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Breaking Barriers to eGovernment

Overcoming obstacles to improving European public services

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Breaking Barriers to eGovernment: Case Study Report

Deliverable 2

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1. Executive Summary

The Internet and related electronic information and communication technologies (ICTs) are being used increasingly in Europe to enhance the delivery of public services and citizens' democratic engagements with government. However, many such innovations that could enhance government efficiency and effectiveness and be of benefit to citizens and businesses have been hampered by legal, organizational and other obstacles.

The Breaking Barriers to eGovernment project is a three year study funded by the EC that aims to address this issue. The overall objective of the research is to identify and explore the barriers to eGovernment progression in Europe and suggest organizational and legal solutions to overcome these obstacles. Three research reports have been produced by the project team: a legal and institutional analysis of barriers to eGovernment (deliverable 1b); a case study report (deliverable 2); and a solutions report (deliverable 3).

This report is deliverable 2, the case study report. The focus of this report is the discussion of five in-depth case studies carried out across Europe: eConsultation, Public Registries, Digital Citizen Rights, Cross Border eProcurement and Employment mobility. These five cases studies were selected to provide practical examples of case studies that varied across eGovernment applications (eDemocracy, ePublic Services, eCommerce and eAdministration); the five key goals of the i2010 eGovernment Action Plan (No citizen left behind, Making efficiency and effectiveness in public services a reality, Implementing high impact key services Strengthening participation and democratic decision making and Putting key enablers in place); local, regional, national and pan-European levels; and according to their stage of development.

Each of these case studies have enabled the team to explore the barriers and their legal and institutional foundations identified in the Breaking Barriers Study; and assist in pointing towards possible resolutions of the key issues. It is clear from the research that the seven barrier categories developed by the Breaking Barriers project (leadership failures, financial inhibitors, digital divides and choices, poor co-ordination, workplace and organizational inflexibility, lack of trust and poor technical design) are robust and are a valuable grouping of the main barriers to eGovernment. Further, the eight legal foundations of these barriers (administrative law, authentication and identification, IPR, liability, privacy and data protection, public administration transparency, relationships between public administrations, citizens and other actors and re-use of PSI) are of significant importance to the obstacles to eGovernment progression.

We found evidence of all in one or more of our case studies, yet none were ubiquitous. For the emergent case studies, we found less barriers, reflecting the fact that only in those countries where the administrative context is most favourable (Denmark, for DCR and northern Europe for Cross Border eProcurement) have projects in these areas emerged. For the more developed areas of public registries and employment mobility, we found a wide range of barriers and legal issues playing a part.

As well as organizational and legal solutions, these cases suggest that there may be technical solutions, in terms of imaginative use of so-called 'Web 2.0' technologies, characterized by user-generated content and the creation of on-line communities, for some of the barriers encountered in some of the cases (e.g. in particular, specific areas of eConsultation and the rapidly growing on-line recruitment market where competition acts as a driver) have highlighted the potential for eGovernment progress through innovation. Potential legal and organizational solutions are presented in the project report, Solutions for eGovernment (deliverable 3).

Partners

The Breaking Barriers project is led by the Oxford Internet Institute (OII), University of Oxford (http://www.oii.ox.ac.uk) and has four project partners. They are:

- Centre de Recherches Informatique et Droit (CRID), University of Namur, Belgium (http://www.fundp.ac.be/facultes/droit/recherche/centres/crid/)
- Department of Administrative Law, University of Murcia, Spain (http://www.um.es/dereadmv)
- Gov 3 Ltd, London, UK (http://www.gov3.net)
- Tilburg Institute for Law, Technology, and Society (TILT), University of Tilburg, Netherlands (http://www.uvt.nl/tilt)

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Full details of the project, partners, papers, resources and events are available on the project website at: http://www.egovbarriers.org.

2. Introduction

The delivery of improved public services and support for active democratic engagement can be enhanced through eGovernment: the use in public administrations of information and communication technologies (ICTs), such as the Internet, together with relevant associated organizational change and skills development (European Commission 2003). The adoption and implementation of appropriate eGovernment policies and practice in Europe would make a significant contribution to fulfilling the Lisbon Strategy of making the EU "the most competitive and dynamic knowledge-based economy with improved employment and social cohesion by 2010" (European Commission 2002).

However, there are numerous obstacles that can hinder progress towards realizing the promise of eGovernment, as has been recognized within the EU through various related Directives, communications and research initiatives (European Commission 2003; OECD 2003; Australian Government Information Management Office 2003; IPTS 2004). Substantial legal, political, administrative, social, institutional and cultural differences between Member States and regions (Leitner 2003; Graafland-Essers and Ettedgui 2003) in the EU make such understanding of the main impediments to eGovernment of particular relevance to the growing number of important public services that seek to span national and regional boundaries. New initiatives are also often needed when rapid technologically-enabled change creates problems by outpacing the evolution of legal and organizational arrangements.

In 2005 a three year study funded by the European Commission, the Breaking Barriers to eGovernment project, was launched. The overall objective of the research was to identify and explore the barriers to eGovernment progression in Europe and suggest organisational, technical and legal solutions to overcome these obstacles. The project team have used four main methods to achieve these aims: a critical review of a wide collection of existing work on eGovernment, a non-probabilistic web-based survey, case study research and engagement with eGovernment experts via a project website, six-monthly workshops, and the creation of an expert group. This report provides a detailed analysis of the findings from the case study research.

The research team have identified 7 key barrier categories which provide a simple guide to an almost infinite list of possible barriers to eGovernment. The seven barrier categories are:

- Leadership failures. Slow and patchy progress to eGovernment can result from a lack of adequate leadership during any stage in the initiation, implementation, promotion and ongoing support of developments.
- Financial inhibitors. Concerns about the costs of implementing and developing eGovernment, together with inappropriate cost/benefit analysis approaches, can constrain or block the flow of investment at the levels necessary to support future eGovernment innovation.
- Digital divides and choices. Inequalities in skills and access to appropriate systems, knowledge and motivational and training support can limit and fragment take-up of eGovernment. Failure to address clearly the needs of potential eGovernment users can also hamper take-up of eGovernment as even those citizens and businesses with appropriate levels of access may choose not to use available eGovernment services.
- Poor coordination. Lack of coordination and harmonization can put a brake on establishing appropriate eGovernment networks and services that cross governance, administrative and geographic boundaries.
- Workplace and organizational inflexibility. The realization of eGovernment benefits can be constrained or blocked by inflexibilities in responding to the need to make necessary

changes in public administration practices, processes and organizational structures to allow them to be better able to make appropriate effective use of electronic networking capabilities.

- Lack of trust. Heightened fears about inadequate security and privacy safeguards in electronic networks and a general distrust of government can undermine confidence in eGovernment.
- Poor technical design. Interoperability blockages caused by incompatibilities between ICT systems or difficult-to-use interfaces to eGovernment services exemplify the kinds of practical flaws that can become serious operational obstacles to take-up of what otherwise appear to be valuable eGovernment systems.

In addition, the project team have identified 8 legal foundations of the 7 barrier categories that can facilitate or block eGovernment progress. They are:

- Administrative law in many European countries that recognizes certain formal guarantees which can create legal ambiguities and obstacles for some eGovernment services.
- Authentication and identification procedures to check identities of online users, which can become barriers if they are too costly or cumbersome.
- Intellectual Property Rights (IPR) protecting creative works, which can impair flexibility and fairness in some eGovernment applications.
- Liability laws addressing complex new divisions of responsibility in online relationships between government, businesses and citizens.
- Privacy and data protection rights facilitating or blocking information sharing in eGovernment activities.
- Public administration transparency, such as Freedom of Information laws that can add costs as well as giving greater access to government information.
- Relationships between public administrations, citizens and other ICT actors, such as a general right to use online services or contractual arrangements between public administrations and ICT suppliers.
- Re-use of public sector information, which can raise complex legal issues when information from networked computer systems and databases can be accessed from different jurisdictional and organizational contexts.

A detailed analysis of the seven barrier categories and eight legal areas is available in the project report, a Legal and Institutional Analysis of Barriers to eGovernment (Eynon, 2006).

The purpose of this report is to summarise the case study research carried out by the Breaking Barriers to eGovernment project team. Five case studies were selected for the research:

- eConsultation
- Public Registries
- Digital Citizen Rights
- Cross Border eProcurement
- Employment Mobility

A justification of the selection of the case studies and the methodology employed are detailed in the sections below.

Justification of case study selection

The case studies were selected in order to enable the project to cover the range of eGovernment applications and to address the policy objectives of the European Commission.

eGovernment applications

eGovernment encompasses the use of the Internet and related ICTs for four distinct but interrelated types of governmental applications:

- eDemocracy. Includes the support of political participation, such as through facilities enabling public discussion of policy issues involving citizen-to-citizen group communication as well as eConsultations linking citizens with public officials and applications in support of electronic voting or polling of citizens.
- ePublic Services. The electronic delivery of information and services to the public, such as through online access to services by citizens or residents.
- eCommerce. Linking governments with public and private suppliers of products and services, such as in the procurement of supplies or outsourcing of services.
- eAdministration. The application of ICTs for supporting 'back office' administrative operations, such as budgeting, accounting and personnel.

Commission priorities

There are five key priorities for eGovernment as set out in the i2010 eGovernment Action Plan (European Commission, 2006):

- No citizen left behind. All citizens, including socially disadvantaged groups, should be major beneficiaries of eGovernment. To meet this inclusivity aim, European public administrations need to make public information and services more easily and cost-effectively accessible through innovative uses of ICT. Achieving this goal also crucially requires greater public's awareness of, and trust in, eGovernment services and their benefits, together with the development of appropriate skills among all citizens.
- Making efficiency and effectiveness a reality. High user satisfaction with public services should be established by using ICT innovations appropriately to reduce the administrative burden on citizens and businesses and by ensuring these eGovernment systems meet their users' needs, as well as increasing administrative transparency and accountability wherever possible.
- Implementing high impact key services for citizens and businesses. Public administrations should create a variety of eGovernment services with a strong and visible impact in meeting social and economic needs, including major projects delivering Pan-European benefits for citizens and businesses. A fair and transparent market, including electronic procurement processes should be established to enable a range of companies to help administrations achieve this goal.
- Strengthening participation and democratic decision making. The use of effectively designed and managed ICT-enabled communication, interaction and knowledge building should enhance citizens' engagement in democratic processes that affect outcomes in diverse social, cultural and economic activities at all levels in the EU.
- Putting key enablers in place. Appropriate technical, standards and other operational support is required to facilitate progress in eGovernment in the EU, for instance to promote smooth interoperability between eGovernment systems (e.g. in the use of eSignatures and for other aspects of electronic identification management).

These goals were reinforced and developed in the 2007 Lisbon Ministerial Declaration. Five cases were chosen that reflect this range of eGovernment applications and key policy objectives of the Commission. They are:

- eConsultation. eConsultation is an important application within eDemocracy and related to the i2010 eGovernment priority to strengthen participation and democratic decision making in Europe. Indeed, re-engaging citizens in political processes and increasing transparency was identified as a priority policy action as part of the the Lisbon Ministerial Declaration of 19 September 2007. ICTs provide a means for extending electronic citizen access to public information and decision-making that opens up many new opportunities for changing who gets access to politicians and governments; as well as who politicians and governments can reach with their own messages. eConsultation is particularly relevant to the Commission, given the span of the EU and the need to develop some degree of psychological proximity between regional governments and local citizens.

- Public Registries. The numerous public registries for businesses and citizens within Europe present a number of interesting legal and organizational challenges. Such digital registries can lead to back-office efficiency gains as well as improved convenience and accessibility for citizens and businesses. As such, registries are an example of eAdministration and are related to two goals of the i2010 action plan: making efficiency and effectiveness a reality and putting key enablers in place. Reducing administrative burden was identified as a priority policy action as part of the Lisbon Ministerial Declaration of 19th September in 2007.

- Digital Citizen Rights. Digital Citizen Rights is one aspect of eServices; and is related to the EC i2010 priority of no citizen left behind. Continued commitment to this goal was reinforced as part of the Lisbon Ministerial Declaration in 2007 where the development of inclusive eGovernment services was identified as a priority policy action. Digital Citizen Rights is a key emerging issue for eGovernment, as the provision of on-line services, participatory initiatives and the general movement of government administration on-line introduces new questions of equity and justice.

- Cross Border eProcurement. eProcurement is an example of an eCommerce application and a high impact service. eProcurement amongst member states has the potential to lead to significant efficiency gains. Indeed, reinforcing cooperation between member states through high impact initiatives such as cross border eProcurement was identified as a priority policy action at the Lisbon Ministerial declaration in September 2007. In this report innovative examples of such cross border initiatives are explored where two or Member states have cooperated in developing common platforms and processes for public eProcurement.

- Employment Mobility. Enabling mobility of workers across Europe increases economic competitiveness, as the labour market is more flexible and adaptable. Online job search is one way to facilitate employment mobility. As such, online job search is an important eService and an interesting example of a high impact service for citizens and businesses.

Methodology

For each of the five cases the research was carried out in two phases. In the first the case study area was examined across Europe. In this phase, the research team began by trawling, collating and analysing all material that was available at a distance, including web-based documentation, audit office reports, cost data, usage statistics, press reports, secondary literature and reports from consultancies, international organisations and national bodies. The expert group were also canvassed for views and any insider knowledge of individual initiatives. This process provided an overview of each of the 5 cases across Europe and assisted in the selection of the embedded cases in phase 2 of the research.

In the second phase, more in-depth research on specific instances or initiatives (the embedded cases) was conducted in each of the five areas. They are:

- eConsultation: Madrid Participa and Your Voice in Europe
- Public Registries: GEWAN, Eurodac and X Road
- Digital Citizen Rights: the case of Demark
- Cross Border eProcurement: the Northern European Subset and Cross Border Tenders: A Joint Belgian - French initiative
- Employment Mobility: EURES, Online Job Search in Slovenia and Jobcentre Plus

The embedded cases were selected across a range of indicators: geographical location, level of government, administrative law, culture, and level of sophistication of the service; and included examples of relative success and failure. Further details of why each of the embedded cases were selected is provided in the forthcoming chapters. These in-depth cases involved further analysis of documents specific to the case and interviews with key stakeholders, including: member State civil servants who have worked on the development of the project (either at national, regional or local level); civil servants from central eGovernment units; private sector personnel where the project has involved contract providers; and EU officials where there has been involvement at the European level. Further details of the precise methodology for each case are provided in the appropriate sections below.

The remainder of this report is divided into 6 sections. Sections 2-6 present the findings from each of the five case studies in turn; and the last section contains the conclusion to the report. All partners have contributed to the authorship of this report. Details of where credit should be assigned to a specific partner are indicated in the text below.

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3. (Dis)Connected Citizenship? Exploring Barriers to eConsultation in Europe

Background

Facilitating the involvement of different sections of society in the process of government is now seen as a democratic prerequisite in many advanced liberal democracies, with some commentators such as Fishkin (1995) highlighting the need for 'mass deliberation', and emphasising the need for people and their representatives to be brought together to collaborate on issues of mutual interest.

The emergence of the European Union as a policymaking and legislative body has opened up the question of the extent to which Europe constitutes a transnational public sphere in which citizens can debate and participate (Scharpf 1999) and many writers point to a democratic deficit at core of the legitimacy problems of the European Union (Peters et al. 2005) that scholars have attributed not only to the institutional weaknesses of the European Parliament but also to the limited 'Europeanisation' of public discourse in comparison with nation states. Within nation states too, the growing importance of network and collaborative forms of governance brings into question the centrality and authority of representative institutions (Sterling 2003), and it is fast being recognised that in order to promote greater inclusiveness, efforts must be made to better connect citizens within the networks of government, counting them as legitimate participants in the policy-making process.

Increasingly, eGovernment has been viewed as one way to facilitate a more inclusive process of participation in Europe, using Information and Communication Technologies (ICTs) to complement and reform existing political processes. In particular, the rapid proliferation of such technologies and growing Internet penetration across Europe has raised important questions and triggered debates about who is able to participate and to what extent they may do so, as well as dealing with the types of participation such technologies make possible at different levels of government and their impact on different government processes. Barber (1984), for example, in arguing for a 'strong democracy' through the creation of active citizen participation where none had previously existed, warns that the use of technology might result in a diminished sense of personal interaction. Still others see information technologies as having the potential to renew political participation, better connect citizens and political elites, and allow for a reinvigoration and reinvention of current democratic institutions and practices through the restructuring of the networks of communicative power and the creation of a more politically informed and active public (cf. Hague and Loader 1999, Dutton 2004). In particular, citizens are able to employ ICTs to reconfigure access to individuals and groups in order that they might discuss issues, organise campaigns and seek to influence public policy, thereby restructuring the politics of who gets access to politicians and governments, as well as to whom politicians and governments can reach their messages (Dutton 2004).

The shift in thinking about eGovernment from being a technology-driven process to being more citizen-focused, and the recognition of a need to promote greater inclusiveness in decision making processes, can be seen in the priorities of the i2010 eGovernment Action Plan (European Commission, 2006) and the 2007 Ministerial Declaration. Indeed, in recent years there has been an emergence of concrete policies for eDemocracy in many European countries (Millard, 2007). A notable example is the United Kingdom where several eDemocracy projects are publicly funded and both Parliament and the Government have outlined sets of policy principles on the subject. One such set of guidelines, a consultation paper issued by the UK government in July 2002 (HM Government, 2002), sets out a clear policy agenda for eDemocracy and contains a detailed but useful division of the concept into two distinct areas – eEngagement (or eParticipation), which emphasises opportunities for greater consultation and dialogue between government and citizens, and eVoting. eEngagement as a policy, if defined by an express intent to increase the participation of citizens in decision-making through the use of digital media, would consequently involve the

institutionalised provision of resources to facilitate the responsible and collaborative decision making resulting ultimately in institutional and social change. Whilst the earliest speculations about the Internet and democracy emphasised the potential for direct, unmediated democracy (OECD 2001) and the transformative nature of the process of public engagement, this report follows the view of scholars such as Coleman and Gotze (2001) that whilst eDemocracy is incompatible with a political culture of elitism it is not about replacing what has evolved so far, and rather than seeking to radically transform governance along any particular ideological line, it seeks to complement the institutions and processes of representative democracy (Coleman and Gotze 2001).

eConsultation: two-way governance in the digital age?

A long-established way of engaging citizens in dialogue with policy makers is that of Consultation (OECD 2001), where citizens are given the opportunity to provide feedback to government and participate in the shaping of issues relevant to them. Whilst there is a need for consultation at several different stages of the policy process (Rosen 2001), the process of consultation has traditionally involved discussion based around a pre-determined policy issue defined by the government during its initial formative stages, on which citizen's views and opinions are then sought. The government also sets the questions and manages the process, and only in rare cases, are citizens invited to suggest issues for discussion which they as citizens might consider particularly important. This type of eDemocracy thus encompasses 'a continuum of consultation', ranging from low level information gathering and aggregation towards a fuller quasi-deliberative level of interaction.

At the core of the consultative process lies the provision of information and the establishment and maintenance of channels of communication between government and its citzens. The use of ICTs in the consultative processes is gradually catching on as their potential to allow policy makers to interact directly with service users and target the opinions of those at whom a policy is aimed at is being recognised. The speed and immediacy of ICT networks allow people to communicate, give feedback, ask questions, complain, exchange information effectively and build relationships with their representatives. Governments also benefit from the information obtained by using it to facilitate better policy making and administration. General guidelines for 'conventional' written consultation are already in place in most of the Western world, and these are now being used as a basis for eConsultation (OECD 2003).

That said, the consultative model is not without its problems. Despite contrary claims from scholars such as Rash (1997) and Bimber (1998), this model is sometimes presented as facilitating direct, unmediated access to government by special interest groups that may distort opinion on particular issues. Information gathered from the consultative process is usually regarded as a passive resource, largely due to the fact that communication by direct question-asking is based on the need to generate quantifiable and comparable responses to particular policy innovations. The result is that the consultative model may only allow for inputs that fit within parameters already set by policy makers, and there is a danger that opinions which question the necessity or legitimacy of a policy or otherwise be outside of pre-defined issues, may be deliberately marginalised or excluded altogether, particularly if discussions are 'moderated'.

Since 1992, a wealth of online applications have emerged which have transformed the original purely text-based read-medium of the Internet into one that supports dynamic and modifiable rich-media content. While these technologies are used most extensively in a consumer and leisure context, some are beginning to make inroads into the political arena, and are making an impact in the political context. In comparative terms, they are still to be taken seriously as tools for facilitating greater public participation. In the Digital Dialogues study conducted by the Hansard Society (2006), three categories of applications were identified according to their frequency of use by government. First, *frequent-use technologies and applications* are already used by government in its day-to-day functioning, such as email, online forms, online polls, online surveys, mailing lists, and newsgroups asynchronous bulletin boards. Second, *occasional-use technologies and applications, such as blogs, forums and instant messaging* are occasionally used by government to engage the public,

although governments and politicians are still coming to grips with their use. Third, *rarely used technology and applications* have potential to engage citizens, particularly younger generations who use them in already in a leisure context, but they are currently rarely used in policymaking and to foster public participation. For example, file-sharing, virals, wikis, online games, mashups, budget policy simulations, social networking sites, virtual online environments and MMORPGs and chat-bots.

The embedded case studies

Despite the great hype surrounding the use of the Internet and other technologies in recasting democratic processes and involving citizens in policy consultations, there are still relatively few examples of such initiatives in any one country. Of the projects undertaken in Europe, initiatives are often experimental, where government bodies focus on combining the consultation model with the use of the information technologies in an attempt to make representative democracy more effective. Examples of such projects range from local initiatives, such as municipal planning consultations in Germany and Sweden to national projects, such as the Estonian Government's portal where citizens can propose new laws, to pan-European Union endeavours such as those set up under the aegis of the European Commission.

The following discussion examines specific instances of eConsultation in different countries across Europe of technology being used to involve citizens in policy processes, and in doing so, explore the factors that might hinder or enable the successful implementation of eConsultation projects. In particular, it hopes to investigate the legal and institutional foundations of potential barriers to eConsultation and to assist the Breaking Barriers project team in exploring these issues in-depth; in order to develop a set of recommendations for overcoming such barriers.

That said, the case accounts presented in this paper are not necessarily examples of best practice nor are they held up because of their limitations. Selected through a process of sifting through relevant project documents and by interviewing and consulting with specialists in the field, they have been chosen for, and discussed as, being innovative and (often) pioneering efforts by government bodies to use digital technology to recast and reinvigorate democratic processes within their respective spheres of influence.

The selection of the case studies has been guided by categorising eConsultation initiatives along 3 dimensions: the duration of the consultation, the level of the participating government organisation, and whom the consultation is targeting. The three categories are discussed briefly below.

Duration: eConsultation can be divided into three categories according to the length of time that they last for:

- Long Term Consultations: include those consultation initiatives which were either specifically set up as long-lasting initiatives or which became permanent initiatives after an initial trial period. Such initiatives seek citizen feedback on highly topical issues as they arise and are not bound around a particular political event or occurrence like an election. Long term eConsultation initiatives include the Bristol City Council (UK), Madrid Participa (Spain), Iperbole (Italy), Otakantaa (Finland), Tana Otsustan Mina (Estonia), ProjektDemokratie(Germany), The Scottish Parliamentary Initiative (UK), Toute l'Europe (France and the European Commission) and Your Voice in Europe (the European Commission).

- Short Term Consultations: include those initiatives which seek citizen opinions about specific political events or during a designated fixed period of time. These initiatives are thus intentionally short-term, are focused on getting citizen input for a specific purpose, and come to a close once the event or time period is over. Short term eConsultations include The City Planning Commission of Kalix (Sweden), The City of Esslingen (Germany), Energy Technology Futures (Canada), Digital Administration Programme – the Democracy Project (Denmark) and The Future of Food (European Commission).

- One-off Consultations: are highly specialised issue-based eConsultations which are held on an ad hoc basis for a fixed period of time. Such consultations tend to be used by government as a means of gathering information from a well-defined target group on a specific and often pressing issue and, of the three types of consultation discussed so far, are likely to have the most visible impact on government policy. Initiatives include the Online Parliamentary Inquiry into Domestic Violence and FloodForum.net (both UK-based).

Level of Government: Case studies were also classified according to the level of government at which they were implemented. That is, at the local government level, at the level of national government and at the regional or pan-European governmental level.

- Local Government. eConsultation initiatives at the level of local government explored in this study include the Bristol City Council (Bristol, UK), Madrid Participa (Madrid, Spain), Iperbole (Bologna, Italy), The City Planning Commission (Kalix, Sweden), and 'media@komm: The City of Esslingen' (Esslingen, Germany).

- National Government. The case studies used to explore eConsultation initiatives began within national government ministries and associated institutions. Examples include Otakantaa (Finland), Tana Otsustan Mina (Estonia), ProjektDemokratie (Germany), The Scottish Parliamentary Initiative (UK), and Energy Technology Futures (Canada).

- Regional / Pan-European Initiatives. Examples of such initiatives include Toute l'Europe (based in France), The Future of Food (a joint initiative between the German and Dutch Ministries of Agriculture) and Your Voice in Europe (the European Commission).

Nature of the Target Audience:

- eConsultation initiatives can also be categorised and discussed according to their target audience. While the majority of these initiatives are concerned obtaining feedback from the general public on a variety of issues, a small number (such as the UK parliamentary consultations on Domestic Violence and Flooding) seek to obtain specific information from a carefully targeted, often specially selected group.

Utilising this framework three case studies were selected to explore in detail. They were: Madrid Participa (at local government level), The No 10 Downing Street ePetitions Initiative (national government), and Your Voice in Europe (European level). Each of these initiatives are discussed in turn below

Case study: Madrid Participa: A Local Government eVoting Pilot

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Definition of the Case Study

The Madrid Participa initiative (Barrat and Reniu 2004; 2005) was part of the City Council of Madrid's long-term strategy that aims to facilitate direct engagements with its citizens. It was conceived as a pilot programme with the aim of checking the legal, technological and organizational feasibility of eVoting systems in the long term. The project has been shortlisted as finalist for the *European eGovernment Awards 2007*, organised by the European Commission[1].

