An investigation of governance frameworks for public projects in Norway and the UK

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Received 24 September 2008; received in revised form 30 March 2009; accepted 7 April 2009

Abstract

This paper describes four case studies which formed a key part of an investigation into public investment project governance frameworks in Norway and the UK. The studies looked at how the embedded governance principles worked out in practice, how they affected PM, and how consistent their effects were with their aims. Conclusion is made about the actual effects of the frameworks, and various areas for improvement or further study are highlighted.

Keywords: Governance; Case studies; Public projects

1. Introduction

Authorities and governments set up various governance frameworks for public projects, but the effect of these on the development of project plans and estimates is not clear. Such frameworks are set up to be self-evidently appropriate, but this does not always apply to complex projects [1]. The effect of bias in the estimates, such as optimism bias and strategic under-estimation is known [2]. However, it is not clear how the various governance frameworks exacerbate or ameliorate these effects, and this is crucial to understanding how to tackle the problem, rather than the “sledgehammer” approach of simply adding factors onto estimates.

Supported by the Project Management Institute (PMI), researchers from the Concept Programme (Norway) and Southampton University have been undertaking a study which analyses the frameworks for front-end appraisal and governance of public investment projects. The aim of this work is to look at how governance regimes for major investment projects in different countries affect project performance, comparing this with the intended effect, including cost and time management. This type of “how” and “why” question cannot be properly answered by a positivist approach. Rather, it requires a phenomenological approach [3], looking in depth at a small number of cases. There are essentially two types of such study: action research, in which we could affect the course of the projects under consideration [4], or case studies, in which effects are observed by an essentially neutral observer [5]. In this study, we had to take the latter role, although it should be noted that the very existence of the Quality Assurance Scheme has a significant effect on the estimation process in the Norwegian projects studied. Four case studies are examined to see how the implemented governance frameworks actually affect Project Management and how consistent they are with the stated aims. While definitive conclusions cannot be drawn, some interesting pointers are given as to the behaviour of the frameworks [6]. This paper only describes conclusions from the case studies, rather than offering the more philosophical and theoretical conclusions, found in the final report [7].

This was a small study, undertaken to find initial results. Two case studies are examined, in two different countries. Norway and the UK were chosen as having, respectively,
a fairly new public-sector project governance framework, and a well-established one. It was found, however, during the UK study, that defence projects (the largest set of public projects) were governed under a different framework from other UK public projects, so it was decided to study a defence project and a civil project in each country. Similarity between the projects in each was sought but, as in most case study research, access was difficult and the choice of projects was largely based on their availability.

The frameworks studied in this paper were developed carefully and rationally, and set out what ought to happen, or what is “espoused” as (or claimed to be) happening. However, in much empirical research it is found that what happens in practice can vary significantly from the espoused approach [8]. Any such difference (and the reasons for it) is of interest when looking at governance structure [9]. Indeed, what is needed to improve project management and project governance in practice generally, is not simply more research on what should be done. Cicmil et al. [10] describe a research approach that takes seriously practitioners’ lived experience of the actuality of projects. It looks not only at the circumstances of the project, but also at praxis, at context-dependent judgement, bounded rationality, power and politics, etc. Our case studies touch on some of these themes.

The study was organised as follows: firstly, the literature provided a theoretical underpinning for governance in general. This enabled us to specify and structure the characteristics of a public project governance framework, and was used in semi-structured interviews with experts in the frameworks. Full details of these steps are given in the final Report [7], which describes the espoused frameworks and their differences. This paper, however, aims to look at the outworkings in actuality of the frameworks and differences. Analysis of framework differences provided foundations for the case studies: in particular, it developed a structured questionnaire that was sent to certain senior project personnel, and a structured set of pointers for each researcher, so that there was commonality of approach across the case studies.

“Governance” is a term with many meanings and usages. Corporate governance has various models in different countries, which can be categorised as shareholder-value systems, where only shareholders are legitimate stakeholders (USA, UK, Canada), and communitarian systems, which hold other constituencies such as employees, banks and the community as legitimate stakeholders. The latter may include “family-based” systems, e.g. Asia Pacific [11]. In this paper, public governance refers to the formal and informal arrangements that determine how public decisions are made and how public actions are carried out, from the perspective of maintaining a country’s constitutional values in the face of changing problems, actors and environments” (OECD [12]).

As far as projects are concerned, “governance of projects” concerns those areas of governance (public or corporate) that are specifically related to project activities. Good project governance ensures that relevant, sustainable alternatives are chosen and delivered efficiently (APM [13]). There are three main aims: choosing the right projects, delivering the chosen projects efficiently and ensuring projects are sustainable. The second of these aims – delivering the projects efficiently – is important to avoid wasting public resources, and involves the framework established around the project execution. This is governance of projects. Choosing the right projects, achieving the right objectives, and ensuring the projects and their effects are sustainable, is governance through projects – the context in which the critical decisions are made. This is true governance of projects on a public or corporate level. As will become evident through the description of the frameworks and cases in this paper, a strong focus on reviews and intervention logic is present in practice. This suggests a more narrow and traditional definition of governance as control than that envisaged by these researchers.

