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Benefits realisation: case studies in public major project delivery with recommendations for practice

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ABSTRACT

Public projects are enablers of policy and are often framed within a political context characterized by the unpredictable, emergent, ambiguous and contextual; this creates tensions around conceptualizations of project performance and project success. Public projects are generally authorized based on a favourable benefit-to-cost ratio, so ex-post scrutiny of realized benefits is crucial to effective evaluation. Nevertheless, evidence suggests that sometimes, the focus on project delivery may come at the expense of benefits realization. This paper describes part of a wider programme of research into benefits realization in public projects. We present 'deep dives' into 3 UK projects and draw on a formal theoretical base to consider questions such as 'what is a benefit?', 'how good are we at defining benefits/beneficiaries?', 'how can we manage and capture evolving benefits in complex environments?', 'how do we recognize and accept complexity while the environment changes?' and 'what effects does this have on our understanding of benefits realization?'. This paper presents an analysis of the case studies and provides a synthesis of the main findings. We make eight recommendations for professional practice in the field of benefits management and set out some conclusions relevant to the wider discourse on the evaluation of investment in public projects.

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1. Introduction

1.1. Background

The practice of project management has a historical tradition that promotes a reductionist view of 'success' - this is commonly (but not exclusively) known as the 'Iron Triangle' criterion of cost, schedule and performance (quality) targets (Pesämaa et al. 2020). Whilst metrics of this nature are accepted as essential elements in classical project planning and control, they reveal little in terms of the nature of the strategic or tactical intent that is the antecedent to project initiation. The idea that the project 'front end' is as important as the project execution phase has a long history (e.g. an important UK report in 1988, Jordan, Lee, and Cawsey 1988) and was a provocation re-stimulated by the late Peter Morris in his paper 'The irrelevance of project management as a professional discipline' (Morris, 2003).

In Koops et al. (2017), a survey of Dutch public project managers ($n = 26$) suggested that the iron triangle was not of primary importance in measuring the success of their projects; three perspectives are subsequently developed in the paper - the *holistic and cooperative leader*, the *socially*

engaged, ambiguous manager and the *executor of a top-down assignment* and in none of these perspectives do the iron triangle criteria feature in the top three measures of project success. Some follies of simplified conceptualizations of project success are explored in Kirkham (2022); the huge UK Post Office Horizon IT/transformation project was lauded for being 'on time, on cost' yet errors in the system and the subsequent prosecution of users who were accused of theft, false accounting etc. led to one of the largest UK miscarriages of justice. Nevertheless, the pursuit of deterministic measures of performance and success can appear to remain ideologically driven by politicians, a product of an unwillingness to engage in a narrative that accepts that risk, uncertainty and complexity influence public project delivery in a way that is nuanced by the asynchronous nature of policy design and project delivery (Kirkham 2020).

Consequently, researchers in the field of project studies have evolved their thinking somewhat to reflect the extensive literature on strategy (in the management sciences) with the project studies literature - particularly by Morris (e.g. Morris 2009). In the public sphere, strategy is formulated by government policy which is, in the main, delivered through projects

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and programmes; Meggs (2018) reflects on this important relationship when arguing that ‘successful delivery is an essential ingredient in achieving governmental strategic objectives’.

Many authors have therefore sought to distinguish between two different ideas of ‘success’: tactical or ‘project management’ success (achieving the outputs of the project efficiently) and strategic or ‘project’ success (achieving the outcome and benefits envisaged) (Davis 2014). In this journal, *Production Planning & Control*, much of the emphasis is on the former, although Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. (2020) and Chipulu et al. (2019) discuss the principles of realization of long-term benefits in projects. However, while the ideas of project benefits, Benefits Management and project success are intuitively appealing, in practice, there is a range of aspects that make understanding, managing and realizing these benefits complex and challenging.

Indeed, despite the strategic importance of major public projects and programmes, there are significant variations in the levels of success of delivering the benefits that formed the basis of those projects, and there is limited evidence to suggest that ex-post evaluation is grounded in rigorous analysis of benefits. Evaluation is crucial to our understanding of ‘what works’ and should inform investment decisions, yet in the UK, an analysis by the Prime Minister’s Implementation Unit in 2019 stated that just ‘8% of the £432 billion spend on major projects had robust impact evaluation plans in place and 64% of spend had no evaluation arrangements’ (House of Commons 2022, 3). This mirrors the findings of a Project Management Institute (PMI)’s Pulse of the Profession[®] report showing that ‘only 64% of government strategic initiatives ever met their goals and business intent’ (PMI 2012). This paper reports on a study undertaken to understand and address these issues.

1.3. This study

In late 2016, the PMI funded a programme of research into the identification and realization of project benefits (ethics approval – University of Hull). The programme comprised three distinct phases. Phase 1 considered the ‘espoused methods’ and involved the collation of information and grey literature on official Benefits Realisation Management (BRM) methods, supported by a systematic review of the literature; a detailed report examining contemporaneous espoused methods used by eight nations and supra-national organizations was presented to PMI in late 2017. It also raised some areas of research, which formed the basis for Phase 2. This Phase explored the ‘effectiveness of BRM frameworks in application’ and considered how espoused methods are operationalized in the project setting, by comparing their application in four of the jurisdictions studied in Phase 1, namely Australia, Canada, the UK, and the USA. A detailed report examining the effectiveness of frameworks in application was presented to PMI in late 2018, and summarised in a paper published in this journal (Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. 2020).

The problematization of emergent (or evolving benefits) was a particularly interesting aspect reported in this latter

paper (Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. 2020), where the authors refer to an ‘occasional enthusiasm’ for tracking benefits at the transition from project close-out to operations, the point being that the emphasis on benefits tends to decrease once the business-case hurdle is achieved and funding secured. Not only does the nominal value of benefits appear to change, but also the benefits themselves seem to fluctuate in perceived importance or as a concern throughout the project timeline. Key empirical questions, which remained after the Phase 1 and Phase 2 studies, included a practical question:

- Why does the emphasis on benefits management appear to decline after project approval?

and two questions which formed the basis of this study:

- What is a benefit and how good are we at defining benefits and beneficiaries?
- How can we manage and capture evolving benefits in a complex environment such as transformation projects? How do we recognize and accept complexity while the environment changes, and what effects does this have on our understanding of benefit realization?

In evidence given by the ‘Project X’ team, of which the authors were a part, to a UK Parliamentary enquiry included the statement ‘our research has identified evidence to support the proposition that the asynchronous nature of policy development and implementation through projects and programmes introduces emergent, unforeseeable risks to the realization of long-run benefits. Variations in the forecasted benefits may not always necessarily be a consequence of project delivery inefficiency, but a symptom of changes in the policy landscape upon which the business case for the project is predicated. This ‘temporal complexity’ is ever present in the work of government and our research is attempting to ‘unravel’ this complexity through a more sophisticated and nuanced understanding of the anatomy of major projects and programmes.’ (Public Administration and Constitutional Affairs Committee 2018, 2).

Thus the objective of the last phase, Phase 3 was to:

- capture rich examples of benefit trajectory from conception to decommissioning by mapping their complex, evolving and non-universal meanings of benefit
- explore the net of relationships, practices and material artefacts (models, objects, infrastructures) that contribute to the construction and malleability of benefits
- interrogate the role of benefits, present or absent, in project management, especially during the delivery phase

The research question to be studied can be stated as follows: *How do benefits change over the course of a project; how does the change in benefits affect project delivery? how do management practices deal with continuous change?*

Phase 3 consisted of ‘deep dives’ on 3 UK projects to consider such questions and make recommendations on improvement to practice. The study selected one project in

each of three domains of the UK Government Major Projects Portfolio (GMPP): infrastructure, transformation and IT (it was felt that the fourth domain, defence projects, would cause unhelpful security clearance issues). The report into these projects was substantial, and only a brief summary of the projects is given here, rather the paper concentrates on a synthesis of the learnings from the cases. More results can be found from the full report submitted to PMI (Williams, Vo, Bourne, Bourne, Kirkham, et al. 2020).

1.4. This paper

This paper is based upon this Phase 3 study. In the paper we examine the primary literature on project success and benefits realization and connect this to issues of professional practice and public administration (transparency and accountability). The theoretical lens is largely based on the 'Sociology of Worth' and 'Actor-Network Theory'; this precedes a description of the study. A case study method is described, then a very brief summary of the three UK public sector projects and some of the key insights generated by each case study. This is followed by a discussion of the findings synthesized across the case studies. The final section presents some resulting recommendations for practice.

2. Literature review

2.1. Critical perspectives on project 'success'

The desideratum for a successful project is usually framed by metrics which focus on time, schedule and performance (quality). Yet, the extant literature provides a rich and interesting landscape of critique on the conceptualizations of 'success' in the context of projects. When articulating the criteria for 'success', there is a convincing argument to suggest that this should be clear, tightly defined and unambiguous. However, the broad recognition that projects are inherently complex, chiefly due to the socio-materialistic dimensions that characterize project organizing, suggests that reductionist approaches are unlikely to engender a more nuanced understanding of success. The debate surrounding a definition of project 'success' has been well-researched in the literature, not least in the authors' previous paper, Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. (2020), which describes early work on project management, which concentrated on achieving the successful delivery of large, complicated but unambiguous projects. This led to the idea of success consisting of the 'iron triangle' components of cost, time and quality rather than the benefits that are to be obtained from the result of the project (Serra and Kunc 2015). Conversations in this journal, *Production Planning & Control*, and others in the wider project studies literature have often considered the achievement of these shorter-term benefits (such as, recently, Arantes and Ferreira 2021; Lerche et al. 2022), although over recent years, there has been more emphasis on the transition to operations (Al-Mazrouie et al 2021) and on consideration of long-term

strategic objectives rather than short-term tactical performance (Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. 2020).

In this paper, we argue that public projects are carried out to achieve a purpose which is grounded in a long-term strategic intent; consequently, our thinking is influenced by the contributions of Morris (e.g. Morris 2009), whose work was celebrated and discussed in the 'Peter Morris Festschrift', (see Pinto and Winch (2016)).

A single definition of project success or project failure is perhaps 'unattainable' (Nixon, Harrington, and Parker 2012, 212) – Ika (2009) describes 'project success' as an 'ambiguous, inclusive and multidimensional concept.' Davis (2014) provides a helpful synthesis of an idea which is largely grounded in the distinction between two different ideas of 'success': the first could be called: tactical or 'project management' success, that is, achieving the outputs of the project in a resource-efficient manner, and the second strategic or 'project' success, that is, achieving the outcome and benefits envisaged from the project. More granularities can be observed in the definition of success proposed by Zwikael and Smyrk (2012) who define success as a triplet of 'project management, project ownership and project investment' success criteria. Perhaps the most influential framework divides the definition of success into five factors, efficiency, effectiveness, relevance, impact and sustainability, developed through work with the U.S. Agency for International Development, then the United Nations and OECD (Samset 2010, Chapter 2).