The project was initially targeted at the 136,227 inhabitants older than 16 years in Madrid's Centro District, which has some distinctive urban characteristics such as having an old quarter and a growing immigrant population[2]. The second consultation was targeted at citizens in the Hortaleza District. Madrid Participa was expected to contribute to a wider policy seeking to improve the area's infrastructure, housing, facilities, urban landscape and a variety of social services[3].

Setting of the Madrid Participa case study

Madrid is one of the most densely populated cities in Europe and the largest city in Spain, with over three million inhabitants[4]. It has developed a complex administrative structure to manage the diverse needs of its many citizens, based on a decentralized model with 21 Districts[5] to help support the availability of all local services throughout its large municipal area. Given the diversity of this population in terms of socioeconomic and nationality perspectives, a key challenge for the Council is to establish close proximity to its citizens' needs. As there are many differences among such a large population, information and communication technologies (ICTs) like the Internet could be a very effective tool to help gain awareness of the concrete problems and priorities of each zone and to support the development of solutions to address these issues.

Madrid Participa sought to gain a better understanding of how citizens could use eVoting and other ICT-enabled capabilities as a means of more simply and efficiently getting in touch, and staying in contact, with a large number of citizens in order to determine and respond to their personalized demands.

Madrid's Mayor and Council made a political commitment to respect the eVoting result since it could not be binding from a legal perspective. A Participation Code which came into force on the 23rd of June 2004 offers a complete legal framework for citizens' participation in the City Council of Madrid[6], including provision for the use of ICTs in many situations. Although the national Spanish legal framework also invites local administrations to promote the use of ICT, a legally binding consultation (known as a 'referendum') needs specific approval from the national Government. This would have resulted in too rigid requirements for Madrid Participa. In addition, the Spanish legal framework for official elections at the local level does not, as a rule, recognize the right to vote for

[1] http://www.epractice.eu/awards
[2] For further information about the special characteristics of the Centro District, see Barrat and Reniu (2004: p. 10).
[3] Madrid Participa has become a focal point for participation issues at Madrid City Council (see: www.madridparticipa.org).
[4] See http://www.ine.es for detailed statistical background on Madrid's population.
[5] A complete organization chart of Madrid's administrative structure can be seen at http://www.munimadrid.es/UnidadWeb/Contenidos/Publicaciones/Organigrama/GralAyto.pdf
[6] For more details of the Code, see: http://www.madridparticipa.com (Government section).

non-EU citizens[7]. Madrid Participa, on the other hand, made no distinction in terms of nationality in order to promote the political aim of seeking to address the needs of all national groups in the targeted area.

The project made a special effort to fulfil a number of strict legal and technical requirements, particularly those related to factors such as the identity of citizens and the security and privacy of personal data relating to them and their participation in eVoting. This made it a good case to illustrate the practical opportunities for extending this kind of 'strong' ICT-enabled participation model to other issues and zones where security and related capabilities are significant, for instance by helping to understand the dynamics of generating trust among citizens in the use of ICT to increase their level of participation in consultations.

All these factors made Madrid Participa one of the most important initiatives in eConsultation in Spain when it was initiated (Barrat and Reniu (2004: p. 4) and Colombo (2006: p. 5))

Milestones in the development of Madrid Participa

The Madrid Participa project emerged in September 2003, following initial conversations between the Madrid City Council and a number of key actors involved in the development of the Information Society, particularly ICT suppliers and experts. Two phases of this pioneering experience in eVoting were subsequently undertaken:

- The first Madrid Participa eConsultation took place from the 28th to 30th of June 2004, only a few days after the city's Participation Code became active. After the objectives for this eVoting experiment had been set, the Council asked for the collaboration of several residents' associations. The questionnaire used sought to identify general areas of concern, such as: 'Which public infrastructures do you believe could be improved within the Centro District?'; 'In your opinion, what is the most important priority needed to improve the quality of life in the Centro District?'; and 'Which activities would most contribute to energizing and revitalizing the Centro District'?

- A second consultation was held in the Hortaleza District from the 18th to the 21st November 2004. This had a more concrete aim: to discuss the policy affecting the opening hours of the Huerta de la Salud public park. Unlike the first consultation, the objectives of this eVote were discussed beforehand with residents' associations in order to ensure it addressed concrete problems of real concern in the neighbourhood. The use of electronic means was not compulsory and other traditional channels were also available[8]. The City Council was committed to implementing the decision of the majority of those voting.

Challenges and potential barriers faced

A high level of participation was expected in the initiative, particularly because it used modern digital technologies and communication media. To encourage widespread take-up, a special effort was made to provide appropriate information about the consultation to all residents with a right to vote. Much attention was also paid to identifying and addressing potential obstacles relating to digital divides within the local community. Plans developed to address such barriers for this ambitious project included:

1. The City Council's lack of the necessary technological means and support was overcome with the collaborative support of several highly-reputed ICT suppliers, which were generous in assisting with much of the cost of the software and related eServices.
2. The City Council did not have the personal expertise to verify the fulfilment of the legal and technological requirements. The Council created a diverse Electoral Board composed of

[7] See Article 13.2 of the Spanish Constitution, which allows the participation of non-EU citizens only under the criterion of reciprocity (the text for this is available at: http://constitucion.rediris.es/legis/1978/ce1978.html).
[8] A complete assessment of this second consultation can be found in Barrat and Reniu (2005).

citizens, institutional representatives and experts to help deal with such requirements and otherwise assist in developing and managing the project.

3. Complete information had to be provided to all citizens, covering: the consultation itself (e.g. date, place and objectives); conditions for participation; and processes for obtaining the identification code to vote. This was achieved through several complementary methods, such as a personalized letter sent to all citizens and an advertising campaign conducted in the media and through selected posters. Above all, the collaboration of the neighbourhood associations involved in the project was key, particularly in contacting certain groups such as immigrants and the elderly.
4. Problems related to the digital divide (see González 2005) were considered as a priority because the use of electronic means was compulsory in the first eConsultation. Among the several channels consequently made available were mobile phones and personal computers at strategically located polling stations (e.g. in markets, neighbourhood Associations and centres for the elderly) where personalized assistance could be requested[9]. In the second consultation in Hortaleza, traditional voting using a physical ballot box was also allowed and was used by nearly 67% of voters (Barrat and Reniu 2005: p. 13).

From a legal perspective, the main obstacles to be resolved related to security and privacy requirements. Failure to address these could lead to a lack of trust, which could become a major barrier to achieving a high level of participation, particularly as the results affected actual policy decisions. A strict system to protect voters' identities and the integrity and confidentiality of their votes was therefore implemented—although this made the project's development more difficult and costly. For instance, all participants had to obtain in advance an alphanumeric identity key acquired by establishing their accreditation in person or via the Internet using a digital certificate. The use of several computer servers for accrediting the identity of voters and expediting the establishment of credentials ensured, among other measures, that the organizers could not interconnect critical personal information provided by voters[10].

Adoption and implementation of Madrid Participa

Madrid Participa and, more generally, the decision to test an eVoting system in Madrid was initially triggered by the initiative of a group of technological companies who offered their services for free, and who therefore became one of the main partners of the project. Such a basis could be problematic in initiatives of this kind as they can not be based mainly on the unselfishness of ICT companies but should be based on public leadership both when planning and executing the project.

Indeed, in this case it was the leadership demonstrated by the City Council in wanting to explore the use of ICTs as an essential tool in widely promoting citizens' participation that turned the idea into a concrete official experience. This leadership was seen as a key element in implementing the Council's existing General Direction for Citizens' Participation in the city's administrative structure and its Operational Plan that sought to increase the use of ICT for citizens' benefit during its current term of office (see González 2005: p. 6).

In addition to the City Council and the supportive groups of ICT suppliers and experts, several residents' associations became key players in the project by acting as a primary channel for informing citizens about the project—but only after the objectives for the first eConsultation had been established and the official initial mailing campaign had taken place (Barrat and Reniu 2004: pp. 21–2). Some of these associations also offered personal assistance to help many citizens engage in eVoting and the creation of an Electoral Board with a diverse representation helped greatly to balance what might otherwise have been a too excessive prominence of technicians in the project team.

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[9] See Barrat and Reniu (2004: p. 67) for a positive assessment of such multi-channel options from the perspective of reducing digital divides, despite the reduction in security that might be involved with some channels.

[10] Full technical details of these legal requirements can be found in Scytl and Accenture (2004).

According to Mr. Carlos González[11], the potentially crucial barriers within this initiative were those resulting from the high cost of this kind of 'strong eVoting' approach[12] and the lack of the required level of resources and expertise within the City Council. However, these potential barriers were overcome in Madrid Participa with the help of the unselfish collaboration of some ICT companies and a group of experts. The pioneering experimental nature of this project meant an additional cost arose from the need to inform the citizens about the aim of the initiative, the process and requirements to participate and, particularly, the objectives of the consultation. This obliged the Council to send a personalized letter to every home in the Centro District, which was the channel through which almost 70% of those participating said they to obtained information about the initial eVote (Barrat and Reniu 2004: p. 23).

Project Design

The project's aim of undertaking a strong eConsultation was part of the justification for opening it not only to Spaniards older than 18 but also to foreigners and those over 16, which is a wider range than specified in the law relating to similar "official" elections. Another reason was to understand a number of specific issues, such as: the extent to which digital divides[13] were an issue, whether the results of the eVoting could or could not be legally binding and the impact of the compulsory use of ICT on the participation of some groups. In this case, the political desire to facilitate the participation of as many citizens as possible determined that several diverse channels were offered, even if some, such as Short Message Service (SMS), did not assure a high level of confidence from the perspective of identification and security[14]. Special attention was also paid to the formal presentation of the questionnaire in terms of simplicity, usability and the neutrality needed to avoid undue interference in citizens' decision making processes.

Impacts of Madrid Participa

General

Despite the efforts of the City Council to promote this initiative, the participation of residents within the Centro District was not as high as had been hoped. Only 882 votes were cast, which is just 0.65 % of the total electoral roll. This was particularly low taking into account the novelty for the public of these types of eConsultations and the fact that participative democracy habits were not yet widespread in the area, particularly using ICT media may perhaps have encouraged participation[15].

As explained previously, Madrid Participa's eVotes had a direct impact only on concrete questions that were submitted to the electors, such as the opening hours for the Huerta de la Salud park, where the City Council thought making the opinion of the majority of eVoters politically binding would be appropriate. Since these two experiences, the Council has not conducted any more eVotes with a similar approach and scope, although the experiment has contributed to a better understanding of participation through electronic means. Reasons for a lack of significant direct follow-up include: the high cost in terms of money and complexity of putting into action such a

[11] Quotes in this study from Mr González other than those cited from published works were obtained in an interview for this study. His official title is Jefe del Departamento de Desarrollo de Nuevas Vías de Participación 2004-2007 Área de Economía y Participación Ciudadana [Head of the Department of Development of New Ways of Participation, General Direction for Participation Affairs, City Council of Madrid].
[12] That is, a system that demands the use of digital signatures for the purposes of authnitcation and identification and incorporates high levels of privacy and data protection within the technological design.
[13] For more details about the level of use of technology tools in Madrid from the point of view of social and economic criteria, see González (2005: p. 3).
[14] Nearly 10% of the votes were made using mobiles phones (Scytl and Accenture: p. 14).
[15] See: http://www.egov-goodpractice.org/gpd_details.php?PHPSESSID=a&gpdid=1780 (Section 17).

strong eVoting system; the experimental nature of the initiative; and, particularly, the low level of participation[16] in the eVotes.

Value of the project within a wider democratic engagement strategy

The two Madrid Participa eVotes should be viewed not as isolated experiences but as part of an ambitious wider strategy to promote participation in the City Council using many techniques, not only ICTs. From this perspective, it has played a relevant role in encouraging local authorities and citizens to consider the use of ICTs to improvement engagements between governments and their publics. This has included highlighting a variety of forms electronic participation appropriate to different circumstance, such as: lodging complaints electronically[17]; non-binding consultations on issues concerning a District; and eSurveys to consult the priorities of citizens on certain issues[18]. The weighting given by Madrid City Council to such approaches is indicated by the way:

- all such initiatives are directed by a specialized department, the General Direction for Participation Affairs, which plays a relevant leadership role;
- a specialized website has been developed under the Madrid Participa label[19], where citizens can reach a wide range of information about the conditions, means and possibilities of participating the City Council affairs, not only through ICTs; and
- citizen participation in the Council's decision is ruled by Madrid's general Participation Code which provides for the use of ICT media in many situations.

Lessons learnt

Although there are no immediate plans to repeat this kind of initiative, important lessons have been learnt to assist any similar ventures:

1. Madrid Participa has been very useful as a check on the attitude of citizens to the use of ICT for consultations. A consequence of the wide publicity given to the project has also helped to encourage new modalities of getting in touch with the City Council, even if an intense modification of traditional habits has not yet taken place.
2. The promotion of the use of ICTs should not be considered as an objective in itself, but more as an emerging tool to help adapt democratic participation to the demands of citizens. It has also reinforced the need to take particular care to address the need overcome digital divides by carefully considering the appropriate role played by electronic media within wider plans to enhance citizens' participation.
3. It is essential to bear in mind that any participation experience must be designed with the aid of the project's target group. For example, Mr. González believes that taking into account citizens' perspectives can ultimately make the eConsultation more effective, even when some circumstances may exacerbate implementation difficulties, such as the need to raise awareness of the initiative among all relevant parties and to spend time and resources on effective initial consultations to assist the initiative's design. The value of this was highlighted by the way the lack of participation of residents' representatives in developing the initial questionnaire led to a lack of confidence in the effectiveness of the first eVote. That was corrected for the second (Hortaleza) eVote by consulting the local neighbourhood beforehand, which could have been a factor contributing to an increase in the overall participation rate by nearly four times.

This case also revealed potential problems connected to the emergent new paradigm driven by the increasingly intense use of ICT for administrative issues, especially from the perspective of power relationships. This was illustrated in the Hortaleza eConsultation on the Huerta de la Salud park by

[16] In both sociological reports that followed the eVotes, the need to increase citizens' participation was perceived by the voters as a priority (Barrat and Reniu, 2004: p. 26; 2005: p. 18).
[17] See: http://www-1.munimadrid.es/SyrWeb/syrGeneral.form
[18] Further information about these initiatives can be found at: http://www.madridparticipa.com
[19] See: http://www.madridparticipa.com

the unwillingness for some groups to accept the consequences of the commitment by the City Council to accept the majority verdict of the eVote. Some political groups argued against this on the grounds of the low level of participation expected and problems related to digital divides, and a group of young citizens conducted an active campaign against the binding outcome because they thought the result (closing the park at night) would be against their particular interests. Such tensions indicate the kinds of complexities that government needs to address in participative multistakeholder decision making. On the one hand, in the survey that followed the first eVote citizens clearly favoured consultation on concrete problems and solutions. Yet, when this perspective was adopted by the Council, other social and political arguments against eVoting emerged.

In a large administrative structure such as Madrid City Council, there may also be different interests inside the government organization, depending on the position of the public authority, especially its nearness or distance to citizens. Mr. González believes the Council's determination to continue with the promotion of eVoting at the central level is being countered by a certain reluctance within decentralized organizations to propose more issues for new eConsultations—despite being closer to citizens and their real problems.

Factors affecting this case of significance to wider eGovernment initiatives

The Seven Barrier Categories

The Breaking Barriers Project, funded by the EC, identified and explored the key barriers to eGovernment in Europe. The project team proposed seven key barrier categories of obstacles to eGovernment progression. The categories are intentionally broad and tied to a multitude of more specific barriers relevant at different governance, institutional and jurisdictional levels. This categorization is particularly valuable when discussing the barriers relevant to this case which may have relevance for other eGovernment initiatives. In summary the barriers are: leadership failures, financial inhibitors, digital divides and choices, poor coordination, workplace and organizational inflexibility, lack of trust and poor technical design[20].

The following are the main issues that arose during the implementation of Madrid Participa of relevance to the seven barrier categories identified by the Breaking the Barriers to eGovernment project (no new barriers were detected in this case study outside these categories).

Leadership failures: From a political perspective, Madrid Participa confirms that good leadership is essential for the success of eGovernment projects such as eConsultations. However, this should not be considered only from a personal management perspective, but within a general plan and an appropriate legal framework on the promotion of the use of ICT for administrative democratic engagement purposes. This is what the City Council did when it assumed responsibility for this initiative as an official project within its general plan for enhancing citizens' participation in the Council's policy making, although technological companies also played a crucial role in developing the initial concept. Such clear government leadership must be harmonized with direct involvement by the social groups affected by the project, particularly in the preliminary phases (as in the Hortaleza eVote).

A key legal factor affecting the Council's leadership role was the provision in the Spanish regulation for local authorities for allowing the result of eVoting to be considered legally binding (a "referendum") only if that has been authorized by the national Government. However, the Council's decision to accommodate an acceptance of the majority view in its Madrid Participa eVoting shows that this inconvenience can be resolved if there is a firm political commitment to using eConsultation.

Financial inhibitors: Madrid Participa was supported unselfishly by a group of ICT companies. However, this model is likely to be of value only in some experimental initiatives but not for longer term strategies aimed at increasing the number and frequency of eConsultations. One of the

[20] For more details about the Breaking Barriers to eGovernment project please see http://www.egovbarriers.org

interesting related understandings revealed by this experiment concerned the contracts entered into with ICT companies. These suppliers are usually not in favour of giving access to their software for commercial/IPR reasons and the public administration officials with which they negotiate contracts may not have the necessary expertise to decide which clauses should be imposed to safeguard the public interest. Experts advice, such as that obtained in this case through the Electoral Board, is important to overcoming this kind of barrier.

Digital divides and choices: The central role of ICT in Madrid Participa led the City Council to take much care in designing an inclusive system that did not leave any citizens behind for economic, social or other reasons. The project sought to bridge digital divides through a number of measures. These included the special effort to inform residents beforehand about the nature of the eConsultation, as well as the availability of a wide range of multi-channel electronic systems, including mobile phones (as used by a high percentage of citizens) and personal assistance at several centres where citizens could, for example, freely access a computer to cast their vote. Although the number of voters increased nearly four times for the second Hortaleza consultation, the overall percentage of citizens that decided to participate was still low, despite the availability in this instance of a traditional voting box used by many participants. This indicates that the main barrier could be an underlying problem with the general lack of a culture of direct democratic participation, rather than the use of any particular medium.

Poor coordination: The clear political support from the Mayor in this case meant few significant problems arose regarding coordination. This was assisted by having the specific department devoted to participation issues take the leadership for this project, as part of a more global plan to increase citizens' participation. Nevertheless, an important lesson from this experience was the essential need to take account of citizens' requirements and preferences when putting into action new eGovernment services, particularly in the initial phase. Otherwise, there is a serious risk that a commitment to the venture by external groups, such as residents' associations, may be lost if they consider the eService provided as useless. Such a commitment also needs to be sustained throughout the project. This reinforces the significance of prioritizing consultation with target groups from the earliest phase of deciding which services are going to be established and in subsequently assessing their functionality and utility.

Workplace and organizational inflexibility: No significant problems were detected in this barrier category during the two eConsultations in this case. However, there has been a distinct lack of interest, even a reluctance, in the subsequent promotion of new eVoting by the Districts' Governing Bodies. This attitude was not perceived while Madrid Participa was in progress, but emerged only later. One reason may be that the project was experimental and thus could be viewed as a novelty; but once there was evidence that this system could be introduced as a regular mechanism to facilitate direct engagements with citizens, a degree of anxiety appears to have arisen because the Governing Bodies may have seen their political role as intermediaries being threatened by more direct eConsultation channels. This could have dampened their willingness to put fresh energy into new eVoting proposals.

The fact that the initiative's strong eConsultation approach, involving strict legal secrecy and authentication requirements, did not become a permanent feature following the initial two eVotes limited its direct impact on the workplace and the 'traditionally' inflexible organizational structure was limited. This could explain why this category did not present itself as a relevant barrier during the eVoting period, but could have been behind the lack of enthusiasm at lower administrative levels to pursuing further similar eConsultations subsequently.

Lack of trust: Authentication is one of the most relevant legal issues the Madrid Participa project had to address, in order to avoid generating a lack of trust in its operation among the citizens targeted. The complexity of this challenge was increased by the additional effort that went into offering multiple channel systems to allow the participation of all citizens regardless of their technological skills and means. This demanded different identification arrangements for different types of channel to check a participant's, although these kinds of problems may be overcome with the new electronic Identification Card being introduced by the Spanish Government[21].

[21] For further information about this identity card initiative, see: http://www.dnielectronico.es

Privacy and data protection requirements were also a priority from the perspective of trust. A dual-server system was used in the underlying ICT architecture to ensure nobody other than the voter could know how they had cast their vote. This needed to be monitored by an external system of control, which was supported by qualified experts. Nevertheless, surveys carried out after the eVoting showed there was not much concern among citizens about the security and privacy of their information (Barrat and Reniu 2005: p. 26). However, the Huerta de la Salud experience also demonstrated a stronger confidence in traditional means, although the low level of participation in this consultation may also be explained by more relevant reasons than a lack of trust in electronic systems such as the absence of an established culture of, and lack of interest in, this kind of direct democratic participation.

Poor technical design: The substantial technical design effort with the support of ICT suppliers and experts contributed to the emergence of no noticeable inconveniences in this respect. The survey after voting in the first Centro District consultation showed an average general satisfaction level of 4 points (out of a maximum of 5), and of 4.3 and 4.2 points respectively for assessments of speed and simplicity (Barrat and Reniu 2004: p. 28). Nevertheless, a special feature of eVoting consultation processes should be emphasized as it may reveal an important lesson for any eGovernment project: it is essential to offer a similar level of guarantee to citizens as when non-electronic methods are used for the same or similar purpose. An example of this, as explained by Mr. González, is the explicit design for Madrid Participa of a capability to allow the casting of a conscious and voluntary 'spoiled vote'.

The case study has also shown that it is vital to have expert advice from an early stage in order to help make informed decisions regarding the technological resources required and how to manage and monitor their correct functioning. This may require external assistance from specialized ICT firms and experts. Madrid Participa was fortunate to have the generous support of ICT companies and experts in this respect, but it could be more of a barrier on other projects.

Relative Influence of eGovernment Challenges

On a 100% scale, the following are approximate relative levels of influence on Madrid Participa Project of some key factors that could affect eGovernment projects:

- Political, administrative and organizational (30%). Leadership is one of the main requirements in order to promote this kind of projects since the use of eParticipation tools requires and brings about a higher level of transparency and, therefore, of control on public workers, who may be reluctant to put citizens' opinion above their own.

- Financial (20%). One of the main inconveniences for eVoting projects is that they demand a high investment to provide with the required software, unless it is unselfishly offered by ICT companies. But this solution is useless when a long-term action is being promoted. Cooperation among public administrations in this field may help to solve this obstacle. Also, there are many other eParticipation tools apart from eVoting that do not demand such an intense financial effort and may involve a higher level of interest from citizens.

- Legal (20%). One of the main difficulties of eVoting projects is to assure the strict respect of privacy and data protection legal requirements since, otherwise, there is a serious risk of reducing citizens' level of confidence and trust in government. Nevertheless, the degree of difficulty from this perspective may be reduced when implementing other modalities of eParticipation different from eVoting.

- Social (20%). Lack of motivation for participating and the absence of a culture of participation may lead to a low degree of citizens' engagement with electronic means for this purpose In addition, the risks related to digital divide had to be overcome to avoid the dangers of inequality (citizens not digitally literate) with some compensating measures (public kiosks, associations…) and support systems for voters (training measures, assistants…).

- Technological issues (10%): Multi-channel solutions must be adopted to guarantee the access of all groups and citizens to participate in the initiative regardless of the use of ICT

tools. Nevertheless, social habits of passiveness may be viewed as a more significant issue. Even if multi-channel access is assured a higher (and proportional) level of participation is not necessarily achieved.

Conclusions

The need to meet wider democratic participation needs with ICT support

Overall, Madrid Participa achieved its main objective of acting as a tool to help gain a deeper insight into citizens' demands and problems related to the design and execution of this sort of eConsultation initiative[22], including the importance of resolving inherent tensions and conflicts arising from the different interests represented in such mutistakeholder policy development. Although it is important in itself to explore the use of new ICT-enabled capabilities for enhancing democratic engagements, such innovations are likely to be most effective when they are conceived as a part of a global strategy to increase citizens' participation.

However, the kind of eConsultation typified by Madrid Participa can be too expensive[23], particularly if there is a low rate of participation. According to Mr. González, the only way of making feasible the direct participation by citizens in public policy making, particularly in a large population, is to have a long-term strategy based on a firm belief in the advantages of ICT-enabled eDemocracy and in promoting their use strongly. This perspective is necessary as many Public Administrations, particularly at local levels[24], have neither the funds nor expertise and resources to manage such complex projects on their own, as illustrated in this case by the specialist requirements when negotiating details of contracts with ICT suppliers. Consequently, greater coordination between Public Administrations is required in this field and, above all, more intense promotion by national and regional authorities to solve these serious problems.

Understanding and addressing citizens' diverse participation requirements

Madrid Participa revealed significant potential barriers to eConsultations that can be posed by digital divides issues, especially when the use of ICT is compulsory. Taking account of citizens' views as early as possible is a key way of enhancing participation and being more inclusive, even if the kind of effective special measures taken in this initiative to inform citizens at the outset about the eConsultation could be too costly and time consuming to be repeated each time a new eVoting experience is planned. The study also found that some concerns about citizens' lack of confidence on security issues may not be as significant as is often assumed. This indicates that systematic assessments of citizens' actual perceptions are crucial from the outset of an eConsultation project, together with an ongoing, objective external system of control to check if the initial expectations have been reached or, even more, if they have to be changed in the light of experience.

