflection. Now used extensively in the police service to solve problems in partnership, they appear to be culturally acceptable (Appendix 6; 2; 16). The most recent development in this regard is the development of the National Decision Making Model (ACPO, 2011) which has drawn upon several police problem solving models and is seen as a mechanism for supporting a wide range of decision making employing a generic structure and helping to limit the cultural aversion to risk taking in decision making. These findings are consistent with research undertaken by NPIA (NPIA, 2011f) into the employment of formal business improvement techniques, which found that problem solving approaches all broadly followed the ‘Deming cycle’ of - Plan, Do, Study, Act. Further, the research concluded:

*“Organisational change and business improvement in policing can sensibly be viewed as an extension of existing problem solving capability already well-established in parts of policing business.”* (NPIA, 2011f).

There is a broad similarity in the structure of these models to approaches that have been developed to support employment of a variety of systems thinking, such as:

- Mingers and Brocklesby’s (1997) - Appreciate, Analysis, Assessment, Action.
- Rickards and Moger’s (1999) – Mapping, Perspectives, Ideas, Action
- Lean systems’ - Check, Plan, Do.
- PANDA’s – Deliberation I, Debate, Decision, Deliberation II.
- CSP’s - Creativity, Choice, Implementation, Reflection.

It would not be difficult to see how the employment of high level structures familiar to the police service might be merged with those of systems thinking to present police managers with a culturally acceptable approach to problem solving that is theoretically sound in terms of employing systems approaches yet is also practically based, allowing

police practitioners to mix and match approaches to meet the problems they face. This aspiration seems to be consistent with Jackson's observations (Jackson, 2006), where he sees critical systems practice:

*“to be much more flexible in the use of methods, models and techniques. It is happy to see these disconnected from the methodologies with which they are traditionally associated and used in new combinations in support of the generic systems methodologies that are applied in the intervention”.* (Jackson, 2006, p.877)

However, having noted an attraction to a broad, high level problem solving structure through which to encourage pluralism in approaches, there is also a risk of this merely justifying pragmatism unless it is employed in a considered and informed way, as noted in the previous section (Jackson, 2003, p.280). It was noted through this research that the police service, with its foundations in emergency response, seemed to have a culture of urgency in relation to its problem solving and that leaders often feel frustration in evidence gathering efforts that open up the challenge of alternative views (Appendix 6; 2; 18, 32). This is consistent with Wood et al's (2008) observation on Fleming (2005) that *“police organisations are often crisis driven and time for reflection is not a priority”* (Wood et al, 2008, p.83) and that the police are *“pragmatists who want to get things done in ways that are known to work and experimenting is often seen as resource wasting”*. (Wood et al, 2008, p.83). In contrast, a particular strength was seen in the QUEST intervention's hard data and evidence gathering and this seemed to appeal to the organisation (Appendix 4; 2; 18). This may have been due in part to the structure, pace and intensity of the project activities which matched the 'can-do' or 'emergency' culture of the service. It was also noted that maintaining momentum was a challenge for change initiatives generally and the sustainability of solutions over a period of time was limited unless they were embedded quickly and continually revisited, as experienced in the QUEST intervention. These experiences echo the findings of Eden et al. (Eden et al., 2009), where an AR programme to evaluate the use of systems approaches within complex and dynamic public problems, confirmed that methods employed needed to reflect the sometimes conflicting requirements of being: inclusive in terms of content knowledge, stakeholders and skills; analytic to ensure wider system

impacts were understood; and quick so that they could be employed by busy managers. This type of approach would appear to be culturally acceptable, with derived solutions appearing to be successful in the short term at least.

Thompson and Purdy (2009) note an unseen 'deep structure' that sustains an organisation's self-definition, comprising of values, beliefs and practices that operate in the collective unconscious of the organisation. In terms of approaches to problem solving, it was noted in Chapter 3 that there appeared to be a strong preference within the police service for HST approaches and this may reflect a deep structure preference that has limited the acceptability of more interpretive approaches. The ability of these deeply seated cultural features to limit the acceptance and sustainability of innovation will be discussed further in section 11.7.2. Chapter 2 described the increasingly complex and plural problem environment being faced by police managers and this research has noted the limitation of responding inflexibly with familiar, 'mechanistic', low variety approaches to problem solving.

Some success was noted in relation to the adaption of systems approaches to become more culturally acceptable through careful use of language and emphasis, such as: the diagnostic questions, loosely adapted from Viable Systems Diagnosis (Flood and Jackson, 1991), that were employed with senior officers to reflect on their meeting structures (Table 10.4); the concise set of questions to support an exploration of the defining features of the problem context with stakeholders (Table 8.1), employed in the ASB and Personal Application interventions; and the adapted evaluation measures associated with the different sociological paradigms reflected in CSP (section 10.4). It would certainly appear feasible for a capable facilitator to translate some of the more specialist systems approaches into a format that is more accessible and culturally acceptable to the sector and this is something that is considered further in sections 11.4, 11.6.4 and 11.8.



## 11.4 Devolved capability

*Engagement with capable, credible and committed leaders, managers and staff locally in understanding, developing, owning and sustaining relevant solutions in a dynamic operating environment.*

*Ability to devolve systems thinking capability to the wider workforce through involvement in professionally supported interventions.*

The average scores within the devolved capability cluster were typical of the overall average in terms of their perceived impact on the success of interventions but were seen to offer the highest potential for improvement of any cluster.

Wood et al (2008) support the notion of participatory approaches to police problem solving, arguing that:

*“police members from all ranks possess potential to challenge the beliefs and meanings that inform their daily practices and are able to alter their routines when innovative practice and new ideas assist them in responding to new dilemmas”.* (Wood et al, 2008, p.72).

One of the aims of the QUEST and ASB interventions was to explore the possibility of devolving responsibility and capability to respond to problem situations to a more local level and build a pool of practitioners who could work with confidence on future projects. Both interventions placed a particular emphasis upon engagement of the workforce in tackling problem solving and for them to employ aspects of systems approaches as part of this process and the findings from these interventions are of particular relevance along with findings from all interventions related to the on-going sustainability of solutions. The systems thinking capability of leadership has already been discussed in section 11.2 and these findings should be considered in unison.

Establishing a project team comprising local staff with credible experience of working within the affected processes and possessing a mix of local operational knowledge alongside competent internal specialists was seen to be an important feature of the QUEST intervention (Section 7.6). This initiative benefited from significant leadership commitment, the targeting and involvement of capable and credible police managers, staff and facilitator support. It was also seen to be advantageous to base the team locally to improve their visibility and to develop a real appreciation of the problem and for them to own and see the work through into implementation in order to sustain improvements, rather like Argyris and Schon's (1974) 'model 2' double loop learning, encouraging reflection upon action in an open system where context and environment are dynamic. This helped ensure the project team had credibility as well as building solutions that were relevant to ensure local ownership and buy-in reflecting Carl Rogers' ideal facilitative attitude of "realness in the facilitator on a personal level" (Kirschenbaum and Henderson, 1989, p.305). The importance of developing a local capability to be involved in delivery and sustainability of improvements was tested during the subsequent ASB intervention which aimed to see how well systems capabilities could be cascaded within the workforce through active participation in projects. The methodology employed in this intervention was intended for application by practitioners with previous experience of participating in a lean process improvement initiative where sufficient capability had been accumulated and where only limited specialist support was required. There was evidence of some successful skills development through this approach, combining 'hands on' involvement alongside training and support targeted upon specific project activities (Appendix 5; 3; 26). It was found that specialist support and advice was of importance, particularly for some of the more complex analyses and also where it had become apparent that the routine application of the lean methodology was not designed to tackle some emergent issues. The intervention had relied upon the project team recognising for themselves where specialist support might be beneficial but it was noted on reflection that opportunities had been missed to introduce, adapt and reliably employ appropriate systems approaches due to the team's limited specialist knowledge (Appendix 5; 3; 10, 28). It has been recognised elsewhere (Pollack, 2009) that the employment of multi-methodology in parallel requires experienced facilitator support but despite this

intervention displaying features that might have warranted such an application, the less experienced facilitators were not able to operate in this way. As noted by Argyris (1970, p.56), where problem situations reside in the lower levels of the organisation the local capability may be sufficient as this tends to relate to routine problem solving activity rather than that requiring specialist support, such as that necessitating parallel multi-methodology application.

Within the ASB intervention it was clear that the project manager and members of the team felt more confident in using the approach because of their exposure to it through previous involvement in similar projects (Appendix 5; 3; 26). The failure of previous attempts to widely deploy business improvement skills within the organisation through widespread training programmes was noted and the maintenance of skills and knowledge through direct involvement in change, supported by effective networking to sustain and build capability and a targeted provision of professional specialist consultancy support was considered to be more effective (Appendix 4; 2; 27). Reflecting upon Argyris and Schon (1974, p.87), an essential component for avoiding the dysfunctionalities of traditional approaches to problem solving is the securing of internal commitment to choices and a constant monitoring of its implementation. This can only be achieved through effective local ownership and a careful balance will be required to avoid over-reliance on limited specialist support while providing a local capability to understand, develop, own and sustain relevant solutions in a dynamic operating environment.

## 11.5 Boundary management

*The importance of the facilitator gaining and sustaining an appreciation of the landscape of diversity within problem situations and identifying centres of gravity in terms of defining features.*

The average scores within the boundary management cluster were typical of the overall average in terms of their potential for improvement but were seen to offer the highest perceived impact on the success of interventions of any cluster.

From the first intervention (section 5.6) it became apparent how important it was for the facilitator to be able to gain an appreciation of the landscape of diversity within problem situations and identify any dominant features or ‘centres of gravity’ and this was echoed within the QUEST intervention (section 7.7). It was considered that some sort of instrument may be of value in supporting this assessment and one such tool was developed and introduced to support the ASB intervention (section 8.4). Drawing upon selected components of boundary critique (Ulrich, 2005) and CSP’s constitutive rules (Jackson, 2003), a concise set of culturally acceptable questions were derived using language that would be recognisable amongst sector stakeholders to support an exploration of the defining features of the problem context (Table 8.1).

The question prompts were used effectively in the ASB intervention to stimulate discussion amongst the senior representatives of the partner organisations during an exploratory meeting. In this intervention the prompts were also used to inform a stakeholder interview design for implementation by members of the project team and although it was considered useful it had some limitation (section 8.6 (ii)). The framework was utilised again in the Departmental Review intervention to identify defining characteristics of the problem situation and it was found to be valuable in helping to reflect upon problem context and the selection of appropriate systems approaches. Here it was considered that it might have been benefitted from a formal discussion to develop a richer view of the client system (section 9.6). Having shown signs of potential it is considered that the analysis of defining features be further

developed to see if it can provide a practical and valid means for the facilitator to better understand problem context and how they might respond. There is also potential for this development to be consistent with any further exploration of the policing problem archetypes (section 11.2.1).

The exploration of boundary also featured in the large group events that were utilised in several of the interventions for engaging the whole system in appreciating context and identifying desired outcomes and how they might contribute and be affected by this. Further analysis of this aspect will form part of the following discussion surrounding the methodological features cluster.

## **11.6 Methodological features**

The average scores within the methodological features cluster were typical of the overall average in terms of their perceived impact on the success of interventions but their potential for improvement was seen to be relatively low in comparison with other clusters.

The variety of themes included within this cluster warrant consideration under the following categories:

- (i) Participative processes
- (ii) Valid and useful information
- (iii) High level problem solving process
- (iv) Modes of CST
- (v) Multi-paradigm support

### 11.6.1 Participative processes

*The potential for appropriately designed large group participative processes to concurrently attend to a diversity of paradigms.*

Research elsewhere has identified the positive impact upon job satisfaction and performance of participatory management in the police service (Wycoff and Skogan, 1994) and in other sectors (Cotton et al., 1988). All interventions within this research involved participative approaches to engage a range of stakeholders and several of these were based upon large group methods (Bunker and Alban, 1997).

White (2002) identifies two broad reasons why organisations might employ large group interventions (LGI), where there is a deficiency of representativeness and where there is an inability to respond to turbulence and uncertainty. LGIs were employed within this AR to address both of these, drawing in a diverse range of stakeholders to tackle complex problem contexts. The large group processes were shown to offer a variety of benefits including but not restricted to:

- Development of creative and new perspectives (IOM intervention);
- Effective engagement of diverse and previously excluded groups (IOM intervention);
- The concurrent exploration of different agency views (ASB intervention);
- The improvement of mutual understanding (Community Safety intervention);
- The ability to develop and work together towards a vision of success (IOM intervention);
- Secure a sufficient coalition of support to progress implementation (ASB intervention).

These features are common to many LGI methodologies (Bunker and Alban, 1997) and the impact of the change variables associated with LGIs are explored further in section 11.7. However, the observation here that is particularly relevant to the research objectives is the ability of appropriately designed LGIs to apparently attend to different

paradigms concurrently. This was most apparent within the IOM intervention where the custody event enabled staff to view the custody process from new perspectives, to draw in creative thinking from diverse and previously excluded groups and to work on improving processes to better meet shared process outcomes (section 6.6 (ii)) and this aspect is picked up in section 11.6.5.

Participation within the interventions extended beyond LGIs, including process and influence mapping workshops which led to the development of acceptable models to aid understanding of the system amongst diverse stakeholders, such as that derived within the IOM intervention where stock and flow models informed a LGI which subsequently informed process mapping events. The value of combining LGIs with other participative methods to help provide structure within problems has also been observed elsewhere (Bryant et al., 2011).

### **11.6.2 Valid and useful information**

*The development of valid and useful information to enhance the understanding of system characteristics and interconnectedness, providing an evidence base comprising a diversity of reliable qualitative and quantitative data presented in a variety of modes of representation.*

Reflecting upon Argyris' Intervention Theory (1970) the interventionist, recognising the whole client system must consider a primary task of securing valid and useful information and this was a significant feature of these AR interventions and particularly those of QUEST and ASB where their evaluation found the development of evidence to base decisions upon to be particularly important. The gathering of 'hard' evidence through the 'dip sampling' of process data was seen as a powerful way to confidently clarify the problem situation and demonstrate this to others and this appeared to appeal to the police culture (Appendix 4; 2; 2, 18).

It was not just 'hard' quantitative data that comprised valid and useful information, so too the development of qualitative data from the group processes' common databases

(e.g. timeline (Appendix 2; 4; 4)) and the use of visual representations of the system (e.g. offender flow model (Appendix 3; 2; 6) or the QUEST Racetrack (7.4, (iii))). Within the IOM and QUEST interventions these were seen to be of considerable value in building a shared understanding of an interconnected system as well as providing a basis for analysis and communication. The ability of such visual models to concurrently appeal to a diverse group of stakeholders as seen in the IOM intervention, is of particular interest to problem solvers in situations involving diverse stakeholder perceptions where such models can be seen to help multi-agency groups progress towards solutions. Bryant et al. (2011) noted the value of models in providing a basis for understanding, analysis and supporting progress in problem situations, suggesting:

*“Models do more than generate insight—they can also facilitate a quicker negotiation between perspectives and help people to become convinced about what to do—but they do these things too on the strength of their analytical capabilities”*. Bryant et al. (2011).

and the ability of models to concurrently appeal to diverse stakeholders was also noted by Pollack (2009), who observed:

*“Models acted as a lingua franca, something which was accessible to end users, management and IS professionals.”* (Pollack 2009, p.162).

Based upon the experience of the interventions comprising this research it was clear that a variety of means of presenting and utilising information were seen to be valuable and with reference to Taket and White (2000), this might be seen as reflecting plurality in the modes of representation (Table 5.5).

### **11.6.3 High level problem solving structure**

Section 11.3.2 discussed the cultural appeal of high level problem solving guiding structures but with a considered application by experienced facilitators able to flexibly and reliably adapt the detail to match the changing problem situation, rather than seeking a detailed predetermined methodology. This discussion will not be repeated



here but it is worth reiterating that the variety of problem situations now being encountered within the police service heightens the weakness of taking a prescriptive approach in problem solving and emphasises the need for informed flexibility and an ability to dynamically respond to the emergent problem situation to ensure the systems approaches employed remain valid.

#### **11.6.4 Modes of CST**

*The ability of mode 2 applications of systems approaches to fulfil the commitments of CST.*

*An emerging set of contextual determinants that might influence the recognition of mode 1 and 2 systems thinking in problem situations.*

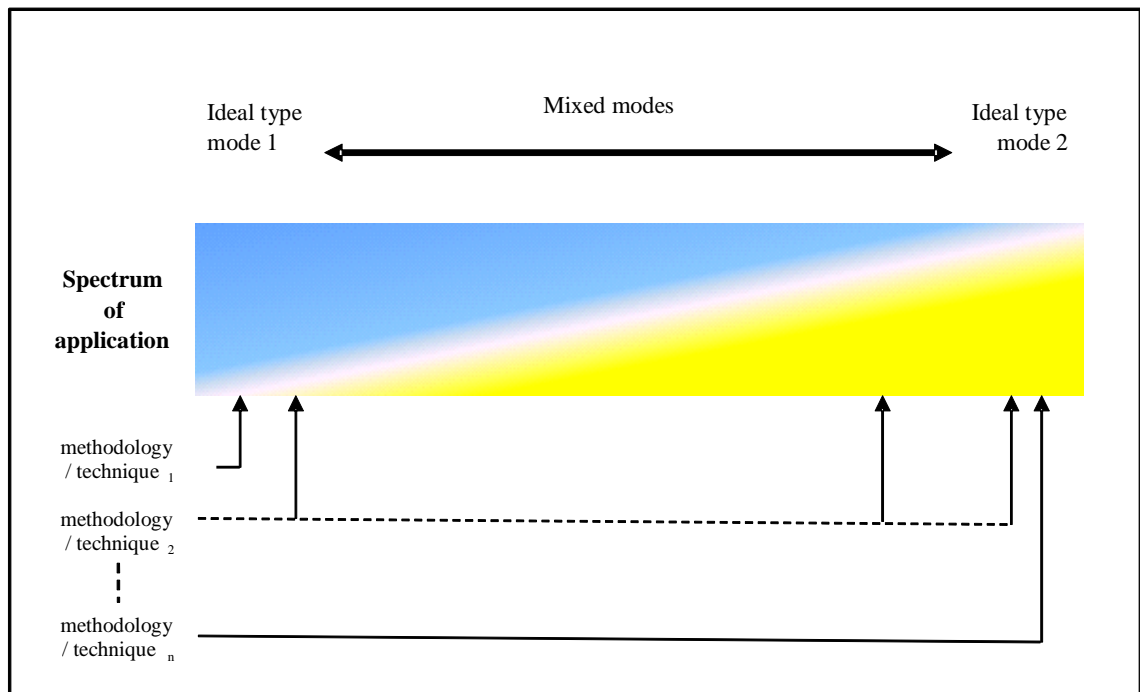
*An experienced practitioner of systems thinking moving flexibly between modes of application, both consciously and unconsciously as necessitated by the unfolding intervention to support contingent employment of parallel multi-methodology.*

The research methodology design was informed by a reflection on leadership in the facilitation of CST which recognised value in making explicit some ‘tacit’ knowledge regarding the use of mode 2 CST. The Personal Applications intervention recognised the ability of mode 2 applications to meet the CST commitments of critical awareness, improvement and plurality (Jackson, 2003) and thereby be considered as a valid means for deploying CST.

This intervention sought to identify the features of situations where a mode 2 form of CST might be considered more appropriate in comparison with a more formal mode 1 application and it was considered useful to identify the contextual determinants that had led to the selection of a mode 2 style application. Recognising Checkland and Scholes’ (1990) spectrum of application of SSM between two extreme ideal types of a mode 1 and a mode 2 application, an attempt was made to identify the contextual determinants relevant to the prominence of modes 1 and 2 that placed the personal applications of

CST comprising this intervention on a similar scale (Figures 10.6 and 10.7). It is recognised that such an assessment will not provide discrete or mutually exclusive values. For example, the purpose of systems thinking might be to both shape the intervention as well as reflect on the prevailing situation. However, the determinants might be considered as providing a means to transfer the learning about the application of mode 2 approaches from one situation to another, thereby supporting the ‘transcontextual credibility’ requirement of successful AR (Greenwood and Levin, 1998) as outlined within the research design (section 4.4). As this list has emerged from the experience of limited research it is not presented as exhaustive or definitive but possibly provides a basis for further exploration.

It was recognised that there would be a dynamic relationship between modes of application where the practitioner might move flexibly between modes at different stages of an intervention both consciously and unconsciously. Further, it was evident (section 10.7 (ii)) that mode 1 and 2 could operate in parallel, for example with one form of systems thinking predominantly in mode 1, supported by a variety of systems thinking in more of a mode 2 form, similar to the relationship between dominant and dependent methodologies of TSI (Flood and Jackson, 1991). As the mode of application can be seen as a continuous spectrum (Checkland and Scholes, 1990) then apart from the extreme ‘ideal types’ it can always be argued that an element of any application displays some characteristics of both modes 1 and 2. The relative balance will depend which end of the spectrum they are operating closest to but the spectrum implies that only in extreme cases will there be just a single mode and as found in the Departmental Review intervention, the relative prominence will change dynamically as the problem unfolds (Figure 11.4). It was concluded (section 10.7, (ii)) that while accepting the inherent difficulty in determining the actual nature of mode 2 systems thinking, in any given problem situation involving CST aware practitioners, it is highly likely that mode 2 CST will be present in series and parallel. Further, if mode 2 CST is considered as being both prevalent and a valid means of deploying systems thinking, then it is probable that most problem situations of this nature will feature multi-methodology in series and parallel in modes 1 and 2 without it being overtly expressed.



**Figure 11.4:** Variety of application modes in multi-methodology

It was also found that mode 2 or less overt mode 1 applications of systems approaches were particularly appropriate for consideration in problem situations that might have significant barriers such as those of culture, allowing the preservation of CST in potentially restrictive situations. Finally, it was noted that the internalised nature of mode 2 CST enables a more immediate and flexible employment to enable CST to respond quickly to accommodate prevailing and evolving contexts. (Section 10.7 (ii)).

### 11.6.5 Multi-paradigm support

*The employment of parallel multi-methodology in different modes is of practical relevance in problem situations involving a variety of stakeholders reflecting multiple paradigm diversity.*

Jackson (2003) puts forward a case for multi-methodology requiring the facilitator of CST to maintain awareness of a variety of sociological paradigms, the success of which might be judged against a diversity of measures. Accepting that problems reflect a variety of sociological paradigms to differing degrees, it might be considered that they

possess a concurrent variety of context. In this situation there will be no prescribed or determinate point when a shift of attention to a new paradigm is universally appropriate or required. It has not been the purpose of this research to debate the variety or relevance of different paradigms. The researcher has accepted that different and potentially incompatible paradigms exist to varying degrees within problem situations and that employing combinations of approaches with strength in different paradigms is an acceptable means of tackling such situations and instead has sought to focus on the deployment of combinations of systems approaches that support effective problem solving in practice. The justification for this view was presented in Chapter 3 (sections 3.2.5 (i), 3.3 and 3.4).

The value of parallel applications of multi-methodology in wicked problem contexts (Pollack, 2009) where there is a greater need for accommodation of multiple paradigms was also noted. The evidence of these research interventions would appear to confirm the value of parallel applications. For example, through the various applications of LGIs and other participative processes that were able to concurrently respond to different sociological paradigms and in the IOM intervention where the various systems approaches were not applied in a linear fashion.

The employment of different modes of CST discussed in the previous section provides a potentially powerful means of deploying parallel multi-methodology and the Personal Applications and Department Review interventions documented examples of this where an experienced practitioner was able to introduce elements of relevant mode 2 systems thinking as necessitated by the problem situation to support other systems approaches in both modes 1 and 2 (section 10.7, (ii)).

## 11.7 Change variables

The average scores within the change variables cluster were typical of the overall average in terms of their potential for improvement but were seen to offer a relatively high perceived impact on the success of interventions.

The findings in this cluster are also linked to those of the boundary management cluster (section 11.5), relating to the facilitator's role in managing and responding to problem context, such as in recognising and acting upon resistance to change. It is not surprising that the relevance of variables that impact upon successful change has emerged from research of this nature and relevant findings and questions emerged from every intervention. The Beckhard change formula variables (Beckhard and Harris, 1977), presented in section 3.2.5 (ii), although traditionally associated with LGIs, were identified as offering a valuable mechanism for reflecting upon this challenge presented to the interventionist and the following sections will employ this formula to reflect upon this challenge (Jacobs, 1994). Accepting that the research findings are not mutually exclusive, the following headings will be used to present the main points:

- (i) Vision
- (ii) Resistance to change
- (iii) Incremental progress
- (iv) Change formula

### 11.7.1 Vision

*The ability to support diverse stakeholders in the development of a view of a desired future state.*

Following the perceived value of employing large group processes in the first intervention the LGIs were subsequently employed in the second and fourth interventions. Through the research it was noted that the large group systems approaches appeared effective in supporting a diverse group of participants in exploring their problem situation through development of shared databases and then developing a

vision of a desired future state and the identification of tangible steps to progress towards this (Appendix 3; 2; 3, 7). These applications appeared to concurrently attend to a range of paradigms and thereby support the aspirations for successful deployment of CST (section 6.6, (ii)).

The ASB intervention saw great value in the early and concurrent engagement of a wide group of stakeholders to get the initiative on the right course, involving the right people to get a clear vision of the aspirations of participants and in this intervention this took the form of a set of ideal futures and common ground themes (Weisbord and Janoff, 1995). The momentum generated by the large group work was seen to be difficult to sustain but the foundations of collaboration created from these activities seemed to provide long term benefit (section 6.6 (i)).

Although the series of AR projects largely drew upon LGIs for vision development, considerable value was also seen in the development of system visualisations (Appendix 3; 2; 2, 5, 6), (Appendix 4; 2; 14), that appeared to provide a common platform for envisioning and analysing the situation and similar to experiences elsewhere (Bryant et al, 2011), a powerful means of communication that was appealing to diverse groups of stakeholders and these featured in the IOM, QUEST and ASB interventions.

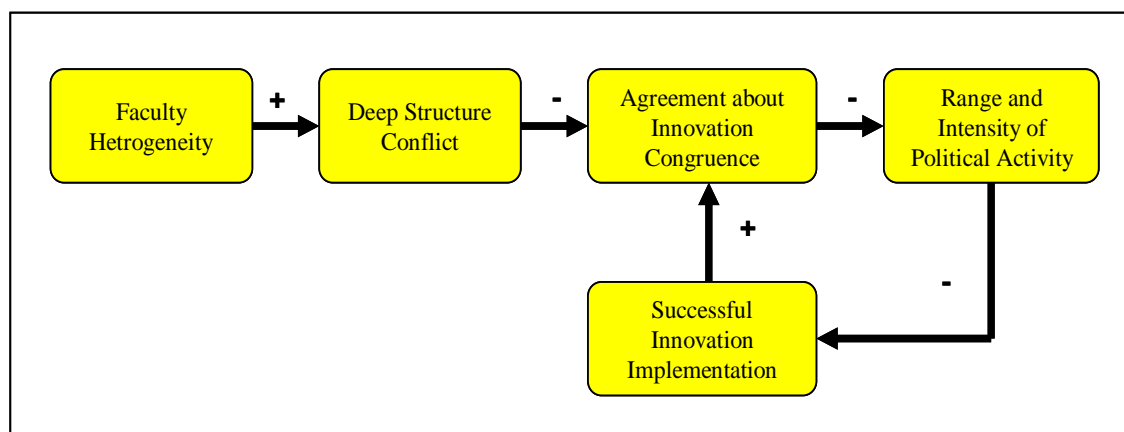
### **11.7.2 Resistance to change**

*The potential for deep structure conflict to limit the successful implementation and sustainability of innovation and change.*

*Recognising and supporting exploration of potential causes of conflict and resistance to change through appropriate systems thinking.*

*The importance of the facilitator of CST continually recognising and iteratively attending to the diverse needs of the whole client system.*

Some of the cultural challenges in relation to the employment of systems thinking have already been discussed in section 11.3 but organisational culture is also influential in an understanding of resistance to change. The QUEST intervention solution for example met a challenge on implementation when confronted with the wider organisational culture (Appendix 4; 2; 5). Thompson and Purdy's (2009) study into the adoption of innovation within university business schools argued the need for a richer view of organisational context, going beyond that readily observable to the *"deeply embedded master structure that sustains the organisation's self definition"*, consisting of *"values, beliefs and practices that underlie the surface characteristics that operate in the collective unconscious of organisational actors"* (Thompson and Purdy, 2009). Their study of curricular innovation identified a political process model that suggested that deep structure conflict can reduce the longevity of an innovation (Figure 11.5). They saw that innovations would only persist as long as the reinforcing relationships between successful implementation, shared congruence and political activity are not disrupted by increases in deep structure conflict. Recognising the time dimension for change also emphasises the need for change to not only overcome any initial resistance, but to be sustainable it must continue to demonstrate success and a fit with the deep structure that is acceptable to those involved. The importance of viewing the resistance to change over time, recognising the variety of actors in achieving acceptable change and for the change to demonstrate clear improvement are discussed further in sections 11.7.3 and 11.7.4.



**Figure 11.5:** Political process model of curricular innovation

Trader-Leigh (2001) undertook a study to identify resistance factors that were of significance in managing change. The research proposed a change management model that included an analysis of resistance factors (Trader-Leigh, 2001, p.141), identifying key causes of resistance to include:

- Rewards
- Political constraints
- Operational constraints
- Benefits
- Culture support
- Goal agreement
- Commitment

Further, the research also identified the most significant underlying factors that might influence the resistance and it was found that self-interest was the most prominent (Trader-Leigh, 2001, p.146), concluding:

*“The relationship of variables to this factor suggest that individual buy-in is affected to the degree that interests are met. People must see ways they will benefit from change in order to buy-in and support it. Depending on how the changes preserve, erode or promote one’s position this may lead a person to act in one way or another”*

The ASB (section 8.6 (ii)) and Departmental Review (section 9.6 (i)) interventions found that the buy-in to change appeared to be closely related to its degree of impact upon the individual participant. The personal impact of change is of particular relevance in participative processes as it will influence individuals’ goals and behaviours within the problem solving process. The importance of individuals’ perceptions in such problem situations and how these can be accommodated, is recognised in methodologies such as SODA (Eden, 1989) and PANDA (Taket and White, 2000). It was noted that within the ASB intervention, where individuals’ needs were not recognised and accommodated, there was a feeling of exclusion and a perception that potentially valuable knowledge and expertise had been lost. Further, the lack of buy-in to any subsequent change proposals would reduce the risk of a successful



implementation particularly where those involved have a longer term stake in the processes and where their buy-in is key to sustaining improvement. This intervention highlighted the potential impact of diverse personal aspirations upon the successful deployment of systems thinking and how recognising this might help the facilitator to better understand and attend concurrently to a range of diverse stakeholder needs and thereby realise greater success in the achievement of wider intervention aims.

It has been recognised that self-interest is the most significant factor affecting resistance to change (Trader-Leigh, 2001) and exploration of this factor might contribute to a more general proposition regarding the role of the facilitator of CST in managing resistance to change and the Departmental Review intervention explored this feature. This intervention found that where the personal impact of change was perceived by individuals to be significant, considerable resistance to progress resulted (section 9.6 (i)). This was seen to be consistent with Guth and Macmillan (1986) who observed the impact of middle management self-interest on the implementation of strategy and considered managers to be motivated more by their perceived self-interest than the organisational interest and that gaining middle manager commitment was a prerequisite for effective implementation and that achieving satisfactory results is better than failing to achieve optimal results via an unpopular strategy. So too within the police service, where Skogan (2008) noted the significant impact of different causes of resistance to change exercised by a variety of groups including: managers; front line supervisors; rank-and-file officers; special units and police unions. The experience of the Department Review intervention led to the suggestion that in this sort of situation, where participants might be personally and significantly affected, that individuals' own goals and interests are brought out more obviously and here the facilitator might be confronted by a more complex web of personal aspirations. This was also noted to be consistent with Schwarz's (1994, p.20) criterion for facilitators securing an effective group process, seeking to satisfy rather than frustrate the personal needs of group members.

Radford (1990) considers the situation in which two or more participants hold different preferences with regard to an outcome. Radford sees a major task in complex decision

making as the on-going analysis of participants' individual preferences, objectives and desired outcomes and then achieving progress following iteration of analysis to gradually move forward. Here, individuals' personal values and beliefs evolve as the situation unfolds and in these dynamic problem situations rational, static decision making is inappropriate as situations can be continually transformed by the prevailing emotions of the actors, power relationships and alternative personal responses. In such circumstances problem solving approaches need to be capable of responding to these challenges and an interventionist here might, for example, see more relevance in the interpretive emphasis of drama theory (Bryant, 2007) than in the functionalist emphasis of game theory (Taha, 1976).

Reflecting on issues of conflict in these situations, Midgley (2000) advocates the employment of boundary critique in arenas where conflict or marginalisation is evident, using it to identify overlapping concerns that may lead to conflict or consensus. Raza and Standing (2011) developed a dynamic model for managing and evaluating conflicts in organizational change where stakeholder interactions and problem boundaries continually change as the problem situation progresses. The employment of boundary critique at different points in time within their model facilitates understanding of the unfolding problem and the tracking of the changing environment and system of stakeholders. Their approach recognises the inherent conflict in resolving any complex issue and proposes a model for conflict management in organisational change which identifies key resistance factors and systems of conflict so as to apply mechanisms and intervention strategies in response. Midgley and Pinzon (2011) demonstrated the potential to extend such use of boundary critique beyond conflict resolution to one of conflict prevention through improvement of mutual understanding and encouraging dialogue regarding the desired future state rather than a disputed present.

Drawing upon these findings, the role of the facilitator of CST would appear to necessitate a more interpretive approach to the identification and exploration of potential conflict and resistance to change through attention to the requirements of the whole client system, recognising appropriate boundary management (such as that of

section 11.5), together with a focus upon desired futures and to do this iteratively and continually. This leads to further consideration of incremental change.

### 11.7.3 Incremental change

*In situations of complexity, an incremental progress towards desirable outcomes is a valid approach for the facilitator of CST, with its application co-evolving as the problem situation unfolds.*

Although all interventions involved flexibly adapting their approaches as required, this was particularly apparent in the Departmental Review, evidencing a practical solution to a prevailing requirement that incrementally moved the intervention onto its next phase, recognising the changing circumstances and constraints (Appendix 6; 2; 11). The Personal Applications intervention added to this the potential for mode 2 applications to be employed flexibly to support CST and support progress through accommodation of prevailing and evolving contexts (section 10.7, (ii)).

Lindblom (1959) introduced the concept of disjointed incrementalism as an approach to facilitating change where, in complex situations instead of trying to identify and encompass all relevant variables, the problem solver would disregard most variables outside of their immediate interest and a solution is achieved by a series of steps rather than one big one. Policy is then not made once and for all, rather it is made and remade endlessly in a process of successive approximation towards some desired objectives where what is desired itself may also continue to change. Lindblom's concept of partisan mutual adjustment gave rise to a reflection upon the Departmental Review intervention where its fragmentation of participation in problem solving was seen to characterise situations of great complexity and where the reliance on self-organisation rather than central co-ordination was more appropriate. Accepting that the problem situations being addressed by the facilitator of CST will not lie at the extreme of decentralised and autonomous decision making, some assistance in helping achieve positive progress among fragmented participants will be necessary. This evolutionary approach to the progression of the intervention given its complex environment was

considered in section 9.6, (ii), drawing upon the experience of Friend and Hickling's Strategic Choice approach (1987) and Taket and White's 'system of consent' (2000) and the relevance of incremental commitment packages recognised.

The value of continually revisiting system conditions was something that was observed by Rashford and Coghlan (1994) who developed a change framework that recognised the complex interrelationships between individual, team, interdepartmental group and organisational levels to "*help unravel the multiple complex issues that occur in organisations*" (Rashford and Coghlan, 1994, p.10). The model suggests that decision makers and change leaders:

*"regularly rethink about the variables, e.g. resistance, as a system's comprehensiveness cannot be grasped at only one point in time. It rather needs viewpoints to be revisited and boundaries redefined"*. (Rashford and Coghlan, 1994, p.206).

In a similar vein Conner (1998) considers that fewer problems are encountered when change is approached as an on-going process, viewing major change as a fluid phenomenon, like ice melting and refreezing. He goes on to note:

*"In today's fast paced world, refreezing to a permanent state is not likely. Most of the time will be spent in transitions, not stable states."* (Rashford and Coghlan, 1994, p.87).

It is also useful here to reflect upon alternative approaches to strategy development. Taking the Johnson and Scholes model for strategy development (Johnson et al., 2005), the order in which the 3 phases of: analysis; choice; and implementation are carried out determines whether the strategy is deliberate, emergent or incremental. Deliberate strategy results from the adoption of a classic planning approach, where analysis informs choice and choice leads to implementation. In certain situations, implementation can lead the choice and analysis and this is referred to as emergent strategy. In other cases, analysis, choice and implementation proceed together, with the preferred choices influencing implementation and analysis, analysis influencing choice and implementation influencing analysis and choice. This is known as incremental

strategy (De Wit and Meyer, 2004). It would appear that the experience of these authors is consistent with the findings from this AR, that in problem situations of complexity, incremental progress towards desirable outcomes is a valid approach for the facilitator of CST to take, particularly when employing parallel multi-methodology, which is considered more suited to an emergent methodology selection where it is not clear in advance what approaches will be needed and what contextual changes may occur (Pollack, 2009). The incremental approach to the deployment of CST can be seen to be analogous to the development of incremental strategy with its various phases co-evolving together as the problem situation unfolds.

#### **11.7.4 Change formula**

*The role of the facilitator of CST can be represented through a mathematical heuristic as an objective function to maximise the variety of success measures associated with relevant paradigms, subject to the incremental fulfilment of the condition for change reflected in the Beckhard change formula.*

A range of observations and findings are drawn together here to inform this reflection:

- (a) Section 11.7.1 recognised the research findings associated with engaging diverse groups of participants in exploring problems and developing a vision of a desired future state.
- (b) Section 11.7.2 discussed the issue of resistance to change, recognising boundary management as important in identifying amongst other things: appropriate involvement; potential resistance and conflict; and potential systems approaches to support improvement (section 11.5).
- (c) Section 11.7.3 proposed that in problem situations of complexity that incremental progress towards desirable outcomes is a valid approach for the facilitator of CST to take.
- (d) The Department Review (Appendix 6; 2; 45) and IOM (Appendix 3; 2; 7) interventions recognised the importance of participants perceiving positive progress for them to buy-in to change.

(e) The QUEST intervention (section 7.6 (ii)) and IOM intervention (Appendix 3; 2; 3) noted the importance of gaining sufficient buy-in and critical mass of support to successfully achieve change.

(f) The QUEST intervention (section 7.6 (iii)) concluded that the facilitators' success in relation to any problem situation must be judged upon measures relevant to the diversity of the client system, such as the 8 E's of CSP.

(g) Section 3.2.4 recognised the problems being faced by the sector as typically 'wicked', section 3.2.5 recognised the relevance of facilitators of CST employing parallel applications in such contexts and the ASB intervention (section 8.6 (iii)) recognised the practical value of employing multi-methodology in parallel in wicked problems to enable the facilitator to better respond to a range of contexts.

Introduced in section 3.2.5 (ii) as a means of reflecting upon resistance to change, the 'Beckhard' formula ( $D \times V \times F > R$ ) was proposed to be of relevance to the facilitator of change who should seek to influence the variables so as to achieve positive incremental progress in problem situation (section 9.7). This formula attempts to describe the conditions required for successful change to occur and considering this in the light of the various findings drawn from this research that relate to the formula's variables ((a) to (e) above) it is suggested here that the formula provides a valuable mechanism to capture the role of the facilitator of CST. In such an application it can be considered thus:

To facilitate incremental tangible progress towards desirable future(s) through employment of appropriate systems approaches that concurrently:

- R Identify and explore resistance to change through appropriate CST to understand problem context.
- D Employ CST to help expose valid and useful data for participants to better understand the problem situation.
- V Employ CST to support the identification of a desired state(s) to which participants can consent.

F Develop concrete actions and potential actions that can be clearly seen to reflect a positive improvement in the problem situation to which participants can consent. F in effect relates to any concrete actions that demonstrate tangible progress towards V at a point in time and these actions might also act as a catalyst to stimulate subsequent wider change.

For resistance to be overcome and change to occur, a critical mass, or ‘coalition of support’ of relevant stakeholders need to satisfy the formula condition ( $DVF > R$ ). This ‘bifurcation’ point marks a transition between qualitatively different behaviours where the system takes a new direction and where for a critical mass, resistance to change transforms for a time at least, into acceptance of change. This will be discussed further in section 11.8.4.

Recognising the importance of viewing the problem situation as dynamic and change as incremental, at any point in time ‘i’ the bifurcation point might be represented by:

$$D_i V_i F_i > R_i.$$

This formula might represent the condition for change at a point in time that the facilitator of CST will be continually aiming to secure, but what is it that the facilitator is ultimately aiming to achieve? When considering what would constitute success in a group intervention setting, Carl Rogers settled for the simplest definition:

*“If, a month after the group is over....most or all of members still feel that it was a rewarding experience which somehow moved them forward in their own growth, then for me it deserves the label of a successful group”.* (Kirschenbaum and Henderson, 1989, p.340).

Taking success as being determined by the variety of individuals’ own interests and reflecting upon the variety of paradigms that might be relevant in any plural and complex problem situation, for example those embodied within CSP (section 3.2.3), a variety of success measures could be seen as relevant to judge the success of a systems

intervention involving multi-methodology led by the facilitator of CST ((f) and (g) above). In terms of CSP, these might include the 8 E's of efficacy, efficiency, effectiveness, elegance, empowerment, emancipation, exception and emotion (Table 3.1). Assuming any relative weighting or interdependence between the E's will be implicit, these can be encompassed within an objective function for the facilitator of CST that might be viewed as:

$$\text{Max } \Sigma E_{ij}, (j=1 \text{ to } 8; i = 1 \text{ to } \infty)$$

It should be noted here that the research is not suggesting that the change process can be scientifically categorised and quantified in such a formula, very much from a functionalist perspective, or indeed claim that the formula is complete or the measures definitive. The mathematical language used here is seen as a heuristic device to concisely and effectively capture the relevant components of the process identified within the research from the perspective of the facilitator.

## **11.8 Capable facilitation**

The average scores within the capable facilitation cluster were typical of the overall average in terms of their perceived impact on the success of interventions but were seen to offer the lowest potential for improvement. It should be recognised that particularly for this cluster there is a need for the internal consultants responding to be able to engage a degree of self-reflection and it has not been possible to tell how much this ability has influenced the facilitators' assessments of their own capability.

An overview of the foundations of facilitation, included in Chapter 3, recognised its relevance to the facilitator of CST (section 3.2.5 (iii)). The issue of facilitation has emerged as an important factor throughout the research and findings related to capable facilitation have already been reflected in this chapter, for example in the section 11.7.2 discussion regarding resistance to change. There is clearly a strong link between CST and facilitation capability and this section will seek to add to the findings in this regard.



The themes related to capable facilitation will be considered in clusters comprising issues related to:

- (i) Systems approaches
- (ii) Dynamic flexibility
- (iii) Client and context diversity
- (iv) Management of complexity
- (v) Roles in critical systems thinking

### 11.8.1 Systems approaches

*The importance of involving facilitators with significant capability in the informed selection and deployment of a variety of systems approaches as well as effective group facilitation.*

*The value of facilitators able to employ multi-methodology in parallel in modes 1 and 2 in responding to the challenges of wicked problem situations typical of multi-agency settings.*

*Facilitation leadership skills that maintain credibility in the approach by carefully balancing rigour and relevance in order to manage exposure of underlying theory and methods, through employment of different modes of application.*

*Facilitators being able and prepared to share and devolve their expertise with each other and the wider organisation in order to increase local capacity and variety in CST through a balance in the breadth and depth of capability.*

All interventions recognised the importance of involvement to differing degrees of facilitators with experience in the application of a wide range of systems approaches and knowledge of relevant systems theory, methodology and techniques with strength in different problem contexts. This variety enabled the selection and adaption of approaches to match the diverse challenges of the AR interventions, often necessitating

recognition of different paradigms. Sometimes this variety was provided by an individual but for the majority of interventions it was fulfilled by a diverse team of facilitators with complementary skills. (Appendix 8; 2; 2.3). This was consistent with experience elsewhere, reflecting Brocklesby and Mingers (1997) and Belton et al. (1997, pp.128–129). So too Pollack (2009), who noted the validity of employing multi-methodology in parallel in wicked contexts (section 3.2.5 (i)) which has been recognised as relevant to typical multi agency projects in the sector. The potential value of employing multi-methodology in parallel through the use of mode 2 systems thinking was a key finding of the Personal Applications intervention (section 10.6 (ii)), requiring the facilitator to possess a degree of expertise in a diverse variety of systems approaches. Coupling the benefit of employing approaches in parallel with the competency required of specialist facilitators or teams of facilitators to work in multiple paradigms, would suggest that the utilisation of capable specialists within multi-agency projects will be a key determinant of success in sector problem solving in future.

Clearly, the knowledge and experience of theory and practice of systems thinking is a key determinant of value in a practitioner's successful employment of both mode 1 and mode 2 systems thinking, though this is more evident in a mode 1 application where methodology use is more overt. The success of any employment of mode 2 systems thinking will also be influenced by the practitioner's ability to deploy the approaches, making informed contextual judgements regarding the selection and deployment of approaches across the mode 1 - 2 spectrum, particularly when these will be used in combination with other systems approaches.

The impact of necessary exposure to theory and the accessibility of approaches upon participant buy-in to problem solving was emphasised in section 11.3.2. The ability to limit the exposure to participants of underlying theory or complexity within the approaches employed was seen to be an important feature of the IOM intervention (Appendix 3; 2; 6), while ensuring participants see relevance and feel sufficient engagement in the process and confident in the rigour of approaches being taken. This was found to be achievable through a less overt use of some approaches and in the employment of mode 2 systems thinking in the Department Review intervention

(section 9.6 (ii)). It was found that the facilitator needed to develop an appreciation of the limits to the application of some approaches in group settings and as observed by Friend (1990), where there may be severe organisational inhibitors, the facilitator needs to understand this and utilise alternatives.

It appeared that there is a need for a co-existence in the facilitator of the ability to ‘keep it simple’ and practical for the majority of participants while also providing credible and theoretically sound guidance and challenge to leaders (Appendix 6; 2; 19). Rittel and Webber (1973, p.156) suggested that many of the ‘wicked’ problem situations then being experienced required greater participation and ‘back room’ experts were no longer acceptable. The requirement for the problem solver to increasingly move from an ‘expert’ mode to a ‘facilitated’ mode in complex problem situations (Franco and Montibeller, 2010) is particularly valid given the growing plurality and complexity of problem situations in the sector. Further, systems methodologies that best match plural situations are likely to be more participative and hence more visible to those involved. Here the facilitation leadership skills are crucial to maintaining credibility in the approach through the careful balancing of practicality and the degree of exposure to underlying theory and methods that might not be acceptable to those involved. This requires the facilitator of CST to possess significant group facilitation skills as well as relevant specialist capabilities in terms of the systems approaches employed. This is reflected by Eden (1990), seeing the facilitator skills in group decision support to require a balance of OR and OD skills to manage process and content simultaneously to treat the situation as a ‘total social event’.

The external perspective introduced by facilitators with professional expertise was clearly valuable in the QUEST intervention in providing a challenge to stimulate new thinking but the right blend of facilitators and local staff with specialist and operational expertise, viewed as credible and supported by leadership, was seen to be important in developing solutions that were relevant (Appendix 4; 2; 25).

The aim of increasing the prevalence of systems thinking amongst organisational leadership and workforce within the police service presents a further challenge to the

specialist facilitators to become more able and prepared to share and devolve their expertise with each other and the wider organisation, having less demarcation between specialisms, and in being prepared to explore alternative approaches so as to increase capacity and variety in CST. This touches upon the issue raised in section 11.3.1 relating to the specialists wanting to “*uphold mystifications of their unique profession*”. (Wood *et al*, 2008, pp.76-77). Such a change might provide an opportunity to clarify the role of the facilitator of CST within the service and this is something that will be discussed in section 11.8.5. The employment of systems thinking by police leadership was discussed in 11.2.1 (ii), where it was proposed that mode 2 thinking might provide a larger platform from which to deploy systems thinking than the mode 1 applications led by specialists. Earlier in this section it was noted that a capable facilitator was required to successfully deploy CST. A practical balance is required between widespread deployment of systems thinking capability and the depth of capability of the specialist facilitator of CST and this is something that will be considered in section 11.8.5.

### **11.8.2 Dynamic flexibility**

*The facilitator possessing the ability to dynamically respond to the prevailing diverse requirements of the problem situation, avoiding limitations that might be presented by a predefined structure or methodology.*

All interventions within the action research necessitated an ability to select specialist approaches and adapt them in response to the evolving problem situation. On occasions these were immediate but they were always contingent. Typically, the Community Safety intervention which reflected PANDA’s pluralism in the facilitation process where the intervention facilitator needed to be alive to changing dynamics and atmosphere during an intervention and be aware of the opportunities to refine the approach through an informed selection and application of appropriate methods and techniques (Appendix 2; 4; 10). In a more general sense, following two separate applications of the same methodology the QUEST intervention noted that the difference in success was more about having a suitable ‘professional’ capability than the

methodology itself (Appendix 4; 2; 8). The IOM intervention emphasised both the value of specialist knowledge as well as engaging a facilitator with good group facilitation skills to direct the process and to complement specialist expertise in relevant systems thinking approaches (section 6.6 (iii)). This is consistent with observations in literature elsewhere regarding the challenge presented to facilitators of CST, (Eden, 1990; Kay and Halpin, 1999; Mingers and Brocklesby, 1997; Eden et al. 2009; Pollack, 2009) as well as in practice on the basis of this research, where stakeholders perceived significant importance in the capabilities of the facilitator/consultant (Appendix 8; 2; 2.3); (Appendix 4; 2; 29). It was noted that facilitators need to be able to read the audience and possess a range of approaches that match the prevailing needs of the problem rather than relying on a single predefined specialist facilitation structure or methodology. Heron (1989, p.17) noted that the effective facilitator should be competent in a variety of modes and applications of facilitation and have the ability to move flexibly between each depending on the needs of the prevailing context. The value of employing multi-methodology in parallel with the facilitator using CST in both modes 1 and 2 to reflect on and respond to the unfolding problem situation might be the only way of achieving sufficient dynamic flexibility in the systems approaches used and in their effective deployment.

### **11.8.3 Client and context diversity**

*To become an effective interventionist, the facilitator of CST embracing Argyris' primary tasks in relation to whole client system diversity.*

One of the products of this research has been an analysis of the defining features of a problem situation and this was discussed in section 11.5. The value of this analysis was recognised as a means of improving understanding of context and recognising different needs and expectations of those involved and affected by an intervention. It was found that the application of this sort of approach might have benefitted from a more formal discussion with the sponsor and key stakeholders to broaden and enrich their view of the whole client system (Appendix 6; 2; 6) and the IOM intervention found that this

would benefit from being an on-going engagement (Appendix 5; 3; 6). This might also be seen as part of a cultural stream of analysis (Checkland and Scholes, 1990).

