



eGOVERNMENT

European eGovernment Research Network

D6.2 Proposal for a European eGovernment Research Programme Framework(M22)

Version 2.0, 13 December 2007

Period covered: 1st January 2007 – 30th April 2008

Work Package 6: A Common Framework for eGovernment Research Programmes.

Authors

*Kim Davis and Trond Knudsen, Research Council of Norway
David Osimo, Institute for Perspective Technological Studies (IPTS)
Roberto Pizzicannella, Centro Nazionale per l'Informatica nella P.A.*

Dissemination Level: Public (PU)



eGOVERNMENT IST-2004-026575 -Coordination Action
Project Cofunded by the European Commission under FP6
Start date of project:1st January 2006, duration 24 months

eGOVERNMENT Coordinator: Mrs Madeleine Siösteen Thiel
Postal Address: VINNOVA, SE- 101 58 STOCKHOLM, Sweden
Visiting Address: Mäster Samuelsgatan 56
e-mail: info@egovernment.org, Phone: +46 (0)8 473 3000, Fax: +46 (0)8 473 3005
URL: www.eGOVERNMENT.org - www.VINNOVA.se

Document Information

Work package: WP6: A Common Framework for eGovernment Research Programmes

Task: T6.2 – Coordination of eGovernment Research work and topics

Document Id: eGOVERNMENT/WP6/T6.2/D6.2/Proposal for a European eGovernment Research Programme Framework 2.0

File name: 071213D6-2Framework2-0.doc

Document owner: Research Council of Norway (RCN)

Document history:

Version	Author(s)	Date	Changes made
0.7	RCN, CNIPA	28 September 2007	
0.8	RCN, CNIPA	3 November 2007	Comments from hearings included, text revised
1.0	RCN, CNIPA	15 November 2007	Review and adjustments
1.1	RCN, CNIPA	1 December 2007	Partner hearing adjustments
2.0	RCN, CNIPA	13 December 2007	Input from WP 4 workshop and project review process

Review history:

Reviewed by	Date	Validated
eGOVERNMENT interest group members	15 November 2007	RCN, CNIPA
Participants at 4th Ministerial eGovernment Conference Research Workshop	19 September 2007	RCN, CNIPA
Participants at WP 4 Workshop in Vilnius	7 December 2007	RCN

Dissemination Statement

To meet formal requirements, this report is presented in static format for public but limited dissemination. However, the content will, in dynamic form, be distributed through the website being prepared by eGOVERNMENT and meeting the requirements for hosting and enhancing dynamic and developing presentations of the evolving scene of national and regional eGovernment research in Europe. This evolving information will support and be supported by the growing network of eGovernment research stakeholders connected by eGOVERNMENT, and sustained through measures initiated in this project.

Summary

This report integrates the main results of the eGOVERNET project. The objective of the eGOVERNET project is to coordinate the creation of national eGovernment RTD programmes and initiatives while encouraging the integration of existing national eGovernment programmes. Main activities have been mapping existing eGovernment research funding, instruments, management schemes and best practice at national and regional levels; measuring eGovernment impact; performing a needs and gap analysis for such research management; providing a knowledge service; building partnerships and creating a common framework of understanding; and supporting further coordinated development of good eGovernment research funding, instruments and management.

The main findings of the project include:

- eGovernment R&D efforts are more complex than expected
- Little consistency of research themes or priorities across nations and regions
- eGovernment research programmes may appear as a bottleneck
- Investment in eGovernment research remains marginal
- Procurement appear as a promising instrument for eGovernment research funding
- Suggested measurement indicators for de-fragmentation and eGovernment R&D strategies and management are build together in the ***EU eGOVERNET Research Barometer***

The objective of this specific deliverable is to present a proposed framework of how eGovernment research can be funded in the European Research Area, at national and regional levels. As such it is a beneficial tool for eGovernment research programme funders, strategists and managers to draw assistance and advocacy when designing support mechanisms.

The authors first reviewed the results of all eGOVERNET work packages along with those coming from other eGovernment research projects funded by the IST programmes in Framework 6. These results were blended into an overall understanding of how various activities contribute to a total picture of eGovernment research funding mechanisms, gaps and needs. From there a framework emerged that depicted ways in which eGovernment research programme managers, applicable research programme managers and policy makers could support and apply eGovernment research.

This framework is considered a handbook for understanding and potentially applying the many ways possible to support eGovernment research for the benefit of citizens.

The eGOVERNET framework suggests grounds for exchanging experiences along with enhancing and creating funding and management infrastructures with room for a broad set of research instruments and approaches. These infrastructures should meet identified goals by establishing long term visions generated from knowledge of technological developments, research priorities rooted in eGovernment strategies, and defined relationships between citizens in addition to other users and the eGovernment stakeholders. This desired future state of eGovernment research management will ideally be sensitive to the needs for pan-European government services and feed input to the European Research Area.

With this background eGOVERNET presents example projects connected to the different policy alternatives. An informative selection of eGovernment research enhancement action components with further options connected to a variety of policy options for the different identified eGovernment research management goals is then presented. This is eGOVERNET's main contribution for all stakeholders to gain a wider experience and to inspire the further discussion and informed coordination of eGovernment research funding, instruments and management in European nations and regions.

This handbook is proposed as a starting point for developing and presenting rich and growing national and regional eGovernment research supported by a variety of instruments and support infrastructures. The goal is to house it in a dynamic format accessible on the Internet. Please see <http://www.egovernet.org> for further news and pointers. Thanks to all external reviewers and eGOVERNET partner members from extensive discussions and inputs!

Table of contents

1. INTRODUCTION	9
2. EGOVERNMENT RESEARCH STAKEHOLDERS AND THEIR NEEDS	12
3. STATE OF THE ART AND PRIORITIZED RESEARCH TOPICS EXISTING TODAY	19
4. FUTURE NEEDS	23
5. EGOVERNMENT RESEARCH STRATEGY OPTIONS.....	28
CONCLUSION AND SUMMARY	36
APPENDIX 1. DEFINITIONS.....	43

1. Introduction

eGOVERNET (www.egovernet.org) is a coordination action supported by the European Commission's 6th Framework Programme for Research and Technology Development, which aims to stimulate and integrate eGovernment research programmes in the European Research Area.

The main objective of the eGOVERNET project is to coordinate the creation of national eGovernment RTD programmes and initiatives and encourage the integration of existing national eGovernment programmes. The consortium, including old and the new member states and associated states, backing the eGOVERNET proposal represents organizations with national programming responsibilities for innovation and research in eGovernment in their home countries. The partners, that include analysis and research capacity, have come together with a view to coordinate their research policies and work towards a long-term strategy for eGovernment research.