It is reasonable to conclude that the literature tends to be bifurcated in the context of success criteria; the majority focuses on the delivery of the defined project whereas the treatment of outcomes that form the strategic intent are less well explored. A stream of work has thus emerged which aims to promote the achievement of project benefits or outcomes, often termed 'Benefits Management' – Badewi (2016) stresses the usefulness of combining Benefits Management and Project Management. The use of Benefits Management (whether under that name or not) has been increasingly prominent in recent years – although in practice, as Samset and Volden (2016) show, in Norwegian public projects there is still often a paradoxical emphasis on tactical project performance, these findings are supported by findings from empirical studies described in Vo et al (2021). In Ika and Pinto (2022) (see also Pinto et al. 2022) the 'four sources of the multidimensionality of project success' are described, the first of which are the 'two complementary notions' (840) of 'benefits realization' and 'project success'.

Whilst the ideas of project benefits, Benefits Management and project success are intuitively appealing and apparently simple, in practice, a range of attributes frustrate our understanding, management and realization of benefits, we explore these later in the discussion.

2.1.1. Benefits realization

There is a considerable body of literature on Benefits Realisation and Benefits Management (see Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. 2020). In Breese et al. (2015), the previous quarter of a century of scholarship in the

field is discussed in the context of 'Benefits Management'. The literature shows the variability in the terms used in practice, as well as some of the inherent challenges in managing long-term outcomes from major project investments (Zwikael and Smyrk 2012). Ika and Pinto (2022) above equated benefits by the production of 'value' from a project, and similar literature based on this concept is given in a literature survey by Laursen and Svejvig (2016), with later work by Martinsuo, Klakegg, and van Marrewijk (2019) and Zerjav (2021).

The terminology differs – indeed, Breese et al. (2016) show a range of definitions of benefits in the professional body literature. For the purposes of this paper, we can say that this concept generally reflects the realization of the overall purpose of the permanent organization, which led to the setting up of the project (PMI 2013): in other words, the achievement of the aim of the permanent organization when it decided to initiate the project (sometimes thought of as outcomes rather than outputs). Breese et al. (2016)'s study shows that the definitions generally define benefits to be measurable; as a result of change; are perceived as positive by stakeholders; and are a way of demonstrating the contribution of project/programme/portfolio to organisational/strategic objectives. They go on to define various types of benefit, including business/intermediate benefits (see e.g. ISACA (n.d.)); end/intermediate benefits; qualitative/quantitative; tangible/intangible; opportunity value and planned/emergent (see, e.g. Jenner 2014) and economic and financial benefits/value (see e.g. CMI 2015; Breese et al. 2016).

Other main publications which lay the foundation of work on Benefits Realisation are the standard textbook by Jenner (2014), the recent work based upon the Norwegian standards by Samset and Volden (2016); Peppard and Ward (2016) on Benefits Management within IT projects; the work by Badewi (2016) already cited and the earlier work of Winter and Szczepanek (2008).

Having laid the foundation of the idea, much emphasis has been on acceptance of the idea and use of the concept. The literature above (some academic but much reflected in the professional literature) gives plenty of normative 'how to' advice on Benefits Management frameworks and how to carry out Benefits Management. The benefits of having mature Benefits Management frameworks are gradually becoming more evident. However, these practices are not very widely implemented yet, or only implemented as a subset of other project management processes, and the empirical evidence of their usefulness is only now growing, although it was claimed in Breese et al. (2015) that 'there is a growing body of evidence that the use of Benefits Management practices enhances the likelihood of projects achieving organizational goals'. Work on the use of such practices, e.g. Mamabolo and Marnewick (2022) show confusion about the practicalities. However, recent work by Badewi (2022) has shown that institutionalization of the benefits management framework does help the various actors support the aim of Benefits Management.

However, much of this work also raises questions and issues that show the complexity of the concept, and we will look at some of these issues below.

2.2. Public projects and resulting issues

This paper refers to major public projects carried out by governments to enact or realize policy aims (Meggs 2018). As indicated above, the moves towards Benefits Management are shown both in the academic and professional literature, and we have cited above literature from various professional bodies. The Benefits Realisation Management framework (PMI 2016), for example, suggests an approach of identify – execute – sustain. It also draws upon Samset's (2010) goals management approach described above, which is also used by some national and super-national authorities to develop their Benefits Management frameworks.

The academic literature has long recognized Benefits Management as a discipline in the delivery of public projects; Aritua, Smith, and Bower (2011), for example, draws attention to how governments use programmes to align project benefits with policy objectives although then highlight their susceptibility to political and policy changes. This is increasingly recognized in national guides such as, in the UK, the Guide issued by the Infrastructure & Projects Authority (Infrastructure & Projects Authority 2017) and the implications of the review of the HM Treasury 'Green Book' (HM Treasury 2020).

However, while this advice will often go deeper than some of the simple normative 'how to' advice noted above, there remain significant issues in enacting Benefits Management, particularly with public projects.

Benefits from public projects, particularly transformation projects, can be unpredictable, emergent and contextual; indeed, 'best practice' can hinder the achievement of what a government department is trying to achieve (O'Leary 2012). In such projects, often the link between project outcomes and broader government strategy is weak (Young et al. 2012). Emergent benefits can be unforeseen but still important, and inflexible frameworks can hinder the realization of such benefits (Smith et al. 2015).

A significant issue for public projects is the plethora of heterogeneous stakeholders (the second of Ika and Pinto (2022)'s 'four sources of the multidimensionality of project success'). Even in straightforward projects, Davis (2014) shows little commonality between the definitions of senior management, project teams, and project recipient stakeholders. Reconciliation of competing tensions in public projects requires a capability and skill set that often transcends the traditional competences advocated in the 'bodies of knowledge' (see Azim et al. 2010). The nature of projects being implemented in the societal domain will imply that many stakeholders might have quite different views of what success means – indeed might have contradictory or even opposite views of success (Case Study 1 below gives an example). In many public projects, project execution requires developmental input from various parties, making some agreement on the aims of the project essential – for example, in the value co-creation in major defence projects (Chang et al. 2013).

But in the public domain then can be more complications. Public policies can be structured in a way that defines

benefits falling outside the traditional project management targets, sometimes difficult to quantify (Breese et al. 2016; Young et al. 2012). There might also be emergent benefits, which are often unforeseen and opportunistic (Smith et al. 2015) – empirical evidence suggests that projects are unpredictable, emergent and contextual (O’Leary 2012). The link between project outcomes and broader government strategy is sometimes unclear or tenuous (Christensen 2012) and there can be competing interests from regional governments which are sometimes required to harvest benefits, or even execute projects (Christensen 2012). Projects are undertaken in timescales which do not correspond to budgetary cycles, parliamentary cycles, or the tenure of individual ministers, which can mean significant realignments of project aims mid-project. The need to assess whether projects have achieved benefits prompts the question of when this assessment should be undertaken (the third of Ika and Pinto (2022)’s ‘four sources of the multidimensionality of project success’), as well often of the issue of how to disentangle the impact of the project from wider socio-economic changes (Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. 2020).

Taking a critical look at benefits and how they develop in a public project, therefore, brought us to the questions cited above, including: ‘what is a benefit?’ and ‘how good are we at defining benefits and beneficiaries?’ and ‘how can we manage and capture evolving benefits in a complex environment such as transformation projects, recognizing and accepting complexity while the environment changes?’. Some of these issues have also been addressed in a recent paper by Aubry, Boukri, and Sergi (2021).

3. Theoretical positioning

The issues the study had encountered required fundamental analysis, and some of the work cited above did not seem well-grounded theoretically. The study therefore considered what would be the most appropriate theoretical stance for the study.

The objectives for this study, given in the first section, generated four themes in the study for different perspectives:

1. Meanings of benefit
2. ‘Typology’ of benefit changes
3. Effects of changes on benefits
4. Tools for capturing change

The multiplicity of objects (here benefits) and their effect can be conceptually studied under three approaches evolving towards greater recognition of fluidity, ambiguity and multiplicity of a ‘benefit’, shown in Table 1.

We demonstrate the multiple nature of benefits through the Sociology of Worth and particularly Actor Network Theory (ANT) to study the effects of its multiplicity and absent presences to advance the ontological approach to conceptualize the patterns of difference in benefits.

3.1. Changes in nominal, recorded value (multiplicity of recorded accounting value across time) – realist

On a primary level, benefits differ due to direct triggers to value revisions (such as changes in project scope, underlying economic factors or methodology of measurement) executed through accounting processes in the change control discipline. Once accounting is accepted as a social and organization practice (Miller and O’Leary 1987), and a process of fabricating knowledge (Latour 1991), figures such as benefits can be studied not as objective snapshots of reality (representationalism view) but as constructed by the practices of a complex network of participants. What counts as the benefit is therefore built into the network of relationships which also involves the socially accepted calculable practice which defines and measures what a benefit is.

3.2. (ii) perceptions of networks (multiplicity of actors’ perceptions) – Epistemological

Actor-Network Theory (ANT), also known as the sociology of translation, has a long history of studying and theorizing objects based on semiotics, i.e. viewing them as ‘an effect of relations with other entities’ (Law 2000, 3). This view accords strong agency to materiality (Orlikowski 2007), but the agency does not reside solely with humans or objects (a realist view), but rather in the relationships (the network) between them (a relational view).

What used to be understood as a simple accounting object, becomes an assembly, a forum, a place of discussion and dispute/disagreement – a matter of concern (Latour 2004).

The sociology of worth (Annisette and Richardson 2011; Boltanski and Thévenot 2006; Thévenot 2002; van Bommel 2014) offers an explanation of the disputes arising around benefits based not on epistemic differences between actors, but as relative to the system of values espoused by a given stakeholder, thus forming a moral judgement. In a dispute, actors justify their position by drawing on vocabularies and supporting objects within one of the six orders of worth (civic, industrial, domestic, market, inspired and fame) (Boltanski and Thévenot 2006). An order of worth can be thought of as a model for a society constructed on the basis of merit. The scheme is the basis for a routine evaluation of worth through classification and hierarchization. Each of the orders of worth promotes a particular social good (e.g. competition in the market order, tradition in the domestic order).

Table 1. A typology of benefit changes/difference.

Pattern of difference in benefit	Theoretical orientation	Approach
1. Multiplicity of recorded accounting value across time	Accounting as objective, mirror of reality	Realist
2. Multiplicity of actors’ perceptions	Actor Network Theory (ANT), Sociology of Worth, perspectivism	Epistemological & performative
3. Multiplicity of states of absence/presence	Mol, Law and Singleton	Ontological & performative

The same impact will be multiple and unequivocal from the very start since it is valued in different (and conflicting) orders of worth, thus resulting in its qualification as a benefit or not. For example, a higher capacity road in the market order could be evaluated favourably since it promotes the competitiveness of the region. However, within the domestic order of worth it could be perceived as compromising heritage, and thus be a disbenefit.

Infrastructure and transformation projects are fertile ground to study change not only because of their size but also because of the multitude of actors with diverse and conflicting systems of value preferences from complex, ever-evolving, heterogeneous assemblages (Jensen and Morita 2015).

In conceptual debates around ontology (Mol 2002), the preservation of the existence of an object, for instance a benefit, is seen as dependent on the work of renegotiation of meanings between actors, which holds because of the ambiguity of the object. Ambiguity can be seen as key in guaranteeing the persistence of social relations as it allows a multiplicity of value judgements to co-exist (Jarzabkowski, Sillince and Shaw 2010) while a definition that is too strict would surface the contradictions between value judgements. Social order is thus created through attempts to find equivalences between the valuations within different orders of worth and the settlements of disputes.

