



Prepared for the eGovernment Unit
DG Information Society and Media
European Commission

Breaking Barriers to eGovernment

*Overcoming obstacles to improving European public
services*
Modinis study
Contract no. 29172

Fifth workshop report

Deliverable WP3 W.5

Submitted 04/04/2007

eGovernment Unit

DG Information Society and Media

European Commission



Fostering Innovation in eGovernment
Breaking Barriers to eGovernment 5th project workshop
Held in collaboration with IN3, University of Catalonia
9th March 2007, Barcelona, Spain

1. Introduction

The project, Breaking Barriers to eGovernment: overcoming obstacles to improving European public services, held its fifth workshop, Fostering Innovation in eGovernment in collaboration with IN3, on the 9th of March 2007 at the Open University of Catalonia, Barcelona, Spain.

The workshop focused on the ways in which innovation can be and has been achieved in eGovernment to improve governance in the information age. It explored how the widespread diffusion of the Internet and Web may enable governments to transform not only the delivery of public services but also approaches to governance. A key aim of the workshop was to consider approaches for overcoming barriers to innovation, including but not limited to legislative, technological, citizen-centric and organizational solutions. The event consisted of a diverse range of speakers from academia and practice to discuss these issues from a variety of perspectives.

The sessions were as follows:

- Welcome, Introductions and Overview - Professor Eduard Aibar, Open University of Catalonia, Spain and Professor Bill Dutton, Oxford Internet Institute (OII), University of Oxford, UK
- The conflicts of eGovernance - Professor Manuel Castells, Open University of Catalonia, Spain and University of Southern California, USA
- Innovation in eGovernment in Catalonia - Ms Marta Contente, Generalitat de Catalunya, Spain
- Innovation in eGovernment: The Use of Geo-information - Dr Sjaak Nouwt, Tilburg Institute for Law Technology and Society (TILT), University of Tilburg, Netherlands
- Online Job Search in the EU: The potential of web 2.0 - Dr Rebecca Eynon and Professor Helen Margetts, Oxford Internet Institute (OII), University of Oxford, UK
- The New Identity Management Infrastructure: Helping Governments Serve Citizens – Dr Mary Rundle Fellow, Berkman Center for Internet and Society, Harvard Law School and Non-Resident Fellow, Center for Internet and Society, Stanford Law School

- Electronic Signatures - Dr Miquel Peguera and Dr Agustí Cerrillo, Internet Interdisciplinary Institute (IN3), Open University of Catalonia, Spain
- Data Protection Best Practices in eGovernment: Real Experiences - Mr Francisco J. López Carmona, Consultancy and Registry Unit, Data Protection Agency of Madrid, Spain
- Summary and Synthesis: Theory and Reality - Professor Bill Dutton, Oxford Internet Institute (OII), University of Oxford, UK

Each of the sessions was chaired by Bill Dutton (OII) and Eduard Aibar (IN3). Further details about each presentation are provided in section two below.

In total, 41 people attended the event from academia, industry and government. The audience was largely made up of people from Spain. A smaller number of individuals were from Belgium, Netherlands, the UK and the USA.

2. Presentations

Welcome, introductions and overview

Professor Eduard Aibar and Professor Bill Dutton welcomed all participants to the workshop. Bill Dutton went on to summarise the Breaking Barriers to eGovernment project and the purpose of the day; emphasising the positive focus on innovation.

The Conflicts of eGovernance

Professor Manuel Castells presentation focused on the interactions between eGovernment and eGovernance and the conflicts between them. He argued that for the nation state to operate effectively in the age of globalisation and global networks it now has to connect with institutions at all levels, from the local through to the super-state level. Such a “network state” requires a network administration. Yet this is in direct contradiction with the current model; where typically the administration is a highly vertical, rigid bureaucracy.

