

Report from Professional Exchange Sessions

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Report from Session 1 - Day 1 “What is project governance and what can be learned from today’s practice?”

(The excerpts from the discussions in the different groups have been edited, and are therefore not identical to the actual statements made by individual group members.)

Group B

Chairman: Kalle Kähkönen, Finland

Introduction

The group started up their discussions after a short introduction by the group chairman. There were considerable divergences in the views on the nature of project governance. Several group members felt that governance included management of project operations. Others felt strongly that governance is tied to decision making before the project is financed. Through the discussions, the group settled for the latter.

Excerpts from the discussion

The term Project Governance can have a wide content, and it can be understood in many ways. What is more important, according to your experience?

We should distinguish between project governance and project management. Governance is different depending on the stakeholders. The interests of the public may be different than priorities voiced

by the politicians, so that the decision making process is also different. Governance is a system for decision making that takes place at different levels.

What is your definition of success? The definition will change from stakeholder to stakeholder. How to satisfy different stakeholders? How to manage the value contents of the project?

There is a hierarchy of levels here. The contractor has the need for strategic input such as time and cost, while the different users have a totally different point of view. *Doing things right* is very different from *doing the right things*. The view on this is different from country to country. We are commonly preoccupied on doing things right. But how do we make sure that we are also doing the right things?

How do we identify risks at different stages of a project? Risk assessment of the project is important. Governance should be made according to the forecasted risks.

Our knowledge (and lack of knowledge) when dealing with a project is mainly concerned with the operational level of the project and not strategic levels. There is a need for better integration here.

This is closely related to Systems Engineering. Performances of projects that are done according to systems engineering seem to perform better.

The financing party should enforce a controlling system to make sure that things proceed according

to expectations. The governance system is no guarantee for things going right. What is being discussed here (in this group) are ways to improve rationalistic planning. One can improve planning to the extreme, but things will still tend to go wrong. If you are discussing how to improve professional standards and operating procedures for those responsible, then you are down to a too detailed level.

The financing party should have a system that makes the next level responsible, which in turn should make the next level responsible to secure that it does what is expected, and so on. If you are messing up this with providing advice on how to improve rationalistic planning procedures, that is not what the (new) Norwegian governance system (set by the Ministry of Finance, see Editor's comments below) is aiming at. There is no obligation in this (new) system to do things in a different way. What the responsible Ministries and Government Agencies have to do is to produce some required documents (with specified data) in whatever way they want to do it, without altering their current practices or procedures. However, the documents are to be endorsed at the county's highest executive and political level, and that makes a lot of difference.

The main asset with this system is that it has considerable authority, and therefore is expected to yield trickle down effects in public administration and below. Some of the rationalistic planning will improve as a result, but that in itself not solve all the other problems at the lower levels.

In the public system, there is more distance between the stakeholders and those taking decisions, than in the private sector.

Honesty and trust are difficult requirements, this may work for strongly religious people. A governance systems still have to presuppose the existence a certain degree of honesty and trust among involved parties.

In the British Chunnel project, the financing party made contracts with itself and paid in advance for work that should be done. But if you do it the other way around, you have possibilities for incentives and sanctions. If you do it the British way, you are certain to fail! How can you expect honesty and trust when you do it that way?

Every country has its own rules of *doing things right*, but still projects fail. Why? Because of poor quality of decision making. If the quality of decision

making is poor, the result is likely to be poor also. Before talking about governance, we have to have confidence in the decision making process and its criteria. But if the mind set is different, everything goes wrong anyway. So it depends on the people, the group and the culture. If a person with power says "Do it this way!", and this is wrong, things go wrong.

More attention has to be on the early stages of the project to get things right from the beginning, then it is a good start for the project.

I believe that a problem could be that there is a lack of decisions rather than that poor decisions are made. Are there mechanisms working that could kill the confidence to make decisions?

It is commonly felt by decision makers, when information is incomplete, that it is very hard to make decisions. This problem can be addressed by the governance system. Training is needed to enable people to make decisions when information is limited.

If the quality of the information supplied is not adequate at the Ministerial level, the project will be stopped. Although, there could be a go ahead given for political reasons.

The need for information to decision makers is important. When the client is demanding, the project gets better.

Experience from evaluation of international projects seems to indicate that strict governance authority; assignment of the best resources (people) available to carry out the project, frequent use of incentives and no interventions is the best way to ensure success.

There are commonly pressures applied from say local politicians towards certain projects which they favor for various reasons. More creative work at the early stages of suggesting alternative solutions to a particular problem may help against such pressure.

Comments by the editor

To readers that did not attend the Norwegian Ministry of Finance's presentation at the conference, it should be informed that the ministry has recently enforced quality assurance requirements (QA1) to all projects with a budget exceeding 0.5 billion NOK (some 0,1 billion USD) "to ensure that the choice of concept has been subjected to a political process of fair and rational

choice - with the ultimate aim that the chosen concept is the one with the highest economic return and best use of public funds". The QA1 exercise requires the preparation of the following information by the responsible Ministries – which will subsequently be subjected to a review of quality by external consultants:

Needs analysis mapping all stakeholders and affected parties and assessing the project's relevance in relation to needs and priorities in society.

Overall strategy document defining the project's goal and purpose (first order and long-term effects) with emphasis on consistency, realism and verifiability.

Overall needs specification specifying all requirements that needs to be fulfilled when the project is implemented.

Alternatives analysis including a zero-alternative and at least two alternative main concepts.

The group members, with only one exception, made no reference to this regime, and their inputs to the theme question "What is project governance?" were largely based on their individual experiences. However, when hearing the testimonies and the argumentation in the group, the expressed ideas overlap considerably with the ideas behind this regime.

On the basis of what emerged in the group, it seems to the editor that the introduction of the QA1 could be seen as a step in the right direction, but only a step. One participant claimed that there would be a "trickle down effect" from this onto the many lower levels of project contractors which would encourage a stricter project regime. This is left to see. It is hard to trust that this will happen without further efforts. And it is still unclear as to what those efforts should be.