This paper will briefly describe the frameworks, discuss the case studies and draw some conclusions.

2. The development of the frameworks

The UK and Norway are similar countries in many ways, but the UK has a much larger economy with much more limited public funds, and higher unemployment. In the UK there was naturally a motivation for putting emphasis on “value for money” from the start; in Norway the focus from the beginning was directed against cost overrun – a control measure to ensure realistic budgets and a good basis for project execution. The initiatives in both countries were based on a wish to improve governance in a wide sense. The two countries have similar political backgrounds – apart from the Nordic/Scandinavian social welfare tradition and the Anglo/American strong market orientation. The UK has a strong public administration tradition with a large and influential Civil Service. Government business is divided into Departments, responsibility for a project being entirely within the Department. In Norway (NO) the Sectoral Ministry is responsible for large investment projects.

This section describes the development of the different frameworks. It should be noted that all three frameworks underwent development between 2007, when the investigation was carried out, and 2008 when this paper was written. Interestingly, the experience of implementing their particular frameworks led both the UK and Norwegian Governments to adjust them. The result of these changes and improvements gave the frameworks a certain degree of similarity.

2.1. UK Office of Government Commerce (OGC)

In the late 1990s, Peter Gershon of GEC was asked by the then Prime Minister to look at procurement in government. Gershon wrote an influential report, covering general commodity procurement and projects, and was asked to set
up the OGC in 2000, pulling together staff from various agencies [14]. The report led to the establishment of the OGC (2004) Gateway Process™ with six well-defined, standardized and documented Gateways. Gateway Review 0 looked at strategic management at the programme level, and Gateways 1–5 at the project level, covering different stages of the project life-cycle. Private sector engagement came from the use of experienced consultants who had been individually accredited by OGC for Gateways. The Six Gateways start at Ministerial level and work all the way down to suppliers. Parliamentary/Governmental level is undertaken by mechanisms outside this study.

Categorisation came later, looking at high political significance, riskiness of the programme and cost. At the top level were the “Top 20” Mission Critical projects, the OGC sitting on the project board. The next level was “High Criticality”; for these, Gateway reviews had to use senior people or independents. Different rules applied to “Medium” and “Low Criticality” projects. Later still, a general concern for better programme management gave rise to the development of small Centres of Excellence as part of the framework, bringing “best practice” to the Department, acting as an OGC liaison point within a Department and reporting directly to the Head of Department. More recently came a Project Initiation Process. The espoused aim of the framework is specifically for the OGC to achieve financial savings (according to procedures laid down by the National Audit Office). At the time of this research, the OGC worked by influence – its recommendations had not then been mandated (although this is set to change). This is the traditional UK civil service culture. The OGC did not consider individual project Gateway reports; rather they looked for systemic trends. Reports on a particular project went only to the OGC and the sponsor (the “Senior Responsible Owner”/SRO), although special reports on the top “mission critical” projects go to the Prime Minister’s Office. A substantial number of people were involved in implementing the framework and giving advice.

A Treasury report entitled “Transforming government procurement” [15], stated that the OGC would become more focused, powerful and smaller, and, since this research was carried out, the Gateway Process has been mandated, with four areas of development in the OGC framework:

- **Major Projects Portfolio:** The system of criticality has been replaced by the Major Projects Portfolio – a list of the key projects across the public sector for delivering the Government’s service imperatives. A single integrated quarterly report on the health of the Government’s Major Projects Portfolio will be produced in conjunction with the Cabinet Office.

- **Major Projects Review Group:** This is a scrutiny committee for major Government projects, sponsored by the Treasury, challenging projects on deliverability, affordability and value-for-money. Their intervention will not only help the team, but will also be of the nature of a scrutiny so will have much stronger power, with an emphasis on actions to be taken. It consists of eleven very senior members of the Civil Service or Government agencies.

- **Enhanced Gateway Reviews:** There will be a new overarching rating of “delivery confidence” to supplement the current rating, indicating the Review team’s assessment of their confidence that the project will deliver its intended outcomes and benefits. When there is a “Red” rating, the report will not only go to the sponsor, but will be escalated to the Head of Department and beyond. The reviews will also include action plans, monitored by OGC.

- **Starting Gate:** A new intervention is to be introduced, intended to provide assurance at the stage of developing major new policy options, prior to initiation of a project or programme.