Manuel discussed the need for an administration based on networks of interactions between units, partners, and different levels of government. Such a network administration needs common databases - which can enable flexibility but also maintain central control. He argued that accessible and interoperable databases are the heart of the network administrations. Open software could assist with this problem, yet while support for open software can be found in policy this has not yet translated effectively into practice. He discussed the need for a shift within government from vertical to horizontal connections. The network state requires a network administration which requires network technologies. Using examples, such as eBidding, Castells went on to discuss how the use of

network technologies is directly linked to transparency in government – although governments need to do more for this to be achieved.

Castells noted that currently communication between government and citizens is not true political participation as governments are not really engaging with citizens in a meaningful way. He suggested that one reason is because of the inappropriate technologies being used in government due to poor decisions made by public administrations who did not think enough about their own needs. Administrations need a technology policy that enables them to evaluate and make informed technological choices. Currently, this is not often the case.

Hierarchical bureaucracy contradicts the networking logic. Castells suggested that there were so many rules within public administrations that no one individual can apply all the rules. In this context, micro powers develop, i.e. the people individuals talk to informally who will solve the problem as opposed to going through the formal process of decision making. Such practice could lead to corruption but tends to enable autonomy. While computers make everything transparent, they also incorporate these informal networks into the logic of the institution. Thus, these informal groups resist the implementation and use of ICTs.

Using examples of the medical profession and the police, Castells went on to discuss how the efficiency of the network administration restricts autonomy of professionals. This causes resentment and a blocking of the use of computers amongst professionals. If workers are rewarded for being flexible (i.e. in terms of wages, conditions and training) then they will be - but typically workers are not rewarded and thus difficulties arise. Another obstacle is the gap between the political leadership who don't understand eGovernment and the innovators within the system who are trying to promote change.

Castells concluded by noting that bureaucracy and innovation are opposing systems; bureaucracy implies security and reliability while innovation implies risk and technical change. Technical change requires organisational change which requires innovation. Currently, computers are put into the vertical rigid administrations without change which makes the organisation even more rigid. An innovative bureaucracy will unblock the obstacles. He argued that the relationship between goals and means is what determines transformation in different organisations. In a bureaucracy the means becomes a goal in itself not a logic of production but a logic of reasserting “where I am and what I am”.

Innovation in eGovernment in Catalonia

Ms Marta Continente gave a presentation based on her perspective “from the battleground”. She argued that transformation of the administration was something that would never be achieved unless there was an effort to increase the demand for eGovernment based on a better understanding of what the citizens want.

In line with Castells presentation Marta noted that real challenge was to create a central way of being very flexible. At the beginning of the 80s the Generalitat de Catalunya worked for subsidiary. In Barcelona it was decided that the districts could make a lot of decisions. This move made the administration more efficient. The large scale projects that have been completed and are ongoing have been implemented with the aim of helping the administration to work as a network and improve transparency not centralise decision making.

Marta noted that the administration was faced with the difficult task of looking ahead to the next 10 years both at the global and individual levels. A key issue was that in the world of the mobility there was a need to provide citizens with personalised services from numerous new channels. This requires the administration to rethink their strategies in order to ensure proximity to citizens. Within the administration there has been a great deal of discussion about standards and the models for managing information; an important aspect of this discussion has been to ensure that the privacy of citizens is not invaded.

Marta then went on to discuss some research findings, noting the importance of metrics and surveys to inform the administration about the quality of the services offered. For example, the research has demonstrated that while there are a significant proportion of internet users who desire eServices; the majority prefer dealing with government in person. It is important for the administration not to forget the reality of the citizens.

Marta then went on to discuss the current activities within the Catalanian administration; where the creation and development of databases form a significant part. For example, there is a project to create a single registry so that all of the data can be shared with all the different departments. This is essential to improve the current service level – but is a significant task. Another project is GentCat 2.0 – including an application called eCatalonia using blogs and wikis to enhance eParticipation.

Marta concluded by stressing the importance of evaluating on a daily basis the direction of the administration. They were constantly attempting to reconcile the difficulties of evaluating and being flexible in the short term but at the same time having a long term strategy.

Questions

Q1 Marta was asked what the main legal barriers were that the Generalitat de Catalunya had to face and if / and how they had been overcome?