By showing how actors make judgements on the value of something, the Sociology of Worth allows one to recognize empirically the multiple, unfolding and fluctuating nature of benefits. Fourcade (2011) extensively discussed the value of SoW in evaluating intangible, 'peculiar', or 'non-market' goods, such as natural resources. Nevertheless, it has theoretical shortcomings: SoW might be overly simplistic in understanding the complex/tangled processes involved in economic valuation; and in particular it attributes the source of change in a benefit to perspectival/epistemic differences between actors and fails to explain the inherent ambiguity of the value of benefits. In other words, SoW tends to keep 'economies of worth' detached/'incommensurable' rather than recognize the mutual influence of worth forms. As an example of how to move forward from this, Fourcade (2011) 'moves the debate over "economies of worth" from the analysis of discourse and "justification"; to that of practices and institutions and their material consequences in terms of economic values' (1726).

3.3. (iii) *ontological view (multiplicity of states of absence/presence) – ontological*

Benefits are always changing, but paradoxically, the stability of a benefit could be due to the heterogeneity of the network which allows actors to project different meanings onto it. Law and Singleton (2005) advance the literature further to depart from the view that the multiplicity of benefits is due only to epistemological differences. Rather, on the example of "alcohol liver disease", they attempt to demonstrate the object is itself multiple (Mol 2002) and created through enactment of practices in multiple times and spaces (Quattrone and Hopper 2001).

Law and Singleton (2005) extend the characterization of objects within science, technology and society (STS) towards a "fire" object – a pattern of discontinuity between absences and presences. In simple terms, the object's state is known at each instance of observation but can take various unknown forms when it is not. The difference in perceived benefits may be due to the nature of the object itself as enacted in various practices rather than multiple interpretations of it by users. The fluid and ambiguous nature of the benefit does not mean it is dispossessed of agency (it still shapes actors' behaviour even when it is seemingly absent from discussions).

This theoretical argument is ontological: that an object is coming in and out of attention constitutes its condition of existence. Our study thus contributes to extend this thinking beyond the epistemological and perspectival views such as boundary object (Star and Griesemer 1989) onto ontological thinking about the fluidity and ambiguity of benefits as enacted in different practices over time.

4. The methods used in the study

The case-study protocol was designed to study empirically the differences and changes of states of benefits through the practices (Gherardi 2012) of change management and disputes around benefits on transformation projects. Our aim was to trace instances of "change" and the effects they have. The specific research questions we therefore defined as:

How do benefits change over the course of a project; how does the change in benefits affect project delivery? how do management practices deal with continuous change?

This question also requires exploring some surrounding issues, before the project: what is a benefit and how is it defined? And after the project: how do we assess the resultant benefit.

Semi-structured interviews were used to capture the data in this study. To empirically study the typology of changes of benefits, the interview questions allow tracing of connections between the perceived "benefits" and factors which actors attribute as causing change. It suggests several "places" from which the value of benefits is being affected and thus retraces a network of heterogeneous influences. A concern for the change in the presence of benefits (and the corresponding effect of their absences) also requires a theorization of change itself. Change cannot be conceptualized independently of the process: rather than being a well-defined instance, we view change as consisting of multiple mediated practices (Quattrone and Hopper 2001). Our questions thus also interrogated existing change management practices and the supporting technologies. Questions were worded to interrogate specific, situated practices of measuring change, and asked about the role (agency) of benefits across the project timeline.

The Interview Protocol used the following four themes:

1. **Meanings of benefits.** To allow for a cross-study comparison and avoiding the assumption that individuals have a common understanding of definitions, the

interview protocol was designed to begin with an in-depth definition, supported by examples, of the different vocabulary of benefits, sometimes used interchangeably. The participants were thus asked to define their concept of benefits, but also to compare against neighbouring notions such as outcomes, impact, legacy and output, to avoid any “taken for granted”. Participants were also asked to recollect situations of disputes around benefits to map the conflicting order of worth used to support or discredit the same benefit (Thévenot 2002; Annisette and Richardson 2011)

2. **Typology of benefit changes.** These questions focussed explicitly on the typology of changes in benefit measurement. Questions were designed to lead participants to reflect on the magnitude of changes across time, in relationship to strategic objectives, as well as across different levels and situations (e.g. design and scope changes). The questions allow for a reflection on what or who drives these changes (Busco, Quattrone, and Riccaboni 2007). The sustained encouragement of the participant to give concrete examples was anticipated to lead to the emergence of themes not accounted for in the protocol design.
3. **Effects of changes.** Under a theoretical perspective which sustains from reifying social reality, a benefit is viewed as an accounting measure which not only orders, represents and shapes reality, but also allows for the disorder, ambiguity and flux (Quattrone and Hopper, 2001). To reflect this theoretical orientation, participants were therefore asked to differentiate periods between high and low engagement with benefits (presences and absences of benefits), with an explicit, and perhaps counter-intuitive focus on times during which benefits are less visible. In both cases, they were asked about the effects that a greater or lesser awareness of benefits creates.
4. **Tools for capturing change.** Finally, to move beyond a discursive, managerialist account about the practices surrounding benefit change capture, participants were asked how accounting objects and instruments were used in practice (Orlikowski 2007).

The interviewers were attentive to the interpretations, opinions and situated experiences of the respondents. Protocol questions were used as a guide to interaction and freedom was given to the interviewer to depart from the protocol to explore in-depth emerging meanings through follow-up questions; in practice, the protocol was closely followed. When possible, the interviews were conducted in person or through a video call. Prior to the interview every participant received an outline of the study explaining the four themes.

Because we do not assume that individuals have a common understanding of definitions, care was taken to interrogate their understanding of the five terms commonly used both in practice and in the literature referred to above related to benefits - output, outcome, benefit, legacy and

impact; this itself allowed a more nuanced approach to defining types of benefits.

Based upon the questions from the Phase 2 study, the total interview protocol therefore covered the following

- i. Definition of a benefit in general (for us, showing abstract thinking):
- ii. Benefits on your project (for us, showing contextualised thinking):
- iii. Using “benefits” on the project (again, showing contextualized thinking):
- iv. Chasing the benefit (for us, showing its evolution):
- v. Mechanics of revising the benefit (again, the evolution):
- vi. Evaluation: assessing benefit “realization”.
- vii. We also supported the interviews with documents (which were anonymized).

The complete interview question set is included in the [Appendix](#), which shows the relationship with the Sociology of Worth and the very strong focus on change throughout the project lifecycle (that is, the change occurring to the project and the understanding of benefits, not benefits AS changes), and particularly the role of benefits in between project funding approval and project sign-off (i.e. the role during project execution).

We also asked interviewees for documents, not all of which were available: including; Programme/project vision statement; Programme/project initiation document; Business cases (all versions if there were changes made to benefits); General programme/project meetings’ agenda and minutes (e.g. programme/project board meetings); Internal project status reports; Projects’ IPA assurance review reports; Stakeholder engagement/communication strategy and plan; and Stakeholder engagement meetings’ agenda and minutes.

We sought interviewees from the different project role categories shown in [Table 2](#), with varying success; we also used snowball sampling to expand the initial sample following the recommendations of respondents. The interviewees for each case study are described within that case below.

Interviews were analyzed using the framework approach (see, e.g. Goldsmith 2021; Smith and Firth 2011), a comparative form of thematic analysis utilizing an established structure of deductively derived themes (i.e. meanings of benefit, “typology” of benefit changes, tools for capturing change, and effects of changes on benefits) to conduct within- and cross-case analysis. Given the nature of the study, the people involved and the necessity for anonymity, we put safeguards in place to protect their identity and secure their participation in the research (see for example Saunders, Kitzinger, and Kitzinger (2015), who specifically discuss audio recordings).

5. Case study 1: infrastructure: the A303

5.1. Introduction

National Highways is the government agency charged with operating, maintaining and improving England’s motorways

Table 2. Categories of interviewee.

	Role in project	Rationale
A	Senior government officials (e.g. Treasury)	Set the guidelines for benefit valuation and evaluation, responsible for justification of project viability throughout lifecycle
B	Senior project managers (e.g. contractors)	Directly accountable for delivery, potential beneficiaries of reporting on benefit realisation
C	Senior Responsible Owner (or client organisation member)	Ambivalent relationship to benefit visibility, both in and out of the project
D	Members of the delivery team (not senior)	Directly responsible for delivery, a very situated understanding of project outputs

and other trunk roads, which total around 4300 miles and carry 1/3 of all UK traffic by mileage and 2/3 of all heavy goods traffic. It was previously known as 'Highways England' but renamed in 2015.

Within National Highways, the Senior Responsible Owner responsible for a project will tend to delegate to two Directors: a Project Director (ensuring the project is delivered to budget, time, quality) and a Sponsorship Director (ensuring the benefits case is clearly defined and benefits are realized), with a constructive tension between their roles (Highways England 2018). National Highways has a Post Opening Project Evaluation ("POPE") scheme (Highways England 2019) consisting of Pre-Opening Baseline Data, a Project Evaluation Plan, evaluation one year then five years after the study; this provides the impact evaluation for the core benefits of the scheme, with detailed information on whether the core benefits identified in the business case have been achieved. Benefits Realisation Management has been developed within Highways England, based extensively on the practices outlined by the IPA (Infrastructure & Projects Authority 2017); in December 2018 Highways England published its first Benefits Manual.

The case study was of a £1.5bn controversial project to improve the A303 road by building a tunnel within 200 m of an iconic prehistoric monument, a World Heritage Site. The project was at the very beginning of the project lifecycle. "Core" benefits were supplemented by a large variety of wider benefits, including legacy activities to be delivered through collaboration with stakeholders. The benefits therefore had a wide variety of natures, as described publicly in National Highways (2022) including economic growth, transport, cultural heritage, environment, community, and legacy.

The wider benefits that fell outside those the Department defined as "Core benefits" (such as traffic congestion benefits) thus broadly fell into three main categories:

- behavioural outcomes, where fully evaluating the impact is never likely to be feasible (e.g. peoples' knowledge of heritage)
- benefits where there is some understanding or measurement of the impacts (e.g. construction safety) or the innovation required is relatively tangible (e.g. health benefits of cycling)
- outcomes that are somewhere in the middle; hard to understand or the innovation is beyond the horizon and where a judgement will have to be made about how far to take the evaluation plan (e.g. supporting local tourism).

5.2. Interviews

There were eight interviewees: a Senior project manager/director, two Senior Responsible Owners/Sponsors, three were Impact/legacy/community/benefit managers and two were other project stakeholders independent of the government team.

5.3. Key insights generated from the case study included

5.3.1. Stakeholders benefitted in a wide variety of ways

The project created a large spectrum of opportunity for both human and non-human (e.g. habitats, environment, and wild animals) actors. While the project cannot seek to deliver benefits for all, on balance, the analysis suggests that the project produced an overall positive benefit for a wide range of stakeholders.

5.3.2. The definition of benefits is very wide

The project delivered a combination of transport, economic and heritage benefits. Although the benefit to cost ratio might be apparently low, the wider benefits to the UK are significant given the importance of the site.