Deliverable 6.2 is a distillation of the work done throughout the entire eGOVERNET project, from the many interest group meetings, the workshops on eGovernment programme activities, policies and actions to the deliverables generated by the work packages that examine the eGovernment programme landscape and, not in the least, discussion among the partners. Therefore, as shown in Figure 1, this deliverable is a compilation, an elaboration and an analysis of work done within the other work packages in the project.

Figure 1 Schematic review of sources for framework from previous eGOVERNET deliverables.

The information collected and evaluated has been folded into Deliverable 6.2 for an overall understanding of eGovernment research funding mechanisms and policy throughout Europe. As such it may be used as a handbook.

This Deliverable is a framework for policy decisions concerning future eGovernment research programmes. It identifies the stakeholders along with an analysis of their needs; current status and practices in eGovernment research programme funding; what future needs exist and gaps identified; policy options available and examples; and finally suggestions for an open method of coordination among entities funding eGovernment research that will foster sustainability.

Public services touch everyone. Not only are they a part of everyday life, but governments account for 45% of EU GDP. Procurement alone represents 15% of GDP or around 1.500 billion Euros a year.¹ By its sheer volume of funding and involvement in people's daily lives, governments drive innovation. This is particularly clear in the United States where federal policy dictates both the research agenda and generates enormous business in its consolidation of requirements and/or results.² European government is more fragmented both in its service

1 Aniyar Varghese in Roadmapping EU Research. IST-2004-027139.

2 For example as a historical driver of innovation in the fuel cell arena, the role of the US space program cannot be minimized. The space program proved the first viability of fuel cell technology. On the other hand, the role of government in advancing the fuel cell from an expensive item with a single mission in outer space to a less

offerings from government and in its research focus concerning eGovernment. Some 45% of GNP in the EU goes to government administration, but they make up only 20% of the ICT market, spending as little as 12% of their budget on ICT, according to participants at a European Business Summit workshop on 15 March 2007.

Currently there are two main sources of funding for eGovernment research, illustrated by **Fel! Hittar inte referenskölla**. One source is Information Society³ (IS) research programmes. The other source is eGovernment implementation programmes. Within these sources are three categories of programmes⁴ as shown in the table below.

Table 1 Categories of eGovernment programmes

DED	<u>dedicated</u> eGovernment research programmes
EXPL	eGovernment research as one <u>explicit</u> priority in a wider programme for IST R&D or eGovernment implementation
POT	eGovernment as one <u>potential</u> application field of other R&D programmes which may concern generic technologies and applications, methodologies and so on

The final source of eGovernment research funding is public administration (PA), where research is done as a part of implementation projects.

There is a contrast between the (high) declared policy importance of eGovernment research, the (small) actual funding through programmes, and the (large) amount of research projects carried out on the ground. This is illustrated in Figure 3.

Figure 2 Bottleneck between policy and projects in eGovernment

In order to address some of these bottlenecks, the Deliverable begins with a review of several other eGOVERNMENT Deliverables. In Chapter 2 eGovernment research stakeholders and their needs are re-examined and Chapter 3 reviews state of the art and research topics existing today. Then future needs are established based on work done by this project and the eGovRTD roadmap project. In Chapter 5 suggestions and examples of eGovernment research strategy options are detailed. The appendix presents a set of definitions.

expensive item with large-scale commercial applications on earth cannot be tied to a single government program. It is undeniable that in the 1980s fuel cell technology needed government funding to advance. However, it was not a single government program, agency, or company that was responsible fuel cell innovation that occurred during this and subsequent periods. Certain programs made key funding decisions or produced new forms of knowledge at key moments. Often, these funds or knowledge were been fortuitous enough to provide the impetus for private actors to continue their pursuit of the technology. Since large-scale commercialization of fuel cells is yet to come, the development of this technology is still a work in progress. *From the National Institute for Standards and Technology Report 7161. The Role of the U.S. National Innovation System in the Development of the PEM Stationary Fuel Cell.*

3 An information society is a society in which the creation, distribution, diffusion, uses, and manipulation of information is a significant economic, political, and cultural activity. *Wikipedia*

4 eGOVERNMENT Deliverable 3.2 “eGovernment research in the EU: Overview Report.” Osimo, David, Stefano Sluzer, Marjan Turk, Alexander Nilsson.

Ultimately eGovernment research should and can be viewed in a more holistic manner as displayed in Figure 4.

2. eGovernment research stakeholders and their needs

A core activity in the eGOVERNMENT project has been the one aiming to clearly define the actors in eGovernment R&D that need to be addressed by the actions proposed in the eGOVERNMENT project. To this end, a series of meetings throughout Europe were held to identify stakeholders, discover their needs, and encourage them to join a network of eGovernment research programme and policy participants.⁵ To reinforce the results of these meetings, questionnaires were sent to research administrators in European governments for information on their stakeholders. This activity has produced a comprehensive view of users and stakeholders needs that are presented further in the chapter.

The relevance of stakeholders' analysis can also be better understood in view of some of the results coming from the scenario analysis on eGovernment in 2020 made by the eGovRTD2020 project⁶.

“In general, in all scenarios new, disruptive technology is not considered 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”⁷.

“Most of the participants expected that future eGovernment challenges would come from the 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”⁸.

Looking at those results, in case of eGovernment research there is an implication that identification of users and stakeholders and the understanding of their needs is a crucial point in meeting the challenges that the evolution of society will pose.

The first step in understanding the users and stakeholders needs has been their identification with respect to their role in different phases and steps in eGovernment programmes implementation and taking into account the contribution of eGovernment research on those implementation programmes.

Figure 5 illustrates the identified users and stakeholders and the links representing their roles in the different phases of the eGovernment programme lifecycle.

⁵ For more information see eGOVERNMENT Deliverable D4.1 Interest Group Summit Reports

⁶ C. Codagnone, M. Wimmer (Eds); "Roadmapping eGovernment Research – Vision and Measures towards innovative Governments in 2020. Results from the EC-funded Project eGovRTD2020"; <http://www.egovrtd2020.org>; 2007

⁷ Ibid. – page. 83

⁸ Ibid. – page. 84

Figure 3 Users and stakeholders and the links representing their role in the different phases of the eGovernment programme lifecycle.

The inner four boxes and arrows represent, in a schematic way, the lifecycle of a generic eGovernment development programme (from strategy definition, to programme design, to implementation, and monitoring). The monitoring and evaluation phase leads to a revision of policy and strategy, as well as providing feedback for programme design or implementation phase.

The “surrounding” boxes represent, again in a schematic way, how different kinds of eGovernment research influences different phases in the implementation programme lifecycle. Of course this is a schematic representation, so in many cases there is a mix of socio-economic and technological research.