Group C

Chairman: Wayne Abba, USA

Introduction

The chairman introduced this session by stating that the theme of "The front end" appealed strongly to him. What are the right rules of governance? In that context, what are the roles of

Government, the professional societies, the standard making societies, and how do they interact? The Norwegian Ministry of Finance has just introduced the QA1 system. I am very interested in hearing about similar efforts from other countries.

Excerpts from the discussion

First, I am worried that gateways similar to the Norwegian QA1 system will create more bureaucracy. Second, is the gateway looking at the right things? For instance, the gateway may well promote good technical and economical short term solutions, but they can still be economically dysfunctional in a long term perspective, say 30 or 40 years.

What does a ministry out-source and what not? I think political decision making has to remain political. If the consultants are used for determination of hard facts such as how much would this cost or how many patients would be served in case of a hospital, it is acceptable to use them, but if the political decision making is outsourced to the consultants, it would be inappropriate. Furthermore, political decision making in single projects is different from decision making in multiple projects. In the latter you must apply a stronger strategic view than in single projects, so it is not just to "kill" single projects in the case of multiple project environments. So how do you find enough projects to "kill" in these situations?

The Danish and the Swedish follow up, with interest, the Norwegian experience with bringing in external consultants. Do the Norwegians have experiences from stopping projects as a result of having introduced the QA systems?

Yes, we have. But the advice provided by the consultants is only an advice. It has no authority. The QA system is not so much about stopping projects as to improving the knowledge base in order to improve processes of front end decision making. Both the Ministry of Finance and the responsible ministry will assess the advice given, and we may emphasize other things than the consultants do. And on the top of the technical issues, we have the political aspects that must be weighed into the equation. The purpose of all of this is to improve the basis for decision by the cabinet.

Is it wise to contribute to the growth of a new consultant industry? This may cost more for the

Ministry of Finance than employing the relevant expertise within the ministry.

Taking the example of hospitals, going back to the stake holders, how do we define quality of health care? Obviously the different stakeholders are defining quality of health care very differently. Some will prioritize the iconic status of the hospital, others will be concerned about local proximity, teaching capacity, others again will prioritize productivity and cost effectiveness, the rest of the local public health sector will be concerned about the hospitals ability to suck money and in the end the patients themselves: Will it improve service delivery? And finally: Will it improve the health status of the population, or are there better ways of achieving that? The use of gateway processes could improve this discussion. I would strongly support that these kinds of questions were posed to the clinicians and not only discussed and decided upon in some ministry, hidden to outsiders.

We believe that the people on the demand side need to manage their side. Similarly, the people on the supply side need to manage their side. But the process has to start at the side that decides what is needed. Should this be done by government people or by consultants?

Instead of contracting for the infrastructure, another alternative is to contract the service itself. This changes the dynamics of the process profoundly.

An essential part of the Norwegian QA system is that it requires alternative solutions to be assessed. Most important is perhaps the zero alternative which requires the proposer to assess other ways of achieving the same effect. (Examples given in the discussion: Purchasing of new fighter planes: Could one alternative to buying them and owning them be to rent them? Or, could the purpose be satisfied in yet another way by not obtaining new planes at all? Or in the case of a new hospital, as an alternative to building another hospital, perhaps you could use the same amount to improve peoples' health by for instance making them stop smoking?).

It is the Government's responsibility to have the capacity to make decisions, and to be aware of its shortcomings. If its capacity is inadequate, the government has to buy the information needed. What is the core capability that the Government should have? And what is the organizational learning that it should secure?

The trickle down effect was mentioned by Knut Samset during his presentation today. I think that that is an effect we agree on and hope to see working. But the QA system of the Norwegian Ministry of Finance is not the only standard setting system at play here.

Comments by the editor

The group showed considerable interest for the Norwegian QA system. But there were concerns that it could contribute to more bureaucracy and higher transaction costs. Also, the ability to stop projects that did not qualify was questioned as it was argued that several projects were of developmental character, and consisted of several contracts.

The purpose of the QA1 system was highlighted as sound: "To ensure that the choice of concept has been subjected to a political process of fair and rational choice - with the ultimate aim that the chosen concept is the one with the highest economic return and best use of public funds".

The consultants' role was discussed with interest. There were concerns about costs and whether it would be more appropriate if the ministries took on the QA work themselves.

The Concept program specifies the consultant's role in the QA1 process thus: "Assert the quality of the documents supporting the final decision regarding the choice of the project concept". Furthermore, it states that "The QA1 exercise shall help ensure that the Government is provided with a sound basis for the decision whether or not to initiate the pre-project as requested by the responsible ministry involved.

The Norwegian Ministry of Finance requires the consultants to do the following:

1. Review the A) Need analysis, B) Overall strategy document, C) Overall needs specification, D) Alternatives analysis prepared by the responsible ministry with emphasis on internal and reciprocal consistency, and relevance of the priorities and choices made.

2. Undertake an independent analysis of the proposed alternative projects, including:

- * Uncertainty analysis (see QA2)
- * Economic analysis.

3. Provide an independent evaluation of the proposed alternatives with emphasis on:

- * Relevance in relation to A) Needs, B) Societal priorities, C) Existing portfolio of projects under the responsible ministry/agency
- * Feasibility in relation to A) Proposed budget, B) Time frame, C) Quality of outputs, D) Composition and timing of elements in the total project
- * Sustainability in the operational phase with emphasis on A) Long-term economic utility, B) Financial sustainability, C) Uncertainties

4. Rank the proposed alternatives and provide recommendations regarding decision strategy and implementation strategy for the project.

From the above, it is obvious that the determination of stakeholders and their interests should be an important part of the need analysis. In large and complex projects one would expect a diversity and even considerable conflict of interests and needs. This represents considerable challenge to the professional skills of consultants and decision makers, as well as the entire Governance system as such.