Another finding was that many citizens might still prefer to use more traditional means. However, a deeper and more complex reason for the low use of technology, despite the many options offered, seems to lie in the lack of a culture of participative democracy. This could arise from a passive—even lazy—attitude to moving on from an archaic model of political representation, where the relationships between citizens and authorities are not fluid. A traditional administrative framework can also be an obstacle (e.g. the over-rigid rule for requiring national approval of referenda in Spain). Clear political leadership is essential to overcoming these kinds of blockages, as in the way the Madrid City Council accepted that the result of an eVote in this case could be legally binding.

Effective promotion of ICT-enabled media can help to overcome citizens' inertia towards participation, although consideration of offline channels must not be neglected when an eConsultation channel is opened. Given the potentially high cost of some eVoting systems, the

[22] See Barrat and Reniu (2004) for full details of the survey carried out after the consultation.
[23] For further information about the budgetary size of the project, please visit http://www.epractice.eu/cases/madridp
[24] For a successful example at the national level in Estonia see http://www.epractice.eu/cases/ivote

facilitation of 'lighter' ICT mechanisms should be considered initially, for instance in efficiently generating an appropriate supportive atmosphere for future 'stronger' eVoting initiatives involving strict legal secrecy and authentication requirements. The failure to date of the 'strong' Madrid Participa approach to become part of a more permanent approach to consultations with citizens highlights the importance of taking account of such deep-rooted potential obstacles. It also has implications for considering differences between experimental and real initiatives when designing and implementing new eGovernment services.

Finally, if there is a will to develop widespread eVoting then a deep analysis is required of the consequences and impact on the political representation system. For instance, this should assess the effectiveness of ICT not just as an isolated tool, but as a part of a general project to modernize the administrative activity and/or to increase the participation. Only if there is a continued, critical and citizen-centric evaluation will it be possible to know with any degree of certainty whether or not the efforts made have been efficient and effective.

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Case Study: The No.10 Downing Street ePetitions Initiative

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Background – Petitioning in the UK

In many countries around the world, citizens have used petitions to make their feelings known about issues that concern them. Simply defined, a petition is a formal request to a higher authority (Macintosh et.al, 2006) such as a Head of State or Parliament, signed by one or a number of citizens. The format of petitions, and the manner in which they are submitted to and considered by the higher authority, varies greatly from country to country.

In the United Kingdom, the tradition of members of the public submitting petitions to the Prime Minister by presenting them at the door of his official residence of No.10 Downing Street is a long established one, reputed to be even older than the practice of voting. In the past, petitions have been paper-based, consisting of a bundle of sheets bearing the names and signatures of the petitioners. But the humble practice of petitioning received a 21st Century makeover when, in November 2006, the Prime Minister's Office in partnership with mySociety launched an ePetitions Service on its website to provide citizens with a modern, more convenient parallel – the ePetition.

The ePetition

Simply defined, an 'ePetition' is a form of petition posted on a website. Such a petition may be created easily by an individual or group, and by adding their details such as an email address to verify their authenticity, visitors to the website may 'sign' it. Theoretically, there is no difference between difference between a paper petition and an ePetition, only the way in which signatures are collected and delivered.

Since its launch in November 2006, the ePetitions Website site has been very busy. By mid-February 2007:

- There were over 3,381 petitions that were active and available for signing
- There had been over 2,555,972 signatures.
- There had been 2,110,710 signers

The ePetitions initiative was also a finalist in the 2007 eGovernment Awards (http://www.epractice.eu/cases/1021)

ePetitions System Features

Any ePetition system faces a number of challenges that need to be considered while considering the system design. These include the need to maintain and balance the overarching democratic requirements of openness, accessibility and participation with the need to keep within Data Protection standards (Macintosh et. al., 2006). An additional value-added feature is a feedback mechanism where, unlike paper-based petitions the service also provides an opportunity for No.10 to respond to petitioners via email. The features of the ePetition site are detailed below:

Home Page

The ePetitions service may be accessed at http://petitions.pm.gov.uk . Visitors to the website can view the petitions online by popularity ranking or beginning with the most recently submitted petition.

Create/Submit a Petition

Petitions may be created using an 'ePetition form'. The creator is required to supply certain basic information about themselves and their petition. Downing Street aims to process petitions within 5 working days, during which time they are to go-live on the website and the aim is to accept as many petitions as possible. As the website must conform to certain standards laid out in the Civil Service Code, while petitioners are free to disagree with the Government or call for policy changes, petitions must meet certain criteria set out in an 'acceptance policy' which is available on the website.

Around 1 in 6 submitted petitions have to be rejected, the most common reason for rejection being duplication – too many petitions on similar subjects clogging up the site. The other common reasons of rejections include: legal issues such as libel, obscenity and offensive language, party political content and issues outside the government's remit. Many of these may yet be resubmitted, as everyone is given a second chance. Should a petition be rejected a second time, it is posted in a separate section of the website, with the reasons for rejection listed.

Sign a Petition

To sign a petition, the petitioner needs to furnish their name, address and email on the form provided. Once the petition is 'signed' the petitioner will receive an email asking them to confirm their 'signature'. Signatures once appended may be viewed as a list by clicking on the specific petition.

Feedback

The petitioner's email address will be used to automatically provide feedback (unless otherwise requested) – a maximum of two responses from the government to the issues raised in the petition, and a maximum of two emails from the creator of the petition. Other, related services such as email updates are available on the Downing Street website, but require the petitioner to sign up to these services.

In accordance with Data Protection laws, all data is held by mySociety, and not by either the Prime Minister's Office or any other government agency.

The Vehicle Tracking and Road Pricing Policy Petition

The No.10 Downing Street ePetitions System was brought firmly into the spotlight by a petition against the Government's proposed Vehicle Tracking and Road Pricing Policy set up on the ePetitions website. The petition began collecting signatures in December 2006 and closed in February 2007, during which time it was publicised widely and attracted over 1.8 million signatories.

There are a number of advantages to ePetitioning: people can obtain background information on an issue, make comments, sign petitions online and receive feedback on the progress of their petition. This, at least in theory, makes for a more informed petitioner and better quality of participation, as people are given the time to research the finer points of a particular issue before they decide whether or not to support a petition.

On the government side, while the ePetitions service simply allows citizens to petition in electronic form, and not participate in a full-blown eConsultation forum, popular petitions and their associated comments may be used during the policy process. Popular petitions, such as the one on Road Pricing Policy, may even serve to highlight issues and uncover underlying discontents which have not as yet been picked up by the media.

But in the long-term, will the ePetitions system change anything? While the road pricing petition, through its sheer size of support, prompted the Government to respond immediately in order to placate irate petitioners, most petitions can in theory be ignored without fear of retaliation. Given how easy it is to start and sign up to a petition (for example over 3,313 people supported a call for Tony Blair to stand on his head and juggle ice-cream) how seriously can one take the Transport

Petition? And will this new form of voter engagement lead to changes in policy, or will the entire exercise be quietly forgotten?

When doing any evaluation the ePetitions System, it must be remembered that first and foremost, the system is a direct replica of the traditional petitions model, and in that sense is not a radically new democratic process where the voice of the majority translates directly into a legal change. Further, petitions are not meant to be representative of a country as, say, an opinion poll might be. Instead, they simply indicate what one group of people think on a subject, but in combining traditional access to politics with technology they are a powerful way of making politicians aware of issues which are important to that group of people. Accepted wisdom says that it will only be the 'antis' on any issue who will sign up to petitions, and not those who are generally satisfied with proposals, and there is a need for the Government to take into account the silent, possibly far larger majority in favour of a policy. One way in which this could be done would be to allow views gathered from the website to feed into a much wider policymaking context such as a consultation, where they may be discussed and deliberated upon by a wider section of the Body Politic representing different sides of the debate.

Conclusion

The ePetitions System is a significant tool in that it further encourages the public's engagement in politics in the UK, opening a channel to far greater numbers of people than were involved in signing petitions before. Given that it has only been in existence one year at the time of writing, it is probably too early to identify the most important barriers to its further development likely to emerge. To some extent, the self-contained nature of the project means that it is may well avoid significant co-ordination problems, identified as the key organizational barrier by the EC-funded Breaking Barriers project of which this case forms a part. The partnership with mySociety, a social enterprise organization which has had considerable success in developing a range of applications to enhance democratic participation (such as www.theyworkforyou.com, a site which encourages users to be informed about the activities of their legislative representatives) means that barriers associated with workplace and organizational flexibility (another key barrier identified by the project) may also be circumvented. The minimal authentication that is required and the guarantees of transparency offered by the site also work against lack of trust, another key potential barrier. It remains, however, too early to pass definite judgement on the value it adds to eDemocracy in the United Kingdom.

Case Study: Your Voice in Europe: European Commission eDemocracy Web Portal

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Definition of the Case Study

Your Voice in Europe[25] is an official web portal of the European Commission, launched in October 2001. It promotes eDemocracy at the European level, with the aims of:

- improving governance[26] in the EU;
- introducing better regulation (see European Commission 2002a);and
- improving the transparency of EU-level policy-making processes.

Above all, it is seen as a key element in the Commission's response to overcoming citizens' distrust of public institutions and politics especially at the EU level, which is a "poorly understood and complex system for delivering the policies people want" (European Commission 2001a).

To promote "greater openness, accountability and responsibility for all those involved" (European Commission 2001), Your Voice in Europe offers an entirely Internet-based tool to help open the policy-making process of the European Commission to the public. This provides a single access point to a wide variety of consultations, discussions and other tools designed to enable people to play an active role in the European policy-making process.

The portal also serves as an internal communication and staff management aid within the Commission, for example to assist regular internal surveys, help prepare events and conferences (e.g. for registration) and to conduct surveys of website users.

The significance of the portal's internal use within the EC is indicated by a commitment to "active transparency"[27] for the Commission's Directorate-General for Communication in Regulation 1049/2001 regarding public access to European Parliament, Council and Commission documents (European Commission 2001b).

The main innovation is that Your Voice in Europe is an instrument that has enacted a policy of greater openness in Commission and pan-European policy-making processes. Consultations cover a wide range of topics, as illustrated later in this study. Access to current and past topics can be made through the "Consultations" tab on the website's home page.

Setting of the Your Voice in Europe case study

Policy context

The European Commission developed Your Voice in Europe within its Interactive Policy Making (IPM)[28] initiative and Minimum Standards on Consultation[29] policy. It is based on the general

[25] See: http://ec.europa.eu/yourvoice/index_en.htm
[26] As defined in the European Commission's (2001a) White Paper on European Governance, which is concerned with "the way in which the Union uses the powers given by its citizens". See also: http://ec.europa.eu/governance/index_en.htm for the Commission's definition of 'governance' for the EU.
[27] In practice, however, this has acted more as a 'reactive transparency', in the sense that every administrative unit offers access to its own information (documents, results of consultations, etc) by request only, not automatically.
[28] IPM is one of the tools that should help the Commission respond more quickly and accurately to the demands of citizens, consumers and business, in accordance with the European Commission's

principles being established for European consultation: participation, openness, accountability, effectiveness and coherence[30].

The Minimum Standards on Consultation requires this web portal to "encourage more involvement of interested parties through a more transparent consultation process" and "to promote mutual learning and exchange of good practices within the Commission". This meets the requirements of the European Union's legal framework, which states that "the Commission should [...] consult widely before proposing legislation and, wherever appropriate, publish consultation documents"[31]. The Commission's guidance on this is "to give interested parties a voice, but not a vote"[32], as the last word in the legislative process returns to the European Parliament and the Council of Ministers.

Legal framework

Your Voice in Europe relies on a wide range of EU legislation which has sought to introduce greater transparency into the work of Union institutions.

For example, Regulation EC 1049/2001 (European Commission 2001b) stresses that "any citizens of the Union, and any natural or legal person (…), has a right of access to documents of the institutions [i.e. the European Parliament, the Council and the Commission]…"[33] and that the Regulation "shall apply to all documents[34] held by an institution"[35]. This defines "the principles, conditions and limits on grounds of public or private interest governing the right of access to the institutions documents (…) in such a way as to ensure the widest possible access to documents"[36].

This regulation is fundamental to Your Voice in Europe as it addresses access to the results of the consultations carried out by the European Commission. This is reinforced by the implementation of two non-binding instruments within EC consultation mechanisms:

1. The White Paper on European Governance (European Commission 2001a), which "proposes opening up the policy-making process to get more people and organizations involved in shaping and delivering EU policy", as it identifies the key principles of good governance, such as: openness; participation; accountability; and responsibility; effectiveness; and coherence for all those involved.

This White Paper is addressed particularly to EU institutions, central governments of Member States, the regions, cities and civil society[37], and proposes to them a series of initial actions that "should help the EC to concentrate its action on clear priorities within the tasks conferred on it by the EU Treaty: right of initiative[38], execution of policy, guardian of the Treaty and international representation".

Communication on Interactive Policy Making (C(2001) 1014) of 3 April 2001. This aims to improve governance by using the Internet to collect and analyse reactions in the marketplace for use in the EU's policy-making process. See also: http://ec.europa.eu/yourvoice/ipm/index_en.htm

[29] See European Commission (2002b)

[30] As highlighted in European Commission (2001a; 2002b).

[31] See Protocol (N° 7) on the application of the principles of subsidiarity and proportionality, which is an annex to the Amsterdam Treaty, quoted by European Commission (2002b).

[32] As the European Parliament stated in its Resolution A5-0399/2001 on the White Paper on Governance, as quoted in European Commission (2001a; 2002b).

[33] See Article 2, §1, of Regulation EC 1049/2001 (previous footnote).

[34] This relates to "any content whatever its medium concerning a matter relating to the policies, activities and decisions falling within the institution's sphere of responsibility" (Article 3, (a), of Regulation EC 1049/2001).

[35] See Article 2, §3, of Regulation EC 1049/2001.

[36] See Article 1, (a), of Regulation EC 1049/2001.

[37] Civil society is defined as including the following: trade unions and employers' organizations ("social partners"); non-governmental organizations; professional associations; charities; grassroots organizations; organizations that involve citizens in local and municipal life, with a particular contribution from churches and religious communities. For a more precise definition of organized civil society, see European Commission (1999).

[38] To enable the European Commission to play its role as guardian of the Treaties and defender of the general interest, it has been given a 'right of initiative' which empowers and requires it to make proposals on the

Its proposals and action points focus on the more effective involvement of citizens, which depends on more active communication with them from EU institutions and Member States.

2. The Communication from the European Commission (2002b) of 11 December 2002 giving general principles and minimum standards[39] for consultation of interested parties by the Commission in moving towards "a reinforced culture of consultation and dialogue".

The Commission has created the Your Voice in Europe web portal in order to better publicize and undertake consultations by offering a single access point for consultation to interested parties and to "ensure adequate awareness-raising publicity and adapt its communication channels to meet the needs of all target audiences".

Jurisdictional context

Although Your Voice in Europe was launched at the European level, it relies on the involvement of a wide number of local, regional and national stakeholders in all stages of its feedback processes. These include over 300 intermediaries, such as Euro Info Centres (EICs), European Consumer Centres Network (ECC-Net) and the Citizens Signpost Services (CSS)[40], as discussed below the section Other EU-level eDemocracy Services Related to Your Voice in Europe.

Your Voice in Europe is therefore based on a 'bottom-up' approach, even if the online consultation mechanism resides at the European Commission level, through the intermediary of its DGs.

European Commission (2002b) underlines this[41]: "Good consultation serves a dual purpose by helping to improve the quality of the policy outcome and at the same time enhancing the involvement of interested parties and the public at large. A further advantage is that transparent and coherent consultation processes run by the Commission not only allow the general public to be more involved, they also give the legislature greater scope for scrutinizing the Commission's activities (e.g. by making available documents summarizing the outcome of the consultation process)". This is also stressed in the White Paper on European Governance (European Commission 2001).

The European Commission's (2002b) Communication "Towards a Reinforced Culture of Consultation and Dialogue" is a direct contribution to the European Union's Action Plan for Better Regulation (European Commission 2002c) and the subsequent new approach to impact assessment policy. Until 2002 there had not been Commission-wide guidelines on how to undertake such consultations, which left each department to develop its own mechanisms and methods for consulting its respective sectoral interest groups. Furthermore, the Secretariat General publishes each year a report on the improvements made in this field (statistics, results, recommendations, etc.).

Management responsibilities

Several Commission Directorates-General (DGs) have accountability for the good working of Your Voice in Europe:

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matters contained in the Treaty, either because the Treaty expressly so provides or because the Commission considers it necessary (see http://europa.eu/scadplus/glossary/initiative_right_en.htm).

[39] The full title of this Communication is "Towards a Reinforced Culture of Consultation and Dialogue – General Principles and Minimum Standards for Consultation of Interested Parties by the Commission". These principles include clear rules about: the content of the consultation process; target groups of this process; publicity about consultations; time limits for public participation; and rules about acknowledgement and feedback in the consultation process. The general principles and minimum standards applied from 1 January 2003.

[40] See below for more on EICs, ECC-Net and CSS in the section Other EU-level eDemocracy Services Related to Your Voice in Europe.

[41] The DGs are obliged to apply those minimal standards in full when they carry out a public consultation, either open or targeted, under the coordination and formal monitoring system of the EC's Secretariat General. DGs are also encouraged to continuously improve their consultation processes.

- DG Internal Market, which is responsible for the IPM system, website design, quality and the introduction and functioning of the portal's information.
- the Secretariat General, which monitors the consultations and the appropriate application of EU "minimum standards" (European Commission 2002b).
- DG Communication, which is responsible for the communication of the information present on the website to the public and the other tools of information (e.g. press releases, mailing lists, press office functions and to post other documentation).
- DG Enterprises, which coordinates relations with the intermediaries mentioned earlier, such as EICs, including the communication of all necessary information and organization other relevant support (e.g. training courses on appropriate methods of dialogue with stakeholders).

At the same time, management responsibility for this web portal rests with just a few people[42] from DG Internal Market. This simplifies knowledge of who is responsible for what[43] or when there may have been a misuse of this tool. Moreover, it is always the Head of each unit or DG who has the 'last word' for decisions.

Other EU-level eDemocracy services related to Your Voice in Europe

Your Voice in Europe is part of a wide framework of EU-level eDemocracy services that seek to increase participation and consultation by European citizens and businesses and to raise the visibility of activities in this area[44]. However, more research is needed to discover how far the average European citizen uses and understands this diversity of channels and the degree to which this proliferation could mean that some citizens might get lost in the flood of information and the diversity of links offered.

Examples of EU eDemocracy initiatives other than Your Voice in Europe include:

- Euro Info Centres[45]: this initiative provides a business support network of EICs comprising over 300 centres across more than 45 countries. They provide feedback to the European Commission about community matters affecting small and medium-sized enterprises (SMEs) and can inform, advise and assist businesses on Community issues. They are in constant contact with the Commission, confidentially feeding back company concerns to the Commission by gathering information through a variety of means, such as: direct discussion, regional surveys or participation in consultation panels. As EICs are an integral part of the Commission's IPM initiative, they submit (with permission from the company) information about the problems encountered with the IPM database.
- ECC-Net[46]: An EU-wide network of European Consumer Centres promoting consumer confidence by advising citizens on their rights as consumers and providing easy access to redress, particularly in cross-border cases where the consumer has purchased something in another country to his/her own. The network has been created by merging two previously existing networks: the European Consumer Centres or 'Euroguichets', which provided information and assistance on cross-border issues; and the European Extra-Judicial Network (EEJ-Net), which helped consumers to resolve their disputes through alternative dispute resolution schemes (ADRs) such as via mediators or arbitrators. There were ECCs in 26 countries across Europe in early 2007.

[42] According to interviewees for this study, there are two full-time Commission officials in charge of the website and reporting on it to the EC.
[43] For example, there is a formal protocol about data protection that requires each Directorate-General to name a controller for the data processed within a consultation.
[44] Some of these use support developed for the IPM initiative in the creation and operation of its eService.
[45] See: http://ec.europa.eu/enterprise/networks/eic/eic.html
[46] See: http://ec.europa.eu/consumers/redress/ecc_network/index_en.htm

- Citizens Signpost Service (CSS)[47]: An EU-wide service that also offers citizens 'customer-tailored information' and advice on their rights under internal market rules (such as car registration or obtaining social security cover in another EU country). It offers a quick, free and personalized reply by multilingual legal experts, who clarify the relevant rules and direct citizens towards the body which can best help solve their problem. In some cases, citizens could be "signposted" to the SOLVIT network, which can deal with the problem. CSS operates in conjunction with Your Europe.

- EUROPA website[48]: A 'user-friendly' portal through which each European citizen and business can access an interactive platform for information, feedback and debate about the EU. It provides general information about the EU and its institutions and activities, with links to parallel networks across the Union to relevant EU websites that could assist citizens (e.g. with information about the "rights" of citizens and businesses, "travelling in Europe" or "studying and working"). Your Voice in Europe and all the other websites mentioned in this section can be also be accessed through this portal's "services" link.

- The European Business Test Panel (EBTP)[49]: A representative panel of businesses throughout Europe that evaluates the impact of new legislative proposals. This is the unique tool allowing the European Commission to obtain direct feedback from businesses on its legislative proposals or initiatives likely to have an impact on business operations.[50] Examples of Panel consultations could include proposals dealing with environmental standards, working conditions or technical rules governing the distribution and marketing of specific products or financial services. The EBTP is also entirely Internet based, using the online consultation tools developed under the IPM initiative. Views from these consultations are fed into the policy making process, and policy makers are committed to taking them into account when finalizing their proposals.

- Europe Direct[51]: Offers general information to citizens about EU matters in any of the official EU languages.

- EC blogs[52]: Internet users can access Blogs written by European Commissioners (including Margot Wallström, Commissioner for Institutional Relations and Communication and Mariann Fischer Boel Commissioner for Agriculture and Rural Development and blogs of the European Representations (including Joanna Drake head of the European Commission representation in Malta)

- SOLVIT[53]: An "online problem solving network" for citizens and businesses within which EU Member States work together to solve, without legal proceedings, problems caused by the misapplication of EU Internal Market law by public authorities. The European Commission coordinates the network (which is operated by the Member States), provides the database facilities and, when needed, helps to speed up the resolution of problems. SOLVIT is

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[47] See: http://ec.europa.eu/citizensrights/front_end/index_en.htm
[48] See: www.europa.eu.int
[49] See http://ec.europa.eu/yourvoice/ebtp/index_en.htm
[50] Companies which are members of the EBTP panel are informed at an early stage about some of the major upcoming political issues being discussed at EU level that may have an impact on their operations. Panel members can receive feedback on the views expressed during each consultation, in their own language. In cooperation with national coordinators, the Commission selects significant policy topics for each new consultation. Panellists are given a time period (at least two weeks) within which to submit replies through online surveys, with most documents, notices, questionnaires and results being made available in official Community languages. Businesses are supplied with a short explanatory note setting out the objectives of the new policy initiative and asked to complete a questionnaire designed for easy use. After the consultation, the Commission provides overall results. As this unique panel is designed to be representative of all European business, EBTP members are asked to reply to each consultation
[51] Replies can be given also by phone or e-mail in the official EU language requested by the citizen. See http://ec.europa.eu/europedirect/index_en.htm for more on Europe direct.
[52] See http://blogs.ec.europa.eu/
[53] See http://ec.europa.eu/solvit/site/index_en.htm.

proposed as an alternative dispute resolution mechanism, and aims to work much more quickly than making a formal complaint. There is a SOLVIT centre in each EU Member State (as well as in European Economic Area countries of Norway, Iceland and Liechtenstein). They are part of the related national administration. Use of SOLVIT is free of charge. If citizens or businesses are already well informed about their internal market rights and have tried in vain to exercise them in another EU country, they can submit a case to SOLVIT. Complaints can be submitted to local SOLVIT Centre by telephone, fax or e-mail.

- Your Europe[54]: A portal to online European and national public services, part of the EC's IDABC[55] programme. It aims to provide practical information about the European Union and its Internal Market to help people clarify matters when there is a lack of information about their rights in Europe and about how procedures work in other EU Member States. Typical information made available through Your Europe includes general guides and country-specific fact sheets with information on citizens' rights and opportunities. This website aims to break down the barriers created by administrative procedures of different EU countries by pooling relevant information into "one single entry-point online" targeting the cross-border dimension. This single gateway approach is the point of similarity with Your Voice in Europe.
- CONECCS[56] (Consultation, the European Commission and Civil Society): Provides information on the committees and other Commission frameworks through which civil society organizations are consulted in a formal or structured way. It includes information on the Commission's formal or structured civil society consultation bodies[57], with a directory of pan-European civil society organizations representing a wide range of interests.

Milestones in the development of Your Voice in Europe

Your Voice in Europe was launched in 2001, with capabilities that have successfully enabled the carrying out of more than a hundred public consultations in the twenty areas of policy activity of the different DGs[58].

After five years of functioning, there is a formal system to monitor the impact assessment for older consultations. The website is regularly updated with open and closed consultations, and the results made available either directly or through a link to the Directorate-General in charge of that consultation.

Challenges and potential barriers faced

Plans were established to address any potential barriers for EC officials through appropriate training courses. Progress was also smoothed by the good relationship between the main DG officials involved with specific consultations and those responsible for the development and operation of the portal itself.

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[54] See: http://ec.europa.eu/youreurope/index_en.html
[55] See: http://europa.eu.int/idabc
[56] See: http://ec.europa.eu/civil_society/coneccs/index.htm for more information on CONECCS. Since the interviews conducted for this study with the EC official in charge of the CONECCS database, the European Commission has adopted a Communication on the follow up to the Green Paper on European Transparency Initiative (European Commission 2007), where it was announced that the CONECCS database will be wound down and replaced in Spring 2008. From 21 March 2007, CONECCS was online for a short period as a read-only information tool but is now closed down.
[57] According to an interview with an EU official responsible monitoring the consultation policy, the number of the CONECCS members was 749 on 7 March 2007.
[58] See: http://ec.europa.eu/yourvoice/ipm/index_en.htm for this figure. The number of consultations identified directly on the Your Voice in Europe portal is less, as the website offers only a selection of consultations addressed to the broader public. A fuller picture of consultations undertaken by different EC Directorate Generals is provided by through links on the left of the portal's "Consultation" home page (http://ec.europa.eu/yourvoice/consultations/index_en.htm).

