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Interconnected Government

A proposal for strengthening central co-ordination of e-government development efforts

Summary

Statskontoret – the Swedish Agency for Public Management¹ – has submitted a proposal to the Swedish Government for strengthening central co-ordination of e-government development efforts. Statskontoret proposes that the Government adopts a regulation enabling a central agency to lay down binding norms and standards in the three following areas: electronic identities and signatures; secure and reliable communication between agencies; storage and labelling of information. Statskontoret considers that it should be possible to facilitate the agencies' efforts to develop e-services to citizens and companies by providing user-independent basic e-functions (i.e. back-office functions) to all agencies. The agencies should be free to make use of these basic e-functions or resolve the matter in some other way.

Background

In June 2001, the Swedish Government commissioned Statskontoret - the Swedish Agency for Public Management - to promote '24/7 agencies', i.e. public agencies that develop and provide electronic services — 'e-services'.

Statskontoret has discussed with the government agencies represented in the Central Government E-Forum² the need for a more permanent structure for further development work. Statskontoret has also consulted the director-generals of other interested public agencies.

In a report to the Government, proposes measures for the whole of public administration that it deems necessary for a continued favourable development of Swedish public e-services.

¹ Statskontoret - The Swedish Agency for Public Management - is a staff agency that advises, assists and supports the Government in issues related to governance, evaluations and modernisation.

² The Central Government E-forum is an informal forum for consultations and co-operation headed by the Director-General of Statskontoret and comprising the Deputy Director-Generals of eight central-government agencies.

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The public management perspective

The Government has stated two overall aims for further development work:

- Simplifying and improving the delivery of public services to citizens and companies.
- Making it easier for citizens to access information and participate actively in decision-making processes in public administration.

According to the Government, one key subsidiary aim is to identify means of minimising the number of citizens' and companies' agency contacts in connection with a single transaction. The Government points out that this calls for greater collaboration between central-government agencies, and between these agencies on the one hand and local authorities and county councils on the other.

The user perspective is a recurrent theme in the Government's action programme for public management and various other initiatives. Public and business expectations of 24/7 agencies and new e-services that have been promised are a matter of simplified routines, prompter decisions, improved accessibility and enhanced openness. These demands are not new; indeed, they have existed as long as public administration itself. On the other hand, the capacity of public administration to meet these demands is, with the introduction of new e-services, presumably better than ever before.

The simplicity requirements should be far-reaching. What the public need is for it to be easy to reach an agency and get their transactions done. It should be possible for users to establish contact when they themselves are able to do so, but also to find their way unerringly without knowing times, places, names, telephone numbers, addresses and so on. Citizens should be able to get specific transactions performed without knowing in advance which agency is responsible. It should also be easy to obtain comprehensive information about the range of services provided by agencies, regardless of which agency is responsible.

A vision of an interconnected government

For citizens, contacts with individual agencies are often of a once-only nature. If every agency deals with the matter of secure identification in its own way and solely for its own purposes, the outcome is unreasonably complex and expensive for the citizens.

In many transactions, such as applications for grants and permits, the agency that takes the decision must have information that is stored at other agencies

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or private operators. There are, for example, some 50 types of transactions for which a civil registration certificate is required. At present, applicants themselves must, in most cases, obtain this kind of supplementary information in the form of a paper document that is enclosed with the application concerned.

To provide better services, simplify administration and reduce the time lag before a decision is taken, every agency should itself be able to retrieve the requisite information for transactions that is already stored with other actors.

The interconnected government that is envisaged may be described as one in which:

- Citizens perceive public-service activities as a coherent whole.
- Applications and database systems use standardised interfaces that enable various public systems to work together.
- Efficient information management eliminates the need for requests for information that the public administration already possesses.

Need for norms and supportive services

Good examples of collaboration between agencies exist. But these are not the result of the systematic, structured development of public administration in general. The potential for automated information exchange is still virtually unexploited. Development efforts have been conducted on an agency basis and with elements of voluntary collaboration in cases where two agencies have found that their interests coincide.

There are several reasons why conducting development work solely in this manner is no longer feasible.

Only a handful of major agencies have such extensive development capacity that they can evaluate various options and technical solutions unaided and translate them into functioning systems. The situation is quite different for the great majority of small and medium-sized agencies that lack in-house development capacity and technical expertise.

In the development of services common to all the agencies, many agencies depend on being able to retrieve information from others. Allowing adherence to common norms to be entirely voluntary creates a risk that agencies, which do not join the common structure for information exchange, will delay service development for the agencies wishing to make rapid progress.



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Demands for uniformity in the agencies' conduct towards citizens, companies and other agencies are set to increase. When, for example, a certain solution for identification and signature has become sufficiently common on the market, users will demand that they should be able to use this solution in their communications with agencies and other public service actors as well.

