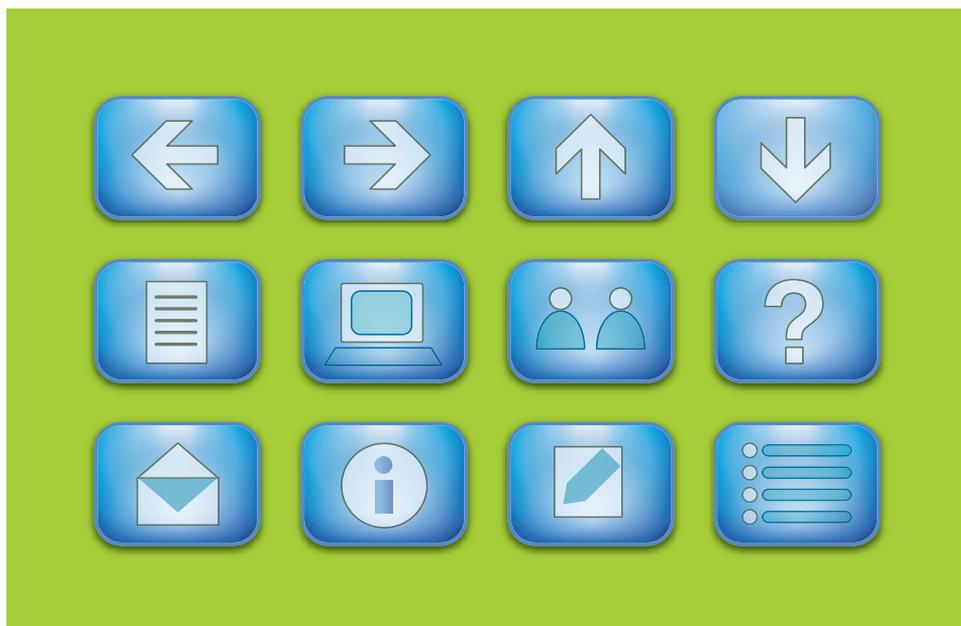




VINNOVA REPORT
VR 2009:28

eGOVERNMENT OF TOMORROW

FUTURE SCENARIOS FOR 2020



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eGovernment of Tomorrow

Future Scenarios for 2020

by

Lennart Nordfors
Bo Ericson
Hemming Lindell
&
Jacob Lapidus

Gullers Group

Preface

In the RTD field of eGovernment VINNOVA contributes to fund projects to intra- and interorganizational cooperation for innovative e-administration, as well as reinforcing Sweden's attractiveness to national and international companies, organizations, researchers and other top experts. More efficient public administration also helps private companies to become more efficient. Successful innovation in this field demands supplementation of investments in technical research and development with knowledge development relating to organizational criteria for cooperation both within and among public organizations.

In 2006 VINNOVA published "The Future of eGovernment - Scenarios 2016", VINNOVA Report 2006:1. The authors Nordfors et al, presented a number of exciting scenarios outlining what the eGovernment situation might be like in 2016. This report has been a basis for discussions at work shops in Europe, mainly in the frame of the EU/FP 6 project eGOVERNMENT.

Since 2006 the intense and increasing use of ICT has pushed Governments to act faster in the eGovernment development. Because of this fact the Scenarios described for 2016 needed to be updated. New factors as social media, people connecting via Internet, gives more push on Governments on all levels to also develop new means of communication.

In this book, however, four new scenarios are presented for eGovernment in 2020. Some similarities remain from our earlier report but other parts of the book offer updates. The starting point is that in the future public participation will grow and trust in government and society will be important. In addition, possibilities and potential problems arising from the use of eGovernment are described.

VINNOVA cordially thanks the authors for a very inspiring book discussing the future eGovernment.

This report will be presented in Malmö on November 20 at the EU 5th Ministerial eGovernment Conference.

VINNOVA in November 2009

Ulf Blomqvist
Head of
Services and IT Implementation Department

Madeleine Siösteen Thiel
Senior Programme Manager
Services and IT Implementation

Directions for reading

This book addresses the future of eGovernment. We define eGovernment as contacts between citizens and government officials through the medium of Information and Communications Technology (ICT). In this report, we limit the discussion to national government and do not take up areas that are the responsibility of local government bodies, i.e. the municipalities and county councils. When relevant, the European level is discussed in analyses and scenarios.

The book builds in important aspects on an earlier work by us: “The Future of eGovernment. Scenarios 2016” (Stockholm. VINNOVA Report 2006:04). At first, we set out to update the scenarios presented in the book from 2006. However, it soon became clear that this was not enough. Development on the web in general, and eGovernment in particular, has been far too rapid.

We are, compared to the period preceding 2006, in quite a new situation. Some examples: “Social media” have entered the scene on a grand scale in the form of for instance Facebook and Twitter. Personalisation and customisation are now possible to a far greater extent. E-commerce is ever more characterised by a “long tail”-logic¹, where community, trade and services are intertwined. In politics, we are experiencing an unprecedented wave of “web activism”, and a sophisticated use of web tools form the nucleus of election campaigns.

In short, new stories of the future – new scenarios – are necessary. Some similarities remain from our earlier work, but in this book we offer essentially new scenarios geared to bring the perspective forward to 2020. Other parts of the book offer updates when describing recent and on-going work about the future of eGovernment.

Section 1, *eGovernment of Tomorrow*, constitutes the synthesis of the work. In this part of the report, we discuss definitions, present theories, visions and central development models. We conclude with four scenarios for development up to 2020. We recommend readers who wish to quickly review the field to read this part.

Section 2, *Futures Studies of eGovernment*, is a review of a number of studies and visions on the future development of eGovernment, and covers the most important studies in the field. They illustrate the development of eGovernment concepts and scenario building up to today. (The scenarios presented in this book aim at bringing the discussion one step further.) Readers who wish to learn more about the problems relating to the development of eGovernment are recommended to read this section, too.

The authors of this book are consultants and analysts at Gullers Group, Stockholm.

¹ “The Long Tail: How Endless Choice is Creating Unlimited Demand”, Anderson, C., New York, Hyperion, 2006

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SECTION 1: eGOVERNMENT OF TOMORROW

1 Introduction

This report deals with the future of eGovernment and the coming together of two areas. Firstly, we have the rapid development of information technology and its applications. The core issue of eGovernment is how to utilise these in order to improve governance. Which strategies should be used? What does eGovernment mean in terms of efficiency, cost-effectiveness, quality of services, public participation etc?

Secondly, we have the issue of trust. According to recent research, trust is a critical factor when forming communities and implementing policy. To what extent can eGovernment encourage – or in the worst case discourage – trust in government?

Together, the development of these and other factors will determine the form and structure of eGovernment in the future. Our ambition is to take a look around the corner to see what reality will look like in 2020. We feel that the choice of 2020 provides an appropriate time perspective; it is close enough to enable us to review the trends and it is far enough away for these trends to actually have an impact on a future that may be significantly different from today.

The method we adopted to do this was to draw up scenarios for the future. The scenarios are created in the first section of the report, *eGovernment of Tomorrow*. In the following chapter, we briefly review what this method entails and what distinguishes it from other methods for addressing the future, and then continue with a chapter in which we more precisely define what we mean by “eGovernment”.

After this, we present a number of theories on how eGovernment may develop. They outline the typical phases that eGovernment goes through – from less advanced forms to increasingly advanced. These theories enable us to grasp the current status of knowledge regarding the forms that eGovernment may take.

Based on the knowledge gained by studying models for the development of eGovernment and other scenario projects that have been conducted in the field, we finally develop four future scenarios for eGovernment in Sweden in 2020. These reflect previous discussions and lines of argument, and add a future perspective. The scenarios are described in a Swedish context, but they are relevant for any democratic and technologically advanced country. Our hope is that they will provide a good starting point for further discussions on eGovernment, its future and what factors we must take into account when giving it concrete form.

In section 2, *Futures Studies of eGovernment*, there is a long part in which we present attempts by other analysts to formulate future scenarios or visions for eGovernment. The aim is partly to provide background material – we have not seen a similar

compilation anywhere else – but also to see what factors experts feel are driving development. Assimilating what the background factors are and evaluating them in terms of how sure we are that they will become reality are decisive elements in the creation of future scenarios.

Section 2 ends with a discussion on the approaches adopted by the different scenario and vision projects, and a table of conducted studies.

1.1 What are scenarios?

Various methods can be used to try to look into the future.

One is to use *forecasts*. This is largely based on extrapolating trends into the future. For example: if we have data on the number of children born over the last few years we can forecast what resources will be required by the primary school system in seven years time.

Another method is *visions*. This is an expression of a desire and ambition to shape the future. Almost all ideological organisations, municipalities and many companies have visions. They point out the direction in which the organisation or company wants to go and can mobilise a lot of commitment and energy. But, strictly speaking, visions are not an attempt to describe the future; they are descriptions of what someone *wants* the future to look like.

In periods of major and fundamental change, however, forecasts can lead us astray. Recurring trend reversals can easily result in misleading extrapolations. A complementary or alternative way of trying to understand the future is offered by the *scenario method*. Scenarios are narratives on different possible futures. They are not predictions of the future or an expression of how we would like the future to be.

Scenarios are narratives that increase our ability to see important changes and trends at an early stage. Good scenarios reduce the risk of tunnel vision. They improve our readiness to deal with change and increase flexibility. Certain criteria are usually set for good scenarios:

- All narratives should hang together logically; they should be internally consistent.
- The scenarios should be reasonably credible – exciting, interesting but not science fiction.
- The scenarios should be clearly different from each other; it is common to work with three to four scenarios for educational reasons.
- The scenarios should also be relevant to the specific issue or institution studied; scenarios are not narratives on the future in general.

The scenarios produced in this report do *not* therefore reflect what we *want* to happen. Nor do they reflect what we *believe* will happen. They reflect different alternatives for what *may* happen.

One of the advantages of the scenario method is that it gives us the chance to “think the unthinkable”. It can thus be seen as a part of emergency or preparedness planning, an attempt to foresee events that would otherwise come as a surprise – are our existing operations robust, could they cope with such events? Another advantage is that we can think in alternative futures – could our operations cope with several different sequences of events or do they rely on the realisation of a particular sequence of events? A third advantage is that the method provides guidance not only on how to adapt to the world around us but also on how to influence it. Is there a scenario that must be avoided or is there one that we would like to see become a reality, and what do we have to do to achieve this goal?

1.2 What do we mean by eGovernment?

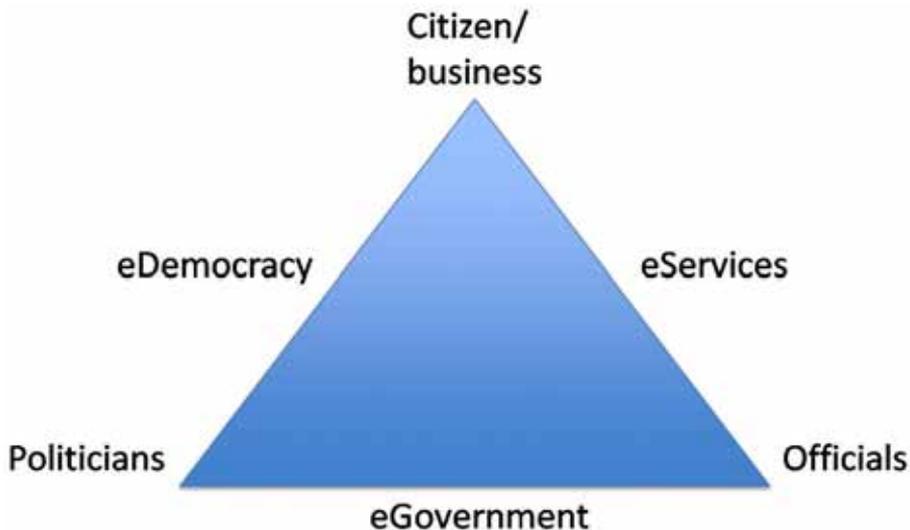
There is no exact definition of eGovernment as yet. Some people define eGovernment only in terms of the possibility to provide government services and information over the Internet. This type of definition is relatively limited and in Sweden in general eGovernment is defined in terms of *eServices*, *eGovernment* and *eDemocracy*.² This gives the development of eGovernment a wider meaning with an impact not only on public administration but also on the public, companies and civil society at large.

eServices refers to the development of government services and the exercise of public authority using various electronic channels. This includes the development of self-service and the possibility for individual citizens to play an active part in addressing or dealing with the case or matter concerned. *eGovernment*, as interpreted here, refers to internal efficiency within and between different government bodies in terms, for example, of the development of a common intranet and the possibility to compile and provide access to information on a particular case so that several officials or authorities can work with the case in parallel, which will improve efficiency. Finally, *eDemocracy* refers to the possibility to develop the influence and participation of the public in the political sphere. New information channels make it possible to quickly put questions to new constellations of citizens and to conduct referendums using ICT. The possibility for citizens to form interest groups is also in rapid development since new applications make it possible to quickly reach a wide and large audience.

² “E-tjänster för ett enklare och öppnare samhälle” (*eServices for a Simpler and More Open Society*), SOU 2005:119

These factors are mutually dependent on each other, for example improved eServices will help to improve the efficiency of public administration and also make it possible to influence policy in areas where users can join together in virtual communities. Ultimately, this is a question of the interplay between politicians, citizens/business and industry and civil servants/public officials. Schematically, this can be described as in the triangle below:

Figure 1. Definition of eService³



A broader definition than the one above is common among those researchers and organisations who are interested in society as a whole and not only in the technical aspects of eGovernment. The researcher Jane E. Fountain⁴ sees the development of eGovernment not only as a question of improving efficiency but rather as a process that will change the structures for the administration and governance of society⁵. This view is shared by the World Bank and by other researchers in the field such as Sharon Daws⁶. She defines eGovernment as follows:

³ “With eGovernment towards Good Governance”, Thomas Sjöström, North Sweden European Office

⁴ Jane Fountain published the book “Building the Virtual State” in 2001. This is seen as a pioneering work in the field

⁵ See “Building the Virtual State”, Jane Fountain, Washington D.C., 2001

⁶ Sharon Daws is Director of the Centre for Technology in Government at the Rockefeller College of Public Affairs and Policy, University of Albany, USA

*eGovernment is the use of information technology to support government operations, engage citizens, and provide government services.*⁷

Clearly, this definition also entails a broader view of information technology that is not limited simply to the use of the Internet but also covers other techniques such as cloud computing, mobile/wireless applications, Pocket PC/handheld terminals and so on.

The European Commission has also adopted a broader definition of the term eGovernment and describes it as:

*“The use of information and communication technologies in public administration combined with organisational change and new skills in order to improve public services and democratic processes and strengthen support to public policies.”*⁸

The broader definition of eGovernment thus embraces several aspects of governance, public administration and society. A common feature of the definitions, however, is that the changes referred to are rooted in the field of public administration. The Swedish approach in which there is a division into three sub-categories, of which eGovernment is one, may therefore be somewhat misleading.

We believe that the triangle above should therefore be redefined so that eGovernance is used as the collective term in order to describe the way that society organises “virtual governance” so that different segments and interfaces use ICT to a greater extent. A better term for eGovernment in the triangle above may therefore be *eManagement* as it is largely a question of contacts between officials and politicians. Sharon Dawes also uses this term.

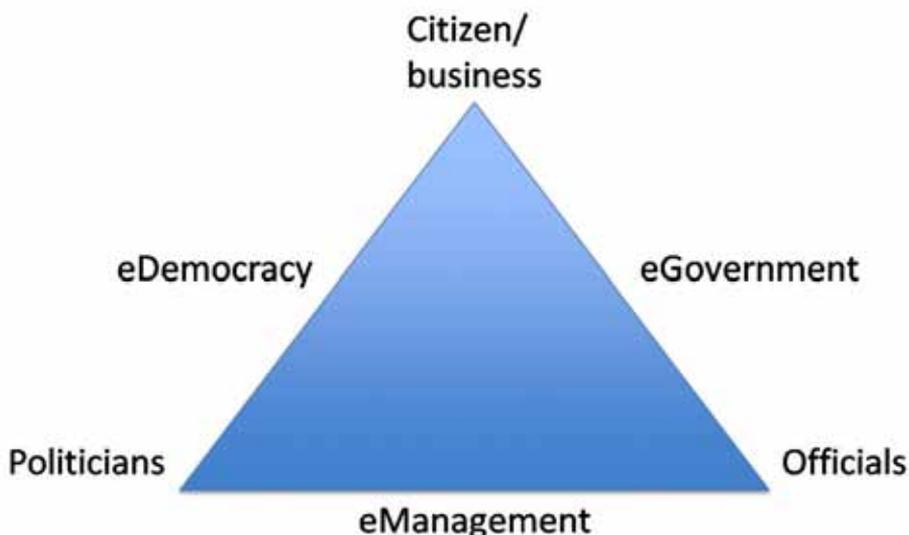
There may also be a need to redefine *eServices* as this term is somewhat limited when it comes to contacts between citizens and public officials. Such contacts are not only about the possibility to provide or receive services; they are also about the possibility of citizens to conduct a dialogue with officials. Consequently, a better definition of this aspect of eGovernance would actually be *eGovernment* as government/public administration is usually defined in terms of the contact between the citizens and civil servants/public officials, i.e. the implementation of adopted policy.

Our interpretation of eGovernance could then be summarised as in the figure below:

⁷ “The Future of E-Government”, Sharon Daws, Centre for Technology in Government, USA, 2002

⁸ “The role of eGovernment for Europe’s future”, European Commission, September 2003, COM (2003) 567

Figure 2. Definition of eGovernment



It is important to point out that in this report we address a broad range of issues relating to governance, not only the issue of the internal efficiency or supply of eServices. We do not claim that ours is the only possible definition of eGovernment, or even that it is a comprehensive one, we would simply like to underline the fact that our study of the future of eGovernment embraces a broad perspective in which the impact on the way that public administration is organised, the design and structure of services and the influence of the citizens is discussed.

In this report we focus on eGovernment as an element of eGovernance (virtual governance) in accordance with the definition above. We thus define eGovernment as *contacts between citizens and government officials through the medium of information and communications technology (ICT) in relation to the provision of government services to the public and the possibility of citizens to conduct a dialogue with government authorities or agencies.* We will not, therefore address aspects of eDemocracy (web referendums, participation via the websites of political parties etc.) or eManagement (the relation between politicians and officials and their possibility to exert control and influence).

2 Theories and visions on the development of eGovernment

As mentioned earlier, the American researcher Jane E. Fountain published her book “Building the Virtual State”⁹, in which she discusses information technology and institutional change, in 2001. The book has subsequently inspired other researchers and practitioners in the field of eGovernment and is regarded as a pioneering work.

Since Fountain published the book, the use of the Internet has expanded dramatically and new applications of Internet technology and related information technologies, such as mobile solutions, have arisen. Nevertheless, Fountain’s basic theory still largely applies.

In the book, Fountain identifies several development stages, above all in the use of the Internet, towards the expansion of eGovernment. These ideas have subsequently been developed by, for example by the Gartner Group in “Four phases of eGovernment”. The development models for eGovernment constitute an extension of Fountain’s theory and are implicit in most of the theories and visions for the future of eGovernment presented in this chapter.