### 2.2. UK Ministry of Defence (MoD)

The one major section of the UK public sector that uses a different framework is the MoD. The MoD has always had an “extended life-cycle”, both very early and very late. The framework came in as the relationship with industry changed, becoming more co-operative, and ensuring that both the whole industrial base and UK sovereign capability are considered. Contracting defence budgets gave motivation for value-for-money and to procuring more accurate predictions. The CADMID process, part of SMART acquisition, was introduced in 1998, following McKinsey work, which also showed the need for a stronger customer within the MoD. This became known as “Capability Management” and was led by a Deputy Chief of Defence Staff. The framework is anchored within the MoD Main Board. Following the McKane report [16], the procurement and logistics agencies were unified into “DE&S”. This encompassed the other espoused goal of the framework: to manage the MoD’s projects as a single portfolio in order to get the best capability for the MoD as a whole. The UK MoD system works with different types of projects, each having a different categorisation. There are two Gates: the Initial Gate to release funds for assessment, and the Main Gate to release funds for the main project. Projects go to the Investment Appraisal Board via two routes simultaneously, from the advocate of the project (the SRO) and via independent scrutiny (within MoD but independent of the project). A preliminary “Foundation Review” is also being brought in. The system is vertically integrated, in that Gates look at the entire project, including the industrial base. Each project is undertaken by an “Integrated Project Team” (IPT), responsible on the project to the SRO, but responsible overall within DE&S. Thus, the MoD considers the whole portfolio of projects; the “Capability” customer considers the programme; and the IPT, the individual project. The Chief of Defence Material reports to corporate targets on DE&S overall performance. Current transitions of the framework consist of minor changes following the McKane report.
2.3. Norway

The triggering incident in Norway was a series of unsuccessful major projects and repeated project overspend during the 1980–90s. Deputy Secretary General of the Ministry of Finance, Peder Berg, led a government committee investigating a number of project cases [17]. The Ministry of Finance initiated the development of an obligatory Quality Assurance Scheme in 2000, with mandatory external assessment of projects, performed by consultant companies, before the financing decision by Parliament. This was mandatory for all state-financed projects over NOK 500 million/£42 million, excluding Oil and Gas. The goal was to ensure improved quality-at-entry. It was a bottom-up process within the Ministry, with Peder Berg as a driving force. The decision to introduce this governance framework was made by the Prime Minister’s Office. In 2005 there was a second generation of the framework, reflecting the need to do something at an earlier stage. The same entity is responsible for the governance framework across all sectors, with few exceptions. For both generations of the QA Scheme the intention was to establish a system where politics and administration is well divided, with the interplay between these two sides well understood.

The whole framework is a control measure. Control rules are documented in the contracts between the Ministry of Finance and consulting companies, the control object being the documents assessed in the regime. There are two gateways: QA1 focuses on the rationale of the project. It covers the early choice of concept and strategy, and the decision to initiate project pre-planning, using a compulsory dossier of four documents, and looking at many alternatives. QA2 considers the decision to finance the project, looking at one alternative only, and controlling the Project Management Plan, with several sub-documents and a focus on cost. QA1 and QA2 provide a tool for control from the top; Parliament–Government–Ministry–Agency. Vertical integration stops at the agency-level and the private sector is not addressed. There are several coordination Forums where the Ministry of Finance gathers key interested people for discussions, often resulting in common understanding and definition of terms and professional standards. The Concept Research Programme supports the development of the regime and studies the practices of the agencies and consultants.

As soon as the new framework was introduced in 2005, the need to develop new common definitions and guidelines was evident. Using the same model as that in the previous introduction period, a number of development processes have been started, resulting in a series of new guidelines.

2.4. Comparison of frameworks

The three initiatives seem to have been prompted by similar developments and motivations; the OGC and Norwegian initiatives are both anchored at the top political level and organised under the Ministry of Finance. OGC goals are more explicit, administratively focused and measured in terms of money; in Norway there are more clearly politically anchored goals, which do not specify the expected effect of implementation. All frameworks aimed to include transparency, being open to scrutiny, and particularly candid about the basis for decision-making. Also included were learning, willingness to change, the setting of common, high professional standards and political anchoring of the framework on a high level, or non-political QA/Gateway review. The process of development, however, was genuinely different. In Norway the initiating process was bottom-up, as was the implementation of the improvement. In the UK both processes were top-down, as was the implementation of the management system. Different strategies were chosen: Norway breaking with tradition and introducing a new arrangement, the UK building on tradition. The Norwegian and MoD’s frameworks are mandatory; the OGC framework currently works by influence. The Norwegian framework is a bottom-up process of learning from cases, transferring experience to other sectors and building “the new profession”. The UK OGC and MoD frameworks, to some extent, are a top-down introduction of a common “quality system”, the Centres of Excellence representing the “new profession”. Both Norway and the OGC have established a support organisation looking for systemic trends: in the UK as a permanent public entity; in Norway as an external research programme. The MoD reports on systemic trends at a top level. The OGC looks only at systemic trends; Norway and the MoD also report on single cases. Norway has a centralized co-ordination forum, while the OGC has established distributed “Centres of Excellence”. (The MOD is already a single, organised entity.)