The challenge to the internal consultant in building and maintaining the confidence of the senior leadership has already been discussed in section 11.2, particularly when the facilitator is seeking to preserve the principles of CST through encouragement of diversity in contribution and thereby avoiding the limitation of simply administering the leadership requirements for change (Schwarz, 1994, p.15). Encouraging a 'hands-on' involvement in the analysis of options was seen in the research interventions as a valuable way of understanding the diverse and changing needs of participants as well as enabling them to feel engaged in the decision making process (Appendix 4; 2; 28) and this is consistent with the aspirations of effective facilitation (Kirschenbaum and Henderson, 1989, p.321; Argyris and Schon, 1974, p.87). However, the Departmental Review intervention also exposed a challenge for the facilitator when key decisions appeared to be being made outside of the formal process behind the scenes, underlining the limitation of the change agent in shaping the progress of an intervention in situations where power and coercion might exist. The issue of organisational culture, discussed in section 11.3, has a clear influence on this finding, emphasising the interdependence of these observations and where improvement in one area might be dependent upon improvement elsewhere.

Reflecting upon Argyris' Intervention Theory (1970), the CST interventionist is likely to be required to support situations occurring at higher levels in the organisation where problems relate to innovation, where information is potentially threatening or where internal commitment is required (Argyris, 1970, p.56). These types of situation, being more complex and plural are clearly typical of those being faced by critical systems thinkers in the sector and if these facilitators are to be effective interventionists within wicked problems then Argyris' primary tasks must be seen as relevant and so too recognising that they relate to the diversity of the whole client system (section 3.2.5 (iii)).

#### 11.8.4 Management of complexity

*The facilitator of CST viewed through a complexity lens becomes responsible for:*

- *identifying patterns, analysing interactions and interconnections within the problem situation;*
- *adapting and responding to, sometimes small, emergent opportunities or problems as they arise within the intervention;*
- *encouraging variety, exception and creativity in viewpoints;*
- *supporting mutual understanding and learning within a co-evolutionary process;*
- *helping participants progress iteratively towards their desirable future(s) through incremental, locally optimal solutions;*
- *recognising and exploiting bifurcation points for the critical mass;*
- *accepting and exploiting a degree of self-organisation.*

The Departmental Review intervention raised a question as to whether the role of the critical systems thinker could be usefully viewed through a complexity lens due to the particularly challenging situation presented to the facilitator in that project (9.7). Here it was noted that four out of the six interventions had identified aspects of relevance to a complexity lens. The relevance of viewing the challenge faced by the facilitator of CST as one of managing complexity has already been touched upon in this chapter through for example the recognition of the relevance of incremental change in complex situations (11.7.3) and extending this to describe the change process through the Beckhard change formula (11.7.4).

In this section the challenge of managing complexity will be considered through the principles underpinning complexity theory, where individual participants in a problem situation might be seen to interact in a complex web, each pursuing, seeking to optimise and continually refining, their own goals as the problem situation evolves. The exploration here to reflect on the role of the facilitator and try to make sense of it through employment of a complexity lens is very much in a mode 2 style of systems thinking.

Axelrod and Cohen (2001) identify a framework to help think through complex settings and take advantage of complexity to generate new possibilities. Their framework describes complex adaptive systems thus:

*“Agents of a variety of types use their strategies, in patterned interaction, with each other and with artefacts. Performance measures on the resulting events drive the selection of agents and/or strategies through processes of error-prone copying and recombination, thus changing the frequencies of the types within the system.”* (Axelrod and Cohen, 2001, p.154).

Their framework is based upon the concept of an agent responding to their environment in pursuit of their own goals through a strategy which might change over time. Specific measures of success tell the agent how well they are meeting their strategies. Strategies spread and change over time through various interactions between agents, including copying and reproducing within the population and variation among strategies is created. Populations possess structures or interaction patterns that can determine what interactions take place and how strategies might spread and change. When a strategy selection leads to improvement in terms of some measures of performance it becomes adaption. When a system contains agents or populations that seek to adapt they refer to these as complex adaptive systems. (Axelrod and Cohen, 2001).

There are clear similarities between Axelrod and Cohen’s description and the situation the facilitator of CST might face when addressing wicked problem contexts. Here the facilitator sees a variety of stakeholders (agents) pursuing their own goals, judging their success through a variety of measures relevant to each agent. These strategies change over time through interactions between agents and when this leads to improvement in terms of relevant measures for a critical mass, even locally or temporarily, this is the ‘bifurcation’ point where commitment to incremental improvement or adaption takes place and where for a critical mass, resistance to change transforms to a consent to change. This very much reflects the process described by the change formula presented in section 11.7.4, confirming the relevance of employing such a complexity lens.



Axelrod and Cohen observe:

*“ as agents adjust to their experience by revising their strategies, they are constantly changing the context in which other agents are trying to adapt.....Each change of strategy by a worker alters the context in which the next change will be tried and evaluated. When multiple populations of agents are adapting to each other, the result is a coevolutionary process.”* (Axelrod and Cohen, 2001, p.8).

Axelrod and Cohen propose a range of actions (pp.155-156) to take advantage of complexity, some of which have particular relevance to the facilitator of CST, including:

- *Build networks of reciprocal interaction that foster trust and co-operation*
- *Promote effective neighbourhoods to help would be co-operators to interact*
- *Look for shorter term, finer grained measures of success that can usefully stand in for longer-run broader goals*
- *Do not sow large failure when reaping small efficiencies*

(Axelrod and Cohen, 2001, pp.155-156).

Employing this complexity lens aids reflection upon the facilitator’s role in a typically wicked problem, becoming responsible for:

- identifying patterns, analysing interactions and interconnections within the problem situation;
- adapting and responding to, sometimes small, emergent opportunities or problems as they arise within the intervention;
- encouraging variety, exception and creativity in viewpoints;
- supporting mutual understanding and learning within a co-evolutionary process;
- helping participants progress iteratively towards their desirable future(s) through incremental, locally optimal solutions;
- recognising and exploiting bifurcation points for the critical mass;
- accepting and exploiting a degree of self-organisation.

Through employment of this complexity lens the facilitator is seen to be released from believing they can or need to control every individual interaction and that they must accept and exploit a degree of self-organisation, such as that observed in the Departmental Review. The prescription of a detailed ‘grand plan’ for such interventions would seem inappropriate and instead, the problem solver would rely upon a flexible and plural capability to recognise and respond to circumstances as they arise, working towards the achievement of incremental positive progress in the problem situation, very much as suggested in sections 11.7, 11.8.2 and 11.8.3. Jackson (2003) makes similar observations regarding the value of complexity theory to managers but here, having established that to be an effective interventionist the facilitator of CST needs to recognise the diversity of the whole client system, the facilitator’s challenge is now extended beyond the boundaries of their direct knowledge or influence should it be accepted that self-organisation is of relevance. This aspect will be picked up in the following section when a recursive model will be considered to reflect on the role of the facilitator of CST.

#### **11.8.5 Roles in critical systems thinking**

*Recognising the concurrent existence of CST at different application recursion levels provides a basis for a more considered exploration of the role of the facilitator of CST and the devolution of its deployment.*

*A recursive model of application levels provides greater coherence in understanding the variety of roles in the employment of methodologies, methods and techniques, from locally applied continuous improvement to major cross organisational change.*

Through the various research iterations a variety of roles have been recognised, including those of organisational leadership, the facilitator of CST and those participating in intervention change activity. Previous sections have already discussed findings relevant to each of these but here we are seeking to firstly reflect on how the variety of roles might feature in different aspects of the application of CST within an intervention through employment of a recursive model. Secondly, to draw together

relevant findings from all clusters within this chapter to reflect upon the role of the facilitator of CST based on the practical experienced of this research. Finally, a comparison will be made between this practical role and the theoretical role of the facilitator of CST derived in section 4.3.4. This section will be structured under three headings:

- (i) Recursive model
- (ii) Role of facilitator of CST based on practice
- (iii) Comparison of theoretical and practical roles of the facilitator of CST

**(i) Recursive model**

The ASB intervention raised a question regarding the potential to view the role of the facilitator of CST in a recursive structure and given its strength in supporting structural insight earlier in this research, the VSM (Beer, 1972, 1985) will again be used here.

This decision is based upon the following rationale:

- The Personal Applications (section 10.5) saw benefit in drawing upon the VSM with its strength in helping to understand the force delivery structures where governance arrangements were considered in a recursive structure.
- So too the Departmental Review intervention (section 9.4 (v)), where the VSM was used to provide diagnosis of a new organisational structure.
- Section 11.8.4 has already considered the role of the critical systems thinker as one of managing complexity and it is noted that the VSM possesses strength in providing structure in a domain of complexity (section 3.2.3 (i)).
- The interventions within this research have demonstrated the concurrent existence of CST at different (recursion) levels of application:
  - methodology selection
  - methodology application
  - personal activity

Drawing upon research undertaken by Howick and Ackermann (2011, p.504), an “*implicitly hierarchical structure*” of categories of activity related to multi-methodology might be considered to reflect:

- (a) How work is carried out – the techniques utilised.
- (b) What types of activities are required – the methodological stages to guide the order of activities.
- (c) Why the types of activities should be undertaken – the philosophical dimension of a paradigm.

Such a hierarchical structure is consistent with findings from this research which noted the relevance of viewing CST within a recursive hierarchy, and bringing these concepts together it is possible to conceive of a model to reflect upon the employment of CST activity at different levels of application. For example, reflecting upon the ASB intervention, this sought to test the ability to devolve responsibility for the application of systems thinking to the wider workforce within a project to implement a chosen methodology and to then provide supporting processes to assist that implementation. Employing the structure provided by the VSM, if this implementation of a methodology is considered to be the ‘system 1’ in terms of the VSM, then the supporting processes can be viewed as ‘systems 2 to 5’. Employing VSM’s recursive structure and taking the methodology deployment as recursion level 1, it is possible to extend this concept further and consider the meta-methodology level as recursion level 0 and the application of individual techniques/activities within the methodology as recursion level 2. In the following discussion these will be referred to as different ‘application levels’ of CST. Drawing on the experience of the set of personal applications (Chapter 10), the value was recognised in utilising mode 2 as a valid means of deploying systems thinking while preserving the commitments of CST. It was shown that the flexible and contingent use of mode 2 CST within the personal applications helped to successfully respond to the prevailing and evolving problem situation and the nature of different modes of CST can also be recognised in this recursive structure.

In general terms, if the deployment of CST within a typical methodology application becomes the system in focus (recursion level 1) then the following recursive structure is illustrative of the types of role the facilitator of CST might be engaged in:

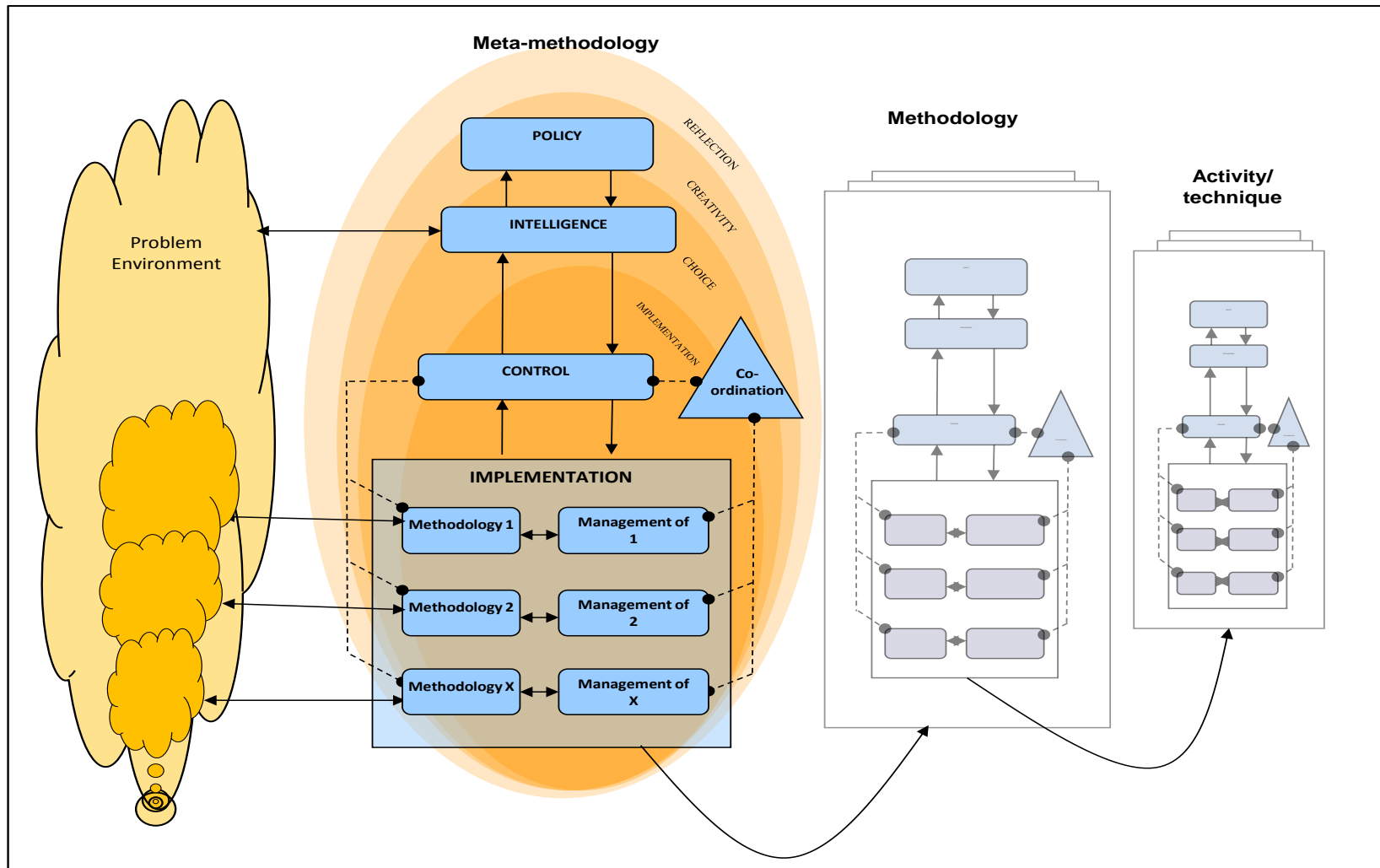
**Level 0** = Meta-methodology level. CST at a meta-level might be reflected in a variety of ways but typically through the stages of CSP: creativity; choice; implementation; and reflection. Various methodologies may be implemented in series or parallel within System 1. Here the facilitator with particular capability and experience is responsible for supporting CSP, promoting CST and handling (multiple) systems approaches in series and parallel and in different modes while recognising dynamic plurality of context. Close engagement with leadership is likely at this level as part of establishing and planning change initiatives and where leadership has previous knowledge and exposure to systems thinking, the CST may be more overt. This level has been reflected in various stages of the research interventions, but most obviously the IOM and ASB interventions.

**Level 1** = Methodology level. Deployment of CST within individual methodological applications, comprising of ‘whole’ specific methodologies or ‘generic’ systems methodologies (Jackson, 2003, pp.307-311). Selected methodology components become the ‘System 1’ at this level and the facilitator is responsible for implementing approaches with integrity in accordance with the requirements of the methodology in question. The facilitator of CST at this level is likely to require specialist capabilities in the chosen methodology but, employing a critical awareness, also introducing new methodologies and techniques as required by the evolving problem context and thereby necessitating concurrent consideration of the other recursion levels. This level was partly reflected in the Community Safety, IOM and QUEST interventions and ‘Personal Application’ examples.

**Level 2** = Activity/technique level employment of CST. This may include a more routine application of techniques but drawing on the experience of the personal applications, a more personal application of CST may also be prevalent here. The ‘how’ to implement components of systems approaches here might not require formal expertise in whole systems methodologies, enabling the potential for increased devolution of responsibility as seen in the QUEST and ASB interventions and in these situations success will often depend on an individual’s capabilities. Where CST is present it might well feature in more of a ‘mode 2’ form, employed as the need arises by

those within the problem situation, involving various systems techniques. This might be considered to be an ad-hoc employment of CST to try and make sense of a prevailing situation such as that experienced in the personal application examples. It might also involve applying a defined technique in a mode 1 form, such as in an environment of ‘continuous improvement’ where the application of selected routine techniques may be encouraged amongst and devolved to the workforce. Although this level can reflect mode 1 activity that might more readily be grasped by non-specialists as evidenced in the QUEST intervention where the transfer to non-specialists of certain lean systems techniques appeared to be successful and then re-used by individuals in a subsequent (ASB) intervention, this level is relevant to all participants, including specialist facilitators as well as reflective leaders employing mode 2 CST.

This structure is illustrated in Figure 11.6.



**Figure 11.6:** Recursive model for role of facilitator of CST

The recursive structure encourages the concept of concurrency in terms of the application levels for the facilitator of CST who needs to maintain continuous awareness at all levels. Taking Howick and Ackermann's (2011) categories, this might be viewed: at a meta level - to consider the 'why' question, recognising the paradigms most relevant to the current situation and identifying methodologies as required; at the methodology level – to consider the 'what' question, adapting an approach to prevailing circumstances; and in the activity/technique level questioning how the techniques and activities are being applied and whether they need to be deployed in different ways. This is not a sequential process and the demarcations between application levels are neither clear nor definitive. The model recognises these relationships more as being complex and relative.

The model's structure provides a basis for exploration of various aspects of the facilitation of CST and related roles. For example, section 11.8.4 discussed the facilitator's challenge of understanding self-organisation. Although some self-organisation might occur within any formal process, it is possible too that it may be occurring outside of this and the facilitator may have no knowledge or influence over this. Such an activity might be seen as outside of the control and co-ordination of the formal facilitation process and be considered within the recursive model as an environmental feature about which to gather intelligence. This type of activity might be seen to be part of the 'stream of cultural analysis' advocated in the two stream form of SSM (Checkland and Scholes, 1990; Checkland, 2000). Section 11.3.1 recognised the potential for tension within the new police governance arrangements and how control and leadership of change might be affected. The employment of a coherent model for better understanding the variety of roles involved in change provides a basis for a more formal exploration of such tensions. Further, through utilisation of the VSM structure, the opportunity is provided for employment of more formal analyses, such as Viable Systems Diagnosis (Flood and Jackson, 1991).

Table 11.2 includes an example of some typical roles of the facilitator of CST at each level of recursion. In this version the italic text is illustrative of those activities that the researcher considered to require more specialist CST capabilities based on the



experience of this research. It is not intended to provide an exhaustive or strict categorisation of roles as these will be very much dependent upon the specific context of each problem situation, but it is seen to identify roles in typical situations with examples of how this was experienced within this action research. This type of exploration also helps to provide a coherent structure for better understanding the various applications of systems methodologies, methods and techniques currently in employment across the police service, be they locally applied approaches to more routine (Argyris, 1970, p.56) continuous improvement or major cross organisational change programmes. Further, there is a potential to extend this analysis to encompass other stakeholder roles, such as those of organisational leadership and governance.

Clearly, this emerging finding is very much at a formative stage and a thorough exploration here has not been feasible. However, the concept for recognising the concurrent existence of CST at these different levels and for exploring the control and co-ordination of its application within a devolved structure may warrant further research as part of the on-going development of critical systems practice as well as informing a deeper understanding of the role of the facilitator of CST, be that a specialist, an organisational leader or a member of the workforce involved in change.

Level	Component	Some Typical Roles
0	Policy Intelligence	<ul style="list-style-type: none"> <li>• Creative exploration of problem context, relevant paradigms etc. (e.g. defining features analysis within ASB intervention or Departmental Review intervention)</li> <li>• Choice of most appropriate and acceptable systems approaches to address the problem situation in close liaison with organisational leadership</li> <li>• Reflection to create learning about the problem situation, systems approaches employed and the meta-methodology</li> <li>• Communication/sharing of learning based upon practice</li> </ul>
	Implementation	<ul style="list-style-type: none"> <li>• Implementation of (multiple) systems approaches in series and parallel to achieve desired change</li> </ul>
	Control Co-ordination	<ul style="list-style-type: none"> <li>• Co-ordination of (multiple) systems approaches in series and parallel in recognition of changing context</li> <li>• Control to appropriately resource and preserve CST during implementation</li> </ul>
1	Policy Intelligence	<ul style="list-style-type: none"> <li>• Reflection upon and critical awareness of the evolving situation and the potential to select and adapt systems approach in response (e.g.1 where the QUEST intervention required specialist facilitators to adapt the selected methodology during deployment; e.g.2 awareness of any self-organisation or alternative decision making processes within the environment as experienced in the Department Review intervention)</li> <li>• Learning in relation to systems approaches employed</li> <li>• Communication/sharing of learning based upon practice</li> <li>• Creativity to identify issues and opportunities within the evolving problem situation</li> <li>• Employment of different representations/models as part of intelligence gathering and communication</li> </ul>
	Implementation	<ul style="list-style-type: none"> <li>• Implementation of methodologies, components of systems approaches etc. to achieve the desired change in accordance with the requirements of selected methodologies</li> </ul>
	Control Co-ordination	<ul style="list-style-type: none"> <li>• Co-ordination of components of systems approach, potentially devolved to non-specialist (e.g. QUEST intervention project manager role)</li> <li>• Control the deployment of systems approach to ensure appropriate standards by appropriate resources</li> <li>• Identification and allocation of appropriate resources to support deployment (e.g. specialists)</li> </ul>
2	Policy Intelligence	<ul style="list-style-type: none"> <li>• Mode 2 reflection on everyday flux in the problem situation (e.g. within the departmental review and personal interventions)</li> <li>• Learning in relation to tools and techniques employed</li> <li>• Communication/sharing of learning based upon practice</li> </ul>
	Implementation	<ul style="list-style-type: none"> <li>• Implementation of routine problem solving activities, tools and techniques, potentially devolved to a non-specialist (e.g. within the QUEST and ASB interventions, non-specialist staff employing ‘dip-sampling’ as part of the methodology component of issue exploration)</li> <li>• Self-organisation in the application of techniques</li> <li>• Provision of specialist advice on techniques</li> <li>• Development of coherent components of systems approaches for use by non-specialists</li> </ul>
	Control Co-ordination	<ul style="list-style-type: none"> <li>• Co-ordination of activities to implement component of the systems approach</li> <li>• Control, to preserve the integrity of components of the systems approach in implementation</li> </ul>

**Table 11.2:** Role of the facilitator at different levels of recursion

(ii) **Role of facilitator of CST based on practice**

Reflecting upon the range of salient findings that have been identified in this chapter, a number have direct relevance to the role of the facilitator of CST. Table 11.3 includes those salient findings that have a direct bearing on the facilitator’s role within a problem situation, with the key aspects highlighted in bold text.

**Table 11.3:** Salient findings relevant to the role of the facilitator of CST

<b>Cluster</b>	<b>Finding</b>
Organisational leadership	<ul style="list-style-type: none"> <li>Facilitators quickly establishing and <b>building their credibility with the organisational leadership across all relevant agencies through visibility and close engagement</b> during and outside of interventions, while carefully <b>balancing rigour and relevance of approaches employed</b>.</li> <li>The facilitator of CST instilling client ownership of solutions through <b>enablement of free and informed choice</b></li> </ul>
Organisational culture	<ul style="list-style-type: none"> <li>The employment of culturally acceptable systems approaches that are both practically based and theoretically sound, such as a <b>high level structure to guide problem solving with flexibility for an informed adaption of detail to match the prevailing needs of an appropriately diagnosed problem context</b>.</li> </ul>
Devolved capability	<ul style="list-style-type: none"> <li><b>Engagement with capable, credible and committed leaders, managers and staff locally</b> in understanding, developing, owning and sustaining relevant solutions in a dynamic operating environment.</li> <li>Ability to <b>devolve systems thinking capability</b> to the wider workforce through involvement in professionally supported interventions.</li> </ul>
Boundary management	<ul style="list-style-type: none"> <li>The importance of the facilitator <b>gaining and sustaining an appreciation of the landscape of diversity</b> within problem situations and identifying centres of gravity in terms of defining features.</li> </ul>
Methodological features	<ul style="list-style-type: none"> <li>The development of <b>valid and useful information</b> to enhance the understanding of system characteristics and interconnectedness, providing an evidence base comprising a diversity of reliable qualitative and quantitative data presented in a <b>variety of modes of representation</b>.</li> <li>An experienced practitioner of systems thinking <b>moving flexibly between modes of application</b>, both consciously and unconsciously as necessitated by the unfolding intervention to support <b>contingent employment of parallel multi-methodology</b>.</li> </ul>
Change variables	<ul style="list-style-type: none"> <li>The ability to support diverse stakeholders in the <b>development of a view of a desired future state</b>.</li> <li>The potential for <b>deep structure conflict</b> to limit the successful</li> </ul>

	<p>implementation and sustainability of innovation and change.</p> <ul style="list-style-type: none"> <li>• <b>Recognising and supporting exploration of potential causes of conflict and resistance to change</b> through appropriate systems thinking.</li> <li>• The importance of the facilitator of CST <b>continually recognising and iteratively attending to the diverse needs of the whole client system.</b></li> <li>• In situations of complexity, an <b>incremental progress towards desirable outcomes</b> is a valid approach for the facilitator of CST, with its application co-evolving as the problem situation unfolds.</li> </ul>
Capable facilitation	<ul style="list-style-type: none"> <li>• The importance of <b>involving facilitators with significant capability in the informed selection and deployment of a variety of systems approaches as well as effective group facilitation.</b></li> <li>• The value of facilitators able to <b>employ multi-methodology in parallel in modes 1 and 2</b> in responding to the challenges of wicked problem situations typical of multi-agency settings.</li> <li>• The facilitator possessing the ability to <b>dynamically respond to the prevailing diverse requirements of the problem situation</b>, avoiding limitations that might be presented by a predefined structure or methodology.</li> <li>• To become an effective interventionist, the facilitator of CST <b>embracing Argyris’ primary tasks in relation to whole client system diversity.</b></li> <li>• The facilitator of CST viewed through a complexity lens becomes responsible for: <ul style="list-style-type: none"> <li>• <b>identifying patterns, analysing interactions and interconnections</b> within the problem situation;</li> <li>• <b>adapting and responding to, sometimes small, emergent opportunities or problems</b> as they arise within the intervention;</li> <li>• <b>encouraging variety, exception and creativity</b> in viewpoints;</li> <li>• <b>supporting mutual understanding and learning within a co-evolutionary process;</b></li> <li>• helping participants <b>progress iteratively towards their desirable future(s) through incremental, locally optimal solutions;</b></li> <li>• <b>recognising and exploiting bifurcation points for the critical mass;</b></li> <li>• <b>accepting and exploiting a degree of self-organisation.</b></li> </ul> </li> </ul>

**Table 11.3:** Salient findings relevant to the role of the facilitator of CST

Accepting there is a degree of detail and overlap in some of the highlighted key aspects, it is possible to develop a SSM root definition summarising the role of the facilitator of

CST, based upon the key aspects of practice identified within the action research programme:

“An intervention facilitator owned system, closely engaging relevant, capable, credible and committed leaders, managers, staff and informed facilitators; to continually manage the problem boundaries, complexity and landscape of diversity of the evolving client system for exploration and incremental progression towards desirable future states in a co-evolutionary process that recognises and overcomes conflict and the resistance to consent to change of a critical mass; through the informed and flexible employment of critical systems thinking between modes 1 and 2, devolved as appropriate within all levels of application; that accommodates self-organisation and secures participant variety, creativity, analysis, understanding, learning, free choice and commitment through provision of valid and useful information.”

Where the ‘CATWOE’ features are considered to be:

**C** = Intervention stakeholder(s)

**A** = Intervention participants

**T** = Variety of stakeholder desired outcomes achieved

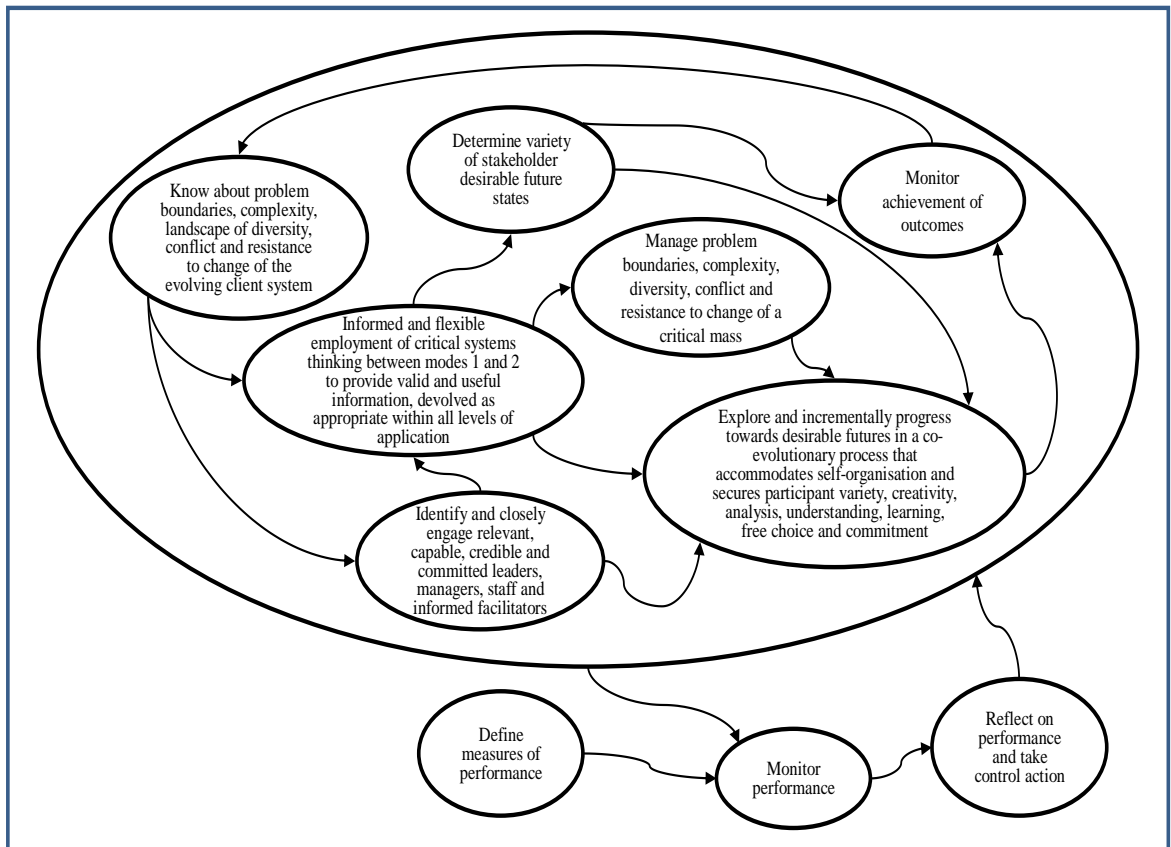
**W** = The variety of stakeholder desired outcomes can be successfully achieved through:

- close engagement with relevant, capable, credible and committed leaders, managers, staff and informed facilitators;
- continually managing the problem boundaries, complexity and landscape of diversity of the evolving client system;
- exploration and incremental progression towards desirable future states in a co-evolutionary process that recognises and overcomes conflict and the resistance to consent to change of a critical mass;
- informed and flexible employment of critical systems thinking between modes 1 and 2, devolved as appropriate within all levels of application;
- accommodation of self-organisation and securing participant variety, creativity, analysis, understanding, learning, free choice and commitment through provision of valid and useful information

**O** = Intervention facilitator

**E** = Problem boundaries

Taking this root definition, a conceptual model (Figure 11.7) has been developed for the role of the facilitator of CST based upon practice experienced within this action research programme. A visual representation of this role is included as Figure 11.8.



**Figure 11.7:** Conceptual model of the role of the facilitator of critical systems thinking based on practice

**(iii) Comparison of theoretical and practical roles of the facilitator of CST**

The research methodology (Chapter 4) drew upon relevant theory to define a conceptual model for the role of the facilitator of CST which was used to design the intervention research structure (section 4.3.4). Following the programme of action research iterations, a variety of the findings were of particular relevance to the role of the

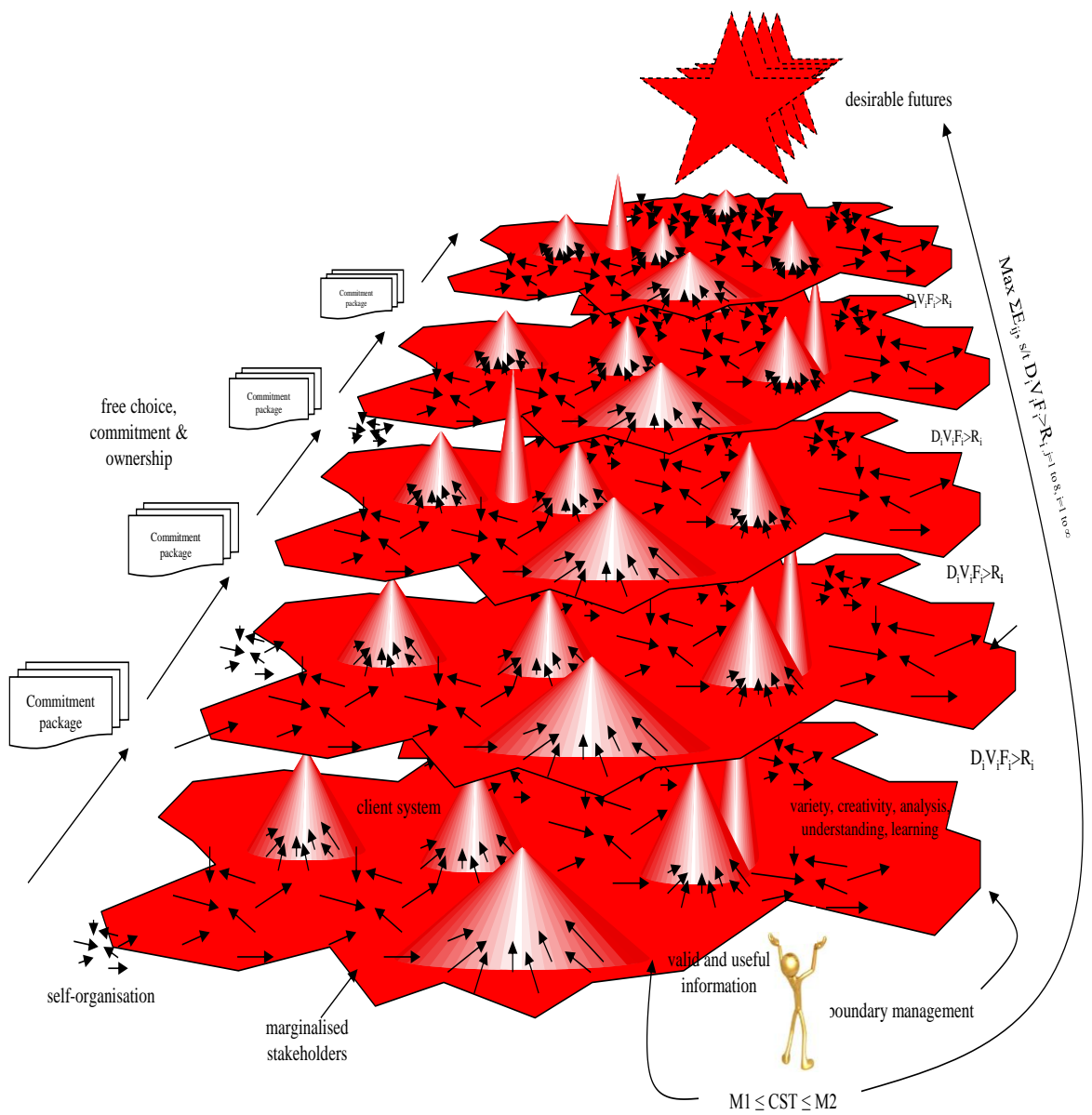
facilitator of CST, providing a new definition for this role based upon practice. This closing section will compare these two definitions to identify:

- (a) Any potential **gaps in the practical exploration** included in this action research and consequently potential gaps in the research findings.
- (b) Any qualification or **potential extensions to the theoretical role** of the facilitator of CST.

Table 11.4 compares the activities comprising the conceptual models derived from theory and practice. It should be noted that as far as possible a similar model structure has been maintained to facilitate a more direct comparison.

<b>Activities from theoretical root definition</b>	<b>Activities from practical root definition</b>	<b>Difference in model based on practice</b>
Know about social and organisational environment of problem situation	Know about problem boundaries, complexity, landscape of diversity, conflict and resistance to change of the evolving client system	Makes explicit some aspects of learning about the environment such as boundary
Maintain critical awareness of strengths and weaknesses of systems approaches	Identify and closely engage relevant, capable, credible and committed leaders, managers, staff and informed facilitators	Combines identification of participants with informed facilitators
Identify appropriate participants		
Employ pluralism in the use of contextually appropriate systems approaches	Informed and flexible employment of critical systems thinking between modes 1 and 2 to provide valid and useful information, devolved as appropriate within all levels of application	Explicit reference to modes of CST, the different application levels and potential to devolve aspects of CST
	Manage problem boundaries, complexity, diversity, conflict and resistance to change of a critical mass	In effect expands on the 'contextually appropriate' aspect
Determine the variety of stakeholder desired outcomes	Determine variety of stakeholder desirable future states	Same
Creatively explore and implement change with relevant participants	Explore and incrementally progress towards desirable futures in a co-evolutionary process that accommodates self-organisation and secures participant variety, creativity, analysis, understanding, learning, free choice and commitment	Makes explicit the incremental approach; recognises participant ownership and aspects of 'self-organisation' outside the formal process
Monitor achievement of outcomes	Monitor achievement of outcomes	Same
Define measures of performance	Define measures of performance	Same
Monitor performance	Monitor performance	Same
Reflect on performance and take control action	Reflect on performance and take control action	Same

**Table 11.4:** Comparison of theoretical and practical roles of the facilitator of CST.



**Figure 11.8:** The role of the facilitator of CST based upon practice



### **(a) Gaps in the practical exploration**

Although there are a number of differences in some model wording, much of this appears to be the result of the practical model incorporating explicit reference to detail that emerged from the research interventions as opposed to the more general terms included in the theoretical model. This is something that might be expected as the theoretical model was constructed to be sufficiently broad so as to encompass a generalised application.

Accepting this, there would appear to be no significant gaps in the practical model and thereby implying no fundamental gaps in the exploration of the role of the facilitator within the findings. The theoretical activity of ‘maintain critical awareness of strengths and weaknesses of systems approaches’ is not as explicit in the practical model but it is implied within the ‘informed facilitators’ aspect. By way of a confirmation, referring back to the research findings it is clear that this aspect has been well covered despite it not being included explicitly in the practical model wording.

### **(b) Potential extensions to the theoretical role**

On the basis of the comparison in Table 11.4, the aspects included in the practical model that may be considered extensions to the theoretical role include:

- Explicit reference to the different modes of CST.
- Recognition of different levels at which CST may be applied derived from the recursive model.
- Recognition of the potential for devolution of aspects of CST.
- Recognition of the existence of self-organisation outside the more formal intervention process.

These potential extensions will be considered further in the concluding chapter of this research.

## **11.9 Research findings conclusion**

The series of action research interventions within this programme separately identified a wide variety of observations relevant to the research objectives and questions and these have been synthesised through an analysis of findings that identified an interconnected set of salient findings that capture the defining features of this research (Table 11.5, Appendix 8, section 5 and Table 12.1).

The concluding chapter will reflect upon these salient findings in relation to the original research questions and objectives, their contribution to knowledge and in terms of future directions for related research.

## Chapter 12 : Conclusion

### 12.1 Introduction

An exploration of the policing and community safety business context (Chapter 2) has identified an increasingly complex, dynamic and pluralistic operating environment that is presenting a significant challenge to the problem structuring and solving approaches traditionally used by managers in this sector. A review of the systems approaches currently evident in the sector has identified major deficiencies in the capability of the traditional approaches in use to effectively meet the prevailing challenges (Chapter 3). A literature review has recognised significant developments in the field of systems thinking that enable problem situations to be tackled more holistically, employing a variety of systems approaches in combination to improve success in problem situations of greater plurality and complexity (Chapter 3).

The evolution of CST (Chapter 3) has been shaped through a variety of action learning based upon the application of systems thinking in practice and a co-evolutionary research agenda is recognised, targeting further exploration of CST in the policing and community safety sector. The researcher, employed as an internal consultant within a major UK police force, is involved on a daily basis in the application of systems approaches to tackle prevailing problem situations. This presented a valuable opportunity to design and deliver an action research programme (Chapter 4) to explore the application of CST in a diverse and high profile range of interventions and to capture the learning from these (Chapter 11). This chapter aims to reflect upon the outcomes of this research and assess the degree to which the original research questions and objectives have been achieved, along with the research validity, reliability and generalisability. The reflection will identify the contribution the research findings have made, based upon their practical value within the business sector as well as their contribution within the field of critical systems thinking and practice. Future potential directions for related research have also been identified to provide an agenda for further development.

This chapter is structured upon four main components:

- (i) A formal response to the original research questions and objectives.
- (ii) Consideration of the research validity, reliability and generalizability.
- (iii) A critical reflection upon the contribution to knowledge in a practical and theoretical sense.
- (iv) Future directions.

## **12.2 Research questions and objectives**

Chapter 4 presented a series of research questions, related objectives and evaluation methods and this generic design is captured in Appendix 1. Each research intervention evaluation included in Part II has utilised this structure and made explicit reference to the objectives and methods of evaluation. The synthesis of the various intervention evaluations presented in Chapter 11 resulted in the identification of a set of findings (Table 11.5, Appendix 8, section 5) which define the outcomes of this research programme and these salient findings along with their underpinning components will help to inform the reflection included here. Table 12.1 presents these salient findings alongside the research objectives and indicates which findings are relevant to each objective. It should be noted that none of the findings are specific to objective 1 so this has been excluded from the table. However, as all findings relate to aspects of CST in a general sense they are all relevant to objective 1. The remainder of this section considers each research question and related objective in turn.

**Table 12.1:** Research findings relevant to research objectives

Research Finding		Research Objective				
		2	3	4	5	6
<b>Organisational Leadership</b>						
1	Leadership developing an understanding of, and confidence in, alternative systems approaches that build the variety necessary to match the complex, plural and evolving operating environment, via active engagement throughout interventions as well as formal management development.					√
2	The potential for sharing and developing practice and understanding of alternative systems approaches through the employment of culturally relevant problem archetypes.				√	√
3	Facilitators quickly establishing and building their credibility with the organisational leadership across all relevant agencies through visibility and close engagement during and outside of interventions, while carefully balancing rigour and relevance of approaches employed.			√		√
4	The facilitator of CST instilling client ownership of solutions through enablement of free and informed choice.			√		√
<b>Organisational Culture</b>						
5	Encouraging exploration of diversity through free and open contribution across the whole system by overcoming cultural and structural limitations to improve variety and success in problem situations.			√		√
6	The acceptance of systems approaches and their successful implementation is influenced by their accessibility and the necessary exposure of participants to unfamiliar theory or expertise in their deployment.			√		√
7	Managers and facilitators of CST recognising the risk of limiting their effectiveness in complex problem situations as a consequence of employing low variety, institutionalised approaches to problem solving.			√		√
8	The employment of culturally acceptable systems approaches that are both practically based and theoretically sound, such as a high level structure to guide problem solving with flexibility for an informed adaptation of detail to match the prevailing needs of an appropriately diagnosed problem context.			√		√
<b>Devolved Capability</b>						
9	Engagement with capable, credible and committed leaders, managers and staff locally in understanding, developing, owning and sustaining relevant solutions in a dynamic operating environment.					√
10	Ability to devolve systems thinking capability to the wider workforce through involvement in professionally supported interventions.			√	√	√

<b>Boundary Management</b>						
11	The importance of the facilitator gaining and sustaining an appreciation of the landscape of diversity within problem situations and identifying centres of gravity in terms of defining features.	√	√		√	√
<b>Methodological features</b>						
12	The potential for appropriately designed large group participative processes to concurrently attend to a diversity of paradigms.	√	√		√	√
13	The development of valid and useful information to enhance the understanding of system characteristics and interconnectedness, providing an evidence base comprising a diversity of reliable qualitative and quantitative data presented in a variety of modes of representation.	√	√			√
14	The ability of mode 2 applications of systems approaches to fulfil the commitments of CST.	√	√		√	
15	An emerging set of contextual determinants that might influence the recognition of mode 1 and 2 systems thinking in problem situations.	√	√		√	
16	An experienced practitioner of systems thinking moving flexibly between modes of application, both consciously and unconsciously as necessitated by the unfolding intervention to support contingent employment of parallel multi-methodology.	√	√	√	√	
17	The employment of parallel multi-methodology in different modes is of practical relevance in problem situations involving a variety of stakeholders reflecting multiple paradigm diversity.	√	√		√	√
<b>Change Variables</b>						
18	The ability to support diverse stakeholders in the development of a view of a desired future state.			√		√
19	The potential for deep structure conflict to limit the successful implementation and sustainability of innovation and change.				√	√
20	Recognising and supporting exploration of potential causes of conflict and resistance to change through appropriate systems thinking.			√		√
21	The importance of the facilitator of CST continually recognising and iteratively attending to the diverse needs of the whole client system.	√	√	√		√
22	In situations of complexity, an incremental progress towards desirable outcomes is a valid approach for the facilitator of CST, with its application co-evolving as the problem situation unfolds.	√	√	√	√	√
23	The role of the facilitator of CST can be represented through a mathematical heuristic as an objective function to maximise the variety of success measures associated with relevant paradigms, subject to the incremental fulfilment of the condition for change reflected in the Beckhard change formula.			√	√	

<b>Capable Facilitation</b>						
24	The importance of involving facilitators with significant capability in the informed selection and deployment of a variety of systems approaches as well as effective group facilitation.			√		√
25	The value of facilitators able to employ multi-methodology in parallel in modes 1 and 2 in responding to the challenges of wicked problem situations typical of multi-agency settings.			√	√	√
26	Facilitation leadership skills that maintain credibility in the approach by carefully balancing rigour and relevance in order to manage exposure of underlying theory and methods, through employment of different modes of application.			√		√
27	Facilitators being able and prepared to share and devolve their expertise with each other and the wider organisation in order to increase local capacity and variety in CST through a balance in the breadth and depth of capability.			√		√
28	The facilitator possessing the ability to dynamically respond to the prevailing diverse requirements of the problem situation, avoiding limitations that might be presented by a predefined structure or methodology.			√		√
29	To become an effective interventionist, the facilitator of CST embracing Argyris' primary tasks in relation to whole client system diversity.			√		√
30	The facilitator of CST viewed through a complexity lens becomes responsible for: <ul style="list-style-type: none"> <li>identifying patterns, analysing interactions and interconnections within the problem situation;</li> <li>adapting and responding to, sometimes small, emergent opportunities or problems as they arise within the intervention;</li> <li>encouraging variety, exception and creativity in viewpoints;</li> <li>supporting mutual understanding and learning within a co-evolutionary process;</li> <li>helping participants progress iteratively towards their desirable future(s) through incremental, locally optimal solutions;</li> <li>recognising and exploiting bifurcation points for the critical mass;</li> <li>accepting and exploiting a degree of self-organisation.</li> </ul>			√	√	
31	Recognising the concurrent existence of CST at different application recursion levels provides a basis for a more considered exploration of the role of the facilitator of CST and the devolution of its deployment.			√	√	
32	A recursive model of application levels provides greater coherence in understanding the variety of roles in the employment of methodologies, methods and techniques; from locally applied continuous improvement to major cross organisational change.			√	√	√

**Table 12.1:** Research findings relevant to research objectives

<b>Research Questions</b>	<b>Linked Research Objectives</b>
1. Can the application of critical systems thinking improve the success of joint problem solving within the policing and community safety sector?	1. Determine whether the application of critical systems thinking can bring about significant improvement in the effectiveness of joint service provision and its management

Although no specific research findings directly relate to this objective, all interventions employed CST in different forms and the majority of interventions involved multi-agency problems and all addressed problems involving a variety of stakeholders in joint service provision. Based upon the separate evaluations of each intervention and drawing upon the interviews with relevant stakeholders as part of these evaluations, the various interventions were considered to have facilitated improvement in relation to their objectives and it could therefore be concluded that the application of CST can bring about significant improvement. Although the Personal Applications intervention was unable to test the stakeholder perceptions in the same way, it was considered to have been successful in helping stakeholders address their problems based upon the fact that in all instances the stakeholders had accepted and implemented the products.

<b>Research Questions</b>	<b>Linked Research Objectives</b>
2. Are there combinations of systems methodologies, methods and techniques that are found to be particularly successful in meeting the challenges of service improvement, identifying the features that are influential in effective engagement of stakeholders and actors in joint service improvement interventions?	2. Identify and implement practical and informed combinations of systems approaches that help policing service stakeholders fulfil their purposes in relation to joint problem solving
3. How do these systems interventions address the challenge of handling the multiple philosophical assumptions (paradigms) that underpin the problem situations and systems approaches employed?	3. Determine the features of approaches that are found to be influential in successfully supporting multi-paradigm problem solving, recognising contextual factors that might affect transferability

The purpose of these questions and objectives centred upon the identification of practical and theoretically informed combinations of systems approaches that were able to handle multiple paradigms and to recognise their influential features and the



contextual factors affecting transferability. There was a wide variety of evidence within each intervention that supported the achievement of these objectives and this is emphasised in Table 12.1 where all findings relating to the methodological features and boundary management clusters provide evidence of this.

In relation to research question 3, how each of the approaches employed handled multiple paradigms, testing some diverse approaches employed was specifically discussed in the evaluation of each intervention and these experiences contributed to the relevant findings identified in Table 12.1. In response to question 2, through the research it quickly became apparent that the identification of particular detailed combinations of approaches was not feasible due to the uniqueness of the situations encountered. Broad guidance was identified in relation to helping facilitators identify features of problems that might warrant employment of systems approaches with particular strengths, dependent upon the problem context and the potential was also recognised for the employment of a culturally acceptable generic high level guiding structure, such as the National Decision Making Model (ACPO, 2011). However, greater importance was seen in capable facilitators possessing the ability to flexibly select and adapt approaches to meet the unique needs of problem situations as they unfold.

<b>Research Questions</b>	<b>Linked Research Objectives</b>
4. What is the influence of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed?	4. Determine the impact of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed, identifying those factors that are particularly influential.

A central strand within this research has been an exploration of the role of the leader/facilitator of CST and how they can successfully manage resistance to the implementation of change and a significant amount of supporting evidence has been obtained from each intervention and subsequently synthesised within the findings.

From Table 12.1 it can be seen that the majority of findings are of relevance to this objective and the depth and variety of evidence is sufficient to claim achievement of objective 4.

Although research question 4 has been partially answered as a result, the research recognised the role of the leader/facilitator of CST in a broader sense and this has resulted in the identification of some new avenues for consideration in relation to this role and these will be discussed in section 12.4.

<b>Research Questions</b>	<b>Linked Research Objectives</b>
5. Can effective processes be established to improve the capability of problem solvers in the sector (and beyond) to successfully select and employ systems thinking, through a more informed appreciation of the impact of systems approaches in prevailing problem contexts?	5. Derive learning from interventions to support the development of systems thinking more generally 6. Develop guidance to assist sector practitioners successfully select and employ systems thinking in problem situations through a better appreciation of the impact of systems approaches

This question and objectives relate to the learning derived that will be of practical and theoretical relevance within the sector as well as more generally. It can be seen from Table 12.1 that all findings are considered relevant to either objective 4 or 5 or indeed to both objectives. Consequently, the documentation of these findings will contribute to learning in both practical and theoretical terms and this will be discussed further in sections 12.3 and 12.4. Specifically in relation to the development of guidance (objective 6), although this is not explicitly referred to as such in the findings, it is encompassed within the finding related to sharing and developing practice and understanding of alternative systems approaches through the employment of culturally relevant problem archetypes.

In relation to research question 5, again the depth and variety of findings go some way to answering this question, but more significantly so within the policing and community safety sector where the research has been focused.