Below we briefly present some of the main features of Fountain’s ideas.

2.1 Virtual governance

The USA that Fountain describes in “Building the Virtual State” is on the threshold of the virtual society. Government has adopted the idea of web portals from the private sector and is launching sites on the web for students, pensioners, small businesses and so on that present information from various relevant authorities. The development of eServices for citizens and companies is underway and government is now facing the real challenge: to change its own institutions and develop co-operation between the authorities in order to better meet the needs of the eSociety.

Fountain takes the introduction of information technology into American public administration as her starting point. Many observers see direct cause-and-effect links between new technology and organisational change, but the links are much more complex than this.

⁹ “Building the Virtual State. Information Technology and Institutional Change.” Jane E. Fountain, Bookings Institution Press, Washington, D.C., 2001

She points out that public administration constitutes more than a formal organisation, it also consists of players who act in a cultural, social and institutional structure and who affect the design of new technology, how it is perceived and how it is used.¹⁰

Information technology in the form of the Internet, computer networks and telecommunications can of course be described objectively in terms of capacity and functionality – “objective information technology” – but when it is put into practice – “is enacted” – in an organisation, it is formed by these institutions in line with their perceptions and the way they structure and use the technology. It becomes an *enacted information technology*. Particular individuals and organisations add their interpretations and the ways in which they apply and use the technology in co-operation with others and in networks. The new technology is embraced by the existing public administration and is changed by it.

The process is mutual. At the same time as institutions and organisations shape and mould information technology, the technology also exerts a pressure for change on these organisations and institutions. This pressure may vary in strength. In many cases, the Internet does not result in institutional change but, on the contrary, reinforces existing structures. In other cases, the technology is expressly used to create change. Institutions and structures can to varying degrees be permissive or restrictive with regard to the players in the organisation and this has an effect on the way that the new technology is used and on what impact it may have.

Fountain also discusses virtual authorities or agencies and the virtual state.¹¹ She defines the virtual state as “an organisation in which public administration is increasingly conducted within collaborating or co-ordinated computerised network systems”, rather than in independent bureaucratic authorities. The virtual state consists of virtual authorities built up around a formal bureaucratic structure.¹²

In the perspective of the late 1990s, Fountain presents a development model for how public authorities use the Internet and associated information and communications technology based on the degree of *institutional change* and *operational change*¹³ at the authority concerned. In the first phase, the authority constructs its own website which provides simple information to visitors. Such a website has little impact on the structure or culture of the authority or on internal power relations.

In the second phase, collaboration between several authorities on a common website aimed at a certain target group is introduced. On this website, information from the authorities is presented, material can be downloaded and simple transactions carried

¹⁰ chapter 6, page 83-

¹¹ page 98-

¹² page 99-

¹³ page 99-

out. There are also links to private companies and organisations of relevance to the target group concerned. The website itself is designed in collaboration with others, but does not affect the authority's own organisation or its "back channels".

The third phase covers the development of the authority's own intranet, which has a greater impact on the internal structures and working methods of the authority. Authorities also develop common websites where the underlying administrative structure is co-ordinated. In this phase, the need for more far-reaching changes in the working methods, management and institutions of the authorities becomes apparent:

*"The promise of a seamless interface with the public at the level of a computer screen is the promise of the first wave of G2C (Government to Citizen) digital government. The second wave, G2G (Government to Government), is integration and connection across jurisdictions and programmes behind the interface, in the bricks and mortar of government."*¹⁴

Fountain brings together two branches of research in her model for "technology enactment". The first of these is the organisational research that studies interaction, co-operation, social capital, organisational networks and strategic alliances between organisations and that takes an interest in how small but growing changes in organisation and management can open the door to cross-border networks. The network organisation has been seen as an alternative to both the hierarchical organisation and the market organisation. The second branch of research concerns networked computing and its impact on the development of the structures and processes of organisations.

She notes that information technology is a tool that can be both used and abused by authorities when it is applied in practice. Once the technology has been introduced, it can become both an obstacle to and an opportunity for the development of the authority concerned. In the best case, information technology not only can enable change, but can also act as a powerful catalyst for achieving change in the organisation. However, it can also reinforce old institutional structures instead of opening up new paths of communication.¹⁵

Fountain concludes by mentioning a number of lines of development that are worthy of attention in the ongoing discussion. She notes, for example, the network structures that have been developed between government and private organisations/NGOs, which risk disturbing the complex, institutionalised balance of power between public and private

¹⁴ page 202

¹⁵ page 201

organisations.¹⁶ She also warns about the outsourcing of public administration: “Outsourcing architecture is effectively the outsourcing of policymaking.”¹⁷

She predicts dramatic cost savings when information technology is introduced into public administration and into the relations between different authorities. However, in contrast to the private sector, improvements in efficiency and lower costs in public administration will not entail rewards in the form of profits, higher share prices and a greater market share but rather budget and staff cuts:

*“When government-to-government channels develop further, bureaucratic decision makers will rapidly experience the perversity of incentives for institutional transformation”.*¹⁸

The protection of personal integrity may also become a problem for legislators, and there is a risk that the distinction between public administration and the private market may become unclear when authorities and private players collaborate in networks.¹⁹

2.2 Development models for eGovernment

Most countries are working with some sort of strategy for the development of eGovernment. Several multinational organisations are interested in the issue, for example the EU, the UN, ASEAN and the World Bank, and a number of research centres are working on different aspects of eGovernment.²⁰ In addition, a number of commercial companies are active in the field, the most well-known being the Gartner Group and Accenture.²¹ The general attitude is that eGovernment is something that is developed gradually and organically and that this development will give rise to changes not only in the level of service provided to the public but also in the organisation of public administration and the influence and participation of different stakeholders in government and in the political process.

One of the best-known and most widespread development model stems from the Gartner Group, *Four Phases of e-Government*.²² The model describes the development of eGovernment in four stages: Presence, Interaction, Transaction and Transformation. The move between these stages is gradual and fluid and different countries are presently at different stages, although practically no country has reached the final level

¹⁶ page 204-205

¹⁷ page 203

¹⁸ page 14

¹⁹ page 205

²⁰ E.g. Center for Democracy and Technology, E-commerce and E-government Research Laboratory

²¹ Accenture has produced several reports under the title “eGovernment Leadership”, www.accenture.com

²² “Gartner Four Phases of e-Government”, Baum, C., Di Maggio, A. et al.

– a level that is described as the objective of the eGovernment strategies of many countries.

Presence: The first stage entails establishing a presence on the Internet. Individual authorities set up websites containing information. The communication is one-way and the information is general in nature, e.g. contact details and central documents. The objective is to provide information and show a presence on the Internet in order to gain public acceptance for this channel of communication.

Interaction: The next stage is to develop the website so that it contains more specific information and becomes more useful to individuals. The website can now be used to search for information from several documents and it is possible to download forms that previously had to be ordered from the authority. At this stage, there are also links to other authorities and organisations that may be of interest to the individual. However, the authority must still be contacted in the traditional way (letter and/or visit) before it can take action or make a decision.

Transaction: In the third development stage, the point has been reached where it is possible to deal with a matter using the Internet alone. In this stage, certain matters or items of business are conducted exclusively over the Internet, for example applications for study grants, housing allowances, the renewal of driving licences and so on. Developing services for self-service is a central element of this development phase. The Internet is also now developed as an alternative supply channel for decisions or services. There is still no common infrastructure for, for example, eAuthorization, but a strategy for this is being drawn up.

Transformation: The final development stage is characterised, as the name implies, by the transformation and renewal of the bases for public administration and the provision of public services. In this stage, there is only one contact route/portal between the public and government and this means that the services the authority provides are changed due to the close co-operation between authorities. This also means that the borders between authorities become diffuse, i.e. that there is so-called “seamless government”, and that different authorities can co-operate on the same case using a common intranet.

At this fourth stage, the governmental CRM system (Client Relationship Management) is highly advanced so that the citizens can be served in the best possible way. The authorities also subcontract other players in order to gain access to their technical know-how and client contacts. This in turn leads to changes in the relationship between authorities and companies and other organisations. New forms for public participation are also developed in this stage and there may be a real breakthrough for Internet referendums and quick opinion polls.

Studies commissioned by the UN²³ on the development of eGovernment have defined development in *five stages: Emerging, Enhanced, Interactive, Transactional and Networked Presence*. These stages largely correspond to those in the previous model, the only difference being that the final stage in Gartner's model is divided into two stages where the final stage focuses more on the integration between authorities and between authorities, companies and the public as a result of the development of co-production.

A variant of the step-by-step development is *the e-service sophistication model* used by Capgemini for illustrating the different degrees of sophistication of online public services.²⁴ It starts in basic information provision, and proceeds over one-way interaction (downloadable forms), two-way interaction (electronic forms) and transaction with full electronic case handling, to end up in personalisation, characterised by pro-active as well as automatic service delivery on the part of the government. This model is being used by the European Commission to measure the progress of online public service delivery across Europe.

It is apparent that many development models share several common features. One feature is that they take development for granted, and they see this development as being largely driven by the technology. None of the models discusses threats or obstacles to development, nor is the impact on society at large discussed to any great extent. Changes in terms of improvements for the individual citizen are taken up, as well as the ability of citizens to influence government in the final stages of the development process. All of the models conclude, however, that fully developed eGovernment will change the playing field for government and the organisation of government.

It is also obvious that the development models already contain the elements of emerging processes in governance characterised by personalisation of eServices, participative policy making and a value adding focus. In society at large, a parallel process is at hand where people use the Internet for creating networks and communities to share information and to organise in a way not seen before.

2.3 Changing to connected governance

Jane E. Fountain wrote her pioneering work "Building the virtual state" in the early 2000s. By then, eServices were still in their bud. Now, forms, requests, transactions, records etc. are effectively handled through eGovernment channels, including social

²³ See www.unpan.org and www.aspanet.org

²⁴ "The User Challenge Benchmarking. The Supply Of Online Public Services." Prepared by Capgemini for European Commission, DG Information, Society and Media, 7th Measurement September 2007. (The 8th Measurement is published in Mid-November 2009.)

services as pension benefits, student loans, licensing and registrations, and a wide area of business services. We are moving fast beyond eServices to a deeper meaning for eGovernment, including the use of social media and Web 2.0 tools encouraging deliberation, knowledge sharing, public participation and innovation.

In an interview in September 2009, Fountain points to three novelties that have lately been brought into the public administration: first, networked government, second, privacy, and third, the role of civil servants as knowledge and information specialists.

“Networked government refers to the shift from vertical bureaucracies that are separated from one another by strict adherence to bureaucratic jurisdiction to cross-boundary and collaborative relationships across bureaucracies. The issue of privacy is central to democracies and public administrators play a key role in protecting the privacy of citizens in a digital age. As governments build their role as central information gathering, processing and sharing entities, the role of civil servants in making knowledge and information available to improve society and the economy also is growing.”²⁵

In recent years, eGovernment initiatives have been refocused on a number of issues, such as how to collaborate more effectively across agencies to address complex intra-governmental issues within and among the agencies, and how to enhance citizen and customer focus and build relationships with private sector and civil society partners. This development is high-lighted in the latest UN eGovernment Survey 2008, titled *“From eGovernment to connected Governance,”*²⁶ where the challenges in moving from eGovernment to connected government are assessed. The main elements of this assessment follow below.

Earlier emphasis within the eGovernment-as-a-whole concept has been mostly on the provision of eServices at the front-end, supported by integration, consolidation and innovation in back-end processes and systems to achieve maximum cost savings and improved service delivery. The evolving second generation eGovernment approach to public service delivery – *connected, or networked, governance* – revolves around governmental collective action to advance the public good by engaging the creative efforts of all segments of society, and influencing the strategic actions of other stakeholders. This allows for an active and effective consultation and engagement with citizens, a greater involvement with multi-stakeholders on all levels of government, and it constitutes a move from an earlier model of government dispensing services via traditional modes to an emphasis on an integrated approach focusing on enhancing *the value of services* to citizen.

²⁵ Article in “Magazine of Turkish Informatics”, September 1, 2009, <http://bilisimdergisi.org/s2/index.asp>

²⁶ “UN e-Government Survey 2008. From eGovernment to Connected Governance”, United Nations, 2008

This new paradigm makes government agencies rethink their operations to move from being system-oriented to chain-oriented with respect to their structure, functioning, skills and capabilities, and culture and management. To achieve “Connected Governance”, governments have to re-engineer *intra-government* processes to be efficient, responsive and tailored to reflect citizen needs. *Inter-government* processes have to be re-engineered into a joined-up and borderless government with both vertical cooperation and integration between levels and horizontal cooperation and integration between the agencies, with multi-stakeholder cooperation incorporated in the government chains.

An integral part of successful eGovernment also implies provision of an effective platform of e-participation, and citizen involvement in public policymaking is requiring governments to engage in multi-stakeholder citizen engagement. Improvements in the quality of governance and the responsiveness and effectiveness of government should serve to empower the citizen, which implies a chance to play a role in influencing eGovernment solutions.

2.3.1 From delivery of eServices to value of services delivered

The shift of paradigm from government providing eServices to the use of ICT to increase the value of services is also elaborated in recent studies for the European Commission, to form the basis for the post i2010 eGovernment Action Plan. Leading research institutes in Europe have been assigned to provide the Commission and EU Member States with visionary insight for the future of public eService delivery. Their vision of the future – “*Value for Citizens. A vision of public governance in 2020*”²⁷ – closely resembles the development approach presented in the UN report above.

The European researchers, Jeremy Millard and Edwin Horlings, connect to the change from an eGovernment with its focus on eService delivery, to a more integrated “Connected Government”, supporting innovation, transformation, empowerment, and with focus on value of services. They foresee “value” to be the overarching driver for governance systems by 2020, inevitably supported by ICT tools. Value creation can be *personal and private*, created for individuals, *participative*, created collaboratively and interactively between individuals, or *public*, created by the overarching governance structure for balancing and reconciling the two other types of values or proactively promoting collective benefits in society.

²⁷ “Research report on Value for Citizens. A vision of public governance in 2020.” Millard, J. (Danish Technology Institute), Horlings, E. (Rathenau Institute), Botterman, M., Kahan, J. (GNKS Consult), van Oranje-Nassau, C. (RAND Europe), Pedersen, K (Danish Technological Institute), European Commission, Information Society and Media, August 2008

A strategic transformation is taking place from a focus on delivering eServices to a focus on the value of those services to constituents, and from New Public Management (NPM), which has dominated the last ten years of public sector thinking, to Public Value Management (PVM). Public Value Management becomes “the new narrative for networked governance”²⁸, contrasted with hierarchical and control-minded public sector traditions, as well as the competitive and customer-focused business mentality of NPM.

Public Value Management opens up for more multi-faceted relationships both within the public sector and between governments and other actors, including constituents. Through the impacts of digital connectivity and the participative imperative of eGovernance, PVM broadens the scope of eGovernment beyond the service delivery realm to include democratic accountability, participation, transparency and legitimacy, as well as institutional innovation and transformation, strongly mediated through direct engagement and empowerment of non-public sector actors and constituents. The new form of governance can extend into completely new areas, such as service personalisation, pre-emptive and early intervention services, and participative decision and policy-making.

This paradigm shift, referred to as second generation eGovernment in the UN report mentioned above, is interpreted by the European researchers as a movement towards much greater bottom-up empowerment than previously seen. Since 2005, there has been a massive growth in on-line collaborative applications, using a number of different formats such as Wikipedia, Flickr, YouTube, Facebook and Twitter, as well as innovations like crowd sourcing and cloud computing. The use of such collaborative tools and visualisation technologies offers tremendous potential to create new forms of governance service delivery and overall transformation of the government-constituent relationship.

At the same time, with the increase of non-physical communication and borderless interaction, traditional roles and responsibilities of public administrations will be subjected to considerable change and classical boundaries between constituents and governments will blur. The balance of power between governments, societal actors and citizens will have to adapt to these changes. Governments will need to become one player among many, drawn from the private and civil sectors and from constituent groups, and they will to a greater extent act as arbiters, coordinators and financiers through a series of governance webs operating across the “cloud” of distributed computing.

²⁸ “Public Value Management – A New Narrative for Networked Governance?” Stoker, G., *American Review of Public Administration* 36 (1) 41-57, 2005

2.3.2 Blurring boundaries

Andrea di Maio, vice president in Gartner Research, and specialised in eGovernment strategies, applies a slightly more technological approach to this same development when using the concept of “*Blurring of government*”.²⁹ Changes in values and expectations of the young generation will impact government both as service delivery organisations and as employers. In particular, social network behaviours and a greater demand for transparency clash with the traditional top-down hierarchical and one-way interaction, typical of government organisations.

Technology is also impacting governments, with increasing demand for personalisation, reliance on the “wisdom of the crowd” and new ways to leverage public information. Government agencies do not need to run their own infrastructure or manage their own applications and data, but can rely on shared, centralised or external services as well as consider the adoption of consumer solutions in areas like collaboration. What is happening in government is that all boundaries are blurring.

Government channels are blurring. The single point of contact that has been developed during the past years will be complemented or gradually replaced by alternative entry points, including private-sector intermediaries, voluntary organisations and more and more by communities enabled by social software.

The boundaries between service delivery organisations and their clients are blurring. Traditional government processes will be gradually replaced by the composition of processes, some of them still managed by government while others by third parties or communities. However, this implies that accountability changes with government employees engaging with external social networks, and the decision making process for both service delivery, policy development and enforcement are being increasingly influenced by external non-governmental information. As a consequence, boundaries among individual government employees, the citizens they serve, the suppliers they buy from and the public at large will blur.

Finally, technology boundaries will blur with shared and consolidated solutions evolving towards the adoption of commoditised infrastructure and applications as a service, with new identity and data management solutions that are under the direct control of citizens, and with increased collaboration across jurisdictional boundaries on the development of vertical applications.

2.3.3 Towards a user driven governance and open government

Gianluca Misuraca, Adviser and Researcher in e-Governance and Public Administration, points to social networks and community based opinion building as

²⁹ Column in “Governing – connecting America’s leaders”, July 16, 2009. www.governing.com

trends which will form future relationships between citizens and government.³⁰ Social networking can both exert its dynamic effect at the local level, supporting the activity of specific communities and projects, and at more cross-boundary or even global levels, creating the conditions for a variety of options in bottom-up social initiatives. In this perspective the future of eGovernment is not so much linked to how we will make the administration more electronic, but how more sharable and adaptable knowledge options and creative interactions become possible between government agencies and their various representatives on the one hand and the citizens and the users of the government services on the other hand.

The use of mobile and wireless technologies provides vast opportunities for government agencies to explore the ways to enhance the outreach of eGovernment services. This ongoing process has benefited from upcoming technological convergences, such as the seamless interoperability between the wireless domain and handset, and a growing use of mobile and wireless technologies in combination with Internet applications. Used for government services, this is referred to as *mGovernment*, and a complement to eGovernment.

