

8 Conclusions

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8.1 The setting of major public projects

This book has been discussing the genesis, planning and delivery of major public projects. Projects are the key organisational form used to deliver transformational policy change and build new systems in the public sector. This includes not just obvious physical systems, such as military systems and infrastructure construction, but also public change and transformation programmes, major IT systems, and programmes aimed to achieve major policy aims, such as decarbonising transport and energy. As a leading official in delivering such programmes in the UK stated, “The vast majority of government policies are delivered through projects of various forms” (Meggs 2017, p. 3).

Currently, more than 20% of global economic activity takes place as projects, and in some emerging economies it exceeds 30%. World Bank (2009) data indicate that 22% of the world’s \$48 trillion gross domestic product (GDP) is gross capital formation, which is almost entirely project-based. In India it is 34%, and in China it is 45% [of GDP].

(Scranton 2014, p. 1)

We therefore have considerable experience of undertaking such projects. However, it is well-known that these efforts have not always been viewed as successful, either by the public or by governments. Samset and Volden (2016) looked at data in Norway on how such projects were set up, and found a number of ‘paradoxes’ or dissonances which need explaining so that we can understand how to avoid or overcome them. This book has been considering those paradoxes.

So what are the ‘paradoxes’ that are the subject of Samset and Volden’s paper? Are they true paradoxes in that two contradictory positions appear to be true (such as the exploration/exploitation contrast in organisational ambidexterity)? Or are they simply examples of the phenomenon frequently seen in organisations of the ‘Knowing-Doing gap’ (Pfeffer & Sutton 1999)? Do we really know how to make our projects deliver, and if we utilised the lessons

of Pfeffer and Sutton, could we develop our organisations so that they more often deliver projects in what we know to be the better way?

It appears from the last six chapters that the aforementioned paradoxes are more subtle than either of these, and are inherent to some extent in the front-end of any project, the evolutionary process of which is embedded within its environment. Such paradoxes are exacerbated by the nature of major projects in the public and political domain. They naturally occur in actual practice, and we can recognise them, the suggestion being that these paradoxes give rise to behaviours that lead to inadequate analysis and decision-making, and disbenefits to the final outcome. The object of this book has been to explore such paradoxes, to explain *why* they arise, consider how to manage them, and where possible, to suggest what behaviours we should be encouraging to try to avoid their negative effects.

How have we approached these questions? Our approach has been to look at projects as they are embedded in actual public practice. There has been a lot of research in the area of projects and project management in the public domain, mainly falling into one of two types, and leaving a gap in what we know:

- i There is considerable research on what organisations need to do and why, which regards projects as individual ‘black box’ entities: strategy, societal transformation, economic geography, etc. – well-grounded but treating projects as entities that realise strategy. There is also a stream of research looking into what projects are set up to achieve and whether or not they achieve this: key here is a stream of research by Flyvbjerg and colleagues – most famously in Flyvbjerg (2003), but with considerable later research (although there is also a stream of research arguing against some of their findings and pointing in particular to Hirschman’s ‘Hiding Hand’ idea, e.g. Ika et al. 2021).
- ii There is also considerable research on ‘project management’, looking within a project, assuming a specific task has been well-defined and presented for a project team to achieve, and ignoring the environment around the project. These were traditionally rather theory-light, normative studies, but recent years have enlarged the scope of such work.
 - Neither looking solely at the environment or solely at the project is sufficient. The move recently into ‘Project Studies’ (e.g. Geraldi & Soderlund 2016) recognises the need to study both the project itself and its environment – and the complex interfaces between them (some of the research by Ika has also started to look ‘under the bonnet’ of projects). A ‘project’ is not a separate entity from its environment, but we must understand how both work together, particularly as the project is formulated and planned. Hence we have taken such a holistic approach in this book.

- The book has tried to explain behaviour in the setting-up of projects within their real environments. Each chapter has taken a different aspect of the front-end of the project, offering a depth of material that warrants careful study and provides lessons for the practising manager. This chapter takes a cross-chapter view, and brings together some thoughts on seven ideas that crop up in most, if not all of the chapters: the problem or need that triggered the problem; the jump to an early project solution; stakeholders and consultation; information generation and flow in the project; accountability for the results of the project; and reflecting back on a project.

