

**Towards a Common eGovernment Research
Agenda in Europe**

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Contents

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Editorial | 1 |
| Marjan TURK, Secretary, Directorate for the Information Society, Ministry of Higher Education, Science and Technology, Slovenia. | |
| Research & Policy Shaping | |
| Interview with Madeleine SIOSTEEN THIEL and Alexander NILSSON, eGOVERNMENT Project | 9 |
| Madeleine SIOSTEEN THIEL, Coordinator eGOVERNMENT, Senior Programme Manager, VINNOVA, Sweden & Alexander NILSSON, Assistant Coordinator eGOVERNMENT, Senior Programme Manager, VINNOVA, Sweden. | |
| Interview with Ernst BÜRGER, Federal Ministry of the Interior, Germany | 19 |
| Ernst BÜRGER, Head of Unit, Information Society and eGovernment, Head of Unit, Deutschland Online, Federal Ministry of the Interior, Germany. | |
| Interview with Jean-Séverin LAIR, DGME, France | 24 |
| Jean-Séverin LAIR, Deputy Head, Directorate General for State Modernisation (DGME), France. | |
| Interview with Frank LEYMAN and Peter STRICKX, FEDICT, Belgium | 32 |
| Frank LEYMAN, Relationship Manager, Federal Public Service for ICT (FEDICT), Belgium & Peter STRICKX, Chief Technology Officer, Federal Public Service for ICT (FEDICT), Belgium. | |
| eGovernment in the UK : National and European Challenges Ahead | 41 |
| Dr. Andrew ROBINSON, Hon. Consul for France in the UK, France & Professor Juliet LODGE, Jean Monnet Professor, University of Leeds, UK. | |
| Case Studies & Technological Demonstrations | |
| Taking Stock of National and Regional eServices across Europe – eGovernment Research Management for the Future | 50 |
| Trond KNUDSEN, Norway, Kim DAVIS, Norway, Roberto PIZZICANNELLA, Italy & David OSIMO, Europe. | |
| Current Debates | |
| Notes on the Impact of Research on the Development of eGovernment | 61 |
| Pr. Jane E. FOUNTAIN, Director, National Center for Digital Government, and Professor, University of Massachusetts Amherst, USA. | |
| 21st Century eGovernance: Turning the World Upside Down? | 71 |
| Jeremy MILLARD, Senior Consultant, Danish Technological Institute, Denmark. | |



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EDITORIAL

TOWARDS A COMMON eGOVERNMENT RESEARCH AGENDA IN EUROPE

*** Marjan TURK is dealing with accelerated development of integrated eGovernment, eHealth, as well as the development of information Society eServices and the promotion of information Society. Formerly, Marjan was Head of Unit for eServices in Public Administration at the Ministry of Information Society. Additionally, He worked for 2 years in the Electronic Industry and 9 years at the Slovenian Police as Head of the Internet-work Division.**

The Slovenian Presidency of the Council of the European Union (EU), which is spanning over the first half of 2008, is leading eGovernment into its next step in the relationship between Government and users, which is symbolised by making an “Alliance with users”.

Such novel concept for eGovernment, launched at the eGovernment Conference in Brdo, Slovenia, is based on the idea that until now governmental strategy was oriented towards users. Therefore, the next step is to create an “Alliance with users”, where Government will be closer to the users, while at the same time, will be able to better identify the needs of both users and Government.

The objective of this conference, organized by the Slovenian Ministry of Public Administration, is to join forces to create such alliance, as Slovenian Presidency policy priorities in eGovernment are important elements of it.

In their last eGovernment Ministerial Declaration, under the Portuguese Presidency of the Council of the EU, Member States have stressed out the important role of eGovernment Research in eGovernment’s future developments and have invited the European Commission to define and support research activities in four policy actions: ***Cross-border interoperability, Reduction of administrative burden, Inclusive eGovernment and Transparency and democratic engagement.***

Cross-border interoperability, which is essential to achieve to establish *Pan-European eGovernment Services* (PEGS), has been identified as one of the key policy action of the Slovenian Presidency.

Presently, the Slovenian Ministry for Public Administration is developing in collaboration with other ministries a PEGS’ prototype delivering two services to explore *cross-border interoperability* issues in a real-time environment.

The two services proposed are:

- 1) Temporary Residence notices for Students;
- 2) Registration service of a new company in Slovenia.

These services are being developed in collaboration with other Member States on a voluntary basis.

Both services are being launched as pilot services, which will later lead to production services.

PEGS’ future developments can strongly benefit from eGovernment Research on specific issues, we will be facing in reaching our policy actions.

However, the creation of a **European Research Area (ERA)** in the domain of eGovernment is still highly hindered by a number of obstacles identified as fragmented research funding mechanisms, lack of visibility and low transnational cooperation over eGovernment research policies.

When drawing from the challenges faced both at national and European levels, interactions between public administrations and the research community is a valuable asset.

The main objective of the **eGOVERNET** project, launched on 1st January 2006, is to support eGovernment Research Management while coordinating national eGovernment RTD programmes/initiatives as well as encouraging integration of existing national eGovernment programmes. The consortium supporting **eGOVERNET** represents organisations with national programming responsibilities for innovation and research in eGovernment in their home countries, involving the following Member States: Sweden, Norway, Lithuania, Ireland, Czech Republic, Poland, Italy and Slovenia.

As **eGOVERNET**'s conclusions and recommendations emphasised, both at Member State level and at European level, eGovernment research is still highly fragmented and is lacking of coordination mechanisms amongst the different stakeholders, particularly between public administrations and the research community. Therefore, better coordination of these interactions is needed at national and European levels.

As the **eGOVERNET** project is ending, the question of sustainability of the results in the long run has been raised. Currently, both the Slovenian and Norwegian partners are undertaking follow-up initiatives for future cooperation in regards to eGovernment Research funding. As one of the initiatives undertaken, the "**eGovernment Pathfinder Alliance**", is applying the "*open method for cooperation*" approach.

The objectives put forward in this initiative are to fill the needs for high quality research results to deliver PEGS, to increase 'Trust' and 'Security', to better measure *Return on Investment (ROI)* and *added value of eServices* to citizens, businesses and Public Administration. These initiatives, as the "**eGovernment Pathfinder Alliance**", are based on ERA, the opportunities and lessons learned from **eGOVERNET**'s recommendations and conclusions.

At this preliminary stage, the following two key themes have been identified and selected:

1) Personalised eServices for citizens:

- a. How does citizens find the appropriate service requested and how to deliver it in a secure way?
- b. How do we develop fully functional integrated eServices to meet these needs?

2) Pan-European eGovernment Services for mobile EU citizens:

- a. Research projects/studies on technological, ontological/semantic, organisational, legal and cultural issues related to our building blocks eGovernment strategy, European eGovernment Enterprise Architecture and compatibility issues with Service Oriented Architectures (SOA);
- b. eServices supporting free work flow force.

A cooperation model builds on informal coordination and synergies between research projects at Member States and EU levels will be apply in order to maximise on existing funding instruments at both levels.

Using the “**eGovernment pathfinder Alliance**”, synergies addressing eGovernment Research will be enhanced between researchers and Member States. Such enhanced synergies will enable a more efficient mapping of eGovernment Research initiatives and programmes at national and EU level such as EC Framework programme 6 and 7. Such alliance will strengthen the Lisbon process as an intergovernmental interface addressing the different issues arising from the policy actions decided upon in Lisbon Ministerial Declaration (September, 2007). This alliance aims at strengthening “*multidimensional collaboration*”, in which Member States can join to push forward eGovernment research funding to achieve better results and more efficient synergies.

In the future, building a common strategy both at European and Member States level is required to boost European eGovernment Research and improve concrete interaction between eGovernment Research and Public Administrations, as an important element of above mentioned “Alliance with users”.

What are the key issues to be addressed in a European context for each policy action defined in the Lisbon Ministerial Declaration? How to establish and sustain better coordination and exchange mechanisms between public administrations and the research community at national and European levels? What are the tools available to make this coordination and exchange more efficient?

How can Government contribute and improve the coordination and exchange between public administrations and the research community in Europe? Is it only through research projects funding or are there any other tools available to make it more efficient? How can Research assist policy-makers to anticipate and manage change induced by the transformation of public services in the emerging knowledge-based society?

The latest developments in eGovernment at EU level have shown that these issues are difficult challenges to address, however, the eGOVERNMENT project is proud of having path the way to a more coherent framework to tackle some of these crucial issues in the future.

This volume of The European Review of Political Technologies (ERPT), published by POLITECH INSTITUTE in partnership with the eGOVERNMENT project, entitled, “*Towards A Common eGovernment Research Agenda in Europe*”, is providing valuable leads and answers from European and International decision-makers, senior civil servants and academics to these important challenges for Europe.

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Research & Policy Shaping

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Interview with Madeleine SIOSTEEN THIEL and Alexander NILSSON, eGOVERNET Project



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ABSTRACT

What is the future of eGovernment research in the European Union? How can Research assist policy-makers to anticipate and manage change induced by the transformation of public services in the emerging knowledge-based society? How to bridge the gaps between public administrations and the research community?

Madeleine SIOSTEEN THIEL, Coordinator of the eGOVERNET Project, and Alexander NILSSON, Assistant Coordinator, are being interviewed by Daniel VAN LERBERGHE, ERPT's Editor-in-chief, on the outcome of the eGOVERNET Project and the perspectives of eGovernment research in Europe.

* Madeleine SIOSTEEN THIEL is the Senior Programme Manager for the "eServices in the Public Sector" RTD programme at the Swedish Governmental Agency for Innovation Systems (VINNOVA). She is the Coordinator of the EU/IST project eGOVERNET in the 6th Framework Programme.

** Alexander NILSSON is Assistant Coordinator of the eGOVERNET project and a Senior Programme Manager at VINNOVA. He is also researcher at the Department of Technology and Society at Chalmers University of Technology and at the Centre for human computer interaction, Uppsala University, Sweden.

1. Can you present us the eGOVERNET project?

Madeleine SIOSTEEN THIEL (hereafter M.S.T): The main objective of the eGOVERNET project is the coordination, the creation of different programmes and initiatives regarding eGovernment Research within Europe. It is also aiming at increasing awareness towards eGovernment Research and eGovernment Research programmes.

The eGOVERNET project focuses on the management of eGovernment Research programmes. The project is not a research programme, as it includes partners from Research Funding Agencies at national levels, ministries and high level policy-making organisations from EU Member States and Norway. The EU/JRC IPTS (European Union Joint Research Centre) also became a project partner. The project offers services and a platform for knowledge and good practice exchange. Additionally, it provides tools and guidelines for all countries in Europe on eGovernment Research management. In other words, it is assisting States to make better use of eGovernment Research as well as to improve and strengthen the creation process of eGovernment Research programmes, and act as an interface for different stakeholders be from academia, public sector and private sector alike.

Do you mean stakeholders as the ones gather around eGOVERNET Interest Groups? Who are the stakeholders that eGOVERNET is trying to bring together?

M.S.T.: The Interest Groups gather in closed meeting sessions representatives from all EU Member States and additional European countries. These were mainly policy-makers but also researchers. Open workshops brought together a much broader range of different stakeholders. During these sessions, we succeeded to established a list of contacts of several hundreds stakeholders, who have shown interest in the project's activities and who will be the main target group for eGovernment Research. The eGOVERNET project has offered them a platform for exchange, dialogue and good practices to improve awareness amongst eGovernment Research at European, national regional and local levels.

Alexander NILSSON (hereafter A.N.): eGOVERNET has undertaken different workload in regard to various stakeholders. Three dimensions have been taken into account: (1) generating knowledge – e.g. state of art analysis in eGovernment Research funding in different countries to better grasp this issue; (2) providing *services* like tools or guidelines such as to strengthen eGovernment policy making or to improve eGovernment Research management; (3) build up *networks* – to create common understanding and to exchange good practices.

Could you provide an example of the tools and services proposed?

A.N.: Several examples can be made. In regard to policy-making, for instance, the set of guidelines to enhance better use of research results. Amongst these, you can read our recommendation to appoint a Chief Knowledge Officer and “Research Information Tsar”, who will grab and disseminate information to increase information and knowledge use.

Another example targeting programmes managers will be the guidelines for harmonised evaluation processes for eGovernment Research projects. Adequate evaluation processes are critical when reviewing funding applications and assessing projects' results.

Are these available through the eGOVERNMENT website?

A.N.: Yes of course. The criteria and guidelines for enhancing eGovernment Research's impact are perused in our Report available to download at the following URL: <http://www.egovernet.org>. I would like to emphasize that some results, developed in the framework of the project from its beginning, are based on our background knowledge and are categorized following their purpose, such as the Who's Who Directory, one of the first service offered by eGOVERNMENT, aiming at connecting different stakeholders using Internet as a social networking tool.

To complement this social networking, the project enabled face-to-face encounters between the stakeholders during conferences, workshops and interest groups. This dimension constitutes a very important part of our project and required an efficient organisation and teamwork between consortium partners.

2. What do we mean by eGovernment Research?

M.S.T.: I believe that eGovernment Research should be better defined, as it has not yet been formally identified as a research thematic. We are lacking of generally accepted definition in this domain. Indeed, eGovernment Research is a broad interdisciplinary area, which involves, not only technical- and scientific-oriented research, but also socio-economic aspects such as users' behaviour, different society models and public management.

This characteristic needs to be recognized as it has a major influence on eGovernment development, not only in regards to public eServices, but also in improving the efficiency of Public Administration and in the adoption of user-centric vision of eGovernment.

Do you mean that there is a need for an input from social science alongside Computer Science as in the other ICT domains of research?

M.S.T.: Yes. It is a broad area and it includes many different research fields. Researchers are not easily convinced of the benefits of collaborative work within their own community. But it becomes a real challenge when collaboration is involved, not only amongst the research community, but also with Public Administrations and businesses.

A.N.: At the beginning of the project, we have defined eGovernment Research¹. However this definition needs improvement and fine-tuning especially in regard to whom you are addressing. Beside the definition challenge, there is also a need to better understand its

1 eGovernment "is the application of ICT, organizational change and skills to Public Administrations (PAs) in order to promote modernization and innovation in the public sector." [DOW p.5]

eGovernment RTD

- Does not include the actual implementation of eGovernment
- Includes different disciplines with equal relevance, with ICT as a key enabler
- Includes different stages of research, from fundamental research to action-oriented research and the innovative integration of existing solutions. Does not include the diffusion of ICT in the public administration
- Is carried out in both public and private sectors, but eGOVERNMENT focuses on research funded through public sector programmes
- Does not include public sector activities specific only to health and education

purpose and objectives and the key role it plays in RTD (Research and Technological Developments) projects in the domain of eGovernment. In my opinion, this dimension plays an important role in raising awareness about eGovernment.

Indeed, eGovernment Research, whether technically or social science oriented, and mainly the interactions amongst researchers but also across the eGovernment community, can certainly enhance the understanding of eGovernment's developments.

This aspect also relates to the fact that during the eGovernment Ministerial Conference, held in Lisbon in 2007, eGovernment Research was brought back as an important element of the Ministerial declaration on eGovernment, due to your project efforts and results. Indeed, for a short period, it has been disconnected from Research, as a lot of questions about eGovernment Research have been raised by the European Institutions. Therefore, is eGovernment Research a research field of its own?

A.N.: It has been brought back in different ways. Research provides state-of-the-art analysis and a knowledge pool, which are crucial when developing or implementing eGovernment projects.

M.S.T.: eGovernment Research is more action-oriented and applied research and therefore not fundamental research.

3. The fact that eGovernment is seen differently from country to country in terms of vision and concept, is playing an important role in its future development, especially when addressing the European Union and the collaborative efforts required to work together towards the completion of the European Project. In such a context, how is the eGOVERNMENT project tackling these issues and in which key areas are harmonization of vision and concept required?

M.S.T.: Alexander has already mentioned some of our activities within the eGOVERNMENT project, such as exchange of good practices and knowledge transfer, but also network building across stakeholders from different European States and sectors. Therefore, it has offered a platform for dialogue, exchange and interactions on eGovernment Research in Europe, which is crucial for eGovernment future developments.

Such platform helped us to understand the existing differences of vision and concepts as well as potential grounds for collaboration at European level. We have not worked so much on harmonization of concepts per se, but on differences and similarities between stakeholders to improve awareness and collaboration. To achieve this, eGOVERNMENT has developed a comprehensive framework to assist stakeholders involve in elaborating eGovernment Research programmes using and proposing different tools and services.