In the report “A Green Knowledge Society”³¹, produced by the consultant firm SCF Associates for the Swedish government holding the EU chairmanship in the second half of 2009 and preparing for the post i2020 eGovernment Action Plan, the use of eServices are taken another step forward. They are seen as a driver of social innovation in the knowledge society. First, services should be available in the ways in which citizens and enterprises can and want to receive them, via mobile phones and television for instance, and not just online via a PC. Second, the emergence of online social networks can help those who are still without access to get the services, and relatives, friends or non-profit associations may act as intermediaries to complement the role of government workers. Third, by this change in the relation between government and the citizen’s collaborative world, people are turned

*“... into participants in the very design of services, they become innovators and investors, adding to the system’s productive resources rather than draining them as passive consumers, waiting at the end of the line.”*³²

Still recognising that implementing a *citizen-centric* model for eServices would be a major achievement in eGovernment, the report advises the EU member states not to

³⁰ Gianluca Misuraca, Adviser and Researcher in e-Governance and Public Administration, Ecole Polytechnique Fédérale de Lausanne, 2007. www.gk3onlineinteractions.net/en/node/85

³¹ “A Green Knowledge Society. An ICT policy agenda to 2015 for Europe’s future knowledge society.” SCF Associates Ltd, Final Report, September 2009

³² “The User Generated State: Public Services 2.0.” Ledbeater, C., Cottam, H. 2007

stop by this but go much further to make governance *citizen-driven*. Government should play the role of commissioner or broker of services. As participants, people should play a much larger role in assessing their own needs in creating and devising service solutions. Progress in eGovernment should in the future be assessed by focusing citizen participation and the quality of services rather than simply in terms of on-line presence.

The report also strongly suggests that open platforms be established for eGovernment service delivery. Such open source approaches could lower the cost of deployment, and accelerate innovation. It would also be consistent with knowledge economy thinking.

Open government transformation

In line with the ideal of a citizen-driven development of eGovernment and use of open platforms, Jeremy Millard at the Danish Technological Institute describes in “*Input to eGovernment priority policy areas 2010–2015*”³³ a new paradigm where open government and open governance is becoming the defining feature of visions, strategies and actions across EU member states and at European level.

This requires incremental, but real and determined, changes to governance structures, processes and mindsets. This means that other actors than government can play appropriate roles in making government more efficient and effective, whilst also enabling government itself to become more proactive. It also implies that citizens, business and other actors in society are no longer content to be passive recipients of governance and public services, but are demanding influence at all levels and in all aspects of public activity.

This “open government transformation” can be defined through a number of interlinked objectives as a governance which is:

- open-sourced and draws on a range of appropriate partners and inputs,
- user-centric and responsive,
- user-driven, as one step on from user-centric,
- engaging, participative and democratic,
- high impact at local level and environmentally sustainable,
- high performance through open evaluation and practice.

³³ “Input to eGovernment priority policy areas 2010–2015”, Jeremy Millard, Danish Technological Institute, October 2008

2.3.4 Swedish eGovernment strategy

Drawing on later years progress in theories on eGovernment and current developments in the use of ICT and the Internet, a proposal for an eGovernment strategy is to be published in October 2009 by the Swedish eGovernment Delegation.³⁴

The strategy takes off in the Swedish Government's Action Plan for eGovernment,³⁵ presented in 2008, where eGovernment is not seen simply as the application of ICT in public administration and services, but also necessitates further development of the administration itself and training of staff. The goal for eGovernment is to make it as simple as possible for as many citizens as possible to exercise their rights and fulfil their obligations and to take part in government eServices, and to reduce administrative costs for business.

Where it is of advantage to citizens and business, and where quality, security and productivity can be improved, government agencies should coordinate their administration by sectors. In each sector, one government agency should be appointed as leading agency for eGovernment coordination. The Action Plan also points out that municipal government, which stands for some 70 per cent of the public administration in Sweden, should be coordinated with state government development strategies.

There is a strong need for using common formats and applications in eGovernment to enable exchange of information between agencies. Government eServices should therefore to the greatest possible extent rely on open source solutions, in order to step-by-step free administration from dependence on single platforms and solutions.

The perspective of the Action Plan of 2008 is user-centric: to make it simple for citizens and companies to handle their contacts with government and gain access to public services. Government digital information and data should also be made available for further use by third party actors with the motive that better access to public information supports economic development and makes everyday life easier for citizens and business.

2.4 Conclusion: Critical uncertainties

In this report, we primarily attempt to discuss the driving forces that affect the development of eGovernment and the alternative effects that these driving forces may have. The development models, theories and outlined trends described above thus

³⁴ The eGovernment Delegation is responsible for the coordination of eGovernment between government agencies, and the follow-up of the effects of development projects for citizens, business and government office staff.

³⁵ "Handlingsplan för IT-baserad verksamhetsutveckling i offentlig förvaltning." (*Action Plan for eGovernment*), *Government Offices of Sweden*) e-gruppen och statssekreterargruppen för samordning av arbetet med elektronisk förvaltning. Regeringskansliet. Januari 2008

constitute an attempt to picture an optimal development process without external disruption, and can therefore be seen as targets or visions for the development of eGovernment.

It is easy to observe that the basic themes have shifted over time. In the earlier years of this decade, a large part of the discussion centred around the issue of efficient services – how should eGovernment develop in order to enhance administrative efficiency, and which services will be perceived by the general public as valuable? A lot of discussion was also about the issue of the “digital divide”: can we really make sure that everyone will be able to use these services?

In later studies, issues pertaining to the explosion of “social media” are evident. Participation, and forms of interaction, is a leading theme. The “Facebook-revolution” is quite clearly influencing the discussion. Another issue, of growing importance, is the sophistication level of services. One example is the ideal of individualisation or “personalisation” of services. So much more can today be done, even in comparison to such a recent period as around 2005, that also eGovernment can benefit from.

Our conclusion, based on the analysis of these different development models and trends, is that we can identify two basic questions that must be answered when discussing the future of eGovernment:

- The first question relates to the degree of trust in government: *will we see higher or lower trust in government from the citizens in the future?*

As we have noted, issues of communities and participation are prominent features in the discussion about eGovernment today. This raises the question of trust, or “social capital”. Trust is the “glue” holding communities together. Indeed, it has been shown that it is a very important factor in explaining well-functioning democracy in general.³⁶ How is trust and social capital faring today? The signals are mixed. It is easy to find studies that claim that it is deteriorating,³⁷ and a long-term trend in most democracies (and most certainly in Sweden) is that citizens’ trust in public institutions has been declining.³⁸ On the other hand, the explosion of “social media”, such as Facebook, bears witness to the extent of trust between users. Ten years ago, “social capital” on the Internet was measured as very low.³⁹ Today, we can see how people are willing to share even very personal information on community sites and on blogs.

³⁶ The seminal work in this area is of course “Making Democracy Work”, Putnam, R.D., Princeton University Press, 1994

³⁷ See e.g. Putnam R.D. “Bowling Alone”, Simon & Shuster, 2001

³⁸ See e.g. Holmberg, S & Weibull, L. “Svenskt institutionsförtroende på väg upp igen?” in Holmberg & Weibull, L. (eds), “Skilda världar”, Rapport 44, SOM-institutet, Göteborgs universitet, 2008

³⁹ See Nordfors, L & Levin B. “Internetrevolutioner”, Ekerlids förlag, Stockholm, 1999

- The second question relates to in which direction the main thrust of eGovernment strategy will develop: *will public administration develop towards mainly increased participation or will the main direction be towards efficient distribution of services?*

To be sure, there is no necessary conflict between the two. On the web, we can today see how the two developments go hand in hand. Communities and participation are on the increase at the same time as more efficient distribution of services, often personalised, are emerging. Amazon might be an example of how the two can be combined. Amazon is growing ever more effective when identifying the users' needs and addressing them in a personalised way, at the same time as contacts with other readers help when selecting goods from the store.

However, in the framework of democracy the two reflect an on-going discussion of how ideal democracy and public administration should be defined. Participative democracy is just one model; another being an efficient indirect democracy that produces desired services for its citizens.⁴⁰ So there is an issue of policy here.

Furthermore, a classic view of parliamentary democracy is that public participation should mainly be something found on the "input" side of politics (parties, elections, parliament etc.), rather than on the "output" side of politics. Implementation of policy should, according to this ideal, be "value free" and performed according to Weberian ideals that imply a certain distance between the government official and the agency's subjects. To what extent public agencies should participate in the public debate has been an issue recently discussed by a public committee in Sweden.⁴¹

⁴⁰ See e.g. McKinnon, C: "Issues in Political Theory", Oxford University Press, 2008

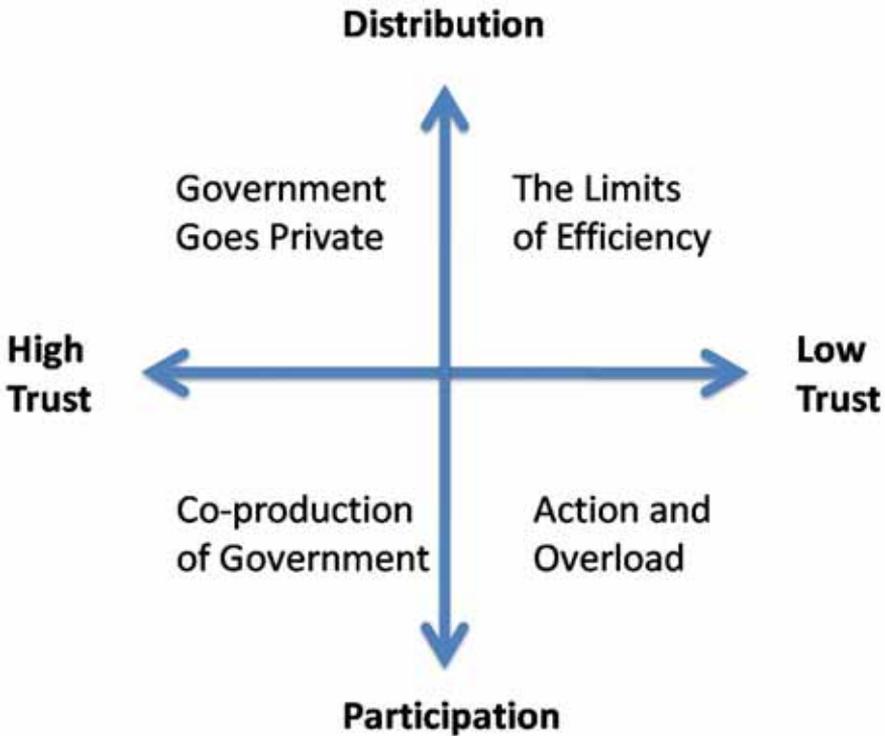
⁴¹ "Opinionsbildande verksamhet och små myndigheter", SOU 2007:107

3 Future Scenarios for 2020

The aim of this book is to identify scenarios – not, as some of the studies we present in earlier chapters, to define visions of desirable futures or present prognosis of what might happen. Scenarios tell us in which directions events *might* develop. They present alternative “narratives of the future” showing what can happen, given that important background factors develop in different directions. The basis of all scenario work is, consequently, the issue of uncertainties. Which are the critical uncertainties today? In other words: which factors or questions do we know are very important to the development of eGovernment, but where we cannot be certain of the answer?

The previous chapter ended by identifying two critical uncertainties: one about the trust level in society (higher or lower trust), the other one about the logic of eGovernment (distributive or participative strategy). We obtain the following “scenario cross” by bringing the two questions together:

Figure 3. The scenario cross



Four clearly differentiated scenarios emerge. These constitute “ideal typical futures”. The trends have been driven to their furthest point in order to provide as clear a picture as possible of the direction that development can take under different conditions. As mentioned earlier, the aim is not to declare what the future *should* be like – this is the work of visions – or what we, on balance, *believe* what the future will be like – this is done using forecasts or prognosis. Here, the aim is to provide pictures of what the future *may* be like, to conduct structured reasoning where questions of the kind “what would happen if...?” are answered.

As we will see, the four scenarios point out both possibilities and challenges that face eGovernment. None of the scenarios show an unproblematic, rosy future. Each of them results in problems that might have to be solved in the future. On the other hand, they also show advantages in terms of, say, democracy and efficiency that eGovernment can help us realise.

In short, the four scenarios tell the following stories:

- *Government Goes Private*: There is a strong demand for eServices. However, government fails to coordinate actions so these can be produced. A private actor emerges that designs the interface between citizens and government, including possibilities for participation.
- *The Limits of Efficiency*: Government coordinates its activities and data, and is on the forefront of personalised services. Most citizens approve and support this. At the same time, groups feel that their personal integrity is threatened through extensive use of personal data.
- *Action and Overload*: Trust in government is low, making it difficult for officials to interact in a positive way with citizens. At the same time, we see an explosion of communities that aim to influence decisions and support individuals in their contacts. The result is very well informed, peer-supported citizens that know their rights. The challenge is to avoid overload in government agencies, when these client demands are pushed with full efficiency.
- *Co-production of Government*: Strong participation in communities etc from Government. Citizens actively participate in developing services and routines that make government more efficient. Issues are raised concerning the possibility of retaining public neutrality and rule of law when officials also are members of close-knit communities.

3.1 Government Goes Private

(high trust, distribution)

2009

Datasets from government are being opened up to the public, one example being the Data.gov initiative⁴² from the Obama administration and the UK government appeal for developers to mash-up 1,000 datasets.⁴³ Both these initiatives are aimed at increasing public access to high value and machine-readable datasets, and are doing so by involving external developers.

Internet users are giving up a great amount of integrity and sharing very personal information with private actors through their communication in social networks, their search behaviour and when allowing cookies in their web browsers. The trust in that Google, Facebook and others won't misuse this information is high; even though many users may be unaware of how much information they are actually sharing with these companies.

Swedish eGovernment is in need of coordination between government agencies. Despite initiatives of integration between different systems, it has so far been difficult to create interoperability between administration bodies.

2010-2020

By 2020, doing your business on the web is the normal way among citizens. The explosion of, first, eServices and commerce in the beginning of the century and, later, of communities and cooperation has taken hold among most citizens. eIdentification is common practice. The issue of a "digital divide", so much discussed as late as around 2010, is no longer seen as important. Even if differences between parts of the population in how good they are at using the web still are around, virtually no one is "e-illiterate". The web is under-going constant change, and some understand how to use new applications and services better than others. But the penetration of new applications is pretty quick.

Government has also developed its services at a quick pace. "Around 2014, we finally left the era of paper and sending letters", as an official expressed it when commenting developments. Applications, decisions, services ... all of these and more form a part of a firm eGovernment structure. The aim has been to improve services and increase efficiency in the public administration. After a few years of scepticism, when many felt that eServices somehow were less trustworthy than traditional channels, demand took off. It was an issue of learning: when people saw that administrative issues could be

⁴² See <http://www.data.gov>

⁴³ See <http://blogs.cabinetoffice.gov.uk/digitalengagement/>

handled with precision and with less work on the part of the citizen they started to appreciate the efficiency of eServices. An efficiency, which also led to increased trust in the public administration as such. Images of “red tape”, “slow service” and “Byzantine organisations” quickly lost their hold.

An important reason for the increased trust was increased transparency. eGovernment is no longer just timely service, but also openness. The fact that citizens could follow their requests and applications, see which official is working with them and understand when and how decisions will be reached increased understanding of the operations of government.

An important step was when a law was passed in 2013 that all non-confidential public databases should be made accessible for citizen use. This meant that people could not just achieve more understanding when they interacted as individuals with the administration – they could also see, assess and understand the basis of policy decisions. It also increased the quality of political discussions. Activists could now not just present their opinion; they could base these on facts that were on par with the decision-makers’ access to data. Networks of “lay statisticians” appeared, helping issue groups to further analyse data, not seldom taking analyses to sophistication levels beyond those figuring indifferent policy proposals from politicians and government officials.

So transparency enhanced public participation. But a line was drawn concerning how profound this participation could be in administrative matters. Around 2014, there was a big debate if administration also should, as it was phrased, “go for participation”. In other words, encourage and organise communities where citizens can actively influence the development of services and routines. Many politicians and political scientists said “no” in this discussion. As the minister for interior affairs said in the parliamentary debate:

“Participation is for politics, implementation is for the administration. We do not want public agencies competing with, for instance, political parties in attracting public interest in policy matters. Politics should be about goals, administration about means.”

By 2010 serious attempts had been made to increase cooperation between governmental agencies when offering eServices. The reasons were evident. On the rest of the web, the trend was integration in “one-stop shop” solutions – Amazon, Facebook and Google being three examples of how user-friendly integrated solutions could be. And, as it was said when commenting proposals in this direction:

“We are dealing with one citizen. Not with a parent, a person on sick leave or a tax payer separately. Isn’t it time that we start taking a more holistic view, and cooperate?”

But attempts to form a common portal, “state.se”, failed to take off, as did trials to cluster agencies around distinct service themes.

Every agency strived to guard its own turf, forming close contacts with its stakeholders and in this way create – as it was perceived – stability. Public administration had gone through, and was constantly going through, reorganisation. Old agencies were abolished or merged. New ones formed. This created a sense of insecurity among public servants. Defining their “core business”, managing their “brands” and increasing “client intimacy” were common strategies to strengthen stability and chances for long term survival. And technical solutions and standards varied between agencies, which furthered conflict. Attempts to create common structures for cooperation between agencies failed. The centrifugal forces were just too strong.

From the individual citizen’s point of view this created an impression that government had reached half way. A common view was that individual services were excellent. Each agency, taken separately, was seen as a well functioning unit that could be trusted. But the fact that one still had to “shop around” was seen as just “so 2009” – in other words badly out of date. More mature users started to create their own “government portals”, where they could integrate relevant parts of their affairs and necessary information about agencies that they had particularly close contact with. Indeed, open-source applications were circulated aiding people in doing this. But this was strictly for the elite, and the solutions had a feeling of beta-versions over them.

By 2013 it was clear to everyone that Google was succeeding in its ambitions to become the leading integrator of information on the web. Having concluded projects like “Google news” and “Google books” successfully, taking the lead and conquering the customer interface from other actors such as newspapers and libraries, the company went on seeking new business opportunities. As the CEO of Google said in an interview in *Wired* 2014:

“Our business is providing searchable and accessible information. We are the dominants in this, and have been successful. Users trust our services and our values. eGovernment is an area that now attracts our attention. It is evident that government is not delivering. Nationally, they are split in agencies. Internationally, such as in the EU, they are split along borders. The fact that people are setting up their own sites shows the need. We can do it much better, and attain greater outreach, than these initiatives.”

18 months later, in 2016, a new service “Google Government” was launched. The test market was Sweden – a country that had come far with eServices, with a very fragmented public administration with its autonomous e agencies and with very mature

users. After a successful period in Sweden, the idea was to go on to among others the European level and the US.

“Googlegov.se” was an immediate success. Profiting from the fact that government databases were open for public use, general data could be fused in a user-friendly way. Users could then customise and personalise their interface with government as a whole, using their eAuthorization passwords to download all relevant data from agencies to their “iGooglegovernment” pages. These pages were easily fused with earlier iGoogle pages, creating full-service focal points for use. The construction of an “iGooglegovernment” was facilitated by the fact that Google could trace user patterns and constantly suggest improvements for the individual about which links or what information they should download. Soon “Googlegov” was the dominating link between citizens and government. Direct visitors on agencies websites dropped drastically, the normal way was now to go via Google. Only less advanced users, about five per cent of the population (mainly senior citizens) kept on with their old ways, surfing around between separate agencies’ sites.