Comparison of the two frameworks highlights some differences. Vertical and horizontal integration is different. A notable characteristic of the Norwegian framework, and its components, is its simplicity, with a more macro-analytic perspective; the UK side is more comprehensive, and adequate for more detailed control measures at a lower hierarchical level, being more micro-analytic from a PPM point of view. The organisation implementing the UK governance framework also supplies the answer to the question: “how to achieve”, whereas the Norwegian framework only answers “what to achieve”. The use of external consultants is similar in both countries, but in Norway companies are assigned to carry out reviews; in the UK this is done by individuals. The Norwegian framework is mandatory, so consultants do not have to persuade the agencies and project organisations. In the UK, the assessment requires only a small amount of effort from senior consultants [18], review roles are defined in detail, and there is a standard report format; in Norway the QA-team performs a complete independent analysis of the project, over many months, with roles agreed in the Forum; within the MoD, assessments are made internally, roles and the dossier format being defined in detail. In Norway the control measures were focused initially on cost and risk, but are
moving more towards benefit and value, particularly following the introduction of QA1; whereas the UK side is focused on the business case/value for money. In the Norwegian life-cycle, concept and strategy are chosen very early; the MoD has an even more extended life-cycle with very early gateways. For cost and time estimation, the OGC framework is complex, complete and detailed, the MoD framework has a high level approach linked to concrete guidelines; the Norwegian approach is more simplistic, with scant reference to time-planning. However it is the only system that carries out full independent cost estimates.

3. Four cases

3.1. Norway defence case (Skjold)

Information about this case came from semi-structured interviews, supported by a pre-supplied questionnaire, with senior personnel involved in the project, and extensive study of the project and QA documentation. There is little in the public domain about the details of how this project was operated, but there is a publically available report [19].

The Skjold class Fast Patrol Boat (FPB) project encompasses the construction of a new vessel, weapon systems, personnel training and logistics and support. The project includes building a series of six vessels. It is an example of a complex defence procurement project. From an overall perspective the Skjold project is currently on budget and schedule. None of the vessels has been delivered to the end user, but the construction phase is proceeding as planned. The complexity of the decision-making process, the technology and the contractual arrangements proved a challenge for quality assurance in this case.

Fast Patrol Boats have been a part of the Norwegian Navy strategy for a long time. In the early 1990s a need to update current vessels and start planning for the next generation was identified. A pre-series vessel, HNoMS Skjold, was completed in 1999 as a separate project. The principal decision to establish the Skjold class FPBs as a part of the Norwegian Navy was resolved in a broad political compromise by the Norwegian Parliament in June 2001. The recommendation from the Ministry of Defence, however, was not to pursue the Skjold project further. The Chief of Defence had, in the recent Defence Study 2000, concluded that the investment and operating costs of the proposed fleet of FPBs should not be prioritized, considering other investments and current liabilities of Norwegian Defence.

During the planning phase of this project the experience of updating the previous class of vessels and the development and building of a pre-series vessel (the prototype) was important. The result was a unique vessel, incomparable to any other. The pre-project documents were subject to a Quality Assurance 2 (QA2) in 2002. The QA2 concluded that the project was well-planned, and prepared to go into next phase. In 2003 the Norwegian Parliament finally decided to execute the project. Again the Chief of Defence appealed to Parliament not to make this decision but to wait for the next long-term plan the following year. This did not happen and execution of the project began. The process described here uncovers some weaknesses in the quality assurance at the time:

- The basic need for the project was not part of the QA assignment. This was not introduced until 2005, as a part of QA1.
- No independent cost estimation was done. The analysis was based only on the project’s own cost data – primarily the First Target Prize from the supplier consortium.
- The QA2 report (March 2002) comments that the document produced at the time was of good quality up to the stage of entering a contract, but was not prepared to enter the execution phase. There was no “Project Control Plan” or steering document in place at the time of the QA2, so this was not controlled. The QA scheme was in its early phase, and practical procedures were not commonly established until 2003.
- Due to ongoing negotiations, the QA consultants were not allowed to access the suppliers’ personnel. This cut them off from a prime source of information, and questions the whole timing of the QA2.

These weaknesses were due to the governance framework being less than mature, and the special situation in which a unique, highly complex project was analysed within the context of a sensitive Defence sector. The quality assurance documented here is representative of the time.

The impact of the QA2 was less significant here. No significant changes to cost estimates or schedule were made. The project organisation did not develop any new or specially adapted documents. The analysis did not identify any new risk elements. On the contrary, the findings of QA2 gave some reassurance that the project was well-formulated, and it is proceeding according to plan.

The potential impacts were not considered here. The most important aspect illustrated by this case is that no matter how strong professional advice may be for, or against, a project, and whatever the result of extensive use of rational methods, the final decision is a political one. This is not altered by QA2 or any other control instrument.

3.2. UK civil case (2MS)

Information about this case came from semi-structured interviews, supported by a pre-supplied questionnaire, with senior personnel involved in the project, and from an extensive review of the case archives held by the client. In addition, useful summaries may be found in public documents [20,21].