### 12.3 Research validity, reliability and generalisability

Validity, reliability and generalisability are factors that determine whether the research will stand up to external scrutiny and section 4.5 explained that this AR would employ Greenwood and Levin's (1998) challenges of credibility, needing to stand up to challenge in terms of:

- 'workability' – whether the resultant actions provide solutions to the problem;
- 'sense making' – from the tangible results of the AR by way of a meaning construction process that creates new knowledge; and
- 'transcontextual credibility' – reliable judgements can be made regarding the possibility of applying knowledge from one situation to another.

It was further considered that Checkland and Holwell's (1998) criterion of 'recoverability' should be considered, where the research thinking and activity is made explicit to enable others to follow the research process and understand how the outcomes were achieved.

The research design was structured so as to capture relevant data to respond to these criteria and each will be briefly considered here, recognising that the criteria and the evidence beneath each are not mutually exclusive.

**(a) Workability** – Section 12.2 presented an assessment of the research objectives to determine whether they can be considered to have provided a solution to the problem (in terms of specific intervention problems as well as the more general research learning objectives). Section 12.4 will extend this to assess the actual and potential impact of the research upon practice and such evidence of the implementation of research findings adds further weight to the achievement of this criterion.

**(b) Sense making** – The research findings within Chapter 11 drew together underpinning evidence and contextual information to clarify the basis upon which the findings were derived. This included triangulation where possible from within

the AR programme as well as reference to relevant documented evidence from practice and theory elsewhere. A conceptual model for the role of the facilitator of CST derived from theory was used to help structure the research design (section 4.4) and the subsequent construction of a conceptual model based upon the practice emerging from the research was used to identify gaps in the outcomes of the research (section 11.8.5). From this assessment it was concluded that the findings had broadly addressed the components of the role of the facilitator of CST, and had facilitated the construction of new knowledge. Further, consultation with a group of internal consultants to gain a sense of the practical relative importance of the findings confirmed the validity of the key themes emerging from the research amongst that group (section 11.1).

- (c) **Transcontextual credibility** - The research process has sought to determine generic findings that are qualified as appropriate with relevant contextual evidence so as to be transferrable beyond the AR interventions from which they were synthesised. It is recognised that the programme of AR has been targeted upon a series of interventions within a single Force, drawing upon the experiences of a limited selection of relevant stakeholders involved and with the researcher providing the continuity of involvement between interventions in relation to planning, implementation and reflection. The researcher has tried to mitigate any limitation caused by this through:
- Within each intervention, consultation involving a variety of key stakeholders from different agencies, including some with experience of similar applications in other police forces.
  - The synthesis of research findings was undertaken by the researcher alone to ensure consistency in the interpretation of his narrative. However, to provide some sense of the practical value of each resultant finding theme, the validity of each was tested and confirmed with a group of WYP internal consultants.
  - The researcher's full time employment within a major police organisation with responsibility for the professional development of the Force's approaches to strategic development, problem solving, policy development, organisational change programmes and performance management, requires the maintenance of

knowledge of developing practice of relevance elsewhere in the business and profession.

- Continuous involvement with developments in the police service nationally through close involvement in national and regional police networks for the development of approaches to business improvement, where emerging findings have been shared and compared.
- Reference to theory and practice elsewhere through university academic staff, publications and membership of the professional network of ORS.
- Engagement with partner CJ agencies through chair of the OR Special Interest Group on Criminal Justice and through conference stream organisation and contribution.
- Qualifying the presentation of evidence accordingly to place any knowledge claims in context and fulfilling the recoverability requirements of AR.

**(d) Recoverability** – The course of AR has been to an extent emergent and rather like the wicked problems faced by the facilitator of CST, its course could not be pre-defined nor readily repeated. However, the documentary evidence included within this thesis, appendices and any associated references have aimed to be sufficient for others to follow the process in order to see how the findings were achieved. To enhance the credibility of the AR process, Checkland and Holwell's (1998) and Champion and Stowell's (2003) frameworks were utilised to guide the programme of AR, with these frameworks being revisited following each individual intervention to capture relevant features of the unfolding research process and thereby supporting its recoverability.

## **12.4 Contribution to knowledge**

The findings included within Table 12.1 present the salient outcomes from the research, built upon a synthesis of relevant themes and observations that were drawn from the variety of AR cycles. The contribution of this research therefore, must not only be considered in terms of the ‘headline’ findings of Table 12.1 but also in relation to the detail that lies beneath (Appendix 8), some of which will be of particular relevance and value to practitioners.

### **12.4.1 Practical relevance**

Based upon the exploration of the systems thinking reflected in Chapter 3, there is limited evidence of any real CST within the policing and community safety sector and consequently the majority of findings from this research should be of practical relevance. However, a number of these are worthy of particular note in terms of their potential impact upon knowledge in the sector and these will be drawn together in this section. Those research findings that are of practical relevance within the policing and community safety sector can be identified in Table 12.1 as those that have been shown to contribute to research objective 6, amounting to 26 out of the 32 findings and reflecting upon the review of business context (Chapter 2), it is considered that these will contribute significant knowledge in the sector. However, from these, the following aspects are of particular note in terms of their contribution:

- (i) Leadership development
- (ii) Devolved CST capability
- (iii) Boundary management
- (iv) Methodological features
- (v) Capable facilitation

### **(i) Leadership development**

The research emphasised the importance of the engagement with leadership in the successful deployment of CST in several respects. However, drawing upon a variety of findings such as cultural resistance, the concept of policing problem archetypes was identified as a potential culturally acceptable means by which organisational leadership might develop their understanding regarding alternative systems approaches that may be of relevance in distinctly different but familiar, problem situations. A prototype set of archetypes was presented to a cohort of police leaders as part of the HPDS in June 2011, to the OR Society Conference Criminal Justice Stream in September 2011 and the Senior Leadership Programme in April 2012 along with an emerging set of practical characteristics that differentiated the six archetypes (Figure 11.3). It is envisaged that there is potential to develop this concept further in liaison with the NPIA as part of their development of leadership training within the police service. Further, the archetypes have potential to inform the development of a more generic set of archetypes for model use based on practice, such as that suggested by Pidd (2010). It was also noted (section 11.2.1) that the benefits to the police service of building the capability for leaders at all levels to employ CST would provide an alternative means of mitigating the risk of an inward facing occupational culture (Winsor, 2012).

### **(ii) Devolved CST capability**

There is currently considerable interest in the police service in relation to building the capability of the workforce to deploy continuous improvement activity within individual forces and to share capability and practice at a regional and national level through the establishment of formal continuous improvement networks to share practice. These networks developed largely through the widespread interest in lean systems approaches, such as QUEST (Berry, 2009a, 2009b) but they are not restricted to that form of systems thinking. At the moment there is a lack of clarity nationally regarding how such capabilities might be effectively devolved within the workforce alongside the variety of specialist systems capabilities already established within forces, employing a variety of preferred methodologies and approaches to deployment. The

identification through this research of the recursive structure for the deployment of CST appears to provide a coherent structure through which to clarify the various roles in the deployment of change, recognising how devolved capability for continuous improvement and might reside alongside other specialisms and the distinct role of organisational leadership and governance in organisational change at all levels. With the introduction of new governance arrangements in the police service (Home Office, 2010b), such a structure might provide a platform to explore relationships between police forces and the newly appointed Police and Crime Commissioners in this regard. This framework provides a platform upon which more widespread interest, understanding and application of CST within the police service can be built and integrated within workforce development programmes.

### **(iii) Boundary management**

Based on the consultation with the internal consultants, those research themes related to boundary management were seen to offer the highest potential impact on the success of interventions of any findings cluster and consequently the relevant research findings from this study are considered to be of significant practical value. Through wider recognition of the strengths of alternative systems approaches identified above, it might be anticipated that approaches such as boundary critique (Ulrich, 2005) and SSM's cultural stream of analysis (Checkland and Scholes, 1990) could find favour in supporting boundary management. However, it may be possible for culturally acceptable approaches to be developed, such as the instrument developed through this research and employed within the ASB intervention (Table 8.1) to provide acceptable means of exploring the diversity of problem situations and lead to a more informed employment of CST in the service. This avenue has real potential for further exploration, with an opportunity to progress this in tandem with the development of the problem archetypes to provide consistency in both, to integrate these with on-going national developments in relation to continuous improvement within the police service and thereby derive significant practical value to complement the theoretical value referred to in section 12.4.2 (i).



#### **(iv) Methodological features**

As part of the QUEST initiative the researcher was invited to become involved in a national working group looking at the development of business improvement approaches within the sector. Based upon the stakeholder feedback from the QUEST initiative and reflected within this research, a set of critical success factors were identified to describe the features of the approach that were considered to be of particular relevance to the success of the initiative. This aspect of the research has therefore already contributed to practical learning not only within the host organisation but also within the sector more widely.

#### **(v) Capable facilitation**

A variety of findings related to capable facilitation will have significant practical relevance to the sector but the following contributions are considered worthy of specific mention:

**The importance of involving facilitators with significant capability in the informed selection and deployment of a variety of systems approaches as well as effective group facilitation and the ability to dynamically respond to the prevailing diverse requirements of the problem situation, avoiding limitations that might be presented by a predefined structure or methodology.**

Historically within the sector there has existed an impatience for service improvement with the continual introduction of new initiatives to address the prevailing problems backed up by advocated ‘best practice’ methodologies, methods and techniques; typically ‘Best Value’ (Boyne, 1999), The Business Excellence Model (Leonard and McAdam, 2002) and lean (Womack and Jones, 2003), leading to initiative overload and a confusing landscape of abandoned approaches. These initiatives have tended to be sold as ‘the best’ approach to solving business problems rather than one of many approaches and that the many approaches will each possess strengths in different contexts. This research has identified that the operating environment is increasingly

complex, dynamic and pluralistic (Chapter 2) and the limited evidence for the employment of CST within the sector (Chapter 3) demonstrates a real capability gap between the needs of the sector and its ability to deliver the alternative systems approaches that are now available to meet the new challenge. Police managers are increasingly required to respond to high variety problem contexts while the favoured problem solving models still reflect traditional, low variety approaches and the research has concluded that these are no longer sufficient. The service will see significant benefit if it can improve its understanding regarding alternative approaches, what their strengths are and how to deploy them with competence as a problem situation unfolds. Consistent with Eden (1990) and Franco and Montibeller (2010), this research has emphasised the importance for facilitators of CST to possess capabilities in both content and process, with expertise in diverse systems approaches and importantly, competency in working with groups to facilitate their effective deployment.

**The employment of multi-methodology in parallel in modes 1 and 2 in multi-agency settings.** The research has emphasised the practical value of both parallel multi-methodology and of different modes of application in wicked problem situations. As many of the problem situations encountered in the sector involve multiple agencies, recognition of an improved capability for deploying such systems thinking will be of particular relevance within development programmes within the police service for leadership, specialists and the wider workforce if problem solving applied within the new operating environment is to be effective over the longer term.

**To become an effective interventionist, the facilitator of CST embracing Argyris' primary tasks in relation to whole client system diversity.** The research recognised cultural barriers in some problem settings where important contributions risked marginalisation and with increased involvement of partner agencies this risk is heightened. Taking the lead of Argyris' Intervention Theory (Argyris, 1970), the facilitators' role can be seen as encouraging commitment through a free and informed choice, recognising the diverse needs of all stakeholders and in doing so address issues of plurality and coercion. A particular challenge was seen to be presented to the facilitator of CST in balancing their responsibilities in preserving the commitments of

CST while maintaining their credibility with leadership and avoiding collusion that might compromise Argyris' primary tasks (Schwarz, 1994, p.15). Problem solvers and leaders in the sector need to recognise this challenge and support the development of effective interventionists.

#### **12.4.2 Theoretical relevance**

In terms of the theoretical contribution of the research, there are a number of findings that warrant consideration as contributing to knowledge in terms of critical systems thinking and practice and these will be highlighted in this section.

Section 11.8.5, (iii) analysed the role of the facilitator of CST through the comparison of a SSM conceptual model derived from theory with one derived from the practice as identified in this research and identified aspects that had emerged from the research that may be considered to be extensions to the theoretical role, including:

- (i) Explicit reference to the different modes of CST.
- (ii) Recognition of different levels at which CST may be applied derived from the recursive model.
- (iii) Recognition of the potential for devolution of aspects of CST.
- (iv) Recognition of the relevance of self-organisation outside the more formal intervention process.

This assessment focuses only upon the role of the facilitator of CST and there are other key aspects of the research that also warrant consideration. Those research findings that are of theoretical relevance can be identified in Table 12.1 as those that have been shown to contribute to research objective 5, amounting to 15 out of the 32 findings and recognising the review of literature (Chapter 3) it is considered that these will contribute in some way to knowledge in terms of critical systems thinking and practice. From these, the following aspects are seen as of particular note in terms of their contribution:

- (i) Leadership CST development
- (ii) Recursive model / Devolved capability\*
- (iii) Large group processes' multi-paradigm capability
- (iv) Change formula and objective function
- (v) Employment of different modes of CST\*
- (vi) Complexity lens analysis of the role of the facilitator of CST\*

\* Also identified as relevant components through the SSM comparison.

The remainder of this section will summarise these aspects of contribution.

### **(i) Leadership CST development**

This aspect has already been addressed in the practical learning section in relation to the problem archetypes concept and the possibility for this work to inform the development of a more generic set of archetypes for model use based on practice such as that suggested by Pidd (2010). It is worth also raising the observation from the research that the development of CST capabilities at an organisational leadership level may have a disproportionately greater impact on the deployment of CST in comparison with targeting development upon specialists. Although the research was not able to take this aspect further, the targeting of CST development on leadership is considered to offer significant potential to enhance its prevalence, prominence and impact, while at the same time recognising the need for its deployment to reflect features captured in the other findings of this research.

### **(ii) Devolved capability/recursive model**

This aspect has been referred to in the practical learning section from the perspective of its potential to clarify the variety of prevailing roles and relationships between different facilitators of change. In terms of its contribution to learning in relation to critical systems thinking and practice, the recursive model is seen as a means of providing a coherent framework for recognising the concurrent existence of CST at the different 'application' levels of meta-methodology, methodology and activity/technique and

building upon the ‘why’, ‘what’ and ‘how’ concepts of multi-methodology (Mingers and Brocklesby, 1997; Howick and Ackermann, 2011). The model recognises that the relationships between these concepts are complex and relative, but the very nature of the model, based as it is upon a structuralist approach (Beer’s (1972, 1985) VSM), offers potential to facilitate a variety of analyses that possess strength in a complex problem domain, such as in supporting the control and co-ordination of the deployment of CST within a devolved structure. It is suggested that this concept may warrant further research as part of the on-going development of CST as well as informing a deeper understanding of the role of the facilitator of CST alongside other key stakeholders, be that a specialist, an organisational leader, a member of the workforce involved in change or a governing body such as the Police and Crime Commissioner (Home Office, 2011b).

**(iii) Large group processes’ multi-paradigm capability**

Although it was not the purpose of the research to undertake a thorough exploration of large group processes, these were employed in several interventions and based upon these experiences it appeared that LGIs provided a platform for the effective employment of systems thinking with concurrent attendance to a variety of paradigms. This exploration also recognised the condition for change formula attributed to such large group interventions (Beckhard and Harris, 1977; Jacobs, 1994) and considered its applicability to any change process involving the deployment of CST.

**(iv) Change formula and objective function**

The research led to the development of a mathematical heuristic to represent the role of the facilitator of CST as an objective function to maximise the variety of success measures associated with relevant paradigms, subject to the incremental fulfilment of the condition for change reflected in the Beckhard change formula. Recognising the validity of incremental change in complex situations, this formula identifies the variables that the facilitator of CST might need to handle in order to secure improvement in pursuance of an objective function for optimisation comprising a range

of relevant measures characterising a variety of paradigms. It is considered that such a heuristic provides a valuable means of reflecting upon the challenge presented to the facilitator of CST in seeking improvement within a complex environment and this concept may warrant further exploration.

**(v) Employment of different modes of CST**

One of the driving forces behind the research was the perceived gap in knowledge related to the employment of different modes of CST. This action research programme took the opportunity to reflect upon the practical employment of an implicit form of CST and identified a variety of significant findings, including:

- (a) Recognising and accepting a spectrum of different modes for CST (Checkland and Scholes, 1990), based upon the examples comprising this research it was concluded that mode 2 applications could fulfil the commitments of CST and this exploration identified an emerging set of contextual determinants that might help explain the prominence of different modes of CST. These determinants might be considered as providing a means to transfer the learning about the application of mode 2 approaches from one situation to another, thereby satisfying the ‘transcontextual credibility’ requirement of successful action research (Greenwood and Levin, 1998). Having been derived from a limited study, these determinants might justify further exploration to establish their wider relevance and added value.
- (b) It was also found that mode 2 applications of systems approaches were particularly appropriate for consideration in problem situations that might possess significant constraints, such as culture barriers and thereby enabling the preservation of CST in potentially restrictive situations.
- (c) A dynamic relationship between modes of application was recognised where the practitioner might move flexibly between modes at different stages of an intervention both consciously and unconsciously. Further, the internalised nature of mode 2 CST was seen to enable a more immediate and flexible employment

that enables CST to respond quickly to accommodate prevailing and evolving contexts.

- (d) As the mode of application can be seen as a continuous spectrum (Checkland and Scholes, 1990) then apart from the extreme ‘ideal types’ it can always be argued that an element of any application displays some characteristics of both modes 1 and 2 and that the relative prominence will change dynamically as the problem unfolds.
- (e) It was argued that the truly reflective facilitator would be likely to continually employ mode 2 systems thinking throughout interventions and it was concluded (11.6.4) that in any given problem situation involving CST aware practitioners, it is probable that mode 2 CST will be present in series and parallel with other mode 1 systems thinking. Further, if mode 2 CST is considered as being both prevalent and a valid means of deploying systems thinking, then it is probable that most problem situations of this nature will feature multi-methodology in series and parallel in modes 1 and 2 without it being overtly expressed.

These research findings have significantly expanded learning in relation to the contribution of different modes of application in relation to the effective deployment of CST.

**(vi) Complexity lens analysis of the role of the facilitator of CST**

The employment of a complexity lens to view the role of the facilitator of CST was considered appropriate given its consistency with Axelrod and Cohen’s (2001) description of a complex adaptive system. Reflecting upon the features of such a system helped to add clarity to the facilitator’s role in a typically wicked problem and this led to the suggestion amongst other things that self-organisation might be something for the facilitator of CST to take more cognisance of in their response to problem situations. Following Argyris (1970) and having established that to be an effective interventionist the facilitator of CST needs to recognise the diversity of the whole client system, this challenge is extended beyond the boundaries of the facilitator’s direct influence should it be accepted that self-organisation is of relevance.

Although this aspect was not explored in any depth, this component of change was recognised as operating alongside the more formal process over which the facilitator of CST will have more knowledge and influence. There is potential for further exploration of this concept within the recursive model referred to in section 12.4.2 (ii).

## 12.5 Future directions

The AR design sought to build upon emergent themes which iteratively extended the research into a wide variety of relevant fields. Given this breadth, a number of areas for potential future development were identified in section 12.4 as offering potential for further exploration:

- (i) The problem archetypes concept has potential to both inform the development of CST within the police service as well as a more generic set of archetypes for model use based on practice (Pidd, 2010). (12.4.1 (i); 12.4.1 (ii); 12.4.2 (i)).
- (ii) Further development of culturally acceptable approaches to support a more informed employment of CST in the service. (12.4.1 (iii)).
- (iii) The development of CST capabilities at an organisational leadership level may have a disproportionately greater impact on the deployment of CST and this is considered to offer significant potential to enhance the prevalence, prominence and impact of CST as well as address the prevailing service criticisms of an inward looking occupational culture (Winsor, 2012). (12.1.2 (i); 12.4.2 (i)).
- (iv) Extending the recursive model for exploring the role of the facilitator of CST alongside other key stakeholders (e.g. the future role of the Police and Crime Commissioner (Home Office, 2011b)) (12.4.2 (ii)).
- (v) Further consideration of the contextual determinants influencing the spectrum of different modes of CST. (12.4.2 (v)).
- (vi) Exploring the impact of client self-organisation on the role of the facilitator of CST. (12.4.2 (vi)).

It is considered that significant additional learning could be derived from the extension of the research into these fields.



## 12.6 Conclusion summary

In the light of an increasingly complex, dynamic and pluralistic operating environment of policing and community safety, major deficiencies have been recognised in the sufficiency of the traditional problem solving approaches currently in use. This research has identified a significant capability gap in the policing and community safety sector's ability to respond to this new challenge. The potential has been identified to bridge this gap through a more considered application of systems thinking that enables problem situations to be tackled more holistically, employing a variety of systems approaches in combination and thereby improving success in problem situations of greater plurality and complexity. Derived from the practical application of CST in a series of high profile interventions within a major police organisation over the period of four years, the research has tackled a complex agenda of interlinked facets of systems thinking, including methodological features, facilitator capability, devolved deployment, cultural issues and the importance of leadership; all with the common thread of CST and in doing this, generated a series of significant findings with notable practical and theoretical learning. Additionally, an innovative agenda for future research has been identified that will sustain the evolutionary development of critical systems theory alongside its practical development from the platform created here for broadening the concept of systems thinking in the sector and thereby increasing its status and impact.

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## **APPENDICES**

**Appendix 1** – Research Design

**Appendix 2** – Intervention 1 – Community Safety

**Appendix 3** – Intervention 2 – IOM

**Appendix 4** – Intervention 3 – QUEST

**Appendix 5** – Intervention 4 – ASB

**Appendix 6** – Intervention 5 – Departmental Review

**Appendix 7** – Intervention 6 – Personal Applications

**Appendix 8** – Intervention 7 – Research Findings

## APPENDIX 1– Research Design

### 1. Generic Research Evaluation Structure

Research Questions	Research Objectives	Evaluation Method
1. Can the application of critical systems thinking improve the success of joint problem solving within the policing and community safety sector?	1. Determine whether the application of critical systems thinking can bring about significant improvement in the effectiveness of joint service provision and its management.	Overall evaluation of research findings, including perception of key stakeholders involved in typical problem situations locally and nationally (interviews and focus groups)
2. Are there combinations of systems methodologies, methods and techniques that are found to be particularly successful in meeting the challenges of service improvement, identifying the features that are influential in effective engagement of stakeholders and actors in joint service improvement interventions?	<p>2. Identify and implement practical and informed combinations of systems approaches that help policing service stakeholders fulfil their purposes in relation to joint problem solving.</p> <p>3. Determine the features of approaches that are found to be influential in successfully supporting multi-paradigm problem solving, recognising contextual factors that might affect transferability.</p>	<p>For each problem intervention:</p> <p>(I). Identify the perception of key stakeholders (including sponsors, managers, facilitators and workforce) involved in the problem situation through interviews and focus groups, specifically in relation to:</p> <ol style="list-style-type: none"> <li>1. Usefulness of different approaches: in meeting stakeholders’ interests, including whether the arising actions solve their perceived problems/intervention aims; increase participants’ control over their own situations; and support and balance effective multiple participant engagement throughout the intervention</li> <li>2. Impact upon problem situation in relation to:               <ol style="list-style-type: none"> <li>(i) prediction and control, measured by the efficacy and efficiency of solutions;</li> <li>(ii) mutual understanding, measured by the effectiveness and elegance of solutions;</li> <li>(iii) ensuring fairness, measured by emancipation and empowerment within the problem situations;</li> <li>(iv) promoting diversity and creativity, measured by exception (marginalized viewpoints recognised) and emotion within the problem situation</li> </ol> </li> </ol>

<p>3. How do these systems interventions address the challenge of handling the multiple philosophical assumptions (paradigms) that underpin the problem situations and systems approaches employed?</p>		<p>3. Usefulness of approaches in terms of :</p> <ul style="list-style-type: none"> <li>(i) supporting creativity</li> <li>(ii) facilitating informed choice of tools</li> <li>(iii) implementation, including: <ul style="list-style-type: none"> <li>• impact of deployment approaches</li> <li>• practicality and feasibility</li> <li>• accessibility and understandability</li> <li>• cultural acceptability</li> </ul> </li> <li>(iv) facilitating learning about the problem and systems approaches employed</li> </ul>
<p>4. What is the influence of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed?</p>	<p>4. Determine the impact of leadership in the facilitation process upon the successful application of systems approaches by managers and facilitators, recognising the impact of organisational culture, the role/position and capability of the facilitator and how the systems approaches are deployed, identifying those factors that are particularly influential.</p>	<p>4. Impact of role/position/capability of participants in problem situation (e.g. sponsors, managers, facilitators and workforce)</p> <p>(II). Evaluation of any supplementary performance data related to the intervention objectives (e.g. efficiency/productivity data)</p>
<p>5. Can effective processes be established to improve the capability of problem solvers in the sector (and beyond) to successfully select and employ systems thinking, through a more informed appreciation of the impact of systems approaches in prevailing problem contexts?</p>	<p>5. Derive learning from interventions to support the development of systems thinking more generally.</p> <p>6. Develop guidance to assist sector practitioners successfully select and employ systems thinking in problem situations through a better appreciation of the impact of systems approaches.</p>	<p>1. Theoretical value of learning derived from research</p> <p>2. Sufficiency of documentation of research thinking and activity to enable 'recoverability' (Checkland and Holwell, 1998) (stakeholder interview and assessment)</p> <ul style="list-style-type: none"> <li>• Appropriateness and practicality of guidance based upon perception of practitioners locally and nationally* (interviews and focus groups)</li> </ul> <p>*It is envisaged that this evaluation could involve a variety of practitioners within the host organisations at local and national levels.</p>

## 2. Ethical Statement

1. The research will recognise the best interests of the individuals, agencies and wider society who are the subject of, or directly affected by, the research.
2. The work aims to recognise, complement and add to any previous research of relevance.
3. Ethical treatment will extend to all participants, including collaborators, assistants, other students, and employees.
4. Where possible, collaborative decision-making in relation to the research will be employed.
5. Full consideration will be taken throughout as to whether a participant will in any way be a 'subject at risk'.
6. All participants will be informed of all aspects of the research that might reasonably be expected to influence their willingness to participate, as well as explain all other aspects about which the participants enquire.
7. Preservation of confidentiality will be effected in line with any prior agreements with participants and organisations, with appropriate consent being secured as necessary.
8. The freedom of individuals or organisations to decline to participate in or to withdraw from the research situation at any time will be fully respected.
9. Where research procedures could result in undesirable consequences for individuals, occurrences will be identified and rectified to protect the participants.

### 3. Research Consent Form

#### The HUBS RESEARCH ETHICS COMMITTEE CONSENT FORM: SURVEYS, QUESTIONNAIRES

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I, .....

**Hereby agree** to participate in this study to be undertaken

by Ian Newsome

and I understand that the purpose of the research is

To establish whether it is possible to identify and implement a coherent combination of systems approaches that help in a practical way policing and community safety service stakeholders and partner organisations at all levels to fulfil their purposes in relation to joint problem structuring, decision making, change implementation and service management.

#### **I understand that**

1. Upon receipt, my questionnaire will be coded and my name and address kept separately from it.
2. Any information that I provide will not be made public in any form that could reveal my identity to an outside party i.e. that I will remain fully anonymous.
3. Aggregated results will be used for research purposes and may be reported in scientific and academic journals.
4. Individual results **will not** be released to any person except at my request and on my authorisation.
5. That I am free to withdraw my consent at any time during the study in which event my participation in the research study will immediately cease and any information obtained from me will not be used.

Signature:

Date:

The contact details of the researcher are:

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## APPENDIX 2 – Intervention 1 – Community Safety

### 1. Participant Questionnaire Feedback

Q1. Which part of the event did you find most useful and why?

Responder	Response
1	Listening to the perpetrator of domestic violence. I've heard plenty of the victims before, but it was genuinely interesting to hear the perpetrator's point of view and experiences.
2	Meeting other members of Community Safety, putting faces to names
3	It was great that SMT wanted people to have fun and entered into the spirit themselves
4	2 <sup>nd</sup> exercise – strengths and successes. As a new addition I learnt a lot about various projects and initiatives that have taken place and come under the community safety banner.
5	The afternoon activity
6	The feedback from the tables regarding the future of the district. Staff demonstrated an outcomes focussed approach in a creative manner
7	Guest speakers. Their talks are a useful reminder of why we are here and, whilst such talks are limited and high risk, they do give a voice to the people we are here to provide services for.
8	DV victim and perpetrator. Real life story and puts in graphic detail the misery, but also what there is to try and resolve.
9	The afternoon 'team' workshop which required input from everyone and, more importantly, for everyone to consider everyone else's viewpoint and then collectively decide on the best way forward. Teamwork in action!
10	The DV presentations – both viewpoints – would have been useful to have a little background on DV for non-DV involved staff.
11	Perpetrator and victim of DV was interesting
12	The personal accounts from the perpetrator and victim of DV
13	Sitting with colleagues and getting to know what they do

Q2. What did you enjoy most about the day?

Responder	Response
1	Listening to the perpetrator of domestic violence. I've heard plenty of the victims before, but it was genuinely interesting to hear the perpetrator's point of view and experiences.
2	The individual tables working on something around Community Safety, collages poems etc.
3	Meeting new people and colleagues only see at away days. Also the gorilla suit video
4	Meeting and talking to new people – networking as a new person this was useful
5	The afternoon activity
6	The feeling of a single common purpose for the Division.
7	Networking
8	DV victim and perpetrator. Real life story and puts in graphic detail the misery, but also what there is to try and resolve.
9	The speeches by both the DV perpetrator and victim – such bravery by both for speaking in front of a large audience and being able to take and answer questions
10	Food
11	Presentations by each group near the end
12	The first session (timeline) and of course lunch
13	

### Q3. What would you have liked to do differently?

Responder	Response
1	Why have pointless quizzes?
2	Nothing, as I thought the day well planned and interesting as well as fun.
3	The handling of DV. I think there should have been a presentation to set context of how serious DV is – the facts. 3 women per week die from DV. There are very few perpetrators who are women and can happen in any relationship – same sex, carer etc. It would be very useful for men experiencing violence to be absolutely in fear of their lives and to experience so many barriers as women to try to escape so it is a totally different situation most of the time if men are victims. Also, many people experience horrendous childhoods and abuse and don't go onto choose to be abusers themselves.
4	
5	Why when all the different departments are split up on tables to get to know each other are the SMT all sat together on one table. Would it not be better for the SMT to mix with us and get to know us all as people rather than names on a list?
6	Early follow up and joint planning
7	Would like to have been presented with a visible structure of CS and a description of which sections do what, what their targets are and key issues for their area of work. Would also like a presentation on how we, Community Safety, fit into the bigger picture in terms of funding, governance arrangements and city-wide partnerships
8	Scrap the cutting pictures out of mags/etc.
9	To have had more time for the fun element of the Quiz. Microphone for presenters and for presentations feedbacks to have stuck to the 2 minutes as stated on the agenda – many were more like 5-6 minutes – too long.
10	SMT's singing!
11	
12	A session from a member of SMT going into some detail re new/forthcoming initiatives
13	

### Q4 Please comment on the venue; accessibility; facilities; catering; comfort

Responder	Response
1	Poor catering, nice food. Tea, coffee, milk, hot water and sugar all ran out at some point. No air conditioning and rather cramped venue.
2	Venue excellent, central, easy to locate. Facilities very good and catering high standard. Hot drinks available all day.
3	Venue fine apart from an extra door could have been opened and 2 queues organised for lunch.
4	All good. Room got very stuffy but if fans were on you couldn't hear. Hated the lollipop sticks to stir hot drinks.
5	Super venue
6	Maybe we should have kept to time and ensured breaks as planned.
7	All fine.
8	The venue was too small for the group and consequently the queue for lunch took too long, and it was crowded for some activities.
9	Excellent, although despite the air-con it did get rather hot
10	Pretty good
11	Very good
12	All very good
13	Good

**Q5** Were you given sufficient opportunity to express your views or ask questions?

Responder	Response
1	Yes
2	Plenty of opportunity to ask questions.
3	
4	Yes
5	Yes
6	Yes
7	Personally yes, although some people would have felt uncomfortable asking questions in large groups. For future events, it might be useful to allow people to break into smaller groups to come up with one or two questions that a spokesperson could ask.
8	Yes
9	Yes, definitely
10	Yes
11	Yes
12	Yes
13	Yes

**Q6** Did you learn anything new during the workshop activities?

Responder	Response
1	No
2	I think that there are always opportunities to get new information whenever different teams meet up.
3	No
4	I learnt a lot during workshops
5	
6	The 'looking back' opportunity worked very well as an ice breaker and allowed everyone freedom to contribute as much or as little as they were comfortable with.
7	
8	
9	Not really – we all put forward ideas as to how things will be in 3 years' time, but it would have meant more if this had been followed up with the <b>actual plans</b> as to how it will be achieved
10	
11	Yes
12	Only about people on the same team whom I had not met before
13	Don't think so



**Q7** Do you feel you have a better appreciation of other team members and customer views since the workshop?

Responder	Response
1	I've met more people
2	I felt that other people in the group I was with did air their views and ideas and that it is always good to have an insight into what colleagues are doing.
3	No
4	Yes
5	Not really
6	Yes, both personally and professionally
7	No
8	Already had good appreciation
9	It became very apparent to me that people in some sections only think of themselves as working for that unit, and not for CS department. There is still a real silo mentality in many staff.
10	Aye.
11	Yes
12	Yes, both
13	Yes

**Q8** Do you have a clearer picture of where the Community Safety Department needs to head over the next three years?

Responder	Response
1	Not really
2	I know what we would all like to achieve over the next few years and hopefully bit by bit we will get there.
3	No
4	Sort of.
5	Yes but still not clear how this is going to be achieved.
6	Yes, and I believe the majority of staff do too.
7	I think so.
8	I already had a clear picture of direction
9	Not really. The aims of the day weren't clearly stated – it would have been better if the objectives had been clearly stated right at the top of the agenda
10	Sort of.
11	Yes
12	Slightly, pretty much the same aims/objectives as we currently have
13	Not really

**Q9** Any other comments

Responder	Response
1	To be honest, this was a poor away day especially if compared with previous ones. It seemed pretty incoherent at times and I along with most people were more than a little unimpressed with having to go through the excruciating Police/TV quiz at the end of the event. It felt that as though the day had been wasted.
2	The quiz at the end of the day was a bit rushed and some colleagues have commented that it was either aimed at older members of staff or the police as most questions seem to be around subjects that they would have more knowledge about.  Colleagues have also agreed that in the future it may be a good idea if SMT spread themselves about a bit and were not all sat on the same table.

	The two speakers on domestic violence, both the perpetrator and victim spoke well and really put their individual stories across. Found it a little traumatic listening to the perpetrator even though I have worked around DV for a long time now. Imagine that some of the participants may have found listening to both speakers a little traumatic. I am aware that we were all warned of this beforehand and I do think that it was very important to do that.
3	Facilitators didn't seem to facilitate or do much. Needed to chivvy people along and try to keep to time. Quiz and exercises could have been quicker and more organised.
4	As an 'outsider' now on the inside it was very unclear what the day was about – what were the aims of the day? If it was to network and give the department a pat on the back then I think it was extremely successful. If there were any other aims, I didn't pick them up. Interesting day all in all.
5	
6	Another successful event. Well done both organisers and participants.
7	
8	What was the point of the final exercise? It always reminds me of something primary school teachers would do with children, or possibly a Blue Peter exercise. Cutting pics out of mags is not my forte.
9	Overall, I thought it was a good day but with the benefit of hindsight, I think there were too many activities (or perhaps it was just too many people for the set activities?). It was a good to see SMT letting their hair down, but I think it would be better for one member of the SMT to sit at each table, as keeping SMT as a separate entity does little to foster good staff relations
10	Facilitators needed a mike!
11	
12	
13	Although the day was fun I don't really know what the purpose was and whether anything was personally gained from it. Not sure it needed facilitating either – The facilitators didn't seem to do much

## 2. Management Team Questionnaire Feedback

### Q1 Did the workshop meet your aims?

Responder	Response
1	Yes
2	Yes
3	Yes
4	Did generate thinking about what CS does well and our priorities for the future

### Q2 Which aspects worked well?

Responder	Response
1	The victim/perpetrator presentations; the creative section
2	I think the overall approach of past, present and future worked well. I was impressed with the outputs from all teams on the vision of a future district
3	Input from guest speakers which really brought to life the impact of DV on people's lives. Focus on success to date and need to build on that in the future
4	Reflecting back on what had got us here was useful exercise, also keeping a flexible agenda for time to manage the energy levels so things didn't drag on too long

**Q3 Which aspects would you have liked to do differently?**

Responder	Response
1	First sessions were good but timing was difficult as people spent differing times on the activities.
2	Not on this occasion
3	Timing meant the quiz was rushed and probably could have been omitted
4	Try to avoid death by flipchart feedback but on a positive, it didn't drag on too long

**Q4 Did the workshop successfully enable creative thinking from your teams?**

Responder	Response
1	Yes
2	Greater than expected
3	Yes, there was some real creativity with some good ideas for inclusion in next year's plan.
4	Think so - showed some acting skills we didn't know about! Also gave an opportunity to think differently/creatively

**Q5 Did the approach exclude or favour any individuals or groups?**

Responder	Response
1	No, but some people didn't engage
2	A very inclusive approach
3	No, the level of teamwork and participation appeared high
4	Don't think so

**Q6 Do you think the workshop helped improve mutual understanding among participants?**

Responder	Response
1	Yes
2	Yes, I was impressed how quickly the division bonded behind a vision for the district
3	This was covered more in the last away day in May, but I would hope that they understood the common purpose to reduce crime and the fear of crime, support victims and manage offenders
4	Was an opportunity to mix with others in the service who you wouldn't normally work with on a regular basis

**Q7 Did you find out anything new about your teams' perceptions and future directions during the workshop?**

Responder	Response
1	Varied understanding of future challengers
2	I saw some individuals performing and contributing well above my expectations
3	No surprises
4	No, but not a bad thing - reinforced/clarified that we were on the right track and teams recognised that

**Q8 Were the workshop activities easy for participants to follow?**

Responder	Response
1	Yes
2	Accessible and understandable for all
3	Yes
4	Seemed to be

### 3. Intervention 1, Interview Schedule

Q1	How useful was the approach in meeting stakeholders' interests, including whether the arising actions solve their perceived problems/intervention aims?
Q2	What actions were implemented as a result of the intervention?
Q3	As a manager/leader in the problem situation, what was the impact upon the problem situation in relation to : <ul style="list-style-type: none"> <li>• prediction and control, measured by the efficacy and efficiency of solutions;</li> <li>• mutual understanding, measured by the effectiveness and elegance of solutions;</li> <li>• ensuring fairness, measured by emancipation and empowerment within the problem situations;</li> <li>• promoting diversity and creativity, measured by exception (marginalized viewpoints recognised) and emotion within the problem situation</li> </ul>
Q4	<ul style="list-style-type: none"> <li>• How effective was the intervention in terms of : <ol style="list-style-type: none"> <li>i. supporting creativity in thinking about the problem situation</li> <li>ii. facilitating informed choice of tools to employ</li> <li>iii. implementation, including: <ul style="list-style-type: none"> <li>• impact of deployment approaches</li> <li>• practicality and feasibility</li> <li>• accessibility and understandability</li> <li>• cultural acceptability</li> </ul> </li> <li>iv. facilitating learning about the problem (and systems approaches employed)</li> </ol> </li> <li>• How could we improve each of these steps?</li> </ul>
Q5	How successful was the intervention in engaging participants? Specifically in terms of increasing participants' control over their own situations; and support and balance effective multiple participant engagement throughout the intervention
Q6	<ul style="list-style-type: none"> <li>• What is the impact of leadership in the facilitation process upon the successful application of systems approaches by both managers and facilitators?</li> <li>• What factors are particularly influential? (e.g. Flexibility, Forthrightness, Focus, Fairness, knowledge/skills, etc.)</li> </ul>
Q7	What impact on success of the intervention does the role/position/capability of participants in problem situation have (e.g. sponsors, managers, facilitators and workforce)
Q7a	How influential do you think the police culture is in relation to acceptance and success of systems approaches?
Q8	What is the impact of critical systems thinking in bringing about significant improvement in the effectiveness of joint service provision and its management?
Q9	<ul style="list-style-type: none"> <li>• In your experience, are there combinations of systems methodologies, methods and techniques that are found to be particularly successful in meeting the challenges of service improvement?</li> <li>• Why is this?</li> <li>• What features are influential in effective engagement of stakeholders and actors in joint service improvement interventions?</li> </ul>
Q10	<ul style="list-style-type: none"> <li>• What is the most effective means of deploying systems capabilities within the sector (e.g. widespread broad knowledge/awareness, internal specialists or bought in specialists)?</li> <li>• Why is this?</li> </ul>
Q10a	Is it better to use these approaches in the background/for these things to be implicit in the way managers think about problems they are facing?
Q10b	Could you see some of this being usefully part of senior level development (not in detail but an overview of possibilities)?
Q11	What processes could usefully be established to improve the capability of problem solvers in the sector to successfully select and employ systems thinking, through a more informed understanding of the impact of systems approaches in prevailing problem contexts?
Q12	Any other observations on the use of systems thinking within the sector?

#### 4. Evaluation of Evidence gained from interviews

Evaluation Method	Evidence	Summary evidence
<ul style="list-style-type: none"> <li>Identify the perception of key stakeholders (including sponsors, managers, facilitators and workforce) involved in the problem situation through interviews and focus groups, specifically in relation to:</li> </ul>		
<p>1. Usefulness of different approaches: in meeting stakeholders' interests, including whether the arising actions solve their perceived problems/ intervention aims; increase participants' control over their own situations; and support and balance effective multiple participant engagement throughout the intervention</p> <p>(Questionnaires; Interview questions 1, 2, 5)</p>	<ul style="list-style-type: none"> <li>Based upon the feedback from participants, management team and the sponsor, the intervention can be considered to have been successful in meeting its aims.</li> <li>All participants who responded considered that they had been afforded the opportunity to have their say and to listen to others</li> <li>The approach taken in the workshop was considered to be very inclusive and was accessible and understandable for all</li> <li>The customer viewpoints, creativity and timeline activities were identified as ones that worked well</li> <li>The sponsor was surprised by the success of the ideal future - creativity exercise (Q1)</li> <li>Engagement and involvement of staff in the process in the interactive exercises was both relevant and effective (Q1)</li> <li>Some participants were unclear on the purpose and value and some didn't buy-in to the process (Q1)</li> <li>It helped understand the wider perspectives (because individuals) started in their 'silos' and the exercises helped break this down (Q1)</li> <li>There was considerable momentum from the outset with the time-line providing the opportunity for interaction – a mechanism to energise the workshop (Q1)</li> <li>Stakeholder engagement in the planning, implementation and evaluation of the intervention along with the flexibility provided by the design was central to our ability to meet diverse stakeholder needs and respond to their differing interests (Q1)</li> <li>There was considerable freedom for participants to engage in ways that they were comfortable with and to take more control of their situations during the workshop (Q5)</li> </ul>	<ol style="list-style-type: none"> <li>The intervention was generally considered to have been successful in meeting the stated stakeholder aims. However, it has not been possible to determine to what extent the intervention resulted in positive change for participants back in the workplace.</li> <li>Stakeholder engagement from an early stage, from the planning, implementation and evaluation of the intervention contributed significantly to the success.</li> <li>In terms of engagement with participants, there is strong evidence that the approach was considered inclusive and accessible with everyone having good opportunity to contribute as they wished, though a small number were unclear on the purpose or value of some aspects.</li> <li>The intervention provided the opportunity for participants to interact and gain a better appreciation for others' perspectives through the timeline for example.</li> <li>The flexibility provided within the design was important in facilitating on-going engagement with diverse stakeholders and responding to their differing interests.</li> </ol>
<p>2. Impact upon problem situation in relation to:</p> <ul style="list-style-type: none"> <li>prediction and control, measured by the</li> </ul>	<ul style="list-style-type: none"> <li>The majority of participants felt they had a better appreciation of other team members' and customer views since the workshop</li> <li>All management team respondents felt it had</li> </ul>	<ol style="list-style-type: none"> <li>The impact of the intervention upon the problem situation can be measured against a range of the criteria identified.</li> <li>In relation to diversity and creativity, there was considerable evidence of both, with creative new perspectives being introduced by staff at all levels and on the evidence of the range of</li> </ol>

<p>efficacy and efficiency of solutions;</p> <ul style="list-style-type: none"> <li>• mutual understanding, measured by the effectiveness and elegance of solutions;</li> <li>• ensuring fairness, measured by emancipation and empowerment within the problem situations;</li> <li>• promoting diversity and creativity, measured by exception (marginalized viewpoints recognised) and emotion within the problem situation</li> </ul> <p>(Questionnaires; Interview question 3)</p>	<p>helped improve mutual understanding among participants</p> <ul style="list-style-type: none"> <li>• The sponsor considered the intervention to be aimed in the main at addressing aspects of mutual understanding; ensuring fairness; and promoting diversity and creativity (Q3)</li> <li>• The aim of enabling everyone to have a fair opportunity for contribution and feel engaged in the process was challenging in terms of some dynamics. It created complexity in the process to try and concurrently accommodate people with different perspectives and preferences and keep things on track (Q6)</li> <li>• The intervention involved a range of participants many of whom had quite different perspectives on the problem situation and different aims for the intervention. The approach had to be sufficiently flexible to cope with participants' differing requirements for improving mutual understanding, ensuring fairness and promoting diversity and creativity (Q3)</li> </ul>	<p>highly animated presentations there was a good degree of emotion underpinning these.</p> <ol style="list-style-type: none"> <li>8. Improving the mutual understanding of participants (amongst themselves and with their customers) was a further aspiration of the intervention and it would appear this was achieved in part at least.</li> <li>9. The intervention design afforded significant freedom for participants to take responsibility for their own contributions and the range of alternative means of contributing seemed to provide a way for the vast majority to participate positively. The management team were co-located in one group and undertook the group activities together while the remaining staff could self-select the groups they wanted to join. The separation of the management team from the other participants was seen as a way of reducing any constraining influences that might have been perceived by participants and increasing their empowerment. It is interesting to note that some participants viewed this negatively and felt that a feature of the intervention should be for management to get to know the staff by involvement alongside them in the exercises.</li> <li>10. The intervention involved a range of participants, many of whom had quite different perspectives on the problem situation and different desires for what they wanted from the intervention. The approach had to be sufficiently flexible to accommodate these differing and sometimes mutually exclusive requirements concurrently. The diversity of view regarding the problem context is evident from some of the participant feedback and this presents a challenge in selecting the most appropriate systems approaches to employ as they possess strength in different contexts.</li> </ol>
<p>3. Usefulness of approaches in terms of:</p> <ol style="list-style-type: none"> <li>i. supporting creativity</li> <li>ii. facilitating informed choice of tools</li> <li>iii. implementation, including:</li> </ol>	<ul style="list-style-type: none"> <li>• Opinion was equally divided on whether participants felt they learnt anything new during the workshop activities</li> <li>• The majority of participants felt they had a better appreciation of other team members' and customer views since the workshop</li> <li>• The majority of respondents felt they had a clearer picture of where Community Safety department needs to head over the next three years</li> <li>• The management team acknowledged some real creativity and</li> </ul>	<p><b>11. Creativity</b></p> <p>The employment of creativity techniques earlier on in the design process, involving the facilitators and representation from the management team might have been advantageous in improving understanding in relation to the problem. However, the aims of the sponsor were sufficiently open to allow the intervention methodology to explore the problem situation creatively and there was considerable creativity generated during the implementation of the workshop.</p> <p><b>12. Choice</b></p>

<ul style="list-style-type: none"> <li>• impact of deployment approaches</li> <li>• practicality and feasibility</li> <li>• accessibility and understandability</li> <li>• cultural acceptability</li> </ul> <p>iv facilitating learning about the problem and systems approaches employed</p> <p>(Questionnaires; Interview questions: 4, 7a, 9)</p>	<p>different thinking with good ideas for inclusion in next year's plan</p> <ul style="list-style-type: none"> <li>• Managers were evenly divided in their view as to whether they had learnt something new about their teams' perceptions and future directions</li> <li>• It was important for the managers to understand in a certain degree of depth the underlying methodology being suggested to allow them to make informed comment about the proposals (Q4)</li> <li>• The approach required assertive facilitation (Q4)</li> <li>• The careful preparation and venue facilities made a big difference in supporting the interactive sessions and flexibility to change the approach on the day (Q4)</li> <li>• The multiple approaches required at different times needed different spaces to effectively facilitate them (Q4)</li> <li>• The facilitators needed to show a degree of flexibility on the day to respond to changing circumstances and being realistic about adapting events where aspects of some exercises were not working as planned (Q4)</li> <li>• Some stakeholders rejected the cultural acceptability of certain methods (Q4)</li> <li>• A structured methodology was needed to help achieve the outcomes but how it was going to be utilised on the day depended very much on the audience on the day and we fully expected to have to change things as we went along. This also affected how much of the underlying methodology that the leader/facilitator kept hidden (Q6)</li> <li>• A broad structure was adhered to help maintain direction and to achieve intervention aims but the detail, timings and logistics needed to be flexible (Q6)</li> <li>• Where there are perceived to be clear interdependencies people can work together to try to better understand and interpret the situation. Where things appear to work in isolation or people can't see the connections this approach doesn't work (Q7)</li> <li>• As facilitators we have strength in getting people involved in deep</li> </ul>	<p>Early deliberation with the sponsor and management team was used to get a good feel for the problem situation and help identify the sort of intervention design that might address their needs. It also ensured they were confident with the problem solvers and bought into the approaches being developed. To quote the intervention sponsor: "It was important for the managers to understand in a certain degree of depth the underlying methodology being suggested to allow them to make informed comment about the proposals."</p> <p>Here a positive relationship between sponsor(s) and facilitator/problem solvers is critical. The sponsor needs to be confident that the facilitator has the credibility and capability to deliver what's required and in this intervention the sponsor was well aware of the facilitation team's knowledge of systems approaches and their skills and experience in delivering previously.</p> <p><b>13. Implementation</b></p> <p>Logistical planning and preparation for the workshop were seen as significant determinants of success to ensure participants' needs and workshop activities could be accommodated along with flexibility to adapt to changing circumstances.</p> <p>Participants didn't need to know all the underlying theory but in order to engage they needed a clear and acceptable purpose with relevant workshop activities that could be seen to help achieve the purpose. In situations with diverse groups of participants it is more difficult to achieve this. Where participants don't have an obvious common purpose or perceive things working in isolation and people can't see the connections, this type of approach is more difficult. The challenge for successful implementation here was to instil some sort of common purpose amongst quite disparate sub-groups within the team. This was attempted through the development of a shared database which was then used to generate ideas for the future direction of the whole team. However some participants were still unclear on the purpose of the workshop.</p> <p>The diversity of the groups necessitated flexibility within the design, but to preserve a clear structure to achieve the intervention purpose. The flexible</p>
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	<p>methods without them knowing (Q4)</p> <ul style="list-style-type: none"> <li>• We adapted parts of each method to suit – it is important to tailor approaches to the prevailing culture but try not to lose their pure intent and this is something that often has to be done within the police but there’s a price for the practicality in terms of losing some of the pure methodology (Q4)</li> <li>• The creativity aspect worked surprisingly well but this has been the case in previous interventions where we thought some of the exercises might not be culturally acceptable (Q4)</li> <li>• I don’t know if the positive change that was reported at the time actually stuck. We could really do to go back in key interventions to see if the change has a shelf life (Q4)</li> <li>• Early deliberation with the sponsor and management team was used to get a good feel for the problem situation and help identify the sort of intervention design that might address their needs. It also ensured they were confident with the problem solvers and bought into the approaches being developed (Q4)</li> <li>• The employment of creativity techniques earlier on in the design process, involving the facilitators and representation from the management team might have been advantageous (Q4)</li> <li>• The importance of having an intervention sponsor who had experience of systems approaches cannot be underestimated....and this was an important factor in the sponsor’s buy-in, understanding and support to the approach employed (Q4, Q6)</li> <li>• With the right venue, logistics, preparation etc. together with appropriately capable facilitators, the deployment of similar approaches would seem to be highly practical and feasible (Q4)</li> <li>• An influential factor in the success of the intervention was the accessibility of the activities that people were engaged in and bought into (Q4)</li> <li>• To overcome any cultural discomfort with the approach participants were provided with a clear and relevant purpose for the day and a series of logical steps (activities) that would achieve the</li> </ul>	<p>structure also demanded assertive facilitation and reflecting upon PANDA’s pluralism in the facilitation process, care was needed to balance flexibility and fairness with focus and forthrightness. During the intervention it became clear there was some tension between empowering participants and meeting other intervention aims. A typical criticism was the facilitators not sticking to the agenda and times allocated to each activity and some attendees would have preferred more direction.</p> <p>The cultural acceptability of some aspects of the intervention was challenging. It was important to be practical in tailoring the approaches to suit the prevailing situation and culture but to do this in a considered way to avoid erosion of methodological validity. For example, the Future Search timeline exercise was adapted but in a way that aimed to preserve its power in collecting and sharing a common data set interactively in a large group.</p> <p>Given the aim of staff engagement and a need to be able to do this within a tight timescale, it was important for the activities to appear relevant and accessible by a diverse group. Some participant feedback indicated a negative perception of certain activities, such as the creativity exercise, but the vast majority felt they were able to contribute.</p> <p><b>14. Learning</b></p> <p>In relation to the problem situation there was an equal division amongst participants as to whether they had learnt something new or not but most said they had a clearer picture about where the partnership was heading over the next three years.</p> <p>The management took a similar view but acknowledged some real creativity and different thinking with good ideas for inclusion in next year’s plan.</p> <p>A risk with an intervention such as this where the workshop products are contingent is that any positive outcomes may have a short ‘shelf life’ back in the workplace. An on-going focus and engagement with staff would be necessary to build on the workshop foundations. To preserve the benefit and being realistic this needs to be a long term feature requiring local ownership</p>
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	<p>purpose (Q4)</p> <ul style="list-style-type: none"> <li>• Reflection upon and evaluation of the approach was built into the design from the outset to identify learning about the problem situation, the techniques and approach employed (Q4)</li> </ul>	with capability in the hands of staff locally.
<p>4. Impact of role/ position/capability of participants in problem situation (e.g. sponsors, managers, facilitators and workforce) (Questionnaires; Interview questions 6, 7, 10, 10a, 10b, 11)</p>	<ul style="list-style-type: none"> <li>• A strong, forthright and animated facilitation lead was considered necessary to keep people focused from the outset (Q6)</li> <li>• The event would stand or fall on the facilitation/lead as there was a concern that cynics within the group might take advantage of any weakness to undermine the credibility of the intervention (Q6)</li> <li>• The aim of enabling everyone to have a fair opportunity for contribution and feel engaged in the process was challenging in terms of some dynamics. It created complexity in the process to try and concurrently accommodate people with different perspectives and preferences and keep things on track (Q6)</li> <li>• A key to success was the management team buy-in across the board (Q7)</li> <li>• The sponsor had considerable experience of the application of certain systems approaches and this was an important factor in the sponsor's buy-in, understanding and support to the approach employed (Q6)</li> <li>• The process lead was a professional systems practitioner with considerable experience in the application of a wide range of systems approaches. This meant that the development of intervention methodology had a sound practical and theoretical basis (Q6)</li> <li>• As regards the other staff involved in this intervention, knowledge and experience of the approaches employed was not necessary. However, a willingness to participate in this type of intervention is a real advantage and the approach attempted to encourage as many staff as possible to engage positively. Once they become used to participating positively in organisational improvement activity their future contribution in similar situations is usually enhanced (Q7)</li> </ul>	<p>15. The importance of having an intervention sponsor who had experience of systems approaches was significant in securing support for the design. Working with the local management team in the planning stages meant that the senior team were positively bought in to the approach.</p> <p>16. The lead facilitator was a professional systems practitioner with experience in the application of a wide range of systems approaches. The intervention was designed and implemented by a team of experienced internal consultant/facilitators with considerable knowledge and experience. This meant that the development of intervention methodology had a sound practical and theoretical basis. This team was also equipped to make sound adaptations to the approach as required during the workshop.</p> <p>17. In terms of the capability of participants, there was no requirement for knowledge of relevant systems approaches, however, a willingness to participate was an advantage and more attention to communication prior to the workshop to building greater understanding may have helped gain commitment and manage expectations.</p>
<ul style="list-style-type: none"> <li>• Evaluation of any supplementary performance data related to the intervention objectives (e.g. efficiency data.)</li> </ul>	<ul style="list-style-type: none"> <li>• No supplementary performance data has been collected for this intervention</li> </ul>	

Comments extracted from questionnaire:

- Workshop participants
- Management Team

Stakeholder interviews were held with the following:

- **Intervention sponsor** - a senior police officer who was seconded to the partnership to serve as head of the Community Safety Department. The sponsor had previously worked within the internal consultancy team of West Yorkshire Police in various capacities and during this time had been exposed to range of OR/systems thinking approaches.
- **Intervention facilitator** - a member of the West Yorkshire Police internal consultancy team with extensive experience of the practical application of a range of OR/systems thinking approaches within the police service.
- **Observations from the researcher** - as described in Chapter 4, the action research design is based upon a series of interventions in which the researcher is actively involved. Within this intervention the researcher took the role of a facilitator and as a consequence the perceptions of the researcher are relevant to the evaluation. For the purpose of consistency the researcher's observations are collated in the same format as the other interview schedules.

