

The Swedish National Audit Office

IT Developments in Central Government – the 1999 Survey

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SUMMARY:

At the end of 1998 the RRV distributed a questionnaire to some 70 government agencies which use IT extensively in their operations. A similar survey was made at the end of 1997. Responses were received from 69 agencies in respect of 215 different projects. This is slightly less than the 231 projects reported on in the previous year.

Strategies

A current operational strategy which can form the basis of an IT strategy was in place in 30 of the agencies but was still lacking in 39. In 1998 the production of an IT strategy was in progress or had been finalised in 14 agencies. Only 5 agencies lacked an IT strategy and no work was taking place in these agencies on the production of a strategy. In other words the majority of the agencies base their IT projects on an IT strategy. If the IT strategies shall have the desired effect, the RRV is of the opinion that links shall be established between the agencies' operational and IT strategies.

Costs

The average duration of a project was calculated at 21 months. The total costs which would be incurred during the entire duration of the projects were estimated at SEK 4.6 billion compared to SEK 3.8 billion the previous year. The average cost per project has therefore increased from SEK 17.4 million to SEK 22.4 million. However, the average cost is raised by a small number of very large projects. On an annual basis the total amount corresponds to SEK 2.6 billion. However, IT projects in central government amount to much more than this. In other words IT development in government agencies is a major item of government expenditure.

Focus

The projects often have several objectives. Improving the quality in operations and rationalisation are given as objectives of two-thirds of the projects. The most common type of investment is re-investment, i.e. an existing system for an existing activity is replaced by a new system. Some 15 per cent of the projects refer to new systems for re-organised or new activities. In other words, where most of the IT investments are concerned, it is a question of modernising IT support for existing systems rather than undertaking a comprehensive development of operations with the aid of IT support.

Importance for the agencies

The respondents consider that the results of the projects will be of strategic importance for their agencies in 70 per cent of the projects. For projects over SEK 10 million this applies in 85 per cent of the projects. In other words great importance is attached to IT development for the agency's operations.

Quality assurance

Quality assurance is usually organised within the projects. This reduces the risk of problems arising in the project, but quality assurance does not provide a guarantee that problems will be avoided - this is very evident from the responses to the questionnaire. No organised form of quality assurance was in place in 16 per cent of the projects.

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Acquisition of systems

The most common form of acquiring systems is to purchase fully developed software on the market. This was done in just over 60 per cent of the projects. Development of systems under agency management was taking place in some 40 per cent of the projects.

Consultants

Some 70 per cent of the projects report costs for consultants. The cost of consultants amounts to 14 per cent of the total costs of all projects.

Failure to meet time schedules and budgets

Some 35 per cent of the projects are behind schedule and 15 per cent of the projects are over budget. In this respect it should also be observed that it is often the case that these deviations have arisen in projects which have already revised their time schedules and budgets. Four projects of ten have already been obliged to revise their time schedules and two projects of ten their budgets. All in all this has the effect that only 41 per cent of the projects have managed to avoid falling behind schedule or exceeding their budgets. Of these projects the majority are so new that it would have been virtually impossible for them to have problems with their time schedules or budgets. Of those that have had a duration of at least seven months, only 34 of 132 projects have succeeded in not falling behind schedule or exceeding their budget. It is quite clear that the agencies have considerable problems in keeping their IT projects under control.

Three projects of four which have been revised continue to have problems in keeping to their time schedules or budgets. In other words once a project has encountered problems it usually has problems in solving them.

What are the characteristics of projects with problems?

The RRV has compared projects with major and minor problems in order to find "risk factors" which agencies should guard against when planning and implementing IT projects. Projects with minor problems are defined as projects with the following characteristics: they are at least seven months old, their time schedule or budget has not been revised earlier, and, at the time of responding to the questionnaire, they have not deviated from the time schedule or budget. Projects with major problems are defined as projects with an age of at least seven months, whose time schedule or budget has previously been revised, and which have problems keeping to their present time schedule and budget.

Projects which have the aim of developing IT infrastructure are more common among projects with minor problems than among projects with major problems despite the fact that they are often very costly. One reason for this can be that the agency is well aware of both needs and technical solutions and therefore there are relatively good prospects for the agency to obtain a full picture of the situation and to plan the projects prior to their start. On the other hand projects which focus on the special activities of the agencies are more common among the projects with major problems than the projects with minor problems. One reason for this can be shortcomings in communication between those responsible for special operations of the agency and the IT experts.

The projects, often very extensive, which focus on a new type of service are over-represented in the group with major problems compared to the group with

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minor problems. On the other hand there does not appear to be a greater risk for major problems when new systems are used for new or restructured activities despite the fact that these projects are also often very large. It is worth noting that new systems which are used in existing operations are to be found relatively more frequently among projects with major problems than among projects with minor problems. It could be assumed that they should be associated with lesser risks since the agency should have acquired considerable experience of the activity and previous systems. One conceivable explanation why this is not the case is that in these cases the agencies underestimate the complexity of the projects or allocate inadequate resources.

Projects which are particularly important for the agency or for external interested parties are seldom to be found in the group with major problems. One explanation for this can be that the agencies take great pains to ensure that it is possible to implement the most important projects according to plan. In such cases the agencies do not lack professional expertise and methods to handle many of the problems which can arise in other projects given lower priority.

The lack of quality assurance in organised forms often appears to cause problems. At least a proportionately larger number of these projects fall within the group with major problems. Although projects which are the subject of external quality assurance are often major projects, they often are part of the group with minor problems - in any case the consequences of the problems are usually limited. However it is striking that not even quality assurance in organised forms constitutes a guarantee that a project will be implemented without problems. The decisive factor here is how the quality assurance is planned and implemented.

Quite contrary to what can be expected, system solutions which are based on finished products available on the market often encounter problems. Over-representation in the group with minor problems is namely small. One conceivable explanation also here can be that the agencies underestimate the complexity of the project or allocate inadequate expertise/resources to the project.

Consultants are, relatively speaking, more often involved in projects with major problems than with minor problems. This could depend on the fact that consultants have greater difficulties in understanding the needs, potential and limitations of the agency. But it could also be due to the situation that consultants are mainly called in to participate in difficult projects or in projects which have already encountered problems. In other words it is difficult to specify what is the cause and what is the effect.

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