One of the legal issues identified at an early stage in the project related to potential problems with the availability of information that the EC must furnish within the framework of its eConsultations policies[59], for example affecting the time available for people to respond to a consultation (normally eight weeks) or the advertising and publicity required to promote the consultation.

Other key legal issues concern data protection and privacy policy regarding the data collected and processed by the IPM process. To help overcome obstacles that may arise in this area, the Data Protection Officer (DPO) of the European Commission is always informed about all open consultations, including details about the purpose of the collection of data and any significant changes during the consultation process. Furthermore, only a few EC officials are in charge of the portal's database, under the control and monitoring of the DPO. The design of the system also incorporates various measures to support effective data protection procedures, as discussed in the next section.

Project Design

Consultation environment

Your Voice in Europe consists of two main Internet-based instruments: the 'feedback' and 'online consultation' mechanisms. These enable the European Commission to collect feedback directly from citizens, consumers and businesses, in order to better understand how they perceive EU policies and to learn from their experience.

The Feedback Mechanism consists of the network of about 300 intermediaries who help the different DGs to collect spontaneous information from citizens and businesses about their views on various EU policies and to record them in the Commission's Feedback database. As indicated earlier, this has led to many consultations, and several DGs have already started to use it as an input for policy making.

The 'Online Consultation Mechanism' enables the creation of online structured questionnaires for completion by citizens, businesses or consumers to give feedback to the relevant DG on a particular policy-related issue.

The IPM consultation tool used by this portal is an online questionnaire management system developed by the Commission's Informatics Directorate (DIGIT) to help undertake eConsultation data collection and analysis across EU Member States. It allows the consultation process to be fast and efficient, with results made available to participants and policy makers more quickly. The software for this is Internet-based and consists of a number of modules that manage the life-cycle of online questionnaires: creation; translation; test; launch; and analysis of results.

Privacy and data protection

Each Your Voice in Europe consultation questionnaire includes a formal "Privacy Statement"[60], which is monitored by the Data Protection Officer of the service. This mentions relevant information about "users" of the consultation process, such as: "what personal information" is collected; "for what purpose"; "through which technical means"[61]; the people who "have access" to that

[59] See The European Commission (2001a) White Paper on European Governance and related European Commission (2002b; c) Communications.

[60] See the 'Privacy Statement' applied for all eCommunications, available at: http://ec.europa.eu./information_society/policy/ecomm/info_centre/documentation/public_consult/privacy_statement/index_en.htm

[61] This follows the requirements of the Directive 95/46 of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data (available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31995L0046:EN:NOT) and the Regulation (EC) 45/2001 of the European Parliament and of the Council of 18 December 2000 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data (available at: http://eur-

information; to whom it is "disclosed"[62]; and the measures of protection employed[63]. There is also information formally available on "how to verify, modify or delete" the processed data. This is not done by direct access to the personal data stored in the database, but through the intermediary of the "controller of the file" (normally each DG manages its own data). This statement must be completed before any data can be included in the database.

In order to provide an efficient service to the DGs, personal data normally remains in the database until the results have been completely analysed by the concerned services, in accordance with information explicitly provided by the statement. The data will then be rendered anonymous when they "have been usefully exploited", after one year for Your Voice in Europe but more generally up to three years from the end of a consultation[64].

Users also identify themselves by completing a form that includes relevant details (e.g. whether they have external funding related to the consultation, in order to identify possible lobbying groups). Participants in a "stakeholders consultation" that targets specific groups and experts with a special understanding of the issues being addressed must be a representative of the relevant field[65]. Approval by the concerned DG of the "legitimacy" of a person or group could allow the identification of "regular consulters" in that area. A DG can also refuse an application for consultation if it is deemed "inappropriate" (e.g. if it includes criticisms expressed in an unacceptable manner).

The portal enables "active transparency" in consultations conducted through it by giving online access to their results, via links to the originating DGs' websites where relevant remarks and criticisms are published.

The Commission usually provides an explicit response by means of mechanisms like 'Green Papers' or 'Communications'. The lead DG must provide a "good reason" if a targeted stakeholder consultation is undertaken, with the option of publishing results of such consultations to a wide public outside these stakeholders groups.

Impacts of Your Voice in Europe

As the structure of this portal's activities involves the many intermediaries identified above in the Jurisdictional Context section and targets a wide variety of stakeholder groups, it was difficult for this study to contact a representative set of stakeholders other than EC Officials with direct responsibilities for the website and for monitoring its performance. The views of these officials were obtained by telephone and direct interviews, which form the basis of many observations here about the impact of the system. The study's researchers have also made their own assessment of the usability of the system.

A window for the European Commission on eConsultation in Europe

In practice, Your Voice in Europe has acted especially successfully as a web "window" for the European Commission and the DGs, who have used it to gather information on all open consultations within their responsibility. DGs have found it to be of great assistance in publicizing their open consultations to citizens, businesses and other European institutions. The Secretariat

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lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=32001R0045&model=guichett).

[62] Normally, the data collected are analysed only by the DG in charge of the consultation. If it is to be shared with other Commission services, specific information on this must be provided (and people have to give their explicit consent on it). The EC does not share data with third parties for direct marketing.

[63] After the submission of a form, the replies are recorded in a secured and protected database hosted by the Data Centre of the European Commission (together with the stakeholder's chosen language used for drafting the reply). This is not accessible from outside the Commission. From within the EC, the database can be accessed only by authorised people using relevant identification and password controls.

[64] This was used, for instance, in the "privacy statement" available for the consultation open until 31 March 2007 on the Green Paper: "Modernising labour law to meet the challenges of the 21st century'" at: http://ec.europa.eu/yourvoice/ipm/forms/dispatch?form=labourlaw&lang=en

[65] Usually subject to a random control by the Secretariat General.

General has used it to assist in controlling the effective application of European rules, in consultation with the different DGs. The many consultations open to the broader public and specific stakeholders conducted through the portal since 2001[66] have focused mainly on the European legislative process (e.g. opinions about Green Papers, amendments of Directives, draft legislation for White Papers, etc).

The EC stakeholders interviewed for this case study generally see this project as a successful tool[67] for the DGs and Commission, with around 10,000 visitors per day. It has been especially useful when inputs are required from targeted groups[68] in almost all geographical areas affected by the EU document or policy field at the centre of the consultation.

The portal's use as a visible tool of good internal coordination is reinforced by conformance to the Commission's Minimum Standards on Consultation. The Secretariat General is responsible for monitoring the application of the Minimum Standards for Consultation. DG Internal Market runs the overall IPM initiative. Plans are being considered to extend IPM to all EC services.

eConsultation limitations of Your Voice in Europe for citizens and businesses

In comparison with traditional consultation media, the use of online eConsultation channels should aim to facilitate participation by citizens and businesses, as well as being useful to the Commission in reducing the time and costs involved in gathering and analysing the results. For example, an online consultation can be based on a structured questionnaire available in every official EU language, with results also presented in the desired languages.

The portal could be also a useful tool of investigation outside the EC, as it offers direct access to the consultations and their results, which would help the Commission to monitor how EU policies work in practice across Europe[69]. The Commission can also launch other consultation strategies to go further into the issue addressed by the consultation (e.g. by organizing public meetings and conferences). Together, these activities can contribute substantively to the development of proposals by the Commission (e.g. as Communications, Green or White Papers) to assist the European Council and European Parliament take final policy decisions.

However, this study had insufficient input on how external users perceived this tool of eConsultation. Nevertheless, from the research we have undertaken we have found that the

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[66] See http://ec.europa.eu/yourvoice/consultations/index_en.htm for current and past consultations. In early April 2007, there were about twenty open consultations covering topics as varied as excise duty, a European Strategic Energy plan, EU maritime policy and European free phone numbers. For instance, the 'Public Consultation on the identification of services of social value in Europe that could benefit from single European free phone numbers starting with 116' by DG Information Society was open to the broader public until 20 May 2007. "Interested parties" were invited to provide their "views, suggestions and relevant information". On 2 April 2007, a Consultation Document giving necessary information about the consultation process was made available in three EU official languages (English, French and German). Citizens are invited to send the consultation response by e-mail or by fax. The outcome, such as any updating of the list of reserved free phone numbers, will be published in the Official Journal of the European Union. See http://ec.europa.eu/information_society/policy/ecomm/info_centre/documentation/public_consult/index_en.htm#116 for more on the "free phone consultation".

[67] Described as even a "perfect" tool by one EC official.

[68] Such as Members of the European Parliament; representatives from Member States; Member State administrations; international organizations; local and regional authorities; NGOs; trade unions; business associations; academic institutions; and individuals.

[69] See, for instance, a large scale consultation in 2005 of 'Young People in Europe: Promoting Active Citizenship and Implementing the European Youth Pact' carried out by the DG for Education and Culture, Youth Policies Unit (see http://ec.europa.eu/youth/youthweek/intro_consult_en.html). This was launched via the European Youth Portal and conducted through Your Voice in Europe. It consisted of an online questionnaire in 19 EU languages and was open to "all interested young people and organizations". Information on the main issues for discussion on future developments in EU youth policy was presented, with respondents invited to express their opinions and comments on the proposals. In total, 3874 replies were received from 32 countries. Statistical analyses and a comprehensive report assessing the results were made available through Your Voice in Europe. They were also communicated to European and national authorities responsible for youth policy development during the European Youth Week in Brussels in December 2005.

generally positive assessments of this portal from EC officials summarized above need to be balanced by some observed limitations:

- For instance, it is clear that the website is not as 'user friendly' as it could be (e.g. the failure to update certain links resulting in 'dead' links; the relative 'invisibility' of the portal for the EC's outside environment[70], which further emphasizes its primary use internally within the Commission; and what some see as a rather insipid, unappealing design).
- The consultation process could also seem intimidating to some citizens. For instance, some consultations require the downloading of substantive official documents to give background to an issue. A variety of different forms of consultation channel are used for feedback, such as by online questionnaire, email, postal 'snail mail' and fax. But it isn't clear which methods are appropriate for which type of consultation.
- Measuring the success of consultations from the user's point of view is also difficult, as just having broad statistics like the number of 'hits' per day on a website are not sufficiently fine-grained to determine who is using what and how they are using it. DG Internal Market could not provide details statistics on the nature of visitors to the portal (e.g. whether they are DG officials, intermediaries, private persons, etc). There are, however, indicators that suggest at least some website facilities are underused (e.g. in early April 2007, the last online "chat" with an official had been undertaken almost 19 months earlier, on 12 September 2005).
- The focus of the portal to date on its use by EC's institutions and services has to some extent limited its availability and usefulness to people outside the Commission. Its Internet-only capability and the nature of its user interface design and choices also restrict its value to those who are not yet web connected or who find difficulty using the portal. For example, some EU languages are not available for all consultations, even when consultations have complementary offline channels (e.g. with the help of intermediaries).

Factors affecting this case of significance to wider eGovernment initiatives

The Seven Barrier Categories

The Breaking Barriers Project, funded by the EC, identified and explored the key barriers to eGovernment in Europe. The project team proposed seven key barrier categories of obstacles to eGovernment progression. The categories are intentionally broad and tied to a multitude of more specific barriers relevant at different governance, institutional and jurisdictional levels. This categorization is particularly valuable when discussing the barriers relevant to this case which may have relevance for other eGovernment initiatives. In summary the barriers are: leadership failures, financial inhibitors, digital divides and choices, poor coordination, workplace and organizational inflexibility, lack of trust and poor technical design[71].

The following are the main issues that arose during the implementation of Your Voice in Europe of relevance to the seven key barrier categories identified by the Breaking the Barriers to eGovernment project (no new barriers were detected in this case study outside these categories).

Leadership failures: There was strong Commission leadership of the project by the Secretariat General and individual DGs, in a spirit of close collaboration[72]. However, this leadership has also tended to emphasized the internal benefits to the Commission, and such leadership is not clear outside the EC in terms of impacts on targeted groups or broader public interests.

[70] For example, during one interview with an EC official we could not find the Your Voice in Europe by means of other EU websites (e.g. EUROPA service), although this problem was subsequently resolved.
[71] For more details about the Breaking Barriers to eGovernment project please see http://www.egovbarriers.org
[72] This has been assisted by the role played by Mr. James Gray of the DG Internal Market, who is in charge of the good working of the portal.

Financial inhibitors: This has not been a barrier for this project in providing the internal service to the EC, as the Commission and individual DGs have given sufficient financial support to ensure an excellent service. However, it is not clear if the many related intermediaries benefited from a coherent policy for funding external consultations to reach the public and targeted groups.

Digital divides and choices: A number of obstacles have arisen in this category: the portal's non user-friendly design aspects; its relative 'invisibility' outside the EC's environment; the availability of Your Voice in Europe only as an Internet-based channel; and confusion arising from the numerous other eDemocracy-related European portals and websites.

Poor coordination: The strong leadership has helped to avoid significant coordination problems within the Commission and improve efficiency. However, it has been difficult to assess how effective cooperation has been with external bodies, groups and individuals.

Workplace and organizational inflexibility: Within the EC, there were no significant problems with workplace or organizational inflexibility, particularly as officials have been given continuous training on the IPM initiative, minimum standards on consultation and related factors. Again, the implications for intermediaries are not clear.

Lack of trust: The Commission's leadership has helped minimize trust concerns by offering guarantees of transparency and effective data protection.

Poor technical design: The poor user interface has been the most significant technical design obstacle.

Relative influence of eGovernment challenges

On a 100% scale, the following are approximate relative levels of influence on Your Voice in Europe of some key factors that could affect eGovernment projects:

- Political, administrative and organizational (50%): the implementation of such portals at the national levels depends mainly on the political motivation to increase awareness and transparency on the governments' consultation procedures. The lack of coordination and leadership in this field are the main barriers to be overcome in the future. Moreover, the general "hierarchical" structure of national public administrations implies that a kind of "top" leader (as the Secretariat-General in this case) assumes the monitoring and the control of such portals, in order to ensure updated information and continuous civil servants training on the tools. There must be also strong political will to take then into account the results/the answers obtained by those consultations. Further efforts should be undertaken in order to avoid that such portals at national level become only "internal" tools for public administrations, as it seems to be the case of the Your Voice in Europe portal.

- Legal (20%): This is related mainly to personal data protection, public information regulations, digital signature rules (to guarantee effective authentication and identification tools) and database regulations.

- Financial (10%): clear conditions for the financing of such eParticipation tools must be adopted by national eGovernment plans, in order to be sure that such tools exist but that they are also used by national legislators or eConsultation "instigators" in a effective way. Clear updated monitoring of all the processing operations should also be took into account in those budgets.

- Social and economic (10%): This related primarily to the take-up of the eParticipation services developed. There is always the need to do not contribute to increase the digital divide within civil society, and above all when such "democratic" matters are at stake. Broader political considerations are needed to overcome these problems. Privacy's concerns must also not be forgotten at all.

- Technological issues (10%): such portal's tool must be interoperable by all stakeholders implied in the eConsultation process. The EC model seems not to be a user-friendly model to be followed by national actors (see Poor technical design barrier above mentioned).

National (or even local) pilot projects should be tested before to launch a general portal like Your Voice in Europe.

Conclusions

Your Voice in Europe is a significant element in the EC's eConsultation policy, particularly as a source of 'eInformation' on consultations carried out by the Commission and in enabling DGs to take account of EU citizens' needs in a wide range of policy fields. This is contributing to meeting the need for greater coherence among the various elements of the EC in their external relations with citizens and business, by addressing through eConsultation processes the real needs of stakeholders and other EU public administrations at different levels.

Its design as a 'single access point' portal exemplifies the European Commission's wider strategy of seeking to channel access to public information through coordinating gateways to facilitate and simplify that access.

Consultations handled via this portal seem to have already provided valuable advice in many fields, and have been duly taken into account in drafting Commission proposals for new policies[73]. Moreover, this study suggests it has been an excellent tool of eConsultation for public officials at a pan-European level which is easily transferable to national levels in each EU Member State.

The main weak points identified concern the portal's use and impact outside its internal Commission users, such as poor user friendliness and external visibility.

This could be a challenge to the effective transparency of the Commission's policy-making process in reaching EU citizens and businesses. There is therefore a need for a more systematic approach to assessing the value of consultations to the public, including research and guidelines to help identify the most appropriate approaches and channels to use for different forms of consultation. An important focus of such impact assessments should be on how Your Voice in Europe is perceived by users from outside the EC. This could help to make the portal even more valuable as an aid to better democratic engagement in Europe.

Addressing these weak points effectively and efficiently would be an important further step towards fulfilling a key goal in related EU policy documents and regulations: to open the EU policy-process to all European citizens and businesses, using eConsultations to better meet the needs of all stakeholders.

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[73] For further information about outcomes, see: http://ec.europa.eu/yourvoice/consultations/index_en.htm (and click on 'Results and Follow-up view').

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Conclusion: using ICTs for public engagement

Through an in-depth analysis of available policy documents and related literature, and from conducting the case studies above, leadership, financial planning, digital divides, coordination, data protection, authentication and identification and innovative use of technology have been identified as factors that might significantly influence the outcome of eConsultation initiatives in Europe.

Key success factors for eConsultation projects seem to include the presence of clear-cut goals, adequate planning and preparation of the initiative, and the innovative use of technology to reach out to as many citizens as possible. Adequate political leadership not only in terms of having key people willing to drive the initiative, but also in terms of framing and acting upon a definite plan within an appropriate legal framework is essential; as is good coordination both within government and between government, citizens, business and user representative groups. Part of the planning process is to consider the finances required to start and run the initiative, which is very important in determining and ensuring the long term sustainability of a project.

There is a tendency for eConsultation initiatives to be project-based and relatively self-contained. While this can help mitigate the potential barriers to their development, particularly co-ordination, it can also limit their value to democratic participation, if they are not incorporated into the routine of policy-making. The continued success of the UK ePetitions project, for example, will probably rest on the perception that popular petitions are actually making a difference in terms of influencing policy-making, but there is little evidence so far to suggest that this will be the case.

Legal barriers and inconsistencies, political apathy amongst citizens and problems of digital and social exclusion are still very much stumbling blocks that governments need to contend with. Significant legal areas which impact the success of a project include data protection and privacy laws which directly affect the manner and degree to which electronic data may be collected, stored and used by the government, and defines the purposes it may be used for. Secondly, authentication and security issues are important as they can impact trust in government and influence participation, both through ensuring the protection of citizen identity while at the same time not placing excessive burdens on users of the system. While not prevalent in the case studies above Freedom of Information Acts and Ordinances which define the conception of information within the country's legal framework, which in turn defines the way in which data may be collected and used are relevant here. A fear of liability on the part of government officials who are apprehensive of using technology and participating in initiatives which might bind them to a course of action or open them up to attack from the citizenry without adequate legal protection could also be an important issue to address.

The emergence of new, principally web-based media – also known as 'social software' or 'participative media' – such as blogs, forums and webchats, is altering the old relationship of

government as the single broadcaster of information and the public as the passive consumer of that information. All these forms of Web 2.0 media, which support user-generated content and are inherently network oriented, are instead resulting in a rethink and a recasting of the 'user' as an active participant and even a producer of content – one who uploads as well as downloads information. In this context, the innovative use of Information and Communication Technologies offers up the possibility of new consultation spaces and the potential to increase the breadth and depth of citizen participation in the public sphere. ICT-based engagement may not, in the short-term, replace conventional methods, but can definitely be used to complement them so as to overcome their shortcomings and provide government with new methods and innovative ways in which they might communicate and interact with their citizens.

Any government which chooses to use ICTs to increase public participation will have to anticipate and deal with a number of issues resulting from the technology such as having to deal with increased oppositional, single-issue politics, increased process speeds and needing to find a way whereby 'pertinent' views and opinions are translated into meaningful debate and deliberation. An important question to be asked, therefore, is what makes an eConsultation initiative successful? From the case studies discussed in the paper, the key to successful projects appears to be the ability of Government to combine not only the creative use of new technologies with a balanced understanding of the Internet and of what actually works online, but also to successfully understand citizens and their motivations and be able to anticipate and tackle the (often unrealistic) expectations of technology held by citizens, politicians and the government. To this end, the timing of a consultation is of paramount importance, if held too late in the policy process there will be little policy impact – resulting in backlash again the technology that is not wholly justified. And finally, there is a need to start seeing applications as not simply communication tools but as creators of space, tools and data that already exist and do not need to be created, and governments start focusing beyond the technology and begin engaging with people in the spaces they create.

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4. Public Registries

Defining public registries

We define a public registry as a centralised and, in some sense, authoritative repository of information for a class of entities. This information may be of value in and of itself, but a defining feature of a public registry in our definition is its utility as the hub of an information architecture that links with other distinct databases, and by doing so, reduces the data requirements of services that build from those secondary databases. The essence, then, is one of information reuse.

This definition does not simply include any government database, though. Databases that are inherently transactional are not the target of our study. However, transactional databases will often have, or at least benefit from, a registry aspect to them. So, to take a stylised example of personal tax records, the tax collection agency will maintain both a list of tax payers and a list of annual payments made by each. Conceptually, the registry is the first list, while the transactions occur in the second. The distinction can obviously be rather grey in some cases. Further, transactions are expected to and do occur for registries: new entities get added and removed. Still, we find the distinction relevant and useful in narrowing down the types of eGovernment project that we are interested in.

From this definition, we can categorise public registries along two dimensions: the type of public registry and the scope of the public registry.

- Types of Public Registry: We may distinguish between three types of registry based on the type of "entity" about which information is stored: citizen registries[74], business registries, and asset registries. From the point of view of an analysis of "barriers to eGovernment", this typology is potentially rather important. It is anticipated that Digital Citizen Rights are likely to be a major factor in limiting and moulding the development of public registries. However, these rights are likely to be rather different for people than they are for businesses; with the former having privacy rights that the latter very often does not. So, while inter alia technical and organisational issues are likely to be shared across registries of both types, citizen registries are likely to meet particular challenges.

- Scopes of Public Registries: Existing and proposed public registries vary a great deal in their scope. For our purposes here, we can divide registry projects up into being of European, national, or sub-national scope. European registries are meant to contain information for the entire population of relevant entities existing in Europe, or at the very least, across more than one European country. We use the sub-national scope as a catch-all for projects operating below the national level; be it regional, county, municipal, local, etc. We can further differentiate registry projects that are targeted at the full population applicable to their scope, and those that are applicable only to a subset. The distinction seems most relevant at the national level, but in principle it applies at the other levels as well.

A categorisation based on scope and the type of entity for which the registry is intended is presented in Table 1. Sub-types are provided for most boxes, and links to examples are provided for many.

[74]Strictly, "citizen" is not really an expansive enough term as governments have registries on people who are not citizens – temporary residents, for example.

Table 1: European registry schemes by scope and type

Scope	Citizen	Business	Asset
European	Identity: RISER Eurodac	Company: European Business Register BRITE Project	European Patent Office Land (eg EULIS) Vehicle (eg EUCARIS)
National	Identity (Births/Deaths): Zentrales Melderegister (Austria) National Identity Register (UK) Public Services Broker (Ireland) Health (eg NPfIT: "The Spine", UK)	Company: Companies House (UK) CVR (Denmark) CFENet (France) CFE (Portugal) Företagsregistrering (Sweden) Companies Registration Office (Ireland)	Land: HM Land Registry (UK) State Enterprise Centre of Registers (Lithuania) Centre of Registers and Infosystems (Estonia) Vehicle: WebDIV (Belgium) ACI (Italy) RDW (Netherlands) SRA (Sweden)
National Subset	Marriage Bankruptcy Child Benefit Service (Ireland) Electoral rolls Crime/Justice Criminal Records Sex Offenders Register (UK) Asylum Licensing Driving Professional status	Licensing Alcohol sale Pharmaceuticals Weapons (eg Export Control Organisation: "Goods Checker", UK)	
Sub-National	Identity (Births/Deaths) ZMR/CRR (Austria) Electoral rolls Licensing	Company: GEWAN (Bavaria, Germany) Bremen (Germany) Catalonia (Spain) Valencia (Spain)	

It is possible to conceive of two ways in which public registries are related to the concept of "barriers to eGovernment". The first treats a public registry itself as an eGovernment project, and seeks to understand the barriers to the creation of such systems. The second stems from our understanding of public registries as being at the centre of a potential information architecture, and thus seeks to understand the ways in which they can act as barriers to the development of other eGovernment services. This is likely to be the result of incomplete and/or inaccurate information being held within the registries. As such, such problems can almost certainly be seen as the direct result of barriers of the first kind. For our purposes here, we pursue analysis of the first kind: barriers to public registries.

A brief survey of public registries

Types of Registry

In this section a review of some of the examples provided in each of the categories discussed above are explored.

Citizen Registries: The example cases listed in Table 1 provide an interesting snapshot of how the different types of registries take different forms (in terms of scope) across countries. A federal constitutional structure, as compared to a unitary one, clearly has implications for the structure of public registries and eGovernment programmes more generally. This institutional variable, together with the legal provisions that surround it, has led to an interesting solution for how to maintain a register of all citizens in Austria. There, the Zentrales Melderegister (ZMR) is effectively a distributed database. Citizens register with their local municipality, which maintains its own local registry. Updates to the local registries are then periodically propagated to a central database maintained by the federal government (ePractice, 2007a). From the seven barrier categories of the Breaking Barriers project, it is tempting to suggest that issues of this sort should be likely to lead to problems associated with “poor coordination” and potentially “leadership failures” due to the large number of organisations involved and “financial inhibitors” due to the small size of many of the municipalities needing to operate local registries. However, the apparent success of the Austrian project suggests that these barriers, if they existed, were well-tackled.

The Austrian ZMR case is also interesting in another respect. The “lack of trust” barrier – specifically with respect to privacy – was clearly perceived to be relevant to the success or failure of the project as a whole. So, while the central ZMR database assigns each individual a unique identifier number (sourcePIN), this number is almost never used directly. Instead, when citizens use their registration in interactions with agencies in different state sectors (staatlicher Tätigkeitsbereich), a sector specific identifier (ssPIN) is generated securely from the original ZMR identifier and this new ssPIN is stored in the sector-specific database. The effect is to limit the extent to which the state can cross-reference all activities of an individual, thus protecting privacy. There are, however, mechanisms for links between ssPINs for an individual to be made. Requests to the Austrian Data Protection Commission (Österreichische Datenschutzkommission), which acts as the sourcePIN Register Authority (Stammzahlenregisterbehörde), make it possible to access data for an individual across sectors (Makolm 2004).