A.N.: During the project, we have organised workshops, where the specific needs of these stakeholders were addressed. Then, we have been formulating a first set of desired states matching eight goals, which served as a basis to coordinate and overcome existing barriers between countries.

Coming back to the feedbacks received from policy-makers during the interviews we have conducted, and more specifically on their expectations from eGovernment Research, the need for comprehensive mapping of eGovernment Research and on hand state-of-the-art analyses of eGovernment issues was key for the successful conduct of eGovernment projects. For example, the Belgian representative was confronted to these issues during an implementation eID project at European level. The lack of comprehensive mapping at European level and of on hand state-of-the-art analyses forced them to devote project time to these issues, which were not the main focus of their project. Did you have the same feeling during eGOVERNMENT Interest Groups meetings? Do you believe that eGovernment Research can fill this need for better mapping and state-of-the-art information in the future?

M.S.T.: Very much so. The needs analysis made from our workshops clearly emphasises it. In eGOVERNMENT project's scope, we have published a report, which provides an overview of the state of the art in research programmes in all Member States and other European countries. Of course, these fact sheets need to be regularly updated but they provide key and concise information on the different national initiatives and activities in eGovernment Research in Europe.

Although we did not run programmes addressing these issues, we have succeeded to raise awareness on these important needs. We are setting up an eGovernment Research portal, which will certainly enable better mapping of eGovernment Research programmes and outcome in Europe.

Can you present to our readers this portal?

A.N.: This new web portal for eGovernment Research will act as a repository for the eGovernment community. The platform enables an interactive and collaborative approach, aiming at gearing up the benefits of eGovernment Research to enhance better use of its results. This web portal will target mainly policy-makers and research programme managers, as well as civil society. In addition, this portal will offer a blog, a Wiki and a forum to discuss eGovernment topics. This portal is still at an early stage and aims at including additional stakeholders in its future developments.

In regards to your example above, the need for state-of-the-art in specific areas of eGovernment Research such as the eID has been emphasised by the different stakeholders we met during our Interest Groups' meetings. As research is more fragmented that we thought at the beginning of the project, such analyses are very difficult to provide. However, with better coordination, exchange and dialogue we will be able to meet this need in the future.

4. Last September in Lisbon, in their eGovernment Ministerial Declaration, EU Member States have stressed out the important role of eGovernment Research in eGovernment's future developments and have invited the European Commission to define and support research activities in 4 policy actions. Do you have any comments on how research should be managed in relation to these?

M.S.T.: The issue has been raised during eGOVERNMENT seminars and workshops. However, our project did not aim at prioritising eGovernment Research themes, but at stakeholders needs to improve coordination, dialogue and exchange for developing better programmes and initiatives in eGovernment Research at Member State and European levels.

When speaking about funding, are there any specific areas that require more attention in the near future for the policy-makers to encourage and stimulate research and projects in eGovernment? The above EU Ministerial policy actions are being viewed by policy-makers as actual needs to improve Government such as the “Reduction of Administrative Burden”, more “Inclusive eGovernment”, more Transparency and Democratic Engagement”. Is there a need to focus funding in these priority areas rather than spreading it around the all span of eGovernment Research?

M.S.T.: eGovernment Research is seen as a cross-disciplinary research field. Therefore, these policy actions are closely interrelated. The important question to be raised is why eGovernment Research is needed? To illustrate this, let us take as example the “Reduction of Administrative Burden” (b). Different research projects and themes are directly connected to overcome this particular challenge and therefore, need funding. eGOVERNMENT focuses on areas where eGovernment Research can be useful rather than on a prioritisation of themes.

In this respect, eGovernment Research meets policy-makers needs. Policy-makers are the ones giving priority to issues following their political, economical and social needs and agenda. From this agenda, they need to be able to evaluate how eGovernment research can help dealing with these challenges. Then, if priorities have been set at European level, we will give priority to these issues and support these themes in our project.

Do you think that some of the themes are underdeveloped compare to others? For example, “Democratic Engagement” (d) is a relatively new policy action at European level. Therefore, research in this field may be less developed than in other fields of eGovernment?

M.S.T.: I would argue the opposite take for example “Cross-border Interoperability”, which is a more technical research field. Few years ago, many eDemocracy and eParticipation projects were undertaken, but priorities have changed over time.

In my view as a programme manager for eGovernment Research at national level in Sweden, and not as eGOVERNMENT’s coordinator, mapping should be an interesting tool for future collaboration to avoid renaming projects. I am aware that research themes are a major issue in Europe, but in eGOVERNMENT, we have much broader approach to eGovernment Research, which aims at developing research programmes when funding has already been allocated.

A.N.: We don’t have background studies on the concrete needs for research yet, especially in cross-border interoperability as such. But this question has raised a major interest amongst stakeholders.

As follow from the feedback from the interviews we conducted amongst policy-makers, the lack of research in legal matters is an important issue for them, as a lot of laws were adopted before the Internet Revolution and eGovernment itself. It came also from the feedback of the previous interviews from the policy-makers. For example, the area that is lacking of research in their point of view is the legal domain or on the financial benefits of eGovernment. In their views, one of the main barrier to eGovernment is to convince decision-makers of its importance and therefore, research which could provide scientific arguments to that end is most welcome.

Therefore, do you think research can play an active role in regards to these issues?

M.S.T.: You made a very good conclusion here. We have grasped from our Interest Groups meetings and workshops that technical oriented research is not the major concern for eGovernment's future developments.

Indeed, social behaviours, legal matters and measurements are very relevant to eGovernment Research in that respect. However, there is still a gap between the eGovernment Research community and policy-makers, that eGOVERNMENT is trying to bridge.

5. An important initiative emerging from the eGOVERNMENT project, is the creation of an eGovernment Ambassadors Alliance, can you explain to our readers, this initiative and how do you foreseen its impact in terms of better coordination and exchange amongst Public Administrations and the eGovernment Research community at European level?

M.S.T.: This initiative aims at disseminating eGOVERNMENT's results as well as to create a forum for policy-makers to enhance eGovernment Research collaboration at European level. We have noticed during the project when we collaborated with other 6 Framework Programme funded projects, that there is a tremendous will for collaboration and exchange. This initiative was undertaken in collaboration with the R4eGov project, co-funded by the European Commission.

Ambassadors and diplomatic representations have not only a practical experience dealing with Public Administrations both at home and abroad, but also understand that public eServices are pan-European and cross-border by nature. Therefore, transnational collaboration needs to be improved and better managed.

We have noticed that Ambassadors and embassies have not only the practical experience of public administration organization but also understood that public eservices are pan-European issues where transnational cooperation is needed. Therefore, Ambassadors are natural stakeholders and a privileged channel for information for policy-makers.

But why did you choose Foreign Affairs Ministries to deal with research, as in your project you interact with mainly research ministries from the different Member States?

M.S.T.: Not only research ministries are involved in our activities, but also funding agencies. The eGovernment Research area is rather complex and it is dealt at the highest levels

of Government and in all States different ministries are involved in these issues, such as research, funding agencies, finance, prime-minister chancelleries, innovation and of course Foreign affairs.

Throughout its duration eGOVERNMENT has tried to reach out to these different stakeholders, but what is of interest regarding embassies is the fact that they have practical experience and know-how with pan-European services and national administrations. Therefore, eGovernment Research can benefit from this know-how as well as assist them to improve their own processes and structures. It is a win-win collaboration.

A.N.: I would also like to emphasize that this eGovernment Ambassadors Alliance is one way to sustain eGOVERNMENT activities in the long run. Ambassadors are a key interest group and on the ground practitioners close to policy-makers and verse in international collaboration, while understanding the needs and requirements for interoperability issues faced at European level. Such initiative is in our view the most appropriate forum to improved eGovernment Research in the near future.

6. What are the main conclusions and recommendations coming out from eGOVERNMENT?

A.N.: During the project, many recommendations that had a strong impact on decision-makers were published, such as we have continuously tried to enhance better exchange and dialogue between researchers and policy-makers as a result of one simple recommendation, which was to publish research reports easily readable by policy-makers.

Do you believe that there is a communication issue between researchers and policy-makers?

A.N.: Absolutely. Researchers and policy-makers live in two different worlds that need to be bridged.

We have developed formal work packages, which contain a set of recommendations. These recommendations, which can be general or more specific ones, include guidelines, as the impact indicators, which are analyses on the meaning of eGovernment Research, but are also guidelines on how to better-evaluated research programmes.

The main conclusion of the eGOVERNMENT project is the need for basic collaboration between countries, which is extremely difficult to meet. At the beginning of the project, and even before, as we planned on applying for an ERA-net programme, we thought about the possibility to launch joint calls for proposals between Member States. This turns out to be a very difficult issue.

M.S.T.: The main conclusion from our Framework Report is what we named the bottleneck dilemma: On one hand, policies are produced regarding eGovernment and eGovernment Research in particular, and on the other, many projects that are related to are not directly labelled as such. Between these two ends of the spectrum stands eGovernment Research programmes, which constitute the bottleneck, we have identified and would like to study it more, especially in regards to funding.

7. Drawing from eGOVERNET's main findings and conclusions, what should be the main research themes for eGovernment to be taken further by the Slovenian and French Presidencies of the Council of the European Union?

M.S.T.: Of course, eGovernment issues remain important at European level. We will try to collaborate not only with the Slovenian and French Presidencies but also with the Czech and Swedish Presidencies in 2009, to ensure sustainability in our work. It is essential for these Presidencies to recognise the importance of eGovernment research in future eGovernment developments in Europe.

The development of joint research programmes should also be a top priority for the future Presidencies, as the one initiated by in collaboration with the Nordic and Baltic countries. This new project is called NORIA-net Citizens' Services (funded by NordForsk,) and will aim at launching a joint call for proposal in late 2009.

A.N.: I wish that these presidencies will provide discussion forums and exchange platforms and stay aware of the importance of these issues at European level.

8. What would be on your New Year's wish list for 2008 regarding eGovernment Research in Europe?

M.S.T.: I wish that eGovernment Research programmes would be a top priority in the European Commission 7th Framework Programme.

A.N.: We look forward to more involvement of research in the implementation projects, as well as an increased in knowledge exchange between them. To this end, the ePractice.eu framework has definitely been a source of inspiration to us

Do you believe as researchers, that time is ripe to move from the good practice approach to a case study approach, as in the business administration field, where case studies, as the one published by the Harvard University Review, have been a source of reference to practitioners and researchers alike? Could it be an interesting work to be undertaken by the eGovernment Research community to provide effective tools to policy-makers?

A.N.: Definitely. This a tool that will be required to better understand eGovernment projects, results and impact and how to use research that have already been accomplished in terms of implementation and future research.

Interview with Ernst BÜRGER, Federal Ministry of the Interior, Germany



*Ernst BÜRGER**
Head of Unit, IS & eGovernment,
Head of Unit, Deutschland Online,
Federal Ministry of the Interior, Germany

ABSTRACT

How can eGovernment contribute and improve the coordination and exchange between public administrations and the research community in Europe? Is it only through research projects funding or are there any other tools available to make it more efficient? How can Research assist policy-makers to anticipate and manage change induced by the transformation of public services in the emerging knowledge-based society? How will the recent appointment of a German Chief Information Officer impact the future of eGovernment in Germany and in the European Union?

Ernst BÜRGER, Head of the Unit, Information Society and eGovernment and Head of Unit, Deutschland Online, Federal Ministry of the Interior, Germany, is being interviewed by Daniel VAN LERBERGHE, ERPT's Editor-in-chief, on the perspectives of eGovernment Research in Germany and in the European Union.

*** Ernst BÜRGER is Head of the Division for Information Society (IS) and eGovernment at the Office of the Task Force Deutschland-Online at the Federal Ministry of the Interior, Germany. Before 1998 Ernst BÜRGER was attorney-at-law and coach for public law. After joining the Federal Ministry of the Interior, he was initially involved in the shaping of the Immigration Act. From 2002 onwards, he headed the office of State Secretary, Brigitte ZYPRIES, and subsequently the office of State Secretary, Dr. Göttrik WEWER.**

1. The fact that eGovernment is seen differently from country to country in terms of vision and concept plays an important role for its future development, especially when addressing the European Union and the collaborative efforts required to work together towards the completion of the European project. In such a context, how is Germany tackling these issues and in which key areas is a harmonization of visions and concepts required?

Ernst BÜRGER (hereafter E.B.): Of course, cultural differences exist amongst Member States. But the European Project, in which Germany strongly believes, definitively constitutes an important step towards harmonization and common vision.

At the last IT summit, which took place in Hanover last December 2007, Germany started to tackle these issues by appointing, for the first time in its history, a national Chief Information Officer (CIO). His main task for the coming years will be to harmonize IT both at Federal and state level. In addition, the CIO will present the German position on IT matters to the European Commission and possibly help create a CIO board at European level.

Indeed, better harmonization and better coordination are needed to improve eGovernment in Europe. Take, for instance, the Services Directive, which is one of the top eGovernment projects: it was drafted by one unit while other units or divisions didn't know about it. Better harmonization and better coordination pose the greatest challenges in this respect.

Also, coordinated efforts and strong political leadership have resulted in the creation of the VISA Information System in 2007. That's why we believe we need better coordination in Europe.

We think that the German initiative of appointing a national CIO should be extended to all Member States. The European Commission should have a CIO too. As I have already mentioned, this could lead to the creation of a CIO board at European level where harmonization of concepts and visions, standardization and cross-border interoperability could be discussed. So, we really need support from decision-makers on ICT issues at European level to achieve this aim.

2. How can eGovernment Research contribute to overcoming these challenges that the future CIO will have to face, as you mentioned, for example, on cross-border interoperability issues or standardization? How do you think eGovernment Research at European level or even at national level can contribute to assisting the countries and the European Union in the following years to overcome these challenges?

E.B.: We definitely have to solve these major challenges.

Cross-border interoperability and standardization, of course, require a pan-European research framework and collaborative work at European level.

But on the other hand, we believe that eGovernment Research should primarily be developed at national level, because most eGovernment services address local requirements. And first of all every EU Member State has to address its own special character and the complexity of its own government system. There are marked differences within the EU Members related to political culture and structure of public administration. In Germany, for example, a knowledge-based economy is emerging and requires specific eGovernment Research involving multi-

disciplinary aspects, such as IT, law, business and social sciences. Germany has decided to tackle this issue by carrying out an analysis of eGovernment Research on its own territory as part of a conference that took place last July. A task research community has been created on that occasion and will hopefully bring attention to research at European level.

In addition, collaboration is also needed between industry and public administrations. Politicians and decision-makers should have a prospective view of these issues and not only request immediate solutions. Research could therefore help them to deal with future opportunities in this field.

3. Last September in Lisbon, in their eGovernment Ministerial Declaration, EU Member States have stressed the important role of eGovernment Research in eGovernment's future developments and have invited the European Commission to define and support research activities in 4 policy actions. Could you suggest or identify, in terms of importance, one or two key issues that you would like to be addressed in a European context for each of the following policy actions?

a) Cross-border interoperability (to define, develop, implement and monitor broad cross-border interoperability generally required for the implementation of the Services Directive, for example cross-border services, eID card, identification of valid certificates and so on):

b) Reduction of administrative burden (to use eGovernment as a lever to contribute to the achievement of the objective of reducing administrative burdens for citizens and business in Europe, to use internationally recognised methodologies (e.g. Standard Cost model) to measure eGovernment services, focusing on the realisation of ICT enabled benefits and impact of public services, to deliver eGovernment services that are easier to use and of benefit to all citizens by increasing user centricity, improving accessibility, convenience and user experience):

c) Inclusive eGovernment (to increase social impact by ensuring that all citizens benefit from eGovernment services):

d) Transparency and democratic engagement (to explore new ways of public participation and increased transparency enabled by innovative ICT technologies for democratic engagement and transparency):

E.B.: We believe that these four points are of extreme importance to create the integrated market where both - citizens and goods - can cross borders freely within the European Union, as prescribed by the Lisbon Strategy for 2010. Therefore we supported the suggestion to put these research issues on the agenda of the EU.

With a view to driving forward our national eGovernment development, Germany has firstly focused on the reduction of administrative burden through the adoption of the standard cost model and the development of eGovernment. The initiatives that will be taken towards this goal will be implemented in the daily work processes of all civil servants.

This also implies a change in the process chain: we want information and data to circulate between agencies, not between citizens. So, with this new process chain, every piece of information communicated by a business owner in an application form, for example, will only be given once. This user-centered perspective is one of the most important points of our system.