The UK Home Office began a procurement process in 1996 after a review of its accommodation concluded that its existing estate needed to be refurbished. In 1998, the Home Office obtained three competing bids, proposing
the existing building at 2 Marsham Street (or 2MS) as temporary accommodation during the refurbishment. Anne’s Gate Property plc (AGP), however, made a developed and costed variant bid for a new building at 2MS, and this plan was adopted. Two bidders submitted further best and final offers. AGP’s bid turned out to be the winner. Extensive probing of the bid by the Project Team was undertaken, investigating the history of the company and previous similar projects, risk, the detailed resourced programme, and a Quantity Survey-type analysis of the price.

The first Gateway Review of the contract was a Gateway 3, in January 2001, during the lead-up to placement of contract. This was only about eight months after the foundation of the OGC. The aims of the Review were, briefly, to confirm the business case and benefits plan in the light of the final tender, to ascertain that the plan should deliver the specified outcomes and value-for-money, and to ensure controls were in place. Outstanding issues were looked at in a Supplementary Gateway 3, with further issues arising later, and leading to a Further Supplementary Gateway 3 in August 2001. At this point the Home Office was embarking on a relationship with a bidder who was very experienced and sophisticated. Having expert support was beneficial to the project.

Analysis following advice taken from consultants and correspondence with the National Audit Office indicated that using the UK Private Finance Initiative would give the best value. In March 2002, the Home Office signed a 29 year contract with AGP for funding demolition, design and construction of the new accommodation on the site, together with provision of associated services. Because this is a PFI project, the authors of this paper do not have access to detailed time and cost estimates, although no increase in price has been reported to date. However, it is interesting that a Parliamentary enquiry later identified evidence of optimism bias, in over-estimating reductions in staff numbers due to outsourcing, efficiency gains and changes in working practices.

During the contract, internal governance was managed through an ongoing Project Board, which decided when Gateways were to be held, and tracked the external governance processes. Key risk areas or issues could be tracked here, such as uncertainties in the numbers of staff actually going into the building. A Gateway 4 review was held in January 2002, at the request of the Treasury – implying that they held a watching brief. This had fifteen specified purposes, including to check that the current phase of the contract was properly completed, that the business case was still valid and unaffected by events – reflecting some of what a Gateway 0 might be expected to investigate – and looking at risks in particular. There was, in fact, more than one Gateway 4, together with a separate PFI contract for information technology provision in the building. However, the governance mechanism appears to have been single project-based, and the governance of this linked project was not clear.

External governance operated through the Home Office Audit and Assurance Unit, and beyond this, to the National Audit Office (NAO). The NAO came on the scene between contract signature and start of construction, and issued a favourable report in July 2003, particularly on the nature of the PFI contract. The role of the NAO is to scrutinise public spending on behalf of Parliament, independently of Government, and their report was taken up by the key Parliamentary Accounts Committee (PAC). This Committee met in November 2003 to look into value-for-money, including running costs, financing, numbers of staff and refinancing charges. The most senior members of the Home Office and contractors were called to give evidence. The hard-hitting report made recommendations on under-forecasting of staff numbers, identification of wider business benefits from the move to the new building, questioned a specific financing issue, and also posed a question about disposal of the existing estate. PAC reports are taken extremely seriously by the Civil Service. This being a very visible public project, there was also considerable interest generally within Parliament, and a succession of Parliamentary Questions were asked, some covering fundamental issues about the project, but many concerning other, more detailed issues, only tangential to its success.

The building handover was completed on time in January 2005, amid considerable publicity. The Home Office then began paying AGP a monthly charge for the building and services amounting to £311 million (net present cost) over the life of the project.

3.3. Norway civil case (IFI2)

Information about this case came from semi-structured interviews, supported by a pre-supplied questionnaire, with senior personnel involved in the project, and extensive study of the project and QA documentation. One publically available reference is a Statsbygg report [22].

The IFI2 project includes the construction of a new building for teaching, research and ICT operations in the Department of Informatics at the University of Oslo (UiO). The building’s planned gross area is approximately 28,250 m². The current base estimate for the building is NOK 1040 million, and the current total budget is NOK 1080 million, based on 2006 price levels. The need for new facilities for the UiO Department of Informatics was explicitly mentioned in a Government proposition to the Norwegian Parliament in 1998. The driving forces were the Department for Informatics’ expressed needs for more space, closely aligned with government strategies to strengthen research and higher education in ICT. In 1999 the Research Council of Norway (NRC) ordered a design proposition for a new building, which was presented in 2000. The initial plans included a 10,000 m² extension of an existing building, financed by the Research Council of Norway. The new facilities were to be rented by the University of Oslo. In 2001, following discussions on the level of rent, Parliament decided to put the new building on the list of prioritised state building projects. This meant 100% state funding of the new building and execution by Stats-
bygg (Directorate of Public Construction and Property). The project thus went into a new planning phase, and in 2002 Statsbygg launched a design contest for the IFI2 building. The pre-project was completed in February 2004, but funding had to wait for a parliamentary decision to finance and execute the project, in May 2005. The new building will, according to the current schedule, be completed in 2010.