Having reached critical mass in users, Google soon took further steps. Users had already, on a spontaneous basis, started to communicate with each other, pointing out how best to communicate with certain agencies, giving names of “favourable” officials etc. Soon, Google set up forums and structured information and recommendations between users. Based on generalised data about citizen behaviour, Google could also publish reports about government efficiency, which influenced public debate. Especially important was the quarterly “public agency ranking”, which compared response times, citizen satisfaction etc.

In 2020, there is a sense of disappointment amongst politicians and within the public administration. As the director the Swedish Tax Administration reflects:

“We only reached half way. We managed to design individual, well functioning, services. But we failed at integrating them. We wanted to hold on to our unique citizen contacts. Now, we are sub-contractors to Google when interacting with citizens. And the politicians wanted us to stay out of the political debate. As we have seen, a private – global – actor has now become something of a citizens’ voice in public matters. Was this really what we wanted?”

3.2 The Limits of Efficiency

(low trust, distribution)

2009

When the Swedish parliament passed the IPRED-law designed to combat pirating in February 2009, it had been preceded by heavy criticism from influential bloggers and

other opinion-leaders that thought this would be a violation of personal integrity. An important point was that they did not want the government to control the flow of information on the Internet.

The Swedish Pirate Party was successful in the elections for the European Parliament in June 2009, proving that significant groups of citizens worried about more governmental control and surveillance.

Large government agencies in the same sectors have set up goals together on collaborating in implementing common IT-systems, cross-referencing data and creating common interface towards the citizens.

2010-2020

In 2012, positive economic development has led to the further development of co-operation within the EU. The historical trend, in which European co-operation slows down in periods of recession but develops rapidly when the economy is going well, has thus continued. As the EU has developed and an increasing number of tasks have been transferred to the supranational level, the debate on the “democratic deficit” has also become more intensive. Brussels has worked hard to improve transparency and the dialogue with the public over the last few years.

eGovernment has proved to be an important tool in this effort. It is easy to navigate the Brussels’ bureaucracy and to contact officials and decision-makers etc. using the European portal. The system also includes links to the national authorities. The public can easily follow cases from the supranational to the national level and are offered support to determine at what level services should be used, officials should be contacted and so on.

The EU is thus a major driving force for the development of eGovernment, and it is also at this level that the standards are set for what constitutes good eGovernment, the technology that should be used and what the interfaces should look like. The process of European integration is in turn promoting integration between Swedish authorities. The administrative structure of the EU does not correspond entirely to the structure in Sweden, and this encourages the two levels to open up to each other and further coordinate their routines.

As a researcher in the field of public administration says in 2014:

“We have in reality one common intranet server but several authorities in the physical world. The common flows of information have led to both improvements in efficiency and cost savings.”

A general desire had been expressed, not least from Brussels, for the national government to provide a common interface for the public in Sweden– a “one stop shop” – for services and interaction with the authorities. This process proved to be

more heavy-going, however. Each of the authorities wanted to stick to “their” contact with the public and own “their” issues. It was felt that this would provide security in the face of discussions about the restructuring of public administration. It was assumed that authorities that had a clear profile and close relations with “their” stakeholders would sit more firmly in the saddle in this context.

It is clear, however, that the users – the public – would like to see a common interface: a “The State.se”. The use of the Internet has generally come to comprise a limited number of search engines. As the Internet has come to play an increasingly important part in peoples’ lives, advanced search engines that can handle the quantity of information on the Internet have also become more important. The demands for a common government portal culminate around 2014 – “Why should I need to surf around to use the services of the public sector when I don’t need to do so in any other context?”

Already in 2012, the authority with the most widespread contacts with the public and with companies – The Tax Administration – began to broaden the content of its website. In an effort to increase tax morality and the willingness to pay tax, the Administration launched entirely new content under the heading: “This is where your taxes go!” This described the operations and activities of the State as a whole with some references to the local government sector. Addresses and links to other authorities were included in order to make it possible for the users to get a clear picture of the different areas in which tax revenues are used. Users who wanted to reach other authorities soon began to use the site and in reality it became the portal that so many people had asked for but not received.

When other authorities note that an increasing amount of traffic is passing through the Tax Administration’s website, they demand to be able to influence the content of this site. A special editorial committee is appointed that represents a broad range of stakeholders and one of its first decisions is to start a new portal:

“The Swedish State.se”, launched in 2015. Continuing to operate under the Tax Administration’s address is felt to be impracticable. Special resources are allocated to run the website, and Sweden now has its own “Internet authority” which has emerged as the result of co-operation between different parts of the nation’s public administration. The sites of the individual authorities are linked together, and these sites increasingly assume the character of sub-sites to “The Swedish State.se”.

The creation of the Swedish State.se provides major rationalisation gains for the authorities. Contacts with users/stakeholders are largely made using the web. “We haven’t quite arrived at the vision of a single-channel model in which everything is

done digitally, and we will probably never quite get there, but we are very, very close,” as one Director General puts it. The savings in terms of handling mail, offices, telephony etc. are considerable.

An increasingly important function of “The Swedish State.se” is the dialogue with the public. What were initially a Q&A function and a chat room on an authority and its activities have developed to become a forum in which social issues are discussed jointly. New forms of public participation, such as the popular “public referrals” are developed. This system enables individuals to comment on memos and reports from enquiries and committees and thus makes it possible to participate in the decision-making process in an entirely new way.

The common portal is directly connected to the authorities’ intranet. This means that all citizens can access all the different types of self-service on offer using “The Swedish State.se”, i.e. they can apply for a study grant, complete a tax return, see how their national pension funds are going and so on. Users are thus meeting “seamless government” in its true sense in that they can do what they need to do without regard to borders between different authorities. All citizens can register their own pages where all the matters relating to them are compiled and where they can follow the progress of their own case or item of business as it is dealt with. “The Swedish State.se” is structured in line with the needs of the users in different situations in life, i.e. as the parents of small children, students or pensioners etc., so that the users are presented with the services and information that are relevant to them at the time. Someone who wants to start a company, for example, is able to contact the Tax Administration, the Patent and Registration Office, the Companies registration Office, the Agency for Economic Development and Regional Growth and the County Administrative Board at one and the same time, and so on.

The potential of far-reaching personalisation of services was clear from the onset. Aggregating tremendous amounts of data about the citizen, “The Swedish State.se” could take the lead in developing personalised services. Mobility helped. For instance, the individual could be reached with reminders when to renew a licence, warnings that routines had changed in a certain area etc. The fact that all vehicles contain GPS allowed development of more sophisticated systems for traffic zoning in big city areas or toll-systems for roads. In short, by 2016 government had crept closer to the individual. This was done with the citizen’s support. New personalised services were perceived as helpful – simplifying life for people.

The advance of eGovernment had occurred in an expanding economy during the long, albeit step-by-step, recovery from the crash of 2008. In 2017, the economy once again started to slow down. Some countries, like Sweden, experienced quick decline in public finances due to the large role of the public sector in the economy. Soon, a discussion concerning fraud in public benefits grew large. Limiting fraud, and combating tax

evasion, became important objectives in politics. This had not been so easy in the past. Due to fragmented databases, it was easy to find loopholes and evade control. Now, thanks to integration of data, possibilities to find the culprits were much better. And by 2018 the system proved its efficiency – people were caught, and attempts to fool the system were on the decline.

Catching offenders was not seen as controversial. But the fact that the state proved to be in a position not just to help people, but also control them, nevertheless created worries. The debate about personal integrity had started in earnest already in 2008. Heavy users of the Internet had reacted against, among other things, the struggle against pirating records and films. Debate centred on what some called the emerging “Big Brother society” – using traffic data as a source to sift people’s activities and catch offenders. About ten years later, the same techniques were being used on a grand scale! As the chairman of the “Free Data”-party (a successor to the Swedish “Pirate Party” in 2009) said:

“Finding criminals is OK. But what is now going on shows how controlled we can be by the state. Who knows to what ends data about our personal lives will be used in the future? It is just not worth the risk!”

Soon, a movement – “No More Big Brother” – materialized. Politically, demands were that no data should be pooled between agencies without the individual’s consent. A demand, that was forcefully criticized, since it would – as it was claimed – “take us ten years back when it comes to efficient eGovernment”. Most people agreed: they felt that, on balance, improved services outweighed the risk to personal integrity. Since people at large felt they had nothing to hide, they accepted surveillance to minimise fraud. But the “No More Big Brother”-movement gathered momentum within a strong subculture of users, and won three per cent of the votes to the Swedish Parliament in the election of 2018. This was support enough to guarantee the movement access to media, talk-shows etc.

After the election of 2018, a “lunatic fringe” developed: a group calling itself “Reclaim Our Privacy”. This group had direct action on its agenda; spamming servers, cracking codes and making prominent citizens’ personal data public and constructing viruses that sabotaged functions of “The Swedish State.se”. After a couple of spectacular successes, when “The Swedish State.se” went down for longer periods, the issue of security was raised. Trust in the system was on the decrease; people just couldn’t feel safe that it would work. And worse: one could no longer be sure that personal data was secure from snooping and – worst case – made accessible on the network of users connected to the “Reclaim”-group.

2020, the situation of eGovernment is mixed. On the one hand, Swedish eGovernment is state of the art in terms of offered functions, user-friendliness, handling of data etc. On the other hand, there is a growing sense of insecurity and trust in the system is decreasing due to security issues. These issues are addressed by government through a series of counter measures on the web and police activity directed towards the “Reclaim”-movement. But, as a leading state security officer says:

“It is a constant race. Our measures are met by evermore-sophisticated attacks. And police action, when successful, tends to create martyrs that inspire others to act.”

3.3 Action and Overload

(low trust, participation)

2009

Through the use of social networking tools, individuals sharing common needs are finding it more and more easy to find each other and to coordinate their actions. One example where citizens seek to further their interests in politics is the site “theyworkforyou.com”. On this site, created by volunteers, help is given when, for instance, contacting your MP.

Internet users are more and more relying on information from fellow users, who they share beliefs and opinions with, instead of searching information from “objective” sources such as the government or other authorities.

Internet users are looking for information from highly customised portals or via tools that filters the information with help from personalised recommendations. The important role of peer-to-peer recommendations and communication can be seen everywhere from amazon.com to Facebook.

2010-2020

The global economy has developed positively 2010–2020, as has the Swedish economy. Contrary to expectations 2010, the crisis of 2008/09 was followed by a “long boom”. A stronger Chinese economic development than expected, successful regulations of the financial sector and – last but not least – technology-driven economic growth fuelled by investments in “green solutions” led the recovery. By 2020 the era is named the “green boom”.

The use of the Internet, broadband and new platforms for accessing the Internet (handsets, television, computers at work and at home), continues to develop apace. The “digital gap” – the situation in which there are major differences between Internet users and others – is not apparent in the Western world but is, on the other hand, in evidence globally as large population groups, and sometimes entire countries, are still on the

periphery. Some observers say that the Internet has now linked people together in networks and brought them closer together than ever before.

However, the impact on social life is actually fragmentary. Values such as self-fulfilment and individualism have been further reinforced and the virtual communities have led to a Europe that is marked by a mosaic of subcultures, some of which have a very limited focus. These are communities, which act as pressure groups and may sometimes – in relation to governments for example – function as interest groups that monitor whether the decision-making process is conducted correctly or leads to the result they want. The situation is also turbulent: new groups appear and old groups disappear at a rapid rate. A feature common to most of the groups is that they transcend national borders and cover the entire world.

The result is political instability with minority governments, frequent changes in the decision-making assemblies and – for the authorities – a highly shifting landscape of stakeholders in which different authorities may sometimes compete in order to reach and establish legitimacy among the same groups. Integration in the EU has made sluggish progress. The single market works well, but when attempts are made to reach supranational consensus on other issues the uncertainty at the national political level spills over into the supranational level. The driving forces for co-ordination and collaboration at different levels are weak.

Decade-old trends of declining trust in government continue. Or, rather, trust in authorities as such is falling. Individualistic values dominate, people feel that they are the best judges themselves in most matters. And the development of the Internet has empowered the individual to a previously never experienced degree. An example is that healthcare now faces difficult challenges: more elderly to take care of, quick development of new – expensive – drugs and, finally, patients that often can compete with doctors in knowledge of illnesses and therapies. The “white coat” is one of the authorities that experience the clearest decline in public trust.

Meanwhile, Internet users are used to simplicity and accessibility when looking for information and services on the web, but each individual authority is unable to offer this simplicity when acting alone. Attempts to work together using an “authority portal” fail, however, because the turbulent situation leads the authorities to seek security in their own identity and in having as close contacts as possible with “their” stakeholders or users. Each of the individual authorities is highly advanced in terms of the technology used, but an overall, collective approach is lacking. The co-ordination attempts made are local, involve only a few parties and eventually come to nothing. Co-ordination in the form of an intranet also makes slow progress as rivalry and prestige raise obstacles here too.

But a common feature in eGovernment is increased transparency. This does not demand coordination between authorities to the same extent as merging services. All that is needed is common standards of openness. So, on this point, progress is quick. Access is guaranteed to non-confidential public databases, making it possible for citizens to study background data in decision-making and participate in public debate in a more efficient way. It is also common standard that every client should know who is handling her case, where it is in the process and when a definite outcome is expected.

By 2016, the situation can be summarised as follows: low public trust in authorities, strong development of communities on the web and fragmentation in government. The stage was set for users to “do it themselves”, to start communities to aid the individual in navigating the complex world of public administration. To be sure, global giants like Google had tried to fill this gap. But they had failed. Lack of trust was not just a problem for government, but also for big business. Many users felt that giant companies like Google and Microsoft represented The Establishment, and consequently something that must be fought and resisted. Google never managed to become more than a search engine. Every attempt from Google to start communities resulted in a quick establishment of “free counter-communities” led by enthusiasts, performing the same functions as the commercial alternative.

Support networks were indeed nothing new. Already in the 1990’s, networks for patients had appeared, and by 2012 they had become important power centres in the healthcare system that no one could ignore. Now, the same phenomenon could be noted for the public sector as a whole. Citizens supported each other, discussing which individual government officials were understood as difficult or easy to deal with. “Lay lawyers” (some of them actually professionals), individuals who had deeper understanding of administrative law, offered advice. And when somebody was unhappy with a decision, she could just by posting a question investigate precedents, on which appeals could be based. “Same circumstances, same law, even same official – and still a different decision! Why?” was a typical appeal directed to higher echelons of the administration.

A network of communities appeared performing these functions. Typically, they were directed to different segments of society that had similar needs in terms of contacts with government. An example is the site “familylife.se”. This community organised families with small children. Its slogan was “know and use your rights!”, and it offered news, social functions, ranking of local day-care centres and schools and legal support (free or professional at a certain fee). The community was also an efficient pressure group. Whenever decisions were to be taken on the national or local level affecting conditions for families, the community formed the nucleus for widespread action.

Around 2018 “overload” was an issue when discussing the future forms of administration. Public participation such as direct contacts with officials, pressure-

group activity, applications for benefits, appeals etc had grown strongly; so much that the system showed visible signs of not coping. This led to a vicious circle: overload produced lower quality in decisions; this lower quality resulted in more appeals, which in turn increased overload etc. Attempts were made to “ease the pressure” by making it more difficult for citizens to act. But these were met with very strong, web-based, pressure group activity. An example: in 2019 a reform restricting the right to appeal public decisions was proposed by government. After a very hard debate some measures were indeed implemented in this direction. But they were not enough to solve the problem.

In 2020, a political scientist analysed the situation as follows:

“The situation is mixed. The active and informed citizen is indeed one of the basic ideals of democracy. Now, thanks to eGovernment and the Internet, John Stuart Mill’s “ideal citizen” is very close to realization. People really know their rights, they can follow what is happening in the governmental offices and they know how to act in a most efficient manner. Now, we are faced with another challenge. Given that resources for the governmental apparatus are limited: how are we to handle this interest? In many cases, citizens are more advanced than officials in assessing the details of their case. Is this the paradox we are facing: that almost ‘perfect’ citizens produce a new form of ‘imperfect’ government? And, if so, what is the solution?”

3.4 Co-production of Government

(high trust, participation)

2009

Customer service and product development solutions from companies are set up as wikis or forums, where customers help each other rather than are being helped by the company. In fact, the result is often that clients in cooperation help the company in its product development.

Customer service and product development is becoming more “social”, performed as a discussion rather than in the form of questions and answers. With interactive and participative contacts established with private companies, users expect the same approach in their contacts with government agencies.

There are examples where Swedish governmental agencies have started to communicate with the citizens directly on platforms such as Facebook and Twitter. Many more are looking into the possibility of distributed customer services directly on social networks instead of only on their own websites.

2010-2020

The explosion of communities on the Internet continues from 2010 onward. If anyone ever had doubted it, “community” is the leading characteristic of the web. As it was noted in the book *Internet revolutions 2.1*, published in 2013: “In the early stages, the activities on the internet could be analysed as a struggle between different logics. A commercial logic – the classical market – stood against “civil society”, in other words communities. Tendencies towards power concentration (big portals, global companies ruling the Internet) stood against decentralisation of power to individuals and spontaneous communities. Today, we can observe that the combination of decentralisation/community dominates developments.”

This development was also noted among producers of eGovernment. It stood quite clear that an actor (be it of any kind) that did not participate in communities couldn't be said to be an actor at all. “Either you join, or you choose to be a passive observer” was the main principle stated by consultants and other experts in eBusiness and eGovernment. And soon strategies based on participation and presence in communities started to materialise.

It had, in fact, been going on for quite sometime. Agencies had since long sought to develop close contacts with stakeholders. When developing their respective brands and seeking deeper relationships with their “constituencies”, they had used tools such as surveys of attitudes, client advisory boards on matters of service levels and focus groups. It had for decades been clear that an efficient agency had to relate to its stakeholders and clients on a deeper level. Otherwise, it would be impossible for it to carry out its mission. It was a well-known truth: government growing more complex, administrative means (regulations and sanctions) and economic incentives (taxes and benefits) were not enough to reach effect. “Soft power” – influencing behaviour through trust and information – was an increasingly necessary ingredient in all implementation.

These well known facts grow all the more salient with the advent of communities aiming at empowering citizens in their interaction with public authorities. For sure, they made people better informed. But they also could function as centres of rumours, misunderstandings and myths about the ways of government. And, as someone noted:

“Nothing is more difficult to handle than a client that thinks he has got it all right, but in fact suffers from grave misunderstandings. These ‘barefoot legal experts and counselors’ we see all around often bring more damage than help.”

And it was the issue of overload, too. As people felt more empowered, they became much more active – overloading the system with demands and appeals. Something had to be done!

The solution was obvious for the “Administration Efficiency Committee” when it published its report in 2015. Agencies had to start taking part in communities. The “barefoot legal experts” had to be replaced by *real* experts from government that could point people to the right direction when they had demands or complaints. And it had to be done not by setting up new, government-sponsored, communities. Citizens already had their points of contact on the net, and the only way to reach them was by participating on these arenas:

“Government has to come to the people, not the other way around. This truth holds also on the Internet.”

