

## 8. Approaches to Governance in Public projects – The Norwegian Case

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This book mainly focuses governance through the lenses of private sector organizations and projects. In this chapter we try to supplement and contrast this perspective with a description of public sector and the differences this represent. One main point highlighted is the use of governance frameworks implemented to secure successful investment projects. Throughout this chapter Norway will be used as the main example. The reason for this is not only that both authors are Norwegian with wide experience doing research on Norwegian public projects. Actually, we claim that Norway is a pioneer in the area of governance of public projects, having introduced a governance scheme applied to all the largest state-funded investment projects across sectors, with external quality assurance of the planning documents as the essential element.

The overall objective is to develop front-end management and project governance as an academic subject. Project governance as seen from the financing party's perspective has long been neglected in project management. In recent years it has been widely recognized that there is a need for a more holistic and interdisciplinary orientation with a specific focus on the front-end stages of a project. This chapter aims at contributing to this by reporting the practices and results achieved in Norwegian public projects.

## 8.1. Public sector – governance for the common good

### 8.1.1. An overview over recent developments

In this book, most chapters focus private sector, but this chapter aims at filling in the picture to indicate differences and similarities between private and public sectors in terms of governance relating to projects.

One obvious characteristic that define the difference between public and private is ownership: Public sector consists of organizations owned by the federal, state, regional or municipal authorities. Private interests own private sector organizations. Another characteristic is that they are normally judicially under different legislation. A third characteristic is what they do: The major issue in public sector has always been providing basic services needed to develop and keep up society. Public goods, defined by economists as being non-excludable and non-rivaling, are a special case – such goods will not be produced in a free market since it is impossible to make a profit – therefore they must be provided (not necessarily produced) by the government. But the public sector also provides and produces pure private goods such as health and education, based on a value that everyone in a society should have access to them regardless of their income. Someone needs to look after and continue to develop these goods. This is why we have public organizations. Public sector is organized through central, regional or local government bodies and their agencies, whereas private sector is organized through many forms of corporations and small businesses or private firms.

A fourth characteristic has to do with incentives: Private firms have owners who, precisely because they have invested their own money, have incentives to introduce the necessary regulations and processes that ensure profit maximizing decisions. Since most firms operate in a competitive environment, they have to be efficient and innovative to stay in the market and make profits. Goal achievement is easy to verify, and leaders who do not deliver will have to go. Public enterprises on the other hand are financed through taxes (or mandatory fees collected by a monopolist), and cannot go bankrupt. Goal achievement is more difficult to verify and reward, and there is no natural incentive to ensure efficient use of resources in the same way as in the private sector.

We focus the difference between private and public sector. There is, however, a big and growing group of organizations that form “grey zones” between public, private and the third sector<sup>1</sup>. For example: there are organizations with public ownership that are operated under private sector legislation, “*to be equally efficient*” as some politicians hold. There are private companies operating services on behalf of (and paid by) the government that are normally considered public; “*because the public sector does not have the capacity needed*”. There are private sector organizations taking over responsibility that traditionally has been public domain; “*so public entities can focus on their most important tasks*”. The increasing amount of services bought from private actors in a market is called outsourcing, and we call the tendency to transfer organizations from public sector to private sector privatization. We also see new forms of collaboration between public and private organizations emerge – both on a permanent basis (partnering) and joint ventures (in single projects) across the public-private divide. The point is: The division between private, public and third sector is getting more complex and more difficult to define.

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<sup>1</sup> Not for profit sector, voluntary sector.

Focusing the public sector, researchers in economics and political science have described the development over the last decades as implementing management models from private sector in public sector organizations. The trend started in USA under President Ronald Reagan and in UK under Prime Minister Margaret Thatcher. Authors have branded this development “New public management” (NPM) and had great influence in western countries including Scandinavia (Busch 2005).

The driving force behind the development that started in the 1980’s was a growing awareness that public sector is growing in scope and cost, and that there is a need for making the most out of the available, limited public funding. Traditionally the tendency was that public sector took responsibility for the whole value chain from the buying (decision making), owning the resources, financing, and executing the production of services in the whole area of responsibility. Now, a wave of changes came towards buying execution of services in private sector using the market forces as a driving force to increase efficiency. Management theories and methods widely used in private sector became more usual in public sector: The use of goal-oriented tasks and performance measurement, the use of contracts and other regulative means like external control, use of relational management and new forms of authority.

Branded “post new public management” (post-NPM) a “second generation reform” or even “rebuilding the State” has occurred (Christensen 2009, p 43). The driving force seems to be a search for more coherence in public sector, after NPM created a highly disaggregated and fragmented public sector. However, the sum of changes did have large impact on public and private sector and the effects are important for vital parts of the topic of this book: governance related to projects. The biggest change has maybe been the change in use of authority and means to regulate behavior.

Another important and parallel development seen in society is that project work has had an increasing importance across sectors and industries, including the public sector, as mode of operation. An increasing part of the total amount of work is organized as projects, and everyone is involved in projects (Jensen 2012). According to Andersen (2008) somewhere between  $\frac{1}{4}$  and  $\frac{1}{3}$  of all value-creation in society is done in projects. Turner et al. (2010, p1) confirms it is close to  $\frac{1}{3}$  or 16 trillion USD. Projects as a concept has even influenced pedagogy, language and rhetoric in general, and in specific areas like culture policy (Velure 2014). This development in society and public sector is in itself an interesting issue to study, but not the issue we study in this book. We will now look more at some specific differences between public and private sector that matters when we discuss governance further.

### **8.1.2. Characteristics of private and public sector and their projects**

The following description has many limitations. It is not intended to represent the whole scope of differences and similarities between private and public organizations and their projects. We have chosen some characteristics that we see as relevant to the discussion in this book, and the flavor of our descriptions are probably colored by the research we have done from a privileged corner of the world.

As indicated above, the public sector is not looking for profit, but looking out for the common good in society, delivering basic services that “everyone” is entitled to have access to. This indicates that:

- Organizations in public and private sector normally have very different goals and measures of success. Public sector obviously has a wide set of goals and corresponding

success criteria. Private sector normally has a relatively narrow array of success criteria, and the usual expression of this is financial result, maximizing profits.

