

Results of the development of the state's information systems

Is the development of the state's information systems economical and efficient? (by the example of the Ministries of the Interior, Justice and Defence)

Report of the National Audit Office to the *Riigikogu*. Tallinn, 12 February 2010

Summary of audit results

The National Audit Office has repeatedly audited the management and development of the state's information technology (IT) area in the last ten years. The last audit was performed in 2005. After that, several measures have been implemented in the state to organise the development better and to guarantee that the systems are compatible. This audit gives an opinion of the results of development project management and the state's coordination mechanism in this process.

The organisation of IT developments in the areas of government of three ministries was studied during the audit: e-police of the Police Board, the supervision information system of the Rescue Board and the childcare information system of AS Andmevara in the Ministry of the Interior; the land register and business portal in the Ministry of Justice and the development of the document management system in the Ministry of Defence. All six systems were due to be implemented in 2009.

We also investigated the activities of the Ministry of Economic Affairs and Communications (MEAC) and the Estonia Informatics Centre (EIC) in coordinating the development of information systems and guaranteeing their compatibility.

In 2010, the policy instrument on information society that was approved in the European Union in 2005, emphasised that 25% of the increase in the GDP of the EU and 40% of the increase in productivity have been achieved due to the development of information and communications technology. The EU Member States with a high standard of life spent more than 1000 euros per resident on IT in 2005, but the same amount in Estonia remained below 200 euros.

Between 2005 and 2008 all 11 ministries spent just over 1.5 billion kroons on information technology (not counting the labour costs of IT specialists) comprising, on average, 2.8% of the operating costs. It was 2% in the Ministry of Defence, 2.3% in the Ministry of Justice and 3% in the Ministry of the Interior. On the basis of estimates, up to one-half of IT expenditure in the public sector is associated with development works, but only about a third of them can be implemented as planned. According to the Information Society Development Plan 2013, it is planned to spend more than two billion kroons on IT developments, including almost one billion kroons from EU structural funds.

The National Audit Office finds that the capability of ministries in preparing and completing IT development economically and efficiently is weak. Only half of the six audited IT developments were completed on time, to the planned volume and with the planned functionality. Feasibility and cost-effectiveness analyses should be completed before the initiation of projects and project management rules should be adhered to when development works are organised.

The key conclusions drawn from the audit are as follows:

- The business portal, land register and e-police developments increased the efficiency of the agencies' activities. Implementation of the fire safety monitoring system, childcare information system and the document management system of the Defence Forces in the intended format has not progressed as planned.
- The main reason why these projects failed is insufficient preparation. Management often decided to start with the development works without assessing all possible solutions, the expected benefits and the cost. Many agencies had no rules for performance of development works. Also, no requirements have been established on the level of state about the initiation, completion and reporting of development projects associated with the state's information system. The persons involved in half the projects were unable to plan the costs of development and the development of the document management system proved to be considerably more expensive than planned.
- The created information systems did not meet the expectations as the participation of users in the development process was minimal. The management delegated the development work to the IT department, but the latter often counted on the company that won the procurement when resolving substantive issues and managing the process. This resulted in unsatisfied system users, increased project costs and failure to meet deadlines due to repeated additional developments.
- The cooperation of ministries and agencies in the development of information systems is still problematic. Considering the needs of other agencies is seen as cumbersome and expensive. Agencies often lack direct interest and the required skills to consider the state's IT compatibility framework and its recommendations. In order to improve the situation, ministries have started to concentrate IT competency in separate agencies, which should service the entire area of administration and organise development work.
- The systems that secure the state's information system are not used to the intended extent in the creation of new information systems. The secured systems themselves are partly the reason – the address data system, for example, is still not usable. This hinders cooperation and data exchange between information systems.
- The state lacks a clear overview of the information systems planned by the ministries and their cost. Some of the audited information systems had not been recognised in the implementation plans of the information society development plan. The ministries are not submitting data about the expenses of their planned projects to the Ministry of Economic Affairs and Communications. This makes the assessment of the cost of future development projects and planning the use of the state's funds more difficult.
- The Ministry of the Interior and the Ministry of Defence have not organised the development works of the audited information systems in accordance with good practise or guaranteed that they are implemented by intended deadlines and to the

planned extent. Ministers should establish the personal liability of executive officers for initiation and organisation of development works.

- The Ministry of Justice established the principles of development and management of information systems as far back as in 2003 and gradually concentrated the IT work in its area of government into the Centre of Registers and Information Systems. This has had positive results. The audited information systems have been created according to plans.

In his response to the report, the **Minister of Economic Affairs and Communications** finds that “Results of the development of the state’s information systems” is a necessary, thorough and multifaceted audit and agrees to establish unambiguous requirements for the initiation, implementation and reporting of development projects by the end of 2010. However, the Minister does not believe that creation of a common electronic project management environment would be practical, because he supports a dispersed approach to project management and work plan information systems. Even though the Minister admits that there are plans to pay more attention to introducing the compatibility framework and the creation of a network in 2010, there is simply no money for compatibility training in 2010.

The **National Audit Office** finds that it is difficult to have a current overview of adherence to the requirements established for management of development projects if no common project management environment is created.

The **Regional Minister** agrees with the recommendation of the National Audit Office about the establishment of requirements for development projects.

The **Minister of the Interior** explains that the project of the childcare information system that was included in the sample was initiated and managed from 2005 to December 2007 by the Estonian Informatics Centre. The software solution delivered to the Ministry of the Interior did not comply with its work processes and the solution had not been tested by users. The Minister also explained that the childcare information system would be liquidated as it is no longer progressing. It is planned to guarantee the required functionalities in the Estonian Education Information System and the Social Services Data Register.

The **Minister of Defence** agreed with the recommendations of the National Audit Office in general and thinks that a Chief Information Office should be appointed on the management level whose tasks would include strategic consultation of the information system development and management in the area of government. However, the Minister does not fully agree with the claim that the development project of the document management system has not been managed according to good practise. The steering group of the document management system was very broad, representatives of both the area of government and the supplier were involved and meetings of the steering group were held regularly and they have also been documented. The Minister believes that observing the rules of IT compatibility is not always possible or practical.

The **National Audit Office** would still like to advise the Ministry of Defence to develop cooperation with the other information systems of the state as much as possible as the systems that secure the state’s information system guarantee adherence to heightened security requirements in most cases.

The **Minister of Justice** explains in his response that the current procedure for carrying out development projects guarantees that a sufficient amount of amendments required for developments are incorporated in the organisation of work concerning principal activities. The Minister of Justice dares to recommend this organisation of work to other ministries as well.

The **Director of the Estonian Informatics Centre** agrees with the recommendations of the National Audit Office and admits that updating the information system of structural aid with requirements for the feasibility and cost-effectiveness of projects is technically simple and can be done without additional development costs.

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