Group D

Chairman: Petter Næss, Denmark

Introduction

In this session, the chairman had prepared a number of questions for the group. The chairman introduced this session by asking the participants his first question: What type of analysis for complex projects is commonly performed in the home environments of the participants?

Excerpts from the discussion

In Denmark, we have a two step decision process before we decide to go ahead with a project. The first is to decide whether or not we should start making the detailed decision material. This first level decision is made on the basis of a quite superficial needs analysis and a rather pragmatic goal formulation. Then the politicians decide if we should go ahead with a full scale investigation or not. Typically, we spend about 1 to 4 million US\$

on this process including alternatives analysis (alternatives promoted by the public may also be included) before the go ahead is given.

In Australia, we start by looking at a whole program of about 200 projects or acquisitions, over a 10 year period, in all worth about 40 billion US\$, and if the government decides to go ahead with all these projects, we go to the individual projects phase.

When doing the front end analysis in the UK, we are trying to understand how wide this is. For example, if it is an opera house, we will not only look at the need for an opera house itself, but also on the implications for transport and other things. An opera house could cost 500 million, but there could be - say - a 5 billion impact on transport. That is what we are trying to capture. We try to make sure that all the right players are sitting around the table right from the start, even before we start producing any documentation.

Experience from Norway shows that there can be miles between the cost estimate figure that is stated in the planning papers, and the figure stated in the negotiated contract. This difference is always a problem for us: How to explain this to the e.g. parliament?

The Chairman: How is the needs' analysis being prepared in your respective home environments? Are the needs investigated from the "project triggering needs" or are the needs emanating through the positive and negative side effects? Suppose you build a railway through an area. This obviously will better the communication, but on the other hand there are negative effects such as environmental effects.

An example of this could be that you want to build a new motorway through London. Do I have to knock down half of London to do it? Yes. Then don't do it! The strategic assessment comes in phases. The next phase could be to look into the consequences. We need qualified independent assessors that are doing their work correctly, honestly and validly at each level.

I think the influence of the public is underestimated as an important factor in quality assurance. Typically, the environmental interests are very well organized, and so are the business interests. Standards may also be changing, e.g. environmental standards. Projects that were OK before, may not be OK anymore after only a few

years of planning. This may require the project to make major changes.

In the beginning of the Norwegian Concept program, it was our impression that such considerations come in a reactive way and not proactively. Typically, there was already a decision on what type of concept that could be chosen, and there were different project alternatives within the same main concept. The idea of focusing on front-end management is to lift these discussions to the strategic level where different types of solutions may come into consideration. Also, a scrutiny of the needs is required as a background for the entire idea behind making a project, and also, determination of how broad the scope of the need analysis should be.

The Chairman: Let us move to the goal formulations at the front end stage, and not seen in the operational project. How are the goal formulation relating to adopted political goals expressed in governmental white papers and similar? And what about the cross sector areas? The review of the QA system seems to indicate that there are some shortcomings particularly with respect to adopting the interests and goals of the cross-sectors.

In my view, if you look at a transportation project as a transportation machine only, then you miss relating it to cross sectors. A problem is that a project has to belong somewhere, and this place has a tendency to develop as the strongest stakeholder and it ends up getting the most influence.

The principal weakness that I see with front end analysis such as cost benefit analysis, is that it is not the volume of information that matters, but it is whether we are able to identify and gauge the critical factors. But typically, we are not sure which ones will be the critical factors. So we end up not doing the sensitivity analysis of the factors that really matters.

My company does this for the Ministry of Finance in Norway. We do try to quantify the critical risk factors, but inevitably end up with some factors that we are not able to quantify. Typically, these can be subjective things, but these are also facts. We end up having to advice that "The quantifiable things tell us this and the subjective things tell us that". So it is up to the politicians to make the final decision. It is always difficult to find a common denominator that says what is the best solution.

In some projects, the amount of information can be overwhelming, with lots of details. My problem is that I need quality information, and I don't necessarily find quality in lots of details. The quality is in whether the key things are there that underpin the success or the failure, and that enables us to choose one solution fore another, and to avoid the type of projects that should not be pursued. We need to make politicians aware of which projects they should NOT choose more than which ones they ought to choose.

Comments by the editor

The session was well prepared by the chairman who posed a number of key questions to the group. These commonly made references to the Norwegian QA regime, with the objective of mapping how other countries were making similar efforts. However, the response was not always consistent, probably because this type of QA work is relatively new to many although some environments have procedures that to some extent are similar to the Norwegian ones. The discussion's lack of consistency illustrates the need for a common strategic methodological framework.

It seems that a common challenge in QA work is to interpret the strategic situations into prioritized recommendations. There are many different and even conflicting interests that demand to be addressed in a project and they appear at many different levels or stages in the process. It is therefore difficult to establish an integrated view of complex projects up front.

In international development projects (World Bank, UN and most national aid agencies), this has been an acknowledged challenge for a long time, say about 25 years. When dealing with complex projects across boarders and cultures, there is need for an easily understandable and communicable way of determining interests, goals and uncertainties and showing how these relate to one another. For this, OECD has recommended financing agencies to use the "Logical Framework Approach" (LFA) in the concept assessment stage at the front end. The method has been adopted by several other users, e.g. the Canadian Government which use LFA as standard in public planning. The method is used to develop alternative project strategies and to assess the effect of uncertainty. The Norwegian QA1 system is compatible to the LFA system. For the benefit of readers that are not familiar with the LFA methodology, the following short description may be of interest.

When LFA is to be used to assist in developing project alternatives, the following studies are usually made initially on the basis of a perceived problem or situation that needs to be improved:

- A) **Stakeholder Analysis** (including society and stakeholders)
- B) **Problem Analysis** (problem trees are sometimes used)
- C) **Objective Analysis** (Parts of the problem tree are selected and reformulated into positive goals)
- D) **Strategic analysis** (Further selection of goals based on priorities expressed by political strategies and others)
- E) **Strategic Framework** (Strategic elements from the above is sorted into a "Project Matrix", see below).