In this scheme the different stakeholders have been indicated, and the dotted arrows represent the influence of the stakeholders on the programme lifecycle (so indicating possible expression of needs).

The different roles, simply represented by arrows in Figure 5, are detailed in the following table.

Table 2 Stakeholders in eGovernment and their roles⁹

Stakeholders	Roles
<i>Policy makers</i>	Incorporate holistic view of societal change. Make strategic decisions Lead, giving political support for research. Secure funding.
<i>Managers of eGovernment research funding activities in public agencies and ministries</i>	Develop long term strategy (national and international collaboration), and secure long term investment in research. Use tools that secure best possible results and usage of research (for example: evaluation models, enhance collaboration and dissemination of results, critical mass, centres of excellence). Advocate for eGovernment research in the political setting (for example: in terms of indicators of eGovernment research benefits).
<i>Managers of eGovernment development and activities in the public sector</i>	Develop solutions for citizens. Improve government through modern technology, resource allocation, and reorganization. Foster common agreements and standards (legal framework and barriers). Put research results into practice (administration).
<i>Private Sector managers</i>	Take research results into practice (commercial). Make business out of research/results.
<i>NGO strategists and managers engaged in eGovernment representing citizens, employees, relevant industry branches and others</i>	Spokesperson for users in different situations.
<i>eGovernment researchers</i>	Find reliable answers (knowledge development). Disseminate results and educate. Push limits and reveal eye-openers.

⁹ from eGOVERNMENT Deliverables D2.1 and D2.2

The following table represents the results from needs analysis, in terms of the stakeholders, their organisations, their responsibilities and examples of their self-described needs.

Table 3 eGovernment research stakeholders and their needs.

Stakeholders	Stakeholder organisation	Description	Examples of identified needs ¹⁰
<i>Policy makers</i>	Government, Public administration, Public Institutions	Policy development, research policies and design policies and strategies	<p>Understanding of “state of the art” in the public sector.</p> <p>Clear indicators of how eGovernment research can make a difference.</p> <p>Clarification of research areas – a satisfactory definition of eGovernment research that takes into account the multidisciplinary character of the field.</p>
<i>Managers of eGovernment research funding activities in public agencies and ministries</i>	Public administration or Agency managing e-Government research programmes	Responsible for ensuring that eGovernment research is carried out according to policies/strategies	<p>Clear identification of where and what kind of research is needed so that results correlate with the needs of users.</p> <p>Mapping the eGovernment research landscape; the field of research is rather new and multi-disciplinary and it is not easy to track down all strategic research initiatives.</p> <p>Need to strengthen various networks such as between researchers and between researchers, government and industry.</p> <p>Consolidation of eGovernment research initiatives.</p> <p>Analyses and evaluations at strategic and tactical level to support the necessary research support structure.</p>
<i>Managers of eGovernment development and activities in the public sector</i>	Government or Public administration	Responsible for implementation, deployment, user of RTD results	<p>Beneficial and realistic targets for different stakeholders (The impact and result of eGovernment implementation and research).</p> <p>Division of responsibilities: who is working in eGovernment research management, in government, in academia and in industry</p> <p>Research on cost effectiveness</p>

¹⁰ The needs do not only correspond to one stakeholder. In the sections of examples some simplifications have made.

<i>Private Sector managers</i>	Company/Industry	Provide eGovernment solutions, eGovernment RTD, design, implementation and consultation, user of RTD results	<p>Knowledge of the need for innovation and change in the public sector.</p> <p>How research results are implemented in practice</p> <p>Understand “State of the art” in the private sector and relevant competence, service and products.</p>
<i>NGO strategists and managers engaged in eGovernment representing citizens, employees, relevant industry branches and others</i>	Non-profit organisation	Represent users, coordinate interests	<p>Clear identification of where and what kind of research is needed so that results correlate with the needs of users (different needs for different users).</p> <p>Users’ needs as a research topic (We need more information about user behaviour and requirements).</p> <p>Understanding the wide, contextual socio-economic environment within societies and organisations; different countries have differently organised Public Administrations (PA) and different practices and require different research programme management.</p>
<i>eGovernment researchers</i>	University or Research Institute	Research performer	<p>Useful ontology; a semantic approach to central concepts concerning eGovernment.</p> <p>More resources for directed eGovernment research</p> <p>Possibilities to build centres of excellence in eGovernment research.</p>

The Tables have shown distinct roles and responsibilities for each of the stakeholders in eGovernment programmes. The ultimate recipients are those benefiting from the results.

3. State of the art and prioritized research topics existing today

Data and analysis¹¹ confirms the diversity of European eGovernment R&D programmes. This chapter examines the state of the art and what topics require research. The results show that eGovernment research is funded through fragmented funding streams, generally belonging to research programmes in the field of IST applications, but also within programmes for eGovernment implementation.

1. eGovernment development efforts more complex than expected.

The first and paramount consideration is that eGovernment research, though undergoing a process of recognition and consolidation, is fragmented even within the Member States. eGovernment research is funded through programmes belonging to different policy areas, namely R&D, Information Society and public management (see Figure 2). These different areas and actors have different approaches, strategic goals and instruments, belong to different policy networks and are therefore more difficult to coordinate.

European Union efforts have played an important role in consolidating this research field. In Europe, it appears now that there is more integration at the level of actual research than at the level of research programmes. Research programmes in most countries therefore appear to be replicating, rather than reducing the fragmentation of research by adding the fragmentation of funding streams.

In this sense, eGovernment research funding appears clearly divided between socio-economic and technological research. In most countries, programmes support only one disciplinary approach depending on the policy area where the programme belongs. Broadly speaking, POT and EXPL programmes (see Table 1 Categories of eGovernment programmes) belonging to research policies tend to support technological research, while programmes belonging to eGovernment policies focus more on socio-economic research. One of the successes of DED programmes is that they allow a multidisciplinary approach.

2. eGovernment research programmes appear as a bottleneck.

There is a paradox in eGovernment research funding. At the policy level, eGovernment research is mentioned as an important application field of IST research. At the same time, in the research community, there are increasing research activities on eGovernment. However only a minority of countries has a dedicated eGovernment research programme, and the budget devoted to eGovernment research is low. It appears therefore that research programmes and funding are a "bottleneck" between high policy awareness at the top and great research effort on the ground.

¹¹ presented in eGOVERNMENT Deliverable 3.2, eGovernment Research in the EU

3. No consistency of research themes or priorities.

In terms of research themes, existing programmes have different degrees of precision when identifying research priorities. This reflects a different approach to research policies, with more or less strong steering of research. Some countries such as UK and Denmark do not define any research priorities at all. By contrast, the European Framework Programme has a structured definition of the research priorities.