5.3.3. There were many occasions planned for communicating benefits

The occasions went from the start (business cases) through pre-construction (public consultations, impact analyses), construction (stage gate reviews, change controls, "baking" core benefits into contracts, meeting diverse groups of stakeholders) and post-construction (the Post Opening Project Evaluation).

5.3.4. There was a considerable emphasis on benefits

Unlike many projects (Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. 2020), there was an emphasis throughout the project duration and across the project management due to the leadership of the sponsorship team

5.3.5. Benefits change over time

Benefits change because the understanding of what can be achieved evolves; opportunities open; perception of benefits (especially wider benefits) changes; benefits are affected strongly by culture and technology.

5.3.6. Core benefits will not change

Core benefits will not change or might change incrementally; however, it is challenging to model the wider benefits/opportunities and some of the smaller, local, more community-related benefits that should be built into the business case.

The previous point raises the question of how tools capturing changing benefits capture these changes.

5.3.7. More study is needed into designing a control system for monitoring change and tension in benefits

Such a control system needs to be part of the core set of project controls, which captures the fluidity of benefits across time (and presence vs absence), and the tension between objectives.

5.3.8. Responsibility

Questions were raised about whose responsibility it was to realize the wider benefits (eg 'improving the life of the community'), requiring re-thinking of the roles of stakeholders in benefit definition, evaluation, and realization.

5.3.9. Improvement

Various suggestions for improvement were made from interviewees, also drawing on their wider experience. These included carrying out Benefits Realisation Management earlier, better post-evaluation practice, ensuring benefits are not treated as an add-on but are integral to the business cases; better techniques for measuring benefits; improving the UK Government formal guidance on benefits; clear governance in place around benefits; additional review points during the project lifecycle to maintain the focus on benefits.

6. Case study 2: transformation: extended services transformation

6.1. Introduction

The UK Department for Work & Pensions (DWP) is responsible for the delivery of the UK government's policies on work, welfare, pensions and child maintenance. The programme business case is based on a strategic vision that is designed to deliver transformational changes to services, and significant improvements in productivity.

The case study, the Extended Transformation Programme, is comprised of several projects at various stages of development and implementation with multiple stakeholder interfaces across the government. The programme worked with stakeholders to develop and implement a new service operating model; manage dependencies between the programme and the future footprint of the estate (i.e. buildings); facilitate the development of delivery plans to support specific transformations; manage commercial arrangements and direct delivery of arrangements.

6.2. Interviews

Four face-to-face interviews were held with civil servants working at various levels in the programme organization – a portfolio manager, programme director, programme manager and project manager.

Initial critical success factors were first defined, covering service transformation, skills and capability, service levels, and commercial impacts. Benefits were in focus and the assumptions regularly checked; there appeared to be a strong focus on the monetisable benefits necessary for justification and releasing money, but a recognition that non-financial, societal benefits are just as important and may have been undervalued in the past.

6.3. Key insights generated from the case study included

6.3.1. Managing project and programme stakeholders

The emphasis on the importance of good stakeholder management was recognized as playing an important part in success, most noticeably at the project level, through the project into implementation. This is, perhaps, not unexpected given the emphasis on stakeholder engagement across the project delivery profession in the UK government. What was particularly noticeable in the interviews is the recognition that the programme would have an impact on their fellow civil servant colleagues as well as citizens and that this required a careful balancing act from a benefits identification perspective.

6.3.2. Risk tolerance

The department operates within an environment that is highly politicised and is frequently quoted in national media sources in relation to some of its most challenging transformations, Universal Credit being one specific example. However, the sense of the data generated from the interviews suggests that this was not impacting on civil servants' individual perceptions of risk (and the empowerment to take risks) – rather that there was a recognition that the department was in 'the public service'.

The 'test-and-learn' approach that was evident in the data captured across many of the interviews appeared to be a method by which the department was attempting to create a 'safe-space' for innovation and risk taking whilst being mindful of the demands of the business case.

6.3.3. Implementation and the transition to business as usual (operations)

There was a strong emphasis on service transformation, recognizing that customers do not have a choice in where to access the services of the department and that developing commercial approaches within a public sector environment are key. Implementation was seen as being critical for success but the criticality of the interface between project delivery and operations was apparent throughout the interviews. Two key points were made in this respect. Firstly, the

challenges of transitioning a department that has, historically at least, operated within well-established (and accepted) operational periods has introduced several challenges in enabling the anticipated transformation. Secondly, the use of “test and learn” and the lessons learned from other departments attempting to enact behaviour change.

7. Case study 3: IT: NHS digital

7.1. Introduction

NHS Digital is an executive public body, sponsored by the UK Department of Health & Social Care, supporting health & social care through the use of information and technology. It is responsible for the NHS Spine, which supports IT infrastructure, joining together over 23,000 health and care IT systems in 20,500 organizations. Each programme has a benefits professional attached, someone from a separate group within NHS Digital who is embedded in the team to support the development of the business case and ensure focus is maintained across the duration of the project.

This Case study focussed on two programmes, both complex, and both comprising several projects at various stages of development.

- Integrating Pharmacy across Care Settings (IPaCS). This focussed on enabling the capture and sharing of appropriate information with other care settings, in order to: reduce demand on urgent care such as emergency departments as patients are directed to local pharmacy or other care provider; release time by reducing administration; reduce medicines waste; and ensure the right services are commissioned.
- Digitising Community Pharmacy and Medicines (DCPM), which aimed to accelerate digital maturity across the community pharmacy sector to drive efficiency and innovation whilst increasing patient digital interaction and visibility of their care. This will give benefits in terms of cost savings, time reductions, usability improvements, enhanced progress tracking, and improved safety and convenience for patients.

7.2. Interviews

Face -to-face interviews were held in two locations with nine people at various levels in the organisation: five were project managers/senior project managers/directors, one was a Senior Responsible Owner/Sponsor and three were Impact/legacy/community/benefit managers or directors.

In the discussion around the different meanings of the terms used for “benefit”, benefits were generally classified according to Green Book definitions (HM Treasury 2022) but there were interesting and insightful comments. One interviewee had conducted an exercise asking patients, GPs, pharmacy staff and staff from NHS bodies to write on post-it notes their 4/5 most important benefits; the top six benefits listed were all qualitative, non-monetised such as patient safety. There were several comments about the usefulness of

quantifying certain benefits. If a GP saves, say 10 min a day by not having to write out repeat prescriptions, that could be quantified, and the sum would be large as there are around 35,000 GPs; but it may not be meaningful as the amount of time saved per GP is small.

Again, benefits were in focus throughout the lifecycle of the project, partly as a result of leaders emphasizing their importance, with an understanding that financial benefits are necessary for justification, with a recognition that non-financial, societal benefits are equally important.

7.3. Key insights generated from the case study included

7.3.1. Stakeholders

Working for the benefit of the patient is core to this group and is one aspect of the focus on benefits. Every pound spent must lead ultimately to better patient outcome. The importance of consulting stakeholders and users and seeing issues from their differing perspectives was stressed by most people. Examples of this were:

- Not if someone will do something in a certain way: It might be assumed that pharmacists and patients would welcome not having to deal with paper prescriptions. However, for some pharmacists, paper was helpful in allowing them to “pick” medicines as they prepared to fulfil patients’ orders.
- The importance of reaching people and communicating according to their interests: the man or woman in the street would be more interested in being able to get an appointment with their GP sooner than in knowing £1m had been saved.
- Presenting a case in a style appropriate to the stakeholder

7.3.2. Attitude to risk

There was a feeling that because public money was being spent and the organization was in the public eye and subject to scrutiny the appetite for risk was reduced. As one person said: “There are cancer patients who may be dying because we are spending time and money on IT.” However, there was also the realization of the need for leadership and vision.

7.3.3. Implementation

Implementation was understandably seen as being critical for success. A product or service may seem ideal but if users cannot or do not want to make full use of it then the benefits cannot be fully realised.

Leadership and willingness to change was important. Uptake in some hospitals was much better in some than in others as a result of good leadership. One interviewee mentioned EPIC (a large electronic patient record system) which will only be sold to leading-edge hospitals because they will understand that in order to benefit from the investment, they must set aside a certain number of staff for a certain

amount of time to complete the training and get up to speed.

Case studies and stories are important. This links back to the influencing of stakeholders and understanding their needs and what will encourage them to change the way they do things. The more an end-user can identify with an example the better.

7.3.4. Continuing the focus on benefits

Several people mentioned the need to continue to shine a light on benefits that were realized once a project had been delivered. This is partly to demonstrate continued value from the work that had been done but also to ensure momentum was not lost. One case had a memorandum of understanding signed with the Implementation and Business Change Team (IBC) before handover, saying that benefits are being handed over to the IBC team to manage, with continued support from the benefits manager. As the IBC team is working closely with users, they are in a better position to encourage the use of services.

7.3.5. Managing expectations

There was some concern that benefits may be hard to stack up in the future, because the biggest gains from transferring to digital have already been made. In addition, stories and anecdotes were essential: whilst figures are important, people are more likely to relate to real-life example.

8. Synthesis

This section seeks to synthesize the key themes and issues emerging from the case studies. It follows the main questions that formed the basis of the semi-structured interviews.

This paper has tried to identify the main lessons from the case studies. There are of course many perspectives or elements mentioned where potential interlinks or mutual influences could be discussed more, e.g. levels of success and the relation to benefits (and the challenges), the relation to ex-post evaluations and their role in this and so on (as pointed out by an anonymous reviewer. Some of these are indeed explored in our main report to PMI (Williams, Vo, Bourne, Bourne, Kirkham, et al. 2020) but the length of a journal paper does not allow full exploration of the interlinks here.

8.1. Fundamental definition of a benefit (abstract thinking)

Clear definitions of terms provide the basis for the adoption of a common language and may enable decisions to be made in a more effective way, with the benefits of clearer communication between stakeholders. The case studies illustrated considerable variations in the conceptualization of benefits, particularly between sectors. Highways England, for example, had a noticeably different set of perceptions to the other cases.

The most frequent understanding of the meaning of the five terms here seemed to give a temporal flow from outputs

(what the project delivered, generally tangible or reified in some sense) to outcome (the direct effect of the project) to impact (the effect of the outcome) to legacy (the “long term” effect that will be left at the end of the project’s operations (but note “legacy IT” is a different use of the term)). This is similar to an extent to the commonly used OECD/USAID structure (Samset 2010) which characterizes a project’s out-turn as efficiency (outputs), effectiveness (outcomes), then benefits/legacy: relevance, impact, and sustainability.

A “benefit” was a term used with a variety of meanings. To some, it was all the above. It could be positive or negative. To many others (but not all) it needed to be measurable.

Many of the understandings seemed to come from the common Project Management discourse, and specifically (since these were UK public projects) from Government guidance (e.g. the Green Book, *Managing Successful Programmes* (Axelos 2020) and other government definitions, particularly in the digital domain).

There was a wide spread of stakeholders with disparate views of benefits. This was shown in all the case studies, although perhaps more evident in the initial stages of an infrastructure project while in IT and Transformation projects it becomes evident as benefits emerge. There are inherent contradictory assumptions within public projects assuming a market economy and here Fotaki (2010) recognizes the idea of a rational policy-making process as a “social fantasy”.