The attribution of comments to individuals has been removed in order to preserve confidentiality.

## 5. Workshop Agenda and Format

District Community Safety – Staff Development Day  
Wednesday, 5<sup>th</sup> December 2007

### A G E N D A

- 9:15 **Arrival and Registration** – collect name badge and refreshments
- 9:30 **Introduction** Head of Department
- 9:40 **Reflecting On Our Past (1)** Facilitators
- Exercise for individuals and groups to reflect on the past and current operations of the partnership
- 10:30 **Coffee available**
- 10:45 **Reflecting On Our Past (2)** Facilitators
- Groups identify the key strengths and successes
- 11:45 **Domestic Violence** – the perpetrator’s viewpoint
- Questions and discussion Head of Department
- 12:15 **Lunch**
- 13:00 **Domestic Violence** – the victim’s viewpoint
- Questions and discussion Head of Department
- 13:30 **Focusing on the Task** (video) Head of Department
- 13:45 **Focusing on the Future** Facilitators
- Exercise for groups to create the ‘ideal’ future, describing how the department is successful in relation to: Reducing crime; Reducing the fear of Crime; Improving public confidence; Supporting victims; Delivering quality of service; Working together as a team; Working with partners
- 15:15 **Break**
- 15:30 **Quiz** – Prize for first and second Quizmaster
- 16:00 **Round-up of day/close** Head of Department

## Introduction

Agenda with 3 main blocks:

1. Reflecting on those things that have made the partnership successful to date
2. Considering key stakeholder perspectives
3. Identifying preferred futures for the partnership in relation to selected themes:
  - Reducing crime;
  - Reducing the fear of Crime;
  - Improving public confidence;
  - Supporting victims;
  - Delivering quality of service;
  - Working together as a team;
  - Working with partners

Style:

- Self-facilitation
- Scribing
- Time – keeping
- Informal/refreshments ‘on-tap’
- Designed for you to enjoy and get out of it what you want to put into it

### Reflecting On Our Past (1)

**Purpose:** Develop a shared awareness of the key events and experiences that have shaped the provision of Community Safety within the district and your personal position.

**Activity:** Through your experience within:-

- (i) Your organisation / Community Safety Department
- (ii) Your personal life

**Identify memorable events over past years that have shaped how we operate – in relation to work, personally or globally.** These may represent to you notable milestones, experiences or turning points that you feel have shaped Community Safety provision. These may be personal to you, internal or external to your organisation.

Record your identified events on the timeline. It is important to record both **‘what happened’** and **‘why this was important’**. Write these on the timeline as clearly and concisely as you can so others can read and understand them.

**Example:** The creation of a joint Community Safety Department - for the first time bringing all the key strands of service provision into one Department.

**Example:** - 1997 Labour Government elected - New Community Safety Policies introduced with massive impact on the Local Authority and Police.

## Reflecting On Our Past (2)

**Purpose:** To identify the things that have been most influential in making the partnership successful. This will provide a shared platform for taking the partnership forward. Data to be used for the partnership's 3 year plan

**Activity:** **What's the timeline telling you about how the partnership and its team have changed over the years?** Reflecting on the experiences you see recorded on the 'timeline', look for patterns and themes that you feel have been the most significant in making the partnership successful.

**What have been the most significant successes and strengths?** Discuss these within your group and identify and record the most significant successes and strengths.

Groups will be invited to share the most interesting points identified. Other groups selected in turn by previous presenter to add to what they've heard.

## Focusing on the Future

**Purpose:** To imagine an 'ideal future' you think the partnership should work towards.

**Activity:** **In 3 years' time what will success look like in relation to...** Within your group, using any creative means you wish, develop a picture of your 'ideal future' that describes how the partnership is successful in relation to your allocated topic:

- Reducing crime;
- Reducing the fear of Crime;
- Improving public confidence;
- Supporting victims;
- Delivering quality of service;
- Working together as a team;
- Working with partners

Potential approaches could include:

- Collage
- Drama/role play/'soap'
- Music/songs
- Cartoons/pictures
- Slogans
- .....Or any other means you wish to try

Each group will be given time to present back their ideal future.

**There will be a prize for the most creative presentation!**

## APPENDIX 3 – Intervention 2 – IOM

### 1. Intervention 3, Interview Schedule

<b>Impact upon objectives</b>	
Q1	<p>In relation to the IOM initiative, how useful was the approach in meeting stakeholders' interests (IOM Strategic Board and Executive Group), including whether the arising actions helped to address their problems and aims?</p> <p>Intervention Aims:</p> <ul style="list-style-type: none"> <li>• Development of a model of IOM at a corporate level where the key activities of all partner agencies can be reflected</li> <li>• To determine if these activities are linked in a mutually supportive way to best achieve the aggregate aspirations of IOM</li> <li>• To target local improvement activity that identifies the most effective and efficient processes to achieve the IOM aspirations and clarifies roles and responsibilities of all partner agencies involved</li> <li>• To build on existing good practice and enable practitioners across the partnerships to improve their own local processes to suit local needs</li> <li>• Deliver and evaluate the remodelling products by October 2008</li> </ul>
<b>Impact upon problem</b>	
Q2	<p>How effective was the approach in relation to :</p> <ul style="list-style-type: none"> <li>• improving prediction and control;</li> <li>• promoting mutual understanding;</li> <li>• ensuring fairness and empowerment within the problem situation;</li> <li>• promoting diversity and creativity within the problem situation?</li> </ul>
<b>Impact of approach taken</b>	
Q3	<p><b>Who was involved</b></p> <ul style="list-style-type: none"> <li>• What worked well in terms of involvement in the project?</li> <li>• Were the right people included?</li> <li>• Did the team possess the right skills? (If not, what was missing?)</li> <li>• What would you do differently in terms of involvement (staff, managers, specialists etc.)?</li> </ul> <p>(e.g. IOM Strategic Board buy-in, partner agency buy-in, staff buy-in, facilitators' support capability etc.)</p>
Q4	<p><b>Accessibility/Understandability/Practicality/Feasibility of the methodology</b></p> <ul style="list-style-type: none"> <li>• How successful was the approach in terms of engaging participants?</li> <li>• Were the approaches easy to understand and use? Why?</li> <li>• What features of the approach were important to its success?</li> <li>• What would you change about the approach taken (e.g. methods and how they were deployed)?</li> <li>• How important is it for participants to be able to fully understand and employ for themselves the methodology being applied?</li> </ul>
Q5	<p><b>Cultural acceptability of the approach</b></p> <ul style="list-style-type: none"> <li>• How influential do you think the police culture is in relation to acceptance and success of such approaches?</li> <li>• How did this approach overcome any cultural barriers?</li> </ul>
<b>Impact on future deployment</b>	
Q6	<p>Do you think you would use aspects of the approach in other problem situations in future (and which aspects)?</p>
Q7	<p>Any other comments?</p>

## 2. Evaluation of Evidence gained from Intervention 2

Evaluation Method	Evidence	Summary
<ul style="list-style-type: none"> <li>Identify the perception of key stakeholders (including sponsors, managers, facilitators and workforce) involved in the problem situation through interviews and focus groups, specifically in relation to:</li> </ul>		
<p>1. Usefulness of different approaches: in meeting stakeholders' interests, including whether the arising actions solve their perceived problems/ intervention aims; increase participants' control over their own situations; and support and balance effective multiple participant engagement throughout the intervention</p> <p>(interview question 1)</p>	<ul style="list-style-type: none"> <li>The aims were met in part. The intervention focused upon two key aspects of IOM, the prisoner release process and the police custody process. In terms of prisoner release the aims were met in full but for the custody process we only partially achieved these.</li> <li>During the early stages of the intervention the specialist input helped to design and lead the discussion in a focused way but a gap came to light when their input was completed. The prison release aspect was supported by dedicated resources and they took away and implemented the products of the IOM work. The Prison Service saw benefits of seconded staff being fully involved in the work and then taking back into their service the lessons learned. The police custody aspect was more difficult to implement without the same commitment and focus. However, some real practical progress has been made in this area resulting in new resource commitments volunteered by agencies. For example, work on repeat presenters to custody generated insights in relation to health treatment that could be applied elsewhere in IOM with the consequence of reducing subsequent service demands.</li> <li>The approaches appeared to meet the immediate needs of the IOM Strategic Board as described in the intervention objectives but the implementation of findings was less successful. It appeared that on-going capable support was required to maintain momentum and expertise to take the solutions forward.</li> <li>The visioning and high level model were well received and these products were still in use at the time of writing (over 2 years on), whereas the more detailed process improvements had a shorter life span and were only partially implemented at the time (e.g. within the prisoner release process).</li> <li>The approach taken to development within the intervention was aimed at engaging a representative and wide range of stakeholders where all contribution was recognised and used to shape the intervention findings. The facilitators ensured that participation was taken seriously and the contribution was duly recognised.</li> </ul>	<p>1. The approaches appeared to meet the immediate needs of the stakeholders but the implementation of findings was less successful. It appeared that on-going support was required to maintain momentum and expertise to take the solutions forward or for the agencies to dedicate capable resources for implementation. Experienced specialist facilitator support ensured participation was effective.</p>
<p>2. Impact upon problem situation in relation to:</p> <ul style="list-style-type: none"> <li>prediction and</li> </ul>	<ul style="list-style-type: none"> <li>We needed a much more detailed understanding of each others' businesses to realise efficiencies across the IOM process and the work undertaken to look at IOM as an interconnected whole and then look in more detail at processes was a step in the right direction. Where there was the will and ability to take things further then efficiencies were possible. In the Prison Service for example there was a recognition of the need for</li> </ul>	<p>2. The work undertaken to view IOM as an interconnected whole and then look in more detail at processes provided a better</p>

<p>control, measured by the efficacy and efficiency of solutions;</p> <ul style="list-style-type: none"> <li>• mutual understanding, measured by the effectiveness and elegance of solutions;</li> <li>• ensuring fairness, measured by emancipation and empowerment within the problem situations;</li> <li>• promoting diversity and creativity, measured by exception (marginalized viewpoints recognised) and emotion within the problem situation</li> </ul> <p>(interview question 2)</p>	<p>efficiencies and they were more outward looking for ways to change their practices. Their engagement with the prisoner release work meant they were more able to implement the process improvements.</p> <ul style="list-style-type: none"> <li>• Improved mutual understanding was more obvious in the police custody work where multi agency involvement was less well developed in comparison with prisoner release. The Cedar Court event for the first time brought custody staff together with partner agencies and this was both ground breaking and challenging. The event allowed staff from all sides to see the custody process from new perspectives and there was a change in cultural thinking as a result. Within the intervention there was less progress made with the police custody aspects but here we needed to start understanding each others' positions before progress could be made in process improvements.</li> <li>• The Cedar Court event attempted to create the opportunity to draw in creative thinking from diverse groups who may not normally have been considered as being part of the custody process and for them to feel comfortable to contribute</li> <li>• The systems approaches combined within this intervention sought to address a range of problem contexts: <ul style="list-style-type: none"> <li>• The visioning activity and custody process design conference sought to fully engage all partner agencies in order to draw in perceptions that might have traditionally been marginalised (e.g. third sector involvement in the design of police custody processes).</li> <li>• Although there were no methodologies employed with particular strength in developing mutual understanding, this was seen to be a product of the visioning activity and the development of the high level offender flow model.</li> <li>• The offender stock and flow model was of particular value in its ability to provide an acceptable high level structure for the problem situation. It also helped stakeholders to start reflecting on the potential for waste to be generated in the shared processes.</li> <li>• The more detailed lean process improvement activity was very much aimed at optimising the process flows to meet stakeholder requirements as defined by the desired shared outcomes</li> </ul> </li> </ul>	<p>understanding of each others' businesses and provided a means of optimising the process flows to meet stakeholder requirements.</p> <p>3. The visioning event concurrently addressed a variety of needs, allowing staff from all sides to see the custody process from new perspectives and there was a change in cultural thinking as a result. The event attempted to create the opportunity to draw in creative thinking from diverse groups who may not normally have been considered as being part of the custody process and might have traditionally been marginalised (e.g. third sector involvement in the design of police custody processes) and for them to feel comfortable to contribute to improving process efficiency.</p>
<p>3. Usefulness of approaches in terms of:</p> <ol style="list-style-type: none"> <li>supporting creativity</li> <li>facilitating informed choice</li> </ol>	<ul style="list-style-type: none"> <li>• It was really good to bring people in from all agencies from the start to consult with and involve them throughout to build ownership of the end products. (Q4)</li> <li>• The visioning session that derived the high level outcomes helped gain buy-in, enthusiasm, motivation and shared understanding. Some people tend to sit back and go with the flow but the approach taken provided the opportunity and encouragement to contribute and this secured buy-in. There was a need for trust, mutual understanding and a shared goal at all levels, from staff through to senior management. (Q4)</li> </ul>	<p>4. Although no formal creativity tools were employed by the facilitators to view the problem situation, through the mapping exercise with stakeholders an improved understanding of the problem context could be identified and this helped the facilitators identify appropriate systems</p>



<p>of tools</p> <p>iii. implementation, including:</p> <ul style="list-style-type: none"> <li>• impact of deployment approaches</li> <li>• practicality and feasibility</li> <li>• accessibility and understandability</li> <li>• cultural acceptability</li> </ul> <p>iv. facilitating learning about the problem and systems approaches employed</p> <p>(interview questions 4 and 5)</p>	<ul style="list-style-type: none"> <li>• In multi-agency situations where we are looking for efficiency, in particular we need something to help see the interconnections and this had been missing in IOM. For example, recognition that tasking resources in one part of the process has an impact further down the line. The work to show the flow of offenders through IOM was really trying to address this requirement. (Q4)</li> <li>• The approach taken was quick and this was a good thing. It's important to keep up the impetus and quickly get events moving to show clear progress (Q4)</li> <li>• The existing culture of multi- agency working helped the approach succeed. All parties had chosen to jointly participate in the development of IOM so the group were already comfortable with the idea of change and they were also prepared to live with an imperfect picture in the short term. (Q5)</li> <li>• The multi-agency team at a senior level fronted up the approach and demonstrated their commitment to it, for example through their involvement in the Cedar Court event. At this workshop we had a mixture of uniformed police officers together with third sector agencies and this visibly showed an openness and commitment to participate. The event was chaired by the local authority and the partner agencies jointly fronted events to avoid it appearing to be a threat to any one organisation (Q5)</li> <li>• When presented with the intervention objectives the facilitators started to formulate their initial ideas about what approaches might work. For example, the potential to use lean process improvement to identify efficiencies. Although no formal creativity tools were employed by the facilitators to view the problem situation, through the mapping exercise with stakeholders an improved understanding of the problem context could be identified and this helped the facilitators identify appropriate systems approaches to employ. For example, the obvious complexity of the interconnected initiatives suggested approaches to help understand and represent the underlying system structure</li> <li>• Due to the participative nature of the systems approaches employed, the staff were closely involved in their deployment. However, theoretical and complex content was kept to a minimum by the facilitators and based on their previous experience they deliberately avoided unnecessary detail for non specialists, for example in retaining a high level stock and flow model, and the approaches appeared to be accessible and well received.</li> <li>• Despite the wide range of partners involved, the approaches employed during the intervention all appeared to be culturally acceptable.</li> <li>• The employment of the chosen systems approaches, be they the stock and flow model or the more detailed process improvement activity, appeared to all help partner agencies improve their knowledge about the problem situation and how they might improve it at different levels.</li> </ul>	<p>approaches to employ.</p> <ol style="list-style-type: none"> <li>5. In this situation involving diverse partners there was value in facilitating an understanding about the interconnectivity of their contributions.</li> <li>6. Due to the participative nature of the systems approaches employed, the staff were closely involved in their deployment and this helped gain buy-in, enthusiasm, motivation, a shared understanding and ownership of their products. However, theoretical and complex content was kept to a minimum by the facilitators and based on their previous experience they deliberately avoided unnecessary detail for non specialists, for example in retaining a visual representation of the high level stock and flow model and these approaches appeared to be accessible and well received.</li> <li>7. The approach taken was quick and this was a good thing. It was seen as important to keep up the impetus and quickly get events moving to show clear progress</li> <li>8. Despite the wide range of partners involved, the approaches employed during the intervention, all appeared to be culturally acceptable.</li> </ol>
<ul style="list-style-type: none"> <li>• Impact of</li> </ul>	<ul style="list-style-type: none"> <li>• There was a good buy-in and interest in the intervention at a senior level despite the wide range of</li> </ul>	<ol style="list-style-type: none"> <li>9. The IOM leadership was very supportive of</li> </ol>

<p>role/position/ capability of participants in problem situation (e.g. sponsor, managers, facilitators and workforce).</p> <p>(interview question 3)</p>	<p>partner organisations involved.</p> <ul style="list-style-type: none"> <li>• There was real value in having an independent specialist body with professional expertise and the flexibility to bring in ideas and resources as necessary to help structure the work and stimulate new thinking.</li> <li>• Having dedicated seconded staff from agencies made a big difference. The Prison Service had a dedicated role in the team and this meant they were fully engaged in the activities and could quickly take away and put into practice any improvements identified. As a result, the value from the prisoner release work was realised and implemented within the Prison Service. This was a contrast to the police custody work, where we had five separate district approaches to be implemented by the five DIP Managers (Drug Intervention Programme Managers). As a result of having no single individual owning the implementation the change drifted somewhat.</li> <li>• The IOM leadership was very supportive of the approach taken during the intervention and clearly had confidence in the specialists supporting the activities.</li> <li>• All agencies fully engaged in the activities and were willing to contribute staff resources to participate in events.</li> <li>• Although the majority of staff were unfamiliar with approaches used, they all seemed to actively engage.</li> <li>• The specialist facilitators were given the freedom to develop intervention activities and they were able to draw upon their wide ranging experience of the employment of systems techniques and methodology in similar problem situations to select, adapt and deploy approaches to suit.</li> </ul>	<p>the approach taken during the intervention and clearly had confidence in the specialists supporting the activities.</p> <p>10. Although the majority of staff were unfamiliar with approaches used, all agencies fully engaged in the activities and were willing to contribute staff resources to participate in events and where staff were dedicated to the role they could quickly take away and put into practice any improvements identified.</p> <p>11. The specialist facilitators were given the freedom to develop intervention activities and they were able to draw upon their wide ranging experience of the employment of systems techniques and methodology in similar problem situations to select, adapt and deploy approaches to suit. Involving independent specialists with professional expertise and the flexibility to bring in ideas and resources as necessary to help structure the work and stimulate new thinking was considered to be of real value.</p>
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Stakeholder interviews were held with the following:

- Senior manager within partnership - a senior representative of the IOM team and as a member of the Strategic Delivery Board and a participant in the majority of intervention activities, was well placed to reflect upon the project activities.
- Observations from the researcher - the action research design is based upon a series of interventions in which the researcher is actively involved. Within this intervention the researcher took the role of facilitator alongside a small team of experienced internal consultants was responsible for identifying and implementing the range of relevant approaches in consultation with the intervention stakeholders and as a consequence the perceptions of the researcher are of particular relevance to the evaluation.

The attribution of comments to individuals has been removed in order to preserve confidentiality.

## APPENDIX 4 – Intervention 3 – QUEST

### 1. Intervention 3, Interview Schedules

<b>Impact upon objectives</b>	
Q1	<p>In relation to the QUEST4 initiative, how useful was the approach in meeting stakeholders' interests (Force Command Team and BCU SMT), including whether the arising actions solved their perceived problems/intervention aims?</p> <p>Intervention Aims:</p> <ul style="list-style-type: none"> <li>• To improve the service to local communities and make better use of our resources. Its twin focus has been: <ul style="list-style-type: none"> <li>○ To ensure that policing services are effective in delivering a quality service to the public of West Yorkshire in line with the Policing Pledge; and</li> <li>○ To ensure that savings identified through more efficient processes are re-invested in policing local neighbourhoods to improve confidence</li> </ul> </li> </ul>
<b>Impact upon problem</b>	
Q2	<p>How effective was the approach in relation to :</p> <ul style="list-style-type: none"> <li>• improving prediction and control;</li> <li>• promoting mutual understanding;</li> <li>• ensuring fairness and empowerment within the problem situation;</li> <li>• promoting diversity and creativity within the problem situation</li> </ul>
<b>Impact of approach taken</b>	
Q3	How effective was the approach in terms of supporting creativity in thinking about the problem situation?
Q4	How effective was the approach in terms of supporting choice and flexibility to employ the right problem solving tools?
Q5	How effective was the approach taken in terms of how it was implemented, including:
Q5.1	<p><b>(i) Who was involved</b></p> <ul style="list-style-type: none"> <li>• What worked well in terms of involvement in the project? <ul style="list-style-type: none"> <li>○ What was the impact of leadership by both: <ul style="list-style-type: none"> <li>▪ Managers; and</li> <li>▪ Facilitators/QUEST project team?</li> </ul> </li> <li>○ What was the impact of involvement of the workforce?</li> </ul> </li> </ul> <p>(e.g. Force Command Team buy-in, BCU SMT buy-in, staff buy-in, specialist/consultant support capability etc.)</p> <ul style="list-style-type: none"> <li>• Were the right people included?</li> <li>• Did the team possess the right skills? (If not, what was missing?)</li> <li>• What would you do differently in terms of involvement (staff, managers, specialists etc.)?</li> </ul>
Q5.2	<p><b>(ii) Accessibility/Understandability/Practicality/Feasibility of the methodology</b></p> <ul style="list-style-type: none"> <li>• How successful was the approach in terms of engaging participants?</li> <li>• Were the approaches easy to understand and use by participants? Why?</li> <li>• What features of the approach were important to its success?</li> <li>• What would you change about the approach taken (e.g. methods and how they were deployed)?</li> <li>• How important is it for participants to be able to fully understand and employ for themselves the methodology being applied?</li> </ul>
Q5.3	<p><b>(iii) Cultural acceptability of the approach</b></p> <ul style="list-style-type: none"> <li>• How influential do you think the police culture is in relation to acceptance and success of</li> </ul>

	<p>such approaches?</p> <ul style="list-style-type: none"> <li>• How did this approach overcome cultural barriers?</li> </ul>
Q5.4	<p><b>(iv) Other factors</b></p> <ul style="list-style-type: none"> <li>• What other factors were critical to its success?</li> <li>• What were the greatest weaknesses? / What would you do differently?</li> </ul>
Q6	<p>How effective was the approach in helping to learn about the problem as well as the problem solving methods and techniques? (E.g. was participation a good way to learn about the problem being tackled and was it a good way to learn the approach for future use?)</p>
<b>Impact on future deployment</b>	
Q7	<ul style="list-style-type: none"> <li>• Do you think you (and others involved) could use aspects of the approach for yourself in future (and which aspects)?</li> <li>• What is the most effective means of deploying systems capabilities within the sector (e.g. widespread broad knowledge/awareness, internal specialists or bought in specialists)?</li> <li>• How useful is it for these approaches to be implicit in the way managers and staff think about problems they are facing on a day to day basis?</li> </ul>
Q8	<p>What supporting processes could usefully be established to improve the capability of problem solvers in the sector to successfully select and employ appropriate systems thinking approaches?</p>
Q9	<p>Could you see some of this being usefully part of internal staff/service development programmes (e.g. senior leadership programmes)?</p>
Q10	<ul style="list-style-type: none"> <li>• In your experience, are there combinations of systems methodologies, methods and techniques that are found to be particularly successful in meeting the challenges of service improvement?</li> <li>• Why is this?</li> <li>• What features are influential, particularly where problems involve different stakeholders?</li> </ul>
Q11	<p>Any other observations on the use of systems thinking within the sector?</p>

### BCU Commander Interview schedule

Q1	<p>In relation to the QUEST4 initiative, how useful was the approach in meeting stakeholders' interests, including whether the arising actions solve their perceived problems/intervention aims? Intervention Aims:</p> <ul style="list-style-type: none"> <li>• To improve the service to local communities and make better use of our resources. Its twin focus has been: <ul style="list-style-type: none"> <li>○ To ensure that policing services are effective in delivering a quality service to the public of West Yorkshire in line with the Policing Pledge; and</li> <li>○ To ensure that savings identified through more efficient processes are re-invested in policing local neighbourhoods to improve confidence</li> </ul> </li> </ul>
Q2	<ul style="list-style-type: none"> <li>• What components were critical to its success?</li> </ul>
Q3	<ul style="list-style-type: none"> <li>• What were its greatest weaknesses?</li> </ul>
Q4	<ul style="list-style-type: none"> <li>• In particular, how effective was the approach in terms of : <ol style="list-style-type: none"> <li>v. supporting creativity in thinking about the problem situation</li> <li>vi. facilitating informed choice of tools to employ</li> <li>vii. implementation, including: <ul style="list-style-type: none"> <li>• impact of deployment approaches</li> <li>• practicality and feasibility</li> <li>• accessibility and understandability</li> <li>• cultural acceptability</li> </ul> </li> <li>viii. facilitating learning about the problem (and systems approaches employed)</li> </ol> </li> <li>• How could we improve each of these steps?</li> </ul>
Q5	<ul style="list-style-type: none"> <li>• How successful was the approach in terms of engaging participants? Specifically in terms of increasing participants' control over their own situations; and supporting and balancing effective multiple participant engagement throughout the intervention</li> </ul>

Q6	<p>More generally:</p> <ul style="list-style-type: none"> <li>• What is the impact of leadership in the facilitation process upon the successful application of systems approaches by both managers and facilitators?</li> <li>• What factors are particularly influential?</li> </ul>
Q7	What impact on success of the intervention does the role/position/capability of participants in problem situation have (e.g. sponsors, managers, facilitators and workforce)
Q8	How important is the ability to combine different approaches in an informed and coherent way (critical systems thinking) in helping to address policing and community safety problem situations, particularly in situations where there is joint responsibility for service provision and its management
Q9	<ul style="list-style-type: none"> <li>• In your experience, are there combinations of systems methodologies, methods and techniques that are found to be particularly successful in meeting the challenges of service improvement?</li> <li>• Why is this?</li> <li>• What features are influential in effective engagement of stakeholders and actors in joint service improvement interventions?</li> </ul>
Q10	<ul style="list-style-type: none"> <li>• What is the most effective means of deploying systems capabilities within the sector (e.g. widespread broad knowledge/awareness, internal specialists or bought in specialists)?</li> <li>• Why is this?</li> </ul>
Q11	How influential do you think the police culture is in relation to acceptance and success of systems approaches?
Q12	Is it better to use these approaches overtly or in the background/for these things to be implicit in the way managers think about problems they are facing?
Q13	What processes could usefully be established to improve the capability of problem solvers in the sector to successfully select and employ systems thinking, through a more informed understanding of the impact of systems approaches in prevailing problem contexts?
Q14	Could you see some of this being usefully part of internal staff/service development programmes ?
Q15	Any other observations on the use of systems thinking within the sector?

## 2. Evaluation of Evidence gained from Intervention 3

Evaluation Method	Evidence	Summary
<ul style="list-style-type: none"> <li>Identify the perception of key stakeholders (including sponsors, managers, facilitators and workforce) involved in the problem situation through interviews and focus groups, specifically in relation to:</li> </ul>		
<p>1. Usefulness of different approaches: in meeting stakeholders' interests, including whether the arising actions solve their perceived problems/ intervention aims; increase participants' control over their own situations; and support and balance effective multiple participant engagement throughout the intervention</p>	<ul style="list-style-type: none"> <li>The approach taken was straightforward and easy to understand at all times. Communication and contact with the senior management team was continuous and proactive. The local SMT bought in from the outset and the QUEST project team were accessible (based within the BCU) and were very amenable to ideas and suggestions coming from the SMT. In the past consultants have presented themselves as knowing best rather than working with us. This project team were a contrast, being open, clear communicators who were prepared to learn about the organisation and work alongside us. (Q1)</li> <li>The approach taken was flexible enough to be refined as the project developed and in response to issues raised in consultation with those affected. Due to the visibility and accessibility of developments, consultation and communication, the SMT had real ownership of the end product. (Q1)</li> <li>The end result has delivered significant change. The change was quite radically different rather than being a bit of a quick fix and the emphasis placed on the use of hard data helped to convince the SMT that the emerging findings from the project work were valid. (Q1)</li> <li>As important as its effectiveness in identifying process improvement opportunities, the approach managed to initiate the start of a cultural change where this type of thinking is more accepted and embraced within the workforce. The SMT played a key role in this change by creating the right conditions to support the cultural change. This sort of thing cannot be imposed, it needs to be encouraged. The division has already started to build the foundations for this through its 'People First' initiative and the bottom-up, inclusive approach taken in QUEST was a logical extension to this. (Q4)</li> <li>Many of the workforce in the BCU who were not as closely involved will not fully recognise the value and impact of the changes. Those who were closely involved, mainly from the NPT, would say QUEST has had a big impact and they demonstrated good co-operation and engagement through involvement in focus groups where they knew their ideas would be taken seriously. (Q5)</li> <li>The initiative has had a significant impact on process improvement but it has been naïve to the need for cultural change. (Q1)</li> <li>Rollout of the changes across the force has been more challenging because we have needed to balance corporate</li> </ul>	<ol style="list-style-type: none"> <li>The approach taken was considered as being flexible enough to be adapted to respond to some issues that emerged during the intervention.</li> <li>A key component was the project team's on-going interaction with senior stakeholders which helped to build their credibility. In addition, the visibility and accessibility of developments, the consultation and communication and use of 'hard data' helped to secure buy-in and ownership of outcomes by the senior management team.</li> <li>Engagement of the workforce was seen as positive who felt their views were being taken seriously.</li> <li>The resulting changes were considered to be significant, not just in terms of the process changes but also in terms of the impact the approach had on the workforce involved on the project who had become more empowered to improve their work processes in</li> </ol>

<p>(BCU Commander interview questions: 1, 4, 5; others' question 1)</p>	<p>principles against local flexibility and sometimes winning over the BCU commanders has been challenging. In the first phase of rollout the Deputy Chief Constable gave a clear message regarding his expectations for BCU commanders to make it work locally and this had a significant impact on the progress and corporacy of the implementation. The change initiative works best with a mixture of corporate direction within clear parameters and a devolved flexibility to adapt solutions locally. (Q1)</p> <ul style="list-style-type: none"> <li>• The project has successfully delivered process improvement and an improved focus on customer service but without continual attention to sustaining the changes by continually challenging practices, there is a risk of diluting these successes. This has been observed where key staff involved in the project have moved on to new roles and their replacements do not possess sufficient understanding of the original intent of the improvement work and how to sustain the benefits. (Q1)</li> <li>• The approach was largely successful. However, we adapted an 'off the shelf' product based upon our experience of local policing and of appropriate process improvement methods to make it fit the needs of WYP and focus firmly on the customer outcomes rather than just process efficiencies. (Q1)</li> <li>• The QUEST4 project was highly successful in meeting its aims but this was not the experience of QUESTCJ which used the same methodology. (Q1)</li> <li>• In QUEST BCU we had a big external consultant presentation of generic products from their previous projects but because we had our own experienced staff involved on the project team we could see through the gloss and judge the ideas for what they were. Some of these ideas were found useful but our experience allowed us to challenge and adapt them to match the situation in WYP. For example, the consultants placed a great emphasis on the collection of data and their previous work had identified a number of activities where efficiencies could be derived. Our concern was regarding whether the data being collected was the right data and without a shared understanding of the processes we were looking at there was no reliable means of knowing this. As a result the approach was adapted to first build a good process understanding using mapping, to then identify the issues and then gather data to validate the issues. (Q1)</li> <li>• The contrast in QUEST CJ was that the team had no internal specialists with experience and knowledge of organisational change and the consultants had no 'off the shelf' solutions to offer. This exposed the methodology as not being the panacea it appeared to be following QUEST BCU and the methodology in itself was not sufficient to deliver results, it's more about the professional capability of the staff to use it. The methodology couldn't compensate for the quality of the people involved. (Q1)</li> <li>• In QUEST CJ the consultants came promising significant efficiencies and when they found they could not deliver</li> </ul>	<p>future.</p> <ol style="list-style-type: none"> <li>5. There was some question about whether widespread cultural change in the workforce had occurred and the process changes might not result in all the service outcomes anticipated on implementation and that the change may become diluted over time without on-going commitment and understanding among the workforce. However, the BCU Commander did see the initiative as the start of a cultural change where this type of thinking will become more widely accepted.</li> <li>6. There was some tension between corporacy and local freedom to develop change that was locally relevant and the methodology offered only a limited support to address this.</li> <li>7. In the first project the QUEST methodology was adapted by experienced practitioners for example in relation to building a better understanding of interconnected processes from different stakeholders before pursuing data to 'optimise' performance.</li> <li>8. The initial stage of the QUEST CJ project was considered to have</li> </ol>
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	<p>these easily they did not have the ability to negotiate with other partner agencies to find them and the methodology didn't offer much to support them in this. (Q1)</p> <ul style="list-style-type: none"> <li>• The project outcome appeared to address senior stakeholder requirements and there was significant involvement of those affected in terms of the solution designs.</li> <li>• The lasting effect of using the approach and leaving tools in the hands of the local workforce has gone some way to enabling them to take more control of their situations in future</li> <li>• There were good examples of multiple stakeholder involvement in the project but the methodology fell short in some circumstances in supporting true engagement</li> </ul>	<p>been a less successful application despite being the same methodology. It was considered that the lack of involvement of capable specialists led to an over reliance on the application of the methodology as given without challenge or adaption. The success of the approach was more about having a suitable professional capability rather than the methodology itself.</p>
<p>2. Impact upon problem situation in relation to :</p> <ul style="list-style-type: none"> <li>• prediction and control, measured by the efficacy and efficiency of solutions;</li> <li>• mutual understanding, measured by the effectiveness and elegance of solutions;</li> <li>• ensuring fairness, measured by emancipation</li> </ul>	<ul style="list-style-type: none"> <li>• The initiative was based very much on an approach that could quantify and predict the impact of process changes. It was surprising, even to external consultants, how accurately it predicted some of the process changes. This has also had an impact on how staff now behave with more decisions being backed up by data. (Q2)</li> <li>• Although the approach was less focused on improving mutual understanding it did achieve this particularly in the smaller BCUs. We were finding that too many small specialist teams had been established with a narrow focus and the changes have now started to break the 'handover' culture that was limiting ownership of work. (Q2)</li> <li>• If terms of empowerment, this is probably more likely to be realised in future as staff in BCUs have developed a wider knowledge of how this sort of approach might help them. (Q2)</li> <li>• The reliance on 'dip-sampling' to generate knowledge about the processes was a real strength, allowing us to see the as is situation much more clearly and providing a means of demonstrating this to others. The methods used enabled us to predict work volumes for crimes and appointments very accurately and this was a strength as it enabled the team to talk with confidence about their ideas for change. There is a health warning with this – you had to be sure it was the right data you were collecting to ensure it was reliable and being clear on the purpose for which it was being gathered. (Q2)</li> <li>• The bottom up approach (e.g. mapping workshops and interviews with staff) provided an opportunity for all those involved to appreciate more the position of others involved in the process and see problems with how things were being done. (Q2)</li> <li>• Care was needed to ensure that what was being developed was the best solution and not just the sponsor's view so the project leadership needed to manage this carefully to ensure all relevant views were considered. (Q2)</li> <li>• Participants were given the opportunity to be creative in their solutions within some given corporate principles. (Q2)</li> </ul>	<p><b>9. Prediction and Control</b> The approach was largely based upon data to quantify and predict the impact of change and to improve efficiency. The use of 'dip sampling' of process data was seen as a powerful way to confidently clarify the problem situation and demonstrate this to others. Though there was a need to ensure you were measuring the right things.</p> <p><b>10. Mutual Understanding</b> The approach was less focused on improving mutual understanding though it did help here to some extent. The bottom up involvement provided a means of empowering the workforce and</p>



<p>and empowerment within the problem situations;</p> <ul style="list-style-type: none"> <li>• promoting diversity and creativity, measured by exception (marginalized viewpoints recognised) and emotion within the problem situation</li> </ul> <p>(Interview question 2)</p>	<ul style="list-style-type: none"> <li>• Prediction and Control – Yes, highly effective here as it was very much about addressing this requirement. (Q2)</li> <li>• Mutual Understanding – To quote the ACC responsible for implementing the QUEST findings, “I now have 3 BCU commanders who know their business” and this was because the approach had clarified process responsibilities and costs. The participants were able to understand their role in the process and their impact on the whole with a clear end to end understanding. The use of peers to deliver the message to the wider workforce helped get the message across with some credibility and the staff were less sceptical and understood the language. (Q2)</li> <li>• Ensuring Fairness – the 4 QUEST principles employed (victim focused, lean, bottom-up and evidence based) encouraged wider staff involvement in the change initiative and enabled them to contribute their own solutions. (Q2)</li> <li>• Promoting Creativity – We didn’t stifle creativity but this was not a key feature of the approach employed. We had to keep focused on our timeline of a 6 month project and this didn’t leave much scope for ‘blue sky’ thinking (Q2)</li> <li>• The approach was very much about prediction and identifying efficient ways to deliver services to meet stakeholder needs and this worked well in QUEST BCU. In QUEST CJ they tried to take a systems view but the team worked in a series of silos and the issues they were pursuing were not supported by the evidence gathered or the views of other stakeholders. (Q2)</li> <li>• In QUEST CJ stakeholder management was not particularly effective and partner organisations were not all bought into the project. The methodology did not appear to have any formal means of helping the partners work together to mutual benefit or to challenge perspectives. (Q2)</li> <li>• Staff on the front line were not fully involved in the work and those who were involved were not encouraged to work together. There was very little creativity in the thinking and the methodology didn’t seem to support this. There was very little challenge to working practices because the teams were happily working on their own areas. (Q2)</li> <li>• The methodology was very much aimed at optimisation of process efficiency and this was backed up by significant data analysis and evidence gathering</li> <li>• The approach enabled a degree of mutual understanding but there were no formal processes for helping the project team tackle conflicting views. This was more apparent in the QUEST CJ where multiple agencies were involved.</li> <li>• The employment and involvement of the workforce in the project provided a certain amount of fairness and diversity but again there were no tools to formally address issues of power and promote diverse, creative views.</li> <li>• The perceived culture of police organisations might be partly to blame for the limited focus of the approach.</li> </ul>	<p>the process workshop format helped surface issues to improve mutual understanding. It was perceived that the mapping clarified responsibilities and the impact of activities on the wider process.</p> <p>In QUEST CJ, stakeholder management was not as effective and the partner organisations appeared less bought into the project. The methodology did not appear to have any formal means of helping the partners work together to mutual benefit or to challenge perspectives.</p> <p><b>11. Fairness</b> Widespread workforce involvement in the initiative was seen as a means of improving fairness and diversity of view. The project leadership needed to ensure all relevant views were considered and not to just reflect the sponsor’s view.</p> <p><b>12. Creativity and Diversity</b> Participants were given the opportunity to be creative in their solutions within some</p>
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		<p>given corporate principles but this wasn't a key feature of the approach as there wasn't much time for 'blue sky' thinking. In QUEST CJ there was less creativity and the methodology and approach taken to deploy it didn't appear to support this. There was also little to help surface marginalised viewpoints.</p>
<p>3. Usefulness of approaches in terms of :</p> <p>i. supporting creativity</p> <p>ii. facilitating informed choice of tools</p> <p>iii. implementation, including:</p> <ul style="list-style-type: none"> <li>• impact of deployment approaches</li> <li>• practicality and feasibility</li> <li>• accessibility and understandability</li> <li>• cultural acceptability</li> </ul> <p>iv. facilitating</p>	<ul style="list-style-type: none"> <li>• The buy-in from the SMT was important but so too was the quality of the management team, all of whom were able to understand the process and were prepared to support change to their working practices and not to be protective. (Q2)</li> <li>• The relationship between local management and the project team was key to build confidence in the team. The open and visible communication meant there were no surprises. (Q2)</li> <li>• The impact of the leadership commitment at a Force level needs to be recognised. The Deputy Chief Constable was highly committed to the project, clearly demonstrated through his consistent attendance at the regular weekly meetings with the full project team. (Q2)</li> <li>• The extensive use of data was also significant in the success, being used as it was to 'prove' to the SMT that the findings were valid. (Q2)</li> <li>• The involvement of the staff who actually work at the sharp end alongside specialists from external consultants and Corporate Review Department seemed to work well. These staff have credibility with their colleagues and their confidence in the solutions was such that they were prepared to defend them with managers at the highest level. (Q2)</li> <li>• The approach taken enabled the SMT to think differently about the problem and work close enough with the team to understand better the problem and learn about the situation rather than just apply professional judgement. The SMT became alert to what process improvement can deliver rather than becoming too immersed in day to day activity. (Q4)</li> <li>• Everyone was in tune. The drive for implementation was provided by the senior team who could see how the proposals would work, they owned them and invested significant effort behind the scenes to overcome any opposition to the change. I'm not sure how successful this sort of thing would be in other BCUs who might not have developed the same culture. (Q4)</li> <li>• The approach was seen as very practical and locally focused. Due to the accessibility of the approach and involvement of quality staff, we understood better what was going on and had confidence in its validity. Because of the regular 'real-time' updates with the locally based team we were able to see immediately if there were any issues to be tackled as they arose. We owned the product and it was not something that was merely dumped on us as a given by a remote consultant. When I look</li> </ul>	<p><b>13. Leadership</b></p> <p>Gaining the support, commitment and trust of the senior officers at a Force and BCU level required a mix of top down and bottom up.</p> <p>A positive leadership at a Force (programme sponsor) level with visible and active commitment was seen as key to organisation wide buy-in.</p> <p>The buy-in of the local management team was seen as essential to instil ownership of the end product rather than having the product</p>