Research themes appear to be not very consistent across countries. One of the main reasons is the institutional policy area each programme belongs to: the priorities of ICT research programmes are not comparable with those of e-government-deployment programmes. However, there are themes identified as priority in more than one country: eDemocracy; security; knowledge management and the semantic web; public eServices for all; interoperability and impact evaluation of eGovernment.

The priority topics from the point of view of the research programmes have been described. However, two recent initiatives have assessed the research priorities, as recommended by the various stakeholders of e-government research. The first is a study launched by IPTS, carried out by the Danish Technological Institute in 2005/2006¹²; the second is the eGOVRTD2020 project¹³, funded by the 6th Framework programme.

Both projects included a foresight activity, describing the scenarios of future government, which will be the user of applications being developed in today's research activities. They also carried out both qualitative and quantitative consultation of various stakeholder of e-government research: academia, government and business. The main results could be summarized as follows:

- There are different views on the priority of the research themes: there are no topics clearly emerging as high priority for most interviewees.
- However, most important themes are considered Understanding citizens' and other users' needs, Privacy and identity, eDemocracy, Trust, and Partnership with private sector.
- There is a consensus that eGovernment research priorities include themes of both technological and social sciences; and policy areas of research, ICT deployment, administration.
- There are differences between stakeholders. For example, government interviewees tend to stress the importance of trust and privacy, of evaluation and measurement. Academics have a specific attention on eParticipation and governance of public-private relations. Industry focuses more on infrastructures, ontologies and knowledge

12 Berce, A Bianchi, C Centeno and D Osimo (eds.) 2006, Towards the eGovernment Vision for the EU in 2010: Research Policy Challenges, IPTS Technical report EUR No: 22635 EN available at www.jrc.es

13 University of Koblenz-Landau; Roadmapping eGovernment RTD 2020: Visions and Research – State of play; 12 May 2006.

management.

- There are differences among member states. For example, interviewees of new member states of the EU give relatively low priority to eDemocracy, and high to ontology and knowledge management.

Some of these priority topics are consistent with those indicated by the research programmes. However, other priorities are notable for their absence. For example, the priority "understanding citizens' and other users' needs" is not mentioned as a priority within existing research programmes, although there seems to be a growing focus on developing citizen-centric eServices.

There is certainly a need for a more systematic and cross-country collaborative effort for defining the research priorities within eGovernment, including emerging themes such as "citizens'/users' needs" and building on existing work such as the one carried out by IPTS and EGOVRTD2020.

4. Investment in eGovernment research remains marginal.

Most eGovernment programmes do not seem to have perceived a necessity to fund any research to accompany or support implementation. This may be because implementation was seen largely as a technological process and, undoubtedly, much of the technology for eGovernment is perceived as being well-developed. On the other hand, the socio-economic and organisational aspects - concerning the end-users as well as with the changes needed inside the public administration (both in intra- and inter-institutional perspectives) - appear to have been underestimated, both in the actual implementation of eGovernment and as a potential area for research. Acknowledgment of their socio-economic importance, facing the often disappointing achievements of eGovernment implementation (e.g. on inter-operability in a broad sense) and low uptake of services by users, might be a reason behind the perceived growing interest in eGovernment research by high-ranking administration officials, mentioned above.

5. Procurement as an instrument for eGovernment research funding.

Another important finding is that research programmes are neither the only nor the largest instrument for funding eGovernment research. Experts agree that institutional funding, public procurement, partnerships with universities and the creation of dedicated research centres are very important in supporting eGovernment research. Public procurement in particular appears to be the most used, mainly in the field of socio-economic research for policy support, but also in some cases for technological research¹⁴. Further work for coordinating eGovernment research programmes should not overlook the role of public procurement and the other instruments mentioned for supporting eGovernment research.

¹⁴ L Nyiri, D Osimo, R Özçivelek, C Centeno, M Cabrera, 2006, Public Procurement for the Promotion of R&D and Innovation in ICT, IPTS Technical report - EUR No: 22671 EN available at www.jrc.es.

4. Future needs

The needs analysis¹⁵ and the subsequent gap analysis with respect to the current state¹⁶ generated a set of requirements depicting what can be considered as the desired future state (DFS) in eGovernment research programme management.

Figure 6 outlines the desired future state of eGovernment research management, highlighting the relations existing among the different requirements.

The role of this representation is twofold:

- it allows for a comprehensive, even though sketchy, representation of the DFS.
- it allows the navigation within the desired future state, especially when considering the policy options and recommendations (presented in the next chapter) connected to each requirement of the DFS. Essentially, when looking at a given policy option, the diagram allows for the understanding of the implication for the other requirements.

Figure 4 – The Desired Future State (DFS) of eGovernment Research Management

In the figure an arrow represents the direction in which each requirement influences another requirement (for example, an “Increased Priority of eGovernment Research” enforces the development of a “Long Term Vision”).

The relations can also be seen backward with respect to the arrow’s direction, i.e. how a requirement is influenced by another requirement (for example, to have a “Long Term Vision”, a clear understanding and analysis of needs of “Users & Stakeholders” is necessary). This second view of the relations is one allowing for reverse navigation among the DFS “elements”, once the requirements have been substituted with the policy recommendations.

It is worthwhile to explain in more details two elements outside the dotted box. The content of the dotted box is valid at regional, national and EU levels. The pan-European dimension is one of the main leading themes in the development of eGovernment. It poses additional challenges for eGovernment research (cross-border platforms, interoperability at process level, inter-organizational models of cooperation, etc.). This explains the relation “influences” of the pan-European dimension on the dotted box.

To confront the challenges, especially the ones related to EU level of eGovernment research, a European Research Area perspective is needed (that’s the “needs” relation arising from the dotted box).

The dotted arrows represent the overall contribution of the DFS to the ultimate goal, i.e., the “Higher quality of eGovernment implementation” (represented by the orange cloud). This reflects the perspective assumed by the eGOVERNMENT project, where eGovernment research is seen as a fundamental way to improve quality and effectiveness of eGovernment initiatives.

¹⁵ carried out in Work Package 2 of the eGOVERNMENT project

¹⁶ carried out in Work Package 3 of the eGOVERNMENT project

In the following section a synthetic description of the requirements for the desired future state is given.

1. Define relationship between citizens plus businesses as users and stakeholders

A prerequisite for the desired state for eGovernment research is a better understanding of users and stakeholders and their relationships. Understanding the needs of various users and stakeholders of eGovernment research management and their relationships and having defined terms of users and stakeholders give policy makers a clear context. This will contribute to a better definition of what government should achieve before any eGovernment research agenda is drawn up. Defining users and stakeholders also would raise awareness among different actors of eGovernment research and leveraged involvement of various stakeholders as well.

This process has begun with both the RTD2010 and eGOVERNMENT work.