Marta replied that the legal aspects are not the only impediment - the technical and organisational aspects have been important as well. The Generalitat de Catalunya has to take into account the law of electronic administration and it is important to have a legal framework. However, it is more important to have an organisational structure that allows the legal issues to go hand in hand with the

technical aspects. She gave an example of registering a new business premises. When a new shop is to be opened the owner has to inform the city to let them know when they are to open the shop; and then inspectors come to the premises within two months of opening. For the new shop owner to have an instant decision as to whether they can open the shop on the proposed date and location, 4 databases had to be combined. The third database was based on legal issues. In this example, the legal directive came first and then the technical databases were established.

Q2 Marta was asked whether there were any real advantages of connections between academics and government and if she had any suggestions on how to develop such a productive relationship?

Marta replied that the Administration of Catalonia has been working with IN3 since 2000 on several projects. It is valuable as the research team can follow what the administration are doing from a distance and be more reflective; whereas the administration are too close to the situation and don't have time to reflect. It is this different perspective that is very useful. An important aspect of such a partnership to work is that each side can trust one another.

Innovation in eGovernment: The Use of Geo-information

Sjaak Nouwt's presentation examined the use of geo-information which can be used by governments for delivering eServices to citizens' via their PC or mobile telephone. Examples include: informing citizens about their neighbourhood, about missing children, holiday destinations, etc. At the same time, governments use geo-information, including digital maps, to provide information about where people, buildings, soil types, storms, and roads are. Geo-information makes it possible to locate people, like police, fire, and ambulance personnel, citizens in a disaster area, or movements of animals in case of infectious diseases.

An innovative type of eGovernment service using geo-information is SMS text messages. In the Netherlands, there are a number of examples of SMS text message services by governments, such as group SMS text messages (for example sent to possible witnesses of a crime); SMS-bomb (SMS text message sent by the police every three minutes to a mobile telephone that has been stolen in order to discourage its use); SMS-Alert (in some neighbourhoods, the police sends SMS text messages to subscribers of SMS-Alert to ask citizens for help searching for a child that is missing, or to warn citizens for burglars); and SMS-CB (SMS-Cell Broadcast, a technique that can be used to send SMS text messages to every mobile phone in a certain area (or cell) to warn people about a disaster, traffic information, or to call citizens to elections.

Sjaak highlighted the different technologies that can be used to generate location information (such as Radio Frequency Identification (RFID), Mobile communication networks (GSM, UMTS), Biometrics and Machine Readable

Travel Documents (MRTD)) and the key legal issues that surround the use of these technologies including aspects of privacy law and criminal law.

From this study Sjaak identified a number of barriers: including poor coordination – noting how important it was to keep all actors informed of activities. For example, the Hague Police Force forgot to inform other police forces in the region/country about sending a Group SMS to possible witnesses of a crime. These police forces could not answer questions from people who contacted them after receiving the SMS message.

Sjaak concluded his presentation by noting the increasing use of geo-information in eGovernment; and asked the audiences for other cases or examples.

Questions

There was some discussion about the implications of using geo-information for eGovernment services and the consequences this may have for citizens privacy. Do such improvements in service delivery mean that the privacy of citizens is compromised?

Online Job Search in the EU: The potential of web 2.0

Rebecca Eynon presented some of the early findings about online job search in the EU which is one of the case studies for the Breaking Barriers to eGovernment project. She noted that it is an interesting case; online job search is one strategy to enhance employment mobility within and across member states and has been identified as an example of a high impact, ePublic Service designed around citizens and business needs in the i2010 eGovernment action plan.

Rebecca went on to discuss the features of online job search services provided by governments. For job seekers there is typically an online searchable database of vacancies and additional guidance / information; with some websites offering facilities for email alerts of jobs, facilities to post CVs to the website and the ability to apply and manage job applications online. For employers services typically include the facility to publish and / or manage job vacancies, search the CV database and contact potential applicants. These online services tend to be supported and complemented by job centres and call centres; and operate alongside numerous commercial initiatives.