- One reason is that public sector has a wide array of external stakeholders. Everyone is a stakeholder in some sense, as a taxpayer, as a consumer of public services or as a user of public commodities. In comparison, the private sector has (or at least takes notice of) a narrow array of stakeholders.
- The degree of involvement from these external stakeholders is also very different. In private sector the stakeholders are either “in” or “out”. The citizen is a stakeholder even when they actively choose not to be involved. They are often represented by others, indirectly through media or interest groups, or even through the public agencies placed there to take care of their needs.
- How to organize for taking care of common goods is also an area that brings in a few differences and similarities. Although not necessarily very different in structure, public sector is associated with more bureaucratic working modus, whereas private sector sometimes are described as more able to make quick decisions and shorter distance to decision makers. The difference is probably less important the bigger and more complex the organizations become.
- Mindset is probably a better explanation for differences than formal structures. Having responsibility for a wide array of stakeholders and the sustainability of common goods obviously makes decision making much more complex in a public organization than in a typical private sector organization. Since it is close to impossible to express simple success criteria in public sector, the decision-making is bound to be more time-consuming. It often requires more studies and discussions before a decision can be made. Due to the common interest and thus a lot of pressure from interest groups and media, every decision is under more scrutiny in public sector than in private sector. This means every detail matters more, and the chance that someone will criticize is bigger. These factors seem to build up to a mindset that is more directed at safety (doing the right thing, avoiding criticism) than for speed (efficiency). Any criticism of this mindset needs to be based on careful consideration.
- Dependence of each other is another aspect that we want to mention here. Public sector cannot and should not even try to do everything in society. Public sector is completely dependent of a well-functioning private sector as supplier of vital services. The other way is also true: Private sector is completely dependent on a well-functioning public sector to be able to develop. Not only as customer for their services, but also as facilitator for commercial business, provider of vital infrastructures and manager of the common goods that private sector cannot take care of.
- Decision-making is another aspect that differs between public and private sector. Not only are major decisions more complex and critical in public sector, but the decision making process is also very different (or can be – there are many variations here on both sides). Typically, in a western country there is an element of democracy in decision-making. This democracy represents involvement of stakeholders and is a quality assurance element of great importance. It does have its cost in terms of the time and

effort it takes to reach conclusion. Private sector organizations may, or may not, accept more power to make decisions concentrated in one or few individuals. We need to consider that there are also cultural elements in decision-making and that even within the same organization, whether public or private, there are different ways of reaching conclusions, who is mandated to make those decisions, and how powerful they are and how easily decisions are changed once they are made.

- Financing is an issue that often comes up in discussions about differences between public and private sectors and major public projects. Public sector is at best robust with its financing based on taxes. The tax money is far from “free” financing, but it is a solid platform for investments in good times. This means well administered countries are also credit worthy and able to finance more and cheaper than most other investors. The ability to finance by taxes is more limited on a local level, at least in Norway. In relation to major public projects we have seen a growing use of local taxes on travelers to finance transport infrastructure for example in Norway. Private sector investors on the other hand may turn to banks and other financial institutions whenever they need more money. If the risk is acceptable they will have financing, at a price set by a financial market. This is obviously different from public sector. When necessary public sector has found room for mixed models. In the 1980s and 1990s we saw the growth of Public-Private-Financing in UK to help public sector finance investments in large scale infrastructure, and the same principle has been tried in Norway, although with other arguments.
- The projects in public sector are generally bigger in terms of money and the number of stakeholders than in private sector. The complexity dimension varies across sectors and may be difficult to use as a distinction between public and private. Criticality or urgency is another dimension that represents a major challenge to governance, but there is little support to claim this is basically different in private and public sectors.
- When all this is said, there is one similarity we need to remember when discussing the division between public and private sector: It is basically about human beings with their strengths and weaknesses on both sides of the divide. It has a lot to do with the competence, attitudes and skills to solve any task at hand, wherever it is. Individuals, their relations (groups and networks) are the main resource in any value creating operation.

As indicated above, there are numerous challenges and interesting aspects of the difference between public and private sectors that may trigger interesting discussions. For the purpose of this chapter, we need to limit our scope to discuss investment projects, and even focus only large public investment projects. We will look at the case of major projects financed by state or municipality. The research we refer to in the remaining part of the chapter is all about how governance is installed in public sector to make sure good decisions are made and carried out in the form of major public investment projects. The Sugarloaf Alliance Case Study elsewhere in this book illustrates well many aspects of public sector investment projects.

Samset (2003) shows that in order to be a true success, public projects need to be strategically and tactically well performed. The strategic dimension points toward the need for the solution to be relevant for key stakeholders, not have unacceptable side effects, and to be sustainable. The tactical

dimension concerns operational efficiency and effectiveness in the process of creating that result. Further, Samset argues that success in projects needs to be considered at three different levels or perspectives: project, users, and society. The project organization is naturally preoccupied with operational issues and efficiency in transforming resources into results. The users are most dependent on the effect achieved upon taking the result into operation. Society acts as investor and owner, and specifically in public sector as steward of common goods, thus concerned with relevance and sustainability of the investment.

To secure successful public investment projects, the investing organization needs to secure some crucial factors: ensure true Cost-Benefit Analysis, transparency, accountability, incentives for efficiency, taking risk into account, prevent rent-seeking from stakeholders, etc. Flyvbjerg, Bruzelius og Rothengatter (2003) points out that many problems in projects are similar across public and private sector, and that installing stronger accountability is necessary. They point out the contrast between private sector where competition can secure accountability, and the public sector depending on transparency as means of strengthening accountability.

Governance can be divided in two main directions: Structure based governance and Relationship based governance (Klakegg and Meistad 2014). In practice, structure based governance typically incorporates five elements: Stage gate approval process, Stakeholder representation, Formal roles and responsibilities, Quality assurance, Contracts and sign-offs (Narayanan and DeFillippi 2012). Relationship based governance typically include non-hierarchical elements like: Leadership, motivation and incentives, Resource allocation, Trust and ethics, Alliances and involvement of stakeholders, Informal relations and communication (Klakegg and Meistad 2014). Some authors have discussed the relative strength of governance instruments to try to answer how to find the right balance between incentives (carrots), regulation (stick) and information (Bemelmans-Vidéc et al. 1998, Yoshimori 2005).

The rest of this chapter will focus on governance schemes and their content (regulation, incentives, information). Main focus will be on the Norwegian case, but we also comment on other countries to illustrate differences. The descriptions will unveil that no organization implements purely structural governance or purely relational governance. Elements of both directions are mixed in a pursuit of maximizing value for limited public funds.

## **8.2. Norway and the governance framework for major public projects**

Throughout this chapter Norway will be used as the main example. Norway is a pioneer in the area of structure-based governance of public projects, having introduced a governance scheme applied to all the largest state-funded investment projects across sectors, with external quality assurance of the planning documents as the essential element. No system can be understood as independent from its context. Therefore we briefly present the country and the context that it represents before introducing the model in section 8.2.2.

### **8.2.1. The context and background**

Norway comprises the western part of Scandinavia, and has a population of about 5 million. The country has an extensive coastline which is rugged and broken by huge fjords and thousands of small

islands. Traditionally sea-based activities such as fishing, shipping and shipbuilding have been economically important and they still are. In the 1960s petroleum and natural gas reserves were discovered and have since boosted the country's economic fortune.

Norway is a small, open economy, highly dependent on international trade. The country maintains a combination of market economy and the so-called Nordic welfare-model with high tax levels, high levels of public ownership and high standards of social welfare. Egalitarian values of the society are strong, and Norway is therefore on top of the Human Development Index. Public expenditure accounts for over 40 % of GDP. Generally this works well with a moderate level of bureaucracy, low levels of corruption and a relatively good ranking on the Global Competitiveness Index (no. 11 in 2014, see Schwab, 2015). But there are concerns regarding decreasing productivity levels, not least in the building and construction sector, with low competition, low innovation, too much regulation and relatively low private ownership (NOU 2015:1).