An essential characteristic of the LFA process is the identification of and the distinct separation of objectives into 3 levels: A) Objectives at society level referred to as the Project Purpose, B) Objectives at Governance level (Project Goal), and finally C) Project Output. This proves useful as front-end discussions usually confuse the three levels. The idea is that once the project produces its intended output, (say buildings or infrastructure), it should contribute significantly to the realization of the Project Goal (e.g. a traffic congestion problem is solved), and consequently, the project will to a premeditated extent contribute towards achieving the Project Purpose (e.g. contributing to improved efficiency in the infrastructure at a given location). What is essential in this process is the mapping of possible uncertainty factors at all levels which may interfere with the fulfillment of goals at that level and finally deteriorating the project's contribution to fulfill the purpose.

The LFA process can be illustrated in what is usually referred to as the "Project Matrix". It may look like this:

(uncertainties) ► Resources (Funding) ► (uncertainties) ►
 Project Output (Results) ► (uncertainties) ► Project Goal
 (Immediate Objective) ► (uncertainties) ► Project Purpose
 (Long term Objective)

At first, this logical sequence seems simple, but in the front-end planning phase, the selection and structuring of different project alternatives is closely related to the associated uncertainties of each concept at each level. So the final selection of a project concept will depend on the uncertainties at all levels of each concept alternative.

Typically, risk factors are divided into two groups, the ones that the project can control, and the ones that are outside its control. In some cases, the risk factors that are outside the control of the project will be assessed by a more detailed risk analysis. The LFA provides a methodological backdrop for risk assessment when assessing different project alternatives. Perhaps more important, it provides a better understanding of the total picture including all risk factors, which can considerably improve the project design and ease the selection process of a project alternative. For further reading, see e.g.

http://www.norad.no/default.asp?V_ITEM_ID=1069

or

http://www.ausaid.gov.au/ausguide/pdf/ausguide_line3.3.pdf

Report from Session 2 - Day 2 “What are the recommendations for the future?”

Group A (Finance)
Chairman: Morten Fangel, Denmark

Introduction

This session was performed using visualization techniques and, unfortunately, inadequate recording quality has made it difficult to interpret several presumably valuable contributions into understandable text. However, some of the contributions have been attempted referred as below.

Excerpts from the discussion

Accountability at all levels is felt as an invaluable quality pertaining to governance systems. Also, a common alignment and consistency in communication in governing such processes is very important. Accountable and reliable project ownership is essential.

Conceptual thinking is essential in hospital planning, financing and investment across Europe. The challenge is essentially: “Is it the right project?” and when asking that question it is the problem of valuing the benefits realistically and getting people to understand the benefits from a whole systems point of view. The difficulty is the stakeholders’ perspective.

Typically, if you ask clinicians about the need for building a new hospital, the answer is: “Of course, we need a new hospital”. If you ask the township, the answer is “Of course we need a new hospital because hospitals define cities, and this will become an iconic hospital in Europe”. And politicians like hospitals because it is a symbol of their valuing health care. In real terms, it is a fact that hospitals make very little difference to the

health status of the local population. Probably most hospitals only need to be half or one third of the size to cover the real needs, because we are not investing funding in the difficult other areas. So what we need in this process, is some sort of strong, transcending advocacy of alternatives.

What struck me with the processes we have seen so far (in this seminar) is that the Norwegian model and the UK Gateway Model doesn’t actually get us very far into this, because I didn’t see enough of an option to think more laterally (I am with Knut Samset on that). Advocacy and clarity are primary qualities in governance systems: Who are you actually building the hospital for, who are going to listen to whom when the chips are down about alternatives, is it the politicians, is it the local planners, is it the clinicians, or who you will rely on in the future, is it the citizens who are not very well informed?

Finally, we need somehow to get risk assessments of various alternatives such as ... if the Norwegian oil money runs out, they may not anymore afford to run the hospital. Also, we need realistic benefit analysis: What are the appropriate criteria to use in assessing the effectiveness of a hospital, is it a cost effective project because of no overrun on cost and time? Or is it the best hospital because it offers the best individual clinical care available or is it because it can get patients well quite quickly, or is it because it can cater for the needs in a large portion of the population, and so on. So it is clear that we struggle with appropriate forum for this, which is getting us into the Governance systems.

And last: The problem with health is that we always operate on two levels: When we are well, we can be rationalists, but when we are ill, or our relatives or children are ill, it is totally different. As projects, hospitals typically have an emotional overload.

You have to be brave enough to face stakeholders advocating other interests at an early stage in the process when you plan to build a hospital, it may be environmental groups or others, because they will turn up later anyway. It is easier making adjustments at an early stage than later in the process.

I wish to refer to one of the presentations yesterday, where it was stated that we need to improve our project estimates with regards to costs, often being underestimated, as well as projected benefits which are typically overstated. Well, I was thinking that it is often quite difficult

to be accurate on such estimates. If we should do this accurately, we have to change the buying behavior of the investors.

The investors, even if they know that they are told a pack of lies, they accept making investments on terms that are grossly inaccurate. So, somehow, we have to change the buying behavior so the investments are made on the basis of truth. The problem with truthful information is that it ultimately will reduce the return of the investments that we are asking private investors to make on government projects. And I wonder what effect reduced expected rates of returns would have on the funds available... So the solution, since consensual systems don't work, punitive government systems are needed. You have to be able to punish organizations rigorously with law to gain compliance in the early days of regimes and in order to enforce behavior of good practice. We have thousands of years of compliance to testify to that.

Projects have to be built on visions, so that it will meet the expectations of the society in the future. While you are working on the project, you may be criticized for the costs. It is not only about the money, projects have to produce results that work in the future as well. You need to know that you do the right thing.