8.2 The front-end as a process

Traditional thinking, as described above, has looked at the project as an exercise to carry out a defined task in a specific time, at a specific cost. As we have looked at the paradoxes, we have seen that these arise because the decision to carry out a project, and the definition of what that project is, is not a specific point in time, but a process that can take considerable time. The generally accepted discussions and analyses of such activities often see front-end processes as being outside of time, based on the implicit assumption that their own dynamics should not impact the results of the project, but this is clearly not correct. We have been exploring this process that derives from the initial idea or recognition that ‘something must be done’, to the point where a project is agreed, ‘signed off’ and made to start – what is generally known as the ‘front-end’ (Williams et al. 2019).

This process might not be straightforward, even in simple projects within a private company. Within the public sector, the project has to emerge from a mass of stakeholder interests and political influences. There is a need to communicate between all the different factions, and Chapter 4 takes the idea of representation construction to conceptualise the project front-end – not only internal representations but also external representations, which are key for communicating about the project and eliciting assessments from decision-makers and stakeholders. This takes place over time, with changes and revelations in the process, as discussed below. Even then, the various stakeholders and decision-makers do not share common goals, and, indeed, might be driven by a variety of cognitive, emotional and social reactions, so that decision-makers will also need to be in a process of filtering and balancing those views.

This process cannot be seen as a sequence of rational, logical decisions, but must take into account the above influences. We have been looking at how it explains the paradoxes, and how we can use this knowledge to design better front-ends. This has been the driver for the chapters. Chapter 2 considered how project aims are defined; Chapter 3 looked at the logic behind the process, and in greater depth at how one major public body’s front-end process

aimed to tackle these issues; Chapter 4 used the processual nature of the front-end to explain the trade-offs that must necessarily be made.

Perhaps the clearest illustration of the temporal effect of the front-end is the activity of project estimation. While well-researched as a ‘one-off’ activity, this book has been exploring the effects of the processual nature of the front-end. Chapter 5 traced the changes to estimates as information became available in the front-end, quoting a parliamentary committee report stating that ministers were too keen to commit to cost and timescale estimates (which are usually stated deterministically, i.e. with no uncertainty bounds, despite the early stage of development) early in the process. They go on to say that “project managers become tied to these estimates. The early estimates can shape the rest of the project delivery ...”. The earliness of these estimates can be forgotten later, as only the final, approved estimate is remembered (the ‘cost estimation paradox’), but early estimates can shape a project if they are wrongly relied upon. The extensive case study presented in Chapter 6, exploring many of the paradoxes illustrates this.

These chapters, of course, overlap, and we have tried to include cross-references between them. The ‘paradoxes’ themselves are not ten independent paradoxes, but are related causally. This is a simplification, many of the paradoxes being mentioned in the various chapters, but Figure 8.1 shows where the interests of the chapters are most focused, and how the sequence of chapters to some extent follows the causal effects of the paradoxes.

8.3 The project trigger

As can be seen, we should first consider what has prompted the project (Chapter 3 uses the term ‘project trigger’). What are we actually trying to achieve in our project? Success is multifaceted, but primacy should be given to the objective for embarking on a project. If we concentrate purely on the tactical objectives of the project (time/cost/scope), we are missing the point. The part of government which wants (or needs) to achieve something ought to consider first what it is trying to achieve and why, in the short and long term – including the long-term effects on sustainability (as discussed in Chapter 4). It is only then that we can logically move on to the ‘front-end’ of the project.

These are easy statements to make, and Chapter 2 explored the difficulty and complexity of establishing a strategic project aim in the public sector. Such complexity includes the wide range of heterogenous stakeholders with different aims, the frequent difficulty of specifying, let alone quantifying targets for the ‘public good’, the added difficulty of comparing these disparate benefits with a single cost, a wide range of political factors, including the mismatch between project lifecycles and budgetary or political cycles, the turbulent socio-economic environment around a project that might change perceptions of its target and its success, the question of whether it is the project or other parties that are responsible for reaping the benefits, the position of the project goals in relation to other related projects, and so on. Often it is

not feasible simply to specify a set of well-defined project goals which remain constant throughout the project.