Some initiatives have been taken recently to “modernize the public sector” i.e. promoting efficiency, flexibility and a more user-oriented approach. State ownership has also been addressed including the need to separate the ownership role from the regulatory functions. However, the great advantage which Norway enjoys as a result of its oil wealth, have masked the needs for broad reforms, and the incentives to make efficient gains are not strong. Rattsø and Sørensen (2008) describe how the presence of the oil wealth has created challenges with demanding citizens and soft budget constraints in public institutions.

There is a clearly pronounced goal, agreed by all political parties, that people in rural areas should have access to the same public goods and the same standard of living as people in urban areas. This implies that the state is heavily subsidizing local infrastructure projects. Local co-financing is normally not required – the exception is road projects where there may be a certain level of user fees. Norway has about 430 municipalities, many of them very small and, in contrast to the state, financially weak. Despite this, the decision processes in public projects are often sectoral and locally based, with strong involvement from local stakeholders.

Volden and Samset (2015) introduced the term “perverse incentives” to describe the imbalance between influence and financial liabilities that would typically result in attempts from local parties to overestimate the benefits and underestimate the costs of “their” projects. These effects are described in general by Flyvbjerg and his colleagues as deception (see for example Flyvbjerg, Garbuio and Lavallo 2009). The problem is complicated further by the fact that Members of Parliament too, are often heavily involved and supporting their constituency. Decisions regarding even small- and medium-sized public projects are made at the Parliamentary level and are highly “politicized”. Whist and Christensen (2011) demonstrate how the early phase of state-funded investment projects in Norway is often characterized by “local rationality” and complex coalitions, while the more rational and analytical processes play a minor role. Welde et al. (2013) demonstrate the total lack of correlation between the Cost-Benefit ratio and project selection, based on more than 200 Norwegian road projects. OECD (2003) also supports the notion that the informal, consensus-based approach to regulatory processes is not well adapted to evidence-based decision-making.

Another problem was the extent of cost overruns in major public projects. The problem got particular attention in 1986 when the new headquarters of the National Bank was being planned. Independent experts raised doubt about the official estimate presented to the Parliament, and claimed that it should be five times higher. After the project was completed, it turned out that the

external experts were right; the final cost was more than five times the initial estimate. This of course produced a media scoop.

In short, there has long been a need to introduce stronger incentives for efficiency and cost control, and for increased rationality and transparency in public decision-making processes. The governance scheme for major public projects could, at least indirectly, be a solution to several of these challenges.

### **8.2.2. The governance framework**

The following description is based on Samset and Volden (2013). It should be noted that the scheme is primarily about governance of projects, and not about project governance or governmentality, in the terminology used elsewhere in this book. Samset and Volden (2013) however use the term “project governance” as a collective concept including both governance of projects and project governance.

In 1997, the Norwegian government initiated a systematic review of the systems for planning, implementation and monitoring of large public investment projects. The results were discouraging. Only three of 11 projects were completed within their budget, cost overruns for the other eight were as high as 84%. The study concluded that the projects were presented to Parliament at a premature level of investigation with inadequate analyses or analyses based on false assumptions. The study also found a number of factors related to procedures, qualifications, responsibilities, etc.

Year 2000 the Ministry of Finance introduced a governance framework applying to major public projects. The main content was the requirement that major investment projects’ cost estimates and management base must undergo external quality assurance before the project was submitted to Parliament for approval and funding (currently known as QA2). A tender was conducted and framework agreements signed with five groups of consultants, all with extensive expertise in project management and project cost estimation, to perform the assessments.

When the framework agreements were to be renewed year 2005, the scheme was extended to include quality assurance of the choice of conceptual solution prior to the Cabinet’s decision on whether or not to proceed with a project to the pre-project phase (referred to as QA1). The term “concept” refers to the conceptual solution that is chosen to meet a specific societal need. For example, the need to connect an island to the mainland can be solved in different ways for instance by constructing a bridge, a sub-sea road tunnel or continued ferry transport (the zero option); in this case, three conceptual alternatives. Rather than start with a project of choice, the idea is to clarify the underlying problem that needs to be resolved, describe the conditions and requirements that will have to be fulfilled and then identify solutions and assess their feasibility against these conditions and requirements. The ultimate aim is that the chosen concept is the one that is considered the best use of public funds. By introducing QA1 the government recognized that the choice of concept is the most important decision for the State as the project owner. It is at this early stage that benefits and costs are compared to determine a project’s viability and societal relevance. The competence requirements for quality assurers were correspondingly extended to include economics and social sciences.

There was now a system with two consecutive control points, QA1 and QA2, preceding two different types of decisions and thus having entirely different contents and perspective. QA1 is meant to secure tactical and strategic success, and is designed to assess the outcome and long term benefits,



relevance and viability of the project. QA2 is meant to ensure the operational success, and is aimed to ensure that cost frames are realistic and that the project outputs are produced on time and in a cost effective manner. This is illustrated in Figure 1. The figure also demonstrates that the input to the QA reviews is essentially produced by the respective government agencies, which in turn will be responsible for following up the resulting recommendations. The quality assessors shall review the documentation, check for consistency and whether the assumptions are realistic, undertake their own independent analyses, and finally give their recommendations. The decisions are taken at the political level without any obligation to follow the recommendations by the quality assessors.

Subsequent framework agreements signed in 2011 and 2015 have largely been a continuation of this system.