I find, that in my home country Japan, the top level typically talk about how to do it, but nobody will talk about why we should do it. All complex projects have good news and bad news. We need to be brave to talk about the bad news first. If we are presented with only good news in the beginning, and we are later to learn about the bad news, it may be too late to solve the problem. We need people on the top that love to share the bad news as well.

Editor's comments

The session focused on the need for a stricter regime to enable decisions to be based on more accurate facts than what is common practice today. There is agreement that the lack of accountability is caused on the one hand by strong interests driven by optimism rather than realism, and on the other, the lack of rules, procedures and even laws securing that decisions are made on realistic information. The Norwegian Quality Assurance system may be a step in the right direction, but it seems that there is need for more.

It seems that we must expect and accept that the individuals and the institutions promoting a project inevitably will argue for the project with a positive bias, and similarly, they will play down the negative sides to it, including the costs. This is probably human nature.

Furthermore, the perspective will be largely restricted to their own interests, and less focused on the interests of the society as a whole.

Important issues such as the project's sustainability and even its relevance with respect to the society's needs, can therefore easily be ignored.

And furthermore, as one of the participants claimed, investors may actually need this kind of positive optimism in order to reach the decision to fund the project.

Consequently, there is, on behalf of the greater society, a need to protect it against spending its common resources on large projects that can be expected to fail in serving its interests. It is commendable that the Norwegian Ministry of Finance has taken this seriously.

In this session, we have heard the recommendation that governments should be more punitive to protect the interests of the greater society. New laws and regulations may be required to achieve adequate protection at both regional and global level. The Norwegian Government's newly established Quality Assurance regime is only a step in this direction. However, although this move is appreciable, it is felt that the philosophy behind the QA regime is not obvious to most of us. It is hoped that we will soon see this regime develop further, and that the logics behind it will become clearer.

Group B - Researchers

Chairman: Kalle Kähkönen, Finland

Introduction

The purpose of this session was to identify ways and means to improve performance and effect of governance regimes in the future, topics for further research, and ways to share experience. A short introduction was given by the group chairman stating the purpose.

Excerpts from the discussion

World wide, the number of qualified people that can operate as project managers of complex programs at this level is extremely low. Furthermore, the governance vehicle for complex programs, how does that look like and how do you manage such programs? It is not about certainty, it is about uncertainty. It is about how you deal with governance in a highly dynamic and complex world. Treasury departments are badly off here, because they are driven back to the traditional approach, because the governance vehicle for traditional programs is all they know.

What is missing is an integrated view of the front end. We can approach this from many perspectives, and we have to integrate all these. The perspectives I see are Governance and 1) decision making and 2) accountability.

Since we do not know enough about front end governance, my suggestion is, from a research point of view, if you don't know what reality is, you cannot expect to be able to improve it. There is an obvious need for empirical research; that is grounded research of the front end. Typical for these programs is that you never build what you start out building because things keep changing. One problem here is that there is a lot of normative thinking in governance.

There is considerable value in grounded research because such research is not influenced by normative biases; it is simply determined by reality. But from this you have to build theories, and from there it gets more and more difficult.

Do we understand well enough the political decision making processes and the development and planning of the project? Case studies of airport projects have shown that projects often run into problems due to political failures as well as administrative technical failures. Furthermore, the political problems with Governance of projects

seem to be more common in the West than in the Far East. What is it about the nature of the political systems in the West that makes this? My hypothesis is that the West has highly decentralized political systems, and the greater degree of decentralization, the more likely you are to run into political problems. Studies have shown that the constitution of different countries means a lot for how "Governance" is being defined.

Another issue here is the one of public participation. It is clear that anybody that is involved in complex projects must be sensitive to public participation. Yet, it seems to me, that we really know very little about effective means for achieving effective participation. The standard methods that are being used, public hearings and the like are being used to legitimize decisions that have already been taken. Typically, they do not permit for genuine informing. There are some exceptions, but I have yet to see any analysis of what kind of mechanisms worked well under what kind of circumstances and for what kinds of projects.

We need to model and describe projects based using the models described in decision making theory. The need for training and specialization in project management and decision making of complex programs.

Another problem here is that some projects last for a long time, and we need to design the project so that it can adapt to the changing project environment, and at the same time act fast to the changes. We also have to design the projects for building and the later maintenance. This is not only about making the project flexible, but also about meeting the changing customer demands. In large projects the customer is usually important. Most projects are demand oriented.

One issue here is also how do you cope with radical changes in the system? The biggest sin at the moment is changes made in the governance. How does the computer industry do this? They have developed road maps for the future, but the advance of the process is constantly demand driven. Challenges here can be technology changes and social changes. In fact, here you are constantly evolving the project hoping that you one day is going to build something! Some projects are even inventing their own future! Where is the textbook for project management that describes that? This is actually covered by systems thinking. We need to bring it forward and make it ours.

Project management could be a large substitute for strategic analysis. Cumulative learning is important. In science driven races, it is project management. In say, architecture projects, these are smaller projects, but the builders themselves have huge research projects. In any such project, there is a need for complex project management skills in exploration, portfolio management, and commercialization. Intercultural understanding is also needed.

How do you perform cost benefit analysis for military projects? Social benefit comes into play here. Benefits can be difficult to determine. Somehow this seems to make a lot of sense, but you inevitably end up in absurdities.

How do you determine value or benefit when the value is not monetary? Doesn't QA 1 attempt to deal with precisely these issues? It seems to me that you are really trying to do something innovative and useful here in Norway, and this is an experiment that ought to be tracked carefully.

Yes, one of the objectives of the concept program is to try to do this. But Concept's perspective is all about quality at entry. You may illustrate the project management with all its problems as an arrow and then the governance system as another arrow surrounding that, and then you have the policy perspective on the top of that. The typical project operates in a messy system, anarchy. All we in Concept are doing is securing quality at entry, we are securing that we are making a good starting point for the messy process that follows. We know that this pays off, and that it is a small investment. We also know that all these project ideas start up as un-reflected solutions to particular problems. Typically these ideas are not challenged in spite of being faulty most of the time. So if you can improve on that initial idea, the effect can be considerable with respect to improving the quality of the end result. Then you can forget about the discussion of project management. It is not interesting! That is our perspective in the Concept program.