In Ireland, a more comprehensively centralised approach to citizen registration is being pursued. However, the trade-off for the comprehensiveness could well be a weaker privacy regime. The Irish government is engaged in a project known as the Public Service Broker which is meant to sit at the centre of nearly all eGovernment services. At its heart, there lies the idea of a Personal Data Vault. This will essentially be a database record for each individual person containing all manner of personal information. Initially, the amount of information stored in the system will be at the discretion of the individual; so, those with privacy concerns or just plain ambivalence to the system's benefits are free to opt out, while those for whom the benefits strongly outweigh any perceived costs can add large amounts of information. The benefits, once a sufficient number of eGovernment services have been developed and integrated, are largely in the area of ease of data sharing and thus reductions in the amount of duplicate information that needs to be supplied to government agencies. The model for the Personal Data Vault is that each individual will have control over which actors and agencies can have access to which portions of their data. Reach, the government agency charged with the development of the Public Service Broker system, discuss building requirements for having users authorise the access of records by providing a pin to authenticate themselves. On the privacy issue, Reach states that (Reach n.d.),

> *Compliance with those published procedures and legislation is further subject to scrutiny by a number of statutory office holders, viz., the Comptroller and Auditor General, The Ombudsman and Information Commissioner and the Data Protection Commissioner. Finally, the Minister and his officials are answerable to the Dail and the Public Accounts Committee on all issues related to the Reach project.*

Here we can see a contrast with the approach taken for the Austrian ZMR. In both systems, the state has the ability to link the activities of individuals across sectors. However, in Austria, the ability to do so is directly controlled by the Data Protection Commission, while in Ireland, the plan is to use the equivalent actor(s) in more of a "fire alarm" way. That is, those charged with ensuring privacy is upheld must discover wrong-doing in Ireland, while those same agents in Austria have technical control over the ability to compromise privacy. Taken as a whole, the state has equivalent power in both countries, but the institutional differences across the two are potentially important for the purposes of generating trust.

One service developed in Ireland to take advantage of the Public Service Broker facility is the new Child Benefit system. This is interesting in the discussion of barriers to public registries as the project can be seen both as a consumer of the Public Service Broker service, and an integral supplier of information to the registry. The dual nature of the project is clear from its stated aims, which were (ePractice, 2007b):

- Sharing of life event data among agencies
- Automatic allocation of a Personal Public Service Number to new born children
- Pro-active and automated processing of child benefit claims
- Elimination of submission of a birth certificate when claiming for child benefit

The ability to automate the process of child benefit payment is contingent on the existence of an accurate database of eligible children and parents. The effectiveness of the Public Service Broker system is likewise contingent on accuracy and completeness. Thus, the automation of birth registration with the Public Services Broker and the subsequent joining of the child benefit system to it provides reward for both citizen and state. The former sees reduced administrative burden associated with the receipt of benefits, the latter sees both reduced administrative burden and a systematically more accurate central citizen registry.

The Eurodac project providing a database of European asylum seekers' fingerprints is another prominent citizen registry. A detailed embedded case study of Eurodac is presented below.

Business Registries: Functions such as company registration show a clear tendency to be national concerns in unitary states, while being a mixture of national and sub-national in federal states. In some federal countries registration is specifically a competence of regions or municipalities. This is true of Germany and Spain, and there are several examples of eGovernment registries operating at the regional level in this sphere, for example, in Bavaria, Bremen, Catalonia, and Valencia. Decentralisation of registry provision in this way potentially increases aggregate costs as systems and processes must be duplicated. However, it may also lead to more responsive service as provider and "consumer" are "closer" in some sense.

The Bavarian business registry case offers examples of several issues of importance in such a decentralised environment. For this reason, we present GEWAN as an embedded case study below.

In order to enhance efficiency and reduce administrative burdens a number of countries have begun, or are moving towards, the use of a unique business number and single registration system for all businesses. For example, Belgium has launched the Crossroads Bank for Enterprises, an integrated business register where each registered business is attributed a unique identification number that is linked to a set of information stored in a central database. This unique identifier is maintained centrally and used as primary key to exchange information between Belgian administrations. Such an initiative eliminates the need for businesses to provide the same information to several administrations and makes possible the delivery of joined-up services to enterprises.

The Netherlands is developing a system of six Basic Registers for personal data (de Gemeentelijke Basis Administratie), all data (name, address, number of employees, company number, key activities) about companies in the New Dutch Trade Register (het Nieuwe Handelsregister), and all information about buildings (Basis Gebouwen Registratie), ground and the use of ground (Basisregistratie Kadaster), map material (Basisregistratie Topografie), and addresses (Basis

Registratie Adressen) are to be included. The Basic Business Register, or BBR for short, will contain the identification details of all companies and organisations based in the Netherlands. The unique identification of companies is necessary for the 'electronic recognition' of companies, and is essential for the exchange of information between different government organisations (multiple usage). The initial version of the BBR has been developed under the coordination of the Ministry of Economic Affairs by four national registers: the Tax Department (Belastingdienst), the Chambers of Commerce (Kamers van Koophandel), the Employee Insurance Scheme Agency (Uitvoeringsinstituut Werknemersverzekeringen), and Statistics Netherlands (Centraal Bureau voor de Statistiek).

There is also an interesting emerging European aspect to company registries. The European Business Register (EBR) (http://www.ebr.org/) is a European Economic Interest Group (EEIG)75 with partners in 17 European states. It provides searchable access to company information across those states, although the level and sophistication of this access varies. While it is not de jure a central registry of European company information, it has the potential to become such a service de facto; in essence, like the distributed database system that forms the Austrian ZMR. Building on the EBR, the BRITE Project (http://www.briteproject.net/) is an attempt to increase the effectiveness of the EBR offering. Started in March 2006, it is a collaboration funded by the European Commission's DG Information Society & Media and coordinated by EBR which “aims to develop, implement and demonstrate an advanced, innovative interoperability model, ICT service platform and management instrument for Business Registers (BRs) to interact across the EU” (BRITE Project n.d.).

Asset Registries: The issue of vehicle registration is also relevant at the European level. Across the European Union tackling car theft, registration fraud, and cross-border traffic enforcement can be problematic as member states can have difficulties in quickly and conveniently accessing car registration information in other countries. Indeed, as this is considered a priority for the European Union, project REGNET began in 2006 as part of the IDABC programme to provide an electronic network to enable exchange of vehicle registration data between member states76. Outside the European Commission there have been a small number of initiatives in this area. Probably the most significant and well known is the European Car and Driving License Information System (EUCARIS) (http://www.eucaris.net/) that was set up in 1994. EUCARIS enables countries to share their car registration and driving license data. It is a commercial venture that has been developed by governmental authorities and is intended to be used by government authorities responsible for the registration of motor vehicles, issuing vehicle documents and driving licences; and government organisations responsible for tracing stolen vehicles, theft and fraud prevention, as well as prosecuting authorities, the police and customs and excise. Countries can decide whether or not to join EUCARIS for a fee. In 2006 participating countries included, Great Britain, Germany, Luxembourg, Latvia and the Netherlands.

EUCARIS does not have a centralised database; the system allows people to search other countries registers but cannot alter them in any way. It has been set up to work within the existing regulatory, legal, technical and cultural landscape. Thus, those that have developed and implemented EUCARIS have had to address a number of issues that are of relevance to the current study. These include: privacy and data protection; identification and authentication; interoperability and differences in administrative law and other practices in each country. For example, different countries hold different types of data and some do not have a centralised registration database. These issues can also be linked to Public Administration Transparency and Re-use of Public Sector Information. Also, the issue of Intellectual Property Rights may also be of relevance here, in terms of who owns and developed the EUCARIS software. These issues will be discussed further below.

The EUCARIS case provides an example of an early eGovernment service that was developed in a relatively "low tech" way to address existing constraints to eGovernment. Such a study, in conjunction with a close dialogue with key stakeholders within the REGNET project could be particularly valuable as REGNET aims to optimise the process of sharing registration information;

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[75] c.f. http://www.europa.eu/scadplus/leg/en/lvb/l26015.htm (accessed 2006/12/04).
[76] See Synergy, Issue 4, October 2005 http://europa.eu.int/idabc/en/document/5005/5584 And the IDABC Work programme 2005 – 2009, November 2005 http://europa.eu.int/idabc/en/document/5101/3. (both accessed 2007/01/25).

and endeavours to address many of the problems encountered by EUCARIS through, for example, tackling data harmonisation and enabling exchange between all member states.

Land registries provide another interesting example of emergent eGovernment.[77] A recent survey found that 86% of land registries in Europe and North America are "wholly or partly computerised" (HM Land Registry 2005: 10). From Table 1, the HM Land Registry (UK) (http://www.landreg.gov.uk/) is notable as they have developed several web-based services. There is a service for professionals (Land Registry Direct) (http://www.landreg.gov.uk/direct/), one for the general public to search the registry (Land Register Online) (http://www.landregisteronline.gov.uk) and an under-development, and somewhat delayed, online conveyancing service (Chain Matrix)[78]. As might be expected with this latter type of service, there were legal issues.[79]

In a revealing example of the technical and organisational issues that can underlie public registries, Peeva (2001) provides an outline of the decisions that Bulgaria confronted in its attempts to comply with its Kyoto Protocol commitments. Faced with the need to record land-use and land-use change in the country, Peeva's analysis sets out how the preferred registry design, both technically and institutionally, varies with the nature of the registry that is chosen. The level of expected transactions and the nature of the organisations that will engage in them is found to lead to different preferred policies.

Comparing the registry types: Business-related registries are currently more developed in an eGovernment sense than citizen-related ones. The apparent relative success of company registries can be seen in the large number of national and European projects in Table 1 that apply to this area. There is some variation in the mechanisms used for encryption and authentication of data, even in the more successful national schemes. Still, there appears to be a tendency to move towards web-based systems, as exemplified by Companies House (UK) rolling out such a system (the "WebFiling" system) after initially developing an email-based system (the "Software Filing" system). It is plausible that the initial divergence in authentication mechanisms is a result of the differing degrees of centralised direction across state sectors that this issue received in different countries. So, in countries such as Estonia (Centre of Registers and Infosystems, see below) and Austria (Bundesrechenzentrum [BRZ][80]), programs led by central government were put into place for the management of registry systems. This included authentication and encryption, and thus provided them with the opportunity to avoid the need for different sectors to "reinvent the wheel" in these respects.

Institutional forms of registry provision

The institutional form of registry provision is an interesting area to explore. Ostensibly, the Estonian example is an obvious one of a centralised approach. There, the Centre of Registers and Infosystems (Registrite ja Infosüsteemide Keskus) was setup under the auspices of the Ministry of Justice and has a very broad range of registries within its remit.[81] In many other countries, such functions fall under the control of a rather disparate array of governmental and non-governmental departments and agencies. An obvious line of inquiry is to investigate whether the centralisation of registry services in this way produces benefits – in the form of reduced "organisational culture", "human resource", or "funding" barriers – or whether the potential downsides that it introduces – in the form of "poor coordination" between registry provider and "client" organisation, and lack of domain-specific expertise – overwhelm the upsides. For this reason, we selected Estonia as one of our embedded cases. However, our field research revealed that this outward impression does not completely hold up to closer scrutiny, with a more standard decentralised structure in place in reality. The case is nonetheless very revealing about several important issues (see section below).

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[77] For a more extensive discussion of eGovernment projects related to land registries c.f. Panayiotou (2003).
[78] http://www.landreg.gov.uk/e-conveyancing/chainmatrix/ (accessed 2006/12/05).
[79] HM Land Registry note the following (HM Land Registry n.d.),The Land Registration Act 2002 contains the legislative provisions to enable the implementation of eConveyancing services. Secondary legislation in the form of rules now needs to be drafted and passed by Parliament to give effect to those legislative provisions.
[80] http://en.brz.gv.at/ (accessed 2006/12/05).
[81] http://www.eer.ee/index_eng.phtml (accessed 2006/12/04).

At the opposite end of the scale from centralised state provision of registry services, there are some instances of privately-run registries (albeit with public sanction and cooperation). The role of the Automobil Club d'Italia (ACI) in "managing [on behalf of the Italian Government] the Car Public Registry [... which] includes managing the taxes and payments services, vehicle ownership and the end-of-vehicle-life data for many Italian regions" (IBM n.d.) is a prime example. Again, little information about this project is currently available. However, such a structure obviously leads to questions whether such an institutional form leads to greater or lesser problems in the provision of registry services. Does an element of private sector discipline yield more customer-focused results, or does a profit motive of sorts inhibit development? Does the monopoly position of the registry provider remove the relative financial discipline normally associated with the private sector, especially where it knows that the state cannot afford for it to fail? More generally, are there lessons that can be drawn by comparing the ACI case with the Estonian central registry agency approach?

The embedded case studies

The sections above on the scope of public registries are suggestive of ways in which barriers to public registry schemes may vary across cases. We may suspect that smaller (lower) scope schemes, being concerned with more manageable bureaucracies and, perhaps, with more malleable organizational cultures will suffer less from issues surrounding coordination and remapping of internal processes. Consequently, registry schemes at, say, the level of the city or region may be more successful than those at the national and transnational level in those regards. By contrast, issues of funding and (relatedly) human resources may well be more problematic for smaller scope schemes that have smaller governments and correspondingly smaller budgets behind them. An inability to benefit from economies of scale would probably exacerbate these funding issues.

It is conceivable that the extent to which legal barriers come into play also varies by the scope of the scheme. If legal restrictions tend to be applied at the national level, then those schemes that operate at that level may benefit from stronger backing from a national government that has the opportunity to change the law. By contrast, regional level schemes are less likely to be able to achieve any required legal reforms (to the extent that they must be passed at the national level). Equivalent reasoning may also apply with respect to European level schemes that are reliant on national legal changes or implementation. The EUCARIS and Eurodac projects, which have failed to achieve fully pan-EU coverage, may be examples of this. It should be noted that this line of reasoning speaks only to the relative ability to overcome barriers, not to the relative occurrence of such barriers across different schemes.

Some working hypotheses are then:

- Organisational barriers increase as the associated level of government gets higher.
- Resource barriers decrease as the associated level of government gets higher.
- Legal barriers are more likely to be overcome by schemes that operate at the national level.

Based on the discussion set out above, we selected three embedded case studies. The aim was to pursue some of the issues that became apparent from our preliminary research and categorisations. To this end, we selected cases at three different levels – sub-national (GEWAN), national (Estonia), and European (Eurodac). These cases were also chosen so as to cut across the other dimension that we identified – that related to the type of entity about which information is stored. Thus, we have a company register (GEWAN), a "citizen"[82] register (Eurodac), and a project that is, in part, an asset register (Estonia). As noted above, a further attraction of the Estonian case

[82] Perhaps "person registry" would be a more appropriate name for this category given that the information being stored is about asylum-seekers, not citizens.

was its apparently different institutional structure in the sense of having a centralised agency providing large portions of the national registry requirements.

Case Study: GEWAN: Web-based Business Registration in Bavaria

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Definition of the case study

GEWAN (GEWerbeAnziegen im Netz)[83] is a fully web-based business registration eService currently being used in Bavaria, Germany. The GEWAN database at its centre is employed by the founders of companies and agencies, municipalities and District Administrator offices in the State to exchange data through the Internet. This supports four main services: registration; dissemination; information; and statistics. It includes an electronic notification service, for example to inform the Tax Office that a company has been founded and will have to pay taxes.

Setting of the GEWAN case study

The high rate of growth of new companies in the State of Bavaria was one of the motivations for initiating the GEWAN project in 1998. Registering new companies can help their success by offering them relevant support, but the registration process had involved substantial paper work and human effort. The Bavarian State Office for Statistics and Data conceived and developed the idea of creating a central company registration database to help reduce this costs and effort, while improving the quality of the registration data and the analyses and services related to this information.

This State Office remains the most important player in the project, as it manages its operation and development. It is supervised by the Bavarian Minister of the Interior, but there is no indication of his direct involvement in this project. Other key players include the Gemeinde (cities) and Landratsämter (district administrations). GEWAN is also supported by business experts in the region (e.g. in helping to determine which information should be processed through its database) and representatives responsible for the protection of personal data.

The State Office for Statistics and Data previously handled all company data now incorporated into the GEWAN database. The new eService has meant the access and registration opportunities offered by the Office are now also available through the use of the Internet. This easier and cheaper registration is expected to support more people in attempting to start a business.

There are similar registration systems on the Internet, such as those used by the Dutch Chamber of Commerce[84] which provides comparable services.

Milestones in the development of GEWAN

1998: Bavarian Office for Statistics and Data originates the idea of a digital company registration service

1999: The Office for Statistics and Data begins testing software it has developed for the new Internet-based registration service.

2000: In December, a pilot project (GEWAN 3.0) begins operating, in only the city of Gaißach.

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[83] For further details on GEWAN, see Bayerisches Landesamt für Statistik und Datenverarbeitung (2005; 2006). Information about this case (in German only) is also available through the GEWAN Gewerbeportal (https://gewan.bayern.de/). And a description of GEWAN is also available on the EU's Good Practice database for eGovernment (http://www.epractice.eu/cases/329).

[84] The form for searching this Dutch company registration database can be found at: http://www.kvk.nl/handelsregister/zoekenframeset.asp?url=https://server.db.kvk.nl/wwwsrvu/html/zoek.htm (registration is required for full access).

2001: In April, GEWAN moves from being a pilot project to integration as a web eService.

2001: In December, Gaißach becomes the first municipality to be officially connected to GEWAN

2002: In March, the GEWAN system is completely updated.

2004: In February, Regensburg becomes the first county (Landkreis) for which the office for the district (Landkreisamt) and all its municipalities are connected to GEWAN.

2007: The latest system update (to version 4.0.1) was undertaken in March, by when more than 1000 municipalities and over 50 Landkreisamt offices were connected to GEWAN. More than 70% of the business registrations are being disseminated electronically to the relevant institutions appointed by law.

Challenges and potential barriers faced

The risk of technical obstacles was minimized by developing GEWAN in close cooperation between software experts and the people who were expected to use the system. The software development was also facilitated because such an Internet-based registration and exchange system is not new, so it wasn't necessary to create a completely new technologically-advanced system. In addition, effective operation would be to all stakeholders' benefit, which provided an all-round incentive to make the system work well.

From the beginning, it seemed that GEWAN would bring only advantages for all the main stakeholders (e.g. in saving time, money and effort). There were not even significant objections against it from those accustomed to the traditional system, as the old paper-based approach was not functioning properly.

Information security and privacy issues were the main potential barriers identified at the outset. The building-in of safeguards in these areas was therefore prioritized.

Adoption and implementation of GEWAN

To help avoid subsequent problems, the Office for Statistics and Data ran an initial pilot project within several areas for one year, after first allowing computer experts to test the pilot intensively. In the period of pilot operation, security was enhanced, the project began doing useful work and the GEWAN project team started to offer seminars to the people who would use the system. This helped to increase familiarization with the new eService. After the pilot, the system was adjusted to cope with more registrations. Initial opinions on the project are not known, but since the number of applications in the first five years of operation was substantial, the early perceptions of GEWAN seem to have been generally positive.

The State Office for Statistics and Data continues to update the system regularly[85], and organizes seminars and lectures to teach people how to use the system. The regular updating copes adequately with any software-related problems that arise, which has further helped to avoid major technical obstacles to the system's general operation. A set of manuals is available at the GEWAN site to enable people to operate the system without additional help.

Project design

The key legal factor to be addressed in the project was the protection of the sensitive company and personal data held in the GEWAN database. This aspect was therefore prioritized in the system's design and implementation, including the incorporation of the latest data security methods when the system is regularly updated. Special care is also taken with the dissemination of company information to third parties. For example, no sensitive data is disseminated, in order to prevent this

[85] Recent information on updates and on the development of GEWAN can be found at https://gewan.bayern.de/ (click on Aktuelles in the top menu).

type of information coming into the hands of unauthorized persons; and only those parties with which its registered companies are obliged to work (e.g. Tax Collectors Office) are sent any related information directly from GEWAN.

As it was designed for the registration of company data, it was essential that plans for this system had to ensure it could process effectively the substantial number of registrations expected. One of the aims of the pilot was to test that this would be possible when GEWAN was introduced.

Registered companies and authorized operators have a separate menu from which to login into the GEWAN database to access four main eServices:

- Registration: Municipalities can acquire and register data on companies. A key objective of GEWAN is to improve the quality of this data, which is achieved by simultaneously checking information as it is entered into the system to ensure its correctness and completeness. In addition, the system ensures that those involved in more than one business need to register their general details only once. As soon it is entered into the system, a check is made to ensure this data has not been entered previously. All registration data is made available immediately after it is entered for inspection by the Landkreisamt, which can adjust the information at any time.

- Dissemination: After the business registration has been checked and approved by the Landkreisamt, it is sent via the Internet to those institutions appointed by law to receive the data. This saves time and money because the data no longer has to be sent by post. Registrations refused by the Landkreisamt are immediately returned to the applicant. The data will be reprocessed and an explanation for the refusal attached by the Landkreisamt

- Information service: GEWAN also offers support for consultants by giving them access to its extensive information system. Its database can be explored easily by entering the date or place of registration, or other search criteria. If the system retrieves several results, they are presented in a clearly structured manner to provide an overview of companies and persons related to one or more companies. In addition, various specific overviews can be produced (e.g. general information about a company; historical data related to a company; or information about the persons working for an enterprise).

- Statistics: GEWAN decodes/translates the data entered into the system on economic activities as indicated by European regulations. This offers opportunities both to create various useful local lists (e.g. all restaurants in a municipality) and to undertake comparisons within the EU. Such lists can be sorted and printed easily.

Project impacts

GEWAN has surpassed its initial goal of improving the performance of the registration process because of the faster handling of information (e.g. quicker and easier of registrations of companies and access to, and analysis of, that data). In addition, its database has been useful for enhancing other functions, such as policy processes and statistical analyses.

Exact numbers relating to the system's performance aren't available, but we believe the increase in efficiency certainly weighs up well against the investment made for this project. The precautions taken regarding the protection of company and personal data seem to have avoided significant obstacles in this respect. The data at our disposal does not mention any changes of laws that would have facilitated the execution of the project and subsequent operation of the resulting system.

The benefits delivered by GEWAN for all stakeholders meant the success of the project was important to all. As a result, there weren't many political or other objections to the development. Impacts on specific stakeholders include:

- The State Office for Statistics and Data had to previously catalogue various data, including company registrations. With GEWAN, it could do this at less costs and much more easily compared to the considerable time, effort and money needed to process paper-based data.

- Businesses enjoy the biggest benefits of GEWAN. When someone wants to start a company, registration is much faster than before and the administrative burden a lot lower.
- Citizens generally notice the project only when they are looking for a company to perform a certain task for them. Plans exist to make a small part of the GEWAN database accessible to the public so that consumers can check the kind of company with which they are doing business.
- The government has a better picture of the development of companies to assist its policy and decision making by, at the click of a mouse, having access to GEWAN's large database with company information. For example, it could compare pollution statistics with data from GEWAN to check how the level of actual pollution corresponds with the related goals registered for particular companies.
- Because of GEWAN, the persons (e.g. notary offices, city offices) who register new companies have taken on new roles as operators of eServices, such as taking care of the input. The State Office for Statistics and Data has also added the maintenance of the database to its registration responsibilities.

Factors affecting this case of significance to wider eGovernment initiatives

Seven Barrier Categories

The Breaking Barriers Project, funded by the EC, identified and explored the key barriers to eGovernment in Europe. The project team proposed seven key barrier categories of obstacles to eGovernment progression. The categories are intentionally broad and tied to a multitude of more specific barriers relevant at different governance, institutional and jurisdictional levels. This categorization is particularly valuable when discussing the barriers relevant to this case which may have relevance for other eGovernment initiatives. In summary the barriers are: leadership failures, financial inhibitors, digital divides and choices, poor coordination, workplace and organizational inflexibility, lack of trust and poor technical design[86].

The following are the main issues that arose during the implementation of GEWAN of relevance to the seven barrier categories identified by the Breaking the Barriers to eGovernment project (no new barriers were detected in this case study outside these categories).

Leadership failures: The substantial experience and good reputation in processing data of the Bavarian State Office for Statistics and Data made it the logical leader of this project, and it has performed this role well.

Financial inhibitors: Financial inhibitors seem not to have played a role in this project, particularly because it produced clear savings to the State Office for Statistics and Data compared to its previous paper-based handling of company data.

Digital divides and choices: Learning how to use the system can cause a problem in its effectiveness. For example, some people still have to learn how to work with it effectively (e.g. start-up companies when first encountering the system). This can create an 'ICT threshold' to be overcome by less technology-minded companies and individuals, while at the same time offering advantages to those who master its use. To overcome a possible threshold education on how to use the system is taken care of by GEWAN.[87]

Poor coordination: Coordination of its technical design and approaches to disseminating company data is a high priority for this project because many parties play a role in the system's development and use. It seems that GEWAN has been effective in this coordination, as indicated by its substantial and growing user base of over 1000 organizations.

[86] For more details about the Breaking Barriers to eGovernment project please see http://www.egovbarriers.org
[87] See: https://gewan.bayern.de/ (under Schulung).

Lack of trust: Although there are always likely to be some people who will continue to trust paper registration more than electronic media, the success of GEWAN in attracting so many participants is building trust in a web-based approach and reducing the degree to which companies hesitate before using this eService.

Poor technical design: The wide use of the GEWAN system indicates that it works well and has a reasonable technical design. Any technical shortcomings are corrected by regular updates and patches[88]. And since an Internet-based registration and exchange system is not new, so it wasn't necessary to create a completely new technologically-advanced system. As a result the chances for a poor technical design were limited.