New models of organization and integration of ICT will therefore be needed along these lines.

Also, the focus should be on our citizens to a much greater extent at European level; in this regard, inclusive eGovernment and eParticipation represent key challenges of the Ministerial Declaration of September 2007.

Finally, as you mentioned, cross-border interoperability is essential to build the infrastructure required to create an integrated market as well as to implement the EC Services Directive (for example, the electronic identity will facilitate the establishment of a business in another Member State). Perhaps, an upcoming CIO board could describe more clearly what is needed at European level with regard to this infrastructure.

4. When drawing from the challenges faced both at national and European levels, interactions between public administrations and the research community seem to be a valuable asset. However, as the eGovernment project emphasized from its findings, both at Member State level and at European level, eGovernment Research is still highly fragmented and lacks coordination mechanisms amongst the different stakeholders, particularly between public administrations and the research community. Do you believe that better coordination of these interactions is needed at national and European level and how would you propose to tackle this issue?

E.B.: Once again, we think that interactions between public administrations and the research community, the need for better coordination appears to be crucial. The first comprehensive overview of the eGovernment research landscape in Germany, which was presented during the Conference of last July, has shown that this field indeed is still highly fragmented. Although business science-oriented research exists on a wide scale in Germany, other research areas must be improved.

We strongly believe that Member States have to put more efforts into ICT research, as it is one of the major instruments to build the Information Society and its applications in the future.

In 2006, the German high-tech strategy has led to an increasing interest in the different aspects of research. The main focus has been on ICT, a key sector for innovation with a major impact on other domains, such as mechanical engineering or logistics for example. But coordination in the research area is still to be improved. We believe that collaborative work amongst Member States as well as the creation of European research teams will help solve this problem.

In addition, a CIO board could draw up guidelines on the ICT areas where research is needed in a near future.

It is clear for you that there is a need for coordination and one of the instruments you mentioned could be the new CIO board at European level. Do you think that there are other tools available to make it more efficient rather than research projects funding, which are the usual mechanisms, or calls for tender?

E.B.: Of course, we have to simplify the administrative procedures for researchers, which has already been requested among the research community. This reduction of administrative burden will therefore allow them to find funding more easily.

6. For the first time, on 1 January 2008, Slovenia, a new Member State, will take over the EU Presidency, and on the second half of the year, France, which has always worked hand in hand with Germany to promote the European project, will preside at its turn over the EU. What should be their main focus in eGovernment in general and to improve eGovernment Research at EU level in particular?

E.B.: We think that the main issue to be considered is the creation of a research community for cross-border eGovernment at European level. In addition, as I mentioned, a European CIO board would be a very important instrument for the harmonization and coordination of ICT in the European Union. Communication problems on major topics between divisions of the European Commission or between Member States could also be avoided in the future.

7. What would be on your New Year's wish list for 2008 regarding eGovernment in Germany and in Europe?

E.B.: At European level, I consider strong political leadership among the European Commission that is in a position to tackle the issue of the reduction of the administrative burden in Europe as essential. Strong political leadership is also needed at national level. Now that the CIO has been appointed in Germany, it will be time for strong decision-making while implementing the Ministerial Declaration resolutions. At this time, we need good luck and hard work!

When you refer to strong leadership, do you refer to what is commonly regarded as eChampions at political level, ie politicians who do not only make tough decisions in general but who are also interested and ready to understand the challenges and the problematic of the Information Society?

E.B.: Yes, we think that in the future, we will need politicians who recognize the opportunities offered by ICT to change traditions in politics. ICT issues should come to mind in the decision-making process. We believe we are on the right track by appointing a national CIO for the coming years.

Interview with Jean-Séverin LAIR, DGME, France



*Jean-Séverin LAIR**
Deputy Head,
Directorate General for State Modernisation
(DGME), France

ABSTRACT

How can eGovernment contribute and improve the coordination and exchange between public administrations and the research community in Europe? Is it only through research projects funding or are there any other tools available to make it more efficient? How can Research assist policy-makers to anticipate and manage change induced by the transformation of public services in the emerging knowledge-based society?

Jean-Séverin LAIR, Deputy Head, Directorate General for State Modernisation (DGME), France, is being interviewed by Daniel VAN LERBERGHE, ERPT's Editor-in-chief, on the perspectives of eGovernment research in France and in the European Union.

*** Began as an expert in Information Technology in governmental security, Jean-Séverin LAIR moved to eGovernment development in the new French eGovernment Agency (ADAE) in 2003. Since 2006, he's Deputy Head, eGovernment Unit in the Directorate General for State Modernisation (DGME).**

1. The fact that eGovernment is seen differently from country to country in terms of vision and concept, is playing an important role in its future development, especially when addressing the European Union and the collaborative efforts required to work together towards the completion of the European Project. In such a context, how is France tackling these issues and in which key areas are harmonization of vision and concept required?

Jean-Séverin LAIR (J.S.L.): It is true that eGovernment is seen very differently from country to country. But in fact, the concept of government itself differs from country to country, which implies divergent views of the essence of public services, being whether a free version of similar services delivered by the private or specific to the public sector. eGovernment leads to a similar problematic, but I don't see a real harmonization happening on this field in a near future.

What, in my opinion, appears to be essential is that Member States could interact and interoperate as easily as possible, such as the existing pan-European social services for instance, which allow the exchange of social declarations or information on a citizen's social coverage at European level. Discussions have been raised on the infrastructure required for efficient pan-European services, especially on the choice between having a single or multiple entry points in each country. France would favoured the single entry point, so that each country would manage the complexity of its own back office.

You want to keep the back office specific?

J.S.L.: It would be a nightmare if each country would have to know the characteristics of the administration of all other countries. I take the example of social domain because it is very complex in France. If you want to know the social coverage of a person, there are thousands of organizations you may have to choose between. I don't think all the countries are very keen on knowing the complexity of our social domain. As France doesn't want to know the complexity of the others' s system, the real harmonization will be in fact to define different points of exchange which can be simple enough to understand by other countries.

Technical and semantic interoperability represent of course key issues in this matter. But I believe that the exchange back office should be as simple as possible in order to facilitate exchanges of data and tasks between Member States. A simplified architecture of our administrative infrastructure could in this field constitute a good solution. Back offices would remain country-specific.

So, the EU project which is currently running, the E-Gov Bus: the front end of the future pan-European services, is the model that you have envisaged?

J.S.L.: Indeed, interactions between different national are really the major problem to be solved.

Each country gathers personal data from a citizen living on its territory, even if this citizen comes from another Member State. This citizen is part of his country of residence 's administrative system, through income tax number or social security number and so on.

He must be able to easily interact with the Public Authorities of the Member State where he lives. Communication of personal data from another country should also be simple. But I think an access to other countries internal procedures is not really a key priority on this.

Most of the time, that is where the problem starts. For example, if you have to buy a car, for immatriculation, you may have to prove your identity, your address or the fact that you have a driver's license. Good links between back offices should be simplified but the front end should be in the country responsible for the request.

2. Of linking those back offices more on the technical point of view, because you mentioned semantic interoperability, maybe the organizational part could be also important?

J.S.L.: Progress has been made on technical and semantic interoperability, not only at European level but also at international level. In regard to semantics, normalization efforts of UNCEFACT could be used worldwide.

eGovernment research could be useful on achieving the simplified administrative model I mentioned earlier, possibly diminish the amount of positions in the administration. Knowing quite well the French system, it may be not so easy to achieve because of the divergence in the definitions of concepts and the limits of each administrative sector, for instance tax and social sectors.

3. Last September in Lisbon, in their eGovernment Ministerial Declaration, EU Member States have stressed out the important role of eGovernment Research in eGovernment's future developments and have invited the European Commission to define and support research activities in 4 policy actions. Could you suggest or identify one or two key issues that you would like to be addressed in a European context for each of the following policy actions?

a) Cross-border interoperability (to define, develop, implement and monitor broad cross-border interoperability generally required for the implementation of the Services Directive):

J.S.L.: Efforts have been made on cross-border interoperability, which implies not only eIdentity but also eDocuments, since exchanges between back offices come down to the transmission of information. The eID project, which has been financed by the European Commission, had already addressed in a forgotten chapter the importance of defining a common format for eDocuments in the European Union. Austria has initiated by law the use of eDocuments, even for important pieces such as court papers. I think this initiative could be extended to all Member States. The first step would be to define a common format for eDocuments at European level.

So, basically, the work on the standard of open documents?

J.S.L.: No, simple standards of open documents or even PDF format without extension cannot be the solution to such as complex issue. We need to take into account the following requirements:

- we need to have data (it must be XML format most of the time)
- we need a human readable format (which can be pdf for example)
- we need to define a common way on the metadata of the document (kind of document, entity, date of validity, ...)
- we need also seals or security measures (signatures, ...)

PDF with many extensions could be a solution but efforts should still be delivered on this.

b) Reduction of administrative burden (to use eGovernment as a lever to contribute to the achievement of the objective of reducing administrative burdens for citizens and business in Europe, to use internationally recognised methodologies (e.g. Standard Cost model) to measure eGovernment services, focusing on the realisation of ICT enabled benefits

and impact of public services, to deliver eGovernment services that are easier to use and of benefit to all citizens by increasing user centricity, improving accessibility, convenience and user experience).

Last year, Paris wanted to be a cybercity. Maybe at local level, there are more work to be done. You might want to encourage exchange at European level?

J.S.L.: The reduction of administrative burden, which seems to obsess me, is the most problematic policy action of the Ministerial Declaration. Member States want to quickly improve their services to citizens and businesses but often do not realize that back offices must be improved first. Efforts have to be made, not on the front office but on the back office

For the front office evolution Member States should adopt a more user-centric perspective while dealing with integrated services. Most of the time I haven't found convincing studies on this issue: governments usually create new services or try to improve the existing ones without questioning the exact needs of users. Research could help us conducting high level surveys on this matter, not a question of good or bad but really to capture the exact needs of the citizens on integrated services.

- c) Inclusive eGovernment (to increase social impact by ensuring that all citizens benefit from eGovernment services).**

This year at the Issy-les-Moulineaux eDemocracy Forum, the Dutch Minister of Interior won an award because of their citizens charter. Basically, they were using the idea of democratic engagement to better nine services through finding the needs of citizens. It was referred as guidelines by the OECD. Do you think it could be transposed in France?:

J.S.L.: I think it is a good idea. But this initiative should lead to concrete applications and not just remain a political declaration. The Netherlands have indeed developed extremely interesting work in regard to different categories of population or different age groups, that could maybe be transposed in France.

Inclusive government is not easy to achieve. Associations or local authorities have created successful initiatives in this field in France but only on a small scale. Research could also help us provide for a more efficient way of promoting eGovernment services to the different categories of population.

Do you think there are convergence of tools, mobile, IDTV, like they did in Flanders?

J.S.L.: Maybe. But since France doesn't use television as a service tool, it may not be a good solution yet. Mobile phones would be far more interesting.

When talking about inclusive government, we focused basically on population who don't have access to the Internet: the digital divide. However, when talking to the British, they always mention that everyone speaks about the digital divide but what about the generational divide, as young people are already voting for stars on their mobile? Is it a problem that France is facing?

J.S.L.: I do not have the exact numbers but we are experiencing a double generational divide: from 40 to 60, a majority of the citizens are not interested in the Internet Technology. But, above 60, although the entire age group is not yet concerned, more and more senior citizens are using the Internet technology, not for eGovernment purposes but to stay in contact with their families.

More than a generational divide, we are therefore facing another phenomenon: we need to create an added value in the use of those integrated services to reach a population which is at the moment outside the Internet generation and which is only looking for high efficiency.

- d) **Transparency and democratic engagement (to explore new ways of public participation and increased transparency enabled by innovative ICT technologies for democratic engagement and transparency); this policy action is quite new and was tackled by local authorities in certain municipalities in France.**

In regard to democratic engagement, eParticipation starts to become quite an important domain to explore at the European level. The European Parliament has invested a budget for an eParticipation call addressing research take up in these issues. Where is France standing? We have good examples at local level of different eParticipation schemes, even one which has won the eEurope award, Besançon?

J.S.L.: France hasn't yet developed the area of eParticipation on a large scale and is therefore not so well ranked in the UNO Report. I believe that collaborative work, which seems minor, is the key element to improve democratic engagement and transparency in our country.

In France, and especially in public Authorities, we have a culture of perfection, which is not so efficient and needs to be improved. eGovernment research could provide us with some guidance in this field via, for instance the exchange of good practices and experiences developed in other countries such as Canada for instance. Nevertheless, collaborative work starts to be recognized as a key factor in the development of eGovernment and will help us improve efficiency with increased transparency and fewer ambitions of perfection.

- 4. When drawing from the challenges faced both at national and European levels, interactions between public administrations and the research community seem to be a valuable asset. However, as the eGovernment project emphasized from its findings, both at Member State level and at European level, eGovernment research is still highly fragmented and is lacking of coordination mechanisms amongst the different stakeholders, particularly between public administrations and the research community. Do you believe that better coordination of these interactions is needed at national and European level and how would you propose to tackle this issue? Is it through funding or are there other tools available?**

J.S.L.: As I mentioned earlier, eGovernment is also a government issue. The concept of government itself depends upon the society model of each Member State. This discrepancy of vision and the competition between those different society models at European level imply a fragmentation of the eGovernment research field as well as an obstacle to better

coordination amongst Member States.

Indeed, if better coordination at European level would promote the anglo-saxon model, I will not be so happy with it. Those important issues have already been addressed by a prospective work on the future of eGovernment I participated to some time ago.

Better coordination is needed both at European level and at national level for sure. For my part, and that is something very interesting considering your question, I don't know very well who are in France the people who are doing eGovernment research.

You mean in the research community?

J.S.L.: Yes, eGovernment research is not only facing a lack of coordination but also a lack of promotion of its activities.

Basically, like the Who's who they developed at the eGOVERNMENT project where researchers and civil servants identify themselves...

J.S.L.: Yes, this is something very interesting.

This means that for you mapping is important to reflect on the national level and maybe build some bridges between the different entities and coordination. When speaking about European level, we think mainly about the European Commission but, for example, I recently discovered the European Science Foundation, which I personally find interesting. We hear about those bodies but we don't know their purposes and their focus. At European level, there are also entities who lack coordination but one of the things Internet is good for is to create an engaged community.

J.S.L.: Yes

So, do you think that tools like ePractice or Web 2.0. could assist you at national level to map who's who, which projects are run, etc?

J.S.L.: France has developed such a tool. The website "Synergies publiques" which is open to all stakeholders engaged in eGovernment, provides for information on strategic orientations on eGovernment in France as, for example, the interoperability framework.

A growing number of visitors are also giving their opinions on various topics presented on this website. It shows the need for social networking in eGovernment, as successfully developed at European level by the ePractice on good practice. For the moment, our interaction with research community is limited to one association, which is dedicated to the Internet: the FING (Fédération Internet Nouvelle Génération). But contacts with the research community should definitely increase.

Do you think that associations, third sector could help on network of researchers?

J.S.L.: The DGME has signed a convention on collaborative work with an engineering school, which is an alternative solution to funding.

Do you think that poles of competitiveness, which are expanding in France, could be useful to eGovernment?

J.S.L.: I don't really see a "pole de compétitivité" on eGovernment

For example, Sofia Antipolis, dealing with ICT to encourage interactions, even offline, with those different researchers

J.S.L.: Yes, there are some different interesting poles of competitiveness in regard to ICT flow, not really on specific eGovernment issues.

Do you think maybe that an instrument like a pole of competitiveness could maybe help or assist you?

J.S.L.: That is an interesting question.

Or do you think they are more oriented toward development?

J.S.L.: No, I was thinking about the fact that eGovernment research is not technically-specific. In order to be useful, poles of competitiveness in eGovernment research should help industries developing added value and reusable solutions, which could only happen for the Information System of local authorities. At State level, industries either win or lose a call for tender, you have far less reusability.

But France has a lot of local authorities. So, maybe it could be interesting for example to have a pole of competitiveness addressing some typical services at local level and improving the solutions which are given to them.

That is something really interesting. To be honest, I never thought about it but I take the idea and keep it to see what we can do about it.

5. What would be on your New Year's wish list for 2008 regarding eGovernment in France and in Europe?

J.S.L.: This is a difficult question to answer but I guess I would wish for the French public authorities to improve their information management as well as to develop a real high level policy in this field.

I also wish that Europe would better promote key instruments of eGovernment development, such as interoperability and open source.