The early stages of development show that issues concerning the execution model and funding sparked some debate, but there was no question about the need for the project.

Cost figured strongly in the 2004 QA2 analysis. Without a total independent cost estimation, the quality assurance confirmed the project’s own cost estimates and need to budget. The corresponding uncertainty analysis of costing placed market situation at the top of the list of identified uncertainty elements. Price rises in the construction market forced an increase in the budget of the project, with funds being drawn from the contingency reserve, and, subsequently, from a regular budget increase in November 2007. Should the success of the QA be judged from the ability to accurately predict costs, or only from the ability to identify the most important risk? The project is not yet completed, so the true accuracy of the cost estimate remains to be seen. The project started up roughly a year later than expected, in the wait for funding, and faced a totally different market situation from that which existed when the decision to finance and execute the project was made. The uncertainty analysis had not been updated: such analyses cannot be regarded as relevant without continuous updates.

There is no doubt that the control focus was prevalent in the QA2 assignment. It is clear that there should be a review of cost, schedule and other key areas before the decision to finance and execute large public projects is taken. It is observed that the subordinate agency generally does not oppose this, but their assessment of QA and its output in this project is that it was redundant and time/consumption. The QA did not result in budget modification or any other decision-making changes. An interviewee from the project suggested that: “The QA has done more to relieve the Ministry of Finance than to help Statsbygg”. However, there seems to be a good deal of consensus on how the process itself should be described. Interviewees from the project organisation and the QA team described the exchange of information as excellent and the interaction between the involved parties as very good.

On the question of QA output, it is observed that the project organisation expected a bit more than a superficial insight into project documents. The QA2 cost focus is described as important by interviewees from the organisation, but control of cost should also include an assessment of technical solutions and their cost effectiveness. This would require an additional focus in the analysis, to include both control of numbers and evaluation of technical solutions, and would demand enhanced technical skills from those responsible for conducting the analyses.

3.4. UK defence case (NEADS)

Information about this case came from semi-structured interviews, supported by a pre-supplied questionnaire, with senior personnel involved in the project. There is obviously little in the public domain about the details of the operation of this project, although it is mentioned in the 2006 Defence Statistics [23].

Ground Based Air Defence (GBAD) is an important defence against an increasing range of low-level airborne threats, e.g. helicopters, unmanned air-vehicles and cruise missiles. In order to be both effective, and a weapon, there must be the ability to take and fuse data from multiple sensors to form a reliable picture of the situation, identify the target and control of the weapon. UK defence currently has two GBAD weapons in its armoury: “HVM” and “Rapier” although these are to be replaced. A “future GBAD” Integrated Project Team (IPT) was set up, following a 1994 NATO feasibility study which suggested an £8 billion solution. This seemed reasonable to the independent MoD estimators, based on historic data, and a funding line for this amount was endorsed. This means that it was accepted as a programme, i.e. it appears in the long-term funding plans, but no Gate has been gone through yet.

There were two stages to the project: the air-defence Command, Control, Communication and Intelligence, under which UK air defence assets would be integrated, and the defensive missile and battle-space management, including sensors and data-fusion. The business case for the first stage was prepared, with a budget of approximately £1 billion. The Initial Gate was passed in 2001, allowing an Assessment Phase, together with a concept second phase. However, in 2003 there was a general funding reduction. The Customer had to cut funding: he had two other programmes within his remit at that point, both well forward with a lot of money committed, and one was politically very sensitive. He therefore changed the £1 billion to £200 million, to give only limited situation awareness. This very basic version of the first phase is now coming to the end of its second assessment phase and has a Main Gate during March 2008, with in-service date forecast for 2010.

Network Enabled Air-Space Defence and Surveillance (NEADS) was established as the remaining capability, with a limited budget. It is currently in the Concept phase, having started off in October 2006, expecting Initial Gate in 2009, and a Main Gate in 2012, and having a Planning Assumption for Service Entry of 2020. When the funding was cut, a cancellation charge was levied, giving the opportunity for some industrial work, which was used to develop the missile, without the need for user-requirement, system requirement, capability gap analysis, a concept of employment, etc., let alone the bulk of NEADS, sensors, data-fusion and communications. The budget for the concept stage of NEADS was also cut substantially in 2003/4, but
a Technology Demonstration Programme has been placed, which is due to finish soon.

From the point of view of the MoD, the strategic need for this capability is clear. There are two weapons that will be going out of service. The main drivers to decision-making here, which affected the project process fundamentally, therefore appear to be threefold: the essential in-service date for the capability due to obsolescence of current equipment, the needs of the UK industrial base and cost restrictions. Three other drivers also come into play: political sensitivity, opportunistic behaviour and the requirement to keep some UK sovereign aspects.