It is in the nature of public projects that there is a wide range of heterogenous stakeholders, usually with a wide range of heterogenous aims and objectives. Stakeholder engagement, establishing success criteria and balancing these, for example, is difficult and time-consuming. It can give results that the commissioning department might not like, or, indeed, the requirements might be mutually conflicting, as in Chapter 4's fourth vignette concerning the freedom of individual cars. Sometimes public debate on the perceived need is lacking altogether. In Chapter 6's Betuweroute case study, "it was not made explicit what 'success' would mean, not even in tactical terms". There were simply notions of the benefits of extra capacity and strategic advantages; indeed, if "success was defined in quantitative economic terms [a specific report] would undermine the claim that [the project] would be a success". We will discuss this further below.

For projects in the public view, the immediate is often more pressing than the longer term. It is perhaps because of all these difficulties that it is so easy to concentrate on the well-defined and more easily defensible 'tactical' success criteria. Estimating and setting tactical targets is known and comfortable, and avoids the fundamental question of what we are trying to achieve. Defining a project with tactical success measures also gives stability in a world where the perceptions and meanings of the objectives might be disputed and changing. Moreover, public perception often focuses on the tactical on-time/on-cost criteria rather than the strategic project objectives. Certainly it appears to be a general phenomenon that, rather than logically concentrating on achieving the end result, the public sector often measures success in terms of tactical performance – the 'success paradox'.

These pressures and issues clearly feed through into the project front-end, and muddy the waters even before the start.

8.4 The early solution

The 'paradox of the significance of front-end management' describes how less effort is spent identifying the best conceptual solution than on estimating and improving performance against tactical success factors. Public views and perceptions are current and pressing now – so it is not surprising that the planning horizon is too short, and that short-sighted decisions are made (the 'paradox of myopic decisions'). Indeed, often, and perhaps due to political influences (such as a minister's 'pet project'), we decide on the solution or project upfront, without the logical sequence of identifying the problem that is to be resolved, or the needs that are to be satisfied, before exploring solutions.

Chapter 4 introduces the 'knowing vs exploring' trade-off: we need to explore the solution space, but how can we explore it unless we understand the solution that we are exploring? On the other hand, if we study individual solutions too much then we may neglect the exploration. In practice, if

we consider a solution, we need a representation that reveals the unknowns and complexities, and guides specific knowledge production. The more we consider this solution, the more we need to know about it, and so the more we focus on it rather than exploring other possibilities. Moreover, this or that knowledge will only be applicable to this specific solution and cannot be redeployed for evaluating alternative solutions. This implies elaborating particular solutions without sufficiently exploring other, different solutions (the ‘paradox of the opportunity space’), as well as being swamped by too much unnecessarily detailed data (the ‘paradox of early information overflow’). This trade-off may also provide an indirect explanation for the ‘paradox of the significance of front-end management’, since the focus is on developing the one solution in the best possible way rather than selecting amongst solutions about which little is known.

The discipline of a structured process ought to help ensure that our front-end follows a logical process such as that shown in Figure 3.1. As Chapter 3 discussed, this ought to help lessen the ‘paradox of the opportunity space’, since multiple solutions or concepts should be generated by the initial process. It ought also to help lessen the ‘paradox of strategic alignment’, as the objectives and benefits of a project have to be clearly articulated upfront. Indeed, there might be a lessening of the ‘predict and provide’ paradox. One important recommendation in Chapter 4 was to ensure that the governance of the front-end provides conditions that allow responsive actions and changes. However, the fundamental trade-off remains, and the experience is clearly often that of jumping into a solution too early.

Sometimes, of course – maybe often – the extreme position is taken of adopting one solution at the start without considering any other solutions at all. Based on the Norwegian data, Chapter 7 claimed that “most projects start out with only one specific conceptual solution to a problem”. This can be driven by political considerations. In the C-NOMIS case discussed in Chapters 2 and 5, the political agenda was considered. In the Betuweroute case study in Chapter 6, key actors “had no interest in first discussing the precise problems and alternative solutions The decision-making procedures did not ask for a clear assessment of the problems/challenges, nor for alternative solutions”.