Open Source? The second European Interoperability Framework focuses on open standards rather than open source. Do you make a distinction between the two?

J.S.L.: Yes, Similar tools are developed simultaneously by the different national public administrations, such as identification through log in or documentary evidence. Development and maintenance costs should therefore be mutualized amongst Member States, although the topic seems still highly sensitive at European level.

Interview with Frank LEYMAN and Peter STRICKX, FEDICT, Belgium



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ABSTRACT

How can eGovernment contribute and improve the coordination and exchange between public administrations and the research community in Europe? Is it only through research projects funding or are there any other tools available to make it more efficient? How can Research assist policy-makers to anticipate and manage change induced by the transformation of public services in the emerging knowledge-based society?

Frank LEYMAN, Relationship Manager for FEDICT, Belgium, and Peter STRICKX, Chief Technology Officer for FEDICT, Belgium, are being interviewed by Daniel VAN LERBERGHE, ERPT's Editor-in-chief, on the perspectives of eGovernment research in Belgium and in the European Union.

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** Peter STRICKX is Chief Technology Officer at FEDICT since 2001. He was the technical lead in projects such as FedMAN, Universal Messaging Engine (UME) and the Federal Authentication Service and co-authored papers on open standards and the use of ODF. His interests include programming and microprocessor & network technology.

1. The fact that eGovernment is seen differently from country to country in terms of vision and concept, is playing an important role in its future development, especially when addressing the European Union and the collaborative efforts required to work together towards the completion of the European Project. In such a context, how is Belgium tackling these issues and in which key areas are harmonization of vision and concept required?

Frank LEYMAN (F.L.) & Peter STRICKX (P.S.): First of all, I would like to mention that Belgium is a federal state, with different regions and linguistic communities.

Our political structure has helped us dealing with and managing different opinions, different points of view, different strategies, different budgets, different cultures, etc...As a Federal Ministry, we serve indiscriminately every citizen and every business. By definition, we have to take into account these differences and still come with a solution for the benefit of all.

Our objective is to create the best possible infrastructure to enable citizens and businesses in Belgium to maximize their abilities in new environments in a world where technology is evolving and changing on a daily basis.

What do we concentrate on? What is our priority in this respect? At this stage, it is probably coming down to interoperability. We implement at national level in regard to the three levels of interoperability (technological, semantic and operational) the same classification and rules that are used at European level. For us, standardization and harmonization of definitions are key interoperability issues, which are translated into the building blocks strategy we have implemented. As a concrete example to this harmonization both at national and regional levels, the concept of "life events" is translated in the same way whenever dealing with citizens or businesses (irrespective of the level of authority (federal or regional)).

2. How can eGovernment research contribute to overcome these challenges, mainly in regard to interoperability and the definition of concepts?

F.L. & P.S.: I believe eGovernment Research could play a major role in overcoming these challenges by advising Member States for example on standards and their evolution, on technological developments and on the complex issues of semantic interoperability. eGovernment Research could definitely assist Europe in developing cross-border interoperability, while taking into account the specific characteristics of every Member State.

In 2006 during eGovernment Ministerial Conference, held in Manchester by the UK Presidency of The Council of the European Union, the concept of "Transformation" was adopted in Europe. This concept focuses more on organisational change in the Public Sector and organisational interoperability. In this respect, do you believe that eGovernment Research can assist to overcome these challenges?

F.L. & P.S. : Nowadays, Transformation is unavoidable. It has become a constant with which we need to live and to which we need to adapt. But again, I think that, by anticipating changes, eGovernment Research could assist Member States in managing better these issues related to the transformational stage.

3. Last September in Lisbon, in their eGovernment Ministerial Declaration, EU Member States have stressed out the important role of eGovernment Research in eGovernment's future developments and have invited the European Commission to define and support research activities in 4 policy actions. Could you suggest or identify one or two key issues that you would like to be addressed in a European context for each of the following policy actions?

a) Cross-border interoperability (To define, develop, implement and monitor broad cross-border interoperability generally required for the implementation of the Services Directive):

F.L. & P.S.: I consider cross-border interoperability (a) to be the most important policy action in this Ministerial Declaration. I am also personally involved in the newly launched European Commission co-funded pilot on electronic identification (eID) interoperability, in which we are dealing with a number of differences amongst Member States.

I would illustrate this with non-technical examples such as the differences between Member States legal systems and the absence of legislation regarding cross-border interoperability and cultural differences between Member states (e.g. cultural, political and organisational).

The issue of "trust" is another example where differences are present, as each Member State has defined its own levels of "trust", leading to specific definitions and concepts. Therefore, as we are in the process of implementing cross-border interoperability, we are facing the challenge of "connecting an apple with a pear", if I may say.

In this respect, eGovernment Research can assist us again in solving the above challenges.

I believe that eGovernment Research could explore these non-technical challenges necessary as well to overcome the different barriers to implement cross-border interoperability.

In regard to "trust", during one of the Interest Group, organised by the eGOVERNMENT project, the French representative, argued that French have a long historical tradition of not "trusting" their public authorities, do you agree with this remark?

F.L. & P.S.: I cannot speak for France. There are no data in Belgium available that could support the argument of my French colleague. Personally I don't have such a strong feeling with regards to Belgians trusting or not Belgian Government. I am sure that at all levels (national, regional, local) you will have skeptics and enthusiasts.

b) Reduction of administrative burden (to use eGovernment as a lever to contribute to the achievement of the objective of reducing administrative burdens for citizens and business in Europe, to use internationally recognised methodologies (e.g. Standard Cost model) to measure eGovernment services, focusing on the realisation of ICT enabled benefits and impact of public services, to deliver eGovernment services that are easier to use and of benefit to all citizens by increasing user centricity, improving accessibility, convenience and user experience):

F.L. & P.S.: I have noticed that each Member State has reached a different stage of implementation in regard to this policy action. In regards to “The Reduction of Administrative Burden” (b), priorities and needs due vary considerably between Member States. Therefore, this situation represents a barrier to good practice exchange.

Can eGovernment Research be of any help on this issue?

F.L. & P.S.: Not at this stage of implementation. Maybe, eGovernment Research can assist us in mapping what has already been achieved, by whom and what stage in the development have these projects been done. In addition, eGovernment Research can assist Member States in the decision-making processes and more precisely in measuring the impact of these projects on the reduction of administrative burden.

FEDICT has recently developed a measurement project called SEMOVAL, which is a tool designed to evaluate and measure the impact of eGovernment projects and to assist Public Authorities in their decision-making processes regarding eGovernment.

During the interview, we conducted with the German representative, he referred to the use of the “Standard Cost Model”, used widely as a tool to major the impact of eGovernment projects in relation to cost, rather than the impact of the project itself. Is SEMOVAL taking into account such model and the issue of cost?

F.L. & P.S.: SEMOVAL is a more comprehensive tool, as it does not only focus on cost figures or technological implications, but also measures the political impact of a given project. I would like to emphasize, that we have developed in SEMOVAL, data interpretation, which are suiting the Belgian context. Therefore, to be transferred and used by another Member State, SEMOVAL, will certainly need customization.

Can SEMOVAL be transfer as a good practice to other countries?

F.L. & P.S.: I believe that any tool developed in eGovernment can be transferable to other countries, which would be interested to use it. I believe that SEMOVAL can be useful to other countries. However, a tool, which will allow comparative analyses between Member States, will be even more beneficial in respect to your question.

c) Inclusive eGovernment (to increase social impact by ensuring that all citizens benefit from eGovernment services):

F.L. & P.S.: Here again, priorities and stages of implementation vary from country to country. However, I would like to emphasize that “Inclusive eGovernment” is linked to the concept of the Digital Divide, and therefore, it’s also country-specific.

Thus, mapping of research in this area, comparative analyses of similar projects initiated by Member States and their degree of transferability in the Belgian context, can be extremely useful to us.

d) Transparency and democratic engagement (to explore new ways of public participation and increased transparency enabled by innovative ICT technologies for democratic engagement and transparency):

F.L. & P.S.: In this respect, we are addressing eDemocracy and also Public Authorities' openness in their processes and activities. I believe eGovernment research on how Web 2.0 tools such as Instant messaging or blogs can assist a State or a Public Authority to increase its transparency and improve democracy can be very useful to us.

How do you think it can be applied to Belgium as most Member States such as the UK, have engaged in eParticipation or eDemocracy to increase voting turn-out and citizens' participation in the electoral and democratic process, however in Belgium, and perhaps the Netherlands, voting is mandatory by law?

F.L. & P.S.: Since voting is mandatory by law in Belgium, our eDemocracy objectives are not related to increasing voting "turn-out" but are focused on transparency (which data is being used where and for what reason) and customer (citizens and businesses) participation. eGovernment research could assist us in determining how "Web 2.0."- technologies could benefit governments in improving their interaction with citizens and businesses.

Every application and tool that is being developed and implemented of course interests us, however, we need a budget, implementation processes specific to Belgium and of course political support to do so. This is a characteristic of the Belgian political system, where every minister is setting his agenda and priorities. This is linked to our political system: every minister sets up his own priorities. eGovernment research can assist us in getting political support by providing concrete arguments and facts that will show in a scientific manner the real benefits, impact and potential of eDemocracy applications and tools on the population and democratic process of our country.

4. When drawing from the challenges faced both at national and European levels, interactions between public administrations and the research community seem to be a valuable asset. However, as the eGovernment project emphasized from its findings, both at Member State level and at European level, eGovernment research is still highly fragmented and is lacking of coordination mechanisms amongst the different stakeholders, particularly between public administrations and the research community. Do you believe that better coordination of these interactions is needed at national and European level and how would you propose to tackle this issue?

F.L. & P.S.: Your question is a rhetorical question. Obviously, better coordination is more efficient and effective at the end of the day. So, we will not argue this aspect.

Large research programmes at European level are technical oriented programmes, where, in my opinion, coordination should be improved. For example, European Commission IDABC programme, which is developing and supporting many concrete projects and applications, however, due to a lack of coordination amongst programmes, these projects with similar objectives as pilots from other programmes are initiated in parallel.

Therefore, eGovernment Research could improve exchange and coordination between these similar projects and applications to generate a greater and more direct impact. For example, issues such as the legal ones, we are facing in the eID pilot we are participating in, could have been solved if interactions between programmes and projects would have been better. Now, we have to find a partner willing to undertake a study on these issues in a limited amount of time due to project's constraints.

In your views, do we need better interactions and information exchange between projects, funded by different programmes or between programmes themselves?

F.L. & P.S.: I believe that we need better alignments between research results and programmes.

A large part of a project is devoted to fundamental research and state of the art studies, which in my opinion should be conducted prior to the project or pilot launching, and most of the project time span should be allocated to the actual development or implementation phases. A better correlation between research results and concrete needs for technical research, directly available to citizens and businesses would enhance research potential and benefits. Without concrete results, research would remain abstract.

5. How can Belgium contribute and improve the coordination and exchange between public administrations and the research community in Europe? Is it only through research projects funding or are there, in your view, other tools available to make it more efficient?

F.L. & P.S.: Funding of research projects is only one method to improve the coordination and exchange between public administrations and the research community. Other ways are to set-up workshops in which administrations present their "research" needs to the research community ; a centralized "research"-portal where governments could search for "eGovernment" related research etc... In that respect, again correlation will reveal itself to be very efficient. In addition, I would like to see how research results could be translated into guidelines. Such guidelines will be very helpful to Belgium.

6. Belgium is seen as Europe's Laboratory by the EU, therefore, drawing from your main eGovernment achievements (eID, Interoperability and one-stop shop strategy), what should be the main focus in eGovernment for the forthcoming EU Presidencies (Slovenia and France) to foster better and more efficient collaboration mechanisms to improve eGovernment research at EU level?

F.L. & P.S.: Integrate research as an important element into eGovernment programmes

Create research deliverables within a limited time-span (not a big-bang approach (first output is at least 24 months out) but gradual steps every 9-12 months towards pre-defined goals).

You mentioned at the beginning of the interview that Belgium is a Federal State, a mini-Europe in a sense. Do you think Belgium can give an added value to that process of collaboration?

F.L. & P.S.: Belgium as a Federal State is very similar to Europe as a federation of independent Member States. Therefore our experience in defining an eGovernment “governance” model based on consensus and respect for each other’s competencies could be an added value to that process of collaboration.

7. What would be on your New Year’s wish list for 2008 regarding eGovernment in Belgium and in Europe?

F.L. & P.S.: In comparison with Belgium, some Member States have made enormous progress in eGovernment thanks to the political support they received, such as Portugal. Portugal has benefited, from a strong political support and will from its dynamic Prime Minister, who is a strong believer in eGovernment and the benefits of Information Technology (ICT). This support has led in the last two to three years to impressive results in different ICT related domains.

Therefore, on my wish list for 2008, I would wish that Belgian decision-makers recognized the absolute need for eGovernment to achieve their policy objectives. I hope that eGovernment will be part of their mission statement and therefore benefit from a budget to realize its aims. Belgium will strongly benefit from leaders who understand the importance of eGovernment for our future.

In the interview conducted with Germany’s representative, the role of a CIO (Chief Information Officer), as it was implemented in Germany, should be beneficial at European level to foster better policies coordination in Europe. Do you think that a CIO, would help decision-makers to be more receptive to the benefits of ICT and eGovernment at national and European level?

F.L. & P.S.: We do not have a CIO in Belgium, but I can give you a list of at least seven people who are filling that role at every level of government we have in Belgium. However, what we do have in Belgium is coordination committees, strategic committees and so forth. These committees are set up of representatives from all regional entities and linguistic communities, who are meeting on a regular basis to deal with ICT and eGovernment issues. Most of the time, decisions can be reached on a consensus basis, and I believe we have to learn how to work in a consensual manner. If a CIO would be more efficient, I do not know that.

At European level, I am not convinced that a CIO would help either. The message I would like to send to the European level is to increase coordination and improve dialogue amongst stakeholders, such as on technical and implementation issues. I would definitely make a plea for better coordination and dialogue, which following our experience is key for successful eGovernment.

eGovernment in the UK: National and European Challenges Ahead



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ABSTRACT

Alliances and mutual learning platforms have never been more important, as events last year have shown. 2007 may come to be seen as a pivotal year for eGovernment in the UK.

While the UK Government is moving to consolidate its own dispersed websites in an effort for improved efficiency, questions are being asked about control, accountability, trust and security, not just at national level but within regions as well.

This also raises the issue of the UK's real engagement with EU directions in eGovernment, and whether the UK needs now to look at and learn from lessons from other memberstates and from EC R and D projects, to rebalance and even correct transatlantic reliance and limitations of national vision and practice.

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2007 : eGovernment in the UK : the scoreboard scenarios

In November 2005, under the UK Presidency, the Manchester eGovernment Declaration was issued. It set ambitious targets for Europe i2010 and created momentum in Europe. The i2010 Action Plan was subsequently adopted in 2006 and the two played an instrumental role in building and sustaining synergies between the EU's member states.

The recent CapGemini Report on eGovernment in the EU, prepared for the eGovernment Summit in Lisbon in September 2007, showed a generally positive record for eGovernment in the UK. The UK was in fifth position overall, after Austria, Malta, Slovenia and Portugal, sharing with them above average scores for the quality and supply of on-line public services. In fact, the UK has moved up from 6th position in 2006, with now 89% of public services on-line, and with a 90% score for the sophistication of its web services. The Report paid attention to "user-centricity", and here the UK was 20% above the EU27 average of 19%. Where the result was less satisfactory was in a range of sub-classifications shared across the EU, such as data security, reduction of the administrative burden for users and providers, and compliance with accessibility standards. These are criteria which recent events, described below, have thrown into sharp focus, with implications on traditional Government as well as eGovernment.

It is important to differentiate between the provision of accessibility and user-friendliness of online information about government and public services for citizens and the management and processing of data about citizens by public authorities. The UK scores well in respect of the former but has encountered significant difficulties in respect of the latter.

Large scale examples of the investment made by the UK Government recently in on-line services are to be found in the IT for Health programme, and the consolidation of multiple sites into two major portals for a wide range of public services.