In considering the impact of the MoD governance framework on the project, there are two notable aspects of NEADS: the organisation takes less interest than they might because they are part of an IPT, in which the other schemes are nearer to Gates; and the project is in its early stages, where a project within DE&S may find it easier to minimise visibility and get the task done. The NEADS project has so far been governed through a mixture of internal (to the IPT) and external assurance. It has not yet undertaken any OGC Gateway reviews, and no Foundation Review was performed. It will be reviewed by an internal board prior to submission for the Initial Gate, expected in 2009. The NEADS project is an example of a complex defence development scheme. It illustrates why emphasis is needed on the concept stage of such projects, as while there may be a clear understanding of the requirement, the best way to fulfil this requirement in a cost-constrained environment is a highly complex and changing decision. It illustrates the need for structured governance processes in the long period leading up to the MoD Initial Gate, during which the project can travel a long and circuitous path. It also illustrates the difference between a straightforward statement of the governance process, and the actuality in projects operating over a number of years within an environment of changing political and cost priorities.

4. Analysis of cases and framework practices

The Home Office case illustrates flexible use of a complex governance framework. The project does not appear to be a technical challenge, but the complicated PFI contract arrangement was a challenge to handle within the common framework. Important findings by the Parliamentary Accounts Committee outside the Gateway Process illustrates the importance of the status of the framework and what organisational level is challenged by the review; this points towards other additional important governance measures. Although a political decision, this case documents substantial influence by rational decision-making. The building was delivered in 2005, on time and without a rise in the service charge – a success story from the project perspective, and, hopefully, also from the strategic perspective. This implies that flexing of the framework, which at first glance might appear rigid, can give useful benefits.

NEADS is an extremely complex development and procurement project, illustrating the need for governance in the early phases of a system development. The case gives a practical example of why a governance framework is important. It also illustrates how assumptions change over time, and the degree of change to be faced during the initiation and development of a complex defence system. It shows the effects of political decision-making and judicious use of the system in the actuality of the project. The case poses a question about how long a development should be allowed to continue before a formal external review is called for. It illustrates why governance in the early phases is vital to project success. It is not possible to know whether it will be a success or not from the strategic or project perspective.

In the IFI2 project the contract arrangements had a special focus, following discussions about the fundamental project concept. This focus was sparked by early direct interventions by the Ministry, based on identifying the cost as being too high. Although a political decision, this case documents substantial influence by rational decision-making. There are no indications that QA had a large impact, but there was clear reassurance, and thus legitimization, in having an independent review. One interesting aspect is the question about how to evaluate the performance of a review. Is it the ability to identify the risks that is important, or to predict the exact cost? In this case, the identified market risk had considerable consequence on cost, and the budget had to be increased. Does this imply a successful QA2 performance or not? Does the need for an increased budget in such a situation deem the project a failure, given that the delivery will be on time and of the right quality?

The Skjold case illustrates why it was important to expand the QA scheme to include QA1, introducing the value focus in the early stages of development. The strategic perspective, critical from the decision-making point of view, is not present in QA2. However, it would need to be early – in this case a late QA1 may not have made any difference: the Defence organisation’s lack of support was well known to the decision-makers. Ultimately, decisions were clearly made on a political basis, taking into account Norway’s ship-building industry. There might be a rational normative framework, but this is embedded in a society which includes influences of power and politics. Indeed, this is how it should be – it is anchored deep is the democratic system and the governance framework. The performance of QA2 had weaknesses, since the rules of practice had not yet been fully established. Thus, the impact of quality assurance was lessened; reassurance was the benefit gained from it. The project perspective shows a well-defined, -prepared and -executed project, but it is likely to be a failure, as was publicly proclaimed by high level officials long before the project was started.

In Table 1 some facts about the four cases are compared. This may question the choice of cases for this study and the performance of the reviews/operation of the frameworks. All cases show deviations from the rules defined by
the framework at the time of the review, although these are explained by situational causes, so this can be seen as a positive flexibility in the frameworks. There are also individual considerations as to how strong the scrutiny should be, depending on the established (or lack of such) practice. It is perhaps of greater concern that none of the cases shows the frameworks as having much direct effect on the project activities. This may be a result of how these cases were selected, all being judged to be performing positively. Another aspect is that typically the projects always have to spend a substantial amount of time and resources to prepare for review.

Table 2 shows a selection of interesting aspects, including both good performance and potential for improving the projects. This does not cover time and cost, as the researchers were unable to access these aspects. Reading this table horizontally shows the different circumstances or solutions found by the different cases in each of these aspects. Reading the table vertically, a story about each case emerges, where the different aspects can be seen to be causally linked to a certain extent, e.g. in IFI2 many of the observations indicate a strong owner and customer position. Direct intervention and control is typical for the governance and management strategy here. The review questions the degree of adaptation to the current situation and the method used for cost estimation. This has no direct consequence for the project but the project manager admits he has learned a lot on a general level about the management of large projects.