Public projects are clearly highly complex in terms of the meaning of success, the complexity of stakeholders, the definition of the project activities, and so on. But public and political decision-making demands simplicity, and ‘deterministic estimates’ (Chapter 5) as soon as possible. Chapter 5.3 discussed two case studies illustrating this dissonance – perhaps going some way to explain why early, sometimes very expensive attempts to estimate costs and benefits were disregarded (the ‘paradox of disregarded analyses of costs and benefits’), and anyway defining individual solutions too early, before the solution space was properly explored.

All of the above points to an early commitment to deciding on a specific solution upfront, the results of which have been explored throughout

this book. It affects estimation, since costs are considered at an early stage based on earlier, lower cost estimates before fully knowing about the solution (Chapter 5 talked about the ‘escalating commitment of decision-makers’). Chapter 6 described this ‘lock-in’ effect, which might be caused by political decisions, or reliance on early (too-low) cost estimates, followed by escalating commitment, the need for justification, inflexibility and the closure of alternatives.

Even here, though, the solution is not simply to avoid early solution choice in all circumstances, because the project owner is not a passive figure seeking a solution, but rather an active participant. Chapter 4’s ‘evaluation vs shaping’ trade-off discussed the compromise between evaluation and leveraging a solution to shape the future. Major projects are always subject to significant uncertainty and lack of knowledge, so evaluation of options can only go so far. Project sponsors often therefore focus on shaping the world around the project, and project representations become a future-making tool. This perhaps explains, and to some extent justifies ‘the paradox of the opportunity space’ and also the ‘paradox of the significance of front-end management’: endless evaluation does not always promote a better project, but sometimes the rapid selection of a solution – if not the best solution – may, in fact, be desirable because it facilitates the structuring effect on the environment.

Chapter 7 recommended an *ex ante* review at the end of the front-end before a project actually goes ahead, and offered some guidance. After these chapters were written, the UK National Audit Office (2021) published a synthesis of how they review major projects, which could provide useful guidance, particularly for *ex ante* reviews. A strong governance process should create a ‘stop-go’ hurdle before the project proceeds, such as the government decision in Chapter 3, particularly if it includes the requirement for such an *ex ante* evaluation, as in the Norwegian system described in Chapter 7.4.

8.5 Stakeholders and consultation

Chapter 2 described the wide range of stakeholders that may be involved in a project. Some will be powerful elements within government; some will be disinterested regulators or permission granters; there may be some who feel powerless, but have important views to express in what is ultimately a public project; pressure groups might consider themselves to be involved; hence there is likely to be a hierarchical range of analysts and decision-makers. Unlike much of private industry, the process is (or at least should be) carried out in the public view – and with the knowledge that there could be public and parliamentary scrutiny after the event. The public, particularly, can be very vociferous in expressing their views about such projects; the use of the word ‘uproar’ in Chapter 4’s third vignette, when a particular element was left out of a public presentation is not uncommon.

The discussion above and in Chapter 2 showed multiple issues in gaining input from a range of heterogenous stakeholders with possibly conflicting

views. This need to consult stakeholders is discussed in Chapter 4's 'pluralism vs support' trade-off. There are clear problems in trying to gain a complete pluralistic scrutiny of the front-end from all stakeholders – this muddies the water to such an extent that a solution may not be found, or may prevent supporters from rallying around the successful option, and offer arguments for opponents. Again, this is a difficult balance in a public-facing project: the need to consult fully against 'paralysis by consultation'. One suggestion in Chapter 4 followed the observation that innovative technologies, including systems such as Building Information Modelling (BIM) are already used to develop product designs, and "an unexploited advantage of these technologies may be the possibility to enable collaboration with stakeholders at the very early stage of a project".