Many public projects make benefits available but do not themselves give direct benefit: a different body harnesses benefits; Case Study 2 said the benefits lay in how we exploit the assets. It is normally in “operations” or “Business as Usual” that benefits are seen. Case Study 3 highlighted the use of the Implementation and Business Change team in making this link between the project and Business as Usual. This also means that stakeholders will have different long-term aspirations and these aspirations will change, as discussed below.

The discussion indicated a desire to understand these terms more clearly both generally and specifically within sectors. This practical demand must be considered carefully in the clear understanding that pinning down the creature of “benefits” is impossible and the need to grasp the unfolding of benefits in time and the multiple meanings in space. However, there is a practical demand that the discourse uses commonly understood terms, and perhaps professional Associations and international organizations have a role to play here. Definitions could be in procedural rather than substantive terms: the key is to move from substance to procedures, that is, rather than defining benefits, processes should be developed to define, then continuously assess the validity of temporarily agreed definitions.

Along with this clarity, there may be a need to define practices that continuously monitor the change in project scope and benefit definition. This move would result in new managerial approaches that cohere with the continuous fluidity of benefit definition and realization, making their assessment clearer within the range of ambiguity that inevitably surrounds benefits, outcomes and similar categories.

8.2. Scoping the project (contextualized thinking)

Cases had a variety of perspectives all answering differently for “greatest good”, and some of these are contradictory. Internal project people (in all Case Studies) often answered effectively on behalf of external stakeholders. However, there seemed more agreement on ideas of “just” or “fair” in case studies, as a sense that public servants were seeking the “common good”.

The idea of “what for YOU is a good outcome” had a more personal focus, with for example internal project people looking at project-management success criteria.

8.3. Focusing on intent (mobilizing the benefit as means)

The benefits are spoken about and recorded throughout the project but are defined (and thus ‘objectified’) early in the process as projects move in the UK system through the five “business cases”. But there seem to be key points at which benefits need to be crystalized such as:

- a. Reviews or regular reporting or times when more senior project executives or sponsors are consulted (e.g. asking for more money).
- b. Major decision points
- c. Changes requiring benefits to be “baked into” contracts.

Those managing projects understand that financial benefits are necessary for justification and to release money, but non-financial, societal benefits are just as important. Non-financial benefits are critical particularly during the project implementation phase as these are the benefits that are important to many of the stakeholders. For them the non-financial benefits are the reason for undertaking the project and these benefits may have been undervalued in the past.

The imperative to realize the benefit provides a “broader focus” for the project team – although the focus seems sharper up to the point of getting the money for the project signed off (Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. 2020). Different members of the team with different responsibilities feel this imperative differently, particularly those with the programme or portfolio responsibility, although generally the team was conscious of “reputational risk”, and one case stated this as “probably the number one thing that drives” the project – although perhaps more so for quantifiable benefits. Cases pointed to the benefits being realized not during the project but during Business as Usual. One case had a separate “Benefits” member of staff and Case 3 a team. An interesting difference from Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. (2020) was brought by two cases who pointed to the advantages for agile [rather than traditional waterfall] approaches, both because “it is easier to keep benefits ingrained in the different phases.” and because benefits start to get delivered earlier.

There was a clear difference between projects which could be better defined up-front (eg infrastructure) where the benefits could also be better defined at the start, and an

IT or transformation project whose output specification was developed as the project proceeded. In the IT and transformation projects, “core benefits” were defined as part of the business case, more details, understanding and specification of benefits emerged during the project. Benefits/outcome “maps” proved useful in some cases. Benefits had to be discussed to see whether they were indeed benefits – for example, the benefit of freeing up 5 min a day for every doctor (which multiplies up to a large apparent saving) depends on what each of these doctor does with their 5 extra minutes.

The idea of benefits being defined and “crystalized” might make some degree of sense for an infrastructure project, but less so for IT (and transformation) projects, where, as the project evolves, so the benefits are understood and developed. But more than this, change is inevitable for a public project and the perceptions of “benefits” particularly can change. Reasons for this include:

- The context of the project changes (which can be true for an infrastructure project also), which will affect the operational phase of the project
- Technology changes
- Public guidelines for benefit measurement change
- Public and stakeholder perceptions about benefits change
- Politics changes the policy

The idea that the focus on benefits measurement was very low (delivery), even a “zone of absence” in the middle of the project (Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. 2020) was not fully accepted in the cases. Clearly the emphasis is on benefits before the money has been approved and the project proper or main construction starts. But even after this point a focus on benefits gives a psychological aim for the project team. And at the key points described such as (a)-(c) above, benefits come back into the consciousness. But there are differences throughout the team, with those at the governance level needing to keep a particular focus on benefits. It has also been observed that the absence of a strict definition of what constitutes a “soft”, “broader” benefit can help efforts to identify them at the project delivery stage and to “surprise [local communities]”.

The question about “disputes” about benefits was understood differently between the different case studies. For one Case Study, where the specification of benefits was emerging, disputes and discussions about benefits were regarded as beneficial, a positive discourse that contributed to the project.

8.4. Chasing the benefit (its evolution)

Perceptions of benefits and their prioritization changes particularly for long-term projects where societal views change. As the project proceeds, the understanding of what can be achieved will change as well as the emergence of opportunities. For Transformation/IT particularly, changes in the world are fast and impact the business case window. This makes

the whole idea of defining benefits which would be realized at the end of that window problematic. In addition, particularly for Transformation/IT, complexity can lead to emergent benefits.

For infrastructure, those running the project felt that the core/strategic benefits will not change (as they are the reasons for building the scheme) or might change but the change can be predicted and would be unlikely to make any fundamental difference - what was important to capture were wider benefits/opportunities as well as some of the smaller or narrower (i.e. fewer stakeholders) benefits.

Even without changes to technology, Case Study 3 points to issues where legislation or strategic direction changes, or even political will changes, so the benefits might need to be significantly re-thought.

The evolution of the benefit is inextricably linked to the operational delivery phase and the criticality of ensuring that projects transition into operations or Business as Usual successfully. Here again, the importance of stakeholders using the system or harvesting the benefits was seen. The success of public projects is dependent upon anticipated changes in the behaviour of citizens, civil servants and other relevant stakeholders to ensure that the operational phase is not disrupted. Where a department anticipates such changes in behaviour, a more nuanced understanding of benefits is required. For one of the IT projects, when the speed of take-up was not what was required, the use of the system became closer to being mandated by the Department (after discussions, pilot schemes etc).

Project reviews did look at benefits, although with the ideas above this was generally focusing on the processes and conceptualization as benefits had not yet been realized. One Case Study noted a lack of optimism bias within the team, and a realistic view when reporting benefits. There was general agreement (with one interviewee dissenting) that the benefits of the project remained in good alignment with the strategic objectives of the department.

In general, there was support for what was done in terms of benefits management. Responses as to what could be changed depended on the type of project but covered: looking more widely than the immediate project for implications of benefit; stakeholder consultation; changes to cultural attitudes towards the benefits; giving suitable weight to non-monetary benefits; and governance.

For one Case Study, benefits changes tended to be captured in updated or iterated business cases, with the importance of (and sometimes difficulty of) capturing new and emergent benefits noted. Governance processes supporting benefits changes were also noted. Reporting benefits changes is an important interface with the Sponsoring Department (i.e. the permanent organization that will take over as 'business as usual'). Post project, it is often difficult to determine the extent to which changes have been the result of the project (Williams, Vo, Bourne, Bourne, Cooke-Davies, et al. 2020).

There was an interesting suggestion that perhaps "quick wins" were being gained with current projects, making

benefits more incremental and thus projects more difficult to justify in the future.

8.5. Responding to change in pre-agreed benefits: valuation

Perceptions of benefits and their prioritisation changes particularly for long-term projects. It was recognized through the case studies that there would be opportunities to change the project benefits as the project progressed, as the project is tested, and innovation occurs. Some changes will be within planned tolerances. Changes to benefits which do not affect other benefits or costs are encouraged but some benefits might be traded off against others. For a transformation project, 'test and learn' enables assumptions to be tested and forecasts to be validated and, if necessary, therefore benefits to be modified. This might be a method for the department to create a 'safe-space' for innovation and risk-taking. There was an acknowledgment that public money was being spent reducing the appetite for risk. The possibilities depended on whether the benefit was quantifiable and/or monetisable, since these are more tightly controlled and monitored, and some will have contractual constraints.

Changes to quantitative benefits were dependent upon the type of project. For IT and Transformation projects, many reasons were cited for needing to change values including changes to evidence or research; better information; changes in scope; improvements in benefits analysis methodology; delay in implementation of regular business case updates; and even incentives to get budgets improved. Stakeholder discussions were continuous, and new issues could arise. Some changes arose because different *lenses* were used to look at a project: for example, an environmental lens, or benefits to the local community. Some changes came through perceptions: thus, there can be *benefit* changes even though there has been no change to the project in practice. But whatever the cause of the change, these changes are "real" in the sense that they impact on the running of the projects. For example, a project could be terminated if it is now considered that benefits are not being realized.

All projects, particularly public projects, exhibit a fluidity that reflects the wider project environment. In the health cases here, for example, a political imperative developed to divert patients away from Accident & Emergency facilities, which changed the way the benefits of the project would be perceived.

Changes happen continuously. However, they are specifically captured during the formal reviews.

The nature of many benefits is that it is clearly difficult to get accurate information on which to base decisions about benefits and values (e.g. forecasts for uptake over months and years) – and besides, it is well-known that more information does not necessarily lead to better decisions, often the contrary (Williams et al. 2009). Some benefits are clearly critical to the business case while others are contributory. In practice, it was suggested that changes only became important to the project when the benefit-cost ratio on a project fell to a critical threshold. For infrastructure, changes in

benefits are less likely to cause major changes in the project (“you can’t build half a road”).

8.6. Evaluation: assessing benefit “realization” (the process of assessing a qualified benefit)

All interviewees recognized the importance of tracking benefits, particularly as this was of advantage to the ultimate end user/customer (whose input was particularly useful at this stage), and because this is where value is created/added. The focus on driving out benefits during the project delivery phase through demonstrating that the project is achieving what it said it would deliver, especially for projects under scrutiny, is tangible. However, it was not clear that there were platforms available to track benefits in practice, nor was it clear whose responsibility this was. Some projects try to ask the “business as usual” team to track benefits – but this still leaves the question of when do you stop tracking benefits of something which has now entered normal practice?

We explored the importance of the portfolio view of projects (and their intended benefits) in the context of ensuring continued alignment with departmental priorities. UK “Single departmental plans” may provide the overarching view but do not necessarily provide sufficient detail on benefits. A portfolio view should enable a holistic view of benefits and disbenefits arising from projects across the sponsoring department, supporting projects where the benefits position may have changed due to circumstances beyond the control of the programme director.

Concern about the need to realise benefits was recognized as being spread around many different parties. However, those without specific responsibility for benefits are unlikely to think about benefits realisation continuously. The need for visibility of the benefits depends on the visibility of the project itself (e.g. a road is a visible artefact and may therefore be subject to less pressure for justification).