The development of functions for reliable identification and information retrieval, for example, entails relatively heavy investment costs, while the real marginal costs of use are low. Accordingly, the number of agencies that can share investment costs directly determines the costs of use.

At present, every agency is fully responsible for developing its own business systems. There is thus a clear risk of sub-optimisation, since each agency's decisions will necessarily be based solely on an assessment of benefits and costs for its own activities. Another reason is that development must go beyond existing services if Sweden is to seize the opportunities for certain types of new, improved service afforded by the new technology. One example is the scope for creating an Internet service that can find public documents regardless of which agency they are stored with.

The Swedish preconditions

The Swedish administrative model, with its independently managed central-government agencies, has had a major bearing on the rapid development of digital applications and e-services within the public administration. Thanks to a parallel implementation of performance management and delegation of powers, it has been possible to create a development-oriented public administration.

Statskontoret deems it important to preserve the advantages of the Swedish administrative model. However, the model also needs an operator capable of assuming collective responsibility for the parts of the public sector's e-systems that enable public services to present a united front and collaborate without agency boundaries being troublesome or even visible to users.

Further efforts to develop public e-services should, in the Statskontoret's view, continue to be based on each agency's independent responsibility for its own business systems and for the public services it provides or may come to provide. The definition of norms and standards referred to by Statskontoret below should therefore be founded on the premise that various business systems should be able to communicate with one another using standardised messages.

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The Statskontoret's proposals

Statskontoret deems it essential to depart from the present loose and, accordingly, fragmented collaborative structure and to move towards firmer and clearer forms of collaboration. More comprehensive development thus needs to be managed by a public body that is in a position, and possesses the authority, to take the requisite decisions, issue the necessary regulations and instructions, and procure and provide basic user-independent functions for e-services.

This public body needs to receive a clear mandate through a regulation concerning government agencies' electronic information exchange, and through its own instruction. It must have explicit responsibility for the joint infrastructure. It needs to work in close collaboration with the agencies responsible for shaping large and complex work systems, while also noting the needs of the small agencies.

The measures proposed are of such a nature that an agency should be entrusted with responsibility for them. Statskontoret is prepared to take on this task and would, in that case, set up a special board with the function of directing these activities. Development work would be conducted in project form.

Statskontoret's proposal covers the central-government sector only. One precondition for Sweden's ability to develop public e-services at the same rate and to the same extent as other leading countries is that the comprehensive structure should be extended to include the whole public sector, i.e. county councils and local authorities as well.

Norms and standards

Already, the agencies' business systems are normally digitised and information exchange between agencies largely takes place on an electronic basis. The further development of public e-services imposes considerably more stringent demands on a common infrastructure for information exchanges. To ensure the greatest possible benefit both for the actors in public administration and for their users, solutions must be designed according to common norms and standards.

Statskontoret deems that this work should focus on cost-effective solutions. One implication of this is that agencies should not be forced to incur any premature costs for system modifications. Instead, the norms and standards should primarily govern the future development of systems for electronic information exchange and transaction management.

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Statskontoret proposes that the Government should draw up and adopt, a regulation enabling the responsible agency to lay down binding norms and standards. The following should be made clear by this ordinance:

- ❑ The normative portions should not be more comprehensive than is necessary to enable public e-services to be developed to function efficiently and integrally. The agencies should retain their responsibility for shaping their own business systems in other respects, and their freedom to do so.
- ❑ The work of defining norms and standards should, as far as possible, focus on functionality instead of form or technique. Moreover, it should be conducted in an open and transparent process and, as far as possible, be based on open and internationally accepted solutions.
- ❑ Before the agency adopts a new or revised norm or standard, it should have an impact analysis carried out.

The need for common norms and standards is obvious in three areas:

- ❑ Electronic identities and signatures.
- ❑ Secure and reliable communication between agencies
- ❑ The storage and labelling of information.

In addition, there is also a certain need to establish quality norms for agencies' web sites, in terms of such characteristics as their accessibility and degree of adaptation to a joint information structure.

Statskontoret deems that a requirement of a uniformly high security level for all public services would boost costs unnecessarily. In Statskontoret's view, primary responsibility for the choice of security levels and methods should continue to be borne by the agency concerned. In some situations, however, joint norms or standards may be needed to ensure that the same information is dealt with at the same security level in every public agency.

A rapid development of market-based solutions for identification by means of electronic certificates is under way. There will probably be a need for a joint system to support the agencies' handling and verification of such certificates.

By developing a citizen-oriented e-administration, the agencies have a growing need to be able to exchange information with one another by secure and reliable means. This entails a need for the application of norms and standards to security systems, interfaces and message formats, for example. In consultation with representatives of other agencies, the Statskontoret has investigated the scope for creating a secure Swedish intranet for central-

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government agencies. This kind of national network will not be exclusive, and must be designed in such a way as not to impede Sweden's joining international networks.