Relative influence of eGovernment challenges

The GEWAN project has been quite successful. There were not many barriers which have caused significant problems. Therefore we would to stress the factors which lead to this success and which could be kept in mind for other eGovernment projects as well:

The GEWAN project has been very successful in Bavaria. There were not many barriers which have caused significant problems, but they had to overcome resistance to the use of new technology and to the uncertainty about the advantages of a central system. Nevertheless we would like to stress the factors which lead to this success and which could be kept in mind for other eGovernment projects as well:

- Political, administrative and organizational (40%): People working for the Bavarian statistics office and companies willing to register have faced administrative barriers for years. The procedure to register companies was too lengthy, too much of a hassle, therefore, the idea to develop a system to smoothen the procedure for the registration was accepted without significant objections by any party. Also politicians were in favor of the system because the system gives them easier access to data which could be of importance for political and economical decisions.

- Legal (5%): Privacy protection was an issue, mainly because the data protection authorities requested a detailed concept in order to provide access to data only to those users that were legally entitled. Maybe because the Bavarian statistics office was an important stakeholder in the project, the way which was dealt with personal data was being trusted. This might be different in other regions of Germany and in other member states.

- Financial (5%): Finance had a relatively low influence in this case because it was clear beforehand that the result of the system would save the Bavarian statistics office and start-ups willing to register time and money.

- Social and economic (40%): The main idea behind the project was to eliminate administrative barriers for starting companies, and to eliminate several manual administrative steps following the initial registration.

- Technological issues (10%): Technological issues were an issue in the early years as Internet bandwith was low and access wasn't given in many locations. Also, there was a lack of trust in the concept of central data storage via an Internet network. One of the main issues was to protect the data in the database and the data being transported to the users of the data.

Conclusions

As far as we can assess, the project has been successful in undertaking its planned function, with many registrations during its years of use. However, there are no detailed assessments yet. The expertise of the State Office for Statistics and Data in this area seems to be a key reason for the

[88] See: https://gewan.bayern.de/ (under Aktuelles).

reasonably smooth progress of the project in achieving its aims. From the start, experts in this Office were aware of the main problems that could surface with this kind of project, and thus were able to plan how to avoid and minimize their occurrence. This highlights a key lesson: that understanding where barriers could lie is an important management tool.

The technical barriers were simply not there because the concept was not new. At the start of GEWAN already many Internet registration services were being used. Also quite a long test period – almost 3 years – avoided technical and user interface problems to arise.

The ICT-threshold has been kept low because GEWAN has been offering courses how to use the system from the beginning.

The result justifies the resources spent not only because the system met its goals, but also because it has extra advantages like the easy exchange of data with tax services, better and cheaper statistical services, and company information service for consumers.

There are also good prospects for implementing it in other German States, as the ease of use and benefits delivered by GEWAN appeal widely to government, companies and company subscribing offices (e.g. notary offices). Thus, the impact of GEWAN is definitely sustainable and practice is being shared.

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Case study: Eurodac: Fingerprint Identification of Asylum Applicants in Europe

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Definition of the Case Study

The European dactylographic[89] (Eurodac) identification project[90] has established a supranational system for fingerprint identification of asylum applicants and illegal immigrants in Europe, including a database that shows where an asylum applicant entered the European Union. The Member State identified by Eurodac as being where the asylum application was first made is held responsible for examining that asylum application, and asylum seekers who have moved elsewhere can, as stated in the Dublin Convention, be returned to it. Eurodac includes all EU Member States that signed the Schengen accord, which removed their internal border controls[91], as well as the non-EU countries Norway and Iceland.[92]

In addition to applicants requesting asylum, the database managed by the Eurodac Central Unit also registers the fingerprints of illegal residents and other persons (known as a 'third-country nationals') who are not a national of one of its participating States and who irregularly cross the external border of Member States.

The intention is to use this system to help prevent asylum applicants applying in more than one State, say by changing their name or by throwing away their travel and identity papers. This is not a novel form of eService. For example, incomers to the US must have personal biometric data, such as fingerprints, checked before they are allowed to enter the country. This gives the US government a detailed picture of the kinds of people travelling into the country. The Eurodac database is comparable, except that it only determines which country should examine the application of an asylum seeker.

Setting of the Eurodac case study

Eurodac's Central Unit maintains the system's database. It is managed by the European Commission with the aim of promoting cooperation between Member States to achieve Eurodac's goal of gaining a better understanding of the location and movements of third-country nationals within the EU and crossing its borders. This requires the Central Unit to maintain an accessible database to provide the information needed by the Member States.

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[89] The study of fingerprints as a means of identification.

[90] See: http://europa.eu/scadplus/leg/en/lvb/l33081.htm for a summary of Eurodac legislations. For more detailed legislative and other background, see the European Commission's websites: 'Towards a Common European Asylum System'. (http://ec.europa.eu/justice_home/doc_centre/asylum/doc_asylum_intro_en.htm); 'Attributing Responsibility for Examining an Asylum Application in the European Union'. (http://ec.europa.eu/justice_home/doc_centre/asylum/criteria/doc_asylum_criteria_en.htm); and 'Eurodac - a European Union-wide Electronic System for the Identification of Asylum-seekers'(http://ec.europa.eu/justice_home/doc_centre/asylum/identification/doc_asylum_identification_en.htm).

[91] This excludes the UK and Ireland, who did not sign the Schengen 'accord' or 'acquis'. This abolished the internal borders of the signatory states and created a single external border where immigration checks for the Schengen area are carried out in accordance with a single set of rules, allowing free movement within it (see: http://europa.eu/scadplus/leg/en/lvb/l33020.htm).

[92] Norway and Iceland are members of the European Economic Area (EEA), which has been maintained to enable three of its members who are outside the EU (Norway, Iceland and Liechtenstein) to participate in the Internal Market while not assuming the full responsibilities of EU membership. This allows participation in EU-related programmes such as Eurodac.

The key stakeholders that Eurodac seeks to satisfy are the government institutions responsible for the registration and identification of third-country nationals in its participating States. However, the Eurodac database is not directly accessible by these national authorities. Instead, the Central Unit can only inform one of its States whether or not the fingerprints of a person are in its database and identify to which Member State it has forwarded these records.

Eurodac is monitored by the European Data Protection Supervisor (EDPS), who ensures the rights of data subjects are not violated by the processing or use of the data held by the Central Unit.

Milestones in the development of Eurodac

This case study looks at the entire development of the Eurodac project, from the conception of the idea in the Dublin Convention of 1990, to its implementation through the European Council Regulation in 2003 and on to assessments of its implications in practice. The following are significant milestones leading to the creation of Eurodac and its subsequent development.

1951: Signing of the United Nations' Geneva Convention relating to the status of refugees.[93]

1990: Signing of the Dublin Convention[94] relating to the State responsible for examining applications for asylum lodged in one of EU's Member States.

1991: Discussions on the technical feasibility of a supranational biometric identification system in Europe begin.

1996: Political discussions start considering a supranational identification system.

1997: Dublin Convention comes into force.

1998: European Union Treaty of Amsterdam[95], which specifically requests Member States to establish criteria and mechanisms for determining which State is responsible for considering an application for asylum.

2000: Signing of the European Council's Regulation 2725/2000 of 11 December establishing Eurodac.[96]

2003: Signing of European Council Regulation Dublin II[97], introducing some changes to the original convention (e.g. restricting a Member State's responsibility for an asylum-seeker who has illegally entered into EU territory to twelve months, after which, if it is impossible to determine through which Member State the asylum seeker entered the EU, responsibility switches to the State where that person has stayed illegally for over five months).

2003: Eurodac operations begin on the 15th of January.

2004–2007: Evaluations of Eurodac (see European Commission 2004; 2005; 2006; 2007).

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[93] See: http://www.unhchr.ch/html/menu3/b/o_c_ref.htm

[94] See: European Commission (1997) for details of its provisions.

[95] Treaty of Amsterdam (amending the Treaty on European Union, the Treaties Establishing the European Communities and Related Acts), Official Journal of the European Union C 340, 10 November 1997, http://europa.eu.int/eur-lex/en/treaties/dat/amsterdam.html.

[96] European Council Regulation (EC) No 2725/2000 of 11 December 2000 concerning the establishment of Eurodac for the comparison of fingerprints for the effective application of the Dublin Convention (http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=32000R2725&model=guichett). See: also Council Regulation (EC) No 407/2002 of 28 February 2002 laying down certain rules to implement Regulation (EC) No 2725/2000 concerning the establishment of Eurodac for the comparison of fingerprints for the effective application of the Dublin Convention, http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=32002R0407&model=guichett

[97] European Council Regulation (EC) No 343/2003 establishing the criteria and mechanisms for determining the Member State responsible for examining an asylum application lodged in one of the Member States by a third-country national, http://eur-lex.europa.eu/LexUriServ/site/en/oj/2003/l_050/l_05020030225en00010010.pdf

Challenges and potential barriers faced

To be successful, Eurodac needs to record the number of asylum requests, the person behind the request and an indication of the place where the request for asylum took place. The project looked to the provisions of the Dublin Convention to help identify ways of clarifying and addressing the complex issues likely to emerge when implementing this new system.

Eurodac's expectation at its outset was that the countries involved would be successful in acquiring fingerprint data. The main technological problems foreseen related to sending this data to the Central Unit, where it could be shared with other States in the initiative. Additional implementation challenges were posed in the form of judicial and coordination issues concerning privacy and the differences in regulations between participating countries.

The sensitive nature of the identity-revealing data to be kept in the Eurodac database makes privacy a significant challenge, as it might make Member States somewhat reluctant to share all of their data. Regulations regarding such data vary greatly across Eurodac's participating States, which could create obstacles to the effective cooperation that is vital to the success of this project.

The transfer of identity data has always been a sensitive subject, particularly when it is shared across areas as large as that covered by Eurodac. The collection of fingerprints can be considered a privacy infringement because of its connection with criminal investigations. For example, a recent inquiry into asylum applications centres (COA) in the Netherlands established that asylum seekers are still uncomfortable with the obligation to allow their fingerprints being taken.[98] Another key Eurodac data collection issue is the significant distance that has to be travelled before the information reaches the Central Unit, which could pose a problem in keeping Eurodac up-to-date. Such obstacles can be addressed using digital network solutions such as e-mail and direct data transfer. However, these methods need to be protected from external interference to safeguard the sensitive data. For this reason, Eurodac contains only fingerprints and identification numbers, but no further personal information such as name, address, etc.

Another problematic area requiring much attention is the role of 'transit countries'[99], the Member States on the externals borders of the EU where asylum seekers first enter the Union and to where they can be returned by other countries because they are where the asylum request was first lodged. Such countries are faced with significant financial and administrative burdens in dealing with these applicants, while often seeing little benefit in return for participating in Eurodac. Gaining the commitment of these transit countries to providing comprehensive, timely and accurate data is therefore crucial to the success of the system.

The Eurodac Central Unit collects fingerprint data from asylum seekers, irregular border-crossers and "illegal" residents over the age of fourteen. Some transit (border) countries, like Greece and Italy, undermined the Dublin II and Eurodac regime by transmitting only very few fingerprint data from irregular border-crossers very late to the Central Unit of Eurodac (Aus 2006). In 2004, Greece waited on average more than 29 days before transmitting its data. As a result, the would-be refugee had four weeks to lodge a potentially successful application for asylum in another Member State. This type of behaviour by transit countries can be explained by a game theory, called the Rambo-situation (Aus 2006:13). In this, a transit country, such as Greece, is seen as an 'upper-lying' (Rambo-like) state, while destination countries, like Germany and the Netherlands, are 'lower-lying' states (underdogs). It is very difficult for the underdog to convince Rambo of the need to participate in the Eurodac regime.

There are at least two ways of persuading 'Rambo' transit countries to cooperate (Aus 2006: p.13). Firstly, disadvantaged 'underdog' destination countries can try to improve their lot by making 'threats' and seek to decrease the utility of defection for transit countries. Second, the disadvantaged countries can make 'promises' and try to increase the utility of cooperation for transit countries. The aim is to create "collective action" (Holzinger, 2003) that achieves and distributes some gain through coordination or cooperation by the joint actions of a number of 'players' in the

[98] *NRC* (newspaper), 6 February 2007.
[99] For example, a large number of asylum seekers enter the EU via transit countries in southern Europe, such as Greece, Italy, Spain and Portugal,

game. Difficulties in achieving the goals of collective actions can be caused by the strategic constellations of the actors (Member States). This results in 'collective action problems', like distribution, defection, coordination, disagreement and instability difficulties. These problems can be resolved, for example by altruism, norms, focal points, correlated strategies, collective decision-making, external power and sanctioning. 'Political' solutions, like decision-making or enforcement, can resolve all types of problems. 'Motivational' solutions can solve some of the problems, and 'rational expectation' solutions can solve some types and help to solve others (Holzinger 2003).

The way the budget for Eurodac would be established and developed was not clear when the project began. However, the technical feasibility study preceded the political assessments of the project's desirability and appropriateness. Discussions on technical requirements started in December 1991, but it was only in 1996 that the political discussions began (Aus 2006). The underlying computerized system to be used for the automated registration of fingerprints in Eurodac already existed when the project began to be implemented. Nevertheless, the use of biometrics in such a system was still relatively novel in 2000, when Eurodac was considered to represent the first application of biometric identification technology within a supranational political entity (Aus 2006).

Adoption and implementation of Eurodac

The Geneva and Dublin Conventions, to which Eurodac participating countries are signatories, makes the State where an asylum claim is lodged responsible for examining the application. To apply the Dublin Convention, it is necessary to establish the identity of applicants for asylum and of persons apprehended in connection with the unlawful crossing of the EU's external borders. Each Member State should also be allowed to check whether a third country national found illegally on its territory has applied for asylum in another Member State.

Member States decided to use fingerprints to meet these objectives as they constitute an important element in establishing the exact identity of a person. Eurodac emerged from the resultant need to collect, store and communicate fingerprint data efficiently and reliably to enable the data to be assessed and compared. However, as will be explained below, transit countries do not always fully comply with the relevant Eurodac regulations because of the high workload and extra administrative and financial burdens they impose.

As stated above, Member States were aware that the collected data should be protected by privacy regulations, so that the data would not fall in to unauthorized hands. When Eurodac was implemented, Member States realized that they had to take this challenge into account.

The main players in Eurodac are the European Commission, which initiated and manages the project, and the EU Member States, which are covered by its database (plus Norway and Iceland). The Commission also established and manages the Central Unit that controls the Eurodac database. The Member States are responsible for the data delivery. This has involved establishing internal organizational structures that enable interworking between peripheral (border) offices where much data is collected from individuals crossing borders, and the relevant National Central Office coordinating data collection in that State. To ensure the reliability of the project and its systems, Member States agreed that there should be an annual evaluation of it (see European Commission 2004; 2005; 2006; 2007).

As indicated by the timeline above, the Eurodac project did not come about overnight. There were also some start-up problems. One of the early difficulties was that the structure of the Community changed after Eurodac had emerged following the Dublin Convention in 1990. This restructuring involved new countries with varying needs seeking accession to the EU. This led to the project being put on hold until the EU structure settled down again.

Project Design

Policy Decisions

Key decisions affecting the project and systems design arose from the European Council Regulation in 2000 setting up Eurodac, which defined the scope of its responsibilities. Discussions

on the inclusion of Norway and Iceland and negotiations on the participation of Denmark[100] were also important influences on the design.

A vital design requirement was to protect the fingerprint data from being accessed by those without the authority to do so. To address this, the European Commission formulated a Council Regulation in 1999, which was later amended by the European Parliament.[101] This requires Eurodac data to be masked and deleted after the asylum applicant has been: legalized; issued with a residence permit; left the territory of the Member State; or acquired the citizenship of one of any Member State.

No great obstacles arose with regard to the legislative aspects in the development and operation of Eurodac. However, there was an explicit emphasis during negotiations to establish Eurodac that its database could be used to implement only the relevant regulations relating to the Dublin Convention, and not for other purposes. For instance, Eurodac may not be used for "the functioning of other international instruments" or "starting criminal investigations against asylum seekers".[102]

The Commission also continues to insist that the system's search function should be used only for transactions foreseen by Article 18 Paragraph 2 of the Eurodac Regulation 2725/2000 of 11 December 2000, which reflects data protection rules safeguarding the rights of the data subject to access his/her own data. These provisions offer the ability to conduct "special searches": access by the data subject to view any communication of the data relating to him/her recorded in the central database and of the Member State that transmitted them to the Central Unit. Such special searches take place only when requested by the person whose data are stored in the central database.

The Eurodac information system

The Eurodac Central Unit was set up in the European Commission via a Restricted Call for Tender (DG JAI A2/2000/A2), which resulted in a contract being signed between the Commission and the successful tenderer in March 2001. The Call for Tender was to implement an automated fingerprint information system (AFIS) that was capable of handling 7,500 transactions per day (500 transactions per hour) with an availability of 99.9%. It needed to deliver greater than 99.9% certainty of accuracy for all returned submissions, with a probability of less than 0.5% of missing a match where a match should happen. Another requirement was that the database had to be capable of storing up to 800,000 full ten-print images per year. In addition, the contract included the delivery of a reference client that could emulate a Member State to prove that the AFIS was capable of handling transactions from a Member State for all data types.

System Management Tools have been implemented to help the Central Unit monitor the activities of the AFIS and produce statistics to match the regulatory statistical requirements. The Monitoring System also had to include a logging capability to track the activities of the Central Unit. In addition, a Business Continuity System (BCS) was established as a backup if the Central Unit becomes unavailable. The BCS also has testing capabilities to allow Member States or Accession Countries[103] to test any new solutions being implemented at a National Access Point, in order to prevent problems arising with the 'live' Central Unit.

The network infrastructure that links the Central Unit to the National Access Points is provided through the Trans-European Services for Telematics between Administrations (TESTA II) network, a Generic Service of the European Commission's Interchange of Data between Administrations (IDA) programme[104]. This is an encrypted private network for public administrations, offering a

[100] European Council Decision (EC) No 2006/188/EC of 21 February 2006 on the conclusion of the Agreement between the European Community and the Kingdom of Denmark extending to Denmark the provisions of Council Regulation (EC) No 343/2003 establishing the criteria and mechanisms for determining the Member State responsible for examining an asylum application lodged in one of the Member States by a third-country national and Council Regulation (EC) No 2725/2000 concerning the establishment of Eurodac for the comparison of fingerprints for the effective application of the Dublin Convention, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006D0188:EN:HTML

[101] See European Commission (1999) and European Parliament (1999).

[102] Legal Service of the Council, Advice 18 March 1993, 5546/93, JUR 25.

[103] Countries applying for membership of the EU before their application is approved.

[104] See: http://europa.eu/scadplus/leg/en/lvb/l24147a.htm

secure telecommunications infrastructure based on IP networking, similar to the Internet. Security is an important element of all data transmission and this is ensured by using the TESTA network and the use of Public Key Infrastructure (PKI) services, also provided through the Generic Services of the IDA Programme.

Impacts of Eurodac

In the various annual evaluations by the European Commission (2004; 2005; 2006; 2007), the general conclusion has been that the Central Unit has produced very satisfactory results in terms of speed, output, security and cost-effectiveness. There are, however, concerns about excessive delay in the transmission of data from several countries to the Central Unit and the low quality of this data. These problems have been addressed in cooperation with the responsible Member States.

Despite these reservations, the evaluations have found that Eurodac has generally met its broad original policy goals of supporting the application of the Dublin Regulation and establishing mechanisms and criteria to determine which Member State is responsible for examining an asylum application lodged in a Member State. For example, the annual evaluation reports show that in 2004 only 17,287 people were found to have lodged a double application, but in the subsequent two years 31,307 and 31,636 third-country nationals lodged a double application. It has also assisted in monitoring and helping to reduce the 'asylum shopping phenomena', where asylum seekers move around between countries to find a point of access. In addition, Eurodac has facilitated the harmonization of Member States' asylum policies and fostered stronger co-operation among its participating States on asylum matters.

The Eurodac system's focus on exchanging electronic data about asylum applicants has also forced the States involved to adapt their old processes to the new technology in order to achieve gains in increased speed, accuracy of information flow and security in government processes. This has resulted in the peripheral (border) offices in several countries being provided with the electronic equipment needed to capture relevant data quickly for transmission to the relevant National Central Office and, from there, to the Eurodac Central Unit. This has significantly improved the quality and speed of the overall process. Moreover, because of the sensitive nature of the information, security was also improved.

Eurodac also meant a change in policy processes. The benefits resulting from this include the harmonization of Member States' asylum policies and a convergence towards a Common European Asylum Policy.[105]

Factors affecting this case of significance to wider eGovernment initiatives

The seven barrier categories

The Breaking Barriers Project, funded by the EC, identified and explored the key barriers to eGovernment in Europe. The project team proposed seven key barrier categories of obstacles to eGovernment progression. The categories are intentionally broad and tied to a multitude of more specific barriers relevant at different governance, institutional and jurisdictional levels. This categorization is particularly valuable when discussing the barriers relevant to this case which may have relevance for other eGovernment initiatives. In summary the barriers are: leadership failures, financial inhibitors, digital divides and choices, poor coordination, workplace and organizational inflexibility, lack of trust and poor technical design[106].

[105] For more details of the EU policy towards a Common European Asylum System, see: http://ec.europa.eu/justice_home/fsj/asylum/fsj_asylum_intro_en.htm

[106] For more details about the Breaking Barriers to eGovernment project please see http://www.egovbarriers.org

The following are the main issues that arose during the implementation of Eurodac and that are of relevance to the seven barrier categories identified by this Breaking Barriers to eGovernment project (no new barriers were detected in this case study outside these categories):

Leadership failures: No significant leadership failures occurred, as all participating States saw Eurodac as a necessary and logical result of the Dublin Convention. Moreover, it was in each State's interest to make this project work because it would give them a clearer picture of the facts of illegal immigration and asylum seeking across Europe, and how arising problems could be solved at European and Member State levels. Eurodac has greatly benefited from the way participating States cooperated to make the project work. This attitude made it possible for States to register third-country nationals, giving them a better picture of their location and movement in their country and across Europe. Without this political leadership, the project would never have even begun. The management of Eurodac's Central Unit by the European Commission also proved to be the appropriate level of authority.

Financial inhibitors: The four annual reports on Eurodac (European Commission 2004; 2005; 2006; 2007) discuss the cost effectiveness of Eurodac. The costs of Eurodac are spread between an EU-level contribution and each participating State, which carries most of the costs. This has been one factor in problems that have arisen with the transit countries who perceive they have an unfair share of the financial burden. As it is reported in each Annual Report (2004-2007) on the activities of the Eurodac Central Unit, the Community generated savings for national budgets by using common available communication infrastructures. The fourth annual report (11 September 2007) analyses that savings for the Member States have been generated because the Community covered the costs for the communication and security services for the exchange of data between the Central and the National Units.[107] This is a result of using the common available infrastructures, like the aforementioned TESTA network. Furthermore, the fourth annual report shows that, after four years of operations, the total amount of € 7,8 million was spent on all externalised activities specific to Eurodac. In 2006, the costs for maintaining and operating the Central Unit were € 244.240,73.

Digital divides and choices: The main problems arising here are related to differences between Member States with regard to the knowledge these countries have about the technology being used and their further development. These differences could also be relevant for the workplace and organizational Inflexibility barrier category.

Poor coordination: This has been one of the most difficult barriers for Eurodac to overcome as there are many differences in regulation between the various Member States in their handling of asylum applications and immigration. The project's focus on the identification of persons and the encoding, storage and management of related data on a computer database makes coordination across States a particularly sensitive issue. Although fast communication and high quality data are essential to the correct functioning of Eurodac, some countries are somewhat reluctant to send the fingerprint data in time. As a result, the information could be outdated, leading to a third-country national entering country X by the time the Central Unit receives the relevant data from country Y, where the person also requested asylum. The negative overall impact on transit countries of the use of Eurodac means they may have little or no interest in bearing the administrative burdens of asylum requests. As Aus (2006) has commented: "The unilateral political and administrative benefits of not being held responsible for processing the asylum requests of tens or even hundreds of thousands of irregular border-crossers each year are apparently valued higher than the costs of sustained non-compliance with Community law".

Workplace and organizational inflexibility: The cultural differences between the various parties in the project have sometimes formed an obstacle to the transmission of the fast and accurate data communication that is essential to efficient administrative and the organizational adaptation necessary to make optimum use of the Eurodac system. For instance, the significant growth in

[107] European Commission (2007), Annual report to the Council and the European Parliament on the activities of the EURODAC Central Unit in 2006. Commission Staff Working Paper SEC(2007) 1184, Brussels: European Commission, 11 September 2007, p. 5
http://ec.europa.eu/justice_home/doc_centre/asylum/identification/doc/sec_2007_1184_en.pdf

administrative workload in transit countries due to conforming with Eurodac regulations can have negative impacts on the staff processing the paperwork. Another problem is that there are still a lot of rejections caused by low quality fingerprint data because of poor training of operational staff.

Lack of trust: To help overcome obstacles resulting from concerns about the misuse of sensitive personal identification data, it has been important to Eurodac's operation to be transparent in meeting best practice in data protection standards, such as through monitoring by the EDPS. It is also important that Eurodac provides a systematic notification of the deletion or protection (masking) of information in its database when that is being used at crucial stages in an asylum seeker's progression, such as acceptance as a refugee or eventual naturalization as a citizen of a country.

Poor technical design: AFIS is a typical fingerprinting tool used widely for police and justice activities and Eurodac benefits from being able to base its technical capability on these well tried and understood tools and techniques. In general, Eurodac software development was able to draw on much existing experience collecting, managing and communicating fingerprint data to help it avoid significant technical design problems.

Legal factors

There are several legal issues related to Eurodac that centre on the protection of the privacy-sensitive data it holds and manages:

- Protecting the privacy rights of third-country nationals: One key concern relates to Eurodac's core functions of systematic collection, central storage and transnational exchange of biometric data. This constitutes a violation of the rights of the third-country national concerned under the European Convention on Human Rights (ECHR).[108] The ECHR's case law sheds light on the exceptional circumstances under which such practices may be justifiably undertaken for the maintenance of law and order, internal security, etc. For instance, national authorities are allowed, in special circumstances, to submit "special searches", that we mentioned above.