Rebecca noted there is very little data available on the success of online job search services; job search is one of the 12 citizen services measured in EC eGovernment benchmarking activities; and the majority of EU countries score 4 / 4 for online sophistication. Yet usage data is very limited; and the research team are collecting this data as part of the case study.

Using job centre plus – the online job centre site in the UK as an example, Rebecca illustrated that while the service had a 4/ 4 on the benchmarking data the site could be improved. For example the website had not yet a facility for job seekers to post CVs, there were no pictures, networking and / or audio features. This is problematic given that the site was in major competition from private sector – currently job centre plus only had 13% of the UK market share of employment and training websites – and these commercial websites do have these more advanced facilities.

To gain an insight into the user perspective Rebecca reported some findings from lab experiments with users in the UK who were asked to find details of a job online - half of whom could use open search and half who were required to use the UK gov portal direct.gov.uk. Almost all in the “open search” group used Google to begin their search and ultimately only 15% found the answer on a government site. So despite benchmarking data this demonstrates that governments need to do more to compete with the commercial sector.

Using the seven barrier categories developed within the Breaking Barriers project Rebecca went on to discuss the main issues: major competition from the private sector (Poor co-ordination); public sites tend to be unimaginative and need to innovate (Workplace and organizational inflexibility); and the costs of providing online search (Financial inhibitors). Potential solutions could be co-operation with private sector, encouragement from central eGovernment units to innovate and use of Web 2.0 applications.

Rebecca noted that the characteristics of web 2.0 fits well with aims of online job search and “Job 2.0” sites are becoming increasingly prominent. Web 2.0 applications are in general absent from Government – a major cause of the public sector falling behind the private sector. Thus online job search is an excellent case study for the project to explore barriers and solutions to eGovernment more generally.

Questions

Q1 A member of the audience noted that social networking in day to day life is effective for finding new jobs so it will be interesting to see how effective these sites are.

Rebecca agreed, saying this was an important part of the case study.

Q2 Rebecca was asked, if the commercial sector is doing this job already should governments be competing in this area?

Rebecca agreed this was an important question that needs to be asked. A related issue still to be explored was whether there were any differences in the characteristics of users / types of jobs available on commercial versus government websites? If so, governments had a role to ensure equity amongst citizens.

The New Identity Management Infrastructure: Helping Governments Serve Citizens

Mary Rundle discussed how identity management can be an enabler of eGovernment, for example, saving costs, streamlining services across agencies, facilitating citizen access to services and enabling public participation. Mary stressed that IDM was particularly challenging in a global context where there were different laws and cultures and where the distinction between the real and virtual world becomes increasingly blurred.

She gave a brief overview of netdialogue.org that aims to help bridge the disconnect between international policymakers and technologists by showing how emerging technologies mesh with international treaty provisions.

Mary discussed two main models attracting attention: 1) federated models and 2) citizen models. In the federated model, there are a few places individuals entrust their data too which is within a federated system (e.g. car rental, hotel chain) so people are always working within a federated system and don't need different passwords for each online activity. In the citizen model the data is all in one place but the individual can designate who can have access to what data and how it can be used.

Mary set out the pros and cons of each model and noted that there was real challenge in bridging international personal data protections and identity management infrastructure. She suggested a potential way forward where user preferences could be expressed in a way that observes international data protection standards and where citizens could use symbols or icons to express how their data is treated in a clear and easy way. These symbols would be "hooked" into the IDM infrastructure and so the data would be treated as stated. The system would be readable / understandable by all actors in this process, i.e., ordinary individuals, lawyers, by the regulatory system and computers. Such a system would also allow audits of how the data is treated both in terms of third – party audits of private actions and internal audits of government actions. This approach has attracted interest from supporters from both the citizen and federated models. At present work is ongoing to explore a number of issues including: what would be necessary in terms of law for this to work, what symbols are appropriate and what internal processes would be required for when government required access to data even when citizens don't know about it.

Questions

Q1 Mary was asked about the scope of this initiative, i.e., whether it is national or worldwide in focus?