The UK Government has invested large resources into equipping the National Health Service with a fit-for-purpose IT system, which, despite setbacks, appears to be moving towards overhauling part of the NHS's historical reliance on paper-based records, in a system where 40% of the overall effort is about data collection, transfer and usage. And the Government is also consolidating its own websites into two major portals, on UK Direct for citizens' services, the other for business via Business Link on-line. All this, plus the top score in eParticipation for the UK in the UN's Report on eGovernment Preparation published in 2005, underlined the commitment to on-line services as one of the hallmarks of the Labour Government since 1997. Of course, there have been setbacks, as in many other countries : the Government has quietly shelved the further development of an NHS on-line University and a national eUniversity, perhaps recognizing powerful vested interests in the medical world and the established dual-mode approach and popularity of the Open University, created, ironically, by the Labour Government in the 1970s. The NHS system for recruiting and allocating posts to junior doctors was also shelved after the personal details of last year's recruits appeared on the web, and following severe criticism from senior doctors about the appropriateness of automated selection criteria.

2007 : Setbacks and Stocktaking

By 2007, concern has shifted from the ability to present and access information clearly online to how securely government departments handled information provided to them by citizens.

A series of humbling events dented citizens' trust in two critical pillars of the eGovernment edifice, which they they had assumed to be in place : trust and security. Three cruel months –September, October and November- brought a catalogue of e-calamities. First, following the SWIFT banking problems, there was the first run on a UK bank for 150 years, despite Government assurances, and the collapse through overload of the bank's on-line system at the height of the crisis. This private sector debacle was swiftly followed by disclosure of a series of data losses which smacked of slack practice in the handling and outsourcing of data.

Government departments lost data on child benefit recipients, some 25 million UK citizens, including bank details, allegedly through simple carelessness by a junior official. It subsequently became clear, however, that the dispatch of large personal data files stored on cds by post and road was far from uncommon. Data on UK drivers was lost from Belfast on discs sent to the USA, home to a company engaged to handle and store government data. The effect of these events, and others hinted at, had immediate political effects : the eGoverned felt vulnerable and citizens felt betrayed, obliging the Government to apologize, to scrutinize procedures for security and accessibility, and to consider penalties for loss or misuse of data by government officials. The national ID card scheme, endorsed by the Labour Government, came under the spotlight as never before, as citizens and the media began to examine much more critically the alleged benefits and security of central data systems. Nevertheless, The Prime Minister began the New Year with a robust statement insisting that ID cards would be introduced, firstly for visa applicants and visitors on a compulsory basis, and then for UK nationals on a voluntary basis.

This questioning of trust and privacy in some aspects of eGovernment had instantaneous political impact, contributing to a sharp loss in the Government's popularity. Though rarely called eGovernment, the competence of Government to manage its citizens' data efficiently, safely and securely came up against clear evidence of systems and working practices that were clearly not fit-for-purpose. And whereas a couple of years ago it was the UK Home Office which was criticized for mishandling records (eg on returning UK citizens having offended abroad), now a wider sweep of Government Departments were exposed to sharp criticism by MPs, citizens, national and international media. However, it is still not clear that Government has learned the lessons or taken sufficiently into account and responded to legitimate citizen concerns and distrust of Government claims as to the security of personal data. While pushing citizens to secure their personal data, government officials have been seen to be careless at best and at worst dismissive of the potential insecurities that arise for citizens knowing that their personal details have been outsourced to unknown or undeclared companies, commercialised and sold on for purposes other than those for which they were originally supplied.

Legacies and Lessons

Legacy systems are never changed overnight nor easily, and the UK itself has moved from one special kind of a unitary state to another in the past 10 years, after devolution to Scotland and Wales, and recent restoration of some devolved powers from London to Northern Ireland. In England, the rejection of a limited-power regional Assembly in North East England in 2004 halted any such move to devolved power to English regions from London. So, in an area of central importance to both citizens and politicians, there are now in fact four National Health Systems in the UK, with England, Scotland, Wales and Northern Ireland having sub-national variations of the 1948 statist model, with implications for pricing, access, treatment, and the

ICT arrangements to deliver these differentiated services to citizens.

If 2007 has been a pivotal year for eServices in the UK, 2008 and beyond will be years when a range of questions will be raised entwining technology and politics as never before, and with civic concepts such as trust, security, fairness and transparency bridging both technology and politics.

The following list will inform the debate :

- how secure is the whole outsourcing process, when personal data is handled in India, USA, or wherever?
- Should lower costs determine the outsourcing process?
- Should 'efficiency gains' continue to take priority over the needs for security and access?
- Under what rules and conditions is data held and exchanged in the countries and companies outside the UK which handle data on UK citizens, and people from around the world visiting the UK?
- How accountable are companies, including non-UK companies working for the UK Government, to the UK taxpayer and governments when major security leaks occur?
- How adequate and sufficient are financial penalties or criminal penalties to encourage robust baked in security from the outset? How fast can they be updated to keep pace with technological advances?
- How does Parliament scrutinize major eGovernment programmes? Is scrutiny enough to ensure real accountability or is accountability no longer possible?
- How can legitimate concerns among citizens be addressed?
- How can vulnerabilities in remote and online transactions be addressed to decrease fraud and the exponential rise in cybercrime?
- If current eGovernment projects are judged to be insecure within a national context, what chance is there of getting popular support for either exchanging data at the EU level or for automated European interoperability between public sector data systems?
- How can the socially excluded and disadvantaged, the disabled and an ageing population be expected to keep in step with and collaborate with eGovernment procedures, if they fail to provide the essential requirement of trust and reliability in handling individuals' data?
- Can citizens be expected to trust the UK's national ID card system and willingly join it or will the Government indeed resort to fines for non-enrolment as originally envisaged? The new leader of the Liberal Party is on record as saying that he will not comply.
- How does Government restore confidence in its ability to manage large IT schemes, and create alliances with citizens on benefits of both cost and service?
- What can we learn from other countries, especially EU Member States and regions?
- What lessons might be learned from studying the CNIL in France, a national watchdog on the impact of Internet-based technologies on citizens' privacy?
- How will the UK cope with Article 8 of the Services Directive?
- Should citizens be able one day to monitor and even control some key aspects of their data held by Government?
- What are the objections to allowing citizens to be in control of access to and the release of their personal data?

Starting to Think Outside the Box

In 2006, a report by one of the UK Government's favourite thinktanks – IPPR – suggested that central government in the UK was always very reluctant to learn from the experiences of

other countries, sometimes called the “not invented here” syndrome. Perhaps. This cannot be said, though, for the influence of some transatlantic political economists over the past 30 years, during which the long shadow of the Chicago group has led to probably greater implementation of US-originated market-led policies in the UK than in any other EU country, on a scale and speed that would never be countenanced in the USA itself, with its federal traditions and bulwarks.

But if Governments are to tackle the challenges to their very legitimacy, they will have to deal head-on with questions which past civil services and governments never encountered.

In a knowledge economy, governments and civil servants will need to be knowledge brokers themselves, enabling and empowering citizens by example. They will need to prove to citizens by providing the evidence for and fitness of e-services which create tangible benefits in terms of better services, easier access, lower costs, and return on national investment. They will have to reconsider some aspects of outsourcing public policy information and delegating to outside private agencies, and sometimes to unaccountable organisations the transformational power of ICT for health, mobility, security, and jobs.

Benchmarking and Benchlearning

If pride comes before a fall, then lessons need to be learned from both good and bad practice, not just at home but from other countries also, so that the national way forward can be adjusted and measured by the experience of others. Fortunately, there are both international and European arenas available to gain and share such experience. The scoreboards of both the UN and the OECD on national eGovernment records provide one set of benchmarks.

This will now be matched by a focus on pan-European eGovernment services (ePEGS) being undertaken by the OECD, and the lessons they may provide for other pan-regional economic and political groupings of states in the world. The focus on ePEGS in the EU is timely : it reflects the impact and implications of electronic transactions and services across the EU in Article 8 of the Services Directive, and the broader implications for sharing of information in areas such as policing, security and justice within the Reform Treaty of the EU to be ratified in 2008.

Some benchlearning has also been started at a lower, but just as valuable a level – that of a region. In the North East of England in November 2007, some 35 professionals from backgrounds as diverse as solicitors, private sector, police, anti-fraud experts, academic computer software departments, and the regional development agency, met over two days to consider how a region might build a more robust framework of response to a growing lack of confidence in both public and private eServices as demonstrated by recent events in the UK. With invaluable and contrasting input and insights from Jacques Bus, Head of Unit in ICT Trust and Security in DG InfoSoc at the EC, Brussels, who agreed to attend the event, the immediate outcome of the meeting was the decision to create the Hadrian Project. Its aim to deliver a regional set of training, awareness, and foresight programmes, secured from national, regional, private sector and perhaps EU sources, to creating the content and context of evidence, experience and knowledge so that this particular region, already a national pioneer in anti-fraud action, can take a lead in building trust in the often difficult transition to a regional knowledge economy.

A regional knowledge economy must balance openness and competitiveness with privacy rights and trusted technologies used by and for citizens.

National Awareness Enhanced by European Engagement

No less important is the European dimension to the UK, where its early encouragement of the Single Market programme (the 1992 project) was championed by Mrs Thatcher as part of the move towards a more open, business-friendly Europe. That dynamic, followed by the pervasive advent of the Internet across business and government, plus later enlargements creating a Europe of 27, again require the UK to think strategically both for itself and its partners as the EU gains greater coherence globally.

Just as research informs innovation and development in the private sector, so its effect in government needs to be understood and selectively utilized, where it brings benefit.

But too often policymakers fail to appreciate the relevance and applicability of many research projects and recommendations. Instead, they seem to prefer the recommendations of private-sector consultants and miss, through lack of awareness or a tendency to seek the traditional private 'solution', the evidence of research funded by government itself in universities and national research laboratories, or research funded by the EC often with key inputs from the UK's research community.

There has never been a better time to engage in a process of mutual learning. Most major government projects now involve large ICT commitments and components. The European Data Protection Supervisor regularly identifies and reports on privacy and data handling weakness and solutions. Governments and citizens are anxious about and perplexed by ICT-led developments in biometric identification in passports and other ID domains, data management, fraud and ID theft, never mind the future challenge of the Internet of Things at the very time when there has been, especially among UK residents, a massive increase in international mobility. Rather than being surprised by events in the future, it is essential to make Government alert to, engage with and even shape the implications of the implementation of Article 20 on EU diplomatic and consular protection, moves towards a Common Consular Space and an EU External Action Programme, cross-border healthcare provision, judicial and police collaboration, and convergent standards for EU passports and visas.

Better National Protection and Performance Informed by EU Pilot Projects

With the UK being a net contributor to the the EU, it makes sense to reap the fullest benefits from its membership. This has usually been seen in terms just of a financial return, but the lessons of EU research projects are no less vital, and maybe more so.

A number of EC R and D projects demonstrate the capacity to test, criticise and question the ways governments tackle national challenges, by taking a wider, Europe-wide view informed by good practice from public-private consortia, experience and piloting. Often such projects involve the evidence of small countries with pioneering experience of eGovernment. Below are some EC and national projects from which other states, and particularly large member states like the UK, but also France and Germany, and their regions, can benefit in shaping their own domestic eGovernment programmes:

- the Bürgerkarte and successful eGovernment projects of Austria
- the eJustice EC project (2004-6), and eJustice programme piloted again by Austria
- secure eVoting in Estonia
- The FIDIS project and its implications for biometric identification
- the SecurEgov project into security in ePEGS systems
- the Challenge project
- the eGovernet Project led by Sweden into eGovernment Research in the EU
- the Barriers to eGovernment project nearing completion
- the launched STORK project into eID (funded by CIP)
- the R4eGov Integrated project into secure eGovernment data exchange interoperability at scale between Member States and agencies

The eGovernment Ambassadors Alliance

One challenge is to CHANNEL the findings of projects such as these to those who need to know. This is where the concept of the eGovernment Alliance comes in. Its aim, like that of the High-Level Conference on eGovernment in February in Brdo as part of the Slovenian Presidency, is to bring users, providers and researchers together, so that they deliver TRUSTED eGOVERNMENT services for European citizens. And so that crucially, the latter's shared interests can be built-in by design at each stage from conception through each upgrade to new systems.

The eGovernment Ambassadors Alliance, an initiative of the R4eGov project, encouraged by eGovernet and informed by the Challenge projects, will be officially launched at the eGovernment Days in February. This builds on the pre-launch in Lithuania in December 2007 endorsed by the Swedish Ambassador to Lithuania. What does the word "Ambassadors" refer to? It designates officials within Embassies and Consulates, who, like the Swedish Ambassador, recognize the need for information, intelligence, foresight and simple eTools to handle the increasingly complex and technology-informed world in which they deliver services abroad to their mobile citizens. It also refers to anyone in national public administrations who needs the tools, training and foresight to cope with practical eGovernment in an integrating Europe. The power of the Alliance will be its capacity to link, share and shape better ways of delivering effective and efficient eGovernment services based on the evidence of pathfinding European, national and regional research.

Slovenia : Presidency Pathfinder in eGovernment

It is fitting that Slovenia hosts eGovernment Days at this time of change and challenge. As the first new member-state from the recent enlargement processes to host the EU Council, it demonstrates how size is unrelated to capacity to learn, lead, innovate and inform, and not least in the recent advances it has made in eGovernment. Perhaps for new EU members which were once part of now-defunct federations, or satellites of the former Soviet Union, questions of identity and borders are also matters of freedom, for both their governments and their citizens. There are important lessons here for the older and larger members of the EU, some of which, like the UK, have embarked on a process of devolved powers to their own nation-regions, with their own agendas for self-management, public governance and accountability. Some new states, small in scale but big in experience, not least having recently transitioned from one system to another, can bring their evidence to share and shape their

and their partners' agendas in eGovernment. The critical ingredient is nurturing the desire to learn together : lifelong learning for trusted eGovernment. If that desire can be secured and sustained, the benefits for implementing some key elements of the Reform Treaty within member states, and for the EU as a place and model for democratic values of privacy, civic rights, and security will owe something to the Presidency of the Republic of Slovenia in the first half of 2008.

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Taking Stock of National and Regional eServices across Europe – eGovernment Research Management for the Future*



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ABSTRACT

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.

The main findings of this 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 built together in the **EU eGOVERNET Research Barometer**.*

An eGovernment Research Management Framework was deduced that describes ways, in which eGovernment research programme managers, applicable research programme managers and policy-makers could support and apply eGovernment research.

The full reports are found at <www.egovernet.org>.

* This paper is based on eGOVERNET's Report D6.2: *Proposal for a European eGovernment Research Programme Framework*, by the same authors.

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What is “eGovernment Research”?

The eGOVERNMENT project (www.egovernet.org) is a coordination action supported by the European Commission’s 6th Framework Programme for Research and Technology Development and aims at stimulating and integrating eGovernment Research programmes in the European Research Area (ERA).

The main objective of the eGOVERNMENT project is to coordinate the creation of national eGovernment RTD programmes and initiatives and to encourage the integration of existing national eGovernment programmes.

The consortium, including old and the new Member States, as well as Associated States (states not member of the EU, but taking part in the Framework programme), represents organisations with national programming responsibilities for innovation and research in eGovernment in their home countries. The partners have come together with a view to coordinate their research policies and work towards a long-term strategy for eGovernment Research.

This paper is relying on and presenting the main results of the work undertaken throughout the entire eGOVERNMENT project, from the many interest groups meetings, the workshops on eGovernment programme activities, policies and actions to the deliverables published by the different work-packages that have investigated the eGovernment programmes landscape and, last but not least, the discussions amongst the partners.

Figure 1 illustrates the overall structure of the eGOVERNMENT project analyses and work.