2. Increase priorities of eGovernment research

Activities, priorities and responsibilities between performers of the research must be defined in accordance with overall eGovernment needs and plans in order to achieve the goal of successful eGovernment research management. This means that a systematic approach to eGovernment development should be introduced.

Increasing the priority of eGovernment research would help to ensure support from governments and enough financial funds for conducting research in the future. Stakeholders should be aware of the importance of eGovernment research for the quality of eGovernment.

Public administration should promote developed services to citizens and business. And broader use of eGovernment services consequently will raise priorities of eGovernment research.

3. Exploit technological development in terms of new ICT, new business models and open source principles

Exploitation of modern ICT use, new business models, and open source principles are needed in order to make eGovernment services more flexible and adaptable.

Different ICT systems need to be seamlessly networked together, in particular new innovative systems that will exchange data in an interoperable way with older ICT systems and back office applications. ICT research should emphasize new forms of dynamic networked co-operative business processes and optimised working organizations. Interoperability and standardization are still key issues to be further explored and enforced.

4. Establish funding and management infrastructure for eGovernment research activities

Successful eGovernment research management seeks the establishment of an organization and research management infrastructure for eGovernment research activities at regional, national and European level. Such an organization and infrastructure would guarantee management mechanisms that would enable ordering, financing, managing and finally fostering practical use of the eGovernment research results.

To enhance coordination of eGovernment RTD to support established long term visions, a central management should be clearly defined. This central body would be able to make

decisions and allocate financial resources, representing a single access point in which to reach all public agencies at all levels of government on national and EU levels. This function would nurture accessibility, knowledge and insights.

People interested in eGovernment research and its results would be able to identify and learn about all the research activities at one place regardless of whether the research has been completed or is still in progress. Together with central management, open calls for research projects also should be centrally presented.

An organization and research management infrastructure for eGovernment research activities on the EU level should stimulate the establishment of centres of excellence at a national level in EU member states. It would increase interaction between academic researchers and governments, which would reflect in a high applicability of research results to Public Administration.

5. Define long-term eGovernment vision and strategy in correlation with research programme management

The development of eGovernment research programmes should be in tight correlation with defined long-term eGovernment vision, strategy and eGovernment research areas at the EU level. This is the only way to develop successful eGovernment and to establish competent eGovernment research programme management.

Defined vision and strategy should indicate eGovernment research areas that need to be covered by different forms of research. The involvement of key government officials responsible for eGovernment development in the preparation of vision, strategy and research area definition is essential to reinforce the importance of research in the development of eGovernment.

Defined vision and strategy in correlation with eGovernment research management should have a strong impact on policy formulation, development strategy and processes.

Government officials should ensure sufficient promotion and support for the further development of eGovernment as well as a consolidation of all eGovernment research programmes and a review of legal frameworks in member states.

eGovernment research and development projects should all be shaped according to the defined long-term vision, to avoid short-term (politically driven) decisions.

6. Establish correlations between different types of research

Desired state in the field of eGovernment research programme management forecasts strong correlations between different types of research.

Collaboration and partnership between researchers, public administration and industry (PPP) should for instance be established where required. Establishing applied and basic research, according to the needs of eGovernment development would allow different research to relate to different research areas and would establish a foundation for the development of eGovernment in Europe. Moreover, there should be a strong correlation between eGovernment research and eGovernment strategies.

European research collaboration should be stimulated and financing possibilities clearly defined.

7. Develop pan-European services

The achievement of interoperability for eGovernment services is a continuous process in which new partners and new technologies constantly need to be integrated:

- eGovernment services are delivered at all levels of government. Interoperability must be ensured among local, regional, national and European administrations to provide seamless service.
- The integration of the new Member States is a major task already underway.
- More and more citizens going online will expect and demand efficient and simplified electronic access to information and services.
- Technologies and market products are evolving. While new ways of ensuring interoperability are emerging, the increasing potential to enrich eGovernment services means that interoperability is becoming an issue in areas where it did not exist previously.
- Advances made by Member States in establishing their own eGovernment programmes and policies mean that many choices have been made with regard to implementation. The integration of heterogeneous elements and processes is becoming a major task.

The growing number of players, the growing complexity of relationships, and related IT systems necessitate consistent architectures, common policies and standards as well as continuous and extensive coordination efforts between EU institutions and Member States. With the rollout of pan-European services, this complexity will increase and need to be met by strategies and priorities at the European level. Such strategies and priorities will certainly be more sustainable if grounded on the best experiences at national and regional levels.

8. Build an European Research Area in eGovernment research

In order to introduce innovations, cooperation and more open communication should be encouraged between the public sector, academic institutions and ICT companies (PPP).

These sectors need an effective tool designed for collaboration, sharing and dissemination of research results to facilitate this open communication. A united and coordinated central European research programme network with connections to existing research networks and organisations should be established. All participants in the eGovernment supply chain would use this network to share and disseminate experiences, research results and acquired knowledge with each other.

Ties between researchers, public administration, industry and other stakeholders should be strengthened. This is the only way to establish projects across boundaries.

The next chapter will bring forward the presentation made in this chapter, looking at the policy options and recommendations that will allow the achievement of the desired future state (DFS) in eGovernment research programme management.



5. eGovernment research strategy options

The result of the gap analysis, with the detailed descriptions of policy options and suggested measures, is contained in the deliverable from eGOVERNMENT Work Package 3¹⁷. The methodology in gap analysis process is synthetically represented in the following figure.