<p>learning about the problem and systems approaches employed</p> <p>(BCU Commander interview questions: 2, 3, 4, 8, 9; others' questions: 3, 4, 5.1, 5.2, 5.3, 5.4, 6, 10)</p>	<p>back at other change it's often done to you remotely and imposed via email. It's lack of local relevance and accessibility can be a real weakness if the change is to stick. (Q4)</p> <ul style="list-style-type: none"> <li>• The reason that QUEST was successful and similar initiatives have failed was the focus and intensity of the approach. We have often played around with change in the past. There is often a resistance to employing systems models because we are so busy we haven't got time to do this sort of thing and become sufficiently bought-in. They often seem artificial, remote and detached from our business. (Q8)</li> <li>• QUEST got straight into the operational side and was not seen as remote or an 'off the shelf' solution. The Racetrack felt like me discussing daily business rather than a theoretical approach. If there was theory it was behind the scenes and subtle. (Q8)</li> <li>• Basic common sense is the most valuable. Approaches that involve people in developing solutions to gain buy-in because these people know the job best. This necessitates getting the right culture to encourage engagement. (Q9)</li> <li>• It's all about sustainability so we need buy-in (not gained if the change is imposed). To maintain success we've had to 'stand-on' sometimes to sustain change rather than let it erode over time or allow it to be undermined by other change initiatives. You need a local leader to act as guardian. (Q9)</li> <li>• Many of the creative ideas came from the consultants' previous work with police forces rather than it being a particular feature of the methodology. In QUEST CJ the consultants brought very little and a lack of creativity was evident. (Q3)</li> <li>• The methodology being advocated by the central external consultants was at times too rigid and restricting. Fortunately the local external consultant's team were more flexible in their application and could see the need to avoid the 'one size fits all' mentality.</li> <li>• The detailed methodology needs more flexibility within four basic phases: <ul style="list-style-type: none"> <li>• Issue identification</li> <li>• Development of a case(s) for change</li> <li>• Solution design</li> <li>• Implementation</li> </ul> </li> </ul> <p>(Q4)</p> <ul style="list-style-type: none"> <li>• The basic methodology was easy to follow though some aspects seemed to emerge as we went along. I think the good product we got in the end was down to the people more than the methodology. We had a buy-in at all levels in QUEST BCU to the methodology's broad principles of: lean; bottom-up; customer focus; and evidence based. (Q5.2)</li> <li>• Some aspects of the methodology were not so easy to follow such as the benefits calculator. This came back to bite us later during rollout when we found we didn't know enough about these aspects to use the tools to adapt the solutions to match local circumstances. (Q5.2)</li> <li>• An important feature of the QUEST BCU project was having a quality team and project structure in place from the outset – putting in the effort up-front to plan and involve the right people was key. We needed a clear vision of where the project was</li> </ul>	<p>dumped on the BCU. This also provided a guardianship for successful implementation.</p> <p>The culture of the local management team was influential as was the close working relationship between leadership and the project team.</p> <p><b>Methodology</b> 14. The simple formal structure of the approach was generally seen as accessible, practical and adaptable to local circumstances as long as it was applied in the right way. Simple graphical representations of each stage of the project helped the teams quickly understand the approach without needing to overload them and the 'racetrack' visualisation of the</p>
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	<p>going so we could select an approach that would match. (Q5.2)</p> <ul style="list-style-type: none"> <li>• Equally important was gaining the support, commitment and trust of the senior officers at a Force and BCU level. This meant we had a mix of top down and bottom up perspectives and were able to communicate effectively at all levels in the organisation. (Q5.2)</li> <li>• Gaining buy-in from cynical staff is traditionally difficult. (Q5.3)</li> <li>• We were lucky to get top team buy-in from the outset so the barriers were fewer. Their aim was for the initiative to be about doing the right things (effectiveness) and the rest would follow (efficiency). By designing a process that enabled staff to deliver the best service they could (which is what they joined to do) rather than having something imposed, helped us gain cultural buy-in to the changes. (Q5.3)</li> <li>• QUEST CJ failed to do this and there is a perception amongst some that this is being done to rather than being done with staff. (Q5.3)</li> <li>• Given the very challenging time constraints there was considerable pressure on the project team. This meant that the team had to be pushed quite hard at times but it also ensured a high level of energy within the team. (Q5.4)</li> <li>• The approach required the team to live and breathe the problem environment from within and also to maintain responsibility for it through into implementation. This meant that the team had a real appreciation for the problem. (Q6)</li> <li>• As previously mentioned, the skills gained by the team through involvement in the project meant that many were capable and intending to utilise the approach themselves in future. (Q6)</li> <li>• Operationally, the Conflict Management Model has been found to be of value in operational problem situations. The key thing with any methodology is for it to be presented as broad principles rather than as a detailed methodology. These broad commitments should establish a clear guide to be adhered to but also provide sufficient flexibility to match any emerging problem situation when a detailed methodology may not. (Q10)</li> <li>• In terms of the QUEST project, these principles included: <ul style="list-style-type: none"> <li>• Bottom-up involvement of staff who operate the process in question</li> <li>• A customer focus</li> <li>• Lean process principles</li> <li>• Data driven</li> </ul> </li> </ul> <p>(Q10)</p> <ul style="list-style-type: none"> <li>• The morning meetings with the whole team were important opportunities to challenge and test project progress including activities such as data collection. The lead provided by the chair of these meetings was important in providing both the opportunity to listen to the team as well as challenge their activities from a position of knowledge. The meetings enabled us to reflect on progress and plan activity for the week ahead. (Q5.2)</li> <li>• The change process was time-bound and fast paced and this helped maintain an energy and sense of motivation to achieve</li> </ul>	<p>system was a very powerful means of building understanding of all those affected.</p> <p>15. Competent practitioners were required to understand the underlying approach and to be able to employ the best response to meet local circumstances as the methodology provided little formal support for the selection of different tools. However, applied successfully, it felt connected to operational work and not too theoretical.</p> <p>16. The methodology was lacking in some respects, such as to help achieve mutual understanding or a formal means of encouraging participant creativity and without experienced practitioners it would be difficult for the approach to help users</p>
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	<p>tough targets. (Q5.2)</p> <ul style="list-style-type: none"> <li>• The development of a robust communications strategy early on was vital to successful involvement and buy-in by local staff. (Q5.2)</li> <li>• Generally the accessibility of the approaches was good and the teams found the process easy to follow but with reference to my earlier comments about the benefits calculator, there could have been better involvement and understanding in certain aspects. (Q5.2)</li> <li>• The handbooks and simple weekly plans developed for the rollout were very useful for new teams to quickly understand the approach and apply it locally. So too were the simple diagrams and presentations. (Q5.2)</li> <li>• Adding to comments already made, key features in the successful application were local SMT buy-in; getting the right team; communication strategy; a bottom-up approach; and gathering data that is 100% accurate. (Q5.2)</li> <li>• There is often general negativity to change initiative due to overload in the past and at some point QUEST will be seen negatively so we need to embed it as quickly as possible. (Q5.3)</li> <li>• To help overcome some of the scepticism, there is value in utilising officers who have credibility to communicate with staff. For example using a credible traffic PC to explain the impending changes meant that staff listened to and accepted the message. (Q5.3)</li> <li>• It was hard to win over the cynical, particularly in the middle management ranks of the Inspectors where there is a real risk of derailing the success of the initiative. The tactic of targeting those people who could be problematic and spend more time involving them would seem appropriate. The initial external consultant's team were very good at this people management aspect. (Q5.3)</li> <li>• Coming from my background as a 'street cop', I had never been involved in this sort of change project. The experience has been great and I've learned an approach I can apply in other situations. Simply put, I now have a way to: <ul style="list-style-type: none"> <li>1. identify issues within a situation;</li> <li>2. to then design and select solutions; and</li> <li>3. to then implement them (Q6)</li> </ul> </li> <li>• These three stages are simple to do and re-use. I have also seen the value of good stakeholder management in doing all of this. (Q6)</li> <li>• The process has also enabled me to pick up much about how the organisation works and joins up. (Q6)</li> <li>• This wasn't obvious in the QUEST methodology. We were in a better position than some other Forces in relation to QUEST and were able to rely on in-house specialists to bring their professional expertise to play and a critical eye for potential tools to introduce at different stages (Q4)</li> <li>• The visual representation of the system we were dealing with in QUEST BCU, the 'Racetrack', was a powerful means of helping to understand the interconnected nature of our work and it provided a common language. The Racetrack had been</li> </ul>	<p>respond to these requirements and select supplementary techniques to employ as the need arose in problem situations.</p> <p>17. Effort was needed up front to plan and get the initiative on the right course, involving the right people to get a clear vision of the aspirations of key stakeholders.</p> <p>Stakeholder engagement throughout was an important feature of the methodology.</p> <p>However, there was no formal method used to support this other than good consultant practice and this led to problems in the QUEST CJS where a more formal structure would have overcome weaknesses in the engagement of diverse stakeholders.</p> <p>18. Particular strength was seen in its hard</p>
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	<p>developed as a result of the consultants' previous QUEST work and had been refined through experience elsewhere. The consultants brought a lot of credible previous experience to the project. However, in QUEST CJ, there was no previous experience of the CJS processes with no equivalent 'racetrack' and no experience amongst the consultants. (Q5.2)</p> <ul style="list-style-type: none"> <li>• In QUEST BCU we had clear objectives with high level principles within which to operate and this helped maintain some focus without stifling flexibility to build solutions that were locally relevant. In QUEST CJ the purpose and potential was less clear and this meant the project team were fishing in the dark. The methodology didn't really help us to reconcile the different stakeholder views and there needed to be much more up front to scope and gain some common vision of where to go. (Q5.2)</li> <li>• The pace of the project was both positive and negative</li> <li>• Stakeholder management was particularly successful to build and maintain buy-in and engagement throughout. The project manager had a close working relationship with the senior leadership and this meant issues were raised and dealt with head-on. This was not evident in QUEST CJ where the project team appeared to be merely producing 'happy sheets' which made everything look like it was progressing well but it didn't take long to find this was not the case in reality. (Q5.2)</li> <li>• Introducing challenge is important and having something built into the methodology is valuable. We established weekly challenge sessions for members of the QUEST BCU project team to present and test their thinking. QUEST CJ didn't have this so everyone was positive, blissfully ignorant that they were going down the wrong road. (Q5.2)</li> <li>• In QUEST BCU working within the BCU with the staff affected was important for visibility. This was in contrast to QUEST CJ which built no local ownership. (Q5.2)</li> <li>• The external consultants approach to process mapping had much to learn from WYP's own approaches that had been developed within a police environment over a number of years. (Q5.2)</li> <li>• The dip-sampling approach to data gathering was a useful way to demonstrate we understood the business and could be very powerful in persuading police managers and staff by seeing the numbers. (Q5.2)</li> <li>• The various QUEST stages, each with a formal sign-off requirement were useful to structure and focus activity and keep things on track but some requirements could be rather bureaucratic and possibly not serving the needs of WYP. These features, along with the 'dip-sampling' to build evidential data, were seen as valuable in any future application. (Q5.2)</li> <li>• The pace of work was fast and the hours long and this appealed to the police 'can-do', 'let's get on with it' mentality and it was making an obvious difference to the real job at the sharp end. The data driven, hard evidence gathering also matched the police culture. For example, once the SMT had seen the data to back up our proposed changes, they were fully bought in. (Q5.3)</li> <li>• The Force Command Team now trust and respect the professional value of the QUEST approach as a result of the success of QUEST BCU. In terms of gaining front-line credibility I'm not sure we are there yet, probably due to a lack of exposure but gaining buy-in from staff was helped by having credible members of the project team who they respected and could talk their language. (Q5.3)</li> <li>• The most successful elements of the methodology were the data gathering, the benefits calculations and the costing which all provided a hard evidence basis for the work. (Q5.4)</li> </ul>	<p>data and evidence gathering. Due to the extensive evidence gathering the changes proposed were defensible in a way that appealed to the Force. The pace and intensity of the project activities also matched the 'can-do/emergency' culture of the service. It was noted that pace was a challenge for change initiatives as solutions erode over time so need to be embedded quickly and continually revisited.</p> <p>19. Although the approach seemed to be effective in helping to understand the problem, learning about the methodology and deployment for future application was not formally embedded in the process.</p> <p><b>Project team</b> 20. Establishing a project team</p>
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	<ul style="list-style-type: none"> <li>• We learned from the consultants how important it was to carefully pre-plan key meetings so they ran smoothly and any problems could be exposed beforehand. (Q5.4)</li> <li>• QUEST CJ tried to take on more than was feasible and the methodology couldn't handle the complexity of diverse stakeholders. This was compounded by having less capable consultants and a weaker team with less involvement of WYP's internal consultants and QUEST specialists (from QUEST BCU). (Q5.4)</li> <li>• We now have some useful skills within BCUs and there's an appetite for applying the approach to other problems. However, it's been a victim of its own success and there are many demands to apply QUEST to a wide range of problems, even when it is not an appropriate approach. It's basically a process improvement methodology and if it's to be used for other things it needs adapting and appending. (Q6)</li> <li>• I was involved in a previous project that applied SSM and this was hard to understand and apply. I prefer a linear process rather than fluffy clouds and the QUEST approach provided this. (Q10)</li> <li>• The police service needs practical, easily understood tools (Q10)</li> </ul> <ul style="list-style-type: none"> <li>• There was some creativity from staff involved in QUEST BCU but in QUEST CJ the consultants came with a rigid plan of what they wanted to do and there seemed to be no place for creativity. When challenged by the Force Command Team about lack of creativity, the consultants' response was to meet their 'experts' back at head office to identify more ideas to bring back to the project (Q3)</li> <li>• The QUEST CJ team pursued the QUEST methodology rigidly but when it was found lacking they didn't seem able to select something else that might have been more appropriate. (Q4)</li> <li>• The consultants sold us a methodology but over complicated it, for example with data collection tools, and coupled with the pace of the work inexperienced team members were in no position to understand the approach and challenge it when it didn't appear right. The consultants also relied heavily on solutions derived from their previous QUEST projects and when challenged it was often hard to defend transplanting others' solutions into this intervention. In QUEST BCU we were better able to challenge but in QUEST CJ this was not possible until too late on. It's important not to undersell the value of our own staff who were able to compensate for these weaknesses in QUEST BCU through their knowledge about the business as well as alternative methods. (Q5.2)</li> <li>• The approach needed a lot of translation and in QUEST BCU we were able to question the methodology and supplement and change aspects that did not fit the problem. Our specialists were in a position to understand the purpose of the various techniques and to recognise where they might be of value or where something else might be more appropriate. Others in the project team had to really be spoon fed with low level tasks without understanding any of the theoretical underpinnings. (Q5.2)</li> <li>• In future we need to use our expertise to hide the complex parts and any difficult theory whenever we are working in a participative ways with staff but avoid making them think it's being done to them rather than with them. The facilitators need to possess this skill. (Q5.2)</li> </ul>	<p>comprising local staff with credible experience of working within the processes alongside competent internal specialists was seen to be important. It was also seen to be advantageous to base the team locally to improve their visibility and to develop a real appreciation of the problem and for them to own and see the work through into implementation. This helped ensure the project team had credibility as well as building sustainable solutions that were relevant to ensure local ownership and buy-in.</p> <p><b>Consultants/ Facilitators</b> 21. Capable in-house specialists were seen as important to add expertise, organisational knowledge and a</p>
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	<ul style="list-style-type: none"> <li>• The ‘racetrack’ visualisation of the system was a very powerful means of building understanding. It was used as a common thread through the analysis, design and implementation of changes as well as the ongoing performance management. (Q5.2)</li> <li>• The intensity and pace of the project meant we had little time to reflect and learn from what we had invested so much in. (Q5.2)</li> <li>• The approach seemed to be acceptable to the police culture. Due to the extensive evidence gathering the changes proposed were defensible in a way that appealed to the Force. One memorable example involved a PC being confident enough to say “No sir, you are wrong” when presenting his findings to the Chief Constable. He was so confident in his evidence he was able to persuade the Chief that he was right. (Q5.3)</li> <li>• The police culture of wanting to get on with things often means we ‘knee jerk’ a response to organisational change rather than properly analyse the situation first. This approach involved considerable analysis and its success within QUEST has resulted in more calls for evidence and analysis in similar change initiatives. (Q5.3)</li> <li>• The methodology was lacking in some respects, such as to help achieve mutual understanding or introduce creativity and without experienced practitioners it would be difficult for the approach to help users respond to these requirements and select supplementary techniques to employ as the need arose in problem situations.</li> <li>• Experienced practitioners were needed to understand the underlying methodology and to be able to select and apply the best tools to meet local circumstances as the methodology provided little formal support for the selection of different tools and in its first application benefited from the experience of internal specialists with knowledge of what approaches might be appropriate</li> <li>• The graphical visualisation of a joined up system (Racetrack) was effective for structuring the intervention and providing a powerful means of communication</li> <li>• Capable in-house specialists with expertise and understanding of organisational context of great value</li> <li>• The pace and intensity of the project activities matched the ‘can-do/emergency’ culture of the service</li> <li>• Stakeholder engagement throughout was an important feature of the methodology.</li> <li>• Effort was needed up front to get the initiative on the right course from the perspectives of key stakeholders and there was no formal method used to support this other than good consultant practice – this seemed to work well in the first project but less so in QUEST CJ where a more formal structure would have overcome weaknesses in the engagement of diverse stakeholders.</li> <li>• It was also seen to be advantageous to base the team locally to improve their visibility and to develop a real appreciation of the problem and for them to own and see the work through into implementation. This helped ensure the project team had credibility as well as building solutions that were relevant to ensure local ownership and buy-in</li> <li>• The approach seemed to be effective in helping to understand the problem and base this on ‘evidence’ but learning about the methodology and deployment for future application was not formally embedded in the process</li> </ul>	<p>critical eye for the potential to introduce appropriate tools as the project unfolded.</p> <p>22. Facilitators were seen as needing to possess skills to hide complex aspects in participative projects while ensuring participants feel it’s being done with rather than to them. Some of the workforce representatives in the project team who didn’t possess previous business improvement experience needed more task level help without theoretical underpinning.</p> <p>23. Those involved rather than the methodology was considered the most important determinant of success.</p>
4. Impact of role/position/	<ul style="list-style-type: none"> <li>• The legacy is a QUEST team now based within the division who are ‘up for it’ and capable of delivering local process improvement for ourselves into the future. It’s important to recognise the importance of a local capability of this nature</li> </ul>	<p><b>Local Involvement, Capability and</b></p>



<p>capability of participants in problem situation (e.g. sponsors, managers, facilitators and workforce) (BCU Commander interview questions : 5, 6, 7, 10, 13; others' questions: 5.1, 7, 8, 9)</p>	<p>to constantly keep on top of problems. (Q5)</p> <ul style="list-style-type: none"> <li>• The dynamic environment we operate in means that problems do not stay solved for long unless we have a constant focus. If I could supplement my local team with a couple of specialists from Corporate Review I would be in a strong position to do this. (Q5)</li> <li>• Leadership is critical and the QUEST project was a great example of this. The Deputy Chief Constable turned up to all the meetings and clearly understood the issues and was bought into the solutions. Support for this sort of initiative at the ACPO level is key. (Q6)</li> <li>• It should also be recognised that the lead provided by the consultants, both internal WYP and external consultants, gave confidence, providing a drive and enthusiasm that was infectious. The initiative was well led, directed and focused on both the consultant and customer sides. (Q6)</li> <li>• At all times I felt I was in control and I bought in as a result. Having met and discussed the QUEST experience with my counterpart in (another police force), the application of QUEST there appeared to be different and the solutions were being simply imposed on Divisional Commanders without any meaningful engagement in their development. Staff were being by-passed. (Q10)</li> <li>• We had control right from the start. As an organisation we like to be able to maintain control, it's our job. So when someone comes in and tries to take over we feel uncomfortable. (Q10)</li> <li>• The approach should not seek to impose systems thinking by way of a remote department. We need to improve the local link and have local expertise who can tackle smaller scale projects themselves. (Q10)</li> <li>• Continuous improvement is proactive as well as reacting to the likes of legislation. We need a divisional capability but with specialist expertise being provided by the centre and maintaining skills and knowledge though effective networking. For example, this is similar to how we deal with POCA. For this we have a local operational team but also have significant professional links with the central specialist team in the Financial Crime Unit. (Q10)</li> <li>• Corporate Review Department should be represented at each division. For example having two Corporate Review trained staff in each. As they become immersed in BCU life they will develop better solutions and these will be owned by the BCUs themselves and consequently be more likely to succeed. (Q13)</li> <li>• Creating the conditions is key. As senior managers we need to understand the value of these approaches so we can act as drivers to stimulate successful implementation. (Q13)</li> <li>• Local Business Managers should own this responsibility but with specialist skills being provided from the centre. The big stuff should maybe be catered for at a regional level and then an effective capability placed in the hands of BCUs to deliver locally. At the moment this is limited due to the fact that the specialist Corporate Review resources are involved in more generic corporate projects when it would be more useful if it was BCU or district based. (Q13)</li> </ul> <p>• An important determinant of the success of the QUEST BCU initiative was the top team support at a force level,</p>	<p><b>Sustainability</b></p> <p>24. The involvement of staff across the range of affected functions with a mix of local operational knowledge at all stages through to implementation was seen as important for effective whole system improvement but so too was the introduction of an external challenge. The link between the project team and local management team was seen to be influential to success of buy-in and continuity in the local teams was seen to be important in terms of sustainability. Establishing effective consultation and communication with the wider workforce was also seen as important in this regard in building a critical mass of support.</p> <p>25. The dynamic operating environment means that problems don't stay solved for long so a local capability is seen as vital to sustainability of improvements. Local understanding of the problem situation and ownership of</p>
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	<p>particularly the Chief Constable’s commitment to the approach and the Deputy’s cross-cutting authority as Senior Responsible Officer (SRO) for the project. (Q5.1)</p> <ul style="list-style-type: none"> <li>• My position as Project Manager was also influential as I had daily access to the Force Command Team through my other responsibilities with the Chief Constable and could obtain decisions and advice readily. (Q5.1)</li> <li>• The involvement of in-force specialists worked well as they provided a gate-keeping role and corporate memory as well as enabling the sustainability of the solutions and the future use of the methodology. However, if I was undertaking the project again I would want a dedicated financial specialist on the team. (Q5.1)</li> <li>• The team make up was good but sometimes the specialists didn’t understand the practicalities of operational policing and having the right ‘blend’ of specialist and operational staff in the team was crucial. (Q5.1)</li> <li>• The QUEST BCU external consultant’s team were very good, being capable in a range of specialisms and with a lead consultant who was highly experienced and able to understand the organisation and adapt the approach to match the circumstances faced. They gave us a real discipline in certain aspects such as the quantification. Unfortunately this wasn’t the case with the initial QUEST CJ team. (Q5.1)</li> <li>• The BCU lead in QUEST BCU was a real gem, providing a mixture of process improvement understanding and operational knowledge. He had direct access to the local BCU management team who fully supported and trusted his involvement. The importance of this role and the support of the BCU SMT cannot be underestimated. (Q5.1)</li> <li>• In terms of the remainder of the project team, there was a broad range of staff covering all the relevant functions being affected by the process improvement work. This contrasted with the QUEST CJ experience where the project team was much less cross functional and operated in separate sections where each party developed solutions that suited their own requirements rather than the process as a whole. (Q5.1)</li> <li>• There is value in having some external challenge incorporated within this sort of project but this needs to be combined with local operational knowledge and a project team working within the area under review through into implementation. (Q5.1)</li> <li>• In terms of deploying capabilities in the sector, it is important for the service to embed the key principles that make it work rather than being a slave to a set methodology. (Q7)</li> <li>• Many police forces are in a position of change overload, all very busy looking to respond to a range of requirements. Unfortunately this means we don’t spend enough time thinking about what change is really needed, selecting a way to best to do it corporately and then taking the time to do it properly. It doesn’t have to be QUEST as this is just one of many different ways to find service improvement but it does need to be thought through in a considered way and professionally delivered. (Q7)</li> <li>• The National Policing Improvement Agency (NPIA) have a responsibility in this regard and should support the development of these types of approaches within the police service, including their inclusion within management development modules. (Q9)</li> </ul>	<p>solutions is key to success. The importance of developing a local capability to be involved in delivery and sustainability of improvements needs to be recognised, rather than simply imposing change devised by external ‘experts’. However, the value of involving specialists was seen as vital to the development of professionally sound interventions.</p> <p>26. Some project team members considered their newly developed skills could be employed within the workplace to tackle future problem situations. However, it was also observed that insufficient local skills transfer had occurred to support self-sufficiency and a local capability with specialist expertise being provided by the centre was seen as one way forward in future.</p> <p>27. The failure of previous attempts to widely deploy business improvement skills through widespread training</p>
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	<ul style="list-style-type: none"> <li>• In all the QUEST roll-out teams I worked alongside all members were good choices with a mix of specialists (performance management, facilitators and consultants), operational staff and admin support. The selection of the right BCU lead was critical as they needed to work closely with the BCU senior management team as well as the project team, including the QUEST specialists. They provided continuity and local ownership and needed to be credible communicators and motivators. (Q5.1)</li> <li>• The key team skills needed to balance specialists with operational staff. We should have supplemented the team with some dedicated financial expertise and taken more ownership of developing the benefits calculators. This would have avoided having to relearn and correct the system developed in isolation by the consultants. (Q5.1)</li> <li>• During the roll-out of the changes there was a degree of resistance from some of the BCU management teams who had not been involved in the initial review work. This was probably down to a ‘not invented here’ attitude and a feeling that the change was going to be done ‘to’ rather than ‘with’ the BCU. There is a critical role here for the central specialists to work with the various BCU management teams to explain and sell the benefits of change. (Q5.1)</li> <li>• Although the involvement of local staff is seen to be valuable, so too was the introduction of people from outside of the BCU and specialists from the central team. This enabled more of a challenge to local practices with an ability to see things differently and also a preparedness to point out where things may improve rather than being protective of the status quo. (Q5.1)</li> <li>• The involvement of external staff, including external consultants made the management teams sit up and listen. We suffer from a certain amount of familiarity breeding contempt and often don’t appreciate the ideas of local staff. (Q5.1)</li> <li>• Co-location of the team within the BCU was valuable to build good working relations and gain local buy-in. (Q5.1)</li> <li>• A strong ACPO lead was of great value in supporting the project teams where conflicts arose. (Q5.1)</li> <li>• As I am moving on from this project I am already planning to use the approach again in the future. I have a momentum going as a result of this work and want to use this to take me further in the organisation. (Q7)</li> <li>• We could have done much of this without employing consultants using our own in-Force capabilities but external consultants did bring a structure and people skills that was valuable. (Q7)</li> <li>• A central specialist team working with local BCU staff seemed to work well. The local staff will transfer skills back into the BCU but the external component introduces professionalism and challenge. If it was totally locally resourced without strong specialist input, the methodology would get watered down and lose impact. (Q7)</li> <li>• As people move through the projects they should take the skills back to their teams. Also, the potential of building a pool of specialists (like the Force facilitation team) from which future initiatives could be resourced should be considered. (Q8)</li> <li>• I have seen staff grow in their roles over a 13 week period and involvement in this sort of thing has a valuable role in people development within the organisation. The sort of things they might learn would include:</li> </ul>	<p>programmes was noted and the maintenance of skills and knowledge though direct involvement in change and then effective networking to sustain and build capability was seen as more effective. It was also suggested that this sort of initiative would build a pool of practitioners who could work with confidence on future projects.</p> <p><b>28. Leadership</b>  Leadership was seen as critical to the success of the initiative, at a Force level, at a local management team level and within the project team. Effective engagement between interveners and management was important in building senior management understanding of the problem situation and in establishing the credibility of the team and approach being taken. Another important factor was a previous exposure to systems thinking amongst leadership. A close ‘hands-on’ involvement also enabled real time decision making at</p>
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	<ul style="list-style-type: none"> <li>• a better understanding about the business</li> <li>• presentation skills</li> <li>• a simple change management model</li> <li>• facilitation skills</li> <li>• improved self-confidence</li> </ul> <p>(Q9)</p> <ul style="list-style-type: none"> <li>• The BCU leadership had a good cultural base that was receptive to this sort of change and this was an important factor in the success of QUEST BCU. There was a clear visible buy-in from the management team who understood the cross functional nature of their processes. (This was not the case with some of the roll out BCUs where the management teams needed winning over). (Q5.1)</li> <li>• The project manager role was key. He established an open and safe environment from the outset which encouraged full contribution from a trusting project team. He had strong connections with the most senior members of the Force on a daily basis which ensured significant awareness, understanding and buy-in from the top and promoted credibility in the project as well as gaining quick decisions at key points. (Q5.1)</li> <li>• There was a good dynamic with the consultants from day one. They understood our needs and took a mature approach to adapting the intervention to suit the circumstances and the needs of the customer rather than slavishly following the methodology. This was not the case in QUEST CJ. (Q5.1)</li> <li>• The bottom-up approach meant that some of the workforce were directly involved in the project but to engage the others effective communication was needed to gain their buy-in. This took various forms such as internet blogs but it was felt that the most effective mechanism would be a successful implementation in the pilot site. Getting first and second line managers bought in was seen as crucial and this was affected by a full day away with inspectors followed by a cascade to sergeants in a style of consultation rather than instructing. (Q5.1)</li> <li>• The professional support provided by our internal specialists was of particular value in building the sustainability of the initiative. They were able to adapt and build on the QUEST methodology to improve the effectiveness of the approach and ensure the solutions were successfully implemented and maintained. (Q5.1)</li> <li>• It's questionable how much managers can/do use the training they receive. For example we have provided managers with an overview of 'lean' but they are in no position to apply this to their own work processes themselves without much more capability. Just knowing about it doesn't mean you can actually do it. (Q7)</li> <li>• When I get back to BCU I will be applying my QUEST skills but this is because I have built a good understanding of how to use them. Using skills in real problem situations is a better way to learn them rather than just receiving blanket training. (Q7)</li> <li>• However, there are now some useful skills out there to be built upon. I could see a specialist professional capability at the centre to pick up the major cross-functional projects and local staff with basic skills to tackle local problems,</li> </ul>	<p>key stages to maintain the project momentum and greater ownership of outcomes.</p> <p><b>Consultants/facilitators</b>  29. The inclusion of capable professional facilitators/consultants on the project was seen as vital for effective stakeholder management, to maintain a focus in the methodology and for the successful selection, adaption and employment of a range of specialist methods and techniques. The combination of internal and external consultants worked well in providing a diverse range of complementary specialist experience and capabilities to use at different points as well as injecting enthusiasm and confidence in the project team. Internal specialists were seen as key to sustainability in employing and developing the methodology further in future but the right blend of facilitators and local staff was seen as important in understanding operational</p>
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	<p>occasionally calling in the specialists as required. (Q7)</p> <ul style="list-style-type: none"> <li>• Knowing what’s going on in other forces in terms of change initiatives and sharing ideas would be useful. (Q8)</li> <li>• The formal cross-force workshops were more of a PR exercise than an effective way of networking. Building good connections with practitioners elsewhere to establish an informal network might be more useful. (Q8)</li> <li>• Sometimes general awareness can work but you really need to apply to real situations. An example of this was KT problem solving training which provided valuable practical techniques that I have applied to good effect many times. (Q9)</li> </ul> <ul style="list-style-type: none"> <li>• The leadership and engagement in QUEST BCU was very strong within the project team and also externally at a Force Command and local level. This was a key contributor to the project’s success. The QUEST CJ experience was different. Although there was good senior level buy-into the project there was less hands-on involvement. Within the project team the police and consultant leadership was weaker and the cross-organisational nature of the work made the requirement for a strong team much more important. (Q5.1)</li> <li>• The consultant leadership was a real contrast between the two projects. In QUEST BCU it was very strong with the consultants bringing in their considerable stakeholder management skills which helped maintain their credibility and secure buy-in from senior stakeholders who could challenge the thinking and be reassured things were moving in the right direction. (Q5.1)</li> <li>• The quality of the police staff involved in the projects was critical. The team in QUEST BCU had a range of experience across the process as well as specialist organisational change expertise. In QUEST CJ this was more difficult given the partner organisations involved and the lack of specialist internal consultants within the team. The team needed to comprise of diverse and complementary skills so we could play to different strengths as the project progressed. (Q5.1)</li> <li>• The consultants and police staff involved in the QUEST CJ project did not really have the necessary experience and skills. Formal involvement of central specialists really was required and with this we would have been able to trap many of the problems early on. (Q5.1)</li> <li>• There probably wasn’t sufficient skills transfer for most team members to be able to apply the approaches for themselves in future. A little knowledge can be dangerous if individuals are not fully competent and improper use might end up in rework being required. (Q7)</li> </ul> <ul style="list-style-type: none"> <li>• Securing buy-in, understanding and confidence of senior management in the intervention team and approach is vital to success</li> <li>• Continuity in the composition of local teams is important to sustain solutions developed and avoid the ‘not invented here’ syndrome post implementation.</li> <li>• The inclusion of professional facilitators/consultants on the project was vital to maintain a focus on the methodology</li> </ul>	<p>policing and developing solutions that were relevant. The external perspective introduced by the facilitators/consultants was considered valuable in providing a challenge to the normal way of thinking.</p> <p>30. It was observed that the external consultant involvement made senior management take more notice of the proposed changes and that much of the change could have been delivered with internal specialists if they had been allowed to do so.</p> <p><b>Methodology</b></p> <p>31. The approach taken reassured local management that they could control the direction of the initiative and that solutions were not simply being imposed upon them. This was seen as particularly important given the culture of the organisation.</p> <p>32. Building an approach to change that is based upon a set of key principles,</p>
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	<p>and for the successful selection and employment of a range of specialist methods and techniques.</p> <ul style="list-style-type: none"> <li>• The combination of internal and external consultants worked well in providing a range of specialist capabilities. For example, the externals brought in expertise in terms of a disciplined approach to quantification and the internal consultants possessed experience of interactive process mapping workshops</li> <li>• Involving local staff in identifying and implementing desirable change worked well in this project. Not only did this mean we identified solutions that were right for the participants but securing the change was also more likely to succeed.</li> <li>• Involving senior officers with previous exposure to process improvement and systems thinking made a difference to their understanding of the problem situation and credibility of the approaches</li> <li>• The project had attracted involvement of ‘the brightest and best’ staff at all levels in contrast to other corporate initiatives where secondment of the ‘best staff’ could not be afforded</li> <li>• Initiative overload in the service is detracting from the likelihood of successful change. The selection of the right approach for the situation and then delivering this professionally and thoughtfully was a real strength of this initiative.</li> </ul>	<p>providing the flexibility to adapt to suit the problem situation was seen as more appropriate than slavishly following an advocated methodology.</p> <p>33. Initiative overload in the service is seen as detracting from the likelihood of success, instead of taking the time and effort to select the right approach for the situation and then focus on a professional and well thought through delivery.</p>
<ul style="list-style-type: none"> <li>• Evaluation of any supplementary performance data related to the intervention objectives (e.g. efficiency/ productivity data.)</li> </ul>	<p>The BCU performance position 9 months into implementation (as at February 2010) included:-</p> <ul style="list-style-type: none"> <li>• An 88% improvement in keeping customers informed of incident re-grading.</li> <li>• The deployment of the most appropriate resource first time in 99% of all deployments.</li> <li>• A 98% reduction in the errors and omissions made by the initial Attending Officer.</li> <li>• A 100% rate of revisit or re-contact to a victim.</li> <li>• A 34% reduction in the average number of days taken to investigate a crime.</li> <li>• A 33% saving in Neighbourhood Policing Teams’ time to reinvest in tackling local issues.</li> <li>• Projected savings of £2,205,904 pa within the BCU.</li> </ul> <p>One of the key intervention objectives sought to improve confidence and satisfaction through improved neighbourhood policing. Although these service outcomes are influenced dynamically by a wide range of factors and the contribution of the QUEST initiative cannot be accurately calculated, the Force’s ongoing survey programme can be used to chart the change in confidence and satisfaction level since implementation.</p> <p>It should be noted that the satisfaction figures were in decline prior to the QUEST initiative and subsequent analysis of customer feedback has identified the source of dissatisfaction being the lack of on-going contact with victims after the initial contact. Although this aspect was not specifically addressed in the QUEST project, additional training for staff has resulted in improved service which is reflected in the more recent survey findings.</p>	

	<p>The satisfaction of service users has declined over the period immediately post implementation of QUEST (circa May 2009) while public confidence has increased. It should be noted that there is a lag of up to 3 months in data collection, meaning that process changes implemented in May 2009 might not be fully reflected in the survey experiences until August 2009. Although it is not the purpose of this research to explore the detail of changes in performance outcomes, a more in-depth analysis of underlying reasons for the decline in satisfaction identified that some of the QUEST process changes to save time dealing with incidents might have contributed to the reduced satisfaction. However, it should be noted that these figures were in decline prior to the QUEST initiative and the lack of on-going contact with victims after the initial contact has been identified as a significant contributor to this. Whatever the source of dissatisfaction, one of the benefits of regular monitoring of the performance racetrack was the early identification of these performance impacts and subsequent remedial action through awareness and training has brought improvement more recently.</p> <p>It is believed that the time saved in dealing with incidents and reinvested in neighbourhood policing has contributed to the improvement in confidence though there would appear to be a trade-off between confidence and satisfaction over the period observed.</p>
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Stakeholder interviews were held with the following:

- **A BCU divisional commander** - a police chief superintendent with considerable operational experience at all ranks and a wide range of policing functions. The Divisional Commander had previously served as head of the department including the internal consultancy team of West Yorkshire Police and during this time had been exposed to a range of OR/systems thinking approaches.
- **Intervention project manager** - a senior operational police officer with a wide range of operational command and organisational management experience and who had previously worked alongside the internal consultancy team.
- **Intervention team member** - a police officer with mainly operational experience prior to this project but had previously worked with the internal consultancy team.
- **Intervention process work-stream leader** – a police manager with a mixture of operational and organisational development experience.
- **Intervention internal consultant** - a member of the internal consultancy team with wide experience of the practical application of a range of OR/systems thinking approaches within the police service, including extensive experience of process improvement.
- **Additional observations from the researcher** - the researcher took the role of the capability work-stream lead and was responsible for establishing sustainability of solutions implemented as well as building capability in the organisation to extend the use of the approach in other areas and as a consequence the perceptions of the researcher are relevant to the evaluation. For the purpose of consistency the researcher's observations are collated in the same format as the other interview schedules but only for those questions specifically related to the intervention.

The attribution of comments to individuals has been removed in order to preserve confidentiality.

## APPENDIX 5 – Intervention 4 – ASB

### 1. Tables and Figures

Feature of Problem Situation/ Intervention	Implications for Stakeholder Questions
Real world/ Analysis of problem situation	<p>What is the nature of the problem situation?</p> <ul style="list-style-type: none"> <li>○ The problem situation is systemic (involving a clearly interconnected whole system) that can be analysed in systems terms</li> <li>○ The problem situation is more about understanding different stakeholder perceptions</li> <li>○ The problem situation involves views/positions of particular individuals/groups who are oppressed and the intervention needs to account for the disadvantaged</li> <li>○ The problem situation involves views/positions of particular individuals/groups who are marginalised and the intervention needs to account for those marginalised by existing knowledge/power structures</li> </ul>
Models constructed	<p>What is the purpose of employing the approach?</p> <ul style="list-style-type: none"> <li>○ To capture the nature of situation to gain knowledge of the real world</li> <li>○ To represent possible ‘ideal type’ human activity systems</li> <li>○ To respond to sources of alienation and oppression</li> <li>○ To surface suppressed or marginalised views using diverse forms of pluralism</li> </ul>
Models used to	<p>How would you like the intervention to address the problem situation?</p> <ul style="list-style-type: none"> <li>○ To improve the real world and for purposes of design</li> <li>○ To structure debate about feasible and desirable change</li> <li>○ To allow everyone to participate in addressing the problem</li> <li>○ To allow relevant stakeholders to express diversity and possibly grant consent to act</li> </ul>
Quantitative analysis	<p>To what extent is quantification important and for what purposes would this data be used?</p>
Process of intervention	<p>What is the aim of the intervention?</p> <ul style="list-style-type: none"> <li>○ To improve goal seeking and viability</li> <li>○ To explore purposes, alleviating unease and generating learning</li> <li>○ To ensure fairness</li> <li>○ To promote diversity</li> </ul>
Intervention best conducted on basis of	<p>Who should be involved?</p> <ul style="list-style-type: none"> <li>○ Experts</li> <li>○ Stakeholder participation</li> <li>○ Alienated/oppressed to generate responsibility for own liberation</li> <li>○ Marginalized views to generate creativity and diversity</li> </ul>
Evaluation of success	<p>What are the measures of success?</p> <ul style="list-style-type: none"> <li>○ Efficiency and efficacy</li> <li>○ Effectiveness and elegance</li> <li>○ Empowerment and emancipation</li> <li>○ Exception and emotion</li> </ul>

**Table 8.2:** Features derived from CSP constitutive rules (Jackson, 2003)



**Beneficiary**

1. Who is the **beneficiary** of the ‘service’? – Who is it currently serving?
2. What is the **purpose** of the ‘service’?
3. What is/are the **measures of success**?

**Owner**

4. Who is the **owner of/controls** the ‘service’?
5. What resources and other conditions for successful implementation are controlled by the owner?
6. What conditions of successful implementation are out of the owner’s control?

**Professional**

7. Who is considered a **professional or expert** in the development of the ‘service’?
8. What kind of expertise is utilised in the development of the ‘service’?
9. What or who is the **guarantor** of success?

**Witness**

10. Who represents those affected by but not directly involved in the ‘service’?
11. To what extent are **those affected** given the opportunity to challenge the ‘service’?
12. What ‘world view’/vision of improvement underlies the design of the ‘service’?

**Table 8.3:** Features (highlighted) derived from boundary critique (Ulrich, 2005)

## 2. Intervention 4, Interview Schedules

<b>Impact upon objectives</b>	
Q1	<p>In relation to the district ASB initiative, how useful was the approach in meeting its aims of:</p> <ul style="list-style-type: none"> <li>• Develop a co-ordinated and streamlined cross-organisational process where partners respond to ASB with clarity of purpose and in accordance with jointly agreed minimum standards</li> <li>• Improve customer experience, ensuring victims of ASB are appropriately supported, whilst perpetrators are given the opportunity to change their behaviour for the better, through effective and consistent use of all ASB tools and powers.</li> <li>• Identify scope to realise efficiencies within a sustainable ASB process, through more effective and joined up use of all partners' resources.</li> </ul>
<b>Impact upon problem</b>	
Q2	<p>What was the impact of the approach in relation to :</p> <ul style="list-style-type: none"> <li>• improving prediction and control;</li> <li>• promoting mutual understanding;</li> <li>• ensuring fairness and empowerment within the problem situation;</li> <li>• promoting diversity and creativity within the problem situation</li> </ul>
<b>Impact of approach taken</b>	
Q3	<b>How effective was the approach taken in terms of how it was implemented, including:</b>
Q3.1	<p><b>(i) Who was involved</b></p> <ul style="list-style-type: none"> <li>• What worked well in terms of involvement in the project?</li> <li>• Were the right people included?</li> <li>• Did the team possess the right skills? (If not, what was missing?)</li> <li>• What would you do differently in terms of involvement (staff, managers, specialists etc.)?</li> </ul>
Q3.2	<p><b>(ii) Accessibility/Understandability/Practicality/Feasibility of the methodology</b></p> <ul style="list-style-type: none"> <li>• How successful was the approach in terms of engaging participants?</li> <li>• Were the approaches easy to understand and use? Why?</li> <li>• What features of the approach were important to its success?</li> <li>• What would you change about the approach taken (e.g. methods and how they were deployed)?</li> <li>• How important is it for participants to be able to fully understand and employ for themselves the methodology being applied?</li> </ul>
Q3.3	<p><b>(iii) Cultural acceptability of the approach</b></p> <ul style="list-style-type: none"> <li>• How influential do you think the police culture is in relation to acceptance and success of such approaches?</li> <li>• How did this approach overcome any cultural barriers?</li> </ul>
Q3.4	<p><b>(iv) Other factors</b></p> <ul style="list-style-type: none"> <li>• What other factors were critical to its success?</li> <li>• What were the greatest weaknesses?</li> <li>• What would you do differently?</li> </ul>
<b>Impact on future deployment</b>	
Q4	<ul style="list-style-type: none"> <li>• Do you think you could use aspects of the approach for yourself in future (and which aspects)?</li> <li>• What is the most effective means of using these approaches in future? (e.g. widespread broad knowledge/awareness, internal specialists or bought in specialists)?</li> <li>• How useful is it for these approaches to be implicit in the way staff think about problems they are facing on a day to day basis?</li> </ul>
Q5	What supporting processes need to be established to improve the ability of staff to successfully select and use similar approaches for themselves in their future work?
Q6	Any other observations on the use of systems thinking within the Police?

### 3. Evaluation of Evidence gained from Intervention 4

Evaluation Method	Evidence	Summary
<ul style="list-style-type: none"> <li>Identify the perception of key stakeholders (including sponsors, managers, facilitators and workforce) involved in the problem situation through interviews and focus groups, specifically in relation to:</li> </ul> <p>1. Usefulness of different approaches: in meeting stakeholders' interests, including whether the arising actions solve their perceived problems/ intervention aims; increase participants' control over their own situations; and support and balance effective multiple participant engagement throughout the intervention</p> <p>(Interview question 1)</p>	<ul style="list-style-type: none"> <li>Generally speaking we have addressed the objectives. One of the most important changes that will meet the review objectives is the multi-agency core team that will be established to provide sustainability in the new process by monitoring performance for example. Because it's a cross organisational process it will be harder to make things happen in a co-ordinated way and agencies only take on the parts of the change that give them a personal benefit.</li> <li>We now have a signed off ASB model that will work and the only delay in terms of implementation will be due to the staffing moves into the new organisation. The process redesign has worked effectively apart from a few changes we had to accommodate due to conflicts of interest and defensiveness around existing organisational arrangements.</li> <li>The council often appeared resistant to changes proposed and preferred to present issues in a way that was sensitive to local politics. The police were fiercely critical of existing processes and while the council accepted the issues, they didn't want to make this public due to potential political sensitivities. In the end we had to water down the recommendations presented so that they sounded like the required change was not radical and the governance board wanted to present the findings in a softer way that didn't appear as critical.</li> <li>As someone experienced in all aspects of ASBU performance and processes, the review of ASB using the QUEST approach was in my view long needed. I had raised process issues in the past but had been discouraged from challenging the existing practices. The review provided an opportunity to address these issues using an approach that might be taken note of by the senior management.</li> <li>Generally, it appeared the intervention had made progress in making inroads into tackling a problem long perceived but not acted upon.</li> <li>There were clear concerns about implementation, in the main relating to gaining buy-in from partner organisations to changes that might not directly benefit themselves</li> </ul>	<p>1. Police perception that objectives achieved though all anticipated implementation issues due to co-ordination and securing buy-in from all partners. Conflicts of interest and reluctance to move from current arrangements.</p> <p>2. Council perception that hadn't got the best from the exercise due to inflexibility of approach in drawing in existing experience but with further work there had been some benefits and was a real opportunity to improve situation.</p> <p>3. Recommendations watered down to accommodate cultural differences in how change might be portrayed (police were more prepared to be openly critical of existing processes compared with the council).</p> <p>4. The requirement for participant (organisations) to see the change clearly addressing their own objectives before buying into implementation might limit success.</p>
<p>2. Impact upon problem situation</p>	<p><b>Prediction and Control</b> The methodology we took from the BCU QUEST was too rigid for the problems we had to deal with. You needed</p>	<p><b>5. Prediction and Control</b> The approach was very much aimed</p>

<p>in relation to :</p> <ul style="list-style-type: none"> <li>• prediction and control, measured by the efficacy and efficiency of solutions;</li> <li>• mutual understanding, measured by the effectiveness and elegance of solutions;</li> <li>• ensuring fairness, measured by emancipation and empowerment within the problem situations;</li> <li>• promoting diversity and creativity, measured by exception (marginalized viewpoints recognised) and emotion within the problem situation</li> </ul> <p>(Interview question 2)</p>	<p>to be able to adapt it to accommodate the ways of the other agencies. Our lean tools and processes were questioned by the council staff so we had to work around this and not employ all the tools we might normally have. However, the dip sampling was very useful to help the project team members better understand the process they were working in. Where data was not collected or was insufficient the police in particular were sceptical. Data carries a lot of weight in the police service.</p> <p><b>Mutual Understanding</b> The visioning day helped address this in the early stages at least.</p> <p><b>Ensuring Fairness</b> The nature of the ‘behind the scene’ politics in the council got in the way of progress and may result in the project not delivering its potential. For example, during meetings everyone might agree a course of action but then go away with no intention of carrying it out. You would find out at a later point that the decisions had been overturned and individuals’ preferred ideas had been applied or that some ‘spin’ had been placed on the findings to make them more politically palatable. It was very difficult to work in the council environment with their tiers of power and bureaucracy.</p> <p><b>Prediction and control</b> The approach taken was helpful in building a joined up process to meet clear objectives but we did have to work hard to achieve this in quite a messy process. The process mapping day was chaotic and there was little agreement between the different agencies. In the end we had to work around this by going to smaller groups to sell the benefits and then build these findings back into a larger process map.</p> <p><b>Promoting mutual understanding / ensuring fairness and empowerment</b> At a strategic level a certain amount of this was provided by the visioning event but this didn’t seem to filter down to the operational level as we moved through the project.</p> <p><b>Creativity</b> This featured by necessity to meet the challenging requirements of finding lean approaches while maintaining high confidence. We had to be light on our feet and creative about relationships and challenge existing practices.</p> <p><b>Prediction and Control</b> The approach was very much aimed at predicting and then controlling performance. However, the success of the</p>	<p>at predicting and then controlling performance. Dip sampling was considered to be useful in gaining understanding of processes particularly by police who give such data much weight. Tools in the methodology aimed at optimising processes were not suited to the issues faced in accommodating other partners’ preferences and gaining agreement on different partner perceptions. The approach was also limited in its ability to accommodate complexity of the process.</p> <p><b>6. Mutual Understanding</b> The visioning event was seen as a positive way to build appreciation at the early stage but on-going engagement with a wider group of stakeholders could have been better. The team had worked well on the solution to a specific problem but there is more to be done.</p> <p><b>7. Ensuring Fairness and promoting Diversity</b> Although existing practices were challenged, perceptions of power and politics within the council were considered barriers to successful</p>
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	<p>application was very much about who was applying it. The predictive work was OK in a limited sense but not enough to fully understand the complexity of what we were dealing with.</p> <p><b>Mutual Understanding</b> The work was a platform to start from. We needed to go beyond the QUEST work to promote understanding and revisit others to bring them more on board. What we've done is work towards a solution to a specific problem but more needs to be done.</p> <p><b>Fairness and Diversity</b> We didn't include all relevant views and some staff felt that the police had taken things over.</p> <ul style="list-style-type: none"> <li>• At a post implementation workshop it emerged that Housing Associations representing private sector tenants felt excluded from process and the ALMOs were seen as leading despite the private being a growing area.</li> <li>• Health issues not included in new structures, Children's Services excluded, Mediation agencies excluded along with some others but some progress at least had been made – a start? Everyone had been invited but not all had taken up opportunity</li> <li>• Tenants consulted to build the process but what about others affected by ASB - who is representing them in process – not just social housing tenants.</li> <li>• Was the boundary critique questioning in the interviews employed properly and did it need revisiting?</li> </ul>	<p>implementation and the police were perceived to have taken things over. Not all agencies appeared to have been successfully drawn into the review and unclear if those affected but not directly involved were properly represented? The effective and on-going challenge to the nature of involvement appeared important.</p>
<p>3. Usefulness of approaches in terms of :</p> <p>i. supporting creativity</p> <p>ii facilitating informed choice of tools</p> <p>iii implementation, including:</p> <ul style="list-style-type: none"> <li>• impact of deployment approaches</li> <li>• practicality and</li> </ul>	<ul style="list-style-type: none"> <li>• The stakeholder interview schedule to capture the views of a cross section of interested parties worked well and as it followed a consistent format to the visioning event it helped to confirm the views expressed there. We learned much from this, such as the extent of the local politics operating within the council. (3.1)</li> <li>• QUEST allows you to learn about your business and it was essential to better understand the business of the other agencies before we could start to improve the processes. This meant we had to learn the council business very quickly and it was a steep learning curve. (3.2)</li> <li>• The visioning day was very useful, particularly for staff from the range of council departments affected, to help them better appreciate the different impacts of ASB. The shared priority issues that emerged from this were very useful. Everyone could see the same issues as important and it provided a common language that brought people together and saying the same things. It gained buy-in from a disparate set of agencies. Everyone remembers the event and took away important messages that were understood by everyone. It gave us a start to the project that would have been very difficult otherwise as there were too many different viewpoints to take on-board all at once. (3.2)</li> <li>• As the project progressed there was a certain amount of momentum lost as deadlines were put back to</li> </ul>	<p><b>8. Consultation</b> Structured stakeholder interviews linked well with the visioning event to capture views in a consistent way Visioning event useful, particularly for staff from the range of council departments affected, to help them better appreciate the different impacts of ASB. Started to gain buy-in from a disparate group of agencies whose different viewpoints would have been very difficult to take on board all at once.</p>