Finally, Table 3 shows our interpretation of these cases and their links to the governance frameworks. Each case documents the importance of governance frameworks in its own way. The potential improvements at the time of the review (compared to the framework as it was defined...
at the time) are well known, and most of these are already established in later versions of the frameworks. This indicates that the development of these governance frameworks is targeted and efficient. Even today’s frameworks have potential for improvement based on these cases. Noted here is the need for: stronger governance in the early stages of development, the wider perspective of reviews, a stronger technical focus in reviews and the regular renewal of the analysis to ensure its relevance. The Home Office case also reminds us that there are other additional, and highly relevant governance mechanisms available.

5. Conclusions

A number of conclusions can be drawn from these cases. Firstly, there are some clear similarities between them:

- In all cases the framework was applied flexibly, although perhaps less so in IFI2.
- The cases illustrate the difference between a straightforward statement of “the” governance process, and the actuality in projects. This is particularly apparent in NEADS, but 2MS also shows flexibility in the OGC system.
- None of the cases shows any obvious influence on the project under review.
- However, in all projects there was value in providing reassurance and legitimization; this is particularly seen in Skjold, IFI2 and 2MS. Although not relevant for NEADS, reviews confirmed what was required: cost, risk, contract, or business case, as relevant.
- Project managers gained experience from the processes.
- All cases appeared to confirm the importance of a governance framework. It is clear that the complexity involved in the decision-making, technology and contracts means that a governance framework is particularly important, although it may be a challenge for quality assurance.
- All the cases illustrate the same potential improvement to the framework as it existed at the time of the review, and the need for much more assessment of a project during its early stages. NEADS illustrates the need for structured governance processes in the long period up to the first decision. Emphasis is needed on the concept stage: for Skjold, neither the basic need of the project nor the value perspective was included in the QA. There was a mixture of unsatisfactory mechanisms in the early stages of the cases.

Conclusions can also be drawn from the differences between the cases:

- Decision-making was sometimes rational and sometimes political. The Skjold project, particularly, shows that no matter what the professional advice or the result of rational methods, the final decision is a political one.
- Other potential improvements to the current frameworks were identified. These included a wider perspective of the reviews (2MS) and the need to update analysis regularly and achieve a stronger technical focus (IFI2).
- It is clear from these cases that the control focus is prevalent in the QA system, and there are similar hints in the MoD system. This is less true for the Gateways which are more “friendly”, although current changes are making them somewhat less so.
- The governance mechanisms throughout appear to have been project-based, but the governance of linked projects was not clear, e.g. 2MS. More importantly, there are clear issues in the division of a programme into projects, e.g. NEADS. Having said that, in the OGC methodology (2MS) it was clear that Gateways could include studies of portfolio business case issues.
- Transaction Cost economics highlight the power of the suppliers. For 2MS, having expert support from those accustomed to dealing with sophisticated and
experienced contractors appears to have been valuable. Skjold had the problem that the QA consultants were not allowed to access the suppliers’ personnel.

- For 2MS, the effect of other governance processes were interesting, i.e. NAO, Parliament and Treasury.
- The ability to look at cost and time issues varied. NEADS had a project-independent cost; there were methodological issues in IFI2, and the problem of no alternative source of data in Skjold. The cost analyses presented for IFI2 by the project organisation and the QA team may have differed. It is interesting that it was another governance mechanism (Parliament) that picked up the optimism bias for 2MS, in benefits, rather than costs.

This study has looked at a number of frameworks in a structured way, and provides a checklist for anyone looking at a particular framework and wondering about its essential nature, or designing a new framework: the discussion here outlines how frameworks differ. But the main topic of this paper was to look at how these frameworks and their differences actually play out in practice, generally following, but always a little different, from those espoused by the authorities. The two sets of bullet-points above give detailed conclusions as to what was beneficial and what was less so in the actual use of the frameworks.

This is a very small sample from which to draw conclusions, although we did try to make it balanced. Clearly, there also were issues in the cases that were provided for the researchers to study, which limited not only the findings, but also the generalizability of those findings. This may partly explain why we found surprisingly little impact of governance frameworks on the projects. Due to the complexity and sensitivity of defence projects, and commercial programmes, but also the generalizability of those findings. This study has looked at a number of frameworks in a structured way, and provides a checklist for anyone looking at a particular framework and wondering about its essence, or designing a new framework: the discussion here outlines how frameworks differ. But the main topic of this paper was to look at how these frameworks and their differences actually play out in practice, generally following, but always a little different, from those espoused by the authorities. The two sets of bullet-points above give detailed conclusions as to what was beneficial and what was less so in the actual use of the frameworks.

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In conclusion, we have characterized the institutional frameworks and their differences. We have seen how they work out in practice, and that while the potential effect was large, the cases we studied did not show their full potential, key benefits being legitimization for the project and reassurance for the project owner. The importance of governance was apparent, particularly in the early stages of projects where concepts are established.

References