Rarely will any of these conflicting views be from disinterested viewpoints, as stakeholders want specific benefits, but few will be paying for these, or paying for over-spends, which can lead to the 'paradox of perverse incentives'. This is where projects which lay no financial obligations on the target group may cause perverse incentives – we will revisit this below.

8.6 Information

A key aspect of the front-end being a process rather than a point in time – a very long process in some cases, such as many military projects – is that we have to consider the temporal flows of information.

Running through all the chapters (see Figure 8.1) is the 'paradox of early information overflow'. Rather than carefully assessing, and making judgments on selected key information, there is a deluge of information upfront, all being very early indications, and decisions are based on these. This leads to early solutions, as highlighted above. As stated in Chapter 7, "in many cases, the amount of specific, detailed information contributes to restricting the original choice of concept to the extent that it will eventually be the realised option". This illustrates what happens in practice with Chapter 4's 'knowing vs exploring' trade-off – it is not just that by exploring individual solutions too much, we *may* neglect the exploration – in fact, this is what happens in practice. There is merit in making strategic decisions on 'scant information' (see Williams et al. 2009). Chapter 7 discussed how early decision-making should consider the problem in its context of stakeholder interests – "rather than being a hindrance, lack of detailed information early on can actually be a benefit, providing focus and flexibility to the analysis".

As the front-end proceeds, Chapter 5 described how new and better information becomes available. In addition, Chapter 7, in particular, considered the validity of information over time. While some data might remain robust over the period of the front-end, demand data, for example, might change over a short period. This is particularly true of projects with a longer front-end, such as military projects. In the well-known torpedo battery example,

which was “officially opened as planned and without cost overrun, it was closed down one week later by Parliamentary decision” (Williams & Samset 2010, p. 40). An *ex ante* review before the project was executed might surely have understood the out-of-date premise for the project.

Indeed, the public conception of rational decisions made at a single point of time in the front-end is clearly at odds with the actuality of humans’ sense-making, both as they explore options, but particularly as they seek to know more about particular options. Chapter 4 talked about the “improvisational, bricolage-like nature of representation construction”, discussing not only how the information comes to hand, but also how the mechanisms by which it is represented can have considerable impacts upon the process of understanding.

This dispassionate discussion of information presumes that the main characters are disinterested and unswayed by external motivations. Chapter 4 already noted the need to – and benefit of – “consider[ing] a broader range of cognitive, emotional and social reactions”. However, the work of Flyvbjerg (2003 and following) would point to ‘strategic misrepresentation’, as political or other motivations seek to influence the information and particularly the estimates put forward. Chapter 5 discussed how,

this may manifest itself in assumptions that may be best described as ‘underdeveloped’ and optimistic forecasts of future long-run benefits. Whilst an unrealistically low initial cost estimate may increase the chance of the project being funded – future problems are ‘baked in’ and are often irreconcilable.

Examples of this in the public sector are legion. Within this book, the extended Betuweroute case study in Chapter 6 described some of the political estimation of cost, with one official not sleeping for fear that politicians would read some specific, disinterested, better – and much higher – cost estimates and “a positive decision to build would be endangered”. The final cost was, indeed, close to those disinterested estimates. One issue, as Chapter 6 pointed out, is that “those who benefit from a positive decision to build are not those who need to pay”, which leads to the question of accountability.

8.7 Accountability

Chapter 2 discussed the multitude of stakeholders and their differing needs and desires. However, this only considered what they wanted out of a project, rather than their input, Chapter 6 bringing to the fore the ‘paradox of perverse incentives’ for those actors who do not have to contribute.

In a public project, there are many actors with many motivations, who mostly do not have to pay if the project goes wrong. For example, “the Port of Rotterdam supported the project but did not have to pay, so it was easy for

them to ask for the line” (Chapter 6). Furthermore, those responsible for providing estimates can make these unrealistically low (or benefits predictions unreasonably high) since they do not pay for the results:

the paradox of perverse incentives explains that it made sense for proponents of the Betuweline to come with excessively low cost estimates. Next a process of lock-in occurred, as a result of which there was no way back, long before the decision to build.