Comments by the editor

The discussion started off by identifying typical characteristics of complex programs and on the need for grounded research to improve our knowledge about the problems of front-end governance. The group agreed that the changing environment for decision making represents a particular challenge for these projects. Accountability is also important, and the combination of the two is particularly demanding.

The group had to some extent problems distinguishing between front-end governance and operation's governance. One reason for this is that several projects have developmental character, such as technology driven projects in e.g. the IT industry. Such projects may evolve continually and it may not be appropriate to distinguish between front end and project operations. Nevertheless, keeping track of customer demands is a common challenge to both types of projects.

The need to be able to determine the intended social benefit of projects *a priori* was pointed out. The Concept program is attempting to secure that such benefit is determined appropriately and if possible quantified.

The Concept program divides the project environment into three realms:

1. **The Project** itself which is expected to yield a particular output
2. **The Governance System** that encompasses several projects and that finances the project in exchange of a contracted project output and that should secure, through enforcement, that the project satisfies the project's goal.
3. **The Society.** The society's needs that should be served by the contribution of the project both at local level (the clients), and at a wider level (society as a whole) and even at a global level. These needs may be expressed through the project's purpose. The society realm may therefore be perceived as encompassing several systems of governance.

The governance system should therefore not only be able to secure that the project delivers as intended, but also secure that the project contribute to serving the complex interests of the society. From this, it is clear that the responsibility of the Governance system is twofold: First it should create a project start by means of e.g. contracts at the front end, and rules and control regimes that the project operations have to follow. Second, it should make sure that the public's short term and long term interests are being served throughout the process. The Concept program focuses on securing the latter.

Group C - Consultants

Chairman: Wayne Abba, USA

Introduction

The chairman introduced this session by stating that the objective of this session was to come up with some ideas of what we should do in the future. He pointed out that the governance system developed by Norway in the form of regulations for the QA process does not as yet have a solid grounding in the form of international standards for this.

Excerpts from the discussion

The government should be held accountable in the same way as their corporate counterparts: Personally as well as organizationally. Corporate executives are held responsible to their shareholders, so why not in the Government as well. Perhaps we could look at setting up a board for these projects that has representation from the users, from the government and the opposition, and keep them accountable as their corporate counterparts.

I do think that what Norway is doing is a good idea, but one of the QA consultants said yesterday that the worst thing that could happen was to be thrown off the "list". These organizations become quasi government and may rest on their laurels, unless there is a re-competition for being short-listed at say at every 5 years.

Another thought is that the QA2 system is similar to the integrated baseline review processes which again are similar to the system engineering review processes. Possibly, some benefit could be drawn from existing standards that build on system engineering, - perhaps we ought to lift them and make them more generic.

I suggest that we make a recommendation to establish a grading system from the World Bank or IMF or similar which would give vintage to the robustness of the QA process so that e.g. the benefit of the project is not being exaggerated and the costs being underestimated and so on. This could also result in say IMF offering reduced costs of capital, say a 1/4 per cent or 1/8 percent less. This would give a new awareness at governmental level and perhaps resulting in renewed interest for training etc. and it may contribute to changing the culture of only being interested in what they are getting back. We could, on the basis of the Norwegian model, combined with using the

existing standards built on system engineering - build an international model, defining an QA international performance baseline for communities and governments at large. We could say: Hey, this is something we should have been doing, would you like to adopt it?

From a research point of view, I think Governments need research results that indicate that getting it right early is important. Because if you are going to sell this to governments so that they put more efforts on front end governance by themselves, they have to have cases that prove that they are going to save money in the long run this way, and that it produces a better outcome. All of the speakers of this seminar have presented their cases by showing a series of failures. If we could start a research program comparing one case with a control regime and one without and see how they come out, it would be of interest.

This whole idea has so far been an area, that so far, almost has defied research. If you don't have the evidence, why would people change? If you could put a case forward and show the benefit. But it is difficult because there are so many parameters changing. Here in Norway we now have an opportunity to dig into that issue and come up with something. We need studies of successes as well as failures. The Concept program plans to make an ex post evaluation of the projects in order to document experiences.

The QA2 system is about project planning which is to be performed by the responsible ministry, but the QA1 system is about getting the business case right, and that is a very uncommon thing in the public sector. So far, focus has been on the costs and the scope, but not on the business case. Presently, there is not sufficient competence in business planning in the public sector. The different ministries are biased, e.g. the Defense ministry has to buy weapons and the Ministry for railways is obliged to build railways. That is why they are in business so they cannot be objective and take the outside view. What we need to see is a marriage between business management with project management. This is a challenge for the ministries.

Yesterday, we heard about the independence versus more detailed project knowledge. The railroad people do not want the aircraft people to evaluate what they are doing, so where is the appropriate balance between independence and more functional knowledge of what an agency is about, and how does the government deal with

that question? In the agencies you have to have a lot of different types of knowledge, you have to know how to build, you also need to know about the user's needs, and also about the stakeholders.

How would a project be developed if protected from political influence, at least in the beginning? What type of political decisions should not be taken at a very early stage? Also, disinformation may be produced to manipulate the situation. This has to do with the political process. What should be decided locally and what centrally? Norway has moved from one QA gate to two gates. Other countries may have three or four. What is optimum? The reason I ask is that I think some of the things we just talked about means that we that we might need a "pre-gate"?