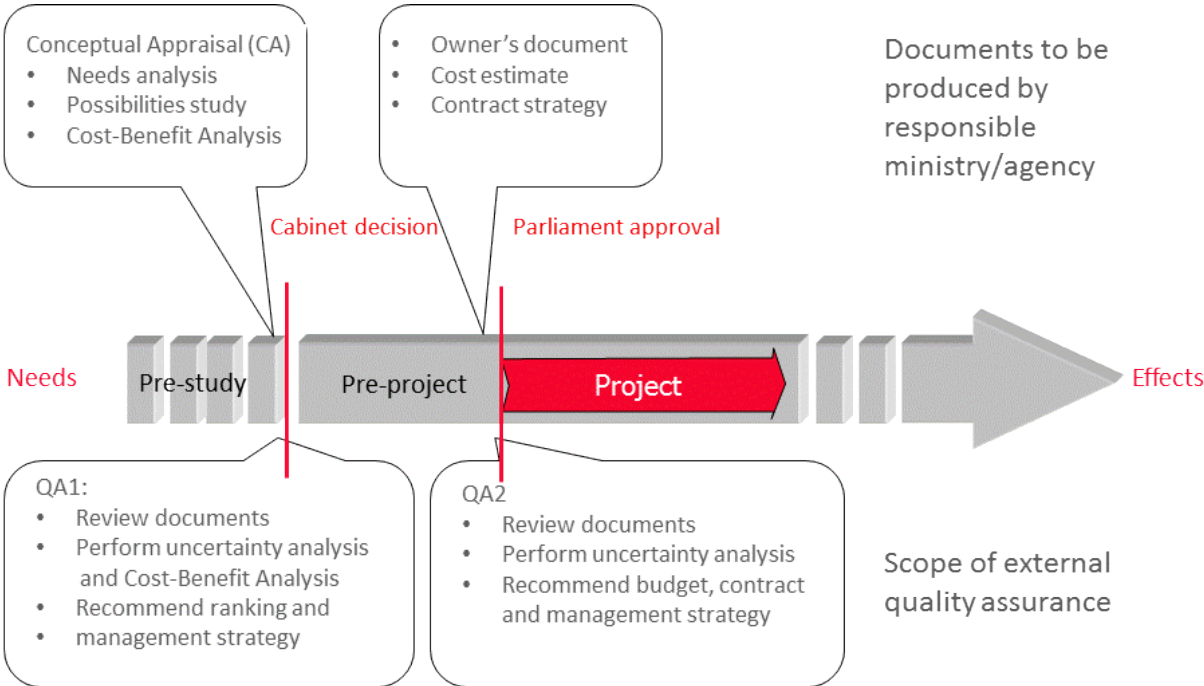


Figure 1 content of the Norwegian governance framework for major public projects

Cost estimates calculated as part of the QA2 scheme are based on stochastic estimation (probability based numbers). By means of stochastic estimation, either based on mathematical-analytical methods or simulation tools, the result is a cumulative probability distribution of investment cost as in Figure 2. PX means that there is a probability X% that the final investment cost will be at or below this level. Two key figures are P85 and P50 (the median) for the investment cost, that are estimated by external quality assessors.

The *cost frame* (project budget) approved by the Parliament should take into account the anticipated uncertainties related to the implementation. The proposed cost frame is normally P85 minus deductions for possible simplifications and reductions (reduction list) that can be handled during the project if the cost frame would be in danger of being exceeded. The budget available to the agency is lower, in order to avoid incentives to use contingency reserves, and normally corresponds to the median, i.e. P50 on the cumulative probability distribution for the investment cost. (The agency should have a budget for the project manager which is even lower).

The control aspect is essential in the QA2 review, to ascertain that the basis for the cost frame proposed to the Parliament is sufficient. But it has also a forward looking perspective to ascertain that key challenges in the implementation of the project are identified. It is important that the owner’s document defines needs, objectives and scope of the project, as well as the key requirements, timeframe, budgets and the project’s uncertainty.

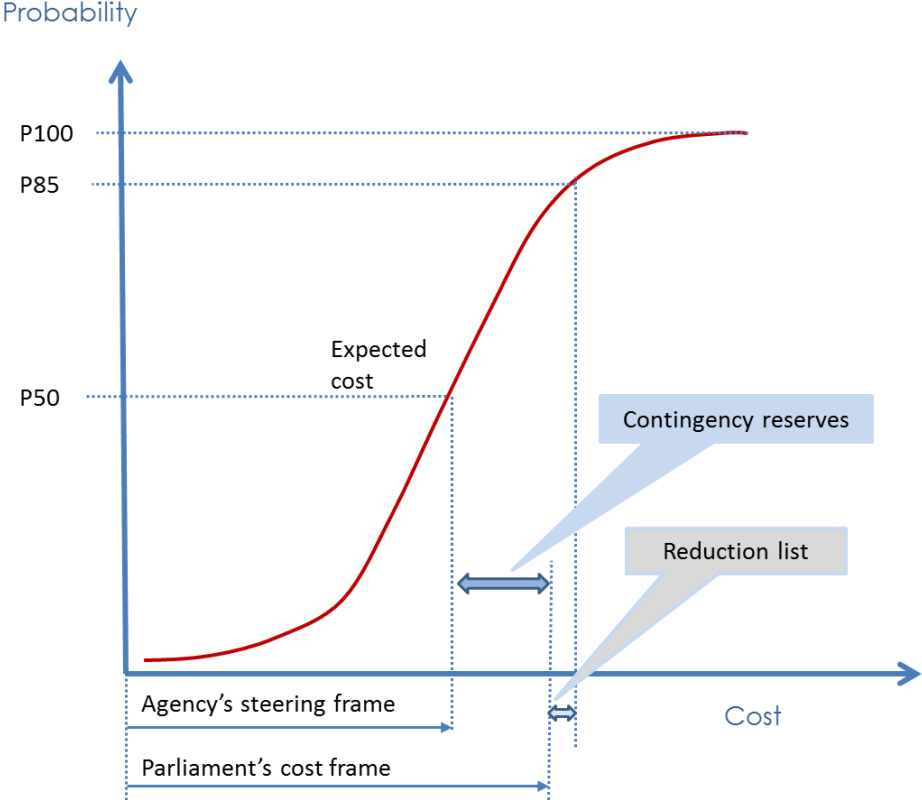


Figure 2 Stochastic cost estimation. Definition of key terms

**What the framework is – and what it is not**

In order for projects to reach their goals many conditions must be met such as:

- i. the basis for decisions is adequate and realistic,
- ii. the decision making process is transparent and as rational as possible, and
- iii. project management and control is satisfactory

The Norwegian governance framework focuses primarily on (i) above. As regards (ii), it affects decision processes only indirectly. The decisions are taken at the political level without any obligation to follow the recommendations by the quality assurers. However, with the requirement that decision documents should adopt a broader societal perspective, and be reviewed by an independent third party, the implication in the long run could be that it will be more difficult to get state funding for projects that are economically non-viable or purpose ineffective.

Regarding (iii), neither QA1 nor QA2 affect project management directly. Governance regimes pertaining to major investment projects may be more or less detailed. Previous studies indicate that a good approach for the authorities is to establish general requirements for structures, processes,

results, etc., but not interfere in project implementation as such (Samset et al. 2006, Klakegg et al. 2009). The current QA system has established general requirements for the type of documentation that must exist, but does not require that agencies use specific tools, formats, etc. and will not interfere during implementation once the project has been initiated. This is in line with the new public management reform discussed earlier. The idea is that this provides the best pre-conditions for efficiency.

In principle, the Norwegian governance framework is rather simple, in the sense that it has only two interventions, no detailed requirements, and applying only to the biggest state-funded projects, about 20 each year.

It implicitly assumes that the individual agencies have appropriate procedures for project implementation, including good leadership, tools and techniques, competence and capacity, culture and ethics, and project management practices more generally. However indirectly, the intention is of course to also to promote and improve these elements. The idea is that such an independent review has a disciplining effect and that agencies will take action to improve their practices.