Secondly, the only really effective way to reduce the workload was to ensure that citizens became even more skilful in their role as clients. This meant that they had to understand how government works, but also that government itself had to improve its way of operating by adapting to modern needs and capacities. And these needs and capacities were under constant change. Concepts of “prosumption” (a pun combining consumption and production) and producer/consumer “co-production”, that had long been basic in service management strategies in the private sector, were now seen as relevant for the public sector. Citizens could no longer just be passive recipients of pre-packaged services; they had to become active *co-producers* of these services – supporting each other, interacting closely with the individual officer, participating in determining routines and channels of communication.

Actually, the process had already started around 2010, when agencies’ communications departments started appointing officers for social media; often younger people that had full knowledge of Facebook and other applications. The aim was mainly outreach of information. Experience proved that it was much easier to reach different target groups by communicating with them via sites they normally visited rather than try to attract them to the agency’s own homepage. In line with the philosophy above, this function evolved into what became known as a “distributed service desk”; moving out client services to relevant e-communities. No longer was it only information officers that were involved. Now, these service desks were staffed by regular agency officers.

The “distributed service desks” were not only about information. They handled applications, appeals, decisions about services etc. And communication was two-way. Dialogue was encouraged concerning how services could be dealt with in an even more efficient way. Citizens could suggest improvements, and often discussion groups (branded “Users’ Committees”) were formed that performed investigations – based on open data from government agencies – that resulted in detailed recommendations for reform. In these groups, officials from public agencies participated more often than not. But their function was not one of authority. When assessing the current problems and formulating suggestions they were on equal footing with other participants, sharing their expertise when relevant.

For many years, voices had been heard demanding integration of government services. Attempts had been made to merge all agencies' websites into a big portal ("The Swedish State.se"). They had all failed. Now, one could note that integration was achieved, but in a different way. Agencies that were represented by separate service desks on the same site soon saw the value in merging these into one. One of the first, established in 2016, was the merging of the service desks of the Swedish Transport Authority, the Police, the Tax Authority, Motor-Vehicle Inspection Companies and others on the community "Carowners United". Services could thus be offered in a one-stop shop manner as an integrated function in this community, and carowners could participate in the development of authorities relevant to them. So integration was reached in new way. As an official commented it:

"Formerly, we battled about the construction of a giant common portal, that citizens should visit. Now, we are integrated in a much better way – it is customized, on the field and in direct interaction with our clients. How could we miss this possibility before?"

The effect on the working culture of the agencies was profound. Traditionally, research on "bureaucratic cultures" performed by political scientists had used categories of "Weberian bureaucrat", "social expert" and "service donor" when describing how officials understood their roles. Now, a new culture of self-understanding appeared; the one of "citizen peer". A new term was coined – "government by group facilitation" – to describe implementation of policy. The officials of the service desks really felt like full-fledged members of their communities. They often identified themselves strongly with them and gained access to discussions by being recognised as such.

In many ways "government by group facilitation" proved to be an efficient way to achieve administrative goals. It was highly flexible and decision-making could take into account data and knowledge about actual situations that otherwise had been difficult to assemble. It was also enjoyed high legitimacy; since officials were accepted as peers, and citizens could participate actively in developments, government grew very close to people. Gaps of trust, due to a sense of distance between authorities and the general public, were narrowed. These strengths showed up in increased public compliance in important peers.

But the situation was not without problems. About 2018, a big discussion started around the new phenomenon of community-based implementation of policy. First, some felt that officials had moved *too* close to the clients. Could this harm the ideal of rule by law, which presupposed neutral officials? Some critics talked about officials "going native", that individuals that were very active in the communities could gain unfair advantages:

“OK for participation, but has it not really moved to far? After all, the public has to be confident that public administration deals with everyone on an equal basis. Here, we see officials becoming members of communities and making friends with prominent individuals on them. Isn't there a danger of corruption lurking around the corner?”

Secondly, communities such as “Carowners United” could be used as channels for organised interests. Indeed, in 2019 there was a scandal where the Auto Industry has masqueraded as members of the community and had managed to influence routines for issuing driving licenses through being active in a discussion group addressing this matter.

In 2020, there was a general feeling that “community-based implementation” was an important step forward. But actions were also taken to create a balance concerning how deep the individual official could go into a community. Following a couple of cases in administrative courts, where undue influence could be proved, reforms were set into motion to oversee how officials acted in communities. Boards of appeal were strengthened and rules of conduct published for the “distributed service desks”.

The officials staffing these desks started to feel the classic dilemma of what in political science is called “street level bureaucrats” – balancing between being close to the citizens, but not too close. As one of them complained in an interview given in December 2010:

“This is not easy. What do they want? First, they wanted me to work to become a recognised member of the community. Now, they are holding me back by rules of conduct that can be tried in court. Members of the community see this, and I have lost the really close sense of intimacy with them. Is there a necessary conflict between the rule of law and efficiency? Nobody really has the answer, but I feel the problem every day!”

SECTION 2: FUTURES STUDIES OF eGOVERNMENT

4 Conducted studies on eGovernment

In this section, we present a structured review of a number of important scenario and vision studies on eGovernment conducted from the early 2000s up to today. The examples are taken from reviews of the literature and previous studies and from searches on the Internet in the field of eManagement/eGovernment, and they all relate to a European or Swedish context. The studies should give the reader a more comprehensive knowledge background to the theoretical discussion and the future scenarios elaborated in section 1 of this book.

Following the review of the ten selected examples below is a short discussion on common themes in the studies; scenario dimensions, driving forces and challenges, and portrayals of society and public administration, and how these may affect the form and structure of eGovernment in the future.

The following scenarios and visions of the future have been reviewed:

Scenarios of eGovernment in 2010 and Implications for Strategy Design: The European scenario project PRISMA (Providing Innovative Service Models and Assessment)⁴⁴ was conducted in the period 2000–2003 with the aim of analysing important trends in the development and provision of public services based on ICT. The time horizon for the scenarios is 2010. PRISMA was funded by the EU's fifth framework programme and was managed by the Institute of Technology Assessment in Vienna under the leadership of Dr. Georg Aichholzer.

eGovernment beyond 2005: In September 2004, the eGovernment unit at the European Commission arranged a seminar with a working group of the eEurope Advisory Group on eGovernment with the aim of drawing up new recommendations for the development of eGovernment in the period 2006–2010. Under the leadership of the Dutch consultancy Zenc, a discussion was conducted in seminar form on eGovernment beyond 2005.⁴⁵

eGovernment in the EU in the Next Decade: In March 2004, the Institute for Prospective Technological Studies, working on behalf of the Joint Research Centre (DG-JRC) of the European Commission, held a seminar on the future of eGovernment

⁴⁴ "Scenarios of e-government in 2010 and implications for strategy design", Aichholzer, G., EJEG Electronic Journal of e-Government, 2 (1), 1-10, 2004

⁴⁵ "Scenario session Report. eGovernment beyond 2005", Ministry of Interior and Kingdom Relations, The Netherlands. Zenc, December 9th, 2004

in Europe with invited experts.⁴⁶ The seminar discussed a vision covering services, technology, and regulations for, and the application of eGovernment in the EU in 2010, as well as important technical, socioeconomic and political challenges.

Scenarios of governments in 2020: In 2007, the European Commission co-funded project eGovRTD2020 presented its report “Roadmapping eGovernment Research. Visions and Measures towards Innovative Governments in 2020”, where a number of visionary scenarios were developed at seven regional workshops across Europe and in the USA to describe how the public sector might use advanced ICT to interact with its constituency. These scenarios were eventually consolidated into eight potential future images of eGovernment in 2020.⁴⁷

Government in 2020: Taking the Long View: In the autumn of 2005, the Gartner Group, a consultancy that studies and analyses the ICT industry, produced four scenarios that show how government may exploit, and in turn be affected by, information technology in 2020.⁴⁸

The Future of eGovernment. Scenarios 2016: This study initiated in 2006 by VINNOVA (the Swedish Governmental Agency for Innovation Systems) built scenarios for eGovernment 2016 based on how advanced computer usage would be among citizens and the extent to which public administration would be integrated or fragmented. The study, conducted by Gullers Group in 2006, is the starting-point for the revised scenarios in the present report “eGovernment of Tomorrow”, where the rapid developments between 2006 and 2009 result in essentially new scenarios.⁴⁹

Value for Citizens. A vision of public governance in 2020: The project was initiated by the European Commission, to look at transformational government beyond the 2010 time horizon for the current EU eGovernment Action Plan. A research report was presented in August 2008 on “Current eGovernment trends, future drives, and lessons from earlier periods of technological change”⁵⁰, and was followed by a focused summary report for the European Commission in December 2008.⁵¹

⁴⁶ “eGovernment in the EU in the next decade. The vision and key challenges”, European Commission, DG JRC, Institute for Prospective Technological Studies, Technical Report EUR 21376 EN, 2004

⁴⁷ “Roadmapping eGovernment Research. Visions and Measures towards Innovative Governments in 2020. Results from the EC-funded Project eGovRTD2020”, Codagnone, C., Wimmer, M.A. (eds), 2007

⁴⁸ “Government in 2020: Taking the Long View”, Andrea Di Malo, Gregg Kreizman, Richard G. Harris, Bill Rust, Rishi Sood, Gartner Industry Research, December 2005

⁴⁹ “The Future of eGovernment. Scenarios 2016”, Nordfors, L., Ericson, B., Lindell, H., VINNOVA Report VR 2006:11 / “Framtidens e-förvaltning. Scenarier 2016”, Nordfors, L., Ericson, B., Lindell, H., VINNOVA Rapport VR 2006:04

⁵⁰ “Research report on Value for Citizens. A vision of public governance in 2020. Current eGovernment trends, future drives, and lessons from earlier periods of technological change”, Authors Millard, J., Horlings, E. Project leader Botterman, M., GNKS Consult, eEuropean Communities 2008

⁵¹ “Value for Citizens. A vision of public governance in 2020. A report for the European Commission”, Botterman, M, et alt, GNKS Consult, European Communities, 2008

eServices in the Public Sector. Analyses of the Innovation System 2013 (E-tjänster i offentlig verksamhet. Analyser av innovationssystemet 2013): As part of the preparations for the new growth area “eServices in the Public Sector”, VINNOVA commissioned four research groups in the autumn of 2003 to conduct brief exploratory studies in the field.⁵² These groups identified a number of visions, or scenarios, for Swedish eGovernment in 2013.

Towards Modern and Consolidated Public Administration (Mot en modern och sammanhållen förvaltning – VISAM): In 2005, seven Swedish authorities involved in the VISAM project, which focused on co-operation for mutual benefit and improved efficiency, presented three sub-reports on the work done over the previous two years. The sub-report “*Dilemmas and Strategic Choices for Public Administration Policy*” (*Dilemman och strategiska vägval i förvaltningspolitiken*)⁵³ discussed, among other things, changing conditions and new driving forces for the development of public administration in Sweden.

A National Information System. Citizens’ and business’ access to eServices (Ett nationellt informationssystem. Medborgares och företags tillgång till elektronisk samhällsservice): This study⁵⁴, conducted in 2007 by the Swedish Administrative Development Agency (VERVA), draws up four scenarios for citizens’ and businesses’ access to eGovernment services. Each scenario is analysed as to costs and benefits, management, architecture and “good governance”, and the demands posed on the steering and management of government.

4.1 Scenarios of eGovernment in 2010

The scenario work conducted by the PRISMA project “Scenarios of eGovernment in 2010 and Implications for Strategy Design”, has the broadest social base of the projects that we have studied. When constructing the scenarios, the project initially identified almost 100 driving forces as being of significance to the subsequent discussion on the provision of public eServices and a sound eGovernment system in the future. These driving forces were analysed in terms of their importance to the development of public administration, how secure they were believed to be and whether they were felt to be critical in determining the direction that development would take. They were grouped into five categories: socio-cultural, economic, political, technical and ecological.

⁵² VINNOVA, “E-tjänster i offentlig verksamhet: Analyser av innovationssystemet 2003”, VINNOVA, December 2003

⁵³ “Mot en modern och sammanhållen förvaltning – Dilemman och strategiska vägval i förvaltningspolitiken”, VISAM, 2005.

⁵⁴ “Ett nationellt informationssystem. Medborgares och företags tillgång till elektronisk samhällsservice”, VERVA Report 2007:9

4.1.1 Scenario structure

Four dimensions were then used for the project's scenarios.

Economy and society, which described the general socioeconomic development of Europe in 2010. Three alternative development routes were considered:

- economic growth and social integration,
- economic, social and political stagnation,
- economic and social recession (Euro-depression).

Government, which described the role of government in peoples' everyday lives and which was assumed to move in one of the following directions:

- confrontation between government and the private sector,
- balance between government and the private sector,
- weaker central government and decentralisation.

Information technology, where it was either assumed that innovations would develop dynamically or that the rate of development in the ICT field would decline.

Environmental sustainability, which referred to peoples' attitudes to sustainable development in terms of either weak or strong support for the concept of an environmentally sustainable society.

The four dimensions generated eight conceivable scenarios and the project selected three of these as being the most likely: A Prosperous and Just Europe, A Turbulent World and Recession and Reorientation. These three scenarios all function as independent macro scenarios for the future of eGovernment in 2010. The scenarios take their starting point in a conceptualised social context and the possible development of eGovernment is described in each scenario.

A Prosperous and Just Europe

The period up to 2010 is characterised by economic and social progress, the world is at peace, Moore's law (which states that the number of transistors per square inch on integrated circuits doubles every 18 months) still applies and it has been possible to make economic progress while also limiting negative environmental impact.

Consequences for government: In a generally positive social climate, the public are open to Information and Communications Technology and have confidence in the security standards and the protection of personal information that the systems offer. The development of economic prosperity has by and large eliminated the digital gap and the vast majority of the population has, over the Internet, access to a wide range of electronic services at home or at public centres. The Internet portals in the eGovernment system offer integrated services to the public in relation to their particular

situation in life, e.g. in connection with birth, marriage, studies, work etc., or to companies in relation to certain business events. Individually-adapted services meet the individual needs of users and several channels (multi-channel solutions) are used to extend access to public services. The work of the authorities is integrated both horizontally and vertically in order to improve the service offered to the public and to business and industry.

A Turbulent World

Economic growth has come to a halt with the result that, to a certain extent, both central government and the private market have become weaker and have sometimes come into conflict with each other. Information technology has, however, developed thanks to market forces, but consideration for the environment has had to take a backseat due to the failing economy and social conflicts.

Consequences for government: The private sector broadens the field in which eServices are used and to an increasing extent takes over tasks from the public sector. Public administration is subjected to cutbacks and various eGovernment projects that are designed to improve efficiency, e.g. by increasing access to public information. However, the high costs for ensuring the quality of the services entails a financial burden that sets clear limits for what is possible, while there is also public concern about the protection of personal data. The fragmentation of society permeates all areas and affects access to, and the use of, ICT. The digital gap grows and financial limits together with a lack of knowledge prevent large segments of the population from using more than the simplest eServices. Only a minority has access to more complex transaction services and electronic signatures and can thus benefit from the new technology and the services it offers.

Recession and Reorientation

There has been a widespread revolt against technology, government and the market in favour of decentralisation, consideration for the environment and “deglobalisation”. Economic development is not backtracking, but there is no economic growth either.

Consequences for government: The Member States of the EU have managed to consolidate their finances and save costs by rationalising the public sector and co-operating more closely with the private sector, for example by privatising and outsourcing public operations. At the same time, the public feels that government is not sufficiently transparent and the IT industry is hit by falling investments in public administration. The use of ICT is also hindered by environmental regulations and lifestyle changes, as face-to-face meetings are now preferred to electronic communication. Serious scandals in which personal data had been abused by both authorities and companies have led to a dramatic fall in confidence in eServices and many people avoid using them, especially advanced services that require

eAuthorisation. Even the use of simple eServices has fallen markedly. The public turns to organisations that work with issues relating to integrity, technology and democracy.

4.1.2 Conclusions for the future of eGovernment

On the basis of the scenarios, the project draws a number of conclusions concerning the possibility to establish robust strategies for eGovernment in the future.

- eGovernment must prioritise a service structure that is user and target group-oriented and in which the specific needs of different groups are taken into account. The user-friendliness of the services must be optimised.
- eGovernment must offer alternative forms for communication and several channels for its services. There should be contact points in the community where it is possible to use/provide eServices on-line.
- The quality and efficiency of eGovernment and eServices needs to be improved. One-stop services and portals are key factors for innovative eServices structured on the basis of a user's situation in life or on business events.
- eGovernment services must be provided in such a way that no one is excluded and no social gaps or divisions are created. The services need to be available in several languages and attention must be paid to people with special needs.
- It is of central importance to eGovernment that personal data is handled in a secure way that inspires public confidence and that the private lives of individual citizens as well as confidential business information are protected.

4.2 eGovernment beyond 2005

The scenario exercise “eGovernment beyond 2005” that was conducted in the Netherlands in September 2004 with leading representatives of eGovernment systems in the Member States of the EU was more instrumental than the work described in the PRISMA project above. The focus was clearly on the development of public administration and co-operation between public administration systems in Europe, and the exercise aimed to contribute to new recommendations for eGovernment in Europe. Right from the start, a working paper from the European Commission⁵⁵ highlighted three main issues for the future of eGovernment and these also outlined the direction the scenarios should take and the boundaries for them.

According to the paper, eGovernment beyond 2005 should be characterised by *the sustainable modernisation of public administration* entailing a move from the on-line

⁵⁵ “Working Paper on eGovernment Beyond 2005 – An overview of policy issues”, European Commission, Information Society Directorate-General, eGovernment Unit, 2004

services of today to a far-reaching modernisation of administration supported by ICT, organisational development and greater expertise.

The paper also called for *innovative government*, with the ability to develop public services and administration in order to fully exploit the potential available and enable government to contribute more effectively to economic and social development. Finally, a *European government perspective* should be adopted on the basis of pan-European eGovernment solutions and increased co-operation at the European level.

The objective was to create open and transparent eGovernment that provides services for all, is effective and gives the tax payers maximum value for their money. The Commission's paper pointed out, however, that the governments of the Member States would have to deal with a number of challenges in order to achieve this, for example:

- *Demographic changes*, including an ageing population, immigration and pan-European mobility, which will put a strain on national finances and the supply of competence.
- *An expanded Europe*, which poses government challenges in the new Member States and to cross-border integration, while also offering the new countries the opportunity to leapfrog certain stages of development.
- *New ideas on public participation and partnership* – “eParticipation” – at the same time as the risk of a democratic deficit has never been greater.
- *The Lisbon Agenda*, which must be realised.
- *Expectations concerning European co-operation on policies and programmes for eGovernment*, with the aim of producing new specifications, common platforms and new services.
- *New technology*, which enables innovative public services and a new division of roles between the public and private sectors, at the same time as the market is often fragmented and the public sector's “late adopters” and solutions remain sub-critical in Europe while the technology is often brought in from the USA.