In connection with the QA1, I want to tell about a Dutch experience. We have been doing a benchmark appropriation involving eight countries trying to control large projects and their cost overruns. What the Dutch are doing is that they have set aside a budget for the first process where they are trying to find a solution through feasibility studies. At this stage, they are not told that we should build e.g. a bridge or a railway. They are told to look at e.g. a congestion problem and that they should come up with different solutions to it. This way we avoid that some politician is coming up with an idea for a solution and the process soon develops into something irreversible before other solutions are being considered. This has secured that there is a lot of flexibility right from the start. What they have also done, is they have postponed the time of the commitment so that they can perform a more detailed analysis, and after this the project may get its go ahead

The Norwegian QA1 system actually has 4 gateways, because we have to produce 4 different documents. This means a total of 5 gates including QA2. I am not convinced that the planners are building on data we can trust is independent. I would suggest that a second independent pre-study is being made, to secure independence.

How many of you are aware of whether your governments are having something like a strategic plan with say a 30 years perspective? Those of us that will be taking business based decisions resulting in complex projects, we need government strategies that extend beyond the government in power at the moment.

A common problem is that the project goals are not very well defined by the owners. Furthermore, the success factors are missing. Several clever people can be working hard on the project, but they may not have the same goals. So it is very important to define what are the needs, and the goals, and the success factors.

How do you keep politicians responsible? A problem is that some politicians will be eager making popular decisions to be re-elected, decisions that may approve projects that have limited social advantage.

Editor's comments

The session was a very active and enthusiastic one. At the end, the chairman said that he believed that "This is a world leading activity that you are engaged in here, and I am certainly going to watch this because I think there are many ideas that we can take away from this".

Many important issues were discussed in this session. One, that is not referred to in the text above, is the qualification requirements for consultants and people in the ministries assigned to work with the QA documentation. There was general agreement on the need for on the job training. Also, there is a need to learn as you go, as the duration of these projects allow for ample improvement of skills while working on the project provided that there are effective feed back systems in place.

Several times, references were made to "Systems Engineering" as presumably providing a valid theoretical basis for the further development of the Norwegian QA system. For the benefit of the readers that may not be familiar with the field of systems engineering, the following is the definition of the International Council on Systems Engineering (INCOSE):

"Systems Engineering is an interdisciplinary approach and means to enable the realization of successful systems. It focuses on defining customer needs and required functionality early in the development cycle, documenting requirements, then proceeding with design synthesis and system validation while considering the complete problem. Systems Engineering integrates all the disciplines and specialty groups into a team effort forming a structured development process that proceeds from concept to production to operation. Systems Engineering considers both the business and the technical needs of all customers

with the goal of providing a quality product that meets the user needs".

A typical systems analysis procedure may typically go as follows:

1. **System definition:** Focusing on a problem and defining its limits
2. **Need analysis:** Identify stake holders and others that are affected by the problem, their needs and priorities. Sustainability issues are addressed here.
3. **List of requirements** including: Functional requirements (how do we want the system to work), Physical requirements (How should the system be built and how should it perform), Operational requirements (How should the system operate) and finally, Economic requirements (What should it cost during development and operation).
4. **Alternative systems** or alternative parts of the system (Search for technologies and components that may improve the performance of the system).
5. **Performance evaluation:** The system or parts of it or components in the system are tested against the requirement specification.

Group D – Industry & Communication

Chairman: Petter Næss, Norway

Introduction

The chairman opened the session by stating that he is involved in the Concept program by doing needs analysis at the front end of large scale projects. He continued by stating that he would try to keep the discussion on the strategic level of projects, and not on the tactical. Typically at this level, different concepts are being discussed, rather than variations on the same basic concept solution. What types of analysis do you think we should carry out at this early stage?

Excerpts from the discussion

The most basic start is to ask: what problem do we intend to address in this project, and is the project a good answer to this problem. In many cases, there is a considerable political pressure to start a project, and sometimes there is no problem to

solve. They want a project to show. So it is appropriate to carry out a needs analysis.

I suggest we say "needs analysis/market analysis". In a project addressing social needs we say "needs", but a project driven by a revenue earning enterprise might address "market".

There are two types of projects, one that is of the "one off type" that you either do or you don't, and then there are continuous projects such as hospitals where you know it will cost more in say 10 years time. In the last case, we try to include the long term perspective in our analysis.

Analysis of conceptually different project alternatives should be made. Also, an effect or impact analysis should be prepared in order to establish if the needs could be expected to be satisfied by the project. The intended impact is usually expressed in the strategic goal. The Norwegian QA system requires a goals' description and a list of functional requirements that the project should fulfill or do.

In Australia, we require that the best example of what is being obtainable today be put on the table, and describing what that can do. A description of the state of the "achievable" art. This is used as a benchmark against setting more ambitious requirements. We have the experience that people specify requirements that are very difficult to achieve. You have to understand why you want to go that far.

The Chairman: What about goal formulations? Do you think goal formulations should be a part of the front end?

You have to clarify what is meant by "goal". How is that different from objective and purpose and effects? I am not sure if it is a goal or an impact analysis you are referring to.

What you are really talking about here is the logical framework or hierarchy of objectives. I wonder how many of you are doing a logical framework of objectives as a part of a project analysis? I have been involved in this a long time, and I recommend against using words like "purpose" and "goals". Start with Output Objectives, Strategic Objectives, and Impact Objectives, to avoid confusion. Many people think of goals as something specific and many think of goals as something general and long term.

When we have goals, we should also have ways to measure to what extent the goals are reached.

The Chairman: How broadly should the needs be defined in connection to a project concept? To what extent should we include other needs than the ones that are triggering the idea of the project concept? To what extent should the process be opened up to include public debate and participation?

Most of the projects the government has to finance, are already committed in one way or another. So most of the budget is about that. Only truly new things may require a needs analysis to be made, but that is a very small part of the total budget.

I disagree with that. We want to have a discussion of totally different concepts satisfying the documented needs in most situations. Also, the needs analysis should cover needs in a wide perspective, not only the needs that are central for the idea behind the project. The need analysis should also focus on both positive and negative side effects.