Mary replied that it was an international system. For example, currently, when individuals want to travel they have to give some personal data that they do not have control of. This system would give citizens more control.

Using a system of icons could not only provide security for individuals data but also provide individuals with more power as it would be possible to see the preferences of individuals on a large scale.

Uses of electronic signature in Europe

Dr Miquel Peguera and Dr Agustí Cerrillo presented the results of a study conducted by a team at the Open University of Catalonia that explored the legal framework and practical uses of digital certificates in eGovernment in Europe. From the study, the main conclusion was that while the effective use of eSignatures is currently increasing this is happening very slowly; the use of digital certificates in order to identify people when accessing eGovernment services remains scarce. The presenters identified two main trends that are fostering the use of the electronic signature: 1) electronic national identify cards that encompass digital certificates for identification and authentication; and 2) legislative procedures that demand certain activities are carried out online, such as submitting invoices to Public Administrations and / or income tax submissions.

The presenters highlighted that while there are an increasing number of eGovernment services that admit digital certificates, the typical option is for access via a pin and user name. Thus, the level of security is not as high. The researchers argued that eGovernment systems should be deigned in such a way that access via digital certificate is also possible as increasingly people will have these devices.

The presenters discussed the key issue of how eSignatures are regulated across Europe. They argued it is important to ensure citizen rights and legal certainty; yet currently the lack of regulation impedes use of eSignatures. The authors identified four different ways of regulating the electronic signature across Europe. The first is to transpose the European directive on electronic signatures into eSignature laws. Yet the laws that have been passed do not regulate the use of electronic signature in public administration in particular. The second is to pass eGovernment laws; yet only a few countries have done so. The third is to incorporate the use of ICTs in Administrative procedure acts; but these only provide basic principles not details of the use of a specific kind of eSignature which is problematic for the countries that have chosen this path. The fourth way eSignatures have been regulated is within eProcurement laws that have been transposed from the European eProcurement directives; yet this means that different countries can provide different kinds of eSignature in the eProcurement process.

A key problem in this area is the lack of uniform criteria for the use of eSignatures within eGovernment. Typically the choice of the kind of eSignature is determined by the level of potential risk and / or if the information has to remain confidential. The researchers then discussed a number of examples where eSignatures are utilised from Belgium, Denmark, Finland and Spain.

The presenters concluded their presentation by providing some recommendations on the use of eSignatures within eGovernment including: political leadership as a motor of change, a legal right for citizens and administrations to use eSignatures, providing users with motivations to use eSignatures (e.g. saving time), and different kinds of eSignatures which have the same level of security.

Questions

Q1 There was some discussion about whether there was in fact a lack of eSignature regulation in Europe - as the eSignatures directive was developed in 1999 and has now been implemented in all countries. The presenters were also asked whether it matters that there is no specific rule for eGovernment within current eSignature regulations?

The speakers stressed that it did matter. There was a need to include specific rules for the use of eSignatures by public administrations in particular because it would improve the use of eSignatures by public administrations, businesses and citizens.

Q2 The presenters were asked if there was a report available?

The presenters announced that there is a report in Catalan that is being translated into Spanish. The researchers are thinking of writing a detailed summary in English.

Data protection best practices in eGovernment: real experiences

Francisco J. López Carmona from the data protection agency of the community of Madrid spoke from a practical perspective about the ePRODAT project. The purpose of the ePRODAT project is to demonstrate to civil servants that data protection can facilitate eGovernment whilst protecting people. Data protection is not a barrier - it is an asset

ePRODAT is aimed at promoting the exchange of knowledge and experiences concerning the protection of personal data for the provision of public services, particularly those relating to eGovernment. It is aimed at individual practitioners, agencies and other bodies who provide eGovernment services. The purpose of the project is to identify best practices that are actually happening today that have been identified both by data protection bodies and universities across Europe. These best practices must involve instances where public bodies are not only obeying the data protection laws but have found cost effective ways to act in accordance with data protection principles. Rather than an “ivory tower” or idealist approach, the emphasis is on approaches that work within the realities of every day life.