Current UK Senior Responsible Owner (SRO) appointment letters emphasise the criticality of the SRO’s role in the delivery of benefits. This is based on the belief that SROs’ performance directly impacts on the performance of projects. However, this is not clear: the specific delivery of benefits is rarely included in the SROs’ objectives; and can SROs be held accountable for benefits once the project transitions into operations/“business as usual”? For others, there was a range of views on the extent to which individual performance was correlated to success in realising benefits. Responses to earlier interview questions suggested that for some individuals, the focus on benefits was part of their job and shaped much of their decision-making, and thus their own personal career. However, only one Sponsorship Director said that his/her performance depended on the realisation of the benefits. At the level above the project, the department sponsor might not have direct objectives for this project but might not be able to achieve core departmental objectives without the project benefits being realized.

The (perhaps self-evident) importance of leadership, and leaders emphasising the benefits and the importance of attention to benefits, was noted in the Case Studies.

Most interviewees were unable to articulate any advantages of not continuously tracking benefits (apart from cheapness and simplicity), and most could point to the disadvantages. Having said that, “continuously” does not identify a frequency and could mean different things – and even if continuous tracking were possible, this does not give full knowledge.

While specific benefits can be more difficult to define unambiguously, “mantras” went through some of the cases. For example, “Every £1 we spend on a project cannot be spent on a patient and therefore we need to get value for money” was used as the mantra to give a thread through the project and help develop a common view.

Stories and narratives were also useful in the wider benefit debate, and they played multiple roles. They provided an important means of engaging with stakeholders, especially those who had only limited involvement with the project. They communicated the personal benefit to those using the system, telling the story of how people like them benefitted from using the system, supporting the all-important project implementation effort. Stories brought data to life by referring to specific instances. They can also be useful in ex-post evaluation where there is a problem of disentangling benefits from one project from the changes in the environment generally.

8.7. Final note

Benefits will fluctuate and emerge progressively (yet not necessarily linearly) in time. However, our conceptual toolkit recognized that entities such as benefits are rarely an instance of singularity and stability – beyond the changes imposed by “external” factors such as scope or measurement methodology, the perception of benefits will inherently vary depending on stakeholders.

The changes in benefits and the difficulty of establishing a single, common and stable value of a benefit is particularly demonstrated on the example of “soft” benefits. In the space beyond any individual project, project managers recognize the mounting pressure to deliver softer benefits relating to wider economic impact and the wellbeing of the local community. The imperative to deliver collapses into the imperative to measure and monetize them. Interviewees are driven to search for a tangible, credible and preferably unique technique to monetize, and thus make the softer benefits as “real” and “present” as hard outcomes. However, the desire to realize softer benefits through a new measurement tool with a hegemonic economic rationality conceals the inherent multiplicity of softer benefits. The sociology of worth introduces equally valid but conflicting ways to evaluate the worth of the same benefit – the very same output (greater traffic on a highway) could be perceived as a benefit (accessibility) or a disbenefit (disruption of ecosystem) by different members of local communities, or even actors internal to the project. Each benefit is therefore “multiple” in the various

versions it comes to takes, whether because of technical changes or inherently diverging judgements stakeholders impose on it.

A measurement tool that is too tightly designed would cast a veil of objectivity on the multiple and conflicting natures of a benefit, without addressing the complexity of judgements and diversity of opinions underlying it.

The study thus yields learnings for the design of tools to support benefit realisation and change management. A tool which embraces the “multiplicity” of benefits, and their evolving nature would not shy away from combining quantitative and qualitative evaluations, or leaving space for tensions. It would recognise the inherent impossibility of capturing a unique and true representation of a benefit which would stand the test of time and create a communicative space for discussion. In a time when both academics and practitioners converge on the “multiple” nature of benefits, the design of tools and benefit realisation practices should reflect the rejection of a positivistic search that seeks to represent and measure benefits by embracing their fluidity, change and need for continuous scrutiny of what a benefit is and could become in different spatial-temporal contexts (e.g. different interested parties, phases of the projects etc.).

The aspect of benefits realisation as a dynamic process and the “benefit trajectory from conception to demissioning” (part of our Phase 3 study objective above) could be usefully explained using the “process view” of projects, as championed by authors such as Langley et al. (2013) and the Special Issues on ‘Process Studies of Project Organising’ edited by Sergi, Crevani, and Aubry (2020). This process view can usefully be applied to the Front End of a project, as described by the chapter on ‘Undertaking the project front end’ by Aubry and Floricel (2022), tracing the definition and evolution of benefits and value throughout that project stage. This could be a useful area of future research.

9. Recommendations for practice

In this last section, we take the insights from these cases to create a series of recommendations for practice under eight separate headings. To enable effective and transparent scrutiny and evaluation, we should seek to satisfy ourselves that benefits are regarded as greater in importance when compared to cost and schedule; this is because benefits are an outcome of a project investment and are therefore of greater importance. Therefore, we believe that public announcements on cost overruns should always be framed in the context of wider benefits, whether quantified or narrative. We have attempted to outline the nature of what is commonly thought of as a “benefit”, its changing nature and the difficulty of establishing a single, common and stable value of a benefit. The idea of “benefits” is difficult to pin down, and “benefits” unfold in time and have multiple meanings.

We will now proceed to give recommendations for practice.

9.1. Definitions

There was a practical desire that discourse used commonly understood terms.

We recommend defining processes to define terms. Rather than PMI (for example) defining benefits for all kinds of circumstances, it could specify policies to define processes to identify and continuously assess the validity of temporarily agreed definitions.

9.2. Tools

We looked at indications to help design tools to support benefit realisation/change management.

We recommend that tools for benefit management should recognize the impossibility of capturing a “true” permanent representation of a benefit, rather create a communicative space for discussion recognising the “multiplicity” of benefits and their evolution, combining quantitative and qualitative evaluations. Practices should continuously monitor the change in project scope and benefit definition.

9.3. Stakeholders

Communication with stakeholders and seeing issues from differing perspectives is important for success – from early consultation about benefits at project initiation to working with them at implementation.

We recommend communicating with stakeholders in terms to which they relate. Often those non-financial, societal benefits are critical as without which the project may have no enduring value to the stakeholders. Non-financial benefits may have been undervalued in the past. Without buy-in from people, systems won’t work.

9.4. Reviews

The “outside view” is important.

We recommend that there is value in an independent (maybe embedded) benefits group for the project which tracks benefits, reviews changes and recalibrates stakeholder perceptions but can avoid optimism bias.

9.5. Post-project phase

Benefits are often delivered during the “business as usual” operational phase using the project’s output products/services. The extent to which benefits are realized depends upon actor behaviours during implementation, the successful transition between project delivery and operations, and subsequent adoption of services.

We recommend ongoing review and reporting of benefits and benefit changes post implementation by the permanent organisation that takes over the project output (possibly for larger projects, by independent oversight bodies) with the assumptions made in the business case determining how long benefits should be tracked.

9.6. Post-project phase – sponsors

This raises questions in relation to the project sponsor.

We recommend when allocating personal responsibilities, such as in SRO letters, consideration of questions such as: Can a project sponsor be responsible for how the output of that project is used? If not, who can be, and what processes are required to transfer responsibilities? Or are we choosing the wrong project sponsors?

9.7. Changes to benefits

Changes to benefits happen throughout a project. Some arise because different lenses are used to look at a project-changing perceptions of benefits while not affecting the project itself. For all sectors, but perhaps particularly IT and Transformation (where benefits are less precisely defined up-front), change will occur in the context of the project and in societal perceptions and political imperatives, so the definition of benefits needs to evolve.

We recommend that processes be developed that recognize this. Agile approaches can be beneficial. “Test and learn” approaches provide immediate learning.

9.8. Narratives and non-quantitative benefits

Narratives are useful to describe hoped-for benefits and needs at the outset as the project evolves, and benefits expost. Quantitative descriptions of benefits can be used to generate narratives, and as in every narrative, this can mean different things to people, and can be rewritten.

We recommend the use of narratives, which provide a useful means of expressing benefits, and that care is taken to avoid the over-reliance on benefits that lend themselves to quantification.

10. Conclusions

In this paper, we show a convergence of academic and practitioner views on the “multiple” nature of benefits. However, we believe that the current design of tools and practices fail to recognize this convergence. We believe that improvement should *reflect the rejection of a positivistic search seeking to represent and measure benefits and therefore embrace their fluidity, change and need for continuous scrutiny of what a benefit is and could become in different contexts* (e.g. different interested parties, phases of the projects etc.). These implications might appear academic, but the implications are increasingly recognized by mainstream media, where calls for the implications to be reflected in the UK Treasury Green Book have been made (see e.g. Daily Telegraph 2020).

This paper contributes to knowledge in two ways. Theoretically, rather than the normative simplistic view of “benefits”, it has taken a critical look at what “benefits” represent in the real world of public projects, with the support of a Sociology of Worth/ANT background, giving a much richer and more useful understanding. We have shown a

project to be an ‘heteromogenous’ object, (Quattrone and Hopper 2006) that is, an object that exists because it acquires homogeneity only because it attracts heterogeneity and difference. A project is seen as beneficial because people see in it a lot of different things, and its ontology can be understood only by exploring how it is materialised (Busco and Quattrone 2015). It also contributes to practice in using this improved understanding to provide eight separate specific areas of recommendation that would enhance the practice of Benefits Management.

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References

- Al-Mazrouie, J. R., U. Ojiako, T. Williams, M. Chipulu, and A. Marshall. 2021. "An Operations Readiness Typology for Mitigating against Transitional 'Disastrous Openings' of Airport Infrastructure Projects." *Production Planning & Control* 32 (4): 283–302. <https://doi.org/10.1080/09537287.2020.1730997>
- Aubry, M., and S. Floricel. 2022. "Undertaking the Project Front End." In *The Front-End of Large Public Projects: Paradoxes and Ways Ahead*, edited by T. Williams, K. Samset, & G. H. Volden. Abingdon UK: Routledge.
- Azim, S., A. Gale, T. Lawlor-Wright, R. Kirkham, A. Khan, and M. Alam. 2010. "The Importance of Soft Skills in Complex Projects." *International Journal of Managing Projects in Business* 3 (3): 387–401. <https://doi.org/10.1108/17538371011056048>
- Annisette, M., and A. J. Richardson. 2011. "Justification and Accounting: Applying Sociology of Worth to Accounting Research." *Accounting, Auditing & Accountability Journal* 24 (2): 229–249. <https://doi.org/10.1108/09513571111100690>
- Arantes, A., and L.-M. D. F. Ferreira. 2021. "A Methodology for the Development of Delay Mitigation Measures in Construction Projects." *Production Planning & Control* 32 (3): 228–241. <https://doi.org/10.1080/09537287.2020.1725169>
- Aritua, B., N. J. Smith, and D. Bower. 2011. "What Risks Are Common to or Amplified in Programmes: Evidence from UK Public Sector Infrastructure Schemes." *International Journal of Project Management* 29 (3): 303–312. <https://doi.org/10.1016/j.ijproman.2010.04.004>
- Aubry, M., S. E. Boukri, and V. Sergi. 2021. "Opening the Black Box of Benefits Management in the Context of Projects." *Project Management Journal* 52 (5): 434–452. <https://doi.org/10.1177/87569728211020606>
- Axelos. 2020. "Managing Successful Programmes." London: Stationery Office
- Badewi, A. 2016. "The Impact of Project Management (PM) and Benefits Management (BM) Practices on Project Success: Towards Developing a Project Benefits Governance Framework." *International Journal of Project Management* 34 (4): 761–778. <https://doi.org/10.1016/j.ijproman.2015.05.005>
- Badewi, A. 2022. "When Frameworks Empower Their Agents: The Effect of Organizational Project Management Frameworks on the Performance of Project Managers and Benefits Managers in Delivering Transformation Projects Successfully." *International Journal of Project Management* 40 (2): 132–141. <https://doi.org/10.1016/j.ijproman.2021.10.005>
- Boltanski, L., and L. Thévenot. 2006. *On Justification: Economies of Worth*. Princeton: Princeton University Press.
- Breese, R., S. Jenner, C. Serra, J. Thorp, and A. Badewi. 2016. "A Unified View of Benefits Management/Benefits Realization Management to be Integrated into PMI Standards." Sheffield Hallam University for the Project Management Institute. <http://shura.shu.ac.uk/information.html>
- Breese, R., S. Jenner, C. E. M. Serra, and J. Thorp. 2015. "Benefits Management: Lost or Found in Translation." *International Journal of Project Management* 33 (7): 1438–1451. <https://doi.org/10.1016/j.ijproman.2015.06.004>
- Busco, C., P. Quattrone, and A. Riccaboni. 2007. "Management Accounting: Issues in Interpreting Its Nature and Change." *Management Accounting Research* 18 (2): 125–149. <https://doi.org/10.1016/j.mar.2007.03.001>