In the discussion of the scenario exercise, the challenges were addressed at a concrete government-policy level in which four key areas crystallised: competencies and roles, regional and local self-government/ autonomy, the handling of eIdentities and personal data and cost/benefit analyses.

At the European level, three important tasks were emphasised: The prioritisation of tasks and who does what, a common set of regulations for the range of services and a common structure/architecture for co-operation/collaboration.

4.2.1 Structure of the scenarios

Given the preconditions described above, the seminar based its scenarios for eGovernment beyond 2005 in line with two dimensions, or processes:⁵⁶ First, *the modernisation process*, in which eGovernment is seen as a tool for better government in a broad sense, and, secondly, *the co-operation and co-ordination process* at the regional, national and international levels as well as within and between the economic, political and social spheres.

A scenario cross was created which indicated three possible lines of development for the eEurope of the future (alongside a continuation of eEurope in the form it has today). The scenarios are described briefly below, as are the opportunities and risks that the seminar participants identified in each scenario.

Dinosaurs

(low level of modernisation, high level of co-operation)

Europe intensifies its co-operation and collaboration, but this is not accompanied by a modernisation of the institutions. The countries' economic, political and social power centres increasingly act as a single whole. We see the emergence of large, powerful institutions that can survive terrorist attacks and produce great quantities of standardised products and services in an effective way. But are they able to satisfy the increasing demands of the public and will they be open and transparent? Will they be flexible enough to respond to the changes in the world around them?

Opportunities and risks: There is a risk that the scenario will lead to a public administration system that is ineffective, centralised and fragmented. Development is "caught in a trap" and the scenario is characterised by lost opportunities and a lack of innovation.

The consequences for society will be a reduction in the quality of life, the loss of democratic opportunities, conformity and perhaps also repression.

Pockets of Inspiration

(high level of modernisation, low level of co-operation)

Some administrations at the national and regional levels modernise their institutions and are open to the demands of the information society. On the other hand, the forms for co-operation and collaboration in Europe do not change but remain fragmented and largely based on old or temporary networks. Regions and countries compete, and there is also competition between the economic, political and social spheres.

⁵⁶ "Scenario session report. eGovernment beyond 2005", Ministry of Interior and Kingdom Relations, The Netherlands, December 9th, 2004

Opportunities and risks: In this scenario, there is a risk that the public systems become further fragmented resulting in local dominance and a decline in public value. The scenario requires strategic leadership.

There is also a risk that social divisions will increase and that there will be inequitable development nationally and in Europe in a system characterised by both innovation *and* stagnation. The scenario paints a picture of “localism”, the breakdown of social structures and inequality.

Transformed Institutional Infrastructure

(high level of modernisation, high level of co-operation)

Modernisation and co-operation and collaboration develop in parallel. Europe has used the Internet, ICT and other technologies as strategic tools to modernise structures, processes, regulatory frameworks, competence supply and administrative cultures. More effective and efficient government provides greater public value at all levels and in all areas of government, but without the creation of an integrated, supranational level in Europe.

Opportunities and risks: The scenario enables strong, community-based and participatory democracy in which political power is controlled. Subsidiarity applies, as well as value diversity and social integration. Government trusts the citizens, who increasingly feel that they are citizens of Europe. The economy runs smoothly and is flexible and competitive.

Government can save money at the same time as the boundaries between authorities can be bridged. Seamless government and an improved range of eServices become possible.

4.2.2 Required changes in perspective

In the working paper⁵⁷ produced ahead of the scenario, the Commission outlines the changes in perspective that are required to proceed towards “innovative eGovernment”:

- The pressure on public administration is so great that improving existing routines with the help of ICT alone is not enough; progress also requires more innovative approaches. Examples of external factors that exert pressure on public administration are the ageing population, the democratic deficit, global competition and convergence within the EU.
- The division between the private and public sectors needs to be readdressed in order to develop innovative services.

⁵⁷ “Working Paper on eGovernment Beyond 2005 – An overview of policy issues”, European Commission, Information Society Directorate-General, eGovernment Unit, 2004

- Relations between government and the public need to be reviewed in order to meet the needs of the public in a more effective and more transparent way and to ensure compliance with the rights and obligations of the public and government.
- The concepts of eParticipation and eGovernment must comprise a dialogue with the citizens that promotes community building – especially at the local level.
- The organisation of public administration needs to be readdressed as network administration over the Internet is qualitatively different to Weber’s rational bureaucracy model.
- Public eGovernment should be used as an important cultural, symbolic and economic resource in an active partnership with the private sector.
- Public services cannot be taken for granted - careful thought is required in connection with the introduction of new services as well as the scrapping of old services. Other aspects of eGovernment must also be taken into account, such as the fight against fraud and cybercrime and security and confidence issues.
- We must look beyond the designation “e-” and use both ICT-based and non ICT-based innovations in public administration.
- Innovations must be driven by user-oriented solutions, and citizens and companies must participate in the development of public administration’s eServices.

The working paper also takes up what is required to ensure *the sustainable modernisation* of public administration:

- Interoperability, e.g. services in several channels – multi-channel delivery.
- Identification and verification (authentication). Trust and confidence are decisive factors for eGovernment and eServices must be available in a secure way.
- Politicians and the managements of public administration systems must support organisational changes in order to overcome resistance to change.
- Competence development. The change from paper-based to knowledge-based administration entails changes in working methods, collaboration procedures and routines.
- Legislation and regulatory frameworks. eGovernment can help to automate parts of the administration process, but will not in itself reduce the complexity of administration.
- The measurement of public value and the users’ understanding of eGovernment and eServices.

Sustainable investments. There is a risk that eGovernment will be inadequately funded in the long term.

4.3 eGovernment in the EU in the Next Decade

The seminar on eGovernment in the EU in the next decade that was held in March 2004 with invited experts from the Member States and on behalf of the EU's Joint Research Centre addressed trends in society, technological development and eGovernment that affect the development of government in Europe. This was not, therefore, a case of working with regular scenarios for the future, the seminar instead focused on driving forces for changes in the field of government and the demand for eServices. A vision of the possible form and structure of European eGovernment in 2010 was presented.

The seminar dealt with the three dimensions of eGovernment: "Government to Government" (G2G), which here includes the local, regional, national and European levels, "Government to Citizen" (G2C) and "Government to Business" (G2B).

4.3.1 Trends and vision

Initially, it was noted that the prevailing view of ICT in an eGovernment context focuses on increasing the quality and efficiency of public services. This is achieved either by providing existing services using less expensive ICT-based distribution channels or by adding "e-functions" to existing services.

However, several trends in Europe indicate that this strategy should be reconsidered. Over the next few decades, the EU will undergo *social and economic changes* in the form of increased cultural and religious diversity, an ageing population and changing patterns in the way we live, work and communicate that will require new public services and new, innovative ways of providing existing services.

Technological advances in the field of ICT in the form of a "miniaturised" and increasingly mobile technology indicate that eGovernment in the future will be part of an Ambient Intelligence Environment (AmI) in which the technology is constantly and ubiquitously present and available to people in their roles as citizens, customers and professionals. This not only requires user-oriented applications, it also raises new questions concerning supervision, the handling of personal identities and where the borderline between public and private should be drawn.

To date, the discussion has focused on public services for citizens and companies, but these constitute only a part of the potential of eGovernment. The possibility to use eGovernment *tools to strengthen democracy* by increasing the participation of citizens and companies in the public decision-making process is expected to attract increasing attention in the coming decades.

The vision adopted by the seminar participants places eGovernment at the centre of the modernisation of public administration, where the technology is used as a strategic tool to reform structures, processes, regulations, competence and cultures with the aim of improving administration and, ultimately, increasing public value.

In order to realise this vision, attention must be paid to a number of key areas. These include the increasing importance of *knowledge management* within public administration and the democratic process. Processes must become more open to participation and government must work more in networks. Government must also become better at *understanding and satisfying the needs of citizens and companies* so that these will become motivated users of eServices.

The need to include a *growing number of players* – private, public and voluntary organisations – in the service chain and establish stronger, more innovative and long-term collaborations is increasing. *Networks and partnerships* between players will play an increasingly important role in the provision and use of eServices and in the democratic process.

4.3.2 Challenges to the implementation of eGovernment

Given this background, the seminar identified a number of important political, socioeconomic and technical challenges to the implementation of eGovernment, some of which are well-known and documented while others require further study. The political, strategic, structural and social challenges highlighted by the seminar participants are highly relevant to an ongoing scenario discussion.

Political and strategic challenges

- Politicians are reluctant to tackle fundamental changes and they tend instead to digitalise existing structures and services.
- The players have different interests regarding the transparency of government, personal integrity and the protection of personal data.
- The players have different interests regarding eDemocracy in terms of participating or representative democracy.
- There are different interests and priorities at the national and local levels.
- There is a conflict between short-term interests, governed by political terms of office, and long-term planning to change structures, processes and cultures in public administration.
- There are budget-related obstacles and demands for cost savings and cost-benefit calculations.
- There is a lack of knowledge on how eGovernment can contribute to the development of knowledge, innovation and economic competitiveness in society.

Structural challenges

- Power relations in public administration make it difficult to handle various administrative cultures, structures and strategies.

- Consideration must be paid to established organisational structures, processes, know-how, notions and cultures and to a general resistance to change.
- There is a need in the public administration system to develop knowledge at both the organisational and individual levels.
- Confidence, collaboration and co-operation must be developed across administrative boundaries and between players.
- Public Private Partnerships need to be tested and reviewed and public and private tasks and interests balanced.

Social challenges

- The diversity of needs among the users must be understood and managed, as well as the user-friendliness of the services, the individualisation of services and access to channels.
- Tools and mechanisms will be needed to achieve and measure public value and satisfied customers.
- The digital gap must be bridged so that all citizens and companies are included in eGovernment.
- There is a need for a secure infrastructure and for the protection of private information in relation to all the players and stakeholders involved, as well as for trust and confidence in eGovernment on the part of the public.

4.4 Scenarios of governments in 2020

The overall aim of the eGovRTD2020 research project for roadmapping eGovernment research was to identify and characterise the key research challenges, required constituency, and possible implementation models for holistic and dynamic governments in Europe in 2020 and beyond. In the scenario-building phase of the project, seven regional scenario-building workshops were conducted across Europe and in the USA. In all 29 scenarios were generated by 140 experts from governments, ICT industry and consulting, and academia.

At a validation workshop, these scenarios were consolidated into eight comprehensive and distinct potential future images of governments in 2020 by extracting the main topics of interest and dimensions emerging from the analysed scenarios. Issues of high relevance for future eGovernment were identified along three thematic clusters: Social and contextual environment, governments and their stakeholders, and ICT development in government contexts.

This analysis resulted in three core dimensions ending up in the final eight scenarios, which were used in the project's subsequent roadmapping workshops and communicated to non-experts.

4.4.1 Core dimensions of the scenarios

Environment (stable, disruptive): The future can be either stable or disruptive. A stable environment is characterised by economic growth, a balanced world order, living in harmony. In a disruptive environment all kinds of crises and incidents occur, like cyber crimes, religious tensions and large social divides resulting in riots.

Attitude towards government (trust, distrust): Citizens can have a positive attitude towards government and have faith in government. They trust that government takes care of them, participate in policy-making processes and perceive the outcome of governmental decision-making as fair. On the other hand, there can be heavy distrust in government. It is not transparent, decisions are hard to comprehend, and results of participation in decision-making are ignored.

Government scope (all-inclusive, core business): Government can focus on their core business, determining laws, regulations and policies, and leave or outsource as many activities as possible to the private and civic sector, including social security. Or government can have a large scope and providing as many services as possible with the intention to be all-inclusive, hardly outsourcing their ICT or business processes but retaining everything in-house.

4.4.2 Eight final scenarios

Orchestrating government

(stable environment, trust, core business)

Disruptive developments that were predicted at the start of the 21st century did not occur or had only a modest effect on Europe's societies. Because of the stable environment government adopts a facilitating, but limited role in society, which attitude is broadly supported.

Individualised society

(stable environment, distrust, core business)

People have become more and more individualistic and self-responsible. They want to get individual responsibilities as a mean to get the maximum out of their potential and for social security purposes. Government only takes care of essential facilities; because of the stable environment the private sector is in the position to compensate the lack of capacity of the public sector.

Ambient government

(stable environment, distrust, all-inclusive)

Government is all around. Citizens have a high confidence in government to effectively and efficiently settle issues for the common good. They are helped by a stable development of environment.

Government keeps on trying

(stable environment, distrust, all-inclusive)

Despite its efforts to be involved in the bettering of the quality of life at all fronts, trust in government is low. People experience a big gap between the technocratic government and their own skills and possibilities to take part in eGovernment.

Transition period

(disruptive environment, distrust, all-inclusive)

In a highly polarised world, governments focus on key state tasks. The socio-economic policy is aimed at individuals taking their own responsibility, a mentality that rests on great support in 2020's society.

Incident politics

(disruptive environment, distrust, core business)

A two-class-society: On the one hand young, well-educated citizens, and on the other hand old citizens with only little understanding of existing ICT. Society has become largely individualistic, with only a small role for government, which is distrusted. A disruptive environment is why citizens demand security, and ICT is deployed for that purposes, as well as to increase the efficiency and effectiveness of government.

Social state

(disruptive environment, trust, all-inclusive)

Society has changed dramatically because of demographic and security-related developments. Government has been able to catch up with the high expectations from citizens and fulfils a key role in the provision of eServices, using state of play technology. Government provides all-inclusive services in order to fulfil the expectations of the public and to bring the instable environment under control.

Empowering state

(disruptive environment, trust, core business)

In a rapidly changing, confusing world, citizens do not have much trust in public administration and hence become self-responsible. Government focuses on its core business and persists in its role as care-taker for society, but continues to be ineffective. There is a large social gap in society.

4.4.3 Reflection and discussion

In general, participants at the projects's scenario-building workshops did not consider disruptive technology as a key element affecting the future of eGovernment in 2020. Instead, innovations are expected from bridging the gap between technology and

context, i.e by improving and applying current technology in such a way that these technologies can be deployed to solve a societal or governmental problem.

Rather, future eGovernment challenges will come from changes in the society and in the interaction of government with their environment, which are more likely to determine the methods of monitoring, interaction, collaboration, policy making and enforcement. In most cases, technology is viewed as an instrument to help solving societal problems.

Thinking in terms of cooperation in communities, solving the privacy problems and ensuring safety and the local focus to stay close to citizens seems to be the vision of most of the session participants. Sensing, information exchange and processing, and connectivity at a semantic level with other governments, but also with private parties, are the key to the effective functioning of government.

4.5 Government in 2020: Taking the Long View

In the scenarios produced in 2005, the Gartner Group showed how the public administration of the future will be affected by two driving forces, chosen for variables in a scenario cross.

The first variable, *the degree of government intervention in the economy*, concerns the extent to which governments are players in their national economies and covers everything from the simple regulation of services in the financial, communication, education and healthcare fields, or the public funding of such services, to also playing a role as a direct provider of these services. The variable shows to what extent the citizens are dependent on government in accessing a variety of social services.

The second variable concerns *citizen attitude to privacy and surveillance* and ranges from situations in which citizens accept that government has free access to their personal information to those where there is a restrictive attitude to the authorities having access to private information.

4.5.1 Scenarios

The scenario cross, made up of Gartner's two driving forces/variables, gives the following conceivable scenarios:

Status Quo Development (restrictive attitude to personal information and surveillance, low degree of public intervention in the economy), in which government does not play a particularly active role in the economy and the citizens enjoy the legal protection of their private information. Government is responsible for overall regulation, gives the market room to manoeuvre and enforces laws that protect personal integrity. Many Western countries have this system today.

Good Big Brother (permissive attitude to personal information and surveillance, high degree of public intervention in the economy). Government is heavily involved in the economy and keeps a close watch on the private lives of its citizens. Government plays the role of a benevolent and reliable service provider, while the citizens accept a greater degree of intrusion into their private lives in exchange for prosperity and security. Singapore is an example.

Governing Phantoms (restrictive attitude to personal information and surveillance, high degree of public intervention in the economy). This scenario describes a strong and enlightened central government and citizens that accept government intervention in the economy but who are wary of government in the private sphere and zealously protect their rights and privacy. Several countries in continental Europe have systems like this today.

Free-Enterprise Government (permissive attitude to personal information and surveillance, low degree of public intervention in the economy). This is a scenario in which the citizens give government a lot of room for manoeuvre to handle personal information to improve or facilitate social services. Government maintains a light touch on business and the economy and supports the free market. The Scandinavian countries are examples of this system.

4.5.2 Impact on government and eServices

The four scenarios affect the development of government and the way that new technology is used for, for example, eServices and surveillance in different ways. Below, we examine several aspects of government and compare development trends in the four scenarios.

Basic social services. With the exception of the “Good Big Brother” scenario, government eServices are not provided from a common contact point. Instead, the various players are responsible for their own services, which are therefore likely to be fragmented. In “Governing Phantoms”, the protection of personal privacy prevents the development of one-stop-shop solutions.

The extent of government. In all of the scenarios except “Governing Phantoms”, the scope and extent of government shrinks by 2020. This is logical in the two scenarios where government control of the economy and the range of services is limited, but even in the “Good Big Brother” scenario social services are consolidated and there is a reduction in responsibilities and tasks at the local level, and while central government shrinks too it also becomes more active.

Distribution of responsibilities and resources. Significant changes are foreseen between the different levels of government. In the “Free-Enterprise Government” and “Status Quo Development” scenarios, the role of local government declines in

importance as most social services are run by other players acting as intermediaries. In the “Good Big Brother” and “Governing Phantoms” scenarios, planning and control of economic development takes place at the national level and is less of a regional and local task.

Data and intelligence gathering plays an important role in all the scenarios. In “Governing Phantoms” it is decisive in the effort to identify trends and to discover illegal activities in a system in which the ambition of the public is to remain as anonymous as possible. In “Good Big Brother”, the same techniques are used to support the measurement and analysis of the public demand for services. In the remaining two scenarios, the techniques are used to support macroeconomic analyses when government increasingly limits itself to a planning and regulatory role.

The consolidation of government and integrated services (“shared services”) as a support for integration and efficiency, and the increasing dependence on external service providers, characterises all the scenarios.

The concept of *a single system government controlled authorisation management* loses ground, either because of personal privacy considerations or because external players take on a predominant role as service providers. It is only in the “Good Big Brother” scenario that a positive trend for this concept is indicated.

4.6 The Future of eGovernment. Scenarios 2016

This study, conducted by Gullers Group for the Swedish innovation system agency VINNOVA in 2006, aimed at stimulating the discussion on what happens when the information and communications technology is applied in public administration and used for eServices to citizens and business. The coming together of ICT and administration trigger changes in the ways administration is organised and working, and between layers of government. It redefines relations to citizens and customers and how government meets demands from the user of public services. Present trends in society at large have strong influence on the direction eGovernment will develop.

Through analysing issues and dimension presented in already conducted scenarios and visions of the future, a few common features of this merging between ICT and administration were identified. Basically, there were two questions that came up frequently:

- *How advanced will the use of computers be among the public?* Are we moving towards a future in which the users will be increasingly advanced, and therefore increasingly demanding with regard to eServices?
- *Will we see an integrated or fragmented government?* To what extent will cooperation be established between different parts of government in the future?