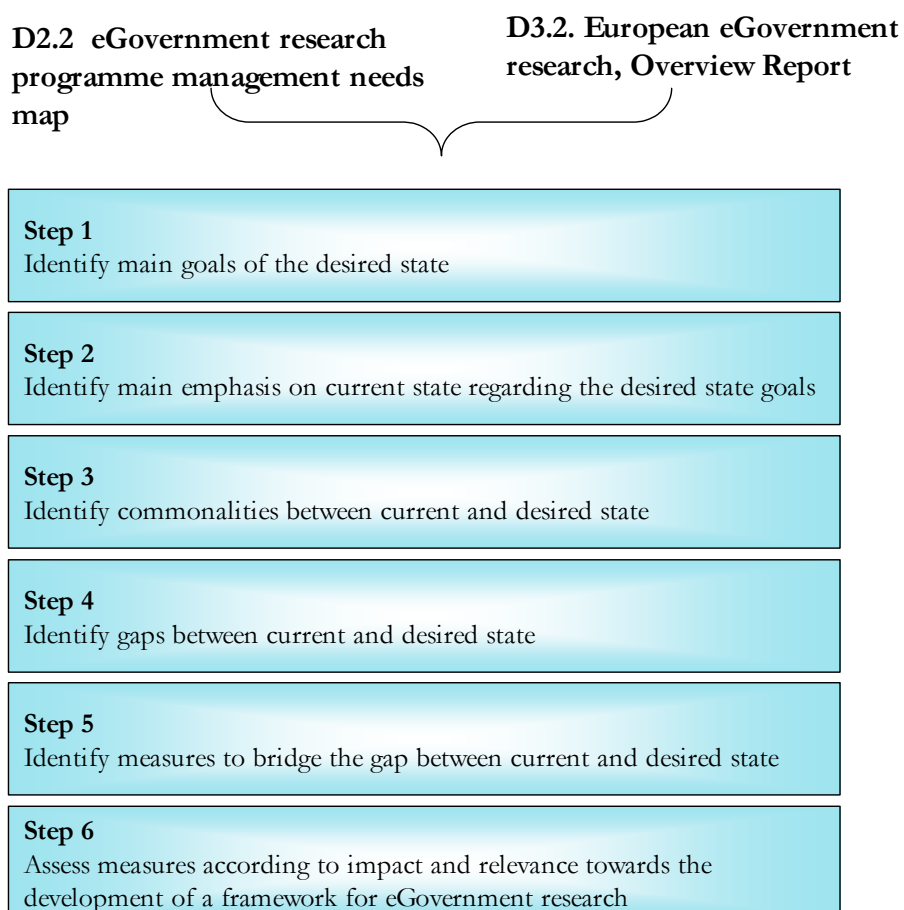


Figure 5 : Gap analysis methodology

In this chapter the policy options and measures are introduced. They were presented, investigated and analyzed with existing examples and practices in desk work and during the workshops and meetings organized within the project activities.

Such forms of representation should make the policy options themselves more understandable, and provide references to policy makers and program managers based on experience.

The following tables report, for each goal identified, policy options, examples and important measure that can be taken.

¹⁷ D3.2- eGovernment research in the EU; overview report; Annex 1: Gap analysis –suggested measures to bridge identified gaps

Table 4 Identified goals with policy options and examples

GOAL 1: Organizations and management infrastructures for eGovernment research activities		
Policy options	Example	Action oriented component
To establish a dedicated eGovernment research programme	<i>eServices in Public Administration</i> , dedicated eGovernment programme in Sweden	Explicit strategic priority with specific target groups
Prioritize eGovernment research within ICT programme Specific mention in public administration tenders	<i>Verdikt</i> , ICT programme in Norway Tecnologias de servicios de la Sociedad de la Información, Spain Innovation Programme Multimedia, Germany	Research strategy based on embedded priorities
Establish intensive Public-Private-Partnerships among academic researchers, public administration and ICT industry	eCatalonia, Spain	Consolidated political and research strategy aligned with industry targets (triple helix)

GOAL 2: Long-term eGovernment vision and strategy defined in correlation with research programme management		
Policy option	Example	Action oriented component
Partnerships between researchers and governmental eGovernment strategy development	Austria eCatalunya	Research based political and/or administrative strategy on eGovernment
Supported development of common specifications and building blocks	EU eGovernment strategy in CIP for eProcurement	Support for targeted policy development

GOAL 3: Relationship between users and stakeholders defined		
Policy option	Example	Action oriented component
Establish user driven research project instruments (research consortium of suppliers, researchers and government entities)	EU Streps Norwegian BIP and KMB instruments	Optimal fit between innovation in eGovernment and research instruments
Service oriented communication developed with eGovernment suppliers and government	Mobhaile web site developed by Irish government	Co ownership among local authorities and central government

GOAL 4: Correlations between different types of research		
Policy option	Example	Action oriented component
Policy within programmes to integrate different types of research project instruments.	FIFOS programme in Norway	Both user driven and research driven with user input (purely research driven)

GOAL 5: Increased priorities of eGovernment research		
Policy option	Example	Action oriented component
Establish centres of excellence on eGovernment.	The National Center for Digital Government (University of Massachusetts Amherst, USA) Center for Technology in Government (SUNY Albany, USA) VINN Excellence Centres, Sweden eGovernance Competence Center at MTA SZTAKI, Hungary eGISE (e-Government Integration and Systems)	Stakeholder acknowledgement of the importance of pooling resources for research

	Evaluation), UK	
Specific priority in programmes	Fenix, Finland (Tekes) eGovernment related thematic priority in broader programme	Programme targeted product-based businesses and projects that dealt with competitiveness and know-how in the long run.
Priority in interdisciplinary research programmes	Programme interdisciplinaire société de l'Information (PIRSI), France Calls for tenders to establish priorities	Government priority
Dedicated programme	Regione Emilia-Romagna, ICT strategy, measure 1.1	

GOAL 6: Technological development exploited in terms of new ICT, new business models and open source principles		
Policy option	Example	Action oriented component
Establishment of eGovernment standards for interoperability.	Guidelines for good practice on eHealth interoperability Recommendation of the Commission on eHealth interoperability	Implementation on European level through definition of solution
	ICT developments behind new web based tax schemes	Research based eGovernment services for privacy
Defacto standards	European computer driving license	Acknowledge of acceptable level of expertise

GOAL 7: Pan-European services established		
Policy option	Example	Action oriented component
Bi or multi-lateral call for eGovernment research on eServices for internal labour market.	European health card.	Cross-border services
Sharing the knowledge base	eService Masters Degree Republic of Ireland and Northern Ireland cooperation	Acceptance within Government of need for common model

	at Letterkenny	
Encourage cross-border service delivery harmonisation.	eProcurement IDABC I nteroperable D elivery of European eGovernment Services to public A ministrations, B usinesses and C itizens.	Consolidation
Public Private Partnerships	EUtube ¹⁸	Cooperation between European government(s) and private enterprise

GOAL 8: A European Research Area in eGovernment research		
Policy option	Example	Action oriented component
Establish joint expert groups on eGovernment research management	eGOVERNET	Close cooperation among active national research organisations
Regional clustering of activities	Nordite cooperation Joint calls between Sweden, Finland and Norway	Close cooperation among active regional research organisations

On the basis of the eGOVERNET needs and gaps analyses¹⁹, possible measures or indicators are presented that may help to monitor the progress in the field. However, the indicators suggested here need to be further discussed and explored before being adopted for long-term analysis of eGovernment research management and cooperation development in Europe. Concerning measures, there seem to be little or no established working standards for measuring eGovernment research strategies and practices within or across states. Concerning measuring eGovernment efforts in general, the OECD's eGovernment project, together with many national initiatives, has gained experience and promoted workable indicators in the field. The OECD e-Government Studies²⁰ also include eGovernment Country Studies for several member states and other nations. However, the OECD indicators in general do not monitor eGovernment research or include eGovernment research indicators in their analysis, although

¹⁸ non-exclusive arrangement between the EU Commission and YouTube, the EUtube channel now approximately 50 video clips on a wide range of topics that explain EU workings on main issues from across the 27 Member States

¹⁹ eGOVERNET Deliverables 2.1, 2.2 and 3.2.