Indeed, Chapter 6 showed how this underlying paradox can loop back, helping to explain several of the other paradoxes (which would start to make Figure 8.1 more realistic but somewhat difficult to read). Perverse incentives can be so strong that an actor can be “motivated to make choices resulting in a project that is a complete failure seen in retrospect” (Samset & Volden 2016, p. 308).

Therefore, a key governance question in such projects is: who is accountable for the outcome of the project? In the language of Chapter 2, responsibility for delivery of the as-defined project output (i.e. the ‘tactical success’) is in the hands of a project manager, and often there is a contract with a private sector partner. However, as Chapter 2 explained, the public is interested in the overall strategic success, in other words, delivery of some useful contribution to the life of the country, at a reasonable price. There is therefore an increasing realisation that there has to be accountability within the system for the project outcome – the benefit that the project brings to the country.

In the UK system there is a position known as the ‘Senior Responsible Owner’ (SRO) who is responsible to the government and to parliament for delivery of both the project and the benefits, and who has to sign a letter agreeing to this (see UK Government 2019 for an example). These responsibilities are set out in a UK Government handbook (Infrastructure and Projects Authority 2019), which clearly states, “The senior responsible owner is accountable for a programme or project meeting its objectives, delivering the required outcomes and realising the required benefits. The senior responsible owner of a government major project is accountable to parliament”.

This is easy to state, but there are clear difficulties which we have already established.

As pointed out in Williams et al. 2020, the evaluation of benefits can be difficult to disentangle from the general movements of the economic environment; there is often a move away from the original pre-defined project (launched under a previous national budget and maybe even a different national government) and “the emergent and sometimes fluid nature of benefits”. Furthermore, some projects only facilitate the gaining of benefits, while other bodies are required to ‘harvest’ those benefits. For example, a piece of infrastructure might facilitate economic development, but only if the regional authorities take advantage of the project to make that development; supply of an IT system might make working with government easier, but

only if it is utilised. Sometimes the causal route between the project output and the desired benefit is long and difficult to justify, for instance between the building of new prisons and the reduction of re-offending (see Chapters 5 and 2).

But it is not the officials themselves who actually execute the project. So far we have discussed only the public sector and the demands upon decision-makers. The project itself will be executed by the private sector, so at some point there needs to be a contract signed with a company or consortium – again trying to avoid ‘perverse incentives’. This might be easy in the hypothetical situation where tactical success factors are easy to define and are completely aligned with the strategic aim of the project, which remains constant throughout. However, we have already seen that none of this is likely to be the case, and that some sort of partnership needs to be formed with the private sector. There are also likely to be other private companies with a strong interest in the project, even if they are not part of the project execution team.

Identifying and allocating risk within such outsourced contracts is often complex, and our understanding of these is having to develop to ensure that the public sector has appropriate contracts (Bloomfield et al. 2019). Even if we can identify the risks unambiguously, there is a trade-off between allocating responsibilities and risks between participants and enhancing collaboration. In Chapter 4, seeing project representations as ‘boundary objects’, the more these are defined prescriptively, the easier it is to allocate responsibilities, but the harder it is to produce collaboration. The solution to this recently has been collaborative governance and contractual forms – but the requirement for these often logically implies the selection of, or at least convergence into, a conceptual solution early in the front-end process (‘paradox of the significance of front-end management’). Again, Chapter 4 looked at relational contractual arrangements which allow responsive actions to obstacles or ‘real life’.

8.8 Reflecting on the project

As we have said above, public projects are carried out with a certain degree of transparency, and the public arena will want to know whether they have been given value for taxpayers’ money. The ‘public arena’ in this case includes not just the general public – who may have particular slants on their views (see Chapter 2). It also includes formal auditing organisations (in the UK, the National Audit office) as well as governmental or parliamentary bodies (in the UK, this includes parliamentary committees). Indeed, Chapter 5 referred extensively to one series of hearings by a UK Parliamentary Select Committee.