<p>feasibility</p> <ul style="list-style-type: none"> <li>• accessibility and understandability</li> <li>• cultural acceptability</li> </ul> <p>iv facilitating learning about the problem and systems approaches employed</p> <p>(Interview questions 3.2, 3.3, 3.4, 4, 5)</p>	<p>accommodate delays in some project phases and this meant losing some project team members who had been seconded to the team. In contrast, the pace and focus of the BCU QUEST was valuable in maintaining stakeholder support and realising benefits before the operating environment changed again. (3.2)</p> <ul style="list-style-type: none"> <li>• The simple handbooks provided by the internal consultant were very useful in providing a high level guide for the various project stages but we didn't stick to these rigidly. However, they were useful to keep things on track and provide some focus when we needed it, particularly as we had disparate groups involved. (3.2)</li> <li>• Most of the staff needed to learn the methodology as they were not project people by trade. We needed specialists who understood the techniques to adapt them there and then as part of the team rather than from afar. But because the police are 'can-do' we just adapted them as best we could. (3.2)</li> <li>• As in QUEST BCU the dip-sampling is key and the staff from the processes doing this for themselves really helps them understand and buy-into the issues. (3.2)</li> <li>• The success of the process mapping efforts was mixed. The council processes were very complex with numerous potential paths so we had to raise the resolution level of the process maps and then provide the necessary detail by way of guides and checklists. The staff involved in the work processes need to build these maps themselves so as to use the right language but even within the council this was difficult. However, the eventual maps were useful to clarify some roles and help see the whole interconnected process and to identify important hand-offs between functions where we needed to gather evidence and monitor changes. Process maps appeal to the police as they help in a visual way to understand and challenge how the business is run. (3.2)</li> <li>• The accessibility of the methodology is OK as long as you have some specialists to fall back on. For example at the outset and then at key stages as required. Unfortunately we did not get as much of this as we would have liked. (3.2)</li> <li>• The cultural difference between organisations made the project more difficult to progress. The council staff looked at any changes from a people perspective and were more concerned with the 'here and now' and how it would affect their own roles in the process. In contrast, the police took a more detached view and saw the changes from more of a fixed resource perspective. The police are probably more used to being moved around their organisation as the needs arise so are not as concerned about process changes that might affect their roles. (3.3)</li> <li>• The politics of the council meant that documents had to appear positive even when the true message was negative. I referred to these as the 'fluffy' documents, which they preferred to use for communication and they often didn't reflect the actual decisions made. The council staff appeared to be risk averse and feared presenting anything that might appear critical. Just before the general election a local MP turned up for some photos so I asked him if he was vote chasing and he didn't deny it. Some involvement seemed to be politically motivated rather than aimed at helping to improve the process. (3.3)</li> </ul>	<p>It provided clarity around the strategic objectives for the review and these quickly became a bedrock upon which to hang decisions</p> <p><b>9. Culture</b></p> <p>Police culture of wanting to press on with work to very tight timescales prevented the project team getting up to speed with the approach and being able to work together with a similar buy-in and understanding.</p> <p>The police were more inclined to be critical of practices whereas the culture of the council appeared to the police to be risk averse and they feared presenting anything that might appear critical. The difference in culture was consistent with the council perception though their representative considered that a more diplomatic or reconciliatory approach was needed – it wasn't about finding blame for things requiring improvement but that's how it sometimes felt.</p> <p>The police have a strict hierarchical structure and sometimes take a mechanistic approach to change what they see rather than recognising the cultural elements. The council wanted to bring more</p>
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<ul style="list-style-type: none"> <li>• Culturally, the methods used were acceptable but the findings were not. Staff didn't like having to tell their colleagues about changes to their work practices. There was a backdrop to this project regarding fear of job losses which was a contrast to the previous QUEST project. The application of tools such as dip sampling was affected by this as it was seen as a potential means to cut jobs. (3.3)</li> <li>• Personally, my involvement with QUEST has been one of the best things I have ever done. I can now look at things differently and more critically. The council staff didn't commit the resources to enable them to take anything much away and didn't see the benefit of future development. WYP have built up valuable knowledge to be re-used (4)</li> <li>• Guidance would be some use but all projects are different so you need to be able to adapt a basic structure. (5)</li> <li>• We should target new recruits and encourage more of a business mind rather than just spoon feeding them with procedure. They need to be able to understand the impact of what they do. The world is constantly changing and we no longer just police the streets, we need to also show cost effectiveness and value for money. (5)</li> <li>• The documents provided by the internal consultant were OK but they needed work to translate them to meet the project needs. I was reasonably comfortable with the methodology as a result of my previous QUEST experience but some staff found the methodology hard to follow. I think you need some experience under your belt as you need to be able to think on your feet to adapt the methodology to meet various stakeholder requirements but in adapting it I was concerned about preserving the methodology integrity. For example, in previous QUEST projects we have been looking to find a single optimal solution but here we needed a spectrum of options to meet a wider range of needs and required outcomes. The council wanted more debate and flexibility around the solutions for consideration. There was nothing particularly wrong with the methodology, it was more about how it was used – what had been a hard sell in previous projects needed to be a softer sell in the ASB review. (3.2)</li> <li>• In previous QUEST projects we had seen benefit in the intensity and speed of analysis leading to decisions and progress. In this project for various reasons the progress had been much slower but despite this the council staff involved still thought we were moving rapidly. The QUEST racetrack has provided a healthy baseline of performance for comparison after the go-live but there is a risk that the value of this will erode due to the slower pace of implementation. (3.2)</li> <li>• Previous QUEST projects within WYP had benefited from visible leadership buy-in and force-wide communication. The ASB visioning day had provided some real clarity at the strategic level but communication beyond this was very hard. As we were unable to openly publish emerging work findings in the ASB review due to sensitivities about presenting anything that might appear critical, we kept a visual notice board in the project office to ensure gaps did not emerge and this communication between partners at a practitioner level was essential. (3.2)</li> </ul>	<p>partners on board and saw things more about understanding and accommodation.</p> <p><b>10. Specialist Support</b>  Success was down to individual practitioner capability. They needed specialists who understood the techniques to adapt them there and then as part of the team rather than from afar. The ability to draw in specialists for the more technical analyses and as a critical friend and reference point for stumbling blocks would be of value. These specialists should have a more strategic overview of the methodology and how to adapt approaches from an independent and professional position. For this 'arm's length' approach to work effectively the specialists needed to be able to engage with the project team as necessitated by the problem and be confident their contribution will be employed appropriately. Pragmatic work-arounds by inexperienced facilitators when they found QUEST techniques were lacking might have missed opportunities that other techniques would have addressed or led to</p>
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<ul style="list-style-type: none"> <li>• The visioning event went well and we couldn't have started without it, particularly as a way of selling the need for change. It resulted in clarity around the strategic objectives for the review and these quickly became a bedrock upon which to hang decisions. We had 140 people involved, representing all stakeholder organisations. The 44 stakeholder interviews that followed confirmed the issues rather than providing more content but they also got the right people involved and opened doors with key stakeholders thereafter. (3.2)</li> <li>• All agencies accepted the approach but they were surprised by its candid nature and we had to adapt it to the audience. It challenged the way they would normally go about their business and we had to adapt the format so it was more acceptable but we couldn't water it down too much otherwise it wouldn't have worked. (3.3)</li> <li>• The process improvement methodology seemed universally acceptable but it was the depth of detail backed up by data that was the issue. Council reviews placed less emphasis on data and had more of a political emphasis. Within this project the council were not as challenging in their use of data as the police. However, the data collected through this review was useful in convincing middle managers, sceptical about the methodology, to take issues within their processes seriously. (3.3)</li> <li>• The greatest challenge was communication and in future we ought to insist that the governance board have a clear understanding of the approach and for them to develop an effective communication plan. (3.4)</li> <li>• The board members needed to recognise they were there to make decisions on behalf of their organisations and not defer decisions. (3.4)</li> <li>• The time spent building relationships across the partner organisations detracted from the effort to build process maps and collect data. (3.4)</li> <li>• The approach needs to be adaptable. I could certainly use it again and would be more confident in using it in new situations. I think we need to draw in specialists for the more technical analyses and as a critical friend and reference point for stumbling blocks. These specialists should have a more strategic overview of the methodology and how to adapt solutions from an independent and professional position. (4)</li> <li>• The approach would benefit from a broader knowledge in the organisation to provide a common language but I think that learning by doing rather than blanket training is the best way. (4)</li> <li>• We seemed to need to stick to the letter of the methodology and this was often restricting when the problem being faced would have benefitted from doing things differently. The way the methodology progressed the analysis was very logical but it was frustrating to have to set aside over four year's worth of knowledge I had accrued in order to collect new information. I didn't feel my views and experience were valued and we ended up reinventing the wheel.(1)</li> <li>• Although I had experience of similar approaches, I was unfamiliar with the specific methodology of QUEST and the police lead on the project who had previously worked on QUEST projects, brought with him the police</li> </ul>	<p>inappropriate conclusions (e.g. through reductionist approach to process mapping in sub-groups). Project manager felt more confident in approach through previous use and appeared competent within limits of its application.</p> <p><b>11. Pace of change</b> It was perceived (by police) that momentum was lost in the slower pace of the project and tangible progress frustrated and raised a concern about the erosion of the proposed changes over time.</p> <p><b>Methodology and Techniques</b> 12. The methodology was considered to be broadly appropriate but it was more about how it was deployed. 13. The question framework used with the intervention sponsors helped to identify key defining characteristics of the situation and assisted in selection of appropriate responses. 14. The dip sampling and process mapping were perceived as accessible and potentially useful but there were questions over the validity of some applications of these.</p>
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	<p>culture of wanting to press on with work to very tight timescales. This prevented the project team getting up to speed with the approach and being able to work together with a similar buy-in and understanding. (1)</p> <ul style="list-style-type: none"> <li>• Because the police lead was familiar with the methodology and used a summary hand-out pack to guide each stage of the project he moved too quickly into each activity for the non-police staff to fully engage. The time-bound pressures made us race through activities without having a clear picture about how this would help feed into the next stage and help achieve the objectives. As a participant you need to be able to see what's coming and build a clear view the outcome of the process. As consequence of this is that we're now having to revisit much of the previous work. (1)</li> <li>• Having said all that, we did get some very useful data from the dip sampling. (1)</li> <li>• The police saw the review methodology as something to strictly adhere to rather than understanding its underlying purpose and that sometimes things may need to be adapted pragmatically and with confidence. Although he had experience of applying the methodology in the police he needed to step back and look at how this application was different particularly because of the partnership angle. The traditional QUEST approach does not truly match the problem – it is more complex and needed a change of methods and the way they were applied to really work. Often felt that we needed a joint view from partners and a shared understanding was lacking. For example, we presented findings in a strict QUEST format but other organisations didn't relate to the language in the same way as the police and it was unfamiliar to them. We needed a more diplomatic or reconciliatory approach – it wasn't about finding blame for things requiring improvement but that's how it sometimes felt. (3.2)</li> <li>• There was much to take from the QUEST methodology but it needed to be more adaptable. We've had to rework many of the findings as a result of rushing through and sticking with all the steps of the methodology. For example, development of role profiles for staff in the new process didn't go into sufficient detail at the outset and we have needed to revisit these. (3.2)</li> <li>• Right back at the outset we had an unrealistic timeframe of 6 months imposed when it might more realistically have been 12 months given the complexity of ASB and the issues being faced. As a result of the false timeline the ASB process implications were not fully explored. (3.2)</li> <li>• The process mapping element was very useful but there was some difficulty following the specific format and detail that the police wanted to use. The ASB process is not a linear path and is difficult to hard wire in this way – many different paths exist and things often occur concurrently. Council wanted an easier to follow map where we could explain the different routes that work may enter the process and to help see the whole system rather than get bogged down in detail that doesn't explain the complexity of the process. These maps were hard to follow and could not fully describe the variety of the process – every case is different and many process paths exist. We adapted the mapping to me more simple and appropriate for the complexity. (3.2)</li> </ul>	<p>15. There was a perception that the approach was not suited to the complexity of the problem being faced and did not help build mutual understanding.</p> <p>16. Broad guidance on methodology is useful but as all projects are different you need to be able to adapt a basic structure to suit the problem. There is a clear need to be able to adapt the methodology pragmatically yet with competence and confidence. The police project manager perceived that the methodology had been adapted from what he had previously employed in the QUEST project to suit the new circumstances but others thought it had not been adapted (enough) and there might have been missed opportunities to introduce alternative approaches.</p> <p>17. The methodology had more emphasis on evidence gathering whereas the council were placed more emphasis on politics of the problem.</p> <p>18. The problem necessitated the building of relationships and understanding of different organisations and it appeared there could have been more emphasis on</p>
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<ul style="list-style-type: none"> <li>• The methodological collection of evidence was good. However, I often found myself in the middle of issues between the Housing and Police collection of data and we had concerns about the validity of some dip samples. There was much evidence in existence from stakeholders that hadn't been collected by the sampling and because of this, potentially valid data was overlooked as irrelevant (3.2)</li> <li>• The culture of the council is one where change is implemented much more slowly and this may be because we are used to involving a range of partners in our projects. Because the police culture is one of greater urgency we ended up racing ahead and missing things in quite a complex ASB process. For example, twelve weeks into the project I met with a manager from one of the participating ALMOs and he was not really clear about what we were aiming to achieve. (3.3)</li> <li>• The police were keen on the development of 'kit cards' to specify the procedure for staff to follow within the process but this was alien to us in terms of language and the approach to controlling process performance. (3.3)</li> <li>• The police have a strict hierarchical structure and just go ahead and mechanistically change what they see rather than recognising the cultural elements. The council wanted to bring more partners on board and saw things more about understanding and accommodation. You can't say to a housing officer this is what you have to do without recognition of the wider impact. (3.3)</li> <li>• The project board was also a challenge. The council has a recognised format for reporting and the appearance of the QUEST products didn't match what was expected. Rigidly sticking to this we had to rewrite the products for the council's internal audience with simpler structures and high level content that didn't get bogged down in detailed facts and figures. I suppose expectations differed and as the police were more interested in the data and it was seen as a police way to present. (3.3)</li> <li>• Some staff didn't want to get involved as they were uncomfortable with what they saw as the confrontational style of the police. Some staff from partner agencies were considered by the police not to be pulling their weight and they were challenged in this regard. Instead of doing this head on a more diplomatic approach would have been better. For example, it was better to keep partners involved even in a limited way where their contribution might not have been as great rather than to lose them altogether (3.3)</li> <li>• We needed to be better at standing back and look holistically at what we were dealing with and then to challenge and reflect more. (3.4)</li> <li>• The question framework used with the intervention sponsors helped to identify key defining characteristics of the situation and assisted in selection of appropriate responses.</li> <li>• There appeared to be a lack of flexibility in the application of the methodology</li> <li>• Lack of knowledge regarding complementary and alternative approaches amongst the team limited success and there were missed opportunities. For example, the possible use of VSM to build and diagnose the new ASB</li> </ul>	<p>this aspect as it was perceived to be a barrier to the development of data collection.</p> <p>19. It was perceived that the team needed to be better at standing back and look holistically at what we were dealing with and then to challenge and reflect more.</p> <p><b>20. Personal Impact</b> The buy-in to change was not surprisingly closely related to its degree of impact upon the individual over the longer term. For example, the council staff were accused of looking at the changes from a personal perspective and how it would affect their own roles</p> <p><b>21. Staff Development</b> From an early point equip staff with appropriate analytical skills to help them think for themselves and understand the impact of what they do would be advantageous.</p> <p><b>22. Communication</b> The visioning event had brought real clarity at a strategic level but active communication of this vision amongst those affected was weak. The number of partners involved made it more difficult to develop</p>
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	<p>structures</p> <ul style="list-style-type: none"> <li>• Without the knowledge or competence to introduce alternative approaches as required the adaption of the approach could not benefit from the introduction of alternative components that might have been more suited.</li> <li>• Limited knowledge about underlying theory meant some components were not as effective as they might be. For example, the stakeholder questions had been developed to ensure appropriate representation in the project but it became clear from the post review workshop that key partners had been excluded</li> <li>• Specialist support was inadequate there appeared on occasions to be some reluctance in specialists to support a project that they lacked confidence in and where their efforts may be wasted or used inappropriately.</li> <li>• The personal nature of change had a significant effect on buy-in and contribution from those affected over the longer term.</li> <li>• The ability to make decisions seemed to benefit from the formal rank structure of the police in previous projects. Here however, decision making authority was unclear.</li> <li>• Police team were keen to maintain a fast pace of change and this didn't allow the rest of the team to get up to speed with the methodology and buy-in and there may have been opportunities missed through the urgency.</li> </ul>	<p>and share clear communications at all levels.</p> <p><b>23. Authority</b> There appeared to be a reluctance or lack of authority to commit to decisions within the project.</p> <p><b>24. Involvement</b> Existing expertise was not always exploited leading to loss of buy-in to change and a feeling of exclusion</p>
<ul style="list-style-type: none"> <li>• Impact of role/position/capability of participants in problem situation (e.g. sponsors, managers, facilitators and workforce).</li> </ul> <p>(Interview question 3.1)</p>	<ul style="list-style-type: none"> <li>• The cultural difference between WYP, City Council and ALMO staff was a challenge. The staff work under different conditions and it was difficult getting everyone to view the problems and the ways to tackle them in a similar light. The police have a 'can-do' approach and tend to want to get on with the job, whereas the other staff were often cautious, particularly where jobs might be affected and unions might show concerns. Consequently, the WYP staff seemed to be more proactive in the running and shaping of the project work.</li> <li>• Getting the right staff into the team is important. We need to involve the right people to own and drive forward the solutions over the longer term. We also needed support from certain specialisms including facilitators to lead process mapping and performance specialists to help collect reliable data.</li> <li>• The project board did not realise how much work was involved in the data sampling to build a good evidence base. They also fell short when it came to budgets and ownership. ASB affects all the agencies involved but no one wanted to take responsibility for ownership or investment to improve. The police lead on the board, an ACC, understood QUEST and had full confidence in the approach whereas the other members did not. It's important for the leaders to fully understand the approaches and see their potential benefits beforehand to gain credibility and for them to then support their use throughout. It was hard to sell the fact that it should be high on their agenda and to visibly demonstrate this. For example, at the last minute certain board members would fail to turn up for key meetings that the project team had spent a great deal of time preparing for.</li> <li>• As regards the project team, we had four people with experience of previous QUEST projects in the police but the council were slow to nominate staff and commit sufficient time so we had to fight for them. The council staff were not familiar with the approach we were using and it took time to gain their commitment and buy-in.</li> </ul>	<p><b>25. Culture</b> The staff work under different conditions and it was difficult getting everyone to view the problems and the ways to tackle them in a similar light</p> <p><b>26 Workforce</b> We need to involve those with longer term ownership of solutions to sustain. Require (time) commitment. Previous experience and skills important. Team building is important, to understand what everyone can contribute, to understanding the methodology and to understand each other's processes and</p>

	<p>The temporary nature of team membership made this more difficult too.</p> <ul style="list-style-type: none"> <li>• The project manager needs good people management skills and to be able to confront and challenge practices.</li> <li>• It would have been useful to have more access to specialists, for example to help with the more technical aspects such as dip-sampling. It took us a long time to learn this and it became a block to progress for a while. You need better support early on from specialists with expertise in numerical modelling, such as advanced Excel. This would ensure that the data presented to the project board is robust and helps to build the credibility of the team. The quality of the analysis is important as the resulting data becomes the bedrock upon which all future project decisions are made. (3.1)</li> <li>• We also needed a critical friend to help challenge our approaches and suggest alternatives. (3.1)</li> <li>• We needed partner agency involvement but the politics seemed to get in the way as did the different organisational processes that operated in the separate agencies. For example, job evaluation of new roles took 6 times longer in the council compared to the police. The police culture is one where officers are brought up to make decisions whereas the council have more of a sharing meeting culture and sometimes this appears to the police like slow progress. Police meetings are more direct and action focused with a requirement to follow up at the next meeting to ensure progress has been made. This didn't seem to happen in the council and consequently progress was slow. (3.1)</li> <li>• Another cultural difference can be seen in the different approaches to getting the work done. The police tend to work long hours to complete delivery whereas council staff tend to work more restricted hours. They did not work as long hours but they were more accommodating than the police and their work was of equal quality. I suppose it's just culturally their way of doing business. (3.1)</li> <li>• I mixed the composition of teams to overcome some of the cultural differences but this wasn't always successful. A certain amount of team building between the representatives from different agencies was necessary and significant efforts were made to try and achieve this. For example, I arranged for two of the team to have a flight in the Force helicopter and visit the police dog handlers. Not only did they overcome a mutual fear of flying but they also found they shared a common love of dogs which helped improve team dynamics. (3.1)</li> <li>• A further problem with the team was that the review threatened the roles of some of the project team staff and this is something that needs recognition in future. To maintain objectivity it may be better to involve such staff in consultation but not to include them as a full-time members of the team. (3.1)</li> <li>• You really need a united governance board who understand the methodology. The leadership at board level seemed quite passive and maybe their role needed clarification. At times it was unclear what they were really thinking and the direction provided by them was limited. The leaders were not an established team but there were some good relationships between individual members that helped. They sometimes seemed surprised by</li> </ul>	<p>expectations sufficiently, particularly with cross organisational projects. Needed a wider involvement of other partner organisations. Continual awareness of potential systems approaches required.</p> <p><b>27. Project manager</b> Requires people management skills.</p> <p><b>28. Specialists</b> Needed to lead certain aspects of the work. We also needed a critical friend to help challenge our approaches and suggest alternatives.</p> <p><b>29. Leadership</b> Need united leadership who understand the approaches and potential benefits to secure credibility. Requirement to visibly support the initiative.</p>
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	<p>the directness of the approach taken within the project. In previous QUEST projects this approach had not caused offence but in the ASB review we had to adopt a softer style and try to balance the needs of the different partners. This is not an issue confined to WYP. (Another police force) are in the process of working with their local partners on a similar project and have encountered the same problems. (3.1)</p> <ul style="list-style-type: none"> <li>• We didn't fully understand at the outset who should be involved or how to get them involved and for them to bring with them the authority to make policy decisions for their own organisations. It wasn't just the governance board who were accountable and making the decisions.</li> <li>• All of a sudden councillors wanted involvement too. I think we had a blinkered view that everyone was on-board.</li> <li>• Early on we should have built the team understanding of the methodology and of each other's processes and expectations before launching into the work.</li> <li>• The visioning event was a useful way to quickly identify a wide range of common issues in relation to joined up working. Having partners such as Environmental Health sat around the same table to discuss these was powerful. However, following this we didn't involve as wide a group of partners in the following phases and we might have done better to have a core team to bring other partners into as we progressed to utilise their knowledge and expertise. For example, there were points when we would have benefitted from involvement of social care.</li> <li>• Environmental Health had their own agenda and didn't understand the whole rationale for the project as long as they achieved their own objectives. They quickly came and went once they saw that the work was moving beyond their own immediate objectives. However, their involvement throughout would have been useful and they would soon have seen their role in the early indication of ASB and that they were central to prevention.</li> <li>• The methodology was only as good as the people applying it and we tried to make sure staff were involved in the way they could contribute best, such as using council staff to audit council system as they understood the data better.</li> <li>• We had some of the right skills in the team and we learnt a lot from each other about operational processes in the different organisations. The staff also had good relationships. Everyone added value in terms of the knowledge about their own organisations' processes but we were narrow in terms of involving people at the managerial level both for their knowledge and their influence on the success of any solutions.</li> <li>• We would have benefitted from greater support from specialists to help adapt the methodology to be more suitable instead of the project manager lacking the knowledge or confidence to do this. It seemed like it was the "inexperienced" hanging onto the integrity of QUEST and missing opportunities to do things better.</li> </ul>	
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	<ul style="list-style-type: none"> <li>• Council Housing Officer perceived issues around the power relationships between police and LA that would need to be overcome</li> <li>• Building trust amongst team and appreciation of contributions</li> <li>• E.g. when dealing with the process mapping the inexperienced team did a pragmatic work around which resulted in an end product rather than reaching for a systems approach that might have better handled the diversity of perception.</li> <li>• The momentum built in the visioning wasn't maintained. The facilitator needs to attend to different aspirations continuously and be alive to diverse requirements of situation. Here, systems thinking in series was a classic approach of 'we've done the soft stuff' now let's move on to the hard and in doing so leave some partners behind – not continually responding to their individual requirements</li> </ul>	
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Stakeholder interviews were held with the following:

- Project team member - A police officer project team member who was previously involved in QUEST projects within WYP
- Police manager - A senior police manager who had previously been involved in implementing a QUEST project within WYP
- Council manager - A council officer working within a relevant function
- Researcher

The attribution of comments to individuals has been removed to preserve confidentiality.

#### 4. Workshop Agenda and Format (courtesy of WYP)

##### AGENDA

09:00	Arrival and Registration
09:30	Welcome and Overview
09:45	Introductions
10:15	Reflecting On Our Past
11:00	Themes and Issues
12:00	Lunch
12:45	Voting:- Theme and Issue Prioritisation
13:15	Ideal Futures
15:00	Round-up of Day / Close

##### INTRODUCTIONS / 'ICEBREAKERS'

**Purpose:** To get to know about your colleagues on your table.

**Activity:** Each delegate should inform their colleagues:-

- Who they are
- Where they come from (organisation / role)
- If they have ever committed an act that someone might have considered anti-social

##### REFLECTING ON OUR PAST

**Purpose:** To develop an awareness of your past experiences in relation to ASB Issues / Service Delivery. The information generated will enable an appreciation of:-

- Our history in relation to Anti-Social Behaviour
- Changes that we have experienced
- What we have in place to build on - Our Foundations

**Activity:** By considering the 3 perspectives of:-

- (i) Personal
- (ii) Your own Organisation / Agency or in your Professional Role;
- (iii) World

and using your own experiences, identify memorable events that represent notable milestones and / or turning points in ASB issues / service provision.

It is important to record both '**what happened**' and '**why this was important**'.

**Example (Organisational):** 1998 Crime and Disorder Act published - multi-agency Community Safety Department established as a response.

**Example (World):-** 2003 - Anti Social Behaviour Act came into force - clear actions outlined for dealing with ASB.

**Example (World):-** 2009 Pilkington Case - Clearly identified flaws in current systems for dealing with ASB.

**Example (Organisational):-** 2007 - District identified as a 'Respect Area' - Recognised our commitment to delivering on actions within the National 'Respect Agenda'.

**Example (Personal):-** 1996 Take That split up - Reported and cautioned for expressing my distress in the form of Graffiti on the School Fence

**Example (Personal):-** 2009 - Loud youths hanging around near my Grandmother's House - She doesn't feel safe to go out after dark and no-one seems able to stop them.

### **GROUP EXPERIENCES**

**Purpose:** To identify the group experience on a 'timeline'.

**Activity:** By reflecting on your experiences in respect of these categories, take a pen and write them on the relevant 'timeline' wall charts.

The wall chart will enable you to see any patterns emerging with regard to your joint experiences.

### **THEMES AND ISSUES**

**Purpose:** To identify themes and issues that have shaped our views. This will establish a context for a shared view of the future.

**Activity:** Within your groups and using the information from the 'timelines', identify the most important themes or issues that have shaped your views of ASB. Record these on a Flipchart.

Then, as a Group, identify your highest priority themes / issues.

A member of your group will be required to report your priority themes / issues back to the main group.

3 Minutes Report Back per Table.



## THEMES and ISSUES - PRIORITISATION

**Purpose:** To discover what we collectively perceive to be the key themes and issues from our particular perspectives.

**Activity:** Over lunch, the themes / patterns and issues you identified as your top 5 priorities will be consolidated with those from the other Groups by the Facilitators. Before the afternoon session you will be asked to consider the consolidated list of themes / patterns and issues and vote for those you see as your highest priorities.

Those receiving the highest number of votes will form the basis for our work in the afternoon sessions.

## IDEAL FUTURES

**Purpose:** To imagine the future you want to work towards.

**Activity:** Your Group will be randomly allocated 1 or more themes / issues identified by all delegates as the highest priority.

Put yourself 5 years into the future and looking back to 2010, what does success look like? Working with your group, list on a flipchart the **accomplishments** in relation to your allocated theme(s). This is an opportunity to be creative and visualise the outcomes you would really want to see in future.

Brainstorm the major **barriers** that you had to overcome, the **opportunities** that were available to you and **who** was involved in achieving success (individuals, groups, organisations, etc.).

Your 'future' should be feasible and desirable (i.e. you will work to make it happen) but don't let cost or difficulty constrain you too much at this stage.

Each group should identify their 3 most significant accomplishments and report back to the main group.

5 Minutes Report Back per Table.

## APPENDIX 6 – Intervention 5 – Department Review

### 1. Intervention 5, Interview Schedules

#### Interview schedule - project team member

	<b>Impact upon Objectives</b>
Q1	In relation to the CSR initiative, how useful was the approach in meeting its aims of: •
	<b>Impact upon problem</b>
Q2	What was the impact of the approach in relation to : <ul style="list-style-type: none"> <li>• improving prediction and control;</li> <li>• promoting mutual understanding;</li> <li>• ensuring fairness and empowerment within the problem situation;</li> <li>• promoting diversity and creativity within the problem situation</li> </ul>
	<b>Impact of approach taken</b>
Q3	<b>In relation to this project and more generally, how effective are WYP's approaches in terms of how they are implemented, including:</b>
Q3.1	<b>(i) Problem solving approaches used - Accessibility/ Understandability/ Practicality/ Feasibility of the methodology used</b> <ul style="list-style-type: none"> <li>• Are there any particular problem solving approaches/methodologies used in the police service that you consider to be particularly useful and/or effective (e.g. SARA)</li> <li>• How important is it for approaches to be understood and owned by police managers?</li> <li>• How important is it for participants to be able to fully understand and employ for themselves the methodology being applied?</li> <li>• How important is it for organisational leadership to understand approaches to secure buy-in?</li> <li>• What issues exist in balancing accessibility with theoretical validity?</li> <li>• How important is it for approaches to be adapted and supplemented as a problem unfolds in an informed way?</li> <li>• What is the potential for greater use of a 'mode 2' approach to deploying systems thinking among leaders and workforce?</li> <li>• How might any barriers to understanding and acceptance be overcome? (e.g. simple/high level models or more widespread general knowledge etc.)</li> </ul>
Q3.2	<b>(ii) Who is involved</b> <ul style="list-style-type: none"> <li>• What works well in terms of <b>involvement</b> in such projects?</li> <li>• Who are the right people to include (staff, managers, specialists etc.)?</li> <li>• What is the impact of <b>credibility and capability of the practitioners/facilitators</b>?</li> <li>• How do specialists <b>balance practicality/acceptability</b> of approaches with theoretical robustness?</li> <li>• How influential are individual participants' <b>personal goals</b> in the intervention process?</li> </ul>
Q3.3	<b>(iii) Cultural acceptability of approaches to change</b> <ul style="list-style-type: none"> <li>• How influential do you think the police culture is in relation to acceptance and success of such approaches, including : <ul style="list-style-type: none"> <li>○ rank and power dominated structures;</li> <li>○ reconciling interests of senior stakeholders against requirements of problem situation;</li> <li>○ viewing problems as emergencies;</li> <li>○ wanting to control problem situations;</li> <li>○ understanding and trust of diverse participants/partners;</li> <li>○ credibility of specialists (internal and external);</li> <li>○ mistrust of over-theoretical approaches;</li> <li>○ lack of continuity in key positions;</li> <li>○ sharing 'best' practice</li> </ul> </li> <li>• How might we overcome any such cultural barriers?</li> </ul>

Q3.4	<p><b>(iv) Other factors</b></p> <ul style="list-style-type: none"> <li>• What other factors do you consider critical to successful change?</li> <li>• What are the service's greatest weaknesses?</li> <li>• What would you like to see done differently?</li> </ul>
<b>Impact on future deployment</b>	
Q4	What is the most effective means of implementing change approaches in future? (e.g. widespread broad knowledge/awareness, internal specialists or bought in specialists)?
Q5	<p>What supporting processes and/or development need to be established to improve the ability of leaders and other staff in the service to successfully select and employ similar approaches in their future work?</p> <ul style="list-style-type: none"> <li>• Leadership development (general awareness)</li> <li>• Specialist development</li> <li>• Staff general awareness</li> </ul>
Q6	Any other observations on the use of systems thinking within the Police?

## Interview schedule - police manager

<b>Impact upon problem</b>	
Q1	<p>During change projects how much emphasis do you see the service placing upon:</p> <ul style="list-style-type: none"> <li>• improving prediction and control;</li> <li>• promoting mutual understanding;</li> <li>• ensuring fairness and empowerment within the problem situation;</li> <li>• promoting diversity and creativity within the problem situation</li> </ul>
<b>Impact of approach taken</b>	
Q2	<b>How effective are WYP's approaches in terms of how they are implemented, including:</b>
Q2.1	<p><b>(i) Problem solving approaches used - Accessibility/ Understandability/ Practicality/ Feasibility of the methodology</b></p> <ul style="list-style-type: none"> <li>• Are there any particular problem solving approaches/methodologies used in the police service that you consider to be particularly useful and/or effective (e.g. SARA)</li> <li>• How important is it for approaches to be understood and owned by police managers?</li> <li>• How important is it for participants to be able to fully understand and employ for themselves the methodology being applied?</li> <li>• How might any barriers to understanding and acceptance be overcome? (e.g. simple/high level models etc.)</li> </ul>
Q2.2	<p><b>(ii) Who is involved</b></p> <ul style="list-style-type: none"> <li>• What works well in terms of involvement in such projects?</li> <li>• Who are the right people to include (staff, managers, specialists etc.)?</li> <li>• What is the impact of credibility in the practitioners?</li> <li>• How do specialists balance practicality/acceptability of approaches with theoretical robustness?</li> </ul>
Q2.3	<p><b>(iii) Cultural acceptability of approaches to change</b></p> <ul style="list-style-type: none"> <li>• How influential do you think the police culture is in relation to acceptance and success of such approaches, including : <ul style="list-style-type: none"> <li>○ rank and power dominated structures;</li> <li>○ reconciling interests of senior stakeholders against requirements of problem situation;</li> <li>○ viewing problems as emergencies;</li> <li>○ wanting to control problem situations;</li> <li>○ understanding and trust of diverse participants/partners;</li> <li>○ credibility of specialists (internal and external);</li> <li>○ lack of continuity in key positions;</li> <li>○ sharing 'best' practice</li> </ul> </li> <li>• How might we overcome any such cultural barriers?</li> </ul>
Q2.4	<p><b>(iv) Other factors</b></p> <ul style="list-style-type: none"> <li>• What other factors do you consider critical to successful change?</li> <li>• What are the service's greatest weaknesses?</li> <li>• What would you like to see done differently?</li> </ul>
<b>Impact on future deployment</b>	
Q3	What is the most effective means of implementing change approaches in future? (e.g. widespread broad knowledge/awareness, internal specialists or bought in specialists)?
Q4	What supporting processes and/or development need to be established to improve the ability of leaders and other staff in the service to successfully select and employ similar approaches in their future work?
Q5	Any other observations on the use of systems thinking within the Police?

## 2. Evaluation of Evidence gained from Intervention 5

Evaluation Method	Evidence	Summary
<ul style="list-style-type: none"> <li>Identify the perception of key stakeholders (including sponsors, managers, facilitators and workforce) involved in the problem situation through interviews and focus groups, specifically in relation to:</li> </ul>		
<p>1. Usefulness of different approaches: in meeting stakeholders' interests, including whether the arising actions solve their perceived problems/ intervention aims; increase participants' control over their own situations; and support and balance effective multiple participant engagement throughout the intervention</p> <p>(Interview Q1)</p>	<ul style="list-style-type: none"> <li>The aim of the review was to clarify a collective purpose for the new department and make sense of a complex environment, while recognising the different needs and expectations of those affected. Our approach therefore aimed to provide a framework that we could all sign up to.</li> <li>We ignored current department structures and instead looked at the functions that were necessary amongst the affected departments and the 3 pillar department structure emerged from this work. Taking the range of relevant functions, the systems thinking employed allowed us to look at areas of commonality and how best to join these together as a cohesive whole, employing a matrix that showed where things were unique or overlapping.</li> <li>Once we had developed the broad concept for the department the second phase of work started to look at a more 'linear' analysis of options that might move towards the desired future state. For example, the Excel calculator helped to assess costed options for structures to test their ability to achieve the aim of saving 50%. This provided a form of scenario planning that could be shared with the senior decision makers to help build understanding and commitment to the potential changes.</li> <li>Personal agendas of participants dominated some stages of the intervention and only when their issues were addressed was progress made</li> <li>Participant engagement improved through use of accessible approaches, translated into acceptable language</li> <li>Application of approaches quite hands on for participants as a result</li> <li>Appeared to be resistance to progressing the review resisting participation such as resisting agreed data collection activities and several private meetings between managers and senior force command took place at different stages which seemed to satisfy individuals</li> <li>Approaches such as spread sheet modelling and VSD help to support optimisation and viability</li> <li>Analysis of defining features helped to reflect upon problem context, selection of appropriate systems approaches and how these might be deployed, including less overt and mode 2 forms. Extending this to a more formal discussion with stakeholders would have been beneficial</li> </ul>	<ol style="list-style-type: none"> <li>The aim of the review was to clarify a collective purpose for the new department and make sense of a complex environment, while recognising the different needs and expectations of those affected. Our approach therefore aimed to provide a framework that we could all sign up to and the systems thinking employed allowed us to look at areas of commonality and how best to join these together as a cohesive whole.</li> <li>Personal agendas of participants dominated some later stages of the intervention and only when their issues were addressed was progress made.</li> <li>Participant engagement improved through use of accessible approaches, translated into acceptable language.</li> <li>Application of approaches quite hands on for participants as a result.</li> <li>Resistance to progress overcome through personal meetings.</li> <li>Analysis of defining features was valuable but might warrant a more formal application.</li> </ol>

<p>2. Impact upon problem situation in relation to :</p> <ul style="list-style-type: none"> <li>• prediction and control, measured by the efficacy and efficiency of solutions;</li> <li>• mutual understanding, measured by the effectiveness and elegance of solutions;</li> <li>• ensuring fairness, measured by emancipation and empowerment within the problem situations;</li> <li>• promoting diversity and creativity, measured by exception (marginalized viewpoints recognised) and emotion within the problem situation</li> </ul> <p>(project team Q2, police manager Q1)</p>	<ul style="list-style-type: none"> <li>• There was a clear emphasis on improving prediction and control, with the employment of the likes of calculators to identify costs of alternatives and in the desire to develop clear organisational structures to control the delivery of relevant functions.</li> <li>• At the outset there was a desire to start to build some mutual understanding among the different departments and the work to identify what the new department should deliver, the common functions as well as specific ones, went some way to achieving this at a senior level at least. Further staff workshops attempted to build on this by creating more understanding at a more detailed local level but there was limited success in this exercise.</li> <li>• This limitation also had an impact on the challenge to current practices and innovative thinking.</li> <li>• Strength in optimisation but also addressed mutual understanding and elements of fairness with some success in optimisation and mutual understanding</li> <li>• Time constraints and sensitivity meant workshop consultation output was limited</li> <li>• Some managers were excluded from key decisions due to the review directly impacting upon their roles</li> </ul>	<p>7. A clear emphasis on optimisation and control, using calculators to identify costs of alternatives and in the development of clear organisational structures to control the delivery functions.</p> <p>8. Also a desire to start to build some mutual understanding among the different departments.</p> <p>9. The staff workshops aimed to identify innovative ideas and challenge current practices but had limited success.</p> <p>10. Elements of fairness addressed but some managers excluded from certain decisions.</p>
<p>3. Usefulness of approaches in terms of :</p> <ol style="list-style-type: none"> <li>supporting creativity</li> <li>facilitating informed choice of tools</li> <li>implementation, including: <ul style="list-style-type: none"> <li>• impact of deployment approaches</li> <li>• practicality and feasibility</li> <li>• accessibility and</li> </ul> </li> </ol>	<p>3.1</p> <ul style="list-style-type: none"> <li>• A number of constraints were placed upon the project in terms of the tight timescales, and the complexity of the range of different functions affected. Also, there was no individual with authority over the project other than the sponsor who was not involved in the detail on a day to day basis so the managers affected were working on the problem themselves on a co-operative basis. In addition to this, there were no dedicated resources. What was delivered was a pragmatic solution given the circumstances and constraints that moved us onto the next phase. It wasn't ideal but the best that we could do.</li> <li>• The senior management workshop with the sponsor helped to communicate and share perceptions and start to gain more detail within the potential options to make them more tangible. This session helped to build buy-in to a broad vision for the new structure.</li> <li>• Due to the number of staff affected and the complexity of the different structures a considered</li> </ul>	<p>11. What was delivered was a pragmatic solution given the circumstances and constraints that incrementally moved us onto the next phase. It wasn't ideal but the best that we could do.</p> <p>12. Having access to a sponsor who was fully bought into the process on a regular basis was a key determinant of success.</p> <p>13. Building a positive relationship was important for ensuring the</p>

<p>understandability</p> <ul style="list-style-type: none"> <li>• cultural acceptability</li> </ul> <p>iv facilitating learning about the problem and systems approaches employed</p> <p>(project team Q's 3.1, 3.3, 3.4, 4, 5, 6; police manager Q's 2.1, 2.3, 3, 4)</p>	<p>communication strategy was important.</p> <ul style="list-style-type: none"> <li>• Our approach had to recognise that it was not being applied in splendid isolation of on-going change elsewhere and there was the potential for contradiction and conflict with these other initiatives.</li> <li>• Having access to the sponsor on a regular basis was a key determinant of success up to this point. This helped secure key decisions for the project team and provided a representation for these decisions within the Force Command Team to improve fit with on-going change elsewhere.</li> <li>• It was important for the sponsor to be fully bought into the review approach and findings.</li> <li>• Having the confidence of the sponsor was important and building a positive relationship here was essential. The track record of those involved meant that there was already a good relationship and credibility within the team.</li> <li>• There was a degree of change experienced during the project that we needed to be able to accommodate as we progressed. For example, the initial savings target was 25% and this was extended to 50%. Also, we started the review looking to merge three departments; this was extended to four departments before eventually requiring a merger of a further department and several additional functions from elsewhere in Force.</li> <li>• Various components influenced the approach selected, including: <ul style="list-style-type: none"> <li>• Involvement and awareness of staff.</li> <li>• The formal organisational change process.</li> <li>• Equality Impact Assessment.</li> <li>• Ensuring engagement with senior managers affected and sponsor.</li> </ul> </li> <li>• There was great importance in the relationships between the change agents, comprising the senior management of the affected departments. There was a certain maturity in the relationship between the individuals involved, with no overt competition and a pursuit of common aims which help secure good progress in the early stages of the review.</li> <li>• The Conflict Management Model and SARA both provide similar high level structures to aid problem solving and these are useful to help people to think before they act. Managers often start with some process or theory in their mind and when confronted with a problem they ask themselves whether they have seen or dealt with something similar before and then reach for the appropriate tools, either applying themselves or accessing resources to help. Sometimes the use of a methodology will be overtaken by events. An example of this occurred during a regional policing project where SSM was being used. An urgency to see results and a concern that the methodology might not deliver these, led to a loss of confidence and trust among participants. This was not helped</li> </ul>	<p>confidence of the sponsor.</p> <p>14. There was a requirement to respond to a degree of change in the project.</p> <p>15. Mature relationship between managers working directly on project helped progress in early stages.</p> <p>16. Conflict Management Model and SARA both provide similar high level structures to aid problem solving and these are useful to help people to think before they act and avoid the traditional approach of jumping from information to action without analysis or reflection.</p> <p>17. Methodology can get overtaken by events.</p> <p>18. The urgency to deliver results is a particular challenge for these sort of problem solving approaches and careful management of their use is important to avoid participants being turned off by them.</p> <p>19. Confidence lost if approach appears complex and difficult to see potential value.</p> <p>20. Value in less overt and mode 1/2 applications but limited deployment of mode 2 as requires certain depth of personal understanding.</p> <p>21. Management problem solving deals with less concrete issues and it's unclear if a 'right solution' is</p>
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	<p>by the apparent complexity of the approach and the difficulty for stakeholders in seeing the potential value it might have offered.</p> <ul style="list-style-type: none"> <li>• The urgency to deliver results is a particular challenge for these sort of problem solving approaches and careful management of their use is important to avoid participants being turned off by them.</li> <li>• Problem solving processes of a more operational nature, such as a HOLMES major incident room or a firearms operation, officers naturally follow procedures to produce policy logs, record outcomes etc. These are clear steps to help solve real problems closely related to operations. In contrast, organisational change or management problem solving is dealing with less concrete issues and it's unclear if a 'right solution' is being identified.</li> <li>• This is fine for operating procedures but for business problem solving, involving those higher up the organisation there may be a requirement to build some understanding of different models for problem solving and the underlying theory. The further down the hierarchy you go the less need there is to understand the 'why' and more need to understand the 'how'. The target for gaining buy-in to approaches needs to be senior or middle management but no lower.</li> <li>• The work to develop a generic set of functions for the new department helped to provide a big picture of the whole department responsibilities. Being able to see this was important to build understanding among the diverse departments involved. This helped clarify responsibilities and identify any overlaps in the desired functions of the different departments and this had not been easy to see solely from the perspectives of the separate departments.</li> <li>• NPJA have developed a system called POLKA to help police officers and staff identify practice used elsewhere and it's often pragmatic to use sort of system to identify similar practice and then adapt this rather than go through a problem solving process to develop something for yourself.</li> <li>• Initiatives need to gain a critical mass of support and maintain momentum by proving that things are actually changing in order to be successful</li> </ul> <p>3.3</p> <ul style="list-style-type: none"> <li>• The police like to be in charge of situations given their familiarity with hierarchy and command structures. They are also considered to be the 24/7 agency of last resort where ultimate responsibility lies for controlling situations and this adds to our willingness to take charge of situations, to be task oriented and have an urgency to complete tasks and deliver results. Typically the agencies we work with do not have the same 24/7 coverage.</li> <li>• It works different for civilian police staff compared to police officers. (Civilian) Police staff do not hold a formal authority. They do not have a proven background and police culture so interaction with them is different. For police officers, all staff have come through a similar development path,</li> </ul>	<p>being identified. At this level there may be a requirement to build some understanding of different models for problem solving and the underlying theory.</p> <p>22. Initiatives need to gain a critical mass of support and maintain momentum by proving that things are actually changing in order to be successful.</p> <p>23. The police like to be in charge of situations given their familiarity with hierarchy and command structures. They are also considered to be the 24/7 agency of last resort where ultimate responsibility lies for controlling situations. Typically the agencies we work with do not have the same 24/7 coverage.</p> <p>24. The success of partnership work is largely down to individuals as a result of their own interpersonal skills and as we move individuals on relatively quickly to their next posts, they have no time to build relationships before the officer moves on to their next posting. While partners tend to be more permanent appointments, our officers rapidly move through roles and their instant expertise in a new appointment possibly frustrates others.</p>
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	<p>starting as constables and working up through the ranks. They build a shared knowledge, language and background through the same experiences and possess a credibility in the eyes of their officer colleagues. Civilian staff don't come with this and they can rub against police officer culture.</p> <ul style="list-style-type: none"> <li>• Credibility of the facilitator will depend on the audience. When we had KPMG involved in the QUEST work they had the weight of well respected senior police officers behind them and that was more critical than their skills in them successfully engaging with the force.</li> </ul> <p>4</p> <ul style="list-style-type: none"> <li>• People need to take more responsibility for the delivery of their own work. Leadership as a critical occupational competence needs to recognise the importance of taking responsibility rather than passing decision making onto others. Whether you use specialists to support the decisions is irrelevant, it's the science and rationale behind it to confirm the decision that's important.</li> <li>• An environment where the leader feels confident to make decisions without fear of recrimination is important. If the leader fears the decision, they pass on the responsibility to a specialist and then they do not own the decision.</li> </ul> <p>5</p> <ul style="list-style-type: none"> <li>• Leadership accreditation rather than pursuit of degrees, backed up by access to specialist resources as necessary is more preferable. Awareness of alternative ways to support decision making will help leaders become more confident.</li> </ul> <p>2.1</p> <ul style="list-style-type: none"> <li>• Cops don't always think in a joined up systems way and as a consequence decision making can be disjointed. I personally liked QUEST due to its evidence gathering, structure and fast pace. I was able to go confidently into senior officer meetings knowing from experience that much data lay behind the analyses. It was certainly not viewed as pink and fluffy and it therefore appealed to the police, whereas the theory and methodology in itself didn't. The culture is not really one of reflecting, it tends to get drilled out of you – "this is how you do it, don't think about it, just follow the procedure."</li> <li>• The conflict management model and SARA are both operationally useful problem solving models which help avoid the traditional approach of jumping from information to action without analysis or reflection.</li> <li>• Managers need to understand the relevance of approaches to their real problems. The more senior managers are the more difficult it is to demonstrate this practical value as they tend to operate at a more strategic level and you need to keep things at a more general level.</li> </ul> <p>2.3</p>	<p>25. (Civilian) Police staff do not hold a formal authority. They do not have a proven background and police culture. For police officers, all staff have come through a similar development path and they build a shared knowledge, language and background through the same experiences and possess a credibility in the eyes of their officer colleagues. Civilian staff don't come with this and they can rub against police officer culture.</p> <p>26. There is a credibility issue for specialists because they don't wear a uniform and have no authority whether they have a recognised profession or not. Appears worse in larger forces. In smaller forces it seems possible to build relationships and to demonstrate worth through experience, whereas in larger forces with staff moving between quite different posts there is less opportunity to do this. Here, the familiarity of rank to measure worth is more likely to be relied upon. When we had external consultants involved in the QUEST work they had the weight of well respected senior police officers behind them.</p> <p>27. QUEST was certainly not viewed as pink and fluffy and it therefore</p>
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	<ul style="list-style-type: none"> <li>• We have to do what the boss wants, not necessarily what's right and you rarely find people who are prepared to go against rank. Respect for rank is also a useful 'cop-out' for decision making when it's easier to refer upwards and avoid risking the selection of a 'wrong' decision in what's often seen to be a 'blame culture'.</li> <li>• As a PC you have significant discretion which provides many opportunities for complaint from individuals you are interacting with often in quite stressful situations. Consequently there's a tendency to cover your back and refer decisions upwards. In a world of 'black and white' there is a greater fear of making the wrong decisions.</li> <li>• We have different types of police officers, including those who dutifully do what the boss wants, possibly with an eye on future progress in the Force or wanting to avoid the risk of blame, and then there are those who feel confident enough to challenge in a positive way.</li> <li>• There is a general feeling of frustration that partners don't seem to be urgent enough. This sort of view is formed at the PC level through conflict at the operational level and this then permeates all the way up through the ranks. The success of partnership work is largely down to individuals as a result of their own interpersonal skills and as we move individuals on relatively quickly to their next posts, they have no time to build relationships before the officer moves on to their next posting. While partners tend to be more permanent appointments, our officers rapidly move through roles and their instant expertise in a new appointment possibly frustrates others.</li> <li>• Officers prefer action to reflection. Our culture is full of linear step by step action plans with an end point and we rarely go round the loop of reflection and review, we are always looking to the next task.</li> <li>• Partnership work is still often looked down upon in the service as 'pink and fluffy' and the perception is that real policing is 'muck and bullets' or detecting crime.</li> <li>• There is a credibility issue for specialists because they don't wear a uniform and have no authority whether they have a recognised profession or not. Having worked in three different sized police forces this is seen to be an issue for Police (civilian) Staff generally in the service but appears worse in larger forces. In smaller forces it seems possible to build relationships and to demonstrate worth through experience, whereas in larger forces with staff moving between quite different posts there is less opportunity to do this. Here, the familiarity of rank to measure worth is more likely to be relied upon.</li> <li>• This situation is not an issue for services such as estate management or accountancy, where officers see this as clearly non-police work. However, for change management cops still often think they know more about the organisation than the change agents.</li> </ul>	<p>appealed to the police, whereas the theory and methodology in itself didn't.</p> <p>28. The culture is not really one of reflecting, it tends to get drilled out of you – "this is how you do it, don't think about it, just follow the procedure." Officers prefer action to reflection. Our culture is full of linear step by step action plans with an end point and we rarely go round the loop of reflection and review, we are always looking to the next task.</p> <p>29. We have to do what the boss wants, not necessarily what's right and you rarely find people who are prepared to go against rank. Respect for rank is also a useful 'cop-out' for decision making when it's easier to refer upwards and avoid risking the selection of a 'wrong' decision in what's often seen to be a 'blame culture'.</p> <p>30. In a world of 'black and white' there is a greater fear of making the wrong decisions.</p> <p>31. In the main, our emphasis is more on prediction and control but we often go through the pretence of objectivity when the senior officer has the outcome they want in mind and they merely want the evidence to support it. In this intervention it was</p>
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	<ul style="list-style-type: none"> <li>• In the main, our emphasis is more on prediction and control but we often go through the pretence of objectivity when the senior officer has the outcome they want in mind and they merely want the evidence to support it.</li> <li>• Leaders often feel frustration in evidence gathering efforts that open up alternative views. The message is often “go away and make it happen”. However, often facts can win them over.</li> <li>• Culturally the boss has to be seen to lead from the front and seeking advice might appear to be weak and they cannot admit to this.</li> <li>• Less relevance is seen in exploring others’ views and they don’t like to be challenged. For example, in firearms incident debriefing employing a standard format to walk through the incident, staff at all levels are asked to challenge the commander’s decision making to identify lessons learned. Despite the legitimacy of this process, commanders tend to be defensive about such challenge of their views and learning is often stifled.</li> </ul> <p>3</p> <ul style="list-style-type: none"> <li>• It’s essential for any learning to be relevant. Senior officers need to be exposed to this environment and stay in it long enough to fully understand through participation. This also helps build credibility of the specialists they work alongside and then subsequently respect and trust.</li> <li>• The emphasis on neighbourhood policing and joint problem solving encourages development of appropriate skills from an early stage and this is clearly seen as relevant. As staff move through the ranks this development should continue. We are not good at investing in senior management development in this regard but it is something that needs consideration. Again, we need to ensure the development is seen as relevant and connected to the real job and that the learning will help them in their careers as an investment for the future.</li> </ul> <ul style="list-style-type: none"> <li>• Unclear how some senior level decisions had been made and upon what data/analysis.</li> <li>• Value perceived in less overt and mode 1/2 applications but deployment limited here as mode 2 requires a depth of personal understanding which was not present amongst all the managers involved.</li> <li>• Cultural issue in service regarding acknowledgement of validity of alternative approaches to tackle problems.</li> <li>• ‘Instant expertise’ required of officers moving between specialisms as part of their career development.</li> <li>• Limited exposure of leadership to potential of alternative problem solving approaches such as CST.</li> </ul>	<p>unclear how some decisions had been made at a senior level.</p> <p>32. Leaders often feel frustration in evidence gathering efforts that open up the challenge of exploring alternative views. The message is often “go away and make it happen”. However, often facts can win them over.</p> <p>33 Leadership needs to recognise the importance of taking responsibility rather than passing decision making onto others. Awareness of alternative ways to support decision making will help leaders become more confident.</p> <p>34. Senior officers need to be exposed to this environment and stay in it long enough to fully understand through participation. This also helps build credibility of the specialists they work alongside and then subsequently respect and trust.</p> <p>35. Need to ensure development is seen as relevant and connected to the real job and that the learning will help them in their careers as an investment for the future.</p> <p>36. Cultural issue in service regarding acknowledgement of validity of alternative approaches to tackle problems.</p>
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<ul style="list-style-type: none"> <li>Impact of role/position/capability of participants in problem situation (e.g. sponsors, managers, facilitators and workforce).</li> </ul> <p>(Interview Q's project team Q3.2; police manager Q2.2)</p>	<ul style="list-style-type: none"> <li>Issue of credibility of police (civilian) staff in officer dominated culture.</li> <li>For organisational change, the most important factor is senior level buy-in, both internally with ACPO and externally with senior partners. We need to identify those key stakeholders who hold the power and influence for core engagement. We don't have a scientific way to identify these but our professional experience tells us who the individuals are.</li> <li>In the departmental review we drew in expertise as the requirement arose at different points in the process.</li> <li>The facilitators of the change required an 'operational' credibility with a track record of successful change in relevant areas as well as having access to senior influence and authority. Where these individuals are civilian police staff or consultants they need to demonstrate results or a sales pitch very quickly to win over the sponsoring organisation.</li> <li>We need to base our approaches on some theory rather than merely someone's opinion but this needs tailoring to the police environment and then selling in a positive way. The specialists require credibility, based upon a track record and charisma to sell their approaches and deliver them effectively. They need to be able to read the audience and possess a range of approaches to use that match the needs of the time rather than a single methodology.</li> <li>You need to be able to understand the personal agendas of those participating in the reviews in order to fully recognise what's happening. People tend to look after their own position first and then that of the wider organisation second. How many people would make changes just for the greater good if the changes significantly disadvantaged themselves? People often use workshop events to promote their personal goals and the facilitators need to be able to understand this and help manage these agendas alongside the overall aim of the project.</li> <li>The staff we want to involve in projects are those who are experienced and have usually been around a long time. Their previous involvement in change may have caused them to become cynical about change as they usually see changes reverting back to previous arrangements in the fullness of time. Individuals will not personally go through the pain of continually changing unless they can see it as positive progress. They need to be persuaded about the need for change and the benefit it will bring so as to overcome their resistance.</li> <li>The experts' skill is in using the terminology that pushes the right buttons and avoiding theoretical elements or employing the theory without the managers realising it. SARA is</li> </ul>	<p>37. Managers affected were working on a co-operative basis as there were no dedicated resources.</p> <p>38. Most important factor is senior level buy-in, both internally with ACPO and externally with senior partners.</p> <p>39. Need to identify those key stakeholders who hold the power and influence for core engagement.</p> <p>40. Where these individuals are civilian police staff or consultants they need to demonstrate results or a sales pitch very quickly to win over the sponsoring organisation.</p> <p>41. When new ideas or specialists come along they need an operational credibility and proven track record of success and with a risk averse culture this is more challenging as you tend to stick with what you know and trust. Specialists are often seen as challenging existing authority so the defence is "what do they know about it?"</p> <p>42. Specialists not seen as 'experts' in relevant aspects. Their accreditation and experience may not be recognised.</p> <p>43. Facilitators need to be able to read the audience and possess a range of approaches to use that match the needs of the time rather than a single methodology.</p> <p>44. Skill is in using the terminology that pushes the right buttons and avoids theoretical elements or employing the theory</p>
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	<p>OK as it has a simple structure and can be used pragmatically but with some underlying theory. If it's complex, senior managers don't have time to work it out. Despite the majority of police work being non-emergency we are still conditioned to respond to situations as if they are. To overcome this approaches need to be proven and once they have been proven and hit the relevant buttons they are accepted.</p> <ul style="list-style-type: none"> <li>• Once there is confidence in individuals and their approaches you no longer need to question them. However, when new ideas or specialists come along they need to be proven and with a risk averse culture this is more challenging as you tend to stick with what you know and trust.</li> <li>• Maybe the specialists are not seen as 'experts' in relevant aspects. Their accreditation and experience may not be recognised.</li> <li>• Specialists are often seen as challenging existing authority so the defence is "what do they know about it?"</li> <li>• Limited involvement of some key senior leadership restricted progress</li> <li>• Unclear how some senior decisions had been made and upon what data/analysis (e.g. C/Supt head, 3 pillars etc.)</li> <li>• Limited availability of specialist systems thinking reduced the potential of CST to support the initiative in modes 1 and 2</li> </ul>	<p>without the managers realising it.</p> <p>45. Need to understand personal agendas of those participating to fully recognise what's happening. People tend to look after own position first and then wider organisation second. How many would make changes just for greater good? Workshop events used to promote personal goals and facilitators need to be able to understand this and help manage agendas alongside the overall aim.</p> <p>Individuals will not personally go through the pain of continually changing unless they can see it as positive progress. They need to be persuaded about the need for change and the benefit it will bring so as to overcome their resistance.</p> <p>46. Limited availability of specialist systems thinking reduced the potential of CST to support the initiative in modes 1 and 2.</p>
<ul style="list-style-type: none"> <li>• Evaluation of any supplementary performance data related to the intervention objectives (e.g. efficiency/ productivity data.)</li> </ul>	<p>Initial exploratory options identified potential for 50% savings on April 2010 budget levels amounting to approximately £5M.</p>	

Stakeholder interviews were held with the following:

- A project team member - who was one of the four senior representatives on the project and who possessed a wide range of police service experience including previous involvement in major organisational change projects.
- A senior police manager - who held a managerial role in one of the affected departments. The individual had wide policing background in several police forces and had led major change projects in the service.
- Researcher.