- Data deletion: Concerns exist about the deletion of data in accordance with Eurodac's rules. Technical and practical difficulties hinder the systematic notification to delete or mask data in Eurodac because of the naturalization of an asylum applicant or when the asylum applicant is recognized as a refugee.

- National level: It has been very difficult, perhaps impossible, for the Commission, Central Unit or EDPS to control which national authorities gain access to personal information registered in Eurodac. One major reason for this is that Eurodac holds data in the personal and politically sensitive area of asylum seeking, including political refugees fearing prosecution from the countries they come from.

- European level: Legal concerns at a European level about Eurodac.

Legal concerns at a European level about Eurodac include (1) Plans for interoperability with the Visa Information System (VIS)[109] and Schengen Information System (SIS II)[110] and (2) the implications of a proposal in December 2006 by the German Presidency of the EU to make Eurodac accessible for police and law enforcement authorities. This stated that a proposal was being

[108] This relates to Article 8(1) of the ECHR giving everyone the right to respect for a private and family life, home and correspondence (see: http:www.echr.coe.int/NR/rdonlyres/D5CC24A7-DC13-4318-B457-5C9014916D7A/0/EnglishAnglais.pdf).

[109] VIS consists of: the Central Visa Information System (CS-VIS); and an interface in each Member State, the National Interface (NI-VIS) which provides the connection to the relevant central national authority of the respective Member State, as well as the communication infrastructure between CS-VIS the NI-VIS interfaces (see: http://ec.europa.eu/idabc/en/document/2186/330).

[110] The Schengen Information System (SIS) is an information system that allows the competent authorities in the Member States to obtain information regarding certain categories of persons and property (see: http://europa.eu/scadplus/leg/en/lvb/l33183.htm).

prepared "for a Council decision concerning access to Eurodac by Member States' police and law enforcement authorities for the purposes of preventing, detecting or investigating criminal offences, in particular terrorist offences."[111] This justified extending Eurodac's use by stating: 'Frequently, asylum-seekers and foreigners who are staying in the EU unlawfully are involved in the preparation of terrorist crimes, as was shown not least in the investigations of suspects in the Madrid bombings and those of terrorist organizations in Germany and other Members States…".[112] Although this specific German proposal might be withdrawn, this phrase directly linking third-country nationals (both legally and illegally resident within the EU) to acts of terrorism is worrying, as it could imply EU measures or policies in the field of Freedom, Security, and Justice are based on the general presumption that migrants within the EU are to be treated as suspected terrorists. Such a policy would run against the generally accepted principles in EU law of non-discrimination and equality. It could also have a negative impact for the position of migrants and their further integration into the society of EU Member States. The invitation by the JHA Council has resulted in a note by the Standing Committee of Experts on International Immigration, Refugee, and Criminal Law (Commissie Meijers) to Vice President Franco Frattini of the European Commission,[113] and a letter to Mr. Jacques Verraes, Directorate D: Internal Security and Criminal Justice of the European Commission.[114] The Standing Committee strongly advises against the intended legislation to amend the Eurodac regulation because it would be unlawful and thus would risk to be annulled by the Court of Justice.

There are five core arguments why the intended legislative measures would be unlawful:[115]

- Access to Eurodac data for law enforcement authorities would be irreconcilable with the present purpose limitation of the Eurodac regulation
- There is no legal basis in the EC Treaty for extending the purpose with security purposes
- The purpose extension would be incompatible with obligations under international treaties ratified by all Member States and with relevant principles of Community Law, the observance of which the Court of Justice ensures
- Data protection authorities lack sufficient means to protect the rights of asylum seekers
- The proposal will affect the integrity of Eurodac.

Relative influence of eGovernment challanges

On a 100% scale, the following are approximate relative levels of influence on Eurodac of some key factors that could affect eGovernment projects:

- Political factors (35%): The main political obstacles came from some objections in transit countries. The negative overall impact on them of the use of Eurodac means they may have little or no interest in bearing the administrative burdens of asylum requests. As Aus (2006) has commented: "The unilateral political and administrative benefits of not being held responsible for processing the asylum requests of tens or even hundreds of thousands of irregular border-crossers each year are apparently valued higher than the costs of sustained non-compliance with Community law".

[111] European Council Document 16982/06, 20 December 2006, http://www.statewatch.org/news/2007/jan/eurodac-16982-06.pdf
[112] European Council Document 17102/06, 22 December 2006, p. 6. http://www.statewatch.org/news/2006/dec/eu-german-pres-policing-agenda.pdf
[113] Standing Committee of Experts on International Immigration, Refugee, and Criminal Law, 'Note on the proposal of the JHA Council to give law enforcement authorities access to Eurodac'. Utrecht, the Netherlands, 18 September 2007, CM0712-IV.
[114] Standing Committee of Experts on International Immigration, Refugee, and Criminal Law. 'Letter regarding the Proposal to give law enforcement authorities access to Eurodac'. Utrecht, the Netherlands, 6 November 2007, CM0714.
[115] See also the website of the Standing Committee: http://www.commissie-meijers.nl/commissiemeijers/pagina.asp?pagkey=37264

- Legal factors (40%): This is related mainly to the protection of privacy rights of third-country nationals, the non-deletion of data in accordance with Eurodac's rules, the lack of control over national authorities who gain access to personal information in Eurodac, plans for the interoperability of Eurodac with the Visa Information System (VIS) and the Schengen Information System (SIS II), and the linking of third-country nationals to acts of terrorism, as a result of the expected proposal to make Eurodac accessible for the police and other law enforcement authorities.

- Financial (10%): The fourth annual report (11 September 2007) analyses that savings for the Member States have been generated because the Community covered the costs for the communication and security services for the exchange of data between the Central and the National Units.[116] This is a result of using the common available infrastructures, like the aforementioned TESTA network. However, there is a financial discussion because transit countries perceive that they have an unfair share of financial burden.

- Social and economic issues (10%): Burden-sharing and variable administrative resources and reception capacities could be significant activities in meeting the concerns of transit countries. For example, sharing the economic burden of administrative procedures and capacities for the reception of refugees between all countries could help to promote cooperation and compliance by the transit countries.

- Technological issues (5%): AFIS is a typical fingerprinting tool used widely for police and justice activities and Eurodac benefits from being able to base its technical capability on these well tried and understood tools and techniques.

Conclusions

The original expectations about areas where the project was likely to be successful were generally met, such as in political leadership and technical performance and security measures. However, there are some obstacles that proved to be problematic because they reflect different interests, regulations and mentalities of participating countries. For instance political and economic consideration among transit countries have proved to be a constraint, as they have led to such countries seeing Eurodac as a burden, not a benefit.

Privacy, communication, legal adaptation and coordination have been the key words in this project. The privacy of third-country nationals remains a major unresolved issue. The States participating in Eurodac must ensure that this sensitive data does not fall into unauthorized hands. To do this, they have to take the necessary measures (e.g. adaptation of privacy regulations and improving computer system security). However, if something like the 2006 German proposal mentioned above (in the subsection Legal factors) is ever implemented, it would give law enforcement authorities across Europe access to Eurodac. This could be an infringement of the 'purpose limitation' principle in data protection regulations, and could strengthen the idea that immigrants or asylum applicants should be considered as possible terrorists or criminals. Legal issues concerning privacy remain a major barrier yet to be fully overcome in relation to third-country nationals.

Effective communication between participating States and the Central Unit is essential to the successful functioning of Eurodac. This will mean coordination of the various data to meet the needs of Member States also becomes more effective. Problems concerning coordination and workplace inflexibility also continue, often because of great variations in the workings, institutions and cultures of different Member State.

[116] European Commission (2007), Annual report to the Council and the European Parliament on the activities of the EURODAC Central Unit in 2006. Commission Staff Working Paper SEC(2007) 1184, Brussels: European Commission, 11 September 2007, p. 5
http://ec.europa.eu/justice_home/doc_centre/asylum/identification/doc/sec_2007_1184_en.pdf

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Interviewees: Mrs. Evelien Brouwer (Centre for Migration Law, Radboud University Nijmegen, the Netherlands, now working for the Institute for Constitutional and Administrative Law, Utrecht University, the Netherlands), Employee (European Commission, DG Justice, Freedom and Security, Unit B2: Immigration and Asylum, Brussels, Belgium), Mr. Jonathan Aus (ARENA - Centre for European Studies, University of Oslo, Norway).

Case study: X-Road: An Interoperability Framework for eAccess to Registers in Estonia

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Definition of the case study

The X-Road project[117] was launched in 2001 with the main objective of guaranteeing the delivery of a web-based service to enable citizens, businesses and government servants to access nearly one hundred governmental databases and registers. The institutions responsible for the larger registers had previously started to develop web services for citizens, but the results of these earlier projects varied greatly. This led to similar services having significant differences (e.g. in user interfaces; agreements between the database user and the authority responsible for the register; and authentication services). All these problems encouraged the project leaders to develop a new general solution, which was carried out by the X-Road project within the Estonian Interoperability Architecture guidelines[118].

In the context of the EU, which Estonia joined in 2004, a key objective was to implement the free movement of information across national borders to support the free movement of goods, people, etc within the Union. Good examples of this potential are the possibility of linking Estonian eServices with pan-European developments such the Schengen Information System[119] an EUCARIS[120] European car registration centre.

The user groups targeted by X-Road's eServices are:

- Citizens[121]: Giving access to the personalized data recorded by state institutions in different databases, with about 70 registers connected to the common architecture in April 2007.
- Businesses: The management of businesses can obtain a list of available eServices customized for their needs.
- Government institutions: Probably the most active group of X-Road users.

Setting of the X-Road case study

Implications of the Estonian Database Act

According to the Estonian Databases Act[122], which came into force in April 1997, state registers in the country operate under different ministries. There are more than 200 different official registers. About a hundred are considered to be the most important, including the registers covering: Population; Business; Land; and Cars. Most registers work under the relevant ministries, boards, inspectorates and municipal governments. However, there are a few ministries where the technical and organizational environments for some registers are centralized (e.g. the Centre of Registers

[117] For information about project X-Road (in English) see: http://www.ria.ee/27309
[118] See: http://www.riso.ee/en/information-policy/interoperability
[119] The Schengen Information System contributes to the implementation of provisions on the free movement of persons within the EU and in judicial cooperation in criminal matters and police cooperation (see: http://europa.eu/scadplus/leg/en/lvb/l33183.htm).
[120] See: www.eucaris.net
[121] The citizens' portal (entrance to the X-Road environment) is at: www.eesti.ee
[122] For details of the Act (in English), see: http://www.riso.ee/en/node/40

and Infosystems in the Ministry of Justice[123]). Several state registers are also outsourced to private companies.

The centralization of registers is not possible and reasonable for several reasons. Each ministry is relatively independent in their decision making processes and work principles. Cross-government cooperation is complicated, which is a particularly strong obstacle in this kind of ePublic Service. In addition, 'info-political' considerations are against centralization, such as special personal data protection principles that make centralization more complex. Centralization of some databases in a few ministries were driven only by pragmatic considerations, and so cannot be considered as typifying general considerations about systems based on the centralization of registers.

The Databases Act defines a general (or basic) categorization for national registers (e.g. relating to Population; Legal Persons; Immovable Property, State Assets). In addition to the general national registers, there are also State registers (databases established by the Government to meet a law or international agreement and which are necessary to perform the functions of one or several ministries); other state agency databases; and local government databases. These register categorizations have been based of a process of establishment (by Law, by Act of Ministry or Local Government etc.), which takes account of the relevant Scandinavian practice in this field.

At the start of 2007, the categorization was changed and the new Law (Public Information Act) does not emphasize the establishment process and the status of registers but rather the importance of basic data rather than the Basic Register as such. This indicates that the same organizational, legislative and technical barriers are relevant for most state databases, not just basic registers. This case study is therefore of wider relevance than only the kinds of registers connected within X-Road.

Milestones in the development of X-Road

X-Road pilot projects started in 2000 and the first operational model began in December 2001. The initial test focused on queries from different Police databases, which ensured special attention was given to guaranteeing the rules of personal data protection for citizens. The mass use of services was launched at the end of 2002, by when Estonian digital ID-cards were available. By April 2007, X-Road offered several hundred eServices for different user groups.

The X-Road development was initiated in the Department of State Information Systems in the Ministry of Economic Affairs and Communications[124]. The development was subsequently transferred to the Estonian Informatics Centre[125]. The project is continuously developing because of the changes in technology, new needs of partnering organizations, etc. The main development work has been undertaken by the private sector, with some support from ICT specialists in public institutions.

One of the main driving forces was the lack of money in state budgets. The very different technical and organizational environments involved would have made it extremely expensive and complicated to build multiple front offices, user identification mechanisms and a large number of interfaces between state registers.

Challenges and potential barriers faced

The main potential barriers foreseen when planning the project were organizational and legislative. For instance, one of the info-political issues addressed was the difficulty of trying to make the register integration process compulsory. Some attempts to do this using legislation had not worked;

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[123] Other examples of register centralization are some databases of the Ministry of Agriculture's Registers and Information Board and in the Estonian Motor Vehicle Registration Centre in the Ministry of Economic Affairs and Communications.

[124] By the Estonian Government of Republic Act, this Ministry is responsible for the general coordination of state information systems in Government. Six people work in this department in April 2007. See www.riso.ee for more details of its activities.

[125] Six people were permanently engaged with this application in April 2007 (see www.ria.ee for more details of its activities).

neither had separate agreements between ministries on how they would join their registers to a single eService environment.

The X-Road concept was innovative. The basic idea was to avoid destroying the existing situation in back-offices dealing with registers, while better integrating the way that users engaged with them. This was thought to be important because the state registers operate under different ministries and their organizational, fiscal and technical environments and models are different. A focus mainly on the data exchange architecture would allow different ministries and separate registers to have their own technical platforms where required, but within a consistent and coordinated architectural framework. Although a few registers could retain separate front-offices, most were expected to connect to the single X-Road 'middleware' and offer eServices through it. This is what has occurred.

The sensitive nature of much information in the registers included within X-Road led to the development and implementation of a personal data protection concept which allows everyone to check their own data and to know who is using this information. This was designed to help build trust among users, while fulfilling the public authorities' legal regulations.

Adoption and implementation of X-Road

Key players and their roles in the project's creation and implementation

The key players[126] behind X-Road included: the Department of State Information Systems (RISO)[127], specialists from the Estonian Informatics Centre that works under the Ministry of Economic Affairs and Communications; IT managers from other public institutions; private businesses; and universities. RISO is responsible for general coordination, initialization of the project, main visions and ICT architecture design; the Informatics Centre for implementation, including leading the practical integration process; the IT managers and administrators of main ministries for dealing with issues relating to the registers issues; and the main development work on X-Road and individual registers was done by private companies (e.g. AS Cell Networks and AS Cybernetica). There are no financial commitments between the public sector partners.

The major decision-makers who actively influenced the projected design were: RISO's ICT systems architect and its Head of Department; the project manager from X-Road Centre in the Informatics Centre; and system designers from Cell Networks and Cybernetica. An example of a state institution X-Road partner is the Centre of Registers and Infosystems under the Ministry of Justice[128], which includes the Business Register, Titlebook Register (part of the real estate information system), Ships Register and Marital Property Register. It was created at the beginning of 2006 during the organizational process that merged the registers in the Ministry of Justice.

Addressing initial problems

The initial understanding was that it would be easy to implement the required eServices as soon as the technical platform was operational. The general understanding among different stakeholders today is that the establishment of the basic platform was only the beginning of a complicated eService implementation process, where the main real problems are non-technological.

At the time of project's launch, legal regulations regarding access to registers via X-Road were too complicated. This was solved by introducing more flexible technical, organizational and legislative approaches. Another incorrect initial decision was the expectation that most of the development work on local database interfaces would be done by the same company that had undertaken the main X-Road development. As soon as more developers (both from private and public sectors) were trained, the efficiency of operational access increased. There was also a recognition that more

[126] This case study is based on interviews with experts from some of the main stakeholders in public institutions. A main author of this study was also involved from the start in X-Road's strategic planning and development.
[127] At the start of the project this was known as the department of State Chancellery.
[128] See: www.eer.ee

technical competence should be built into the back-office support. Other initial problems in the process of implementation included: encouraging partners to connect their systems; helping them with technical issues; offering appropriate hardware and software to assist the integration process; and preparing and approving regulations at Government level.

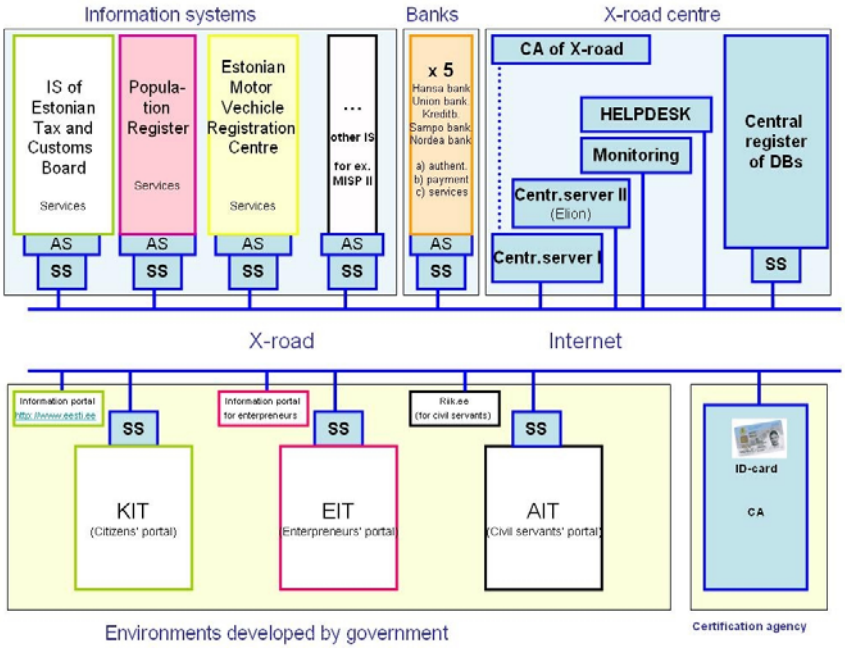
The rate at which registers joined X-Road was slower than expected after the technology was tested and first became available. This was due mainly to organizational obstacles. The general finance model of some registers was also an obstacle in the initial phase of the project. For example, the Population register used a different model to others, which meant it would lose part of its budgeted income after integration with X-Road. This caused the institutions affected to oppose participation. The problem was resolved after a revision to the relevant paragraph in the Population Register Law.

Technologies used to implement the project

X-Road harmonized the register environment within the Estonian Interoperability Architecture[129]. Like other similar national interoperability framework principles adopted by EU countries, this is not a legal regulation or direct eGovernment standard, but forms 'strong recommendations', focused mainly on the public sector. However, as with X-Road, such interoperability frameworks are increasingly incorporating private sector ICT systems.

The schema of the system configuration in Figure 1 shows that all the information systems involved are connected to the X-Road security servers via adapter servers (AS), which converts messages in X-Road XML format to special database query languages (mainly SQL) and from query answers back to XML. The data transfer protocol used in April 2007 was SOAP, together with older XML Remote Procedure Call (RPC) protocols where appropriate.

Figure 1



The X-Road Centre is at the heart of a broader eGovernment environment because all the central servers (e.g. doing central monitoring and certification) of this wider network are connected and located here. The Centre has specialist staff who manage eGovernment hardware, software,

[129] See: http://www.riso.ee/en/information-policy/interoperability

Internet connections, etc. Its management group also organizes relevant courses and seminars and coordinates activities with the EU and other external bodies.

The undertaking of research and development projects by the X-Road Centre is likely to increase. For instance, A new central register of databases added to the Centre at the beginning of 2005 includes not only the description of all Estonian public sector registers and databases, but also collects descriptions of all government eServices in the WSDL (Web Service Description Language) format. This enables the development of different automatic tools by using the library of eServices to automatically generate new ones on the basis of the stored service descriptions.

Project Design

Key design decisions included:

- implementation of the interoperability framework as a foundation building block for public eServices in Estonia;
- use of the open systems concept;
- the guaranteed neutrality of technical platforms;
- a cost model in which the end-user of eServices should not pay for the service;
- development of a single mechanism for authentication and authorization of users; and
- a data-security model that enables everyone to know how his/her data is used by government.

Impacts of X-Road

Overview of outcomes

There is no available detailed study of the impacts of the X-Road project. However, it seems that its aims and visions have been broadly reached. Compared to the original goals, the expectation of its early growth were too optimistic, primarily because of unforeseen difficulties that meant the integration and take-up process took much more time and effort than planned. The main problems were not in the technology but with organizational, legal, financial and motivational aspects.

The main impacts in organizational, legislative and technological terms were in developing a model of cooperation between different state registers that allows fast, inexpensive and very flexible development of different eServices in a secure way that guarantees data protection. Users seem to be generally satisfied, as indicated by its increasing usage profile, rising steadily from 590,337 in 2003 to almost 3 million in 2006, involving more than 12% of the Estonian population in accessing X-Road eServices via different portals. In addition to citizens, about 400 organizations are connected to this environment and around 23,000 entrepreneurs access its business portal.

Uses of this integrated registers system have had strong impacts to the processes in the partner organizations, as well as in the different user organizations. These arise not only in the direct handling of registry tasks, but even more importantly in how the approach adopted has opened opportunities to take a fresh look at the organization and its processes and practices. It was in this way that the implementation of X-Road prepared the ground for administrative reforms and changes in the organizations. Several developments and organizational changes in the Informatics Centre arose from its role as the X-Road Centre in the system’s set-up period. And a number of forms of innovative cooperation have been implemented between partnering organizations, which have had indirect impacts to the work of these organizations.

Success factors and factors required a rethink

The main success factors were finding appropriate motivational models for engaging different stakeholders. For instance, the institutions responsible for state registers were attracted by:

- the simple and easy process of integration through the X-Road middleware
- saving money when using shared services (e.g. a single front office; single ID-card based authorization and authentication of users; and special data protection measures)
- technical support and helpdesk advice during the implementation process.

The prime motivations for citizens to access registers using the X-Road environment is that is free, has a simple user interface, employs a unified authentication mechanism and offers a long unified list of the integrated eServices available.

On the technology side, some relatively minor issues needed to be revised during the project. For example, the SOAP data transfer protocol standard was not available and not planned for when X-Road was first conceived. During interviews for this study with government stakeholders, a view was strongly expressed for ensuring basic knowledge about the technology is transferred more effectively to the implementing agency. It was felt the know-how had remained too strongly with the private companies who developed the software for X-Road, particularly in the project's early phase.

As already explained, the rules for accessing and integrating registers had to be made more flexible after initial problems were experienced. Coupled with strong 'idea selling' efforts, this helped to speed the project's progress significantly. The assumption that the different register organizations could leave all technical integration work to one developer was overcome by the special short training courses for the registers' back-office developers, after which the pace of integration increased to a satisfactory level.

Special 'selling' also had to be done to raise awareness of X-Road among senior decision makers.

Legislative changes

The Database Act, Public Information Act and related ministry-level sub-acts formed the overall regulatory environment for the registers system. Some rules of integration of the system and general descriptions of responsibilities and principles of supporting systems were also provided. In addition, principles established in the Personal Data Protection Law also had a significant influence on the development and implementation of the register integration projects. The main problems and discussion in this area were about permission to use a single electronic identification (eID) and the degree to which cross usage of data between different registers should be allowed.

Modifications were made to relevant legal acts during the implementation process. The X-Road project implementation could therefore be seen as helping to create a new legal environment for the registers. Special integration agreements were established to help manage the partners' organizational aspects through an agreed set of common rules.

Factors affecting this case of significance to wider eGovernment initiatives

The Seven Barrier Categories

The Breaking Barriers Project, funded by the EC, identified and explored the key barriers to eGovernment in Europe. The project team proposed seven key barrier categories of obstacles to eGovernment progression. The categories are intentionally broad and tied to a multitude of more specific barriers relevant at different governance, institutional and jurisdictional levels. This categorization is particularly valuable when discussing the barriers relevant to this case which may have relevance for other eGovernment initiatives. In summary the barriers are: leadership failures,

financial inhibitors, digital divides and choices, poor coordination, workplace and organizational inflexibility, lack of trust and poor technical design[130]

The following are the main issues that arose during the implementation of X-Road of relevance to the seven barrier categories identified by the Breaking the Barriers to eGovernment project (no new barriers were detected in this case study outside these categories):

Leadership failures: Top managers were not very seriously engaged, except IT managers. Project management and leadership problems in the launch period were resolved by recruiting a new implementation manager. The value of effective 'selling' of this kind large cross-government project, including to senior mangers, was highlighted by the X-Road experience.

Financial inhibitors: Financial issues were not barriers in this case. A stable state budget financing mechanism was functioning and requirements were met within the planned budget, which may have been one reason why the project was not highlighted on senior management's radar.

Digital divides and choices: Careful planning and design of user interfaces, security and privacy processes to boost trust and other user-related issues helped to avoid the emergence of any specific digital divide obstacles in this case.

Poor coordination: The general relevant coordination mechanisms and organizational aspects were achieved within central government ICT services. Coordination between IT managers of public organizations was not the barrier, but some coordination problems arose between general managers of partnering public organizations.

Workplace and organizational inflexibility: This was the main barrier in this project, particularly where internal motivational factors in public sector organizations did not support the kind of changes and innovation represented by the X-Road initiative. As money saving was not a major motivating incentive for public institutions, the main driving forces were probably: the simplicity of integration; provision of help-desk and support from the Informatics Centre; and pressure from related legislation.

Lack of trust: This factor had a minor influence on the success of the project in terms of trust doubts between the partnering organizations, which possibly influenced progress on the integration effort and the take-up speed. The user identification mechanisms were designed to take account of all data security needs, which seem to have help build trust among users.

Poor technical design: The technical design avoided significant obstacles by following the available best practice. Solutions were piloted and applications tested completely before going live. Although some technical aspects required discussions between different partner organizations (because of the need to integrate different ICT platforms), this did not result in any major technical complications. Additional development work for solving any technical problems that arose in partnering organizations was adequately financed and carried out.