As part of the scheme there is also a certain emphasis on exchange of information and experience among civil servants and consultants involved in the scheme. The Ministry of Finance holds a yearly Quality Assurance forum where different aspects of the scheme are discussed, including the need for guidance concerning the elements in the analyses. The general rule is that the public agencies, such as the Norwegian Public Roads Administration in the case of road projects, create and follow their own guidelines, but in some areas they might collaborate on the development of joint guidelines and uniform practice. Not least, a trailing research program, The Concept program (presented further below) follows the scheme and the projects included in it continuously, helping to identify and disseminate best practice and to develop better tools and methods.

### *Brief comparison with other countries*

Several other countries have established similar formal, cross-sectorial project models for public investment projects in recent years. Samset et al. (2015) describes and compares five models in addition to the Norwegian. See also Klakegg et al. (2015) for a comparison of the schemes in Norway, the Netherlands and the UK.

Norway and the UK were first, around the turn of the millennium, to establish stage-gate models requiring quality assurance before certain decision points. The British system is more ambitious, with 4-7 gates, not just in the front-end but also during implementation and after project completion. On the other hand, each assurance in the UK is simpler and less time-consuming, as the quality assurers do not perform their own independent analyses. Also, it is more flexible in the sense that the scope of the assurance and approval process may vary from project to project. Both schemes have developed over time, with increasing focus on the very early stage and the strategic perspective. Other countries, such as Canada (Quebec), Denmark, Sweden and the Netherlands, have since introduced similar schemes, largely inspired by the Norwegian and the British models. The original justifications for introducing the schemes differ to some extent (value-for-money, cost control, faster project implementation).

One of the characteristics of the Norwegian model is the use of private consultants to perform the quality assurance, instead of public employees. Denmark and the UK also involve private consultants,

and Quebec did so until recently when instead a separate public organization was established to deal with quality assurance.

Moreover, Norway seems to be alone in using probability-based cost and steering frames. The UK and Denmark use adjustment factors (a proportional factor is added to the base estimate of both time and risk) depending on project type and risk tolerance. Other countries, like Sweden, are more focused on the total Cost-Benefit Analysis than on getting the cost estimate right.

The conditions for financing are also different in each country. Several countries seem to be aware of the problem here labeled perverse incentives, thus in addition to the quality assurance they require co-financing from those who receive the benefits of the projects. For example, The Netherlands require co-financing from the initiating party as the main rule. The Scandinavian countries generally do not require co-financing.

### **8.3. Practices in Norwegian public projects**

This section addresses specific issues concerned with governance within the context of projects. Acknowledging that the project is a part of a bigger whole, we need to put it into context: The Norwegian governance framework for major public projects is dominant in the public sector and thus relevant for this section too. This section as a whole will give an impression of the results of framework and its influence on Norwegian projects, as well as some indications as to why it is so powerful.

#### **8.3.1. Project governance in autonomous public agencies**

The Norwegian project governance scheme is not primarily about project governance. This was clear from the beginning, at the introduction back in the year 2000. It was about strengthening the decision-making and control of investments at a higher level (Klakegg, Williams and Magnussen 2009, p 94). The underlying intention was of course to improve the performance of individual projects. The focus, however, was on a higher level in the organization – in this book associated with governance of projects (see next section). The idea was that if the owner became more professional in defining projects, setting up a good framework for planning and executing projects, and becoming a more demanding customer, the agencies, project managers and private sector suppliers would follow up and become more professional too (Klakegg 2010). This has proven to be a correct assumption. Obviously, all improvements in the period after year 2000 did not come because of the introduction of the QA-scheme, but there is little doubt that it helped. By introducing demanding requirements on the top of the pyramid, the effect trickled down through the project organization and set higher standards, results improved accordingly (Klakegg et al. 2009; Samset and Volden 2013; Klakegg, Williams and Shiferaw 2015).

The Ministry of Finance assumed that the Agencies would not accept being told from above how to do their projects. This is consistent with the way the Norwegian government is organized and the egalitarian Norwegian culture. Therefore they designed a framework that had few interventions, so that everything in between these controls was up to the agency to decide. During the interventions on the other hand, the projects are subject to critical scrutiny (Klakegg et al. 2009). This leaves the

agencies fully responsible for their own projects and the way they organize and manage their projects, and at the same time give the Ministries assurance that their projects are well taken care of.

In terms of governance, this leaves a lot of flexibility to the agencies. They may find the best ways to plan and execute their projects according to the situation and needs in their specific responsibility area. It means for example that infrastructure projects are planned and executed differently in the road sector than in the railway sector and again different from the sea transport sector or aviation. This has its strengths and weaknesses. Among the positive elements is the ability to define best practices for each mode of transport – designed to best fit the technical and organizational challenges in each agency. It also leaves the agency in charge of all aspects of planning and management so that no agency is forced into practices they do not want or see fit for their specific area of responsibility.

On the other hand, the control effort at the two critical decision gates is very demanding, and the different practices in different agencies increase the variety of methods and procedures which adds to complexity. The agencies and the project organizations have to put up a lot of effort to accommodate the controls during quality assurance. The proceeding QA reports are also powerful and normally seen (by the Ministry of Finance and the decision makers) as an important source of information about the benefits of the investment (in QA1) and the investment cost, risks and execution strategy (in QA2).

This fine balance between flexibility that leaves the agencies a wide room to maneuver in terms of their operational choices and the rigidity of the two quality assurance interventions is challenging but gives good rewards. In the Norwegian work culture this marks the responsibility for each party and allows the freedom to decide for themselves. Behind this balance of powers lies a fundamental balance between trust on one hand and distrust on the other. If the controls in one of the two major decision gates expose any critical issues that are not adequately dealt with, the QA will not recommend that the project pass into the next phase without meeting the specific requirements proposed by the owner ministry and Ministry of Finance together.

The influence of governance on projects work directly through the decisions made and the requirements included in the Norwegian model. To be able to meet the requirements, the projects have to perform certain activities and use practices that are considered proper for the job. These practices are partly adapted from international best practices and partly developed in Norway by the ministries, agencies, consultants and researchers together – in the Concept research program or one of the other arenas designed for learning and improvement following the QA scheme.

Alignment of strategy and project objectives is a key issue in project governance. The Norwegian scheme addresses this by intentionally putting more of the decision-making power to central government and high-level political arenas where it belongs (Klakegg et al. 2009, p 93). By making crucial decisions on the purpose of the investment, the strategic intent, and the objectives and execution strategies on a high level, combined with critical scrutiny that focus on consistency throughout the planning of the project, strengthen the alignment between government strategies and project planning and execution. There is still great tension between for example local authorities and central authorities over planning preconditions and scope decisions. However, the scheme put the final word more towards central political decisions. This clearly limits the possibility of projects parting from the intended strategy.

### **8.3.2. Stakeholder management**

There is still tension between stakeholders over how agencies plan and execute projects. As described above there are different practices. There is a widespread tradition for involvement of stakeholders in Norwegian public projects. Directly affected parties are normally taken into consideration and often they are involved in discussions and even negotiations over premises and solutions. Sometimes, it is them who proposed the project in the first place. The planning legislation requires that stakeholders, e.g. neighbors and other affected parties should have their say in all projects building physical infrastructure. This is independent of the governance scheme and falls either into the period before QA1 as part of developing the conceptual alternatives for choice of concept, or into the period between QA1 and QA2 before final decision to approve the project as part of the local approval of the plans.