One project that comes to my mind is the Norwegian opera house. There are two main goals in this project. First it is the cultural goal, and second is the urban development in this part of Oslo. In this case it is essential for the project to clarify which of the two you think is the most important one.

Public participation is difficult. In Australia we are very weary about secondary reasons for financing projects, because everybody tries to throw in as many reasons as possible in favor of "their" project alternative. We think that if we should consider the primary justification for a project. If you can't make your case on the most important factors, then the secondary factors will never be enough justification for the project. Regarding negative side effects, you have to make the decision on the basis of what is best for the whole society, which is a broader view, and try to stick to that. But we try to keep in mind what is central to the situation, people try to come up with quite distant reasons for or against projects, but we will usually rule those out. What is important though is that these arguments are on the table so it is transparent what information the decisions have been based on.

The Chairman: The Norwegian QA1 system requires that a cost-benefit analysis should be made at the concept stage. Some are skeptical to this since it is obviously difficult to get reliable data to base this on at this early stage. What do you think about that?

I don't think that you can do this at the concept stage, since you don't have a technical solution priced out, - you might be able to do some rough estimation though, but I also don't see how you can do an impact assessment. It is a long shot if you should, say build a power plant, to determine its economic impact in an area as a result. Another example is the bridge between Copenhagen and Malmø. The bridge has led to movement of people from Copenhagen to Malmø because housing is cheaper there. Could you have predicted that in an impact assessment?

Another example from Denmark is that when discussed whether we should apply for the Summer Olympics, it was claimed that the value of the improved health of the Danish public would compensate the costs of the Games because it was assumed that the Danes would be inspired to exercise more! But the claim gave rise to an interesting discussion. The discussion itself is of course quite important.

What you need here is actually transparency. An impact assessment based on approximate data is possible to carry out and could be a good basis for communication with the public. And we need to include the negative impacts as well as the positive.

Comments by the editor

Much of the discussion was about the justification of different analysis being made to enable evaluation of project concepts before financing. Several types of analyses were discussed: Needs/Market analysis, Cost/Benefit analysis, Alternatives analysis, Impact analysis and strategic goal analysis. Obviously, considering the differences in the participants background, there were some difficulties developing a common basis for the exchange. One area where this was discussed by the group, was the goal hierarchy referring to the project itself, the immediate beneficiaries of the project and the society as a whole.

One participant suggested that instead of using the terms "goals" and "purpose", the terms Output Objectives (Project Output), Strategic Objectives (Project Objective), and Impact Objectives

(Society Impact) should be used. This is conformity with the Logical Framework Approach (LFA).

There was considerable discussion on the topic of Need's Assessment. There was agreement on the difficulty designing projects to address many varying needs and consequently resulting in more complex goals, as opposed to a few that would be central to the project. Also, one should look into how the goals could be verified.

Again, it is felt strongly that the reference to the LFA methodology as a basis for setting up the system of goals for easier communication and possibly later evaluation of projects could be valuable.

It could be mentioned that when using the LFA, the framework should be built through an iterative process involving the stakeholders. The exercise therefore not only provides a framework for organization of objectives, uncertainties and indicators in a project alternative, but it also builds a common dialogue and a sense of ownership in the project among the stakeholders.

Another feature of the LFA methodology is its application during evaluation of the project. This would typically involve the following evaluation criteria: the project's Efficiency, Effectiveness, Impact, Relevance and Sustainability. These criteria relate to the LFA objective hierarchy as follows:

- **Efficiency** is measured referring to **Input -> Output** (Example: The bridge cost more than budgeted)
- **Effectiveness** is measured referring to **Output -> Goal** (Example: The bridge traffic was higher than estimated)
- **Impact** is measured referring to **Goal -> Purpose** (Example: The bridge facilitated to more tourists to the island)
- **Relevance** is measured referring to **Goal -> Purpose** (Example: The bridge helped maintaining industry on the island)
- **Sustainability** is measured referring to **Goal -> Purpose** (Example: Traditional economy (fishing) was weakened on the island)

Typically, evaluations may use the above criteria while focusing on a set of different aspects: Economic and financial aspects, Institutional

aspects, Socio-economic aspects, Technological aspects, Environmental aspects and Policy support aspects.

The Concept program intends to study the experiences with the QA1 and QA 2 systems based on the performance of the projects when this can be evaluated. The above system for evaluation could be useful in this endeavor.



Front-end Management of Major Projects

The Concept Research Program was initiated by the Norwegian University of Science and Technology year 2002 to conduct research on front-end management of major investment projects, more specifically, on how to ensure quality at entry before the final decision to fund a project is made. Its aim is to develop know-how on how make more efficient use of resources and improve the effect of major public investments. The Concept Program is financed by the Norwegian Ministry of Finance.

In popular terms, the idea behind the program is that some 80 per cent of decisions determining the success of a project is already locked up-front. What remains open to improvement afterwards is correspondingly restricted. However, some 80 per cent of project management resources are used during implementation. Doing a better job up-front is therefore likely to pay off in the long term.

The Concept Research Program conducts trailing research on all major public investment projects in Norway to study the effect of different measures and interventions over time. The program facilitates cooperation between key Norwegian and international professional institutions, essentially universities, research institutes, and consulting companies. The prime users comprise Ministries and Government agencies, project organisations and professionals in industry. A number of Masters level and PhD students are working with the program.

Below are three examples of recent major Norwegian investment projects: To the left is a model of the new opera-house now being built in Oslo (photo; Snøhetta). In the middle is an image of the new bridge linking Norway and Sweden at the Svinesund fjord (photo; the Norwegian Public Roads Administration). To the right is an image of “KNM Skjold”, a stealth type rapid torpedo vessel for the Royal Norwegian Navy (photo; the Norwegian Defence Media Centre).



The program is based at the Norwegian University of Science and Technology, Department of Civil and Transport Engineering in the city of Trondheim. The main academic collaborating party is the Norwegian School of Economics and Business Administration.

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