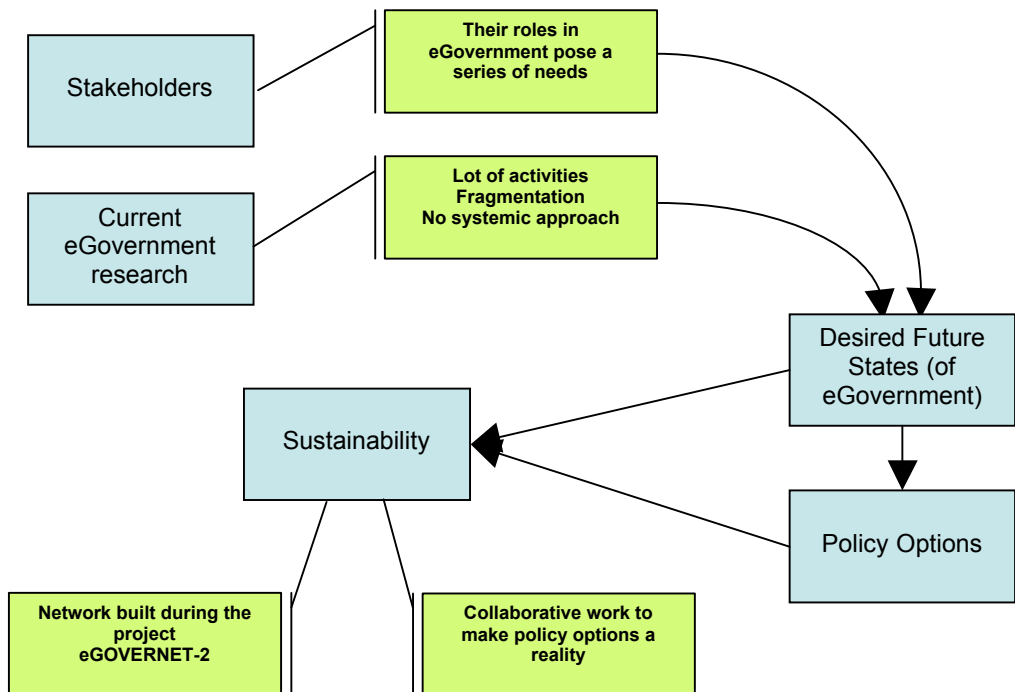


Figure 1 Overall structure of the eGOVERNMENT project analyses and work.

Here, we are presenting an overall understanding of eGovernment Research’s funding mechanisms and policies in Europe. Stakeholders have been identified using a needs analysis; state-of-the-art and good practices in eGovernment Research programme’s funding; a mapping of existing future needs and gaps; policies options available and examples, as well as suggestions for an open method of sustainable coordination among funding eGovernment Research entities.

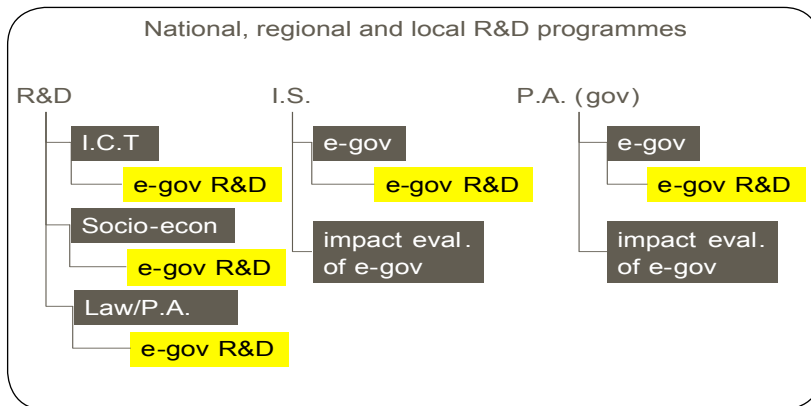


Figure 2 Parallel funding streams in eGovernment.

Currently there are two main sources of eGovernment Research funding as illustrated on Figure 2: (1) Information Society¹ (IS) research programmes and (2) eGovernment implementation programmes. From these sources, we can identify as illustrated in the table below, three categories of programmes².

Table 1 Categories of eGovernment Research Programmes

| | |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DED | Dedicated eGovernment research programmes |
| EXPL | eGovernment research as one explicit 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, etc. |

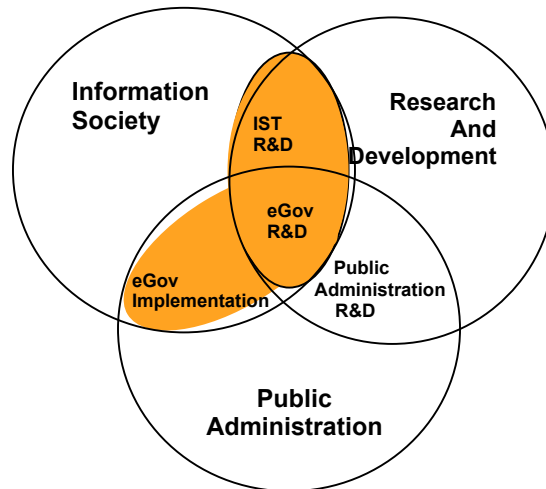
The final source for eGovernment Research funding is Public Administration (PA), where research is part of implementation projects.

1 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

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

There is a discrepancy between the (high) declared policy for eGovernment Research, the (small) actual funding through programmes, and the (large) amount of research projects carried out on the ground. In order to address some of these bottlenecks, we shall review eGovernment Research stakeholders and their needs, as well as the state-of-art and research themes on the agenda. Then future needs will be established based on work undertaken during this project and the eGov RTD roadmap project. Finally, suggestions and examples of eGovernment research strategy options will be presented.

In our view, we can approach eGovernment Research in a more holistic way:



eGovernment Research Stakeholders

One of the main activities of eGOVERNMENT has been to identify who were the main actors on eGovernment R&D. eGOVERNMENT has published a comprehensive overview of users and stakeholders' needs, which we would like to summarise here.

The eGovRTD2020 project³ has also helped us significantly to understand what were the stakeholders' needs with eGovernment Research. Both projects argue that identification of users and stakeholders and the understanding of their needs is a crucial point in meeting our future societal challenges.

The first step in understanding users and stakeholders' needs, has been to identify them in respect to their respective roles during the different implementation phases of eGovernment Programmes, while taking into account the input of eGovernment Research in a given programme life-cycle, as illustrated in Figure 4:

³ 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

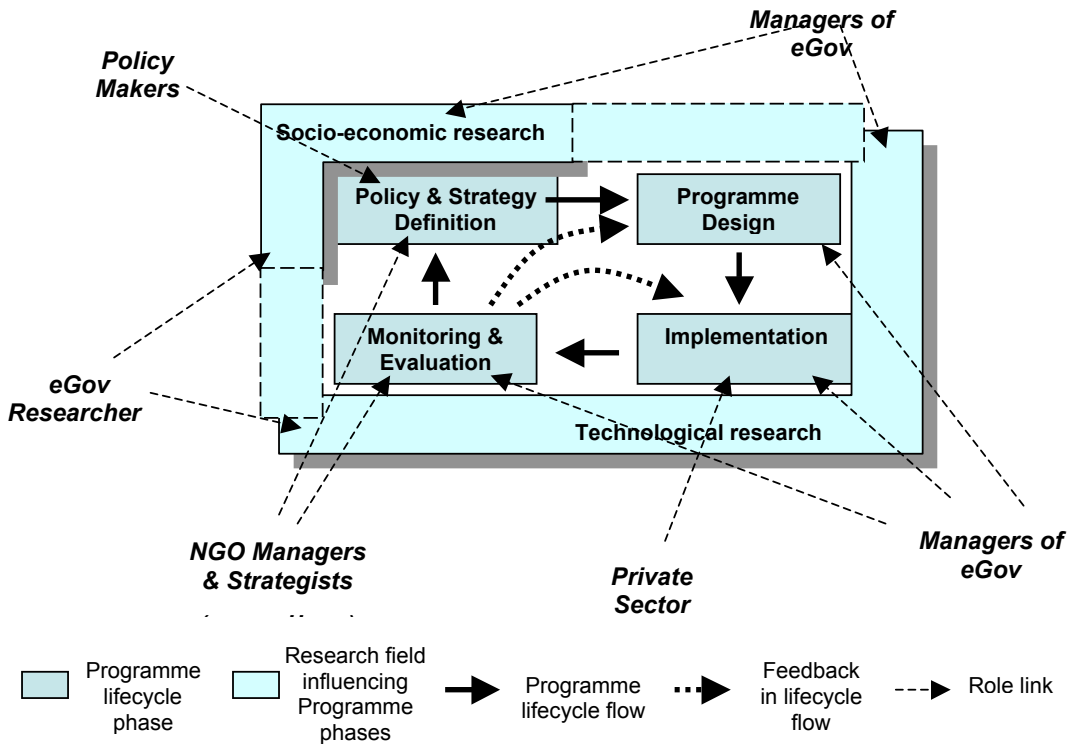


Figure 4 Users and stakeholders and the links representing their role in the different phases of an eGovernment programme lifecycle

The 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 to monitoring).

The ‘monitoring and evaluation’ phase leads to a revised policy and strategy, as well as providing feedback to programme design or implementation phases. The “surrounding” boxes represent how different types of eGovernment Research are influencing the different implementation phases of a programme lifecycle. However, in many cases, we have a combination of socio-economical and technological research. Following this figure, the different stakeholders are emphasized, and the dotted arrows represent the influence of the stakeholders on the programme lifecycle (this points out to potential needs).

Table 2 points out to the results from our needs analysis in relation to organisations, responsibilities and examples of stakeholders’ self-described needs:

Table 2: eGovernment Research Stakeholders and Needs.

| Stakeholders | Stakeholder organisation | Description | Examples of identified needs ¹ |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Policy makers</i> | Government, Public administration, Public Institutions | Policy development, research policies and design policies and strategies | Clear indicators of how eGovernment research can make a difference. Clarification of research areas – a satisfactory definition of eGovernment research that takes into account the multidisciplinary character of the field. |
| <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 | Clear identification of where and what kind of research is needed so that results correlate with the needs of users. Need to strengthen various networks such as between researchers and between researchers, government and industry. Consolidation of eGovernment research initiatives. Analyses and evaluations at strategic and tactical level to support the necessary research support structure. |
| <i>Managers of eGovernment development and activities in the public sector</i> | Government or Public administration | Responsible for implementation, deployment, user of RTD results | Beneficial and realistic targets for different stakeholders (The impact and result of eGovernment implementation and research). Division of responsibilities: who is working in eGovernment research management, in government, in academia and in industry. Research on cost effectiveness. |
| <i>Private Sector managers</i> | Company/ Industry | Provide eGovernment solutions, eGovernment RTD, design, implementation and consultation, user of RTD results | Knowledge of the need for innovation and change in the public sector. How research results are implemented in practice. Understand “State of the art” in the private sector and relevant competence, service and products. |
| <i>NGO strategists and managers representing citizens, employees, branches and others</i> | Non-profit organisation | Represent users, coordinate interests | 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). 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. |
| <i>eGovernment researchers</i> | University or Research Institute | Research performer | Useful ontology; a semantic approach to central concepts concerning eGovernment. Possibilities to build centres of excellence in eGovernment research. |

State-of-the-art, Priorities and Future Needs

Data and analysis⁴ confirms the diversity of European eGovernment R&D programmes. Here we examined the state of the art and what topics require research.

1. eGovernment development efforts are more complex than expected.

The first and paramount consideration is that eGovernment research is fragmented even within the Member States. Broadly speaking, POT and EXPL programmes (Table 1) 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.

3. Little 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. Research themes appear to be rather inconsistent 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.

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. Also, 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.

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 research⁵.

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

5 L Nyiri, D Osimo, R Özçiverek, 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.

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 viewed to be as essential for success:

1. To establish organisation and management infrastructure for eGovernment research activities;
2. To define long-term eGovernment vision and strategy in correlation with research programme management;
3. To define relationship between users and stakeholders;
4. To establish correlations between different types of research;
5. To increase priorities of eGovernment research;
6. To exploit technological development in terms of new ICT, new business models and open source principles;
7. To develop pan-European services;
8. To build a European Research Area in eGovernment Research.

The EU eGovernment Research Barometer

A set of examples for policy options has been detailed for each of the deducted goals.

These examples have been drawn from the many interest groups meetings and workshops held by the eGOVERNMENT project. They provide 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, the potential for the policy options and actions for success are detailed below:

Table 3: Potential visions for nation and regions to exploit different 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 |
| Prioritise 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 institutionalised |

| 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 were 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 |
| De facto 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 calls for eGovernment Research on eServices for internal labour market | Cross-border services | Well suited to support prioritized areas of 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: A 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 important to keep the momentum started in the framework of eGOVERNMENT project. Various issues have been tackled and concrete discussions are showing the way for future collaboration. With time, eGovernment Research will be seen in a more holistic way.

To encourage the use of eGovernment Research and research management for supporting eGovernment developments, monitoring relevant activities is induced by the following indicators. Further studies, such as country ones, providing better knowledge bases and generating more developed monitoring tools. To this end, eGOVERNMENT is proposing **The EU eGovernment Research Barometer**, measuring the development of eGovernment Research activities, management and cooperation in Europe by monitoring on a regular basis:

1. The number of eGovernment Research organisations and management infrastructures by type and scope;

2. Identifying eGovernment Research strategy documents from Member States and their regions by using a simple typology of their content;
- 3a. Identifying support instruments for collaborative eGovernment R&D and their penetration rate;
- 3b. Mapping eGovernment Research stakeholders' networks using a simple typology by size, stakeholders' inclusion and type of actions;
4. Identifying funding instruments for different eGovernment Research by type, size and penetration rate;
- 5a. Mapping eGovernment Centres of Excellence by focus, size and stakeholders' inclusion;
- 5b. Identifying eGovernment Research priorities, within government and regional strategies, including research strategies and programmes;
6. Mapping eGovernment standards by penetration rate;
- 7a. Mapping bi- and multi- lateral pan-European eGovernment services, following stakeholders, type and penetration rates;
- 7b. Mapping relevant cross-border eGovernment services' knowledge bases and their typology;
- 8a. Mapping initiatives leading toward the emergence of an eGovernment-ERA, by scope and stakeholders' involvement;
- 8b. Monitoring stakeholders' representation and activities - such as the sustainability model of the eGOVERNMENT network.

The following challenge address by this framework is to analyse and develop it further, while implementing it and learning from it. Such challenge will enable us to contribute in a better way to eGovernment future innovation and development. To this end, the created eGOVERNMENT network is ready to take upon itself this important task by transferring this framework into a dynamic and evolving environment, while receiving inputs and fine-tuning from the entire community of stakeholders. Several initiatives are on their way to pursue this work:

- **The Ambassadors eGovernment Alliance** – Its goal is to meet the challenge of free flow of workforce within the EU and a knowledge base to build the future Pan-European eServices thru exchange of good practices and collaboration with the eGovernment Research community.
- **The eGovernment Pathfinders Alliance** – aiming at enhancing cross-national and cross-regional collaboration amongst eGovernment Research funded at national and regional levels.
- **The Nordic/Baltic Network NORIA-net eCitizens** – aiming at launching a common Nordic/Baltic eGovernment Research call for proposal in 2009.

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Notes on the Impact of Research on the Development of eGovernment



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ABSTRACT

In this article, the author sketches three dimensions of a research program that would have significant impact on European politics, economy and society. First, the design and political development of institutions is central to a mature research program, given the role played by these structures and systems in the capacity and behaviour of governments. Second, civil servants are the human actors within institutions who are the agents of change, the designers of the particularised elements of policy design and implementation, and the “nodes” of networked governance. Third, inequality reduction is one of the central tasks of a democratic society.

These three dimensions outline the critical structures, actors and purposes of eGovernment. Emerging technologies do not necessarily liberate and decentralise; they must be designed to do so. Inequalities stemming from globalization, increasing cultural complexity and marketisation require attention to eGovernment research priorities in order to focus them for maximum impact on society’s most pressing challenges.

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Research exerts an impact when it examines and explains underlying structures, relationships and possibilities. Applied, or practical, research goes further to prescribe or recommend improvements to structures and systems. The language and stance of research is skepticism in order to maintain the highest levels of rigor to test claims and assertions, particularly those concerning desired futures. The ultimate goal of research should be the improvement of the human condition and society. These are the starting points for a broad, important research program with impact.

There are three critical domains to examine in order to deepen the EU research agenda in eGovernance and to increase the impact of research: institutions, the civil service, and inequalities.¹ In this brief article, I take up these three topics in turn and sketch possibilities for research highlighting the likely impact. As noted in *Building the Virtual State: Information Technology and Institutional Change*, institutions of governance have been a dominant concern in political and social thought since antiquity.² The rise of information societies does not invalidate this observation. Policymakers in developed countries globally view the Internet and associated technologies as levers for government modernization and reform. In some cases, authoritarian oriented “reforms” tend toward greater centralization and control over the polity by means of the very same powerful tools – such as integrated databases, data mining, extraordinary data collection, real time analysis – that are lauded by democratic policymakers as the means to build greater transparency and access.

Thus, the political uses of seemingly neutral technological tools may have far-reaching and unintended implications for democracies as they become embedded within institutions. In democracies, there has been broad agreement since antiquity that inequalities are social conditions that require amelioration and that the institutions of governance exist, in part, to reduce inequalities.