Major public projects like rail and road projects affect a lot of people. Therefore rail and road authorities often invite to open public meetings or more involving workshops for developing goals and for planning. This way people who want to involve themselves can have updated information on the projects under development and for the project this is a good opportunity to learn about people's expectations and views on suggested solutions. These gatherings of people may include the general public and has become more common in recent years, and also more professional in format. This practice is not a part of the governance framework, but is compatible in nature and has increased transparency in these large, complex projects.

Large building projects and other infrastructure projects take up similar practices. Some beneficial practices are described in the Sugarloaf Alliance Case Study. This kind of stakeholder involvement has proven a good source for knowledge to the project planners and managers, and positive for stakeholders' understanding of the projects. This is expected to reduce the potential for conflict. On the other hand it may also increase expectations and thus increase conflict later if expectations are not met. Norwegian media frequently report on such situations in public projects. This is one area where further research could be beneficial; we should know more about the effects of stakeholder involvement on specific projects.

Related to alignment of strategies and projects on one hand and the freedom for projects to maneuver on the other hand, we should look at the use of steering committees, project boards and reference groups in projects. These are organizational entities, or decision-making arenas, specifically connected to one project and thus elements of project governance. The governance framework introduced by the Ministry of Finance contains no rules regarding the organization of projects.

## **8.4. Governance of projects: Striving for better public decision making on major projects**

This section presents the research and documented results of introducing the governance framework in public sector in Norway.

### *The Concept research program*

In parallel with a governance scheme being introduced for major public projects in Norway, a research program was established to accumulate information about the projects over time, develop improved methods of analysis, and study the effect of quality assurance and other measures taken during the front-end phase. The Concept research program is based at the Norwegian University of Science and Technology, and funded by the Ministry of Finance, but cooperates broadly with research and study centers in Norway and abroad in their respective fields. The overall objective of the research program is to develop front-end management and project governance as an academic subject.

Concept research program performs trailing research on major public investment projects in Norway. The first projects that were included in the Norwegian governance framework are now completed and into their operational phase. This allows for a preliminary review of how the system works. The presentation below is based on Samset and Volden (2013), Kvalheim et al. (2015), and Welde (2015).

### *The projects subject to the model*

After 15 years of operation (2015), there have been about 220 quality assurance (QA) reviews under the framework. About 160 projects have been subjected to QA2, of which 80 are now completed and in their operational phase. The QA1 scheme has been in operation only since 2005, and about 70 projects have so far been through a Conceptual Appraisal (CA) followed by an external QA1 review. None of these projects have been finalized thus far, but eleven projects have reached the QA2 stage.

With few exceptions, the projects subjected to the model represent major public investments with an expected investment cost above the threshold value of approximately EUR 80 million. About half of the projects are within the transport sector (mainly road and rail); the other half is mostly defense and construction projects and Information/Communication Technology (ICT) projects in different parts of government.

### *Improved cost control on portfolio level*

So far the “hard facts” about effects of the scheme are restricted to the effects of QA2. Welde (2015) presents the most recent update of the cost figures, for 67 completed projects where the final cost has been established and reported. There are some challenges with the data, not least related to the agencies’ reporting, but any discrepancies between the reported and the actual final cost are presumably small and constitute at most no more than a few percent of the total cost (see Welde, 2015).

The data show that 53 of the 67 projects, i.e., 79%, were completed within or below the cost frame. The total net savings for the projects taken as a whole were almost EUR 600 million, or about 7% of the total investment. It should be noted that the cost frame largely corresponds to the quality assurers’ recommendations, i.e. the P85 estimate minus a reduction list. Ideally therefore, on portfolio level one should expect that approximately 85% of the projects deliver within the cost frame, but 79 % is rather close. There are no striking differences between sectors, but the defense sector notably has had no projects with cost overruns (100% within the cost frame). Another interesting finding is that there is a vague tendency for cost overruns to have occurred in the middle part of the period, i.e. projects approved in the period 2004-2008. This may be due to strong cost increases in the construction industry that occurred in this period and that might not have been



adequately addressed in the uncertainty analyses. Alternatively, the subsequent Global Financial Crisis of 2007-2008 may have had unforeseen consequences, for example pushing the prizes down, helping subsequent projects.

The agencies' projects budgets largely correspond to the quality assurers' recommendations i.e. around P50. With a sufficiently large portfolio we should therefore expect that the average for the whole portfolio is close to P50. The results are approximately as expected. The differences are almost symmetrically distributed around zero, indicating that cost control at the portfolio level is good. The distribution is slightly skewed to the right, however, with 48% of the projects below and 52% above the budget. There is an average positive deviation of 2.8%.

A closer look at the projects indicates that not only are the financial results satisfactory, but overall there is a high rate of operational success. Few projects experience delays, or shortcomings related to quality and functionality. The projects also seem to be essentially well organized and executed. Most risk factors that do indeed materialize were identified in the QA2 reports. However, there are also examples of projects where expensive adjustments and upgrading were necessary in the first few years of operation. This finding shows the importance of focusing on the life cycle cost, not exclusively the investment cost. A study of the use of reduction lists in railway projects found that these lists have limited use as an active tool for controlling costs, since the saved amounts are relatively small and not sufficient to avoid large overruns. The study concluded that to function as intended the possible reductions must have the support of relevant stakeholders, and be technically and contractually possible to implement in a late phase of the projects (Olsson, 2015).

Caution should be used when comparing these results with the cost overruns from the 1990s. At that time cost frames were not based on stochastic cost estimation and thus not directly comparable with neither P50 nor P85. However, looking retrospectively, there are clear indications that the situation has improved. What we do know with reasonable certainty is that on portfolio level major Norwegian projects today cost what they say in advance that they will cost. This suggests that the QA2 scheme and the methodology used for cost estimation have produced reliable cost estimates.

### *A more systematic approach to projects in the earliest phases*

Ten years after the first QA1 report was produced, it is still too early to evaluate the effects of this part of the State Projects Model. However, there is little doubt that the quality of the Conceptual Appraisal reports (see figure 1) has improved steadily over time and that there is a convergence towards a common best practice. The same trend can be observed with the QA1 reports – quality assurers have gained years of experience and shown a positive learning curve. Some reviews in the literature have already examined the performance of the Conceptual Appraisal/QA1 process in the transport sector and the agencies' experience with the scheme; see, for example, Rasmussen et al. (2010), Statens vegvesen (2012), and Bjertnæs (2012).