Best practices could be categorised into four groups: consent management, privacy friendly identity management, personal data management, and online services to citizens. Given the time available, Mr Carmona discussed the first two – more details about the all of these categories are available on the ePRODAT website.

When governments manage the consent of the people to deal with their data you need something called a consent management infrastructure. One example is Rediris and University of Malaga in Spain where the university found out that data protection laws meant that any they had to ask staff and students about any information they published about them. Therefore, the university made every person responsible for the publication of their data – which they can be change at any time.

One example of privacy friendly identity management is Quasi-Niere in Germany where patients and doctors data was anonymised when managing kidney transplants. In this case doctors and patient names are replaced with unique codes. This is important as the anonymisation of the patients record means that the decisions about who gets a kidney transplant is made purely on the clinical facts. It also enables comparisons of the results of each centre.

Mr Carmona concluded by suggesting that these who would like to know more could visit the project website and / or read the eMagazine on data protection that was available on the site.

Questions

Q1 Mr Carmona was asked if he thought the current framework on data protection is adapted enough to eGovernment communications? Or should a new regulation for specifically eGovernment services be introduced?

Mr Carmona replied that he sees eGovernment as a series of interconnections between different government bodies and different levels of government who wish to exchange personal information. He did not know if the current legislation is ready or not for these kinds of activities or if it should be changed. He stressed that eGovernment is not just about the boundaries of one organisation, the data is now shared amongst lots of different departments and it is essential that these kinds of information requirements related to eGovernment services can be managed under data protection laws.

Summary and Synthesis: Theory and Reality

Bill Dutton drew together the themes and the discussion from the day into five key themes:

The first is the importance of researchers and practitioners not making the means the end of the activity. It is important for stakeholders to take a step back and ask what eGovernment is for, what they are trying to achieve because eGovernment becomes the end. Bill noted that it was interesting that losing track of means and ends is problematic. For example, privacy becomes a barrier rather than a requirement of data protection.

The second is the pace of technological change; it is impossible for researchers and practitioners to keep up. Bill gave the example that it is now possible to uniquely identify every single piece of paper when viewed with a laser. In theory this development means, for example, that any passport would be a unique identifier. So RFID is antiquated before it is even a central technology. Such technological developments are inseparable from cultural, legal and social change.

The third issue is the degree to which government is lagging behind other sectors; which relates to concerns around bureaucracy versus innovation and is a theme that could be layered so that it is also enshrined in law that is antithetical to innovation. Innovation does not do faster what we already do - most innovations change the way things are done - if there is no change the benefits are not achieved. Bill noted that there are a number of unique requirements for government that need to be considered. For example, equity issues are not the same for the commercial sector; the requirement for standards across sectors in government is more critical compared to in other sectors; and the incentive structure is also different. Governments want to reduce costs and don't want to generate more demand for services that will increase costs. Yet when there is an incentive structure governments can move fast, such as security after 9 /11 and the Madrid bombings. This demonstrates that governments can move when the incentive structures are appropriate. More research on incentives is required.

The fourth is the degree to which government is nested within complex ecologies of services; global institutions like the internet, satellite systems enabling geo locations, with local institutions and governments in the middle. It is important when exploring eGovernment both to take the broad view at a high level and drill down to more specific sectors as many differences are found even within one sector in one country.

The fifth is the blurred boundary of where government ends – and this is related to the complex ecology noted above. If individuals want good information and go to Google or another search engine for it then there needs to be a debate about who should provide the information / service. Perhaps the role of government in this context is more about rating the quality of information available as opposed to providing a separate but similar service.

3. Conclusion

The workshop was a valuable event for the Breaking Barriers project, raising the profile of the study, enhancing collaborations between the project team and eGovernment experts and encouraging more open and frank debate about the barriers to eGovernment. Comments, project findings and issues raised at the workshop will inform further development of the research both in terms of identifying barriers to eGovernment and exploring solutions to overcome them.

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