These two issues were used to shape the cross for four clearly differentiated scenarios in 2016.

4.6.1 Scenarios for 2016

The State.se

(advanced users, integrated government)

Accessibility in combination with user-friendly interfaces have led to a situation in which very few people feel that it is complicated or difficult to use the Internet, and there is a widespread sense of security on the Internet.

Following demands from the users for a common interface with government, the individual government websites have been linked together and later been integrated in one single national portal. The portal is directly connected to government's intranet and data systems, giving citizens direct access to all types of eServices offered by government agencies. Users and other stakeholders are largely using the national portal for contacts with government agencies appearing as "seamless government".

The Uninvited Guest

(advanced users, fragmented government)

Internet users are accustomed to simplicity and accessibility when looking for information and services, but government has been unable to offer this simplicity. Attempts to bring individual authorities together in a "government portal" fail, and rivalry between agencies slows down co-ordination of the intra government systems.

A new site, "Eniro Government", exploits the need for a site to which people can turn for eServices and contacts with authorities, with the necessary links, guides on how to use the eServices and help to find the way among authorities. But when it comes to services relating to the powers of the authorities themselves, legislation prevents access and citizens have to turn to the site of the particular authority concerned.

The Retreat

(less-advanced users, fragmented government)

The rapid development towards a fully-fledged eGovernment system has taken a step back as a result of serious attacks on the Internet and data system security. Growing lack of confidence make users feel that eAuthorisation is no longer secure, and security in connection with the use of eServices have to be handled by more drastic methods.

The vision of an electronically co-ordinated government with seamless interaction was dropped. Many services can't be provided and new services are not developed. Instead, government choose a multi-channel strategy. Citizens' advice bureaus are re-launched

throughout the country to meet the government's increasing focus on contacts with their users and stakeholders.

The Generation Gap

(less-advanced users, integrated government)

The pace of technological development is rapid and many people find it difficult to keep up. "The digital gap" between users and very advanced users becomes obvious.

Government's dilemma is to combine the absolute demand for equal treatment with a very varied degree of computer maturity. The answer is a distinct multi-channel strategy, where a continually upgraded Internet becomes the channel for advanced users, and an "access light" version is offered the less-advanced users. An important part of the solution is the co-ordination of government agencies in a single, integrated government system, but with several access routes – beside the web also the telephone and "over-the-counter" contacts.

4.7 Value for Citizens. A vision of public governance in 2020

This project for the European Commission, conducted under the lead of GNKS Consult, identified seven key strategic transformations required for eGovernance by 2020 based on three major policy goals of eGovernment: *Efficiency*, the search for savings with the constituent as a taxpayer, *effectiveness*, the search for quality services with the constituent as a consumer, and *governance*, the search for good governance with the constituent as a citizen and voter.

The strategic transformations have served as input for scenario and gaming exercises, and eventually to the final research report delivered to the European Commission in 2008, preparing for the renewal of the European eGovernment agenda beyond 2010.

In "Value for Citizens", the creation of value of eServices for taxpayers, consumers and citizens are seen as the overarching driver and reason for eGovernance. This value can be of *personal or private* nature to individuals, be they citizens, communities, groups, localities companies etc. It can also be a *participative value*, created collaboratively and interactively between two or more individuals, or a *public value* created by the governance structure and proactively promoting collective benefits. Public value specifically looks for long term benefit, larger than the sum of more short term and restricted benefits provided by personal and participative value, and requiring a trade-off that normally only the public sector can arbitrate.

4.7.1 Key strategic transformations and trends and drives

The seven key strategic transformations required for eGovernance by 2020 presented below together form a coherent framework for analysing and clustering the main trends and drivers for improved production of public value.

Plural and partnership governance

Plural and partnership governance focuses on the structures, roles and relationships amongst the public, private and civil sectors, as well as constituents, in forming new business models and value chains within the public realm in order to produce value.

Trends and drivers include an integrated and joined-up government, a balance between centralisation and de-centralisation, a networked governance which is open and porous, and a process of business model and value chain innovation.

Performance governance

Performance governance concerns innovative processes and practices being adopted in the public realm to prioritise adaptive capacity, manage risks, minimise costs, and maximise benefits realisation, in order to produce value.

Trends and drivers include changes in leadership, skills and working practices as well as public sector innovation and transformation, knowledge management based on intelligent handling and re-use of data, change management and capacity redeployment, especially through rebalancing back and front-offices, and performance management.

Personalised service production

Personalised service production focuses on creating personal or private value through universal personalisation, self-directed services, and fully inclusive constituent empowerment in services.

Trends and drivers include universal personalisation, self-directed services, personal relations, personalisation through intermediation by combining public, private and civil services through new outlets, and personalisation through inclusion to ensure access to government services for all groups and individuals.

Participative policy-making

Participative policy-making creates participative or collaborative value through open societal decision- and policy-making, whether initiated top-down or bottom-up, and whether or not mediated by political representatives.

Trends and drivers include policy-making initiated by government, empowering communities and localities, leveraging local resources, know-how and skills, transparency and openness, and accountability in an environment where decision and policy-making are opened up.

Trust, privacy and protection

Trust, privacy and protection is the sine qua non of all other eGovernance transformations, via conformable and negotiable security, greater control by constituents over their own data and own (often) multiple identities, and a focus on trust, resilience and risk management.

Trends and drivers include security and data protection, information assurance, resilient and robust infrastructures, upheld privacy needs, and the building of trust with constituents based on constituents' needs.

Production and use of ICT

The production and use of ITC for public sector transformation and innovation, for example through ambient intelligence based on semantic and mobile systems, intelligent agents, the mass collaboration and crowd-sourcing tools of Web 2.0, the roll out of Web 3.0, governance webs in the computing cloud, large scale ubiquitous networking and grids, as well as increasing technology and device convergence and constituent autonomy and control.

ICT technology perspectives are continuing user-centred and user-friendly services, ambient intelligence based on semantic and mobile systems, intelligent agents, federated systems for identity management authentication, artificially intelligent databases, search engines and knowledge systems, and maximised production and use of ICT for public sector innovation.

Public value governance

Public value governance creates public goods and society-wide benefits, so distinguishing the public realm from other realms, driven forward by visible value systems and innovative approaches to open source governance.

Trends and drivers include a shift in focus from delivering eServices to the value of those services to constituents, a paradigm shift in public value and governance, empowering being the next great turning upside down, a change of definitions and drivers of eGovernance itself to more policy-driven innovation, a political landscape of plurality and blurring boundaries and jurisdictions, an increasingly articulated citizenship, and a public realm that is being turned upside-down through the empowerment paradigm and new balances between top-down and bottom-up.

4.7.2 Conclusions – Vision for 2020

- Government organisations will be connected, networked and fully joined-up. Public organisations will interact and connect intelligently with each other and with private actors.

- Government services will provide more individualised services, allowing users to tailor the service to their personal requirements. Users will also be enabled to design, create and self-direct their own services.
- Governance will be much more open, participative, democratic, and will welcome inputs and interests from all segments of society at all levels.
- There will be a greater focus on managing, evaluating and improving performance in achieving public value across all areas of the public sector. This will also enable greater diversity in governance outcomes and effects.

4.8 eServices in the Public Sector 2013

The first out of three scenarios or visions with a closer focus on the practice of public administration and eGovernment, is VINNOVA's analysis of the innovation system "eServices in the Public Sector (*e-Tjänster i offentlig verksamhet*)", published in 2003. The scenarios, or models, in the analysis describe varying degrees of co-ordination for eServices and a scenario in which an increasing number of services are farmed out to private and other public players. There are both conflicts and overlaps between the five scenarios.

The eService Model is a scenario in which the citizens are in control. Their search for information is their process and not the producers'. In other words, public officials should not act as intermediaries or gatekeepers for information and services but instead support individual citizens who can themselves access and use the services.

The Network Administration scenario entails autonomous public organisations with their own areas of responsibility that collaborate on the basis of their own voluntary choices. Cohesion is ensured in that the respective organisations not only consider their particular areas of responsibility but also take a holistic view of public administration and their part in it. For example, the needs of the public are met by co-ordinating interfaces for services in the form of a standard.

The User Entrance scenario is one in which the users, e.g. the public, companies and foreign users, have an adapted common entrance to the full range of public operations. Users are met by information and services that are arranged in a uniform way and the underlying technology is adapted to support this. A user-centred view of reality has replaced the producer-centred view. One consequence of this is that users do not notice and do not need to know which organisation is actually in charge of handling the item of business concerned – "it just works". It is also of no interest to the users to know which authority or authorities are involved.

The Information Hub scenario entails certain aspects of public administration being taken over by a new organisation. The work previously performed by the public when contacting various authorities and providing information in the form of documentation

to the authority responsible for dealing with the matter concerned has now been taken over by the producer. This change has been necessary in order to ensure that operations are based on the needs of the public and not on the needs of the operations themselves. As it would be untenable to maintain a network of organisations that would have to continually communicate back and forth, a central database has been created and is run by a new organisation. The information in this database is arranged in a uniform way and is accessible to all authorised public organisations.

Outsourcing is used by an increasing number of public organisations that get help from private or other public organisations to do some of their work. Examples include the scanning of documents or call centres.

4.9 Towards Modern and Consolidated Public Administration

In the VISAM project, seven Swedish authorities worked together to develop, test and establish common channels for the “interface” between public administration and citizens and companies. The authorities thus tackled one of the main issues facing the development of public administration, i.e. the issue of co-ordination versus fragmentation that recurs in various forms in the scenarios presented above. The project presented its final report in 2005.

4.9.1 Driving forces

The work conducted by the authorities in the VISAM project was founded on the strategic preconditions for the development of public administration in Sweden, highlighted by an enquiry on local government responsibilities.⁵⁸ These preconditions included globalisation, European co-operation, IT, demographic trends and changes in lifestyles and attitudes. The development of co-operation between authorities in their contacts with citizens and companies should be viewed in this light. Two driving forces were identified as being of particular importance.

The first of these driving forces was the demand for government to become *more client or citizen oriented*. Public administration systems must apply the perspective of private individuals or companies to their operations.

The second driving force was the demand to become *more cost-effective*. In the future, a declining labour force will have to support a growing non-working population. It will not be cost-effective, and perhaps not even possible, for every authority to

⁵⁸ “Nya förutsättningar för välfärds- och tillväxtpolitiken (*New Conditions for Welfare and Growth Policy*)”, SOU 2003:123

independently provide all the functions required to offer a range of services that will satisfy public demand.

Together, these two driving forces will push development towards an increasing degree of co-operation between government organisations. In the future, government must be able to handle needs and demands that cannot be satisfied or managed within one and the same organisational unit. *Increased horizontal collaboration, with a focus on operational flows/processes* will lie at the core of this development.

In order to increase the benefit and value provided to citizens and companies while also increasing the efficiency of the authorities, partly new ways of organising public administration will be required. VISAM identified three alternative courses of action for the continued development of cohesive public administration:

Voluntary co-operation between authorities. Co-operation on the provision of services will continue along the same lines as in the joint trials and projects conducted by the authorities today. Some changes will, however, be required in the way the authorities steer and manage the various projects.

Network-based public administration. This alternative entails the development of horizontal relations within and between operations and that independent administrative units rely on functions provided by other units. The workings of public administration will still be developed within the framework of the prevailing formal organisational structures.

Consolidated service authority. In this alternative, those parts of the authorities responsible for contacts with the public and companies will be detached and then brought together to form a joint service authority. The idea is that contact with the public has unique characteristics and requires expertise that is best developed in a separate organisational environment.

4.10 A National Information System. Citizens' and Business' Access to eServices

The Swedish Administrative Development Agency (VERVA) presented in 2007 a report on how citizens' and business' will have access to eServices in the future. Four scenarios were developed and analysed regarding costs and benefits for society, management requirements, requirements on the architecture of government, and how the scenarios fulfil the principles of good governance.

The basic idea of the report is that citizens and business will reach eServices partly using a national contact centre consisting of a citizen's portal and a phone number, partly through clusters of services formed by the specific needs and situations of the

citizen or the business. The contact centre will guide the user to the appropriate agent to handle the issue at hand.

This vision is based on the Swedish government model with independent government agencies and free-standing municipalities and county councils.

4.10.1 Driving forces

To build the scenarios, six current trends and forces driving towards increased efficiency in government were identified and analysed:

Increased use and development of ICT

Citizens and business will use ICT in an even higher extent to consume, interact and communicate, both in work and for leisure. Young people who have grown up with ICT as an everyday tool will place higher demands on public agencies eServices than today's users.

New forms for organising value creation – networking and cooperation

Current developments in ICT, demography and global economy will increasingly challenge hierarchical organisations, and lead to new forms to organise value creation, e.g. through crowd-sourcing and networks for cooperation. Traditional models of organisation, based on control, are replaced by value creation founded on community, cooperation and self-organisation.

An increasing individualisation

Personal power has been strengthened by the last decades' development in politics, economy and ICT. Individualisation is changing the nature of the information age and active citizens of a new digital democracy will emerge as creators and consumers of user-generated content, transforming art, politics and commerce.

eGovernment boosting growth

Government must be effective to retain its legitimacy with citizens and business. The development of ICT will have a leading role to make public administration more effective and thus boost economic growth.

Globalisation

Globalisation opens up boundaries and increases influences from outside on economy, culture and politics. Public administration is no exception from this and ICT will play a significant role in this process of change. Sweden is already affected by demands on the exchange of information and standardisation from the EU and other international bodies.

Increasing demand for welfare services

The demand for welfare services, particularly within health care and education, will increase in the future. This is due to demographic facts and rising incomes in the population. To meet higher demands for welfare services, efficiency in the public sector must increase.

4.10.2 Scenarios

The scenarios in the report are created from a scenario cross with the two variables *degree of central coordination* by the state and *degree of central integration* of public agencies' systems and processes.

Degree of central coordination is about what the state should organise and what should be organised by municipalities and county councils, the market and trade organisations, as well as ways for steering and financing public services. With a low degree of central coordination, conditions for developing different forms of market solutions will be more favourable.

Degree of integration addresses how well systems, processes and financing are integrated between the public agencies. With a high degree of integration, the various systems in public administration are linked together by automate communication and exchange systems.

The scenario cross generates four different scenarios of the future of government and how future eServices for citizens and business will be organised. Customer focus, coordination and cooperation in the public sector, as well as standardisation and interoperability in the ICT architecture, are fundamental conditions in all four scenarios.

Information Chaos

(decentralised coordination, low integration)

Each government agency, municipality and county council shapes its own information system and makes them available in their own individual way. There is none, or very little, central coordination of information and eServices provided, and low, or none, integration between the information systems of different government agencies.

Citizens and business must have good knowledge about how the administration is structured and which agency does what. The scenario can lead to the establishment of private guiding services to help citizens and business to find their way in the government organisation.

The political leadership refrains from steering eGovernment and plenty of scope is left for private initiatives. This might also leave room for an emerging market for eServices. Local, individual actors handle issues concerning eIdentification, interoperability etc.

Guide

(centralised coordination, low integration)

A coordinating actor collects information from government agencies, municipalities and county councils by automatic information exchange between data systems, and presents it in an overall and all-inclusive manner.

The responsibility for guiding is centralised to the coordinating actor, while each government agency, municipality and county council is responsible for the information and systems they control.

In this scenario, citizens and business are given assistance to find their way to the information they need by using the guide. Since integration is weak between the different parts of administration, it might take some time before users actually win access to the requested services.

With one actor named as responsible for the overall guide, there will be few initiatives by local actors to cooperate and the market will remain passive.

Clusters

(decentralised coordination, high integration)

A number of government agencies, municipalities and county councils cooperate to gather information within a certain field and present it in uniform way. The roles of different parts of administration will blur, but the important thing is that items are held together.

The clusters are composed of government agencies, municipalities, county councils and private companies, forming networks around needs of citizens and business, as “building a house”, “life-long learning” or “start business”. Information is individualised and citizens and business can follow their items through the entire process, irrespective of organisation boundaries in the public administration.

The scenario implies a high degree of integration and the automatic information exchange of data within each cluster. Responsibility for information and services is decentralised to each involved actor.

One-stop-shop

(centralised coordination, high integration)

The one-stop-shop provides all government information in a comprehensive presentation to citizens and business, independent of any boundaries between different parts of the public administration. The responsibility for the information structure is highly concentrated to the central layer in government. All items from citizens and business are handled in a uniform way. The system is proactive and informs citizens and business on the consequences of decisions taken.

The central government has taken over a great deal of responsibilities from individual government agencies, municipalities and county councils. Government appears as one entity.

However, the one-stop-shop scenario combined with the prospect of the ICT technology opens up for a “Big Brother-perspective” and raises the issue of personal integrity versus better, more simple and effective public services.

4.11 Summary and discussion

A number of common themes recur in the scenarios and visions. These relate to society, the economy, value systems, and to the development of public administration and ICT. Below observations are grouped in 1) scenario dimensions, 2) driving forces and challenges, and 3) portrayals of society and public administration. Together, they form a list of factors to take into account when developing eGovernment.

4.11.1 Scenario dimensions - “critical uncertainties”

A natural dimension in the design of scenarios is the very general concept of *social development*, or more specifically *economic, social or political development*. What will the future be like if there is growth, stagnation or recession? This dimension is included as an independent variable in “Scenarios of eGovernment in 2010”, where it leads to various possible futures: A Prosperous and Just Europe, A Turbulent World and Recession and Reorientation. This variable is also implicit in several of the scenarios that have a stronger focus on public administration. In “Scenarios of governments in 2020”, *stable* or *disruptive* environment form one variable of three in the scenario cross, and depicts a society characterised either by economic growth, a balanced world order and living in harmony, or a society with cyber crimes, religious tensions and large social divides.

Another dimension that is incorporated in social development in “Scenarios of eGovernment in 2010” is the extent to which society is characterised by *integration or fragmentation*. In the scenario A Prosperous and Just Europe, society is more highly integrated than in the conflict-filled scenario A Turbulent World and the decentralised scenario Recession and Reorientation.

This dimension of integrated or fragmented government is also fundamental as one of the axes in the scenario cross in “The Future of eGovernment”, where *integrated government* gives rise to the scenario The State.se with direct access for users to government agencies via a national portal, while in scenario The Uninvited Guest *fragmented government* gives free scope to a private portal to become the interface between citizens and their government. This aspect is also dealt with in “Scenarios of governments in 2020”, where government scope is either *all-inclusive*, retaining

everything in-house, or focus on *core business*, outsourcing as many activities as possible to the private or civic sector.

The dimensions *public–private*, *state–business* and *state–citizen* constitute independent variables in several scenarios. In “Scenarios of eGovernment in 2010”, the confrontation or balance in the relation between government and the private sector leads to different trends in the development of public administration. “Government in 2020. Taking the long view” works with a scenario cross in which one of the variables is *degree of government intervention in the economy*, which may be high or low depending on whether government itself is responsible for finance, communication, education and healthcare services or governs by regulating the market.