These studies suggest that the Conceptual Appraisal/QA1 process is time and resource consuming, but overall, the scheme is perceived as meaningful by the involved agencies. In particular, the scheme provides a more systematic approach to the early identification of project ideas than the prior system. Rather than going straight to selecting road sections and determining a technical solution, planners are forced to take a broader perspective and to discuss societal aspects, which allows ideas to mature and stimulates creativity in the agencies. The QA1 scheme allows the



government to have a more direct influence in the early stages of the process in comparison to local stakeholders, who have traditionally had a significant influence, especially in road projects.

However, there is still room for improvement. One in-depth study of 17 projects (Samset et al., 2013) specifically examines how the opportunity space is defined and utilized in Conceptual Appraisal reports. A recurrent problem is that the conceptual solution has already been selected before the Conceptual Appraisal process, either because of path dependency in the agencies or political constraints and limitations. Another study (Statens vegvesen, 2012) suggests that quality assurers seem to give disproportionate attention to economic considerations and that they should balance economic viability with the achievement of various political objectives. Finally, some ministries and agencies have drawn attention to the futility of undergoing the full Conceptual Appraisal /QA1 process in cases where, in their opinion, there are simply no alternatives apart from one feasible conceptual solution.

An important prerequisite for QA1 has been that the quality assurers' recommendations are only advisory and that the final decision is a political one. The results so far confirm that this is still the case. In studying the Conceptual Appraisal and QA1 recommendations and the resulting decisions for the first 70 QA1 projects, trailing researchers have found that quality assurers agree with the agency/sectoral ministry on the ranking of concepts in one-third of the cases. In these cases the Cabinet normally follows that recommendation.

However, in the remaining two-thirds of the cases, the quality assurer and the sectoral ministry diverge on the ranking of concepts. The QA1 reports more often recommend the zero-alternative or a more economically feasible concept. In such cases, the Cabinet follows the recommendation by the agency/sectoral ministry more often than the QA1 recommendation, but in other cases, project proposals are withdrawn and sent back to the sectoral ministry for new Conceptual Appraisal, or the Cabinet chooses a completely different concept (Grindvoll, 2015). The fact that political decision makers do not follow the quality assurers' recommendations is not surprising. Public investment decisions in Norway are often complex and highly politicized. The QA1 scheme can ensure only that decision makers are well informed about both alternatives and their economic implications. Over time however, it may become more difficult to select conceptual solutions that are obviously ineffective and that are clearly inferior to other alternatives.

One noticeable impact of the Conceptual Appraisal /QA1 scheme is that the ministries' opportunity space has been broadened during the appraisal process owing to the advice from quality assurers, as they play a role as not only controllers but also advisers. In several cases, the opportunity analysis in the Conceptual Appraisal was rejected by the external reviewers, resulting in a second round in the appraisal process, with new conceptual alternatives. In addition, there is reason to believe – although it is difficult to prove – that many of the most poorly conceived investment proposals are now screened out before they even reach the Conceptual Appraisal /QA1 stage. Such proposals can be rejected early because of the improved processes and procedures in the involved ministries and agencies, which likely constitute the most important beneficial effect of the QA1 scheme.

The governance framework in its current form appears to be suitable for the purpose for which it was designed. However, governance regimes should not be static. They need to be flexible so that they can be altered if they do not work as intended or if changes in operating conditions and characteristics of the projects should necessitate change.

One can also observe significant spinoffs from the framework in terms of increased awareness in government, altered practices, research and new knowledge, skills development and training on front-end management and governance of major projects. In addition, similar schemes are being introduced also for smaller projects and in other sectors. Several of the biggest municipalities in Norway have introduced similar schemes for their biggest projects. The same is the case for investment projects run by health authorities and high voltage electricity transmission and distribution projects, which are not included in the model since they are not owned by the state directly, but by state-owned enterprises. There is also diffusion to other countries as discussed above.

## 8.5. Cultural aspects of the Norwegian public sector

If there is one thing that sticks out in the descriptions above, it is the importance of people as individuals and in groups. As indicated in the characterization of public sector in the beginning of this chapter, people and culture may also be of specific importance in public sector. This is useful for explaining some aspects of why the Norwegian model actually works.

Changes do influence Norwegian government, as described in the introduction to this chapter, but the Norwegian society, government and culture have remained stable during the last couple of decades. Strong democratic tradition, good economy, egalitarian culture and a population with high level of education is among the factors that explain this. The Norwegian work culture and over-all regulation and organization of work life, including a strong position of workers' rights, are also a part of the explanation. These stability factors build a strong platform for organizing tasks as projects.

Integration is a key issue in making structural and relational governance work in any context, and not least in major public projects. Alignment between organizational structures and cultures in order to avoid a mismatch between formal structures and people's behavior has been a guiding principle in development and implementation of the model.

Looking back at the reported problems before the introduction of the Norwegian governance scheme back in 2000 (Berg et al. 1999, Klakegg et al. 2010), some of the problems were structural in nature: Every department of government had their own decision making structures and budgeting routines. There was little to connect them across the sole responsibility of each Minister. The scheme introduced a common structure by which governance could be addressed, further developed and made valid across the whole area of application. It has even proved influential even beyond the area of application through a "trickle down" effect that makes it influential also on a regional and municipal level (Welde et al. 2015). An even wider range of public organizations introduces similar structures and requirements, and private sector fulfils these requirements as suppliers to public customers.

Given the poor performance of Norwegian public projects back in the 1990's one would perhaps think the introduction of improvement measures like the QA scheme would be non-controversial. This was not the case. On the contrary, it challenged the traditional independence of each Minister and Agency and even the culture of egalitarian independence that is deeply rooted in Norwegian work life. There was opposition (Berg et al. 1999), but over just a few years the good results of the QA scheme convinced, first the professionals, then the leaders in government agencies that this was an improvement. An interesting observation is that top management in both the opposing parties

and the supporting parties had strong focus on the major public projects in this first period, which may have helped the projects to better results. The first projects under the new scheme had good top management support, access to the best individuals (project managers and experts) and generous investment budgets. After a few years, the conditions for projects normalized, but by then the results had convinced most parties, and as shown above the good results have continued.

Norwegian work culture can be characterized as egalitarian and independent, meaning people in formal positions are given a fair amount of room to maneuver within their area of responsibility. They do not like to be told how to do their job. Similarly the framework is not a detailed recipe for how agencies should do project management or solve other aspects of planning and execution of projects. This was also a conscious choice. Copying best practices from other countries or private sector is held to be ineffective in this context and was never considered an option. However, learning from private sector and other industries (oil and gas industry in the Norwegian case) is held to be important.

The development of the governance framework is done in respect for the specific conditions in Norwegian public projects and work life. Agencies and project managers need to have the opportunity to choose or develop their own practices. They can select whatever best practices they find suitable as long as they meet the performance requirements in the two quality assurance gates of the Norwegian governance framework. Experience over the last decade show that the projects and agencies are increasingly choosing to implement international best practices and share experiences of their own free will. One of the arenas for doing this is the Concept research program and another is ProjectNorway (a research-based collaboration of members that consist of project-based organizations from private and public sector).

