

# concept

Håkon Finne

## Governance of Major Public ICT Projects. Managers' Experiences and Opinions

Concept report no. 56



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Managers' Experiences  
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## **Governance of Major Public ICT Projects. Managers' Experiences and Opinions**

### **English summary**

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## English summary

The present report describes experiences from design, governance, and implementation of large ICT projects in national government agencies in Norway. The experiences are gained by individuals who have played key roles (or still do) as project managers or representatives of project owners in many such projects over a number of years. These experiences have been collected and processed through facilitated workshops, where a total of 25 experts have shared their experiences. In this report they are integrated in an analytical framework and connected to policy questions for further handling of this kind of projects.

The background is the tendency that large ICT projects have for large cost or time overruns, or for being terminated after large expenditures without useable solutions for the project owner. Out of 20 ICT or telecom projects that until now have been submitted to the quality assurance procedures of the Norwegian state project model, at least one in four have had significant challenges or either been terminated after high expenditures or been put on hold. The Ministry of Finance's quality assurance scheme does not seem sufficient to handle these issues. Some studies suggest that the distribution of cost overruns is far from gaussian, that there is a considerable share of very high overruns (Budzier og Flyvbjerg, 2011). This gives a rationale to search for important causes and to seek remedies against them.

The discussion of a long series of topics related to project size, duration, and complexity shows that complexity in itself increases the risk of considerable overruns. The drivers of complexity make up a mixture of a considerable ICT investment lag (there is a lot to catch up with) and tendencies to add on more tasks once a project stands a chance to receive funding. Increased complexity and duration on their side make it harder to succeed with a classical waterfall implementation strategy. There will always be a need for changes during the project, and the lack in flexibility may cause large ripple effects for every change made. How to handle obsolete technologies selected long before project implementation is one of these problems. A segmentation of projects to make each of them more homogeneous may be a useful strategy.

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Discussions also showed the digital maturity of agencies to vary considerably, and that this has major implications for design, governance, continuous follow-up, implementation, and benefits realization – and hence also for cost, time for completion, benefit, quality, and profitability. Good project managers may compensate for some of this, particularly if they have a good rapport with a strong project champion in top management. They may also drive a more rapid process of maturation in the agency if the project is organized with many and well-organized contact points towards the user organization and the latter is willing to invest sufficient time and resources for this purpose. This obviously has a cost, as do the changes required to benefit fully from the ICT solutions in the operations of the agency.

What good project managers can contribute, which is what makes them attractive, is to a great extent about how they handle the project organization internally and how they regulate the relationship with the owner and user organization(s). Virtually all conceivable contingencies will occur in a project of long duration; hence project management is first and foremost risk management, and in this case, it is imperative that the 'software factory' is more or less self-managed. This can be achieved through a high degree of autonomy in how the teams solve the tasks they are allocated. It also depends on personnel turnover not to become too high, since good solutions are dependent on specific knowledge about the agency, its work, and choices done throughout the project – context-specific and experience-based, frequently tacit, knowledge. This may necessitate personnel management at the project level, a function that normally is allocated to the basis organizations alone.

The report tentatively concludes that project complexity preferably should be reduced at the design stage. Four main categories of activities are suggested on the basis of the experiences reported: roll-out of standard solutions in large quantities, establishment of central infrastructure services, digitalization (and simplification) of existing work processes, and development of new (or major transformation of old) capabilities. Each of these has its own project logic, and it may be a good idea to keep them separated as much as practically possible in order to reduce cost-driving project design complexity.

Development is rapid in this area. Since the data collection for this report began in 2014, there reportedly has been a significant change in the direction of designing new ICT projects in state agencies with greater homogeneity and lesser scope. The threshold for mandatory quality assurance is now being considerably lowered and applying to the portfolio level.

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Forskningsprogrammet Concept skal utvikle kunnskap som sikrer bedre ressursutnyttning og effekt av store, statlige investeringer. Programmet driver følgeforskning knyttet til de største statlige investeringsprosjektene over en rekke år. En skal trekke erfaringer fra disse som kan bedre utformingen og kvalitetssikringen av nye investeringsprosjekter før de settes i gang.

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*The Concept research program aims to develop know-how to help make more efficient use of resources and improve the effect of major public investments. The Program is designed to follow up on the largest public projects over a period of several years, and help improve design and quality assurance of future public projects before they are formally approved.*

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