A specific feature of “Scenarios of eGovernment in 2010” is the dimension *degree of public support for environmental sustainability*, where strong support characterises the scenario Recession and Reorientation. Sustainability plays a part in “eGovernment beyond 2005”, but in the sense of *sustainable modernisation of public administration* or robust government. In “Scenarios of eGovernment in 2010”, too, we can find a reference to “robust strategies for the eGovernment of the future”.

The attitude towards government is one of the three independent variables in “Scenarios of governments in 2020”, where *trust* leads to faith in government, participation in policy-making processes, and a sense of fair decision-making with the government while *distrust* is characterised by non transparency, ignored participation and lack of acceptance of government decisions. In “Government in 2020. Taking the long view.”, one of the variables in the scenario cross is *citizen attitude to privacy and surveillance* on a scale from high to low acceptance. This variable gives the scenarios a slightly different approach than the other scenarios studied.

Several of the scenarios and visions work with dimensions that are specifically linked to the development of government towards an increasing degree of eGovernment and eServices: *How rapid is the change and how radical is it?*

“Scenarios of eGovernment in 2010” includes a variable that more specifically describes the *rate of development of ICT*, from a dynamic to a declining rate of development, where the dynamic option has a major and comprehensive impact in A Prosperous and Just Europe but only affects a minority in A Turbulent World. In Recession and Reorientation development is in decline.

“The Future of eGovernment” takes the view of the user when discussing *how advanced the use of computers will be* among the public, which in one scenario leaves a gap between generations and a challenge to government to combine the demand for equal treatment of citizens with a varied degree of computer maturity.

The scenario, or rather the vision, “eGovernment beyond 2005” uses the two dimensions *modernisation process* and *co-operation and coordination process* to

describe potential models for public administration in the future. The move towards the coordination and integration of the different parts of the public administration system is also outlined in the Swedish studies “Towards a Modern and Consolidated Public Administration” and “eServices in the Public Sector”, but most explicit in “A National Information System”.

In “A National Information System” from 2007 a scenario cross is formed by using the two variables *degree of central coordination* of public services and *degree of integration* of public agencies’ systems and processes for government. Central coordination aims at political solutions as in the scenarios Guide and One-stop-shop, while decentralised coordination leaves room for market and a range of private solutions for providing public eServices, as seen in the Information Chaos scenario.

4.11.2 Driving forces and challenges – “givens”

In the scenarios, the driving forces for the development of eGovernment are often implicit in, or coincide with, the dimensions used as independent variables. These are left open for variation; they are “critical uncertainties” that result in different images of the future. In the visions and portrayals of the future, on the other hand, certain driving forces and challenges are taken for granted. In other words, a certain future is presumed. In the language of scenario method, these are “givens”, factors that must figure in *any* image of the future. Below we list which “givens” are common in the conducted scenario studies.

Before the scenario exercise “eGovernment beyond 2005” was started, the type of eGovernment desired for Europe was outlined. This should be characterised by *sustainable modernisation* by moving from today’s on-line services to further modernisation with the help of ICT. Government should also be *innovative*, with the ability to develop services and public administration and contribute to economic and social development. Finally, *the perspective should be European*, with pan-European eGovernment solutions and increased co-operation at the European level.

Important driving forces mentioned in “eGovernment beyond 2005” include the *ongoing demographic changes in Europe*, comprising ageing populations, immigration and cross-border mobility, and the challenge that the *expansion of the EU* by the inclusion of new member states will pose to governments. A third driving force is *new ideas on public participation and partnership*, while it is also noted that there is a democratic deficit in Europe. Finally, *new technology that will enable innovative public services and a new division of roles* between the public and private sector is under development.

The seminar on “eGovernment in the EU in the Next Decade” highlighted a number of trends that affect strategies for eGovernment in Europe, such as *increased cultural and*

religious diversity and an ageing population, but also changes in lifestyle and patterns of work and consumption.

In the ICT field, the seminar identified several technological advances that will particularly drive changes in public administration, including *miniaturisation and mobile solutions* that will make eServices constantly and ubiquitously available, and *user-oriented applications*. However, the seminar also raised questions about *surveillance and privacy* and noted a trend towards *increased participation on the part of citizens and companies in the public decision-making process*.

“Towards a Modern and Consolidated Public Administration” adopts a purely public-administration perspective and summarise the demands, or driving forces, to partly *client or citizen oriented* and partly *cost-effective*. A similar policy-based definition of drivers for future eGovernment is presented in the EU vision project “Value for citizens”. The outline of the key strategic transformers required for eGovernance by 2020 is based on the three major policy goals for public governance: *Efficiency*, the search for savings to the taxpayer, *effectiveness*, the search for quality services for the consumer of public services, and *good governance* for the constituent as citizen and voter.

“A National Information System” points at a number of driving forces and trends in society which will affect the future eGovernment and citizens’ and business’ access to public eServices, as *an increased use of ICT, new forms of value creation through networks, individualisation, an eGovernment promoting growth, globalisation and rising demand for welfare services*.

4.11.3 Portrayals of society and public administration

The images of society and public administration that emerge in the scenarios are of course dependent on the dimensions chosen as independent variables. Of the actual scenarios studied, it is only “Scenarios of eGovernment in 2010” that attempts to portray alternative conceivable futures for *both* society and public administration seen as an undivided whole.

This includes, for example, the optimistic development scenario A Prosperous and Just Europe, which comprises social and economic development and an integrated society that has also managed to restrict the impact on the environment. This society provides scope for the rapid, radical and equitable development of eServices and the integration of eGovernment both horizontally and vertically.

In contrast to this development ideal we have A Turbulent World, which posits sluggish economic development and a market that develops on its own terms and sometimes comes into conflict with society. Consideration for the environment has to take a back seat and social divisions increase. There are cutbacks in public

administration and IT and eServices are taken over by the private sector and are fragmented. The digital gap grows and the more advanced eServices that are developed are used primarily by the more well-off sectors of society.

The Recession and Reorientation scenario is the antithesis of optimistic development in that people have revolted against the new technology and prefer the decentralisation of public administration and services, value the environment highly and become insular as a reaction to globalisation. The development of Information Technology is limited as is confidence in, and the use of, eServices.

In “eGovernment beyond 2005” we see a similar pattern with a positive development scenario, a more mixed scenario comprising both development and stagnation and a conservative scenario. The focus in these portrayals of the future is on the structure of public administration.

In the positive development scenario Transformed Institutional Infrastructure, which is characterised by modernisation and co-operation, the full potential of Information Technology is used to give the public the greatest possible value at all levels and in all areas of government.

In the mixed scenario Pockets of Inspiration we see the modernisation of some authorities at the national and regional levels, while others fall behind and cling to old patterns of administration. We are presented with a fragmented image of Europe where there is competition between different geographical areas but also between the economic, political and social spheres.

In the conservative scenario Dinosaurs, co-operation in Europe and between institutions increases, but this is not accompanied by a modernisation of the institutions. We see the emergence of large, powerful institutions that provide standardised services, but they are resistant to change and lack transparency and flexibility.

In “The Future of eGovernment” development of society and public administration are closely interdependent; changes in society have direct effects on the future structure and functioning of eGovernment, while the form and penetration of eGovernment affect society at large. In one scenario terrorist attacks on vital data systems halt development of eGovernment and people resort to traditional forms of government-citizens contacts resulting in a fragmented government, while in another scenario a society in harmony paves the way for a national portal where users meet the “seamless government” via integrated government intranet and data systems.

The two more recent studies (2008 and 2009) “Value for citizens” forwarding a vision of public governance in 2020 and “Scenarios of governments in 2020”, also focus on government’s role and functioning in different societal environments. The former

identifies seven on-going key strategic transformations in governance, which end up in an eGovernment based on value creation rather than plain distribution of eServices.

The latter outlines eight scenarios, based on the degree of uncertainty and impact of a number of relevant issues concerning social and contextual environment, government and their stakeholders, and ICT development, leaving a broad array of possible future societies and forms for eGovernment in 2020.

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Appendix: Table of conducted studies

Table of conducted studies

(Future Studies about eGovernment)

Dimensions	Driving forces/challenges	Society	Government	Conclusions, eGovernment
Scenarios of e-Government in 2010 and implications for strategy design				
<i>Economy and society</i>		<i>A Prosperous and Just Europe</i> , with economic and social progress and restricted environmental impact	<i>A Prosperous and Just Europe</i> , openness to technology, general access to eServices, Internet portals, integrated government	Client/target group-oriented services, user friendliness
Growth/integration-stagnation-recession				Multi-channel delivery/contact points for eServices
<i>Government</i>		<i>A Turbulent World</i> , sluggish growth, conflict government–market, technology is developed thanks to market forces	<i>A Turbulent World</i> , private sector takes over public tasks, reduced and fragmented eGovernment, digital gap	Quality of services/efficiency of organisation
Confrontation government-private				Social inclusion
Balance government-private				Security/protection of privacy/trust
Weakened central government/ decentralisation		<i>Recession and Reorientation</i> , revolt against technology, market and government, decentralisation, consideration for environment, deglobalisation	<i>Recession and Reorientation</i> , government privatised and outsourced, low level of confidence in eCommunication/eServices, privacy and democracy issues discussed	
<i>Information Technology</i>				
Dynamic development				
Declining development				
<i>Attitude to environmental sustainability</i>				
Strong support				
Weak support				

Dimensions	Driving forces/challenges	Society	Government	Conclusions, eGovernment
e-Government beyond 2005				
<i>Main issues</i>	Demographic changes	<i>Dinosaurs</i> , Europe intensifies co-operation, large and powerful institutions, standardisation, question marks regarding transparency and flexibility	<i>Dinosaurs</i> , inefficient, centralised government, lack of innovation.	<i>Key areas</i>
Sustainable modernisation of government	Expanded Europe			Competences and roles
Innovative government	Citizen participation and partnership		<i>Pockets of Inspiration</i> , public administration fragmented, local dominance and reduced user value	Regional and local self-government/autonomy
European government perspective	Lisbon Agenda			Handling of eIdentities/eAuthorisation
<i>Scenario dimensions</i>	Policies and programmes for eGovernment	<i>Pockets of Inspiration</i> , Europe is fragmented and competing, some nations and regions modernise, others cling to old patterns, increasing divisions in society		Cost analyses(cost/benefit)
The modernisation process	New technology/"enabling"	<i>Transformed Institutional Infrastructure</i> , modernisation and co-operation in parallel. Subsidiarity, diversity of values and social integration. Participatory democracy	<i>Transformed Institutional Infrastructure</i> , IT a strategic tool, cost savings, seamless government, better range of eServices. Government trusts the citizens	<i>At the European level</i>
The co-operation and co-ordination process				Prioritisation of who does what
				Common regulations for range of services
				Common structure/architecture for co-operation/collaboration

Dimensions	Driving forces/challenges	Society	Government	Conclusions, eGovernment
eGovernment in the EU in the next decade				
	<i>Social/economic changes</i>		<i>A knowledge-based eGovernment, open processes and work in networks</i>	<i>Challenges</i> Political and strategic Structural
	Increased cultural and religious diversity.		<i>A user-centric eGovernment, the needs of citizens and companies</i>	Social Interoperability and standardisation
	Ageing population		<i>A distributed eGovernment, a growing number of players –public, private, organisations</i>	Technology and application Laws and regulations
	Changed lifestyles and patterns of work and consumption		<i>A networked eGovernment, networks and partnerships between players</i>	
	<i>Advances in IT</i>			
	Miniaturised and mobile technology (Ambient Intelligence Environment)			
	Demands for user-oriented solutions			
	Surveillance and handling of personal identities, border between public and private			
	<i>Increase in democracy</i>			
	Increased participation on the part of citizens and companies in public decision making			

Dimensions	Driving forces/challenges	Society	Government	Conclusions, eGovernment
Scenarios of governments in 2020				
<i>Environment</i>	<i>Thematic clusters</i> (for scoring uncertainty and impact)	<i>Scenarios</i>		
Stable	Society and context	<i>Ambient Government:</i> Government is all around. Citizens have a high confidence in government, helped by a stable environment.		
Disruptive	Government	<i>Incident politics:</i> A two-class-society: On the one hand young, well-educated citizens. On the other hand old citizens with only little understanding of existing ICT.		
<i>Attitude towards government</i>	ICT	<i>Individualised society:</i> People have become more and more individualistic and self-responsible. Government only takes care of essential facilities.		
Trust		<i>Orchestrating Government:</i> Because of the stable environment government adopts a facilitating, but limited role in society, which attitude is broadly supported.		
Distrust		<i>Government keeps on trying:</i> Trust in government is low. People experience a big gap between the technocratic government and their own skills and possibilities to take part in eGovernment.		
<i>Government scope</i>		<i>Transition period:</i> In a highly polarised world, governments focus on key state tasks. The socio-economic policy is aimed at individuals taking their own responsibility.		
All-inclusive		<i>Social state:</i> Society has changed dramatically. Government catch up with high expectations from citizens and fulfils a key role in the provision of eServices, using state of play technology.		
Core business		<i>Empowering state:</i> There is a large social gap. Citizens do not have much trust in public administration and hence become self-responsible. The government focus on their core business.		

Dimensions	Driving forces/challenges	Society	Government	Conclusions, eGovernment
Government in 2020: Taking the long view				
<i>Government intervention in the economy</i>			<i>Status Quo Development</i> , low degree of intervention, restrictive attitude	Consolidated or fragmented range of social services
High degree of intervention			<i>Good Big Brother</i> , high degree of intervention, permissive attitude	Extent of government
Low degree of intervention			<i>Governing Phantoms</i> , high degree of intervention, restrictive attitude	Distribution of responsibilities and resource between government levels
<i>Citizens' attitudes to privacy and surveillance</i>			<i>Free-Enterprise Government</i> , low degree of intervention, permissive attitude	What role does data and intelligence gathering play?
Restrictive attitude				Consolidation of government and integrated services
Permissive attitude				<i>One</i> government system for identity management

Dimensions	Driving forces/challenges	Society	Government	Conclusions, eGovernment
The Future of eGovernment. Scenarios 2016 (Framtidens e-förvaltning. Scenarier 2016)				
<i>How advanced will the use of computers be among the public?</i>			<i>The State.se</i> , advanced users, integrated government	
Advanced users			<i>The Uninvited Guest</i> , advanced users, fragmented government	
Less-advanced users				
<i>Will we see an integrated or fragmented government?</i>			<i>The Retreat</i> , less-advanced users, fragmented government	
Integrated government				
Fragmented government			<i>The Generation Gap</i> , less-advanced users, integrated government	

Dimensions	Driving forces/challenges	Society	Government	Conclusions, eGovernment
Value for citizens. A vision of public governance in 2020				
<p><i>Policy goals</i></p> <p><i>Efficiency</i>, search for savings – constituent as a tax-payer</p> <p><i>Effectiveness</i>, search for quality services – constituent as a consumer</p> <p><i>Governance</i>, search for good governance – constituent as citizen and voter</p>	<p><i>Key strategic transformations</i></p> <p>1) Plural and partnership governance – structures, roles and relationships of agents producing value</p> <p>2) Performance governance – processes and practices used by agents producing value</p> <p>3) Personalised service production – creating personal or private value</p> <p>4) Participative policy making – creating participative value</p> <p>5) Trust, privacy and protection – the sine qua non of all other eGovernance transformations</p> <p>6) Production and use of ICT – for public sector transformation and innovation</p> <p>7) Public value governance – creating public value</p>		<p><i>eGovernment value creation</i></p> <p><i>Personal or private value</i> – created for individuals (citizens, communities, groups, localities, companies, sectors, etc.)</p> <p><i>Participative value</i> – created collaboratively and interactively between individuals to balance or reconcile any conflicts with their own personal value</p> <p><i>Public value</i> – created by the overarching governance structure for balancing and reconciling the other two types of values, as well as proactively promoting collective benefits</p>	<p>1) ICT will be used to create an environment in which government organisations will be connected, networked and fully joined-up</p> <p>2) Government services in 2020 will be responsive to user needs and wants, and will provide more individualised services</p> <p>3) Governance will become much more open participative, democratic, and will be welcoming inputs and interests from all segments of society at all levels</p> <p>4) There will be greater focus on managing, evaluating and improving performance in achieving public value across all areas of the public sector</p>

Dimensions	Driving forces/challenges	Society	Government	Conclusions, eGovernment
e-services in the public sector. analyses of the innovation system 2013 (E-tjänster i offentlig verksamhet. Analyser av innovationssystemet 2013)				
			<p><i>The eService Model</i>, citizens seek information and perform services themselves</p> <p><i>Network-based Administration</i> independent authorities co-operate as they choose</p> <p><i>User Entrance</i>, a common public entrance to public operations</p> <p><i>Information Hub</i>, a central organisation handles contacts with the public</p> <p><i>Outsourcing</i>, authorities farm out some of their services to private and other players</p>	

Dimensions	Driving forces/challenges	Society	Government	Conclusions, eGovernment
Towards modern and consolidated public administration (Mot en modern och sammanhållen förvaltning – VISAM)				
	Demands for client and citizen orientation Demands for cost effectiveness		<i>Voluntary co-operation between authorities, co-operation on services as today</i> <i>Network-based administration, independent authorities rely on functions of other units</i> <i>Consolidated service authority for contacts with citizens an companies</i>	Increased horizontal co-operation between authorities Operational flows and processes in focus

Dimensions	Driving forces/challenges	Society	Government	Conclusions, eGovernment
A National Information System. Citizens' and business' access to e-services (Ett nationellt informationssystem. medborgares och företags tillgång till elektronisk samhällsservice)				
<i>Degree of central coordination</i>	Increased use and development of ICT		<i>Scenario Information</i>	
Decentralised coordination, market solution	New forms for organising value creation – networking and cooperation		Chaos: Citizens and business are directed to search engines on the Internet	
Centralised coordination, political solution			<i>Scenario Guide:</i> Citizens and business are given assistance by way of a guide to find the information they need	
<i>Degree of integration</i>	An increasing individualisation			
Surface and low grade of integration	eGovernment boosting growth		<i>Scenario Clusters:</i> Citizens and business can follow their items, irrespective of administrative boundaries between government agencies or other actors	
Deepness and high degree of integration	Globalisation			
	Increasing demand for welfare services		<i>Scenario One-stop-shop:</i> Citizens and business use services through one single entrance to government	

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eGovernment of Tomorrow - Future Scenarios for 2020

eGovernment is a crucial factor in the development of public administration on all levels. In this book four scenarios are presented of how eGovernment might develop in the future. Their point of departure is the future of public participation and trust in government and society at large. Possibilities and potential problems arising from the use of eGovernment are described. Together, the scenarios offer inspiration for anyone who has an interest in the subject.

Lennart Nordfors holds a PhD in political science. He has published a number of books on the future of democracy, the Internet and eGovernment. He is a contributor to the volume "Scenarios for Success" (Bill Sharpe and Kees van der Heijden, eds).

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The authors are partners of Gullers Group, Stockholm, a consultancy specialised in strategy development and communications. Among its clients are the Swedish Government, the Swedish Parliament, numerous governmental agencies and ENISA (European Network and Information Security Agency).



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