This combination of free choice by their own will and the modern willingness to take part in networks and communities of practice is important in terms of building a strong platform for governance. These networks are resourceful because organizations and individuals come together and learn from each other by sharing knowledge and experience. The effect is improved performance in each organization and in individual projects, but it also has a strong effect in terms of leveling out differences and strengthening good practices across organizations. We need to mention a couple of cultural factors in this context: Norway is a small country. Together with egalitarianism, this opens up for close relations and sharing across organizations. The level of trust in work relations (inside an organization and across organizational borders) is generally high. The resulting Norwegian work culture is traditionally very open, in some aspects even bordering to being naïve (lately there is indications that this may be changing).

Finally, one cultural element, which even has a judicial side, is that the Norwegian attitude is that the system is responsible, more than the individual is. The Scandinavian model is slightly different from for example the Anglo-American tradition. Instead of blaming the individual when things go wrong, we blame the system. For example, the Norwegian State is responsible for the actions of its employees. The State can be sued, but not the person. On the other hand, the state can seek recovery from the employee, but this rarely happens unless there is a case of proved fraud (Klaegg et al. 2010, p93). This adds to the openness in the work culture since there is less opportunity for losing your job over a case of unlucky communication. Public sector is also by law obliged to keep open all communication in the Freedom of information legislation, which is generally held strongly in Norway. Article 100 of the Constitution gives access to public documents. The basic principle of the

law is that everyone has the right to access State and municipal documents and to be present at sittings of courts and elected assemblies.

The good side of this cultural setting is that knowledge and experience flows across organizations, and this helps strengthen both governance and management in both public and private sector. On the other hand, this also opens up for people moving relatively easily between the different sectors and organizations adding to the challenge of lack of continuity on the public sector side. How big this challenge really is, is beyond the scope of this chapter.

The Norwegian workforce is well educated and disciplined. This has opened up for a development that has given us a quality of Norwegian work life that allows mindful and self-organizing individuals and teams. This does not give hierarchical power and formal structures a strong position. Instead, it gives any attempt to use structural means without considering the relational and human side careful consideration a difficult start. The powerful position that the governance initiative for Norwegian State projects has is only possible because the Ministry of Finance knew this from the beginning and made good choices. The result has been a governance initiative that has kept its fundamental structure unchanged from 2005 and with a constantly developing and improving content and maturing practice.

## 8.6. Conclusion

The purpose of this chapter is to address the differences between public and private sector and the consequences in terms of governance and governance of projects. It does so by presenting a perspective on public sector that offers some explanation to what is different in public sector, compared to private sector where the rest of the book is coming from. The specific case presented here is the Norwegian governance framework for major public projects. The last part of the chapter complements the description with the documentation of its results in terms of influence on project governance and governance of projects.

The Concept research program and other published material by researchers and professionals involved in this development document the effect of the initiative. Structural governance has had more attention than other aspects in this research. Structural governance is easier to address due to its formal character and visible elements, as shown in the Norwegian case in this chapter. Relational governance may be just as important in implementing effective governance as structural governance. Reviewed in hindsight, in the light of the concepts promoted by this book, the research addresses both project governance, governance of projects and indirectly governmentality.

High degree of formalization characterize public sector compared to private sector. The flexibility to make quick decisions and take action is lower. This hampers large decisions on strategic and political level, but is also one of the reasons why projects are so popular: Projects actually help this situation. By giving projects access to resources and room to maneuver, they can act efficient like in private sector. The descriptions of the Norwegian culture, government, and the Norwegian governance approaches to projects have shown a predominantly non-authoritarian approach to governmentality. We even find that authoritarian approaches would be counterproductive in the given culture and environment. To that end, the neo-liberal governmentality approach chosen for the Norwegian work

life and public sector is a vital part of the success of projects and project management. For further details we refer to related chapters in this volume

The success-story told here leaves out some improvement initiatives made by the industry itself, and the improved technological and educational effort made by organizations in both public and private sector during the same period. It is also worth noticing that this initiative has proved its qualities in this specific Norwegian context, and that any attempt to copy the success needs to consider carefully how to address the specific conditions in the situation. Just copying the whole or parts of this initiative and implementing them under other circumstances will probably not be a success, neither in short or long term perspective. The Norwegian governance framework does not solve every problem or answer every question related to public projects. However, the Norwegian case illustrates the strengths of the governance concepts promoted by this book.

As previously mentioned, 'good governance' includes four principles that constitute sustainable and ethical project governance, namely transparency, accountability, responsibility and fairness (Millstein, Albert, Cadbury, Feddersen & Tateisi, 1998). The Norwegian governance frameworks introduced here has significant influence on all these dimensions of public projects:

In terms of transparency the governance framework itself require an almost total openness and transparency, not only about who makes the decisions, on what basis and how. Every single project above the activation threshold is critically scrutinized by external experts with no previous relations to the project. By publishing every assessment made in QA1 and QA2 there is no doubt all involved parties have to act professionally and perform to their best. All mistakes or omitted aspects will be critically reviewed and known among governors, customers and pairs – a very strong motivation. In line with this principle of transparency the infrastructure agencies have developed practices that involve stakeholders far more than before, adding to the transparency and opening up to the affected neighbors and the general public.

In terms of fairness the governance framework contributes by securing that all relevant aspects of the project is considered in comprehensive concept assessments where the positive and negative effects are considered for all relevant parties in society. Specifically themes like external effects of these public investments, disadvantages for neighbors and local community, accessibility for the disabled and other aspects of fairness is explicitly challenged. Unfair effects will be assessed and weighted against the ultimate objective – whether the disadvantages are ethically acceptable given the positive and intended effects on the greater society. Certainly there are aspects of these considerations that do not add up as a purely rational object of calculation, and the political system of decision making has room for value-based considerations when it comes to the final decision. All involved (professional) parties are highly aware of this aspect that limits the power of rational analysis.

Responsibility is a key aspect of the governance framework. In the Norwegian case it is anchored on top political level at the Prime Minister's office, and represents a clear line of responsibility down through levels of organization to the agency responsible for executing the project. By help of the "trickle down" effect this responsibility is made effective also on lower levels of the organization. However, there is no active element in the governance framework that secures this responsibility is promoted all the way down through contracts to those physically performing the activities on the ground. These details are left to the agencies and their project managers to handle professionally. This is one area where there is room for improvement, and lately the focus on seriousness and social

responsibility has become a focal point in Norwegian work life. This development is not a result of the implementation of the governance framework but more a result of unacceptable business ethics cases being exposed in media and by professional organizations.

All in all, the strengthened transparency, fairness and responsibility add up to an increased level of accountability in public sector organizations and their projects. Not only do projects deliver within budget, but also more often in time and according to planned standards. Whether it will also give more relevant and sustainable projects in the future remains unknown until a significant number of projects are finished after being subject to the QA1 procedure. However; the indications so far are positive and almost all involved parties acknowledge that the implementation of the governance framework has positive effects, mainly in line with its intention.

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