Institutional Analysis and Development

The reality of integration in European life, as exemplified by cross-border labour flows, seamless financial and other economic systems, and the increasing use of global market mechanisms, has outstripped the pace of institutional change in governance models. The structure and behaviour of the state -- that is, its governance models, systems, processes and expert civil servants -- functions best when it is properly aligned with the current realities of economic and social systems and practices. I define the “state” here as the formal institutions of governance. Institutions not only encode regularized practices and behaviours, they convey legitimacy in democratic systems by means of the fact that they are widely shared, even taken for granted, social constructions of deep durability.

1 This invited article is based in part on remarks prepared for the Keynote Plenum “A live debate on the contribution of eGovernment to growth and jobs,” convened as part of the 4th Ministerial eGovernment Conference, “Reaping the Benefits of eGovernment” which met in Lisbon, Portugal on September 20, 2007. (See <http://www.megovconf-lisbon.gov.pt/>)

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2 J. E. Fountain, *Building the Virtual State: Information Technology and Institutional Change* (Washington, D.C.: Brookings Institution Press, 2001).

They include laws, regulations, societal norms, organizational structures and systems, as well as regularized routines, standards, and practices that define professional behaviour.

A key area for research is theoretical and practical inquiry into the relationship of institutional structures and processes and currently used technologies for governance. Complicating matters is the federalism of Europe and simultaneous innovations at the local, regional, national and EU levels. Research on eGovernment in Europe has reached a level of maturity to allow it to move beyond a primary focus on service provision. A more forward-looking emphasis would focus on institutional redesign. In some cases such efforts would include possibly radical redesign of government processes. For example, eGovernment developments that support and enable global financial systems and global trade offer important examples that are currently either already well defined or that are emergent. The Office of Harmonization in the Internal Market (OHIM) provides one such powerful example concerning trademarks and related intellectual property.³ With respect to spatial data, central to environmental policies, the EU has recently launched the INSPIRE Community Geoportal, a gateway to geographic data and services increasingly standardized and rationalized as the Infrastructure for Spatial Information in Europe.⁴

Service production and delivery might be seen as activities near the end of long value chains in government decision making. Working upward in the value chain might entail research into knowledge production, knowledge sharing, and knowledge activation within and across boundaries in Government. The research questions related to institutional design at the upper ends of the value chain are of the type: What governance structures, processes and tools support cross-boundary and networked activities? Rather than simply focusing at the boundary between Government and citizen, working upward in the value chain might focus attention on enabling legislation, budgetary processes, optimal workgroup structures and management, and flows of information and data that define many of the policy-related problem solving capacities of the state. With respect to growth and jobs, there is value to be created through integration of services across the boundaries of programs, departments and Governments. These cross-Governmental initiatives yield great promise and represent a key “next step” in producing “better public services.” As a complement to these activities, research emphasis should be given to Governmentwide – and to EU wide – projects that would shift some attention in eGovernment to structures and information flows across the entire Governmental enterprise. Working at this higher level in the value chain would allow sufficient scope and authority for redesign efforts.

The substantial risk in not taking this step into cross-boundary redesign is that systems are being built upon outdated institutional and management arrangements and such systems will be difficult and expensive to change due to sunk costs and path dependence. So the timing of this “next step” and its urgency are important issues with economic as well as political impact.

In the 1980s, management attention increased to service economies, service organizations, customer service and, finally, service oriented Government. While Governments provide services to citizens, and should do so as responsively and effectively as possible, eGovernment often has focused too narrowly on services and operations.

3 <http://oami.europa.eu/en/default.htm>

4 <http://geoportal.jrc.it/index.htm>

In doing so, opportunities for research on process redesign, organizational and cross-organizational redesign and networking, and data-driven policymaking have been missed.

Often, the structures and systems that are invisible to citizens are of greatest importance to their well-being. Thus, a deeper research program might include a focus on currently available modes of policymaking – powerful uses of data, mapping, other visual tools, scenarios, modelling, etc. New capacity allows policymakers and civil servants to better compare alternatives, estimate outcomes and future states based on policy choices, to visually depict current states, to share knowledge and deliberate together across boundaries.

My definition of “better public service,” therefore, requires a thorough rethinking and re-examination of the structure of public services to identify and exploit possibilities to create value by working across boundaries and jurisdictions. Again, it is imperative to avoid putting the status quo online and accepting “second best” gains in speed and cost while forgoing the potential larger gains of institutional redesign.

Epistemic Communities of Knowledge Creating Civil Servants

Civil servants are the chief actors within government institutions. Their behaviors instantiate institutionalized rules, norms, and codes. They are the human element that breathes life into structures and systems. As a practical matter, the quality of government institutions is inseparable from the quality of the civil service. The civil service of the future -- or the civil service for the knowledge economy and information society – implies that new skills will be needed. Central research questions along this second dimension, therefore, are What are these skills? and How will these skills be developed?

Civil servants function within countries and within the EU, but are increasingly influenced by global policy developments. International standards in health, safety, finance, trade, environment are pushing civil servants in many countries toward global practices. This set of pressures also makes traditional boundaries within Governments more fluid as national institutions articulate more closely with regional, EU and global institutions. As civil servants become more cosmopolitan, they open up to new ways of conceptualizing, framing and accomplishing their complex work. They carry these changes into other areas of policy practice that are more domestic in nature. Ironically, it may be that civil servants responding to global influences in their policy domain develop broader perspectives than legislators who may be responding internally to their constituents.

The importance of civil servants as carriers of practice implies logically that a research agenda should include thought to the production of strong epistemic communities, or “communities of practice,” among civil servants. This will require a significant strengthening of the education and training of the young people who will become the next generation of civil servants. It is the professional civil servants who will work out the intricate policy, legal, operational and technological details of future institutional systems. Their partnership with IT industry professionals needs to be one of equals rather than a simple outsourcing relationship by government actors of IT strategy and development.

A two-pronged research initiative would include, first, support and facilitation of communities of practice among civil servants and related experts at the European and regional levels.

The second prong of this initiative entails support for the development of the future civil servants who will be guiding Europe and the countries within it for the next generation. Funding and planning for modernization of university programs within which such civil servants would be trained is a key imperative. Universities, working with industry and other research institutes, are (or should be) a central source of knowledge creation, long-range thinking, innovation, experimentation and a place for the linking of the traditional legal and Governmental knowledge base with the realities and challenges of pervasive computing.

The risk in ignoring the second research dimension is a civil service unable to effectively partner with industry to re-envision public services and an inadequate translation of e-commerce practices to eGovernment without the necessary thinking through of fundamental differences between the public and private sectors. Simplistic views of contracting and outsourcing are now giving way to more realistic views of partnership. A second risk of underinvestment in the professional growth of the civil service is to assume that civil servants are, on average, an impediment to progress when in fact they are central and key knowledge experts at the core of the initiation, design, development, implementation and productive operation and refinement of eGovernment public services.

Research that connects structure and behaviour – institutions and civil servants -- offers potentially powerful results.⁵ Research consortia such as the eGOVERNMENT Project have been assiduously seeking out the most innovation and far-sighted practices of policymakers and civil servants in order to surface, articulate, and share forward-looking practices across the public administrations of Europe. Such fine-grained, contextually specific knowledge sharing is critical to building an understanding of what works in actual practice, in contrast to predictions based solely in theory. These data collection efforts also illuminate how different countries and experts in various policy domains are solving the many puzzles of eGovernance in practice as well as leveraging opportunities afforded by emerging technologies. As a complement to such ground-level, practice oriented data gathering, researchers might also examine streams of theory and research drawn from political science, sociology and economics to rethink institutional perspectives in light of emerging technologies. The deeper research questions for scholars as well as practitioners are: Do the far-reaching and fundamental shifts emergent in the use of current information and communication technologies imply correlatively fundamental change in institutions? If so, what might these be? How far and to what extent can institutional and other normative governance changes be predicted or forecast and to what extent are societies subject to trial and error or, more accurately, the slow accumulation of experience?

A research program with impact should systematically focus on opportunities for and thorough examination of “best practices” in cross-jurisdictional initiatives. There are many such successful initiatives in Europe to be mined for information and then shared across the EU. Several researchers globally examine the success factors underlying such initiatives. This emerging knowledge base should also be mined and shared widely to form a base for knowledge exchange.

5 Jane E. Fountain, “Challenges to Organizational Change: Multi-level Integrated Information Structures (MIIS),” in David Lazer and Viktor Mayer-Schoenberger, eds. *Governance and Information Technology: From Electronic Government to Information Government* (Cambridge, MA: MIT Press, 2007).

At the cutting edge of research is the working out of core governance challenges in such networked projects. These include but are not limited to joint accountability, joint budgeting and resourcing, joint management and leadership, and joint operations. Laying the management and practical foundation for integrated initiatives is a key imperative for eGovernment and “next generation” public services. Funding should include on-the-ground experiments as well as university and research institute examinations and synthesis of current knowledge.

Reducing Inequalities

In our quest to build the Government of tomorrow, a research program with deep impact will not ignore the most difficult challenges of today. Many have assumed that new technologies will erase the democratic deficit. This is in itself a matter for serious empirical research. Unpacking this deficit, one finds several trends unlikely to abate in the near future. These include immigration, the further development of global labor markets, and inequities in education. How can ICT be used to improve education, job prospects, socialization of new immigrants in ways that respect cultural foundations? In short, how can ICTs help to address such fundamental social challenges? In addition, much of European society is aging. Can ICTs be used to decrease cognitive decline, to reduce the isolation of the elderly, to increase the effectiveness and reach of health care systems? Can technology be used within the care economy rather than as a form of labour-substitution to reduce costs?

Thinking of inequalities more broadly, a research program should provide clarity on the rate and types of participation in eDemocracy and eGovernment processes. For example: What are the current empirical numbers for digital participation in political processes? What types of people (in terms of age, education level, income, region) tend to participate using digital modes? How are these subpopulations similar to or different from the “average” population? Who and what do they represent? This is important to know because we cannot otherwise attach conceptions of representation or legitimacy to such modes. For example, in the U.S. one can observe online activity of young people in political websites, particularly those with video, such as uTube, but researchers have not seen the translation of such participation into voting behaviour and other traditional modes of political participation. Research is needed to better describe the growing constellation of political participation modes and how the portfolio of participation types is changing. We also need to better understand how new modes relate to traditional modes, which ones have the most impact, and the importance with which policymakers should interpret and “measure” new modes of voice.

Inequality reduction usefully may be linked with knowledge activation. One of the major opportunities for ICT to contribute to growth and jobs is to align the recommended eGovernment research efforts with existing policies meant to *activate knowledge*, that is, with an emphasis on the building of knowledge societies and information economies. Many eGovernment service efforts support traditional sectors and industries, which is entirely appropriate and necessary. Yet there is considerable growth potential in eGovernment efforts to develop and support knowledge industries. Moreover, many traditional industries themselves are being transformed by ICT and rely on alignment with eGovernment processes that facilitate such transformation.

In sum, eGovernment efforts should be aligned with policies to *activate knowledge*; thus, they should support, enrich and catalyze existing policy orientations toward knowledge production, knowledge sharing, and the Governmental and economic information infrastructure necessary to develop and support the information economy.

Information technologies increase the ability of citizens and businesses to participate in decision making at all levels, hence they hold potential to reduce the present democratic deficit. Yet the confluence of informatization with globalization has produced a rich stew of political and social challenges with respect to participation and deliberation. A research program with impact also must grapple with the effects of waves of recent immigrants from developing countries who form an important part of the labour force and societies of Europe. If these groups are not explicitly designed “into” the democratic process, severe problems of dislocation are likely to continue. Given the digital divide and challenges of digital literacy (e.g., ability to search, navigate, express oneself in text form) what research avenues hold the greatest promise to reduce the democratic deficit as societies grow more complex culturally?

Citizens may choose whether and how to enter participative and deliberative processes, but they have little choice regarding the facticity and importance of their personal data. Some experts predict that during the next 20 years or so, businesses and citizens will control and manage their own personal data throughout the life cycle. Further, they might “authorise” access to their data by governments. This scenario stands in stark contrast to the present in which governments exert considerable effort and expense to order, update and maintain the accuracy of citizens’ data. It is highly desirable for citizens to have access to and control over the accuracy and timeliness of all of their data organized by the Government. Yet this may not be feasible. One has only to examine the debacle regarding personal information with respect to eCommerce and the inability even to control opting in and opting out to imagine some of the complexities of managing all of one’s personal data over the lifecycle of an individual, family or business. The ability of most individuals to organize and maintain the currency of personal data is limited.

At the same time, innovations such as MyPage on [norway.no](http://www.norway.no), “the gateway to the public sector” in Norway, offer a glimpse of the possibilities Governments might provide for access to and control over personal data.⁶ MyPage allows individual citizens to see an overview of the information that Norwegian public agencies, from local to central level, have for that individual. These data are stored and maintained in several different agency databases, but are brought together online through the central gateway. It is a matter of empirical research to determine exactly what the time, labor and cognitive demands of managing one’s personal data would be. We should not assume that individuals will spend any more time and effort in front of screens and with digital devices than they do now.

The barriers to citizen participation are not technological, nor can they be erased by technology. Barriers include apathy, ignorance, lack of time, lack of knowledge. Political scientists and sociologists, as well as information scientists, might produce knowledge with impact regarding the possibilities and limitations of technology to deepen deliberation and participation. It is time to retrieve Herbert Simon’s prescient warnings concerning lack of time and attention deficits in the information society.

⁶ <http://www.norway.no/minside/default.asp>

Several decades ago, Simon wrote:

...in an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it.⁷

How are citizens to integrate and synthesize broad areas of knowledge available digitally? Tools can help. But the complexities of policy and politics remain, as ever, fraught with highly challenging normative judgments. There is no analytical or technological solution to override these value judgments. Powerful tools that assist with aggregation do not necessarily provide integration, which lies at the heart of compromise and judgment.

Conclusions

In this brief article, I have sketched three dimensions of an eGovernment research program that would have significant impact on European economy and society. The design and political development of institutions is central, given the role played by these structures and systems in the capacity and behaviour of governments. Civil servants are the human actors within institutions who are themselves the agents of change, the designers of the minutely particular elements of policy design and implementation, and the “nodes” of networked governance.

Finally, inequality reduction is one of the central purposes of democratic society. Emerging technologies do not necessarily liberate and decentralize; they must be designed to do so.

The inequalities stemming from globalization, cultural complexity and marketization require close attention to the priorities in eGovernment research programs as well as to the effects of those programs.

⁷ Herbert A. Simon, “Designing Organizations for an Information-Rich World,” in Martin Greenberger, *Computers, Communication, and the Public Interest*, Baltimore, MD: The Johns Hopkins Press, 1971, pp. 40-41.



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21st Century eGovernance: Turning the World Upside Down?



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ABSTRACT

The 21st Century is heralding a decisive paradigm shift in the way we are moving towards much greater bottom-up empowerment than previously seen. ICT is the major enabler (but not the only one), and this is being and will be reflected in all aspects of our lives, including of course our relationships with government and the public sector.

We still have to adjust our governance structures, processes and mindsets to cope with this new 'empowerment' paradigm.

This is already happening fast in other aspects of our lives, so how can government catch up?

By way of an overview of why and how the new social software and networking tools are already affecting our lives, this question is directly addressed in this article, which also presents an eGovernance vision for the 21st Century and indications of some of the research which will be needed to achieve it.

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Introduction: paradigm shifts in governance

The 21st Century is heralding a decisive paradigm shift in the way we (in Europe, as well as globally) are moving towards much greater bottom-up empowerment than previously seen. ICT is the major enabler (but not the only one), and this is being and will be reflected in all aspects of our lives, including of course our relationships with government and the public sector. We still have to adjust our governance structures, processes and mindsets to cope with this, and in doing so, we will be more consciously guided by an articulation of our 'values' than ever before. This we can already see, as many countries struggle to re-assess their national and regional identities, to create and identify a European value-set, take account of the threats as well as opportunities of the values of others in the globalised world, and take tentative steps towards identifying global values, for example through ongoing efforts to ensure conformance to the UN's human rights declaration of 1948, seeking to establish frameworks for 'good governance' and pursuing the Millennium Development Goals for 2015.

The world is indeed being 'turning upside down'.¹ We have made such paradigmatic governance shifts in earlier periods – what has been summarised as 1) the foundation of the liberal state in the 18thC which laid down the rule of law, property rights and the protection of individuals from the state as well as from each other; 2) the establishment of democratic principles as the industrialists and entrepreneurs demanded their share of power in the 19thC, culminating in universal adult suffrage in the early 20thC; and 3) social solidarity in the 20thC when government started in earnest to support the socio-economic wellbeing of all citizens in relation to health, education, employment, etc., as the welfare state became widely established. Now, in the 21stC, 'empowerment' seems to be the next great turning upside down – literally. (Frissen, Millard, et al, 2006).