²⁰ <http://webdomino1.oecd.org/COMNET/PUM/egovproweb.nsf>

this obviously would have been of interest for indicating maturity, experience and knowledge management levels in the eGovernment field. The eGEP (eGovernment Economic Project)²¹ project, has proposed a comprehensive framework for measurement of impact and performance of eGovernment services. As previously, no specific indicators were included for eGovernment research.

The eGOVERNET project will encourage the introduction of such a focus both at regional and national levels and at the European and international level in general. Many other actors like suppliers, researchers and governments have added their more or less generalised eGovernment measurement indicators, but these too seem to view the existence of eGovernment related research as interesting, in contrast to other important fields of interest in development like ICT, health or industry branches.

In eGOVERNET, operationally and practical adaptively is preferred for the necessity of giving an impression of the status of the field in a short term perspective.

Table 5 Measurement indicators

Goals	Practical measurement indicators
Organizations and management infrastructures for eGovernment research activities	1. Number of relevant organisations and infrastructures, with type and span.
Long-term eGovernment vision and strategy defined in correlation with research programme management	2. Identification of formal eGovernment research strategy documents in member states and their regions with simple typology of their content.
Relationship between users and stakeholders defined	3a. Identification of support instruments for cooperative R&D and their penetration. 3b. Identification of stakeholder networks with simple typology including size, stakeholder inclusion and task types.
Correlations established between different types of research	4. Identify funding instruments for different research types and their type, size and penetration.
Increased priorities of eGovernment research	5a. Identify centres of excellence, their foci, size and stakeholder inclusion. 5b. Identify eGovernment research priorities within government and regional strategies, including research strategies and programmes.
Technological developments exploited in terms of new ICT, new business models and open source principles	6. Identify eGovernment standards and their penetration.
Pan-European services established	7a. Identify bi- and multilateral services, their

²¹ <http://82.187.13.175/eGEP/>

	stakeholders, their type and penetration. 7b. Identify relevant knowledge bases of relevant cross border services and their typology.
An European Research Area in eGovernment research	8a. Identify initiatives towards an eGovernment-ERA, their scope and stakeholder involvement. 8b. Monitor the sustainability of the eGOVERNMENT network



Conclusion and Summary

The Framework proposed here by the eGOVERNET project is intended to be a dynamic handbook that grows stronger with feedback and in discussion from stakeholders. The results of the project are thus intended to feed into a strengthened focus on eGovernment research presence in the following Framework Programmes. As such it is a beneficial tool for eGovernment research programme managers to draw assistance and advocacy when designing support mechanisms.

The Framework, Deliverable 6.2, has identified the stakeholders along with an analysis of their needs; current status and practices in eGovernment research programme funding; what future needs exist and gaps identified; policy options available and examples.

According to eGOVERNET findings, there are three main sources of funding for eGovernment research. One source is Information Society (IS) research programmes. The other source is eGovernment implementation programmes. Within these sources are three categories of programmes:

1. DED: dedicated eGovernment research programmes;
2. EXPL: eGovernment research as one explicit priority in a wider programme for IST R&D or eGovernment implementation;
3. POT: eGovernment as one potential application field of other R&D programmes which may concern generic technologies and applications, methodologies and so on.

The final source of eGovernment research funding is public administration (PA), where research is done as a part of implementation projects.

There is a contrast between the (high) declared policy importance of eGovernment research, the (small) actual funding through programmes, and the (large) amount of research projects carried out on the ground.

eGovernment research today has a number of characteristics:

- eGovernment development efforts are more complex than expected
- Investment in eGovernment research remains marginal
- eGovernment research programmes appear as a bottleneck
- Procurement is an instrument for eGovernment research funding
- There is no consistency of research themes or priorities

The needs and gap analyses have generated a set of requirements for a desired future state in eGovernment research programme management. To research the desired state, a number of elements are essential for success:

- Establish organisation and management infrastructure for eGovernment research activities
- Define long-term eGovernment vision and strategy in correlation with research programme management
- Define relationship between users and stakeholders

- Establish correlations between different types of research
- Increase priorities of eGovernment research
- Exploit technological development in terms of new ICT, new business models and open source principles
- Develop pan-European services
- Build an European Research Area in eGovernment research

A set of examples for policy options has been detailed for each of the goals. These examples have been drawn from the many interest groups meetings and workshops held by the eGOVERNMENT project. They give insights into how governments throughout Europe have addressed the need for eGovernment research in creative ways.

Such forms of representation should make the policy options themselves more understandable, and provide references to policy makers and program managers based on experience.

The goals with policy options, the action component and most important, and the potential for the policy options and actions to succeed are detailed below:

Table 6 Potential visions for nation and regions to exploit the policy options

GOAL 1: Organizations and management infrastructures for eGovernment research activities established		
Policy options	Action oriented component	Potential visions
To establish a dedicated eGovernment research programme	Explicit strategic priority with specific target groups	Suitable for some nations with dedicated eGovernment and RTD policies
Prioritize eGovernment research within ICT programme	Research strategy based on embedded priorities	Likely option many nations and regions
Establish intensive Public-Private-Partnerships among academic researchers, public administration and ICT industry	Consolidated political and research strategy aligned with industry targets (triple helix)	Likely options where PPP is already well institutionalized

GOAL 2: Long-term eGovernment vision and strategy defined in correlation with research programme management		
Policy option	Action oriented component	Potential visions
Partnerships between researchers and governmental eGovernment strategy development	Research based political and/or administrative strategy on eGovernment	Suitable where a dedicated long-term strategy is well prepared.
Supported development of common specifications and building blocks	Support for targeted policy development	Recommended as a starting point where eGovernment strategy exists within one or more sector.