- 1016/j.mar.2007.04.003
- Busco, C., and P. Quattrone. 2015. "Exploring how the balanced scorecard engages and unfolds: Articulating the visual power of accounting inscriptions." *Contemporary Accounting Research* 32 (3): 1236–1262.
- Chang, A., Y. Y. Chih, E. Chew, and A. Pisarski. 2013. "Reconceptualising Mega Project Success in Australian Defence: Recognising the Importance of Value co-Creation." *International Journal of Project Management* 31 (8): 1139–1153. <https://doi.org/10.1016/j.ijproman.2012.12.005>
- Chipulu, M., U. Ojiako, A. Marshall, T. Williams, U. Bititci, C. Mota, Y. Shou, et al. 2019. "A Dimensional Analysis of Stakeholder Assessment of Project Outcomes." *Production Planning & Control* 30 (13): 1072–1090. <https://doi.org/10.1080/09537287.2019.1567859>
- Christensen, T. 2012. "Decision-Making in the Political Environment." In *Project Governance: Getting Investments Right*, edited by T. Williams and K. Samset, 256–276. Basingstoke: Palgrave Macmillan.
- CMI. 2015. *The Effective Change Manager's Handbook: Essential Guidance to the Change Management Body of Knowledge*. Edited by R. Smith, D. King, R. Sidhu and D. Skelsey. London: Kogan Page Publishers.
- Daily Telegraph. 2020. *Tweaks to Green Book that could put Johnson's 'blue wall' on a stronger footing* Tim Wallace. Daily Telegraph, UK, 8th January 2020.
- Davis, K. 2014. "Different Stakeholder Groups and Their Perceptions of Project Success." *International Journal of Project Management* 32 (2): 189–201. <https://doi.org/10.1016/j.ijproman.2013.02.006>
- Fotaki, M. 2010. "Why Do Public Policies Fail so Often? Exploring Health Policy-Making as an Imaginary and Symbolic Construction." *Organization* 17 (6): 703–720. <https://doi.org/10.1177/1350508410366321>
- Fourcade, M. 2011. "Cents and Sensibility: Economic Valuation and the Nature of 'Nature.'" *American Journal of Sociology* 116 (6): 1721–1777. <https://doi.org/10.1086/659640>
- Gherardi, S. 2012. *How to Conduct a Practice-Based Study: Problems and Methods*. Cheltenham: Edward Elgar Publishing.
- Goldsmith, L. J. 2021. "Using Framework Analysis in Applied Qualitative Research." *Qualitative Report* 26 (6): 2061–2076.
- Highways England. 2019. *Evaluation Insight Paper: Post Opening Project Evaluation of Major Schemes*. Guildford, UK: Highways England
- Highways England. 2018. *Sponsorship Manual*. Guildford: Highways England.
- HM Treasury. 2020. *Green Book Review 2020: Findings and reponse*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/937700/Green_Book_Review_final_report_241120v2.pdf
- HM Treasury. 2022. *The Green Book: Central Government Guidance on Appraisal and Evaluation*, May 10, 2022. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1063330/Green_Book_2022.pdf
- House of Commons. 2022. *House of Commons Committee of Public Accounts report HC 254. Use of evaluation and modelling in government*, February 24, 2023. <https://committees.parliament.uk/publications/22451/documents/165470/default/>
- Ika, L. A. 2009. "Project Success as a Topic in Project Management Journals." *Project Management Journal* 40 (4): 6–19. <https://doi.org/10.1002/pmj.20137>
- Ika, L. A., and J. K. Pinto. 2022. "The 'Re-Meaning' of Project Success: Updating and Recalibrating for a Modern Project Management." *International Journal of Project Management* 40 (7): 835–848. <https://doi.org/10.1016/j.ijproman.2022.08.001>
- Infrastructure & Projects Authority. 2017. "Guide for Effective Benefits Management in Major Projects." London: Infrastructure & Projects Authority.
- ISACA. n.d. *ISACA Glossary*. <https://www.isaca.org/knowledgecenter/documents/glossary/glossary.pdf>
- Jarzabkowski, P., J. A. A. Sillince, and D. Shaw. 2010. "Strategic Ambiguity as a Rhetorical Resource for Enabling Multiple Interests." *Human Relations* 63 (2): 219–248. <https://doi.org/10.1177/0018726709337040>
- Jenner, S. 2014. *Managing Benefits: optimizing the Return from Investments*. London: TSO (The Stationery Office)
- Jensen, C. B., and A. Morita. 2015. "Infrastructures as Ontological Experiments." *Engaging Science, Technology, and Society* 1: 81–87. <https://doi.org/10.17351/ests2015.21>
- Jordan, G., I. Lee, and G. Cawsey. 1988. "Learning from Experience: A Report on the Arrangements for Managing Major Projects in the Procurement Executive." *Report to the Ministry of State for Defence Procurement*. London: Ministry of Defence.
- Kirkham, R. J. 2022. "Estimating." In *The Front-End of Large Public Projects: Paradoxes and Ways Ahead*, edited by T. Williams, K. Samset, and G. H. Volden. Abingdon UK: Routledge.
- Kirkham, R. J. 2020. "Written Evidence to the Public Accounts Committee, House of Commons: Lessons from Major Projects and Programmes." <https://committees.parliament.uk/writtenevidence/17307/pdf/>
- Koops, L., C. van Loenhout, M. Bosch-Rekvelde, M. Hertogh, and H. Bakker. 2017. "Different Perspectives of Public Project Managers on Project Success." *Engineering, Construction and Architectural Management* 24 (6): 1294–1318. <https://doi.org/10.1108/ECAM-01-2015-0007>
- Langley, A. N., C. Smallman, H. Tsoukas, and A. H. Van de Ven. 2013. 2013 Feb. "Process Studies of Change in Organization and Management: Unveiling Temporality, Activity, and Flow." *Academy of Management Journal* 56 (1): 1–13. <https://doi.org/10.5465/amj.2013.4001>
- Latour, B. 1991. *We Have Never Been Modern*. London: Sage Publications.
- Latour, B. 2004. "Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern." *Critical Inquiry* 30 (2): 225–248. <https://doi.org/10.1086/421123>
- Laursen, M., and P. Svejvig. 2016. "Taking Stock of Project Value Creation: A Structured Literature Review with Future Directions for Research and Practice." *International Journal of Project Management* 34 (4): 736–747. <https://doi.org/10.1016/j.ijproman.2015.06.007>
- Law, J. 2000. "Objects, Spaces and Others." Centre for Science Studies, Lancaster University, Lancaster, LA14YN, UK. May 20, 2022. <https://www.lancaster.ac.uk/fass/resources/sociology-online-papers/papers/law-objects-spaces-others.pdf>
- Law, J., and V. Singleton. 2005. "Object Lessons." *Organization* 12 (3): 331–355. <https://doi.org/10.1177/1350508405051270>
- Lerche, J., S. Lindhard, P. Enevoldsen, H. H. Neve, D. E. Møller, E. L. Jacobsen, J. Teizer, and S. Wandahl. 2022. "Causes of Delay in Offshore Wind Turbine Construction Projects." *Production Planning & Control* 1–14. <https://doi.org/10.1080/09537287.2022.2026673>
- Mamabolo, M., and C. Marnewick. 2022. "Benefits Realisation Management: Responsibilities and Challenges." *SA Journal of Information Management* 24 (1): 9. <https://doi.org/10.4102/sajim.v24i1.1574>
- Martinsuo, M., O. J. Klakegg, and A. van Marrewijk. 2019. "Editorial: Delivering Value in Projects and Project-Based Business." *International Journal of Project Management* 37 (5): 631–635. <https://doi.org/10.1016/j.ijproman.2019.01.011>
- Meggs, A. 2018. "Crossing the 'Valley of Death' – How We Can Bridge the Gap Between Policy Creation and Delivery." *Civil Service Quarterly Blog*. January 4, 2021. <https://quarterly.blog.gov.uk/2018/03/28/crossing-the-valley-of-death-how-we-can-bridge-the-gap-between-policy-creation-and-delivery/>
- Miller, P., and T. O'Leary. 1987. "Accounting and the Construction of the Governable Person." *Accounting, Organizations and Society* 12 (3): 235–265. [https://doi.org/10.1016/0361-3682\(87\)90039-0](https://doi.org/10.1016/0361-3682(87)90039-0)
- Mol, A. 2002. *The Body Multiple: Ontology in Medical Practice*. Durham: Duke University Press.
- Morris, P. W. G. 2003. "The Irrelevance of Project Management as a Professional Discipline." 17th IPMA World Congress on Project Management, 4–6 June 2003, Moscow, Russia. (pp. 1–19).
- Morris, P. W. G. 2009. "Implementing Strategy through Project Management: The Importance of Managing the Project Front-End." In: T.M. Williams, K. Samset and K. Sunnevåg, eds. *Making Essential Choices with Scant Information: Front-End Decision Making in Major Projects*. Basingstoke, UK: Palgrave.
- National Highways. 2022. "Benefits." March 22, 2022. <https://national-highways.co.uk/our-work/a303-stonehenge/benefits/>
- Nixon, P., M. Harrington, and D. Parker. 2012. "Leadership Performance is Significant to Project Success or Failure: A Critical Analysis." *International Journal of Productivity and Performance Management* 61 (2): 204–216. <https://doi.org/10.1108/17410401211194699>