The attribution of comments to individuals has been removed to preserve confidentiality.

### 3. Structural Challenge using Viable Systems Diagnosis questions for ‘Pillar 2’

Question	Response	Comment
<b>1. OPERATIONS</b>		
What form of division best describes the organisation (e.g. process or function)?	<ul style="list-style-type: none"> <li>• Pillar 2 has responsibility for integrating the processes of Strategy and Planning &gt; Operational Research &gt; Organisational Change &gt; Organisational Learning which are considered to cluster under three functional specialisms within the pillar.</li> </ul>	Strong linkage to the Performance Review function in Pillar 1 is essential to inform and complete the development cycle. Also linkage with any audit function.
Can any divisions be grouped?	<ul style="list-style-type: none"> <li>• Not without ‘dumbing down’ the specialisms further.</li> </ul>	
Should we further sub-divide the divisions?	<ul style="list-style-type: none"> <li>• A dedicated support for the current responsibility for ‘Regional Liaison’ may warrant further consideration should that work area grow.</li> </ul>	
Is the operational split: <ul style="list-style-type: none"> <li>• logical?</li> <li>• coherent?</li> <li>• providing clarity of purpose?</li> <li>• relatively simple?</li> <li>• informative?</li> </ul>	<ul style="list-style-type: none"> <li>• Yes relatively, apart from the weakened linkage to Performance Review.</li> </ul>	Improved linkage with Performance Review might improve coherence.
<b>2. CO-ORDINATION</b>		
Is co-ordination reliable and responsive, with reasonable speed?	<ul style="list-style-type: none"> <li>• This is a new structure but co-ordination would be provided on a day to day basis by the section heads.</li> <li>• The introduction of an IT based work co-ordination system informed by Organisational Learning will help facilitate this also.</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate professional capabilities of managers required to make this work.</li> <li>• Introduction of IT based system key to making this work.</li> </ul>
Is there clear responsibility for implementing co-ordination procedures?	<ul style="list-style-type: none"> <li>• TBC</li> </ul>	
Do all the main management processes practice co-ordination?	<ul style="list-style-type: none"> <li>• TBC</li> </ul>	
Are the procedures for co-ordination agreed and understood by all divisions?	<ul style="list-style-type: none"> <li>• TBC</li> </ul>	
Is co-ordination too centralised?	<ul style="list-style-type: none"> <li>• No</li> </ul>	

Are co-ordination procedures carried out in Operations that should be handled in Control or Co-ordination?	<ul style="list-style-type: none"> <li>• Not an issue for the size of operation.</li> </ul>	
Are the co-ordinators adequately skilled and qualified?	<ul style="list-style-type: none"> <li>• Initially seen as a role of the section heads but it may be possible to extend this to a dedicated individual and for the resource to be available to department.</li> </ul>	Potential to extend role to a dedicated resource.
Are there procedures to take control action when co-ordination is unable to manage?	<ul style="list-style-type: none"> <li>• Head of Pillar 2 responsibility.</li> </ul>	
Is co-ordination facilitating or interfering?	<ul style="list-style-type: none"> <li>• As a section head responsibility no problem is envisaged. However, a dedicated resource with no section responsibilities would need careful implementation.</li> </ul>	An extended role would require careful implementation.
<b>3. CONTROL</b>		
Who carries out control procedures?	<ul style="list-style-type: none"> <li>• Section heads within their own teams.</li> </ul>	Appropriate professional capabilities of managers required to make this work.
Do all the main management processes practice control?	<ul style="list-style-type: none"> <li>• TBC</li> </ul>	
Is control taking over when co-ordination procedures are not able to manage?	<ul style="list-style-type: none"> <li>• TBC</li> </ul>	
Is control reliable and responsive?	<ul style="list-style-type: none"> <li>• TBC</li> </ul>	
Is control allocating resources?	<ul style="list-style-type: none"> <li>• Within their own teams, yes.</li> </ul>	
Is control auditing processes of divisions?	<ul style="list-style-type: none"> <li>• Within their own teams, yes. Head of Pillar 2 would be responsible for informed management across the specialisms.</li> </ul>	Appropriate professional capabilities of managers required to make this work.
Is control interpreting and implementing policy?	<ul style="list-style-type: none"> <li>• Within their own teams, yes.</li> </ul>	
Does the control function ensure that policy is implemented in a supportive manner?	<ul style="list-style-type: none"> <li>• TBC</li> </ul>	
<b>4. INTELLIGENCE</b>		
Is intelligence in touch with opportunities and threats in the external environment?	<ul style="list-style-type: none"> <li>• Given the responsibilities and skills of the strategy team within this pillar it is in a strong position regarding the external environment.</li> </ul>	
Is it assessing the strengths and weaknesses of internal activities?	<ul style="list-style-type: none"> <li>• Responsibility for the Organisational Learning function resides in the team and this will be a significant source along with the SIA responsibilities.</li> </ul>	Strong linkage with the Performance Review team essential.
Does intelligence bring together the internal and external information?	<ul style="list-style-type: none"> <li>• Within the Force SIA.</li> </ul>	As above.

Is the information generated disseminated?	<ul style="list-style-type: none"> <li>Formally via Force Control Strategy and less formally through environmental scanning identification and dissemination of issues to all areas</li> <li>Management team will be responsible for identifying and sharing intelligence relevant to individual service areas and sharing these.</li> </ul>	
Does intelligence benefit management?	<ul style="list-style-type: none"> <li>Yes</li> </ul>	
Is intelligence looking into the future, picking up and following trends?	<ul style="list-style-type: none"> <li>Yes</li> </ul>	
Is intelligence open to novel ideas?	<ul style="list-style-type: none"> <li>Yes</li> </ul>	
Is intelligence integrating information into a useful form for policy making?	<ul style="list-style-type: none"> <li>At a Force level SIA refresh is provided to Command Team quarterly</li> <li>At a portfolio level ACC will be appraised of issues through regular meetings</li> <li>On a local level, the key responsibility for intelligence generation in the department resides in the same section as the policy making team</li> </ul>	
<b>5. POLICY</b>		
Is there clear vision and a definite direction?	<ul style="list-style-type: none"> <li>The new department will develop detailed purpose, objectives and measures once its structure has been agreed by Command Team.</li> </ul>	Appropriate process to be established to feed new planning cycle.
Are there measurable objectives?	<ul style="list-style-type: none"> <li>As above</li> </ul>	
Are vision, objectives and direction suitable?	<ul style="list-style-type: none"> <li>As above</li> </ul>	
Are visions being implemented as desired?	<ul style="list-style-type: none"> <li>As above</li> </ul>	
Are there procedures to introduce policy when opportunities/ threats are recognised?	<ul style="list-style-type: none"> <li>At a Force level planning process to remain as present.</li> <li>At portfolio level regular ACC meetings will fulfil this role.</li> </ul>	
Do procedures alert policy when control and co-ordination are not meeting objectives?	<ul style="list-style-type: none"> <li>ACC's OPR and regular meetings will address this.</li> </ul>	
Is there representation and participation at the policy level?	<ul style="list-style-type: none"> <li>It is envisaged that a cabinet approach to participation at the policy level will exist.</li> </ul>	
How does policy make decisions?	<ul style="list-style-type: none"> <li>As above</li> </ul>	
Is policy being overridden by any management functions?	<ul style="list-style-type: none"> <li>TBC</li> </ul>	
Is policy taking into account intelligence information?	<ul style="list-style-type: none"> <li>Should do but TBC.</li> </ul>	



## APPENDIX 7 – Intervention 6 – Personal Applications

**Table 10.2:** Activities necessary to meet the requirements of the Disability Rights Commission Code of Practice (Section 3.16)

	<b>Activity</b>	<b>Owners</b>	<b>Current Position</b>
1	Identify relevant legislation, guidance, disability issues, etiquette etc.	Man. Support (initially) Policy Owner (on-going)	<ul style="list-style-type: none"> <li>• Largely completed as part of initial research though there will be a need to keep revisiting this particularly through liaison with disability groups</li> </ul>
2	Identify relevant potential acts of discrimination that should feature in disciplinary rules	Personnel	<ul style="list-style-type: none"> <li>• Discrimination is covered for Police officers under the Police code of misconduct and support staff are also covered under their discipline procedure</li> </ul>
3	Build disciplinary rules and procedures that incorporate acts of discrimination	Personnel	<ul style="list-style-type: none"> <li>• See above</li> <li>• Procedures need link into the Policy (see 4 )</li> </ul>
4	Establish positive policy on disability	Policy Owner	<ul style="list-style-type: none"> <li>• Policy Guidance and etiquette has already been developed and included on the Policy Database. Overarching Policy is Equality of Service Delivery.</li> <li>• Identification and Involvement of Policy Owner (Head of Community Safety) in Standing Committee required</li> </ul>
5	Communicate policy to all staff	Policy Owner	<ul style="list-style-type: none"> <li>• General awareness of policy/etiquette communicated to all staff via Team Brief</li> <li>• Any changes/updates will require communication</li> <li>• Current means of providing awareness to be reviewed</li> </ul>
6	Identify aspects of services where staff have public contact	Force Training	<ul style="list-style-type: none"> <li>• Training Needs Analysis required</li> </ul>
7	Develop relevant training programmes on disability awareness and etiquette	Force Training	<ul style="list-style-type: none"> <li>• FIA has already incorporated awareness training</li> <li>• Specific training for identified service areas still required</li> </ul>
8	Deliver Training	Force Training	<ul style="list-style-type: none"> <li>• On-going responsibility</li> </ul>
9	Monitor level of staff understanding of policy, legal obligations and duty of reasonable adjustment	Management Support	<ul style="list-style-type: none"> <li>• Part of planned in-depth Forcewide annual staff survey</li> <li>• Results to be presented to Policy Owner and SC</li> </ul>
10	Determine whether understanding is of acceptable level	Policy Owner via Standing Committee	<ul style="list-style-type: none"> <li>• tbc</li> </ul>
11	Take control action to ensure appropriate understanding is achieved (including initiation of relevant update training)	Policy Owner Local managers Force Training	<ul style="list-style-type: none"> <li>• tbc</li> </ul>

12	Identify features of a complaints procedure that make it easy to use	Head of D and C Head of Diversity Head of Comm. Safety	<ul style="list-style-type: none"> <li>• Liaison between owners required to establish appropriate internal and external complaints procedures (using existing systems wherever possible)</li> <li>• See also 17</li> </ul>
13	Establish a complaints procedure that's easy to use	Head of D and C	<ul style="list-style-type: none"> <li>• tbc</li> </ul>
14	Monitor the complaints procedure	Head of D and C	<ul style="list-style-type: none"> <li>• tbc</li> </ul>
15	Take control action to ensure the complaints procedure is easy to use	Head of D and C	<ul style="list-style-type: none"> <li>• tbc</li> </ul>
16	Identify issues emerging from any complaints received	Management Support Head of D and C	<ul style="list-style-type: none"> <li>• tbc</li> </ul>
17	Consult disabled customers, staff and organisations regarding the performance of services	Management Support	<ul style="list-style-type: none"> <li>• Consultation programme to be developed by Management Support</li> <li>• Programme to inform 12 and 18</li> </ul>
18	Identify acceptable levels of inclusion, accessibility and reasonable adjustment	Standing Committee (corporate issues) Local service providers	<ul style="list-style-type: none"> <li>• See also 17</li> <li>• Acceptable levels will inform the audit checklist (19)</li> </ul>
19	Review service provision across all relevant areas to establish services that are considered to be inclusive, accessible and reasonable adjustments effective	Standing Committee (corporate issues) Local service providers	<ul style="list-style-type: none"> <li>• Comprehensive audit checklist to be developed for consideration of SC</li> <li>• Audits then to be completed for identified areas using checklist</li> </ul>
20	Identify aspects of services requiring improvement	Standing Committee (corporate issues) Local service providers	<ul style="list-style-type: none"> <li>• On the basis of the consultation findings(20), complaints received (19) and outcome of audits (22) – corporate and local issues will be identified</li> </ul>
21	Take control action to ensure services are accessible and reasonable adjustments are effective	Standing Committee (corporate issues) Local service providers	<ul style="list-style-type: none"> <li>• Act upon findings of 23</li> </ul>
22	Determine performance expectations of Command Team (in how the Force is meeting the requirements of the DDA via the Standing Committee)	Policy Owner and Command Team	<ul style="list-style-type: none"> <li>• Regular update reports will be provided to the Command Team Sponsor and feedback sought</li> </ul>
23	Monitor performance of the system	Command Team	<ul style="list-style-type: none"> <li>• See above</li> </ul>
24	Take control action to ensure the performance is acceptable	Command Team and Standing Committee	<ul style="list-style-type: none"> <li>• tbc</li> </ul>

## APPENDIX 8 – Research Findings

### 1. Analysis of Research Observations

Ref	Int.	Observation	Cluster
1	1	The intervention was generally considered successful in meeting its stated aims and the participative large group processes guided by PANDA would appear to provide effective practical combinations of methods and techniques to improve joint problem solving in a way that appealed to the sector.	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Methodology</li> </ul>
2	1	There was evidence of perceived improvement in the measures associated with different problem contexts	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
3	1	Better communication and consultation with staff prior to the workshop could have helped refine the workshop design as well as gain commitment and manage the expectations of participants.	<ul style="list-style-type: none"> <li>• Boundary management</li> </ul>
4	1	There appears to be significant importance for participants to feel their problem solving efforts are demonstrating clear progress towards their view of a desirable future state and to be making tangible progress in this regard. PANDA went some way to achieving this.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
5	1	Early deliberation with the sponsor and management team was used to get a good feel for the problem situation and to help identify the sort of intervention design that might address their needs.	<ul style="list-style-type: none"> <li>• Boundary management</li> </ul>
6	1	The employment of creativity techniques earlier on in the design process, involving the facilitators and representation from the management team might have been advantageous in improving understanding in relation to the problem context.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
7	1	The diversity of the groups necessitated a flexibility within the design that facilitated on-going engagement with diverse stakeholders and responding to their differing interests. At the same time, there was a need to preserve a clear structure to achieve the intervention purpose	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
8	1	It was important to be practical in tailoring the approaches to suit the prevailing situation and culture but to do this in a considered way to avoid erosion of methodological validity	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
9	1	The degree of acceptance of the techniques could be influenced by their accessibility, not appearing to necessitate a deep theoretical understanding or expertise amongst practitioners and participants to start applying them.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
10	1	A local capability in systems thinking with ownership in the hands of staff locally would help to sustain workshop products to preserve their relevance.	<ul style="list-style-type: none"> <li>• Devolved capability</li> </ul>
11	1	The importance of having an intervention sponsor who had experience of systems approaches and who had confidence in the credibility and capability of the facilitators to deliver was significant in securing support for the design.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
12	1	Working with the local management in the planning stages meant that the senior team were positively bought into the approach and were able to champion the intervention amongst their staff.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
13	1	The intervention was designed and implemented by a team of experienced internal consultant/facilitators who could develop an intervention methodology with a sound practical and theoretical basis that was flexible to adaption as required rather than rigidly	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Culture</li> </ul>

Ref	Int.	Observation	Cluster
		adhering to a predetermined plan.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
14	1	The intervention lead needs to be alive to changing dynamics and atmosphere during an intervention and be aware of the opportunities to refine the approach through an informed selection and application of appropriate methods and techniques, often in the absence of any formal supporting analyses.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
15	2	The intervention appeared to meet the immediate needs of the stakeholders but the implementation of findings was only partial and was dependent upon availability of capable resources	<ul style="list-style-type: none"> <li>• Devolved capability</li> </ul>
16	2	The intervention appeared to attended to all sociological paradigms at different points	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
17	2	Aspects of the intervention, such as the visioning event, were clearly able to respond concurrently to different sociological paradigms	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
18	2	The various systems approaches within the intervention successfully progressed in parallel and attended to a range of paradigms in what was considered a 'wicked' problem context	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
19	2	The mapping exercise with stakeholders facilitated an improved understanding of the problem context, helping to identify appropriate systems approaches and providing a means for diverse partners to build a common concept of their joined up system	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
20	2	This need for clear and quick progress towards multiple stakeholder goals echoes the findings of the previous intervention	<ul style="list-style-type: none"> <li>• Methodology</li> <li>• Change variables</li> </ul>
21	2	Despite the wide range of partners involved, the range of systems approaches employed during the intervention all appeared to be culturally acceptable	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Methodology</li> </ul>
22	2	Leadership was highly supportive of the approach taken during the intervention and clearly demonstrated confidence in and support for the specialists facilitating the activities	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
23	2	The facilitators needed to draw upon a wide ranging expertise in systems techniques and methodology to flexibly select, adapt and deploy approaches to suit	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
24	2	Involvement of independent specialists with professional expertise and the flexibility to bring in ideas and resources as necessary to help structure the work and stimulate new thinking was considered to be of real value.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
25	2	The participative nature of the systems approaches employed, closely involving staff in their deployment, helped gain buy-in, enthusiasm, motivation, a shared understanding and ownership of the outcomes.	<ul style="list-style-type: none"> <li>• Change variables</li> <li>• Methodology</li> </ul>
26	2	Through a less overt use of approaches and in the employment of mode 2 systems thinking the facilitators deliberately avoided unnecessary theory and detail for non specialists and the approaches appeared to be accessible and well received.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
27	2	The facilitators were careful to clearly build participant ideas into the model to improve ownership and not to simply impose an expert modeller's view of the problem	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Change variables</li> </ul>
28	2	The exposure of participants to broader critical systems thinking through an experienced facilitator was seen to be of benefit in looking at the problem more creatively	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>

Ref	Int.	Observation	Cluster
29	2	Ideas were necessarily introduced in real time during the workshops rather than being part of a pre-defined facilitation structure and this required the facilitators to possess a broad expertise in systems thinking as well as group facilitation skills	• Capable facilitation
30	3	A range of quantifiable process improvements and efficiency savings have been realised but there had been little impact on customer satisfaction.	• N/A
31	3	Increased empowerment and involvement of staff in change with some limited skills transfer to staff involved.	• Devolved capability
32	3	Concern about the sustainability over the longer term without ongoing cultural change	• Culture
33	3	The development of reliable 'hard data' to evidence improvement in efficiency and secure buy-in and ownership of outcomes and robust project governance appear culturally appealing with strength in terms of prediction and control.	• Methodology
34	3	Less focus was placed on improving mutual understanding though the workshop involvement of staff helped surface issues and the mapping help visualise and clarify roles and the impact of activities on the wider process. There was less success when applied across organisational boundaries.	• Methodology
35	3	Widespread workforce involvement provided a means of improving fairness and diversity of view, however, the project leadership had a challenge to ensure all relevant views were balanced against corporate goals	• Methodology
36	3	Although there was evidence of some creativity, there was little in the methodology to encourage this and surface diverse and marginalised views.	• Methodology
37	3	The simple formal structure with flexibility in the detail was seen to be culturally acceptable and the system visualisation was a very powerful means of communication	• Methodology • Culture
38	3	Competent practitioners were required to understand the underlying approach so as to supplement and adapt it to meet local circumstances as the methodology provided little formal support for the selection of different tools.	• Capable facilitation
39	3	The 'inclusive, analytic and quick' approach was culturally acceptable, felt connected to operational work and not too theoretical	• Methodology
40	3	Significant importance was seen in participants feeling their involvement was demonstrating clear progress towards a desirable future state	• Change variables
41	3	There was no formal method used to explore diverse stakeholder perceptions, particularly in the formative stages of the project which led to subsequent problems in one application	• Boundary management
42	3	Involvement of capable and credible police managers and consultant support, locally based working with affected workforce was advantageous, improving appreciation of the problem context and continuing buy-in and ownership into implementation.	• Leadership • Capable Facilitation • Methodology
43	3	The development of skills and knowledge through direct involvement in change and then effective networking to sustain and build capability was considered appropriate.	• Devolved capability
44	3	Visibility and accessibility and use of 'hard data' helped to secure buy-in and ownership of outcomes by the senior management team.	• Methodology

Ref	Int.	Observation	Cluster
45	3	A key component was the project team's on-going interaction with senior stakeholders which helped to build a coalition of support, locally and corporately.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Methodology</li> <li>• Change variables</li> </ul>
46	3	Where leadership had previous exposure to successful use of systems thinking the buy-in was seen to be more effective.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
47	3	Potential was seen in leadership development through exposure to a wider variety of systems thinking approaches through practical experience as well as specialist training.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
48	3	Facilitators were seen as needing to possess the professional skills to select, adapt and employ a range of systems approaches and to hide complex aspects in the participative projects while ensuring participants felt it was being done with, rather than to them.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
49	3	There appeared to be a need for a co-existence in the facilitator of the ability to 'keep it simple' and practical for the majority of participants while also providing credible and theoretically sound guidance and challenge to leaders.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
50	3	The success of the QUEST approach was seen to be more about having a suitable professional capability and local staff involvement to deploy it, rather than about the methodology itself.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
51	3	The combination of internal and external consultants worked well in providing a diverse range of complementary specialist experience, enthusiasm and confidence in the project team.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
52	3	There appears to be a challenge for internal consultants in building and maintaining the confidence of the senior leadership where the internal consultant wants to preserve the principles of critical systems thinking in situations where leadership holds a strong view on a problem situation and how it should be tackled	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Capable Facilitation</li> </ul>
53	3	The critical systems thinker has to balance the leadership requirements with their responsibility to expose leaders to a diversity of possibilities and gain their appreciation and confidence when solutions implemented are found to be more successful	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
54	3	To preserve the principles of CST the facilitators' success in relation to any problem situation must be measured against all 8 of the E's of CSP rather than the degree to which they implement leadership requirements	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
55	3	The learning from this intervention contributed to a national police working group on business improvement.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
56	4	All parties indicated the project had provided real benefit and that the original objectives had been met although improvements were perceived in relation to a more flexible use of methodology and attending to cultural differences between organisations.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
57	4	Implementation was seen to be at risk unless participant (organisations) could see the change clearly addressing their own objectives in order to buy into implementation.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
58	4	An unrefined QUEST approach was considered unsuitable for accommodating other partners' perceptions and handling multiple processes concurrently.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
59	4	The visioning event was seen as a positive means of building appreciation and accommodation of other partner viewpoints at the early stage.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>

Ref	Int.	Observation	Cluster
60	4	There was a perception from all parties that the approach was not suited to the complexity of the problem being faced and did not help build mutual understanding or offer support to address issues of power.	• Methodology
61	4	Issues of marginalisation and power were apparent and it would have been beneficial to revisit the initial boundary assessment at key stages to ensure the unfolding problem context was fully recognised.	• Boundary management
62	4	On-going consideration of appropriate involvement by an experienced specialist would have overcome some of issues of marginalisation and provide a sufficiently diverse collaborative capacity to be able to respond to the breadth of issues prevailing.	• Capable Facilitation • Boundary management
63	4	The structured question framework developed for use with the intervention sponsors helped to identify key defining characteristics of the problem situation and assist in selection of appropriate responses.	• Boundary management
64	4	Although the broad methodology guidance was useful, as all projects are different you need to be able to adapt a basic structure to suit the problem and to do this not only pragmatically but also with professional competence and confidence.	• Capable Facilitation
65	4	The diverse partner requirements may have been better addressed through the employment of diverse systems approaches in parallel.	• Methodology
66	4	The decision to employ a serial application of multi-methodology was considered necessary to enable less experienced facilitators to employ the approaches for themselves in clear stages.	• Capable Facilitation • Devolved capability
67	4	The downside to this was a classic approach of moving from 'soft' to 'hard' systems thinking at a prescribed point and in doing so leaving some partners behind as a result of not continually responding to their individual aspirations.	• Capable Facilitation
68	4	The visioning event helped to gain buy-in from a disparate group of agencies whose diverse viewpoints and lines of accountability would have been very difficult to take on board all at once.	• Change variables • Methodology
69	4	The initial stages of the review appeared to attend adequately to the variables of the Beckhard change formula but as the review progressed this success was not maintained as participants and problem contexts changed.	• Change variables
70	4	The buy-in to change appeared to be closely related to its degree of impact upon the individual participant.	• Change variables
71	4	Cultural differences between the organisations involved were identified. It was perceived that the police take a mechanistic approach to change, being more critical of practices and showing urgency to progress matters, with less time for accommodation of different partner views and culture.	• Culture
72	4	They were also seen as wanting to take over control and again this may be a cultural trait, where the service is traditionally very much about maintaining order and controlling situations.	• Culture
73	4	The importance of organisational leadership possessing a broad understanding of the systems approaches being employed within the intervention was emphasised.	• Leadership
74	4	The police service's current interest in lean systems may provide an opportunity to encourage a wider appreciation of systems thinking.	• Methodology
75	4	Specialists should be available to provide a more strategic overview of the methodology, recognising when and how to adapt approaches to match the problem context.	• Capable Facilitation

Ref	Int.	Observation	Cluster
76	4	It was considered that specialists who fully understood the techniques and possessed sufficient capability and knowledge to adapt them there and then in response to the prevailing situation should be part of the project team.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
77	4	Close involvement of a specialist facilitator who could act as a critical friend to help challenge the team's approaches and suggest alternatives was also seen as valuable.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> <li>• Devolved capability</li> </ul>
78	4	Developing capability in systems thinking through involvement in systems practice would appear feasible within limits and consideration might be given to this development in parallel with participation in relevant networks and through formal training.	<ul style="list-style-type: none"> <li>• Devolved capability</li> </ul>
79	4	Some resistance to the introduction of unfamiliar systems approaches was observed amongst the specialist facilitators and this may have been due to individuals' comfort working with different paradigms, the facilitator's attachment to an institutionalised way of doing things or a genuine concern regarding the cultural acceptability of different approaches.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> <li>• Culture</li> </ul>
80	4	It was considered that development of a framework to improve learning through the sharing of practice may be a suitable platform to address some of the cultural barriers.	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Devolved capability</li> </ul>
81	4	There was some evidence that facilitators were uncomfortable handing components of their specialist systems approaches to less experienced staff.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
82	4	It is possible that a combination of facilitators dedicated to the intervention would have responded better to the challenge of shifting between paradigms.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
83	4	This intervention displayed all features of 'wicked' contexts, thereby emphasising the validity of employing multi-methodology in parallel and coupling this with the specialist facilitator competency required to work in multiple paradigms, would suggest that the utilisation of capable specialists within multi-agency projects will be key to success.	<ul style="list-style-type: none"> <li>• Methodology</li> <li>• Capable facilitation</li> </ul>
84	5	The intervention successfully achieved its stated objectives although there was a degree of uncertainty regarding the ultimate feasibility of the proposals.	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
85	5	The combination of different modes of systems thinking and being cognisant of an appropriate degree of exposure of more complex elements of selected approaches, appeared to have helped to achieve at least some of the explicit aims.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
86	5	The analysis of defining features helped reflect upon problem context, the selection of appropriate systems approaches and how these might be deployed but it might have benefitted from a more formal discussion to develop a richer view of the client system.	<ul style="list-style-type: none"> <li>• Boundary management</li> </ul>
87	5	The 'hands-on' involvement of managers in the analysis of options using the adapted systems approaches appeared both accessible and acceptable.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Culture</li> </ul>
88	5	There appeared to be resistance to progressing the review on the part of individuals where the review was developing in a way that was not consistent with individuals' preferences and personal agendas.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
89	5	There was a need to understand the personal goals and agendas of those participating to fully recognise what's happening and the facilitators needed to be able to understand this and help manage such agendas alongside the overall aim of the intervention.	<ul style="list-style-type: none"> <li>• Change variables</li> <li>• Capable facilitation</li> </ul>



Ref	Int.	Observation	Cluster
90	5	Where participants might be personally and significantly affected, individuals' own goals and interests are brought out more obviously and here we are not dealing with an objective, detached entity but often a complex web of personal aspirations.	<ul style="list-style-type: none"> <li>• Change variables (personal)</li> </ul>
91	5	The role of the systems thinker would appear to be to manage the complexity and overcome resistance to change through effective deployment of critical systems thinking that attends to the requirements of the whole client system.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> <li>• Change variables</li> </ul>
92	5	The approaches were effective in achieving optimisation, using calculators to project aggregate costs of alternative scenarios and developing organisational structures sufficient to control the delivery of functions.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
93	5	SSM provided an overall structure for the inquiry as well as helping participants improve their understanding of others' views and the workshops attended to elements of fairness and mutual understanding.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
94	5	The use of mode 1 and mode 2 thinking in conjunction was seen to be an effective way of employing parallel multi-paradigm multi-methodology.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
95	5	The introduction of the different mode 2 aspects was emergent within a broad inquiry structure.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> </ul>
96	5	The approach delivered a pragmatic solution to a prevailing requirement that incrementally moved the intervention onto its next phase, recognising the changing circumstances and constraints.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
97	5	The reliance on self-organisation rather than central co-ordination in highly complex problem environments provides a potentially useful lens through which to view the role of the facilitator of critical systems thinking.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
98	5	The employment of concepts such as Strategic Choice's commitment package might provide a valuable means for the facilitator of CST to support incremental progression in complex interventions.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
99	5	Problem solving models that the police are familiar with, such as the Conflict Management Model and SARA provide high level structures that provide a useful way of encouraging officers to think before they act.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
100	5	Formal methodology can get overtaken by events and the urgency to deliver results is a challenge for these sort of problem solving approaches and careful management of their use is important	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
101	5	Where senior management already have their preferred answer in mind the intervention might merely be seeking the evidence to justify it.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
102	5	The existence of diverse perceptions in problem situations presents a challenge to leadership who must encourage diversity exploration.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
103	5	Considering Argyris' primary tasks for an interventionist, the critical systems thinker cannot merely attend to the demands of the senior leadership.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
104	5	Initiatives need to gain a critical mass of support and maintain momentum by demonstrating tangible positive change to maintain credibility.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>

Ref	Int.	Observation	Cluster
105	5	There appears to be a cultural issue in service regarding acknowledgement of validity of alternative approaches to tackle problems.	• Culture
106	5	There may be a requirement to build some understanding amongst leadership regarding different models for problem solving and the underlying theory.	• Leadership
107	5	Familiarity with a command structure hierarchy and responsibility for controlling situations encourages the police to take charge of problem situations in which they are involved.	• Culture
108	5	Civilian employees do not hold a formal rank authority and this was seen to impact on their credibility as a professional change agent and in larger forces the familiarity of rank to measure worth is more likely to be relied upon.	• Culture
109	5	Professional facilitators of CST, no matter how capable they may be, need to be able to quickly establish their credibility in the eyes of senior leaders.	• Leadership • Capable Facilitation
110	5	Formal hierarchy might restrict free contribution in problem solving and discourage taking personal responsibility for decision making.	• Culture
111	5	Awareness of alternative ways to support decision making such as through a wider understanding of CST might be seen as a way to help leaders become more confident in their decisions.	• Leadership • Devolved capability
112	5	Gaining senior level buy-in to the approach with senior police leadership and partners was seen to be the most important factor in multi-agency change projects.	• Leadership
113	5	There was a need to identify for core engagement those key stakeholders who hold the power and influence through boundary critique or similar analyses of defining features.	• Boundary management
114	5	Senior officers need to be exposed to the organisational change environment and stay in it long enough to fully understand its nature through participation.	• Leadership
115	5	Leadership should benefit from wider exposure to systems thinking and thereby improve the potential to employ for themselves mode 2 CST.	• Leadership • Devolved capability
116	5	Civilian specialists need to demonstrate results or a 'sales pitch' very quickly to win over leadership, particularly where the specialist is challenging the existing authority.	• Culture
117	5	Facilitators need to be able to read the audience, use the right terminology and avoid overtly theoretical elements.	• Capable facilitation
118	5	Employing multi-methodology (modes 1 and 2) in parallel requires the facilitator to possess a degree of expertise in a variety of systems approaches that match the problem context.	• Capable facilitation
119	5	With less emphasis on the facilitator structuring the inquiry, there will be a greater focus and reliance on CST in mode 2 to reflect on and respond to the unfolding problem.	• Capable facilitation • Methodology
120	6	Combinations of systems approaches across the mode 1 - 2 spectrum were perceived as being successful in helping stakeholders address their problems.	• Methodology
121	6	It is possible for an experienced practitioner to combine elements of relevant systems thinking in mode 2 to reflect multiple paradigm	• Capable facilitation

Ref	Int.	Observation	Cluster
		diversity.	• Methodology
122	6	The applications reflected the 3 commitments of CST, supporting the validity of employing mode 2 style approaches in such interventions.	• Methodology
123	6	The opportunity to employ CST is often emergent, particularly in complex situations and if systems thinking is to be of value in such circumstances the selection and implementation of an approach needs to be immediate and contingent and mode 2 CST might provide a valuable means of fulfilling this requirement.	• Capable facilitation • Methodology
124	6	Mode 2 applications may provide a means of overcoming 'type 3' errors by supporting employment of CST in situations where the consultant enters the problem at a late stage.	• Methodology
125	6	Some key contextual determinants to the spectrum of mode 1-2 styles have been identified from the applications.	• Methodology
126	6	There is possibly a dynamic relationship between mode 1 and 2 applications, where the practitioner might move between modes at different stages of an intervention both consciously and unconsciously.	• Capable facilitation
127	6	It is evident that mode 1 and 2 can operate in parallel, for example with one form of systems thinking predominantly in mode 1, supported by a variety of systems thinking in more of a mode 2 form.	• Methodology
128	6	If mode 2 CST is considered as being both prevalent and a valid means of deploying systems thinking, then it is probable that most problem situations of this nature will feature multi-methodology in series and parallel in modes 1 and 2 without it being overtly expressed.	• Methodology
129	6	There is potential to respond to the limits in the application of some systems approaches in group settings where there may be severe organisational inhibitors, in particular cultural ones, by employing systems approaches less overtly or in mode 2.	• Culture • Methodology
130	6	Influencing the ability of managers to employ (mode 2) systems thinking in a more informed way might have a more significant impact on the use of systems thinking in the service than an equivalent effort to improve the capability of specialists.	• Leadership • Devolved capability
131	1Q	<i>How does the intervention facilitator balance and respond to the landscape of diverse and dynamic contexts as seen by the sponsor, key stakeholders and other participants and manage their expectations throughout?</i>	• Boundary management
132	1Q	<i>Can the facilitator improve the success of CST through better engagement with intervention sponsors and leadership?</i>	• Leadership • Capable Facilitation
133	2Q	<i>How significant is the relationship between the facilitator and senior stakeholders in the successful buy-in to the application of systems approaches?</i>	• Leadership • Capable Facilitation
134	2Q	<i>Can the utilisation of large group processes improve the successful engagement of multiple stakeholders in the deployment of critical systems thinking?</i>	• Methodology
135	2Q	<i>How important is the ability of developing system visualisations to help build shared understanding of problem situations?</i>	• Methodology
136	3Q	<i>To what extent can the workforce really develop the capabilities and become empowered to deploy systems thinking and improve their</i>	• Devolved capability

Ref	Int.	Observation	Cluster
		<i>own processes in future through participation in and exposure to improvement initiatives such as QUEST?</i>	
137	3Q	<i>Is it possible to build the capability of problem solvers to deploy systems thinking with greater success through the development of a combination of propositional knowledge and know how?</i>	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Devolved capability</li> </ul>
138	3Q	<i>Is it possible to improve the success of future systems interventions within the sector through better recognising and managing the plurality of participant perceptions from the outset?</i>	<ul style="list-style-type: none"> <li>• Boundary management</li> </ul>
139	4Q	<i>Can a recursive model be developed to help reflect upon the employment of CST and to develop a viable approach to CST deployment at the methodology, meta-methodology and activity levels?</i>	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
140	4Q	<i>To what extent do diverse personal objectives of stakeholders affect the successful deployment of systems thinking in problems involving multiple participants?</i>	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
141	4Q	<i>Does the importance of attending to a variety of contexts concurrently confirm the need to employ multi-methodology in parallel to achieve the aspirations of CST in multi-agency situations and can the Beckhard change formula be usefully employed to help represent this situation?</i>	<ul style="list-style-type: none"> <li>• Methodologies</li> <li>• Change variables</li> </ul>
142	5Q	<i>Is the Beckhard resistance to change formula applicable to change interventions involving any number of stakeholders as a means of describing the condition for change for the critical systems thinker?</i>	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
143	5Q	<i>Can the role of the critical systems thinker be usefully viewed through a complexity lens, with the responsibility for managing complexity and overcoming resistance to change through effective deployment of critical systems thinking that attends to the requirements of the whole client system?</i>	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
144	5Q	<i>Can the analysis of defining features be further developed to provide a reliable means of helping the facilitator better understand problem context and how they might respond?</i>	<ul style="list-style-type: none"> <li>• Boundary management</li> </ul>
145	6Q	<i>Can the development of systems thinking amongst senior organisational leadership lead to a disproportionately greater impact on the successful deployment of CST across the service than focusing on the development of specialist internal consultants?</i>	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Devolved capability</li> </ul>
146	6Q	<i>How influential is the police culture in the successful implementation of CST and can the critical systems thinker overcome practical challenges to the deployment of CST through considered employment of different modes of CST?</i>	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Capable facilitation</li> </ul>

## 2. Clustered Research Observations

### 2.1 Organisational leadership

Ref	Int.	Observation	Cluster
11	1	The importance of having an intervention sponsor who had experience of systems approaches and who had confidence in the credibility and capability of the facilitators to deliver was significant in securing support for the design.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
12	1	Working with the local management in the planning stages meant that the senior team were positively bought into the approach and were able to champion the intervention amongst their staff.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
22	2	Leadership was highly supportive of the approach taken during the intervention and clearly demonstrated confidence in and support for the specialists facilitating the activities	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
42	3	Involvement of capable and credible police managers and consultant support, locally based working with affected workforce was advantageous, improving appreciation of the problem context and continuing buy-in and ownership into implementation.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Capable Facilitation</li> <li>• Methodology</li> </ul>
45	3	A key component was the project team's on-going interaction with senior stakeholders which helped to build a coalition of support, locally and corporately.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Methodology</li> <li>• Change variables</li> </ul>
46	3	Where leadership had previous exposure to successful use of systems thinking the buy-in was seen to be more effective.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
47	3	Potential was seen in leadership development through exposure to a wider variety of systems thinking approaches through practical experience as well as specialist training.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
52	3	There appears to be a challenge for internal consultants in building and maintaining the confidence of the senior leadership where the internal consultant wants to preserve the principles of critical systems thinking in situations where leadership holds a strong view on a problem situation and how it should be tackled	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Capable Facilitation</li> </ul>
73	4	The importance of organisational leadership possessing a broad understanding of the systems approaches being employed within the intervention was emphasised.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
87	5	The 'hands-on' involvement of managers in the analysis of options using the adapted systems approaches appeared both accessible and acceptable.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Culture</li> </ul>
102	5	The existence of diverse perceptions in problem situations presents a challenge to leadership who must encourage diversity exploration.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
106	5	There may be a requirement to build some understanding amongst leadership regarding different models for problem solving and the underlying theory.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
109	5	Professional facilitators of CST, no matter how capable they may be, need to be able to quickly establish their credibility in the eyes of senior leaders.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Capable Facilitation</li> </ul>

Ref	Int.	Observation	Cluster
111	5	Awareness of alternative ways to support decision making such as through a wider understanding of CST might be seen as a way to help leaders become more confident in their decisions.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Devolved capability</li> </ul>
112	5	Gaining senior level buy-in to the approach with senior police leadership and partners was seen to be the most important factor in multi-agency change projects.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
114	5	Senior officers need to be exposed to the organisational change environment and stay in it long enough to fully understand its nature through participation.	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>
115	5	Leadership should benefit from wider exposure to systems thinking and thereby improve the potential to employ for themselves mode 2 CST.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Devolved capability</li> </ul>
116	5	Civilian specialists need to demonstrate results or a 'sales pitch' very quickly to win over leadership, particularly where the specialist is challenging the existing authority.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Capable Facilitation</li> </ul>
130	6	Influencing the ability of managers to employ (mode 2) systems thinking in a more informed way might have a more significant impact on the use of systems thinking in the service than an equivalent effort to improve the capability of specialists.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Devolved capability</li> </ul>
132	1Q	<i>Can the facilitator improve the success of CST through better engagement with intervention sponsors and leadership?</i>	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Capable Facilitation</li> </ul>
133	2Q	<i>How significant is the relationship between the facilitator and senior stakeholders in the successful buy-in to the application of systems approaches?</i>	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Capable Facilitation</li> </ul>
145	6Q	<i>Can the development of systems thinking amongst senior organisational leadership lead to a disproportionately greater impact on the successful deployment of CST across the service than focusing on the development of specialist internal consultants?</i>	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Devolved capability</li> </ul>

#### Key themes (and relevant interventions)

- Gaining cross partnership senior level buy-in to the systems approach employed within multi-agency change projects. (5)
- Leadership possessing a broad understanding of alternative systems approaches through sufficient previous exposure to and experience of systems approaches. (3,4,5)
- Leadership working closely with facilitators in the planning stages of projects. (1, 3)
- Internal consultants building and maintaining the confidence of the senior leadership. (1, 2, 5)
- Management and staff having 'hands on' involvement in project activity to gain understanding and build a coalition of support, locally and corporately. (3, 5)
- Involvement of capable and credible police managers. (3)
- Leadership development through exposure to a wider variety of systems thinking approaches through practical experience. (1, 5, 6)
- Leadership development through exposure to a wider variety of systems thinking approaches through specialist training. (5)
- Leadership becoming more aware of the existence of diverse perceptions in problem situations. (5)

## 2.2 Organisational culture

Ref	Int.	Observation	Cluster
1	1	The intervention was generally considered successful in meeting its stated aims and the participative large group processes guided by PANDA would appear to provide effective practical combinations of methods and techniques to improve joint problem solving in a way that appealed to the sector.	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Methodology</li> </ul>
13	1	The intervention was designed and implemented by a team of experienced internal consultant/facilitators who could develop an intervention methodology with a sound practical and theoretical basis that was flexible to adaption as required rather than rigidly adhering to a predetermined plan.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Culture</li> <li>• Methodology</li> </ul>
21	2	Despite the wide range of partners involved, the range of systems approaches employed during the intervention all appeared to be culturally acceptable.	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Methodology</li> </ul>
32	3	Concern about the sustainability over the longer term without ongoing cultural change.	<ul style="list-style-type: none"> <li>• Culture</li> </ul>
37	3	The simple formal structure with flexibility in the detail was seen to be culturally acceptable and the system visualisation was a very powerful means of communication.	<ul style="list-style-type: none"> <li>• Methodology</li> <li>• Culture</li> </ul>
71	4	Cultural differences between the organisations involved were identified. It was perceived that the police take a mechanistic approach to change, being more critical of practices and showing urgency to progress matters, with less time for accommodation of different partner views and culture.	<ul style="list-style-type: none"> <li>• Culture</li> </ul>
72	4	They were also seen as wanting to take over control and again this may be a cultural trait, where the service is traditionally very much about maintaining order and controlling situations.	<ul style="list-style-type: none"> <li>• Culture</li> </ul>
79	4	Some resistance to the introduction of unfamiliar systems approaches was observed amongst the specialist facilitators and this may have been due to individuals' comfort working with different paradigms, the facilitator's attachment to an institutionalised way of doing things or a genuine concern regarding the cultural acceptability of different approaches.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> <li>• Culture</li> </ul>
80	4	It was considered that development of a framework to improve learning through the sharing of practice may be a suitable platform to address some of the cultural barriers.	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Devolved capability</li> </ul>
87	5	The 'hands-on' involvement of managers in the analysis of options using the adapted systems approaches appeared both accessible and acceptable.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Culture</li> </ul>
105	5	There appears to be a cultural issue in service regarding acknowledgement of validity of alternative approaches to tackle problems.	<ul style="list-style-type: none"> <li>• Culture</li> </ul>
107	5	Familiarity with a command structure hierarchy and responsibility for controlling situations encourages the police to take charge of problem situations in which they are involved.	<ul style="list-style-type: none"> <li>• Culture</li> </ul>

Ref	Int.	Observation	Cluster
108	5	Civilian employees do not hold a formal rank authority and this was seen to impact on their credibility as a professional change agent.	• Culture
110	5	Formal hierarchy might restrict free contribution in problem solving and discourage taking personal responsibility for decision making.	• Culture
116	5	Civilian specialists need to demonstrate results or a 'sales pitch' very quickly to win over leadership, particularly where the specialist is challenging the existing authority.	• Culture
129	6	There is potential to respond to the limits in the application of some systems approaches in group settings where there may be severe organisational inhibitors, in particular cultural ones, by employing systems approaches less overtly or in mode 2.	• Culture • Methodology
146	6Q	<i>How influential is the police culture in the successful implementation of CST and can the critical systems thinker overcome practical challenges to the deployment of CST through considered employment of different modes of CST?</i>	• Culture • Capable facilitation