GOAL 3: Relationship between users and stakeholders defined		
Policy option	Action oriented component	Potential
Establish user driven research project instruments (research consortium of suppliers, researchers and government entities)	Optimal fit between innovation in eGovernment and research instruments	Well suited option for well established innovation agencies
Service oriented communication developed with eGovernment suppliers and government	Co ownership among local authorities and central government	Well suited for regions where this is not already in place. Should be suited for nations with traditions for such formal structures

GOAL 4: Correlations between different types of research established		
Policy option	Action oriented component	Potential visions
Policy within programmes to integrate different types of research project instruments.	Both user driven and research driven with user input, purely research driven)	A prerequisite and easy to target and implement for research funded agencies – a priority 1 action

GOAL 5: Increased priorities of eGovernment research		
Policy option	Action oriented component	Potential visions
Establish centres of excellence on eGovernment.	Stakeholder acknowledgement of the importance of pooling resources for research	Look to examples, - well suited where stakeholders are committed and where sufficient resources might be allocated
Specific priority in programmes	Programme targeted product-based businesses and projects that dealt with competitiveness and know-how in the long run.	Well suited where minimum 5 year programmes with well grounded priorities may be put in place
Priority in interdisciplinary research programmes	Government priority	Valued as a possible easy success. Interdisciplinary is a prerequisite for successful eGovernment research

GOAL 6: Technological development exploited in terms of new ICT, new business models and open source principles		
Policy option	Action oriented component	Potential visions
Establishment of eGovernment standards for interoperability.	Implementation on European level through definition of solution	Should be coordinated internationally and founded in evaluation studies
	Research based eGovernment services for privacy	An area of interest for citizens and businesses, that has significant potential of appreciation
Defacto standards	Acknowledge of acceptable level of expertise	Should be linked to international work

GOAL 7: Pan-European services established		
Policy option	Action oriented component	Potential visions
Bi or multi-lateral call for eGovernment research on	Cross-border services	Well suited to support prioritized areas of

eServices for internal labour market.		cooperation within groups of nations
Sharing the knowledge base	Acceptance within Government of need for common model	Important for building communication among researchers, government strategists and other stakeholders
Encourage cross-border service delivery harmonisation.	Consolidation	Necessary for high impact
Public Private Partnerships	Cooperation between European government(s) and private enterprise	Necessary for coordinated building of competence and cross fertilisation

GOAL 8: An European Research Area in eGovernment research		
Policy option	Action oriented component	Potential visions
Establish joint expert groups on eGovernment research management	Close cooperation among active national research organisations	For efficient exchange of new knowledge and experiences
Regional clustering of activities	Close cooperation among active regional research organisations	For efficient exchange of new knowledge and experiences for higher potential of innovation

Finally it is of great interest and importance to continue the momentum begun in the eGOVERNMENT project. A number of methods have been addressed and concrete discussions are underway for cooperation. Ultimately, eGovernment research should and can be viewed in a more holistic manner. (See **Fel! Hittar inte referenskölla.**)

To encourage the use of eGovernment research and research management for supporting eGovernment development, monitoring relevant activities is suggested by the following indicators, while initiating further analysis like country studies, developing a better knowledge foundation and building more advanced monitoring instruments. eGOVERNMENT thus introduces *The EU eGovernment Research Barometer*, measuring the development of eGovernment research activities, management and cooperation in Europe by regularly monitoring:

1. The number of eGovernment research organizations and management infrastructures, with type and span.
2. Identification of formal eGovernment research strategy documents in member states and their regions with simple typology of their content.

-
- 3a. Identification of support instruments for cooperative eGovernment R&D and their penetration.
 - 3b. Identification of eGovernment research stakeholder networks with simple typology including size, stakeholder inclusion and task types.
 4. Identify funding instruments for different eGovernment research types and their size and penetration.
 - 5a. Identify eGovernment centres of excellence, their foci, size and stakeholder inclusion.
 - 5b. Identify eGovernment research priorities within government and regional strategies, including research strategies and programmes.
 6. Identify eGovernment standards and their penetration.
 - 7a. Identify bi- and multilateral pan-European eGovernment services, their stakeholders, their type and penetration.
 - 7b. Identify knowledge bases of relevant cross border eGovernment services and their typology.
 - 8a. Identify initiatives towards an eGovernment-ERA, their scope and stakeholder involvement.
 - 8b. Monitor the development of size, stakeholder representation and activities, i. e. the sustainability, of the eGOVERNMENT network.

The main challenge in the following will not be to use and implement this framework as presented, but to analyse and develop it further, while implementing and learning from it to contribute to the field of eGovernment innovation and development. Thus, the eGOVERNMENT network will take on this task, transfer this framework to a dynamic context, available for inputs, refinements and extension.

~

Appendix 1. Definitions

eGovernment has numerous definitions. The best list comes from “Roadmapping eGovernment Research: Visions and Measures towards Innovative Governments in 2020” Edited by Cristiano Codagnone and Maria A. Wimmer. This book was one of the results of the eGOVRTD2020 project funded by the IST Programme. The following has been taken from this book:

2.1 Definitions for eGovernment

Authors: *Maria A. Wimmer and Cristiano Codagnone*

For some time now, initiatives and activities in the context of eGovernment have investigated the usage of ICT in the public sector and in different sector-specific implementations. Many definitions have emerged which express the breadth and depth of the field. A selective sample is provided in the following:

- Gartner Group (2000): The continuous optimisation of service delivery, constituency participation, and governance by transforming internal and external relationships through technology, the Internet, and new media.
- European Information Technology Observatory (European Information Technology Observatory (EITO), 2002, p. 288): eGovernment is defined as the use of Internet technologies to conduct, enhance and support relations with, and transactions between, different government bodies and citizens, businesses and other government bodies.
- OECD11: The use of information and communication technologies, and particularly the Internet, as a tool to achieve better government.
- Pacific Council on International Policy, Working Group on eGovernment in the Developing World: eGovernment is the use of ICT to promote more efficient and effective government, facilitate more accessible government services, allow greater public access to information, and make government more accountable to citizens. eGovernment might involve delivering services via the Internet, telephone, community centres (self-service or facilitated by others), wireless devices or other communications systems.
- United Nations: eGovernment is defined as utilising the Internet and the worldwide-web for delivering government information and services to citizens.
- World Bank: eGovernment refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.

Similar definitions with a rather general scope of eGovernment being the topic of using ICT in the public sector in order to provide public services online are given in (Lenk and Traunmüller, 1999, Schedler et al., 2003, Tambouris and Wimmer, 2004). A comprehensive definition of the scope and processes covered by eGovernment is formulated in (Lucke and

Reinermann, 2003). The European Commission (European Commission, 2003, p.7) defined eGovernment 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 to strengthen support to public policies*”.

Another broad definition was developed in the German Memorandum for eGovernment (Fachausschuss Verwaltungsinformatik, 2000, p. 3): “*Electronic government refers [...] to the implementation of processes of public participation, decision-making, and service provision in politics, government and administration with an intense usage of ICT. [...] This definition includes [...] a series of administrative and management processes as well as processes of political and financial controlling*”.

The term “**users**” means users of eGovernment as a whole, namely citizens, business and government (or public administration broadly speaking).

The term “**stakeholders**” implies the organisations that are embedded in the cycle of eGovernment research, namely research programme managers, researchers and users.²²

²² eGOVERNMENT Deliverable D2.2 eGovernment research programme management needs map. Page 24.