Many different definitions of 'empowerment' exist, but the purpose of this article is not to review or refine these. However, in the present context the term can cover how citizens, communities, groups and interests in society can themselves be enabled bottom-up to further their own as well as collective benefits. The 20thC welfare state was essentially top-down, paternalistic and bureaucratic. 21stC empowerment is both a reaction against this and a natural progression. We see its imperative in moves towards respect and accommodation for plurality, diversity, difference and the establishment of countervailing powers. We recognise it in decentralisation, devolution, the break-up of hierarchies, the emerging poly-centric world, a demand for more openness, involvement and influence, and the burgeoning growth of multiple channels and a myriad voices. Although reactionary, centralising and authoritarian forces are still at work, moves towards greater empowerment herald a new balance between top-down and bottom-up. They are also reworking and re-interpreting what we mean by protection, democracy and social solidarity from previous paradigm shifts, as well as extending the new form of governance into new areas.

A new focus for eGovernment and eGovernance

Governments and the public sector generally are central players in governance systems. However, eGovernment is not often researched or implemented with governance

¹ A direct analogy is made here with Christopher Hill's book "The World Turned Upside Down: Radical Ideas During the English Revolution" (Penguin, London, 1972), which describes the bubbling ferment of radical ideas at the grass roots of English 17th C society, which we also now know were fuelled by printed broadsheets distributed nationwide by a dense stagecoach and messenger network, the period's equivalent of the Internet.

consequences in mind. Instead, functional approaches to eGovernance (Does it work? Is it value for money?) have been predominant, and, however important these are, there has been a tendency to overlook the major transformatory changes to governance systems that increasing evidence shows are likely to occur over the next ten to fifteen years, strongly enabled by ICT.²

eGovernment research itself has perhaps come to its own turning point, and some are even saying that “eGovernment is dead” as government changes enabled by ICT are now mainstream.³ Today it is inconceivable that any government or public sector project would not use ICT, which is no longer an add-on but is intrinsically bound up with developments in any aspect of government. This said, there remain many areas where research, development and deployment of ICT in government, including at the pan-European level, will continue to require huge effort.

Two of these areas, to which limited attention has been paid to date, are a focus on 1) new mass collaboration tools, which permit the large scale inclusion of citizens, communities and businesses in governance policy and decision-making, developing and delivering their own services, etc.; and 2) new policy and decision-making tools for use by governments and other actors to access and exploit data and intelligence from across the whole public sector (and elsewhere) to analyse, develop, model, simulate and measure policies and policy outcomes. At base, these two developments are two sides of the same coin. They could provide tools for new forms of governance which reflect and promote society’s increasing (bottom-up) demand for greater influence, responsibility and direct action. Simply said, the new empowerment paradigm requires a new set of governance structures, processes and mindsets. It is happening fast in other aspects of our lives, so how can government catch up? This question is directly addressed in section 5 below, but first an overview of why and how the new social software and networking tools are already affecting our lives.

How new networking tools are changing the dynamics of supply and demand

New networking tools, coupled with the Internet web backbone on which they rely, are starting to make it possible to combine and exploit the interests and expertise of huge numbers of people, so that potential designers and suppliers of goods and services can identify each other, work together, and deliver. This was hardly possible in the world of purely physical products and services. This is also seen on the demand side, given that the technology enables demand pooling, for what would otherwise remain dispersed and largely unknown minority needs, which can create markets which are commercially viable and/or are sufficient to warrant public sector service supply.

This is already being seen on a significant scale in the private sector. According to Anderson (2006), 25% of Amazon’s book income comes from the sale of books not in their top 100,000 best selling books, which even the largest bookseller in the USA is not able to keep in their stores. Similarly, 98% of Ecast’s jukebox music website of 10,000 titles are purchased online at least once every three months, a significantly greater percentage than a physical music store and distribution system. Both of these examples strongly depart from the traditional and commonly accepted 80-20 marketing rule which says that 20% of products will command 80% of sales. This does not mean that the big sellers are selling less, but

2 Each of the sources in the reference list at the end of this article provide some of this evidence.

3 http://www.epma.cz/Docs/CfP_6thEEEGOV2008_November07.pdf (accessed 20-1-08).

does mean that total sales are increasing and that this increase is largely accounted for by minority taste which, with purely physical products and services, rarely register any sales at all.

ICT changes the nature of the market for such products and services in at least four ways. First, the need to have physical stock is abolished, but even when the product remains physical (as with books), stock does not have to be concentrated in one place to which the customer has access but can be dispersed to many low cost warehouses, or even subject to ICT controlled production only when an order is received. In this sense, manufactured products are starting to behave more like services which have typically been distinct from physical goods by being created only at the point of demand, and thus tailored to the specific needs of the individual customer. When warehousing is no longer necessary, because all goods and services are only created when the customer wants them, then one of the main differences between goods and services starts to vanish, as well exemplified in Dell Computer's business model. This has potential implications for public sector services in terms of individualising the product. Second, distribution is not a problem for 'e' products, but even when the product remains physical, distribution becomes easier if customers can select and purchase online. Third, searching for precisely the right product or service, even for minority needs, becomes possible for the first time. Fourth, and perhaps most important, the technology enables suppliers and users to identify and exploit expertise and knowledge which was previously dispersed, not known about or inaccessible. It could thus enable, also for public services, an explosion of new offerings which are highly differentiated according to both large scale and small scale demands, thereby also blurring the distinction between the roles of supplier and user, and between the different but multifarious stakeholders.

Social entrepreneurship and public services

These developments herald a new form of social entrepreneurship, involving substantial changes in the 'public value chain' – new user-producer relationships, new definitions of what constitutes public value, and the rise of new stakeholders creating this public value. As technologies like social software and social networking tools become more and more ubiquitous and are deployed on a larger scale, existing governmental value chains will change and new coalitions of key stakeholders will be organised in order to create new forms of public value. Thus, the production and distribution of relevant content and information, and possibly even manufacturing processes, is now incorporating a move from formal organisations to decentralised networks, often with an ad hoc character. Consumers become 'prosumers' and users become 'pro-ams', and thus take up new roles in the value chain, leading to what has been called the 'democratisation of innovation' (Von Hippel, 2005).

For service delivery this implies that gates are opened to new players. The role of intermediary 'gate-keeper' organisations (like libraries and media) is already changing. Some organisations are rapidly finding that their mandate has disappeared, and there is a growing demand for new intermediaries and trusted third parties. A shifting of tasks from the governmental level to users is already visible, especially in terms of information gathering for different kind of (public) tasks. Police departments are increasingly using pictures taken by citizens (who use the cameras in their mobile phones) of offences such as violence or hooliganism. Public broadcasters use citizen weblogs as sources for their reportage, and urban planning practitioners use SMS messages from citizens reporting on infrastructural defects in order to plan repair schedules.

Many, though of course not all, Government users (citizens, businesses and civil servants) are no longer prepared just to be passive recipients of government and eGovernment services. Some experiments in the UK have been applying this approach to the public sector for several years (Leadbeater, 2006), especially in health, education and crime where few designers have traditionally worked. One example reveals how the UK Government is dealing with diabetes which costs the UK National Health Service £5 million per day and is one of the main causes of premature death. The average diabetic spends just three hours a year with doctors, but thousands of hours a year managing their own condition themselves. The biggest gains will come from enabling diabetics to become more effective at self-diagnosis and self-management, for example by equipping them with appropriate ICT tools, techniques and peer support. Similarly, 90% of health care is delivered in the home.

People want more home-based solutions that they feel they control. The health information available to patients on the Internet is transforming their role – no longer passive, they can question and participate.

More recent thinking in the UK and elsewhere includes trials in the management of personal budgets for social services. For example, as part of the 'Putting People First' programme, 2,000 disabled persons across the UK have been given a financial allocation, in cash form if they wish but in most cases this is held by the local authority to be spent in line with the person's own wishes once their care plan is approved. This can be spent on their own choice of care assistants, to join clubs rather than day centres, and go to hotels or on package breaks rather than to residential homes for respite care. Although the pilots have not yet been fully assessed, the emerging results are so positive that ministers have decided to push ahead and make the approach the basis of all adult social care services. Ivan Lewis, the care services minister said: "There is absolutely no doubt that people who use individual budgets say it has transformed their lives."⁴ ICT has been the enabling tool in linking the six government departments whose efforts and resources needed to be integrated to implement these trials, and has also been used by some of the disabled people and their carers to access necessary information and make their choices. Some of the thinking behind empowering the end-users of public services through choice and the devolution of resources has been developed by Julian Le Grand, former adviser to ex-Prime Minister Tony Blair, although many aspects of choice and competition in the public sector remain highly controversial. (Le Grand, 2007)

Another example is based on the increasing availability of consumer electronics, like high resolution recording equipment, sensors and cameras, which means that the use of this technology need not be restricted to governments or the private sector but can also be used by citizens to create their own services. In the Netherlands, a protest group of people who live near Schiphol Airport in Amsterdam has developed a measurement system based on sensor technology for noise pollution caused by aircraft. The system has been installed in the gardens of the protesters and records the level of noise experienced by residents, and is captured electronically, collected and published on a website.⁵ This citizens' initiative resulted from dissatisfaction with the measurement methods used by the Federal Government which they considered not to be objective or reliable, and their measurements have had a substantial impact on the Schiphol expansion debate.

4 The Guardian newspaper, 10 December 2007.

5 <http://www.geluidsnet.nl/en/geluidsnet/> (accessed 20-1-08).

This illustrates an increasing trend whereby professional hardware and software are becoming commodities available to everyone to design and implement their own 'user-driven' services, in this case showing how the Dutch Government had its own tasks taken over and its competence and reliability questioned.⁶

An eGovernance vision for the 21stC

Since 2005 there has been a phenomenal growth in mass, on-line collaborative applications, using a number of different formats – such as Wikipedia, Flickr, YouTube, Facebook, Second Life, as well as innovation jams used by business.⁷ It is clear that 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. On-line communities can leverage considerable human knowledge and expertise and rapidly build their capacity, in particular through so-called 'crowdsourcing' as collective intelligence which exploits the 'wisdom of the crowd'.

This is enabled by ubiquitous information networks, and permits Governments to tap the insights of large numbers of people to arrive at decisions and outcomes that are often more efficacious than only relying on solutions provided by a small number of 'experts'.

Extrapolation of the present exponential growth leads to scenarios where large numbers of people could, if equipped with the right tools and incentives, simultaneously voice opinions and views on major and minor societal challenges, and thereby herald the transition to a different form of dynamically participative 'eSociety'. (See Tapscott & Williams, 2006, and Surowiecki, 2004). While such scenarios are readily imaginable, we also recognise that we currently do not have appropriate governance models, process flows, or analytical tools with which to properly understand, interpret, visualise and harness the forces that could be unleashed. Further, there are also serious challenges, contradictions and barriers to be overcome in deriving the promised benefits, some of which can be addressed by appropriate technology research within a wider socio-economic context.

The legitimacy of Governments is derived through democratic processes combined with a requirement of transparency and accountability. In a world that is increasingly using non-physical communication and borderless interaction, traditional roles and responsibilities of public administrations will be subject to considerable change and classical boundaries between citizens and their Governments are blurring. The balance of power between Governments, societal actors and the population will have to adapt to these challenging new possibilities. For example, new governance models imply that governments will need to increasingly become one player among many drawn from the private and civil sectors, as well as from citizen groups. Governments will thus become arbiters, coordinators and funders, instead of only regulators and sole agents, through a series of governance webs, or 'g-webs' (New Paradigm, 2007), operating across the 'cloud' of distributed computing.⁸

There will be fewer barriers in the 21stC for citizens and businesses to participate in decision making at all levels, whether directly, through elected representatives or by creating their own political agendas and processes.

6 See also the examples and analysis provided by the European Commission's Institute of Prospective Technological Studies tutorial on the impact of web 2.0 on eGovernment, 20 September 2007: <http://www.jrc.es/news-and-events/new.cfm?new=60> (accessed 20-1-08).

7 For example by IBM: https://www.collaborationjam.com/get_started2006/index.shtml (accessed 20-1-08).

8 IBM press release 15-11-07: <http://www-03.ibm.com/press/us/en/pressrelease/22613.wss> (accessed 20-1-08).

Advanced tools – possibly building on gaming and virtual reality technologies – can empower citizens to track the totality of decision making processes and see how their contributions have been (or are being) taken into account. Opinion mining, visualisation and modelling into virtual reality based outcomes and scenarios can help to shape, guide and form public opinion. However, modern decision-making is complex and must be based on a process whereby issues are examined in the context of available evidence, where political negotiation takes account of the needs of all interests, and that all those involved accept responsibility and accountability for the outcomes. Strong dangers exist that decision-making will be monopolised by those ‘who shout loudest’, or that the debate becomes hijacked by ‘hostile interests’. There is also a risk of ‘unauthenticated opinions’ which mislead and confuse, so more understanding is needed of how ICT can assist the process of arriving at legitimate and widely beneficial outcomes despite the avalanche of contradictory opinions and ‘facts’.

In the 21stC many administrative, linguistic and cultural differences will be interoperable through the use of semantic-based cooperation platforms, enabling Europe’s diversity and plurality to be better exploited socially, economically and culturally, rather than purely acting as barriers. However, it is likely that the relatively less educated in information societies will remain a challenge, although their needs will change, and questions of digital literacy, confidence and political cognition will be permanent issues to be addressed. This is the more so given that the pace of knowledge sharing and knowledge creation will continue to accelerate. There is thus a danger of social bifurcation as the 21stC will also see the rise of the younger ‘Net Generation’ (those who have grown up in the digital and Internet world) who will both demand governance services and responses to match, and become public sector workers expecting to net-work (‘wiki’-work) rather than work hierarchically. (New Paradigm, 2007)

Also in the 21stC, transparency and trust will characterise a changed relationship between Governments, businesses and citizens. Governments traditionally collect, process and store significant quantities of data. In the 21stC, the relationships will have changed and many businesses and citizens will be able to ‘authorise’ access by governments to ‘data spaces’ of *their own* data which they control and update. For some citizens this may, however, be too difficult or inappropriate, as the complexities of managing all of one’s personal data over the lifecycle of an individual, family, community or business are potentially huge, so new technologies and approaches would also be needed to tackle this problem. These data could be stored in the ‘cloud’ so that storage will be a network commodity and provided as a service. Such a scenario would result in a ‘private shared space’ jointly accessed by data users and/or their agents and data providers. These shared spaces will require maximally robust access rules and procedures and hence new technologies and tools that ensure security, privacy and data protection. Data protection is also one of the main sources of trust in such technologies, and in the new forms of eGovernance this will have to be earned through demonstrable transparency and accountability of processes and tools.

6) A 21stC step-change in technology, governance and thinking

The purpose of this article has been to stake out, however briefly, some of the ground which the eGovernment community needs to occupy in near future research, development and deployment. This is ground which is already seeing phenomenal changes in technology and market dynamics, but now needs to apply these to governance systems and societal challenges. New governance, including eGovernance, needs to be there.

Existing trends show how market forces, hand-in-hand with technology, are changing the parameters of supply and demand, and how this, together with incipient new forms of social entrepreneurship and expectations, are starting to change the face of public services and the role and mandate of Government in the governance system.

History shows how the market and technology are very good servants but very poor masters. Markets and technologies are not brought down from the mountain carved in stone, but are created and shaped by governance systems – regulation, standards, monopoly power or the lack of it, government interventions, plus a whole host of other signals and guidance which structure both the market and the technology developed and rolled-out. Previous paradigm shifts were not primarily driven by markets, at least in their critical early stages.

The canals, railways, electricity, telephones, etc., were not initially demand-led but were driven as much by visions and expectations, and often lost money in purely market terms. The 21stC step-change will likely be the same. It will demand, not just new technology (much of which we are already starting to see), but new governance and new thinking.

In new Europe, and the globalised world in which Europe operates, new governance systems are needed based on types of empowerment which both harness the bottom-up energy, entrepreneurship and responsibility of people, and promote macro cooperation through processes which build new governance structures. In short, we need ‘open-source’ governance, enabled by new technologies but focused on tackling the micro problems of individual quality of life and prosperity in Europe and global problems like climate change, trade inequalities and poverty.

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