An evaluation should stand back and consider the project against the success criteria, as laid out generically in Chapter 2, and again in Chapter 7.3. This was done in Norway by the Concept programme (as described in Samset & Volden 2016), with results laid out in Chapter 7. Achievement of cost/time targets can be evaluated quantitatively, although this can be problematic if

the final output differs from (or in some cases bears little resemblance to) the original plan, perhaps because circumstances changed during the project – which is not unusual for public projects. However, higher level criteria such as ‘effectiveness’, ‘relevance’ and ‘sustainability’, which might be difficult to quantify (let alone monetise), have to be largely evaluated subjectively.

There are significant problems with larger public projects in evaluating benefits *ex post* (see, for example, Williams et al. 2020). For projects having an economic impact, the effect is often indistinguishable from general changes in the economy (i.e. it is difficult to evaluate what would have happened without the project). As described above, some projects only facilitate benefits, leaving other bodies to ‘harvest’ those benefits. Where projects are part of a portfolio, it can be difficult to disentangle the effect of individual projects. This means that the clear, unambiguous allocation of benefits to a particular project might be very difficult in some circumstances and requires comparison with hypothetical counterfactual options.

However, despite all this, Chapter 7 shows a process which is operating well and has the capacity to contribute to greater delivery of projects, as well as ameliorating the effects of all ten paradoxes.

8.9 In conclusion

In conclusion, in this book we have looked at the reality of the genesis planning, launching and delivery of major public projects. There is plenty of advice and guidance for the public decision-maker, but actual practice appears not to be so simple. As Samset and Volden (2016) showed a few years ago, there seemed to be a number of curious ‘paradoxes’ causing projects to be launched in ways that were later seen as not of the best. Figure 8.1 shows these paradoxes and the way in which many flow from each other.

Looking more deeply into the front-end of the project showed a number of fundamental trade-offs in Chapter 4 which to some extent are unavoidable. It is important that a project understands, acknowledges and manages these trade-offs and steers a clear course.

Consideration of the ‘paradoxes’ has enabled us to understand them better, as well as the underlying causes – both from the environment and from the actors. Some aspects are incorrect behaviours that need to be understood and avoided. Some, however, need to be understood and managed as paradoxes, as argued in emerging paradox theories such as Schad et al. 2016 (see Chapter 4).

This chapter cannot do justice to the depth of each individual chapter, but has noted some themes which cut across all chapters.

The authors of the book hope that their discussions will help to produce more clarity for decision-makers – as well as public understanding of the decisions being made – so that some behavioural traps can be avoided, better decisions made in paradoxical situations, and so that we can plan and deliver projects that actually provide our countries with the benefits they need efficiently and effectively.

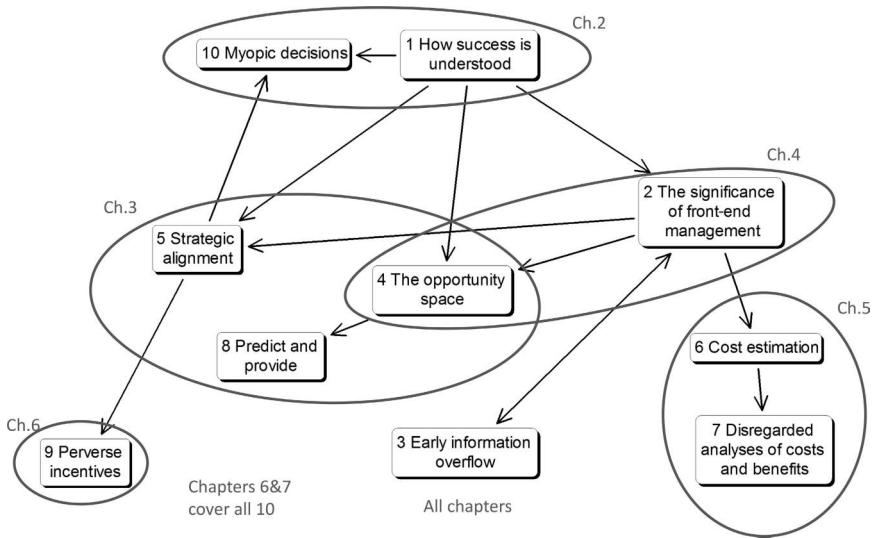


Figure 8.1 Chapters and paradoxes.

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