#### Key themes (and relevant interventions)

- Familiarity with command structure hierarchy in a service that is traditionally very much about maintaining order and controlling situations, there is a tendency for the police to want to take charge in problem situations. (4, 5)
- Formal rank hierarchy restricting free and open contribution in problem solving. (5)
- The police approach to change can be urgent and mechanistic, with less time for accommodation of different partner views and cultures. (4)
- A cultural resistance to acknowledge the validity of alternative approaches to tackle problems and sustain improvement. (3,5)
- Employment of culturally acceptable high level problem solving structures with flexibility to adapt the detail. (1, 2, 3)
- Facilitators employing specialist systems approaches less overtly or in 'mode 2'. (6)
- Facilitators' attachment to an institutionalised way of doing things. (4)
- Improving learning through the sharing of practical applications rather than formal training. (4, 5)
- Civilian change agents' absence of formal rank to measure status impacting on their professional credibility with leadership, particularly where there's a challenge to existing authority. (5)

### 2.3 Capable facilitation

Ref	Int.	Observation	Cluster
7	1	The diversity of the groups necessitated a flexibility within the design that facilitated on-going engagement with diverse stakeholders and responding to their differing interests. At the same time, there was a need to preserve a clear structure to achieve the intervention purpose	• Capable facilitation
8	1	It was important to be practical in tailoring the approaches to suit the prevailing situation and culture but to do this in a considered way to avoid erosion of methodological validity	• Capable facilitation



Ref	Int.	Observation	Cluster
13	1	The intervention was designed and implemented by a team of experienced internal consultant/facilitators who could develop an intervention methodology with a sound practical and theoretical basis that was flexible to adaption as required rather than rigidly adhering to a predetermined plan.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Culture</li> <li>• Methodology</li> </ul>
14	1	The intervention lead needs to be alive to changing dynamics and atmosphere during an intervention and be aware of the opportunities to refine the approach through an informed selection and application of appropriate methods and techniques, often in the absence of any formal supporting analyses.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
23	2	The facilitators needed to draw upon a wide ranging expertise in systems techniques and methodology to flexibly select, adapt and deploy approaches to suit	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
24	2	Involvement of independent specialists with professional expertise and the flexibility to bring in ideas and resources as necessary to help structure the work and stimulate new thinking was considered to be of real value.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
27	2	The facilitators were careful to clearly build participant ideas into the model to improve ownership and not to simply impose an expert modeller's view of the problem	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Change variables</li> </ul>
28	2	The exposure of participants to broader critical systems thinking through an experienced facilitator was seen to be of benefit in looking at the problem more creatively	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
29	2	Ideas were necessarily introduced in real time during the workshops rather than being part of a pre-defined facilitation structure and this required the facilitators to possess a broad expertise in systems thinking as well as group facilitation skills	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
38	3	Competent practitioners were required to understand the underlying approach so as to supplement and adapt it to meet local circumstances as the methodology provided little formal support for the selection of different tools.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
42	3	Involvement of capable and credible police managers and consultant support, locally based working with affected workforce was advantageous, improving appreciation of the problem context and continuing buy-in and ownership into implementation.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Capable Facilitation</li> <li>• Devolved capability</li> </ul>
48	3	Facilitators were seen as needing to possess the professional skills to select, adapt and employ a range of systems approaches and to hide complex aspects in the participative projects while ensuring participants felt it was being done with, rather than to them.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
49	3	There appeared to be a need for a co-existence in the facilitator of the ability to 'keep it simple' and practical for the majority of participants while also providing credible and theoretically sound guidance and challenge to leaders.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
50	3	The success of the QUEST approach was seen to be more about having a suitable professional capability and local staff involvement to deploy it, rather than about the methodology itself.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
51	3	The combination of internal and external consultants worked well in providing a diverse range of complementary specialist experience, enthusiasm and confidence in the project team.	<ul style="list-style-type: none"> <li>• Capable Facilitation</li> </ul>
52	3	There appears to be a challenge for internal consultants in building and maintaining the confidence of the senior leadership where the	<ul style="list-style-type: none"> <li>• Leadership</li> </ul>

Ref	Int.	Observation	Cluster
		internal consultant wants to preserve the principles of critical systems thinking in situations where leadership holds a strong view on a problem situation and how it should be tackled	• Capable Facilitation
53	3	The critical systems thinker has to balance the leadership requirements with their responsibility to expose leaders to a diversity of possibilities and gain their appreciation and confidence when solutions implemented are found to be more successful	• Capable Facilitation
54	3	To preserve the principles of CST the facilitators' success in relation to any problem situation must be measured against all 8 of the E's of CSP rather than the degree to which they implement leadership requirements	• Capable Facilitation
56	4	All parties indicated the project had provided real benefit and that the original objectives had been met although improvements were perceived in relation to a more flexible use of methodology and attending to cultural differences between organisations.	• Capable Facilitation
62	4	On-going consideration of appropriate involvement by an experienced specialist would have overcome some of issues of marginalisation and provide a sufficiently diverse collaborative capacity to be able to respond to the breadth of issues prevailing.	• Capable Facilitation • Boundary management
64	4	Although the broad methodology guidance was useful, as all projects are different you need to be able to adapt a basic structure to suit the problem and to do this not only pragmatically but also with professional competence and confidence.	• Capable Facilitation
66	4	The decision to employ a serial application of multi-methodology was considered necessary to enable less experienced facilitators to employ the approaches for themselves in clear stages.	• Capable Facilitation • Devolved capability
67	4	The downside to this was a classic approach of moving from 'soft' to 'hard' systems thinking at a prescribed point and in doing so leaving some partners behind as a result of not continually responding to their individual aspirations.	• Capable Facilitation
75	4	Specialists should be available to provide a more strategic overview of the methodology, recognising when and how to adapt approaches to match the problem context.	• Capable Facilitation
76	4	It was considered that specialists who fully understood the techniques and possessed sufficient capability and knowledge to adapt them there and then in response to the prevailing situation should be part of the project team.	• Capable Facilitation
77	4	Close involvement of a specialist facilitator who could act as a critical friend to help challenge the team's approaches and suggest alternatives was also seen as valuable.	• Capable Facilitation • Devolved capability
79	4	Some resistance to the introduction of unfamiliar systems approaches was observed amongst the specialist facilitators and this may have been due to individuals' comfort working with different paradigms, the facilitator's attachment to an institutionalised way of doing things or a genuine concern regarding the cultural acceptability of different approaches.	• Capable Facilitation • Culture
81	4	There was some evidence that facilitators were uncomfortable handing components of their specialist systems approaches to less experienced staff.	• Capable Facilitation
82	4	It is possible that a combination of facilitators dedicated to the intervention would have responded better to the challenge of shifting between paradigms.	• Capable Facilitation

Ref	Int.	Observation	Cluster
83	4	This intervention displayed all features of ‘wicked’ contexts, thereby emphasising the validity of employing multi-methodology in parallel and coupling this with the specialist facilitator competency required to work in multiple paradigms, would suggest that the utilisation of capable specialists within multi-agency projects will be key to success.	<ul style="list-style-type: none"> <li>• Methodology</li> <li>• Capable facilitation</li> </ul>
89	5	There was a need to understand the personal goals and agendas of those participating to fully recognise what’s happening and the facilitators needed to be able to understand this and help manage such agendas alongside the overall aim of the intervention.	<ul style="list-style-type: none"> <li>• Change variables</li> <li>• Capable facilitation</li> </ul>
91	5	The role of the systems thinker would appear to be to manage the complexity and overcome resistance to change through effective deployment of critical systems thinking that attends to the requirements of the whole client system.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> <li>• Change variables</li> </ul>
95	5	The introduction of the different mode 2 aspects was emergent within a broad inquiry structure.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> </ul>
97	5	The reliance on self-organisation rather than central co-ordination in highly complex problem environments provides a potentially useful lens through which to view the role of the facilitator of critical systems thinking.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
100	5	Formal methodology can get overtaken by events and the urgency to deliver results is a challenge for these sort of problem solving approaches and careful management of their use is important	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
101	5	Where senior management already have their preferred answer in mind the intervention might merely be seeking the evidence to justify it.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
103	5	Considering Argyris’ primary tasks for an interventionist, the critical systems thinker cannot merely attend to the demands of the senior leadership.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
109	5	Professional facilitators of CST, no matter how capable they may be, need to be able to quickly establish their credibility in the eyes of senior leaders.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Capable Facilitation</li> </ul>
116	5	Civilian specialists need to demonstrate results or a ‘sales pitch’ very quickly to win over leadership, particularly where the specialist is challenging the existing authority.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Capable Facilitation</li> </ul>
117	5	Facilitators need to be able to read the audience, use the right terminology and avoid overtly theoretical elements.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
118	5	Employing multi-methodology (modes 1 and 2) in parallel requires the facilitator to possess a degree of expertise in a variety of systems approaches that match the problem context.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>
119	5	With less emphasis on the facilitator structuring the inquiry, there will be a greater focus and reliance on CST in mode 2 to reflect on and respond to the unfolding problem.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> </ul>
121	6	It is possible for an experienced practitioner to combine elements of relevant systems thinking in mode 2 to reflect multiple paradigm diversity.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> </ul>
123	6	The opportunity to employ CST is often emergent, particularly in complex situations and if systems thinking is to be of value in such	<ul style="list-style-type: none"> <li>• Capable facilitation</li> </ul>

Ref	Int.	Observation	Cluster
		circumstances the selection and implementation of an approach needs to be immediate and contingent and mode 2 CST might provide a valuable means of fulfilling this requirement.	• Methodology
126	6	There is possibly a dynamic relationship between mode 1 and 2 applications, where the practitioner might move between modes at different stages of an intervention both consciously and unconsciously.	• Capable facilitation
132	1Q	<i>Can the facilitator improve the success of CST through better engagement with intervention sponsors and leadership?</i>	• Leadership • Capable Facilitation
133	2Q	<i>How significant is the relationship between the facilitator and senior stakeholders in the successful buy-in to the application of systems approaches?</i>	• Leadership • Capable Facilitation
137	3Q	<i>Is it possible to build the capability of problem solvers to deploy systems thinking with greater success through the development of a combination of propositional knowledge and know how?</i>	• Capable facilitation • Devolved capability
139	4Q	<i>Can a recursive model be developed to help reflect upon the employment of CST and to develop a viable approach to CST deployment at the methodology, meta-methodology and activity levels?</i>	• Capable facilitation
143	5Q	<i>Can the role of the critical systems thinker be usefully viewed through a complexity lens, with the responsibility for managing complexity and overcoming resistance to change through effective deployment of critical systems thinking that attends to the requirements of the whole client system?</i>	• Capable facilitation
146	6Q	<i>How influential is the police culture in the successful implementation of CST and can the critical systems thinker overcome practical challenges to the deployment of CST through considered employment of different modes of CST?</i>	• Culture • Capable facilitation

#### Key themes (and relevant interventions)

- Experienced facilitators able to develop an intervention methodology with a sound practical and theoretical basis. (1, 2, 3, 4, 5)
- Employing multi-methodology in parallel requiring the facilitator to possess a degree of expertise in a variety of systems approaches in wicked problem situations. (4, 5)
- The facilitator maintaining awareness of cultural issues, changing dynamics, conditions and diverse stakeholder requirements during an intervention, recognising the opportunities to stimulate creative new thinking and refine an approach flexibly as required. (1, 2, 3, 4, 5)
- The ability to select and implement approaches that are immediate and contingent often without any formal supporting analyses. (1, 2, 3, 4, 5, 6)
- An experienced facilitator employing ‘mode 2’ systems thinking dynamically alongside other problem solving approaches, both consciously and unconsciously. (5, 6)
- Clearly building participant ideas into the solution to improve ownership and not simply imposing the facilitator’s view of the problem. (2,3)
- Measuring the facilitator’s success within an intervention against all stakeholder needs rather than just those of the sponsor. (3, 5)
- Internal consultants preserving the principles of critical systems thinking where leadership holds a strong view on a problem and how it should be tackled. (3)
- Ability to recognise and employ culturally acceptable approaches, recognising cultural differences between organisations involved. (3)

- Facilitator’s ability to identify and secure contribution from all relevant stakeholders (directly and indirectly affected). (3)
- Combinations of facilitators with different skills to better respond to the challenge of shifting between paradigms. (4)
- Maintaining an understanding of the personal goals and agendas of those participating and handle these alongside the leadership’s overall aim of the intervention. (3, 5)
- Overcoming participant resistance to change through effective deployment of systems approaches in modes 1 and 2 that attend to the requirements of the whole client system. (5,6)
- The facilitator recognising and exploiting self-organisation rather than central co-ordination in highly complex problem situations. (5)
- The reluctance of facilitators to devolve knowledge of specialist systems approaches to less experienced staff. (4)

## 2.4 Devolved capability

Ref	Int.	Observation	Cluster
10	1	A local capability in systems thinking with ownership in the hands of staff locally would help to sustain workshop products to preserve their relevance.	• Devolved capability
15	2	The intervention appeared to meet the immediate needs of the stakeholders but the implementation of findings was only partial and was dependent upon availability of capable resources	• Devolved capability
31	3	Increased empowerment and involvement of staff in change with some limited skills transfer to staff involved.	• Devolved capability
42	3	Involvement of capable and credible police managers and consultant support, locally based working with affected workforce was advantageous, improving appreciation of the problem context and continuing buy-in and ownership into implementation.	• Leadership • Capable Facilitation • Devolved capability
43	3	The development of skills and knowledge through direct involvement in change and then effective networking to sustain and build capability was considered appropriate.	• Devolved capability
66	4	The decision to employ a serial application of multi-methodology was considered necessary to enable less experienced facilitators to employ the approaches for themselves in clear stages.	• Capable Facilitation • Devolved capability
77	4	Close involvement of a specialist facilitator who could act as a critical friend to help challenge the team’s approaches and suggest alternatives was also seen as valuable.	• Capable Facilitation • Devolved capability
78	4	Developing capability in systems thinking through involvement in systems practice would appear feasible within limits and consideration might be given to this development in parallel with participation in relevant networks and through formal training.	• Devolved capability
80	4	It was considered that development of a framework to improve learning through the sharing of practice may be a suitable platform to address some of the cultural barriers.	• Culture • Devolved capability
111	5	Awareness of alternative ways to support decision making such as through a wider understanding of CST might be seen as a way to help	• Leadership

Ref	Int.	Observation	Cluster
		leaders become more confident in their decisions.	• Devolved capability
115	5	Leadership should benefit from wider exposure to systems thinking and thereby improve the potential to employ for themselves mode 2 CST.	• Leadership • Devolved capability
130	6	Influencing the ability of managers to employ (mode 2) systems thinking in a more informed way might have a more significant impact on the use of systems thinking in the service than an equivalent effort to improve the capability of specialists.	• Leadership • Devolved capability
136	3Q	<i>To what extent can the workforce really develop the capabilities and become empowered to deploy systems thinking and improve their own processes in future through participation in and exposure to improvement initiatives such as QUEST?</i>	• Devolved capability
137	3Q	<i>Is it possible to build the capability of problem solvers to deploy systems thinking with greater success through the development of a combination of propositional knowledge and know how?</i>	• Capable facilitation • Devolved capability
145	6Q	<i>Can the development of systems thinking amongst senior organisational leadership lead to a disproportionately greater impact on the successful deployment of CST across the service than focusing on the development of specialist internal consultants?</i>	• Leadership • Devolved capability

#### Key themes (and relevant interventions)

- A local capability in systems thinking with ownership in the hands of staff locally to sustain intervention outcomes. (1, 2, 3)
- The development and deployment of systems approaches that match the capability of local skills and knowledge. (4)
- Developing local capability in systems thinking through practical involvement in projects, supported by formal training relevant to the project. (3, 4)
- Developing capability in systems thinking through networking and sharing practice. (3, 4)
- Close involvement of a specialist facilitator to act as a critical friend, challenging local approaches and suggesting alternatives. (4)
- Exposing leadership to alternative systems thinking to help them become more capable and confident in their decisions. (5, 6)

## 2.5 Boundary Management

Ref	Int.	Observation	Cluster
3	1	Better communication and consultation with staff prior to the workshop could have helped refine the workshop design as well as gain commitment and manage the expectations of participants.	• Boundary management
5	1	Early deliberation with the sponsor and management team was used to get a good feel for the problem situation and to help identify the sort of intervention design that might address their needs.	• Boundary management
41	3	There was no formal method used to explore diverse stakeholder perceptions, particularly in the formative stages of the project which led	• Boundary management

Ref	Int.	Observation	Cluster
		to subsequent problems in one application.	
61	4	Issues of marginalisation and power were apparent and it would have been beneficial to revisit the initial boundary assessment at key stages to ensure the unfolding problem context was fully recognised.	• Boundary management
62	4	On-going consideration of appropriate involvement by an experienced specialist would have overcome some of issues of marginalisation and provide a sufficiently diverse collaborative capacity to be able to respond to the breadth of issues prevailing.	• Capable Facilitation • Boundary management
63	4	The structured question framework developed for use with the intervention sponsors helped to identify key defining characteristics of the problem situation and assist in selection of appropriate responses.	• Boundary management
86	5	The analysis of defining features helped reflect upon problem context, the selection of appropriate systems approaches and how these might be deployed but it might have benefitted from a more formal discussion to develop a richer view of the client system.	• Boundary management
113	5	There was a need to identify for core engagement those key stakeholders who hold the power and influence through boundary critique or similar analyses of defining features.	• Boundary management
131	1Q	<i>How does the intervention facilitator balance and respond to the landscape of diverse and dynamic contexts as seen by the sponsor, key stakeholders and other participants and manage their expectations throughout?</i>	• Boundary management
138	3Q	<i>Is it possible to improve the success of future systems interventions within the sector through better recognising and managing the plurality of participant perceptions from the outset?</i>	• Boundary management
144	5Q	<i>Can the analysis of defining features be further developed to provide a reliable means of helping the facilitator better understand problem context and how they might respond?</i>	• Boundary management

#### Key themes (and relevant interventions)

- A formal assessment of the problem environment to engage those key stakeholders who hold the influence and expertise to improve the design and success of the intervention. (1, 3, 4, 5)
- A means of recognising diverse stakeholder positions and context at key stages to ensure the unfolding problem context is fully recognised so that appropriate involvement and systems approaches can be employed. (4)

## 2.6 Methodological features

Ref	Int.	Observation	Cluster
1	1	The intervention was generally considered successful in meeting its stated aims and the participative large group processes guided by PANDA would appear to provide effective practical combinations of methods and techniques to improve joint problem solving in a way that appealed to the sector	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Methodology</li> </ul>
2	1	There was evidence of perceived improvement in the measures associated with different problem contexts.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
6	1	The employment of creativity techniques earlier on in the design process, involving the facilitators and representation from the management team might have been advantageous in improving understanding in relation to the problem context.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
9	1	The degree of acceptance of the techniques could be influenced by their accessibility, not appearing to necessitate a deep theoretical understanding or expertise amongst practitioners and participants to start applying them.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
13	1	The intervention was designed and implemented by a team of experienced internal consultant/facilitators who could develop an intervention methodology with a sound practical and theoretical basis that was flexible to adaption as required rather than rigidly adhering to a predetermined plan.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> </ul>
16	2	The intervention appeared to attend to all sociological paradigms at different points.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
17	2	Aspects of the intervention, such as the visioning event, were clearly able to respond concurrently to different sociological paradigms.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
18	2	The various systems approaches within the intervention successfully progressed in parallel and attended to a range of paradigms in what was considered a 'wicked' problem context.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
20	2	This need for clear and quick progress towards multiple stakeholder goals echoes the findings of the previous intervention.	<ul style="list-style-type: none"> <li>• Methodology</li> <li>• Change variables</li> </ul>
21	2	Despite the wide range of partners involved, the range of systems approaches employed during the intervention all appeared to be culturally acceptable.	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Methodology</li> </ul>
25	2	The participative nature of the systems approaches employed, closely involving staff in their deployment, helped gain buy-in, enthusiasm, motivation, a shared understanding and ownership of the outcomes.	<ul style="list-style-type: none"> <li>• Change variables</li> <li>• Methodology</li> </ul>
26	2	Through a less overt use of approaches and in the employment of mode 2 systems thinking the facilitators deliberately avoided unnecessary theory and detail for non specialists and the approaches appeared to be accessible and well received.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
33	3	The development of reliable 'hard data' to evidence improvement in efficiency and secure buy-in and ownership of outcomes and robust project governance appear culturally appealing with strength in terms of prediction and control.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
34	3	Less focus was placed on improving mutual understanding though the workshop involvement of staff helped surface issues and the mapping help visualise and clarify roles and the impact of activities on the wider process. There was less success when applied across organisational boundaries.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>



Ref	Int.	Observation	Cluster
35	3	Widespread workforce involvement provided a means of improving fairness and diversity of view, however, the project leadership had a challenge to ensure all relevant views were balanced against corporate goals.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
36	3	Although there was evidence of some creativity, there was little in the methodology to encourage this and surface diverse and marginalised views.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
37	3	The simple formal structure with flexibility in the detail was seen to be culturally acceptable and the system visualisation was a very powerful means of communication.	<ul style="list-style-type: none"> <li>• Methodology</li> <li>• Culture</li> </ul>
39	3	The 'inclusive, analytic and quick' approach was culturally acceptable, felt connected to operational work and not too theoretical.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
42	3	Involvement of capable and credible police managers and consultant support, locally based working with affected workforce was advantageous, improving appreciation of the problem context and continuing buy-in and ownership into implementation.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Capable facilitation</li> <li>• Methodology</li> </ul>
44	3	Visibility and accessibility and use of 'hard data' helped to secure buy-in and ownership of outcomes by the senior management team.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
45	3	A key component was the project team's on-going interaction with senior stakeholders which helped to build a coalition of support, locally and corporately.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Methodology</li> <li>• Change variables</li> </ul>
55	3	The learning from this intervention contributed to a national police working group on business improvement.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
58	4	An unrefined QUEST approach was considered unsuitable for accommodating other partners' perceptions and handling multiple processes concurrently.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
60	4	There was a perception from all parties that the approach was not suited to the complexity of the problem being faced and did not help build mutual understanding or offer support to address issues of power.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
65	4	The diverse partner requirements may have been better addressed through the employment of diverse systems approaches in parallel.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
68	4	The visioning event helped to gain buy-in from a disparate group of agencies whose diverse viewpoints and lines of accountability would have been very difficult to take on board all at once.	<ul style="list-style-type: none"> <li>• Change variables</li> <li>• Methodology</li> </ul>
74	4	The police service's current interest in lean systems may provide an opportunity to encourage a wider appreciation of systems thinking.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
83	4	This intervention displayed all features of 'wicked' contexts, thereby emphasising the validity of employing multi-methodology in parallel and coupling this with the specialist facilitator competency required to work in multiple paradigms, would suggest that the utilisation of capable specialists within multi-agency projects will be key to success.	<ul style="list-style-type: none"> <li>• Methodology</li> <li>• Capable facilitation</li> </ul>
85	5	The combination of different modes of systems thinking and being cognisant of an appropriate degree of exposure of more complex elements of selected approaches, appeared to have helped to achieve at least some of the explicit aims.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
91	5	The role of the systems thinker would appear to be to manage the complexity and overcome resistance to change through effective deployment of critical systems thinking that attends to the requirements of the whole client system.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> </ul>

Ref	Int.	Observation	Cluster
			<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
92	5	The approaches were effective in achieving optimisation, using calculators to project aggregate costs of alternative scenarios and developing organisational structures sufficient to control the delivery of functions.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
93	5	SSM provided an overall structure for the inquiry as well as helping participants improve their understanding of others' views and the workshops attended to elements of fairness and mutual understanding.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
94	5	The use of mode 1 and mode 2 thinking in conjunction was seen to be an effective way of employing parallel multi-paradigm multi-methodology.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
95	5	The introduction of the different mode 2 aspects was emergent within a broad inquiry structure.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> </ul>
99	5	Problem solving models that the police are familiar with, such as the Conflict Management Model and SARA present high level structures that provide a useful way of encouraging officers to think before they act.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
119	5	With less emphasis on the facilitator structuring the inquiry, there will be a greater focus and reliance on CST in mode 2 to reflect on and respond to the unfolding problem.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> </ul>
120	6	Combinations of systems approaches across the mode 1 - 2 spectrum were perceived as being successful in helping stakeholders address their problems.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
121	6	It is possible for an experienced practitioner to combine elements of relevant systems thinking in mode 2 to reflect multiple paradigm diversity.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> </ul>
122	6	The applications reflected the 3 commitments of CST, supporting the validity of employing mode 2 style approaches in such interventions.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
123	6	The opportunity to employ CST is often emergent, particularly in complex situations and if systems thinking is to be of value in such circumstances the selection and implementation of an approach needs to be immediate and contingent and mode 2 CST might provide a valuable means of fulfilling this requirement.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Methodology</li> </ul>
124	6	Mode 2 applications may provide a means of overcoming 'type 3' errors by supporting employment of CST in situations where the consultant enters the problem at a late stage.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
125	6	Some key contextual determinants to the spectrum of mode 1-2 styles have been identified from the applications.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
127	6	It is evident that mode 1 and 2 can operate in parallel, for example with one form of systems thinking predominantly in mode 1, supported by a variety of systems thinking in more of a mode 2 form.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
128	6	If mode 2 CST is considered as being both prevalent and a valid means of deploying systems thinking, then it is probable that most problem situations of this nature will feature multi-methodology in series and parallel in modes 1 and 2 without it being overtly expressed.	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>

Ref	Int.	Observation	Cluster
129	6	There is potential to respond to the limits in the application of some systems approaches in group settings where there may be severe organisational inhibitors, in particular cultural ones, by employing systems approaches less overtly or in mode 2.	<ul style="list-style-type: none"> <li>• Culture</li> <li>• Methodology</li> </ul>
134	2Q	<i>Can the utilisation of large group processes improve the successful engagement of multiple stakeholders in the deployment of critical systems thinking?</i>	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
135	2Q	<i>How important is the ability of developing system visualisations to help build shared understanding of problem situations?</i>	<ul style="list-style-type: none"> <li>• Methodology</li> </ul>
141	4Q	<i>Does the importance of attending to a variety of contexts concurrently confirm the need to employ multi-methodology in parallel to achieve the aspirations of CST in multi-agency situations and can the Beckhard change formula be usefully employed to help represent this situation?</i>	<ul style="list-style-type: none"> <li>• Methodology</li> <li>• Change variables</li> </ul>

#### Key themes (and relevant interventions)

- Participative large group processes providing practical combinations of methods and techniques to improve joint problem solving in a way that is culturally acceptable. (1, 2, 4)
- Participative group processes helping to surface issues, visualise interconnectivity, gain buy-in from diverse agencies whose different viewpoints and lines of accountability might be difficult to draw together otherwise. (1, 2, 3, 4)
- Participative systems approaches, closely involving management and staff throughout their design and deployment can support creative thinking and help gain buy-in, a shared understanding, motivation and ownership into implementation of outcomes. (1, 2, 3, 4)
- Widespread workforce involvement as a means of improving fairness, creativity and diversity of view to balance against corporate goals. (3)
- The development of reliable ‘hard data’ to evidence improvement in efficiency and secure buy-in and ownership of outcomes and robust project governance appear culturally appealing with strength in terms of prediction and control. (3, 5)
- Approaches that are accessible, not necessitating a deep theoretical understanding or expertise amongst participants to start applying them are more successful in situations where methodology needs to be transparent to participants. (1)
- Facilitators employing specialist approaches less overtly or in a mode 2 form helping to avoid unnecessary theory and detail for non specialists.
- Approaches that present a simple formal guiding structure rather than a detailed predetermined plan, with a flexibility for the facilitator to adapt the detail to emergent context appear to be both effective and culturally acceptable. (1, 3, 5, 6)
- Approaches that are ‘inclusive, analytic & quick’ secure buy-in & ownership of outcomes particularly in complex and dynamic problem situations involving diverse groups. (3)
- Employing mode 1 and mode 2 thinking in conjunction as an effective way of employing different approaches in parallel. (5, 6)
- Where severe organisational inhibitors exist (particularly cultural ones), employing specialist systems approaches less overtly or in mode 2 to preserve CST. (2, 5, 6)
- In complex situations the opportunity to employ CST is often emergent with the selection and implementation of an approach being immediate and contingent and mode 2 CST provides a valuable means of fulfilling this requirement. (6)
- Participative group processes able to respond concurrently to different participant requirements. (1, 2)
- Parallel use of approaches in modes 1 and 2 able to attend to the requirements of the whole client system in complex and diverse problems. (2, 4, 5, 6)

## 2.7 Change variables

Ref	Int.	Observation	Cluster
4	1	There appears to be significant importance for participants to feel their problem solving efforts are demonstrating clear progress towards their view of a desirable future state and to be making tangible progress in this regard. PANDA went some way to achieving this.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
19	2	The mapping exercise with stakeholders facilitated an improved understanding of the problem context, helping to identify appropriate systems approaches and providing a means for diverse partners to build a common concept of their joined up system.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
20	2	This need for clear and quick progress towards multiple stakeholder goals echoes the findings of the previous intervention.	<ul style="list-style-type: none"> <li>• Methodology</li> <li>• Change variables</li> </ul>
25	2	The participative nature of the systems approaches employed, closely involving staff in their deployment, helped gain buy-in, enthusiasm, motivation, a shared understanding and ownership of the outcomes.	<ul style="list-style-type: none"> <li>• Change variables</li> <li>• Methodology</li> </ul>
27	2	The facilitators were careful to clearly build participant ideas into the model to improve ownership and not to simply impose an expert modeller's view of the problem.	<ul style="list-style-type: none"> <li>• Capable facilitation</li> <li>• Change variables</li> </ul>
40	3	Significant importance was seen in participants feeling their involvement was demonstrating clear progress towards a desirable future state.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
45	3	A key component was the project team's on-going interaction with senior stakeholders which helped to build a coalition of support, locally and corporately.	<ul style="list-style-type: none"> <li>• Leadership</li> <li>• Methodology</li> <li>• Change variables</li> </ul>
57	4	Implementation was seen to be at risk unless participant (organisations) could see the change clearly addressing their own objectives in order to buy into implementation.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
59	4	The visioning event was seen as a positive means of building appreciation and accommodation of other partner viewpoints at the early stage.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
68	4	The visioning event helped to gain buy-in from a disparate group of agencies whose diverse viewpoints and lines of accountability would have been very difficult to take on board all at once.	<ul style="list-style-type: none"> <li>• Change variables</li> <li>• Methodology</li> </ul>
69	4	The initial stages of the review appeared to attend adequately to the variables of the Beckhard change formula but as the review progressed this success was not maintained as participants and problem contexts changed.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
70	4	The buy-in to change appeared to be closely related to its degree of impact upon the individual participant.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
88	5	There appeared to be resistance to progressing the review on the part of individuals where the review was developing in a way that was not consistent with individuals' preferences and personal agendas.	<ul style="list-style-type: none"> <li>• Change variables</li> </ul>
89	5	There was a need to understand the personal goals and agendas of those participating to fully recognise what's happening and the facilitators needed to be able to understand this and help manage such agendas alongside the overall aim of the intervention.	<ul style="list-style-type: none"> <li>• Change variables</li> <li>• Capable facilitation</li> </ul>

Ref	Int.	Observation	Cluster
90	5	Where participants might be personally and significantly affected, individuals' own goals and interests are brought out more obviously and here we are not dealing with an objective, detached entity but often a complex web of personal aspirations.	• Change variables
91	5	The role of the systems thinker would appear to be to manage the complexity and overcome resistance to change through effective deployment of critical systems thinking that attends to the requirements of the whole client system.	• Capable facilitation • Methodology • Change variables
96	5	The approach delivered a pragmatic solution to a prevailing requirement that incrementally moved the intervention onto its next phase, recognising the changing circumstances and constraints.	• Change variables
98	5	The employment of concepts such as Strategic Choice's commitment package might provide a valuable means for the facilitator of CST to support incremental progression in complex interventions.	• Change variables
104	5	Initiatives need to gain a critical mass of support and maintain momentum by demonstrating tangible positive change to maintain credibility.	• Change variables
140	4Q	<i>To what extent do diverse personal objectives of stakeholders affect the successful deployment of systems thinking in problems involving multiple participants?</i>	• Change variables
141	4Q	<i>Does the importance of attending to a variety of contexts concurrently confirm the need to employ multi-methodology in parallel to achieve the aspirations of CST in multi-agency situations and can the Beckhard change formula be usefully employed to help represent this situation?</i>	• Methodology • Change variables
142	5Q	<i>Is the Beckhard resistance to change formula applicable to change interventions involving any number of stakeholders as a means of describing the condition for change for the critical systems thinker?</i>	• Change variables

**Key themes** (and relevant interventions)

- Participants feeling their problem solving efforts are demonstrating clear progress towards their view of a desirable future state and to be making tangible progress in this regard. (1, 3)
- Participative approaches directly engaging a diverse range of stakeholders in shaping the change to build understanding, motivation and ownership of outcomes. (2, 3, 4)
- Developing a vision of improvement and providing a means for diverse partners to build a common concept of their joined up system. (2, 4)
- Participant (organisations) seeing change clearly addressing their own objectives in order to buy into implementation. (4)
- The impact of change on different partners, affecting their buy-in when things might be developing in a way that is inconsistent with their aims. (5)
- Participants being personally and significantly affected, bringing out individuals' own goals and interests more obviously as a complex web of personal aspirations. (5)
- The facilitator being able to provide a flexible response to participants' emerging requirements in order to support incremental progress to resolve complex interventions. (5)
- Initiatives gaining a critical mass (coalition) of support and maintaining momentum by demonstrating tangible positive change. (5)

### 3. Key Themes from the Research

Ref	Theme	Ability to influence success*	Potential for improvement*
<b>Organisational leadership</b>		<b>4.18</b>	<b>3.39</b>
1	Gaining cross partnership senior level buy-in to the systems approach employed within multi-agency change projects. (5)	4.63	3.63
2	Leadership possessing a broad understanding of alternative systems approaches through sufficient previous exposure to and experience of systems approaches. (3,4,5)	4.13	3.25
3	Leadership working closely with facilitators in the planning stages of projects. (1, 3)	4.25	3.50
4	Internal consultants building and maintaining the confidence of the senior leadership. (1, 2, 5)	4.13	3.38
5	Management and staff having 'hands on' involvement in project activity to gain understanding and build a coalition of support, locally and corporately. (3, 5)	4.00	3.38
6	Involvement of capable and credible police managers. (3)	4.71	3.43
7	Leadership development through exposure to a wider variety of systems thinking approaches through practical experience. (1, 5, 6)	4.38	3.75
8	Leadership development through exposure to a wider variety of systems thinking approaches through specialist training. (5)	3.88	3.13
9	Leadership becoming more aware of the existence of diverse perceptions in problem situations. (5)	3.50	3.13
<b>Organisational culture</b>		<b>3.74</b>	<b>3.33</b>
10	Familiarity with command structure hierarchy in a service that is traditionally very much about maintaining order and controlling situations, there is a tendency for the police to want to take charge in problem situations. (4, 5)	3.88	3.13
11	Formal rank hierarchy restricting free and open contribution in problem solving. (5)	3.38	3.75
12	The police approach to change can be urgent and mechanistic, with less time for accommodation of different partner views and cultures. (4)	3.38	3.50
13	A cultural resistance to acknowledge the validity of alternative approaches to tackle problems and sustain improvement. (3,5)	3.50	3.75
14	Employment of culturally acceptable high level problem solving structures with flexibility to adapt the detail. (1, 2, 3)	3.63	2.75
15	Facilitators employing specialist systems approaches less overtly or in 'mode 2'. (6)	4.13	3.00
16	Facilitators' attachment to an institutionalised way of doing things. (4)	3.50	2.88
17	Improving learning through the sharing of practical applications rather than formal training. (4, 5)	4.38	3.75
18	Civilian change agents' absence of formal rank to measure status impacting on their professional credibility with leadership, particularly where there's a challenge to existing authority. (5)	3.94	3.50
<b>Capable facilitation</b>		<b>4.28</b>	<b>3.16</b>
19	Experienced facilitators able to develop an intervention methodology with a sound practical and theoretical basis. (1, 2, 3, 4, 5)	4.50	3.50
20	Employing multi-methodology in parallel requiring the facilitator to possess a degree of expertise in a variety of systems approaches in wicked problem situations. (4, 5)	4.50	3.56

Ref	Theme	Ability to influence success*	Potential for improvement*
21	The facilitator maintaining awareness of cultural issues, changing dynamics, conditions and diverse stakeholder requirements during an intervention, recognising the opportunities to stimulate creative new thinking and refine an approach flexibly as required. (1, 2, 3, 4, 5)	4.63	3.63
22	The ability to select and implement approaches that are immediate and contingent often without any formal supporting analyses. (1, 2, 3, 4, 5, 6)	4.38	3.50
23	An experienced facilitator employing 'mode 2' systems thinking dynamically alongside other problem solving approaches, both consciously and unconsciously. (5, 6)	4.38	3.63
24	Clearly building participant ideas into the solution to improve ownership and not simply imposing the facilitator's view of the problem. (2,3)	4.75	2.50
25	Measuring the facilitator's success within an intervention against all stakeholder needs rather than just those of the sponsor. (3, 5)	3.88	3.00
26	Internal consultants preserving the principles of critical systems thinking where leadership holds a strong view on a problem and how it should be tackled. (3)	4.13	3.63
27	Ability to recognise and employ culturally acceptable approaches, recognising cultural differences between organisations involved. (3)	4.50	3.13
28	Facilitator's ability to identify and secure contribution from all relevant stakeholders (directly and indirectly affected). (3)	4.88	2.63
29	Combinations of facilitators with different skills to better respond to the challenge of shifting between paradigms. (4)	4.25	2.63
30	Maintaining an understanding of the personal goals and agendas of those participating and handle these alongside the leadership's overall aim of the intervention. (3, 5)	4.13	2.75
31	Overcoming participant resistance to change through effective deployment of systems approaches in modes 1 and 2 that attend to the requirements of the whole client system. (5,6)	4.13	3.00
32	The facilitator recognising and exploiting self-organisation rather than central co-ordination in highly complex problem situations. (5)	3.63	3.25
33	The reluctance of facilitators to devolve knowledge of specialist systems approaches to less experienced staff. (4)	3.50	3.13
<b>Devolved capability</b>		<b>4.20</b>	<b>3.94</b>
34	A local capability in systems thinking with ownership in the hands of staff locally to sustain intervention outcomes. (1, 2, 3)	4.00	4.13
35	The development and deployment of systems approaches that match the capability of local skills and knowledge. (4)	n/a	n/a
36	Developing local capability in systems thinking through practical involvement in projects, supported by formal training relevant to the project. (3, 4)	4.13	3.94
37	Developing capability in systems thinking through networking and sharing practice. (3, 4)	4.00	3.88
38	Close involvement of a specialist facilitator to act as a critical friend, challenging local approaches and suggesting alternatives. (4)	4.38	3.63
39	Exposing leadership to alternative systems thinking to help them become more capable and confident in their decisions. (5, 6)	4.50	4.13
<b>Boundary management</b>		<b>4.50</b>	<b>3.56</b>
40	A formal assessment of the problem environment to engage those key stakeholders who hold the influence and expertise to improve the design and success of the intervention. (1, 3, 4, 5)	4.63	3.56
41	A means of recognising diverse stakeholder positions and context at key stages to ensure the unfolding problem context is fully recognised so that appropriate involvement and systems approaches can be employed. (4)	4.38	3.56

Ref	Theme	Ability to influence success*	Potential for improvement*
<b>Methodological features</b>		<b>4.10</b>	<b>3.17</b>
42	Participative large group processes providing practical combinations of methods and techniques to improve joint problem solving in a way that is culturally acceptable. (1, 2, 4)	4.00	3.25
43	Participative group processes helping to surface issues, visualise interconnectivity, gain buy-in from diverse agencies whose different viewpoints and lines of accountability might be difficult to draw together otherwise. (1, 2, 3, 4)	4.25	3.13
44	Participative systems approaches, closely involving management and staff throughout their design and deployment can support creative thinking and help gain buy-in, a shared understanding, motivation and ownership into implementation of outcomes. (1, 2, 3, 4)	4.75	3.25
45	Widespread workforce involvement as a means of improving fairness, creativity and diversity of view to balance against corporate goals. (3)	4.13	3.25
46	The development of reliable 'hard data' to evidence improvement in efficiency and secure buy-in and ownership of outcomes and robust project governance appear culturally appealing with strength in terms of prediction and control. (3, 5)	4.75	3.00
47	Approaches that are accessible, not necessitating a deep theoretical understanding or expertise amongst participants to start applying them are more successful in situations where methodology needs to be transparent to participants. (1)	4.50	3.19
48	Facilitators employing specialist approaches less overtly or in a mode 2 form helping to avoid unnecessary theory and detail for non specialists.	4.25	3.13
49	Approaches that present a simple formal guiding structure rather than a detailed predetermined plan, with a flexibility for the facilitator to adapt the detail to emergent context appear to be both effective and culturally acceptable. (1, 3, 5, 6)	4.00	3.13
50	Approaches that are 'inclusive, analytic and quick' secure buy-in and ownership of outcomes particularly in complex and dynamic problem situations involving diverse groups. (3)	3.63	3.75
51	Employing mode 1 and mode 2 thinking in conjunction as an effective way of employing different approaches in parallel. (5, 6)	3.63	3.25
52	Where severe organisational inhibitors exist (particularly cultural ones), employing specialist systems approaches less overtly or in mode 2 to preserve CST. (2, 5, 6)	4.13	3.38
53	In complex situations the opportunity to employ CST is often emergent with the selection and implementation of an approach being immediate and contingent and mode 2 CST provides a valuable means of fulfilling this requirement. (6)	n/a	n/a
54	Participative group processes able to respond concurrently to different participant requirements. (1, 2)	3.63	2.50
55	Parallel use of approaches in modes 1 and 2 able to attend to the requirements of the whole client system in complex and diverse problems. (2, 4, 5, 6)	3.63	3.00
<b>Change variables</b>		<b>4.44</b>	<b>3.39</b>
56	Participants feeling their problem solving efforts are demonstrating clear progress towards their view of a desirable future state and to be making tangible progress in this regard. (1, 3)	4.25	3.50
57	Participative approaches directly engaging a diverse range of stakeholders in shaping the change to build understanding, motivation and ownership of outcomes. (2, 3, 4)	4.75	3.25
58	Developing a vision of improvement and providing a means for diverse partners to build a common concept of their joined up system. (2, 4)	4.25	3.50



Ref	Theme	Ability to influence success*	Potential for improvement*
59	Participant (organisations) seeing change clearly addressing their own objectives in order to buy into implementation. (4)	4.63	3.75
60	The impact of change on different partners, affecting their buy-in when things might be developing in a way that is inconsistent with their aims. (5)	4.50	3.63
61	Participants being personally and significantly affected, bringing out individuals' own goals and interests more obviously as a complex web of personal aspirations. (5)	4.00	3.13
62	The facilitator being able to provide a flexible response to participants' emerging requirements in order to support incremental progress to resolve complex interventions. (5)	4.50	3.25
63	Initiatives gaining a critical mass (coalition) of support and maintaining momentum by demonstrating tangible positive change. (5)	4.63	3.13
<b>TOTAL</b>		<b>4.17</b>	<b>3.34</b>

\* Each theme is rated in terms of:

1. Its ability to influence the success of interventions with multiple stakeholders
2. Its potential for improvement in the current operating environment

Rating	1	2	3	4	5
<b>Influence on success</b>	Little influence	•	•	•	Significant influence
<b>Potential for improvement</b>	Little potential	•	•	•	Significant potential

## 4 Intervention Specific Question Linkage

Intervention	Ref	Question (“Implications for subsequent research iterations”)	Response
1 (Community Safety)	Q1	<i>How does the intervention facilitator balance and respond to the diverse and dynamic contexts as seen by the sponsor, key stakeholders and other participants and manage their expectations throughout?</i>	4 (ASB)
	Q2	<i>Can the facilitator improve the success of CST through better engagement with intervention sponsors and leadership?</i>	2 (IOM) 4 (ASB)
2 (IOM)	Q3	<i>How significant is the relationship between the facilitator and senior stakeholders in the successful buy-in to the application of systems approaches?</i>	3 (Quest)
	Q4	<i>Can the utilisation of large group processes improve the successful engagement of multiple stakeholders in the deployment of critical systems thinking?</i>	4 (ASB)

	Q5	<i>How important is the ability of developing system visualisations to help build shared understanding of problem situations?</i>	3 (Quest)
3 (Quest)	Q6	<i>To what extent can the workforce really develop the capabilities and become empowered to deploy systems thinking and improve their own processes in future through participation in and exposure to improvement initiatives such as QUEST?</i>	4 (ASB)
	Q7	<i>Is it possible to build the capability of problem solvers to deploy systems thinking with greater success through the development of a combination of propositional knowledge and know how?</i>	6 (ASB) Findings
	Q8	<i>Is it possible to improve the success of future systems interventions within the sector through better recognising and managing the plurality of participant perceptions from the outset?</i>	4 (ASB)
4 (ASB)	Q9	<i>Can a recursive model be developed to help reflect upon the employment of CST and to develop a viable approach to CST deployment at the methodology, meta-methodology and activity levels?</i>	Findings
	Q10	<i>To what extent do diverse personal objectives of stakeholders affect the successful deployment of systems thinking in problems involving multiple participants?</i>	5 (Dept. Review)
	Q11	<i>Does the importance of attending to a variety of contexts concurrently confirm the need to employ multi-methodology in parallel to achieve the aspirations of CST in multi-agency situations and can the Beckhard change formula be usefully employed to help represent this situation?</i>	Findings
5 (Department Review)	Q12	<i>Is the Beckhard resistance to change formula applicable to change interventions involving any number of stakeholders as a means of describing the condition required for change for the critical systems thinker?</i>	Findings
	Q13	<i>Can the role of the critical systems thinker be usefully viewed through a complexity lens, with the responsibility for managing complexity and overcoming resistance to incrementally change through effective deployment of critical systems thinking that attends to the requirements of the whole client system?</i>	Findings
	Q14	<i>Can the analysis of defining features be further developed to provide a reliable means of helping the facilitator better understand problem context and how they might respond?</i>	Findings
6 (Personal)	Q15	<i>Can the development of systems thinking amongst senior organisational leadership lead to a disproportionately greater impact on the successful deployment of CST across the service than focusing on the development of specialist internal consultants?</i>	Findings
	Q16	<i>How influential is the police culture in the successful implementation of CST and can the critical systems thinker overcome practical challenges to the deployment of CST through considered employment of different modes of CST?</i>	5 (Dept. Review)

## 5. Figures and Tables

**Table 11.5:** Summary of salient findings of the research

<b>Organisational Leadership</b>	
1	Leadership developing an understanding of, and confidence in, alternative systems approaches that build the variety necessary to match the complex, plural and evolving operating environment, via active engagement throughout interventions as well as formal management development.
2	The potential for sharing and developing practice and understanding of alternative systems approaches through the employment of culturally relevant problem archetypes.
3	Facilitators quickly establishing and building their credibility with the organisational leadership across all relevant agencies through visibility and close engagement during and outside of interventions, while carefully balancing rigour and relevance of approaches employed.
4	The facilitator of CST instilling client ownership of solutions through enablement of free and informed choice.
<b>Organisational Culture</b>	
5	Encouraging exploration of diversity through free and open contribution across the whole system by overcoming cultural and structural limitations to improve variety and success in problem situations.
6	The acceptance of systems approaches and their successful implementation is influenced by their accessibility and the necessary exposure of participants to unfamiliar theory or expertise in their deployment.
7	Managers and facilitators of CST recognising the risk of limiting their effectiveness in complex problem situations as a consequence of employing low variety, institutionalised approaches to problem solving.
8	The employment of culturally acceptable systems approaches that are both practically based and theoretically sound, such as a high level structure to guide problem solving with flexibility for an informed adaption of detail to match the prevailing needs of an appropriately diagnosed problem context.
<b>Devolved Capability</b>	
9	Engagement with capable, credible and committed leaders, managers and staff locally in understanding, developing, owning and sustaining relevant solutions in a dynamic operating environment
10	Ability to devolve systems thinking capability to the wider workforce through involvement in professionally supported interventions.
<b>Boundary Management</b>	
11	The importance of the facilitator gaining and sustaining an appreciation of the landscape of diversity within problem situations and identifying centres of gravity in terms of defining features.
<b>Methodological features</b>	
12	The potential for appropriately designed large group participative processes to concurrently attend to a diversity of paradigms.
13	The development of valid and useful information to enhance the understanding of system characteristics and interconnectedness, providing an evidence base comprising a diversity of reliable qualitative and quantitative data presented in a variety of modes of representation.
14	The ability of mode 2 applications of systems approaches to fulfil the commitments of CST.
15	An emerging set of contextual determinants that might influence the recognition of mode 1 and 2 systems thinking in problem situations.
16	An experienced practitioner of systems thinking moving flexibly between modes of application, both consciously and unconsciously as necessitated by the unfolding intervention to support contingent employment of parallel multi-methodology.
17	The employment of parallel multi-methodology in different modes is of practical relevance in problem situations involving a variety of stakeholders reflecting multiple paradigm diversity.

<b>Change Variables</b>	
18	The ability to support diverse stakeholders in the development of a view of a desired future state.
19	The potential for deep structure conflict to limit the successful implementation and sustainability of innovation and change.
20	Recognising and supporting exploration of potential causes of conflict and resistance to change through appropriate systems thinking.
21	The importance of the facilitator of CST continually recognising and iteratively attending to the diverse needs of the whole client system.
22	In situations of complexity, an incremental progress towards desirable outcomes is a valid approach for the facilitator of CST, with its application co-evolving as the problem situation unfolds.
23	The role of the facilitator of CST can be represented through a mathematical heuristic as an objective function to maximise the variety of success measures associated with relevant paradigms, subject to the incremental fulfilment of the condition for change reflected in the Beckhard change formula.
<b>Capable Facilitation</b>	
24	The importance of involving facilitators with significant capability in the informed selection and deployment of a variety of systems approaches as well as effective group facilitation.
25	The value of facilitators able to employ multi-methodology in parallel in modes 1 and 2 in responding to the challenges of wicked problem situations typical of multi-agency settings.
26	Facilitation leadership skills that maintain credibility in the approach by carefully balancing rigour and relevance in order to manage exposure of underlying theory and methods, through employment of different modes of application.
27	Facilitators being able and prepared to share and devolve their expertise with each other and the wider organisation in order to increase local capacity and variety in CST through a balance in the breadth and depth of capability.
28	The facilitator possessing the ability to dynamically respond to the prevailing diverse requirements of the problem situation, avoiding limitations that might be presented by a predefined structure or methodology.
29	To become an effective interventionist, the facilitator of CST embracing Argyris' primary tasks in relation to whole client system diversity.
30	The facilitator of CST viewed through a complexity lens becomes responsible for: <ul style="list-style-type: none"> <li>• identifying patterns, analysing interactions and interconnections within the problem situation;</li> <li>• adapting and responding to, sometimes small, emergent opportunities or problems as they arise within the intervention;</li> <li>• encouraging variety, exception and creativity in viewpoints;</li> <li>• supporting mutual understanding and learning within a co-evolutionary process;</li> <li>• helping participants progress iteratively towards their desirable future(s) through incremental, locally optimal solutions;</li> <li>• recognising and exploiting bifurcation points for the critical mass;</li> <li>• accepting and exploiting a degree of self-organisation.</li> </ul>
31	Recognising the concurrent existence of CST at different application recursion levels provides a basis for a more considered exploration of the role of the facilitator of CST and the devolution of its deployment.
32	A recursive model of application levels provides greater coherence in understanding the variety of roles in the employment of methodologies, methods and techniques; from locally applied continuous improvement to major cross organisational change.