- O'Leary, T. 2012. "Decision-Making in Organisations." In *Project Governance: Getting Investments Right*, edited by T. Williams and K. Samset, 175–220. Basingstoke: Palgrave Macmillan.
- Orlikowski, W. J. 2007. "Sociomaterial Practices: Exploring Technology at Work." *Organization Studies* 28 (9): 1435–1448. <https://doi.org/10.1177/0170840607081138>
- Peppard, J., and J. Ward. 2016. *The Strategic Management of Information Systems: Building a Digital Strategy*. Hoboken: John Wiley & Sons.
- Pesämaa, O., M. Bourne, M. Bosch-Rekveltdt, R. Kirkham, and R. Forster. 2020. "Call for Papers: Performance Measurement in Project Management." *International Journal of Project Management* 38 (8): 559–560.
- Pinto, J. K., K. Davis, L. A. Ika, K. Jugdev, and O. Zwikael. 2022. "Coming to Terms with Project Success: Current Perspectives and Future Challenges." *International Journal of Project Management*, 40 (7), 831–834.
- Pinto, J. K., and G. Winch. 2016. "The Unsettling of "Settled Science:" the past and Future of the Management of Projects." *International Journal of Project Management* 34 (2): 237–245. <https://doi.org/10.1016/j.ijproman.2015.07.011>
- PMI (Project Management Institute). 2012. *Driving Success in Challenging Times*. Newtown Square, PA: Pulse of the Profession®. August 27, 2018. <https://www.pmi.org/learning/thought-leadership/pulse/driving-success-in-challenging-times-2012>
- PMI (Project Management Institute). 2013. *The Standard for Program Management*. 3rd ed. Newtown Square, PA: PMI.
- PMI (Project Management Institute). 2016. *PMI Thought Leadership Series – Benefits Realization Management Framework*. Newtown Square, PA: Pulse of the Profession®. August 27, 2018. <https://www.pmi.org/learning/thought-leadership/series/benefits-realization/benefits-realization-management-framework>.
- Public Administration and Constitutional Affairs Committee. 2018. "Evidence Given to The UK Government's Management of Major Projects Inquiry, Evidence by Dr. Richard Kirkham." June 20, 2023. <https://committees.parliament.uk/writtenevidence/96816/pdf/>
- Quattrone, P., and T. Hopper. 2006. "What is IT?: SAP, Accounting, and Visibility in a Multinational Organisation." *Information and Organization* 16 (3): 212–250. <https://doi.org/10.1016/j.infoandorg.2006.06.001>
- Quattrone, P., and T. Hopper. 2001. "What Does Organizational Change Mean? Speculations on a Taken for Granted Category." *Management Accounting Research* 12 (4): 403–435. <https://doi.org/10.1006/mare.2001.0176>
- Samset, K. 2010. *Early Project Appraisal: making the Initial Choices*. Basingstoke, UK: Palgrave Macmillan.
- Samset, K., and G. H. Volden. 2016. "Front-End Definition of Projects: Ten Paradoxes and Some Reflections regarding Project Management and Project Governance." *International Journal of Project Management* 34 (2): 297–313. <https://doi.org/10.1016/j.ijproman.2015.01.014>
- Saunders, B., J. Kitzinger, and C. Kitzinger. 2015. "Anonymising Interview Data: Challenges and Compromise in Practice." *Qualitative Research* 15 (5): 616–632. <https://doi.org/10.1177/1468794114550439>
- Sergi, V., L. Crevani, and M. Aubry. 2020. "Process Studies of Project Organizing." *Project Management Journal* 51 (1): 3–10. <https://doi.org/10.1177/8756972819896482>
- Serra, C. E. M., and M. Kunc. 2015. "Benefits Realisation Management and Its Influence on Project Success and on the Execution of Business Strategies." *International Journal of Project Management* 33 (1): 53–66. <https://doi.org/10.1016/j.ijproman.2014.03.011>
- Smith, J., and J. Firth. 2011. "Qualitative Data Analysis: The Framework Approach." *Nurse Researcher* 18 (2): 52–62. <https://doi.org/10.7748/nr2011.01.18.2.52.c8284>
- Smith, R., R. Sidhu, D. Skelsey, and D. King, eds. 2015. *The Effective Change Manager's Handbook: Essential Guidance to the Change Management Body of Knowledge*. London: Kogan Page.
- Star, S. L., and J. R. Griesemer. 1989. "Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907–39." *Social Studies of Science* 19 (3): 387–420. <https://doi.org/10.1177/030631289019003001>
- Thévenot, L. 2002. "Which Road to Follow? The Moral Complexity of an "Equipped" Humanity." In *Complexities: Social Studies of Knowledge Practices*, edited by Law, J. & Mol, A. Durham and London: Duke University Press.
- Van Bommel, K. 2014. "Towards a Legitimate Compromise? An Exploration of Integrated Reporting in The Netherlands." *Accounting, Auditing & Accountability Journal* 27 (7): 1157–1189. <https://doi.org/10.1108/AAAJ-04-2013-1309>
- Vo, H., R. Kirkham, T. M. Williams, A. Howells, R. Forster, and T. C. Cooke-Davies. 2021. "An Empirical Study of Assurance in the UK Government Major Projects Portfolio: From Data to Recommendations, to Action or Inaction." *International Journal of Managing Projects in Business* 14 (4): 865–897. <https://doi.org/10.1108/IJMPB-10-2019-0242>
- Williams T, Samset K and Sunnevåg K, eds. 2009. *Making Essential Choices with Scant Information: Front-End Decision Making in Major Projects*. Basingstoke, UK: Palgrave.
- Williams, T., H. Vo, M. Bourne, P. Bourne, T. Cooke-Davies, R. Kirkham, G. Masterton, P. Quattrone, and J. Valette. 2020. "A Cross-National Comparison of Project Benefits Management Practices – the Effectiveness of Benefits Management Frameworks in Application." *Production Planning & Control* 31 (8): 644–659. <https://doi.org/10.1080/09537287.2019.1668980>
- Williams, T., H. Vo, M. Bourne, P. Bourne, R. Kirkham, G. Masterton, P. Quattrone, and C. Toczycka. 2020. *Identifying and Realising Project Benefits: Phase 3: The Effectiveness of Frameworks in Action*. Project Management Institute.
- Winter, M., and T. Szczepanek. 2008. "Projects and programmes as value creation processes: A new perspective and some practical implications." *International journal of project management* 26 (1): 95–103. <https://doi.org/10.1016/j.ijproman.2012.03.003>
- Young, R., M. Young, E. Jordan, and P. O'Connor. 2012. "Is Strategy Being Implemented through Projects? Contrary Evidence from a Leader in New Public Management." *International Journal of Project Management* 30 (8): 887–900. <https://doi.org/10.1016/j.ijproman.2012.03.003>
- Zerjav, V. 2021. "Why Do Business Organizations Participate in Projects? Toward a Typology of Project Value Domains." *Project Management Journal* 52 (3): 287–297. <https://doi.org/10.1177/87569728211001663>
- Zwikael, O., and J. Smyrk. 2012. "A General Framework for Gauging the Performance of Initiatives to Enhance Organizational Value." *British Journal of Management* 23 (S1): S6–S22. <https://doi.org/10.1111/j.1467-8551.2012.00823.x>

Appendix. Interview question set

	Guidance, expectations, theoretical relevance
0. Background (viewpoint of respondent) Name, job, previous significant job history, educational background	Understand the conditions of possibility shaping the dominant subject positions (a respondent has diverse and multiple moral standings – what could have shaped it?) – relevant for SOW
1. Fundamental definition of a benefit (abstract thinking) How would you define a benefit, in general? Do you think there are different types of benefits? If so, which?	e.g.: (<i>what to expect</i>) -benefits of the end product (if infra then reduction in travel time, agglomeration economies etc.) vs the benefits accrued because the project is itself being executed (employment on-site, regeneration works in the area). -officially reported vs perceived ...
Is a benefit different from ... i. Outcome ii. Output iii. Impact iv. Legacy v. If yes, how is it different? From where do you think you derive these understandings of vocabulary? Is it convention? Is it specific to your role/organisation/industry? To whom do you think the project benefits?	If benefits to all, then impossibility. But loss, absence contains desire, and vice versa therefore continuous use of unattainable benefits can be explained by them being a fantasy ... see Fotaki (2010)
2. Scoping at the project (contextualised thinking) Can you give an example of a vi. Benefit vii. Outcome viii. Output ix. Impact x. Legacy on this specific project What do you think is the greatest good the project will deliver? For you, what would be a good outcome of the project? What would be a just, fair outcome?	SOW SOW SOW
3. Mobilising the benefit as means What are the occasions where you would speak of/record/report a benefit during the life-cycle of a project? How are you affected by the imperative to realise the benefit? When do you feel the benefit is most on your mind? Thinking of times when the focus on benefits measurement is very low (delivery), what role do you think it still plays? Can you recollect instances of disputes around benefits? If so, what were the main disagreement points? How was the eventual compromise reached? Was it reached? Is the controversy still ongoing?	Shows instances where the benefit is “objectified”
4. Chasing the benefit (its evolution) Why would a benefit change over time? What would be the reasons? Please provide the full breakdown of benefits in the contractual Business Case. How has it changed overall? (high level , more specific below) Thinking of the IPA assurance reviews, • If benefits issues were considered in the review scope, how many review recommendations addressed benefits issues and were they implemented? • What were the impact those recommendations made on the benefits profile and practice as a whole? Now, could you focus on one specific line item (rather than the sum of all benefits) and tell how it evolved? How did your opinion about what the greatest good the project is doing evolve since its start? Taking the perspective of the client organisation, how did their strategic objectives change in relation to the project? Do you feel the benefit might be in disconnect? Has there been an attempt to adjust? If you had a chance to influence the handling of benefits, what would you change? How is benefit change, during project delivery, now captured? Has it always been like that? Why use this specific benefit change capturing method? Would you say there are different “tribes” with relation to managing benefits, with fundamental disagreement over the meaning? Who would they be?	Understand what happens in the zone of absence, ie the middle of the project SOW
5. Responding to change in pre-agreed benefits: valuation Are there incentives/encouragement/possibility to modify desired benefits during delivery?	See whether attitudes do shift from functional use (legitimation etc.) to progressively belief Pay attention to sociomateriality – the “tools” used in capturing the benefit Tribes understood as groups of shared opinion and an extent of cohesiveness leading to group action and mutual support in disputed over meaning The process of giving worth, the qualification of a change in pre-agreed benefits

(continued)

Continued.

Guidance, expectations, theoretical relevance

Under what circumstances would you revise the quantitative value of a benefit (grand total)?

- a. If same line items but fluctuating values of line items, what happens?
- b. If a line item to completely be taken out (eg design change, scope reduction), what happens?
- c. If a new line item to be introduced (eg design change, scope expansion), what happens?

6. Evaluation: assessing benefit "realisation"

(the process of assessing a qualified benefit)

How does the need to realise benefits manifest itself during project delivery?

Who would be concerned about it? Do you think the need to realise benefits should be more pronounced, more visible?

Is realising the benefit something that is on your mind regularly, part of daily conversations?

Is your individual performance dependent on it?

What are the pros and cons of not continuously tracking benefit realisation?

Note abbreviation: **SOW**: Sociology of Worth, Boltanski and Thevenot's texts – especially On Justification