For public-sector information stored with various agencies to be searchable from a single portal, it needs to be labelled according to a common, technically sustainable method that is independent of any one system, and stored in such a way as to be accessible. Corresponding requirements apply to all information an agency may need to be able to fulfil its management of a transaction.

A supportive range of services

Statskontoret considers that it should be possible to facilitate the agencies' efforts to develop e-services by providing user-independent basic e-functions.

An agency should normally be free to make use of these basic e-functions or resolve the matter in some other way. It is important for it to be easy for the individual agency to make use of the basic functions. Particular attention should be devoted to the circumstances of small agencies.

The basic e-functions that the central government has already developed lay the foundations for further work. Future development will take into account existing and forthcoming international standards and the trends under way in the market. The basic e-functions should be purchased on market terms.

The intention is, in an initial phase, to develop basic e-functions that:

- Facilitate the agencies' handling of electronic IDs and signatures.
- Enables secure transfers of information between various agencies.
- Deal with certain fundamental functions connected with reception and dispatch of electronic documents.

Financial implications and financing

Before the various basic e-functions are specified, it is not possible to make a more definite estimate of cost as the basis for an investment calculation. Experience from similar projects indicates, however, that an investment of this kind becomes profitable as soon as three or four agencies of normal size, or about ten small agencies or small municipalities, join the service instead of resolving the matter on their own.



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Another key premise is that a service which provides ready-made functions will permit much more rapid development of the type of e-services that require secure identification, electronic signature or exchange of information with other agencies.

Our financial analysis assumes that the activities of the proposed agency should, at least initially, be kept on a limited and manageable scale. The costs of these activities are of four types:

- ❑ Costs for the agency's in-house administration (decision-making body, drafting of decisions, web site and other information).
- ❑ Costs for preparing proposals for standards and norms, and of administering the same.
- ❑ Costs for developing and preparing basic functions for administration in its entirety.
- ❑ Costs for providing basic e-functions.

Statskontoret considers, for its part, that the administrative costs for the new tasks would not necessarily exceed the costs that it already incurs for the Swedish State E-Forum. Accordingly, no additional grant is required for this.

The preparation of proposals for norms and standards is in many respects a matter of continuous development work that needs to be done with the assistance of many different private and public players. The European Commission, too, is successively becoming an ever more important player.

Statskontoret already participates in this kind of development work and finances it either with its own budget allocation or with charges from its procurement co-ordination. The agencies that wish to participate in preparing proposals of this kind will, as today, need to defray their own costs.

A basic e-function can be provided either as a service procured on the market from one or more suppliers, or as a system being procured on the market and operated by an agency. The primary option one should consider is the procurement of a service. The proposed agency's role will then be primarily that of being a competent procurer. This responsibility should also include ensuring general dissemination of information, overall provision of advice and mediation of the users' exchange of experience.

The costs for providing a basic e-function should be covered entirely through charges for connection and use, levied on those who use the basic function concerned.

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The costs of development and procurement of a basic e-function should be regarded as an investment expense, to be repaid during the economic life of the investment. This investment expense can be financed in various ways.

One option is loan financing, i.e. covering the costs of development and procurement through borrowing, which is then repaid in the course of the economic life of the investment³. The advantage of this model is that it affords good incentives for agencies and private suppliers alike to assist in bringing about cost-effective solutions of wide application. Another option is for one or more private parties to bear the costs of development, in full or in part, and thus also a substantial portion of the business risk. Statskontoret recommends loan financing.

Other matters

Statskontoret has embarked on a project to prepare procurement of the first group of basic e-functions proposed. Initially, the Agency will be able to use its own accumulated surplus of charge revenues to cover certain costs for pre-studies and other preparations for procurement of basic e-functions.

Pending the Government's investigation, as proposed above, of the scope for extending the interconnected structure to include local authorities and county councils as well, the Statskontoret intends to take initiatives, after consultations with a number of local authorities, for collaboration on specific development projects that are in line with the proposals described in this report.

During the Spring 2002, Statskontoret will study the proposal that has been made that the Agency should assume responsibility for the national portal – <http://www.sverigedirekt.se> – and for certain related functions. Statskontoret will formally state its opinion on the proposal at a later date. At this stage, however, we note that there is an affinity between responsibility for the national portal and the functions that Statskontoret has discussed in this presentation.

³ Swedish agencies fund major investments of the kinds not covered by their annual grants though loans from the National Debt Office. Within the framework of performance management, the Government authorises agencies to take out loans and sets a maximum limit. The loans are subject to market interest rates and their terms range from three to five years. The agencies finance these capital costs by means of their annual grants.