Extract from Rigsrevisionen's report
submitted to the Public Accounts Committee

The decision-making phase in government IT projects

1. Introduction and conclusion

1.1. Purpose and conclusion

1. This report concerns the decision-making phase in government IT projects. The decision-making phase is the period that begins when a ministry decides to initiate an IT project and ends when the development of the IT system starts. During this phase, the ministry makes essential decisions on IT projects and lays the foundation for the implementation of the projects. The study was initiated in December 2019 at the request of the Danish Public Accounts Committee.

It appears from the Public Accounts Committee's request that government IT is considered critical infrastructure in line with, for instance, electricity and roads, and that the decision-making phase is decisive for the success of IT projects. The Public Accounts Committee has asked for a study that sheds light on, among other things, the duration of the decision-making phase, expenditure incurred during the decision-making phase, how the ministries choose development methods, and whether the ministries apply relevant knowledge to adjust budgets ad time schedules. The Public Accounts Committee considers it important to collect knowledge and acquire learning about whether and, in the affirmative, how the decision-making phase affects the success of the projects measured against targets set. Thus, the study has focus on learning in connection with the decision-making phase in IT projects.

The study includes the ministries that, since 2011, have launched IT projects with budgets of more than DKK 10 million and whose decision-making phases have been completed by July 2020. The IT projects included in the study are subject to the rules of the government budget guidance concerning IT projects, and they have therefore been risk assessed by the Council for IT Projects. Thus, the study includes 96 projects distributed across 15 departments and involving total costs of approx. DKK 7.6 billion. This means that the study includes all departments with the exceptions of the Ecclesiastical Ministry, the Ministry of Social Affairs and the Interior, and the Prime Minister's Office, since none of these have consulted the Council for IT Projects on such IT projects in the period examined.

The Government Council for IT Projects
This was established by the government in 2011. The members are top managers from public and private companies. The council provides guidance to the authorities on timely handling of risks to IT projects.

2. The purpose of the study is to shed light on the characteristics of the decision-making phase in government IT projects and to determine whether there is a connection between the decisions made by the ministries in the decision-making phase and the performance of the IT projects in terms of price, time and benefits. The report answers the following questions:

- What costs have the ministries incurred, and how much time has the ministries spend on the decision-making phase?
- What decisions have the ministries made concerning procurement of the IT systems?
- To what extent have the ministries adjusted project budgets and time schedules in the course of the decision-making phase?

We also examine whether there is a connection between the performance of the projects in terms of price, time and benefits and the issues examined in the decision-making phase, including the expenditure and time consumption of the ministries, the ministries' decisions concerning procurement of the IT systems and adjustments made by the ministries to the projects in the course of the decision-making phase. We look into the benefits of the projects as indicators of the quality of the projects.

These questions are answered through examination of the decision-making phase for the 96 IT projects distributed across 15 ministries. Additionally, we answer the questions through a more detailed examination of 6 projects initiated by the Ministry of Finance, the Ministry of Justice and the Ministry of Taxation, respectively.

Main conclusion

The issues examined by Rigsrevisionen relating to the decision-making phase of the projects do not alone explain why some projects perform well in relation to price, time and benefits, whereas others do not. The projects are all very different, and several other factors have an impact on whether the ministries achieve the objectives set for their projects. This means that the projects are not necessarily successfully implemented, because the ministries choose, for instance, an agile development approach or inhouse development, or because the ministries spend a considerable amount of money on or devote much time to the decision-making phase. The consequence of this finding is that the ministries need to assess how each individual project should be organised to achieve its objectives.

Factors examined
- Costs incurred by the ministries and time spent in the decision-making phase.
- Decisions made by the ministries concerning technical solutions, development method and method of procurement.
- Adjustments made by the ministries to project budgets and project completion in the decision-making phase.

On average, the ministries have spent approx. DKK 9.8 million and 17 months on the decision-making phase

The study found that the performance of the projects in relation to price, time and benefits is not dependent alone on the amount of money or time the ministries spend on the decision-making phase. The study also found that there is no connection between the time spent by the ministries on the decision-making phase, and the overall time spent on the projects. This means that the decision-making phase of a project that takes long to complete can be short without affecting the performance of the project, or the other way around. The level of expenditure incurred in the decision-making phase is largely the same across most of the projects. This indicates that the ministries incur certain overhead costs in connection with the decision-making phase and organisation of IT projects, irrespective of the total price of the projects. Examples of such costs could be expenditure for project management, analyses, requirements specifications and tendering. The ministries have broken down the costs relating to the decision-making phase on internal and external expenditure for 48 of the 96 projects.

There are variations in the expenditure incurred and the duration of the decision-making phases in the six projects initiated by, respectively, the Ministry of Finance, the Ministry of Justice and the Ministry of Taxation. The variations can be explained by the fact that, for instance, one ministry has spent more time on the tendering process for one of its projects than planned, and another ministry has not incurred any expenditure for procurement of an IT system, because the ministry developed the system inhouse.

Since 2011, the ministries have increasingly employed agile or partially agile project development methods. The distribution between ministries that have procured their IT systems via an EU tender process or framework agreement is fairly even, and relatively few of the ministries have developed their IT systems inhouse The study shows that the ministries' choice of technical solution, development method and method of procurement is not the only factor that affects the subsequent performance of the projects in terms of price, time and benefits. The decision-making phase is shorter in agile projects, projects developed inhouse, and in projects that have not been through an EU tendering process, but where the ministries have procured the IT-systems via a framework agreement. The examination of the six projects initiated by the Ministry of Finance, the Ministry of Justice and the Ministry of Taxation, respectively, shows that the ministries' decisions on technical solutions, development methods and methods of procurement are not consistently based on considerations of what is seen as the option best suited to the relevant project. For instance, the ministries have not in any of the projects stated which development method they considered to be best suited to the project. Instead, they have made their choices based on, for instance, their previous experience. Rigsrevisionen finds that the ministries must be able to motivate the choices they make based on a consideration of what is seen as the option best suited to the projects; their choices should not be based only on their experience with past choices.

The budgets and time schedules of most of the projects have been adjusted by the ministries in the course of the decision-making phase. The adjustments have in most cases led to budget increases and postponement of project completion The study found that adjustments do not necessarily have the consequence that the projects achieve the objectives set for price, time and benefits; typically, the consequence of adjustments made by the ministries to the budgets is that the ministries' estimates reflect the actual expenditure more accurately.

The Ministry of Finance, the Ministry of Justice and the Ministry of Taxation have adjusted the budgets and time schedules of their six projects based on offers received from the suppliers. The ministries have also incorporated recommendations given by the Council for IT Projects concerning adjustments of budgets and time schedules. However, five of the six projects were subjected to risk assessment by the council so late that it may have affected the relevance of the recommendations given by the Council for IT Projects. The Council for IT Projects has informed Rigsrevisionen that the risk assessments of 23 of the 96 projects were completed after the projects had entered the implementation phase. Rigsrevisionen finds that the belated risk assessments make it difficult for the Council for IT Projects to give relevant recommendations during the decision-making phase. This means that the ministries have less opportunity to acquire relevant knowledge that can help them reduce risks to their project and be instrumental in the success of the project.