Relative influence of eGovernment challanges

On a 100% scale, the following are approximate relative levels of influence on X-Road of some key factors that could affect eGovernment projects:

- Political, administrative and organizational (40%): Administrative barriers, existing work practices and lack of motivation for changes were among the main influence here, but direct political influences less so. Also, IT managers were hesitant in the launch period. A main argument was about not allowing other developers into their own technical environments, which was solved after the institution's own technical staff were offered training and started undertaking this development work themselves.
- Legal (30%): This is related mainly to personal data protection, public information regulations, digital signature rules and database regulations.

[130] For more details about the Breaking Barriers to eGovernment project please see http://www.egovbarriers.org

- Financial (5%): Finance had a relatively low influence in this case because of the project's stable budget planning mechanism, with relatively minor efforts needed to find appropriate levels of finances. The main financial discussion concluded that the adopted strategy for integration of registers would cost much less than alternative methods considered.
- Social (10%): This related primarily to take-up of the X-Road eServices developed. In some ways, too fast a take-up of services can pose as many problems as too slow a rate. Broader info-political considerations are needed to overcome these problems, such as those related to privacy.
- Technological issues (15%): The most significant technical effort focused on the creation and testing of the basic architectural and system concepts and techniques during the pilot project.

Conclusions

The X-Road concept has proved to be a good one and has been generally successful, after the project's initials problems. It is important to emphasize the role in this achievement of motivational models that address the need to take account of risk, organizational, legislative and psychological barriers of stakeholders in such a public-sector area. After the complicated and at times difficult initial implementation period, stakeholders began to appreciate the value of the innovation and were happy to cooperative. But the process itself was not very easy. The main barrier was not the technology but the difficult organizational and legislative environment of the public sector in which the project was enacted. Fiscal and technical barriers have been less important, and in most cases were solved without significant complications.

Estonia had some advantages in the implementation process. Its legal system was still in the phase of development and the implementing ministry had the power in practice to create necessary regulations. Stable general ICT coordination institutional structures and expert personnel helped to support the development and implementation, including strategy, action and resource planning. A positive driving force came from the generally supportive attitude of citizens toward new innovative services.

The X-Road system has provided a high quality exchange layer that facilitates quick and effective communication between government databases and provides a wide range of services to improve efficiency and decision-making in both public and private institutions. The system provides so many cost and efficiency savings that it easily justifies the investment in it. Other countries would benefit from the implementation of systems similar to X-Road system, which can be the basis for delivering a productive and comprehensive means of communication between government databases.

Sources

Interview with Riho Oks, Development Advisor to the Director of Informatics Centre. Riho Oks was involved directly with the implementation process of X-Road project being responsible on integration process of registers from different public institutions

Interview with Ahto Kalja X-Road project manager. Estonian Informatics Centre. Ahto Kalja was one of the main architects of the project and working not only with technical issues but also with organizational and legislative topics.

Interview with Uuno Vallner, Head of IT Architecture Unit, Department of State Information Systems, Ministry of Economic Affairs and Communications. Uuno Vallner was one of the initiators and visioners of the project

Interview with Marko Lehes, Director of Centre of Registers and Information Systems, Ministry of Justice

Conclusion

What are the broad conclusions that we can draw from the three embedded cases? The first conclusion is that, despite their common technical goals of acting as registries, each project experienced rather different barriers. As we hypothesised, the registries that were not related to personally identifying information appeared to face fewer barriers associated with the “lack of trust” category, and equally faced fewer legal hurdles. Thus, for the company register, GEWAN, the only relevant barriers were found to be “digital divides” and some limited “leadership failures”. It is notable that GEWAN appears not to have been impeded by “poor coordination”. Part of the reason for selecting it as an embedded case was that the project necessarily involves a large number of administrative actors operating at different levels of government.

Moving on to the Estonian case, slightly more serious barriers were discovered. They were found to primarily revolve around “organizational inflexibility” and to some extent around “lack of trust”. As the x-Road project included aspects of citizen registries, it is unsurprising that the privacy aspect of “lack of trust” was more apparent than it was for GEWAN. The discovery of problems with “organizational inflexibility” is more interesting. Part of the reason for choosing the Estonian case was to investigate whether a more centralised system of registry provision is a successful model. The x-Road project suggests that there are costs and benefits to such a structure. It appears that when centralised systems are dependent on the cooperation of other departments and agencies in a technical sense, then great care must be taken to ensure that the necessary changes in development patterns are made across all organizations concerned. Thus, the finding is one that touches on the “poor coordination” category. The solution to the barrier turned out to be using a better understanding of the desires of the diversity of organisations associated with the project.

For Eurodac, the main barriers were found to be far more extensive. They were “financial inhibitors”, “poor coordination”, and “organizational inflexibility”. Given the personally identifying nature of the information stored, it is interesting that “lack of trust” did not feature more prominently as a barrier. In fact, the findings of our research suggest that this possible barrier was acknowledged and dealt with at a fairly early stage by limiting the data held in the registry to only fingerprints – with no associated identifying information. While there is cause for concern that specification creep will undo this strategic decision in the future, for now privacy issues appear to be of low consequence.

The barriers that were unearthed are of note as they stem from the pan-European nature of the project. Engaging in collaborative eGovernment projects across countries with varying degrees of experience and capacity with communication technologies would seem to be an activity that requires careful planning. Different levels of experience with eGovernment systems is likely to be linked to different organisational structures in each country. In turn, these different structures are likely to require different mechanisms to reconfigure them for effective use of new IT systems.

We found that the importance of “financial inhibitors” is itself an indicator of a cross-cutting underlying issue – the political aspects of the project. Fundamentally, Eurodac suffers from an imperfect alignment of incentives to participate in the project across the member states. Those countries that act more as gateways than as destinations have less to gain from the system. This leads to reduced incentives both to commit financial resources and to act diligently in the administration of Eurodac. While the particular pattern of interests in this case is a result of the policy area concerned, this would appear likely to be a problem that is likely to appear in other similar pan-European eGovernment endeavours.

The Eurodac case also revealed that, despite harmonisation attempts, the differing legal regimes across states have made for some difficulties in the uniform operation of the service. It is in this area that privacy issues have had their biggest effect. However, the main impediment here seems to be the differing laws rather the privacy in and of itself.

The final point to make on the barrier categories is that, in general, “poor technical design” is not a problem. This would seem to be because the operation of registries is, now, a fairly standard, well-tested service. Administrations have a lot of experience of running large databases in many contexts; and technology seems to be the most straightforward factor to resolve in the cases reviewed here.

One last question remains. How did the hypotheses that we offered above fair in our empirical research? On the first – that organisational barriers increase as the associated level of government gets higher – the evidence would seem to support it. The sub-national project (GEWAN) appeared to suffer little from barriers of this sort, while the national Estonian, and pan-European projects were found to have progressively larger problems in this area. The results are less conclusive for the second and third hypotheses; respectively, that resource barriers decrease as the associated level of government gets higher, and that legal barriers are more likely to be overcome by schemes that operate at the national level. While financial inhibitors were only found to be of importance for Eurodac, this is the result of underlying political issues rather than an actual lack of financial resources for the participating countries. In the case of X-road having adequate finances and planning and budgeting appropriately were noted but as the project was delivered within budget was not a major issue. Legal aspects were also found to be of limited relevance for the sub-national project we studied, but it seems likely that this was the result of it being concerned with company information rather than personally identifying data. In support of the hypothesis the national level X-road project illustrated the benefits of being able to develop the most appropriate legal frameworks to facilitate the initiative.

To conclude, this case study has shown that, despite ostensibly similar technological goals, public registries face very different levels and types of barriers. The nature of the data that they store is of prime importance, but the institutional and political context also has a strong bearing on the difficulties that are likely to be faced. It seems unlikely that there is a single best model that can be used to implement public registry projects as it is important to adapt these considerations to the specific context.

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5. Digital Citizen Rights

This case study on digital citizen rights (DCR) is necessarily of a different nature to the other cases of this project, for two reasons. First, our research found that the very concept itself is of an amorphous and evolving nature. Different interlocutors in the developing debate over how to incorporate the “digital” into existing rights frameworks often emphasise very different things. For some, DCR would include general Internet rights such as freedom of speech and censorship, which we exclude from this case study. Second, the subject of the study is not concerned with a particular type of eGovernment programme – one in which a specific service is digitised, to greater or lesser effect. Instead, it is cross-cutting, and potentially touches on issues relevant to all types of eGovernment provision. The essence of the DCR case presented here is an analysis of normative claims regarding what the state should and should not be engaging with in the digital era. This potentially impinges both on the sorts of programmes that governments implement, and on the ways in which they do so.

In response to these two distinguishing features of DCR, the case study presented below is structured accordingly. We begin by providing an extensive analysis of both the historical precursors and the current emerging contenders in the sphere of digital rights claims. From this analysis, we show that a number of distinct strands can be identified in the developments, and that these strands have received very different degrees of attention among participants in relevant debates.

As a result of the perceived importance of the most long-standing strand – the one that we associate with T.H. Marshall's “civil citizenship”– we then move on to develop a conceptual framework that can be used to delineate different aspects of DCR in this area. The typology that emerges from this work is one built upon an idea of information rights. It allows us to delineate the different types of legislation and rights claims that are applicable to DCR.

With this typology in hand, we move on to an empirical embedded case study. We identify Denmark as a leading exponent of DCR adoption, and set out the results of field research conducted during a visit to Copenhagen. The aim is to present evidence as to how rights issues have affected real-world eGovernment initiatives. The results suggest that the newer rights claims identified in the preceding section have had little influence on eGovernment in Denmark – both from state and civil society perspectives.

The case study is then concluded with a discussion of the key lessons that can be drawn from the historical, conceptual, and empirical sections.

Digital Citizen Rights: what should they entail?

We carried out a selective survey of the emerging field of rights statements and claims in the area of Digital Citizen Rights (DCR). While initially slow to acknowledge the implications of the digital era for citizen rights, a range of proposals have recently been forthcoming from governments, scholars, and activists. Whether acknowledged or not, these new normative claims tend to share a heritage of earlier, non-digital, international rights declarations. Consequently, we begin our survey with a brief outline of the important features of these statements.

The picture that emerges is one of an evolving field that has been influenced at all levels of human endeavour. Important contributions have been made by large-scale international agreements between governments, by individual national governments, by communities of pan-European local governments, and by provident individual scholars.

However, despite these contributions, the picture is also one of an under-development. For their many worthy and eminent additions to our understanding of rights as they relate to “digital citizens”, it must be questioned how large an impact this community of actors has really had on public policy. This may partly be explained by the lack of legal enforceability that characterises most of the expressions of digital rights that we discuss below. They tend to fall into the category of aspirant rather than applied practice. Nonetheless, it is reasonable to see them as important steps in a process of political and civic awakening as to the implications of our onward march into the digital era.

Precursors

In this section, we set out a history of some of the prominent historical precursors to the more self-consciously “digital”rights claims that have been proposed recently. With the aim of both brevity and authority, we concentrate only on five international treaties and declarations that form foundational parts of the recognised body of international human rights law. These are the Universal Declaration of Human Rights (UDHR) (United Nations 1948), the European Convention on Human Rights (ECHR) (Council of Europe 1950), the International Covenant on Civil and Political Rights (ICCPR) (United Nations 1966), the International Covenant on Economic, Social and Cultural Rights (ICESCR) (United Nations 1966b), and the Charter of Fundamental Rights of the European Union (CFREU) (European Union 2000).

For our purposes here, we choose to highlight two aspects that emerge from this body of international legal instruments. First, is the well-recognised idea of individual privacy. It is referred to explicitly in numerous international declarations, and has gone on to find statutory force in most “developed world” jurisdictions. Second, and somewhat more controversially, we discuss the degree to which these legal instruments have embedded within them, an implied notion of a right of access to knowledge or information. To the extent that they do, we can see them as important forerunners to many of the later, more specifically “digital”, rights assertions.

Privacy

Privacy has a long history of recognition in instruments of international law, and it is easy to see how those earlier assertions of such a right have important implications in the digital era. The added scope that interlinked databases provide for the sharing and aggregation of data on individuals clearly generates the potential for a reduction in privacy.

Of course, to some extent, these earlier privacy declarations reflect their times. With the prevailing technological constraints, it was not possible to monitor the communications and transactions of entire populations. Thus, the privacy assertions tend to be framed in terms of individuals facing specific, physical intrusions by the state. We can see this in Article 12 of the UDHR (UN 1948), Article 8 of the ECHR (Council of Europe 1950), and Article 17 of the ICCPR (UN 1966).

> *[UDHR] Article 12*
>
> *No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.*
>
> *[ECHR] Article 8 – Right to respect for private and family life*
>
> *Everyone has the right to respect for his private and family life, his home and his correspondence.*
>
> *[ICCPR] Article 17*
>
> *No one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence, nor to unlawful attacks on his honour and reputation.*

The onset of technological change led to adjustments to the expression of the privacy principles that underlie the articles above. In the European Union, data protection had already found legislative

form in Directive 95/46/EC (EU 1995) which set down a framework for “the protection of individuals with regard to the processing of personal data and on the free movement of such data”.

In 2000, the EU adopted the Charter of Fundamental Rights of the European Union (EU 2000), and there we see a more expansive notion of privacy rights expressed.

> *Article 7 – Respect for private and family life*
>
> *Everyone has the right to respect for his or her private and family life, home and communications.*
>
> *Article 8 – Protection of personal data*
>
> *Everyone has the right to the protection of personal data concerning him or her.*

Such data must be processed fairly for specified purposes and on the basis of the consent of the person concerned or some other legitimate basis laid down by law. Everyone has the right of access to data which has been collected concerning him or her, and the right to have it rectified.

While Article 7 maps onto those of the earlier documents, Article 8 clearly pushes forward the boundaries of privacy rights. It provides recognition for the implications of the changing scope of technical possibilities. The removal of physical limitations to the collection, retention, and analysis of personal data can be seen to herald the arrival of equivalent legal limitations.

One striking aspect of rights associated with privacy is that they tend to be inherently limiting on the actions of the state. Restrictions are placed on what information can be collected and stored, and even on the ways in which information can be linked together – “data must be processed fairly for specified purposes”. Those privacy rights that do not constitute limitations on the state very often amount to duties on it instead. So, once the data is collected, it must be possible for the citizen to inspect and correct the information that is held. Linking our discussion here back to the broader project, the very nature of privacy rights, to the extent that they influence eGovernment projects, would seem to offer only the prospect of additional barriers. However, as we shall see in our other embedded case studies, this conclusion turns out to be overly pessimistic.

Access to Information

In contrast to the potentially negative relationship that can be discerned between eGovernment and privacy, another manifestation of DCR appears likely to have a more benign impact on the structure and development of government on the web. The assertion of rights of “access to information” hold the promise of imposing duties on the state to make information available in a way that citizens can easily find and use. Internet technologies offer the most obvious mechanism for achieving these aims in an efficient manner, and thus rights of access to information may well be enablers to eGovernment.

But is there a right of access to information? International law holds numerous provisions that indicate that there is. Article 19 of the UDHR, Article 10 of the ECHR, Article 19 of the ICCPR, and Article 11 of the CFREU all provide for freedom of expression and the right to receive and impart information. Each is founded in the notion of freedom of opinion and expression. However, from the point of view of access to information, these articles appear to be rather weak. They amount to little more than a requirement of non-interference – by the state or otherwise.

The ICESCR goes a step further, though. It imposes a positive duty on the state to make it possible for all people to participate in cultural and scientific progress.

> *[ICESCR] Article 15*
>
> *The States Parties to the present Covenant recognize the right of everyone:*
>
> *To take part in cultural life;*
>
> *To enjoy the benefits of scientific progress and its applications;*
>
> *To benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.*

The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for the conservation, the development and the diffusion of science and culture.

Thompson (2006: 48) is bold in his assertion that the body of international law discussed above constitutes a strong source for a right of access to knowledge. He claims that,

> *even though the right of access to knowledge is not directly acknowledged in any of the dispositions of those instruments, it is an indispensable tool for the realization of the rights provided for by many of them. In this sense, we could say that the right to access at the same time underlies and distinguishes itself from the rights entrenched in the ICCPR and the ICESCR. The right of access to knowledge, as generally affirmed, is not the right to culture, is not the right to education, is not the right to freedom of information, is not the right to food, is not the right to health, and at the same time is at the background for the fulfilment of all of them – it is as basic and as essential as a right to have rights.*

Even if we do accept claims of this nature, it is possible to question the extent to which they will or should apply to eGovernment. Does a right of access to information, justified in the way above, constitute a duty on the state to make available the information that it holds? A case for such a proposition can be seen to rest on ideas of equal participation in the cultural and political aspects of the state. If state-held information is only available to the few, then equitable participation by all will likely be impeded.

Whether the reader accepts an argument of this form, or indeed any other, should not distract from the core purpose of this section. In a brief way, we have only sought to set out the legal antecedents to the emerging field of digital rights frameworks. It is to these that we now turn.

Emerging Digital Rights Frameworks

In this section, we provide a selective survey of more recent, and more overtly "digital"-oriented, rights statements and claims. We discuss the features of four such projects, each of which has had quite a different impact on the continuing debate in this area.

World Summit on the Information Society (2003-2005)

The World Summit on the Information Society (WSIS) was a UN organised process that, following its endorsement in 2001 by the UN General Assembly, constituted two phases: Geneva (2003) and Tunis (2005).[131]

> *The objective of the first phase was to develop and foster a clear statement of political will and take concrete steps to establish the foundations for an Information Society for all, reflecting all the different interests at stake.*

As such, its relevance to the recent development of DCR is clear. Indeed, discussing what they term the "global information society", Drake & Jørgensen (2006: 4-5) see the WSIS process as an important step towards uniting the previously disconnected worlds of ICT policy-making and human rights.

Following a three day conference in Geneva in which 11,000 delegates, from 175 countries participated – including heads of state and government – a Declaration of Principles was agreed.[132] This declaration identified a number of "key principles" for an "information society for all". While much of the focus of the declaration is on development issues with respect to poorer parts of the

[131] http://www.itu.int/wsis/basic/about.html (accessed 2007/04/06).

[132] We concentrate our analysis on the Geneva Declaration rather than the Tunis Commitment. This is not to downplay the important of Tunis – indeed, Drake & Jørgensen (2006: 33) cite phase 1 as "human rights damage control", while phase 2 was "essentially different in this regard". However, in the areas of direct interest to us here, the Geneva Declaration is both more extensive and clearer in its expression of the important principles that are at the foundation of the WSIS process.

world, some aspects are nonetheless of relevance to rights issues surrounding eGovernment in the developed world. At the most basic level, the WSIS declaration offers a highly prominent successor, in the area of information policy, to the international agreements already discussed above.

Of the 11 "key principles", the most relevant for our purposes are:

1. "Information and communication infrastructure: an essential foundation for an inclusive information society"
2. "Access to information and knowledge"
3. "Capacity building"
4. "Building confidence and security in the use of ICTs"
5. "Ethical dimensions of the Information Society"

From this list, the fourth and fifth principles emphasise the importance of privacy as a fundamental underpinning of any "information society". Interestingly, while the latter invokes privacy as a fundamental right, the former amounts to an instrumental justification. That is, "building confidence and security in the use of ICTs" is seen as a necessary step to encourage take-up of digital services – where such services are seen as a positive end in and of themselves.

The first principle in the list above is a declaration of the importance of access to technology, and particularly "connectivity". Clearly, such a declaration goes beyond the sorts of statements that are found in the body of international law discussed above. However, as we will see below, a connectivity right is either explicitly or implicitly part of other digital rights frameworks that we analyse.

From the second principle in the list above stems the following;

> *The ability for all to access and contribute information, ideas and knowledge is essential in an inclusive Information Society.*

Here, we see a significant explicit statement of the the importance of "access to information". Whereas the earlier body of international law had to be interpreted as implying a right of access to information/knowledge, the WSIS Geneva declaration states it boldly. However, it is important to note that, like much of the rest of the debate on rights of access to knowledge, the declaration refers to information in the sense of science, technology, and the like; offering no reference to state-held information or any rights that might be associated with that. Still, the expression of the principle is surely significant, and it is but a short and logical step to apply it to government information. As we shall see below, this is a step that several others have taken.

The principle of "capacity building" is also remarkable. It is stated that,

> *Each person should have the opportunity to acquire the necessary skills and knowledge in order to understand, participate actively in, and benefit fully from, the Information Society and the knowledge economy.*

From this, it is easy to infer a duty on the part of the state to provide this "opportunity". Although without explicit reference to the WSIS process, the EUROCITIES charter discussed below appears to follow this line of reasoning.

(1) Burger@Overheid – eCitizen Charter (2005)

A branch of the Dutch public sector ICT implementation organisation, ICTU[133],

> *Burger@Overheid.nl is an independent platform which stimulates the development of eGovernment from the citizen's point of view.*

[133] http://www.ictu.nl/profile.html and http://www.burger.overheid.nl/service_menu/english/who_we_are (accessed 2007/04/07).

It conducts surveys and research into the wishes of the citizenry with respect to eGovernment issues, and acts as an advisor to different branches and levels of government to best achieve their online goals.

In 2005, it launched its “eCitizen Charter”, formulated as a collection of rights (and duties) for citizens in the digital age. The aim was to provide an answer to the question: “What can citizens expect when eGovernment is finally implemented?”[134]. It “is deliberately written form [sic] the citizens' perspective” (Burger@Overheid 2005: 3), and enumerates ten rights that a citizen can expect.[135]

As with the WSIS declaration, privacy and security is explicitly recognised as an important right. But this is actually a relatively small part of the overall charter, being noted only in the “Trust and Reliability” and “Convenient Services” rights.

By far more prevalent is the assertion of rights associated with access to information and access to services. “Transparent Public Sector”, “Comprehensive Rights and Duties”, “Personalised Information”, “Comprehensive Procedures”, and “Accountability and Benchmarking” are all explicitly rights associated with a duty upon government to provide, or make available, information to the citizen. Compared to the WSIS declaration, this set of rights clearly goes much further. This is partly a matter of detail and granularity – the eCitizen Charter is obviously aimed at a different level of the debate to the broader WSIS process – but such a set of information rights over government data nonetheless constitute an extension to those that went before.

In the category of rights to services, we find “Convenient Services”, “Considerate Administration”, and “Involvement and Empowerment”. Again, it is notable how these are rights claims that go beyond the sorts of digital/information citizen rights the preceded the eCitizen Charter. While concerned with privacy, the “Convenient Services” right, as its name suggests, is motivated by efficiency and convenience for the citizen, and thus, in effect, imposes a duty on the state to digitise its services – a duty to engage in eGovernment. The other two rights in this “services” category amount to a duty on the state to be attentive to feedback from the citizenry – on one hand with respect to eGovernment services, and on the other hand with respect to much broader policy-making. The latter is rather an interesting direction. It seems to perceive the increased possibilities for citizen-state communication that come with digital technologies to imply a duty for the state (and citizens) to pursue these new avenues of political participation. While only a small part of the eCitizen Charter, this aspect of the development of DCR forms a more prominent aspect of the other two DCR documents that we discuss below.

Briefly, it is important to note the presence of the “Choice of Channel” right in the charter. While other similar documents emphasise the importance of access to communication technologies and eGovernment services for all, the right asserted here is rather more permissive with respect to the preferences of citizens. In effect, it offers a different solution to the ensuring of equality of access to government than that prominent in other DCR documents: rather than training everyone to use one channel, allow each person to make their own choice of channel. The charter is notably silent on cost implications for a strategy of this sort, however. To the extent that governments services on the web are to be justified on efficiency grounds[136] – and from the Danish embedded case study in this report, this is certainly common – a strategy that requires provision of expensive 'legacy' channels undercuts much of this justification.

Finally, it is interesting to highlight one of the (subsidiary) aims of the charter. That is, to foster greater cooperation and understanding between citizen and state, rather than simply to impose limitations and duties on one side. On the one hand, the “Workbook eCitizen Charter of ...” publication (Burger@Overheid 2005) is formatted as a school exercise book, with each right defined on a page with an explanation of it, followed by space for notes on what “this means for my organisation” and when it is “feasible”. On the other hand, Poelmans (2004: 18) notes that the charter,

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[134] http://www.burger.overheid.nl/service_menu/english/what_we_do (accessed 2007/04/07).
[135] Please see the Appendix for a full list of the rights listed in the charter.
[136] See also Poelmans (2004: 80), who cites “efficiency” as the first “reason for investments in new ICT applications”.

> *can contribute to the quality of online contacts [...] by reducing unrealistic expectations citizens may have about [eGovernment].*

In this sense, the eCitizen Charter is more a discursive, deliberative document than a simple assertion of well-defined rights. This fits with the voluntary nature of the charter. As noted in the text itself (Burger@Overheid 2005: 5),

> *At present the charter is not mandatory, but is based on the principle: Comply or Explain.*

(2) Tracy Westen – Digital Citizens' Bill of Rights (2006)

The Center for Governmental Studies (CGS) is a California-based think tank that "helps implement innovative approaches to improving social problems and the processes of self-government".[137] Founded in 1983 by Tracy Westen and Robert Stern, it has since then been active on issues related to campaign finance and public interest law. Westen has been active in both government – as a former Deputy Director of the US Federal Trade Commission – and in academia. He currently serves as an Adjunct Professor of Law at the USC-Annenberg School for Communication.

In January 2006, the CGS published a draft of Westen's "Digital Citizens' Bill of Rights".[138] The opening paragraph makes bold assertions:

> *Democratic systems of governance are about to undergo significant, even seismic, changes. These changes will not involve such comparatively simple questions as "Who will be our next President or Prime Minister?" or "Will current political parties retain their control of basic institutions?" The impending changes are more fundamental. They will involve deeper, more structural shifts that will move nations away from their traditional reliance on "representative democracy" toward newer, emerging forms of "direct democracy." The current revolution in communications technologies will play a catalytic role.*

He goes on to claim that,

> *New democratic institutions will alter the rights and responsibilities of citizens as well.*

With this introduction, Westen then sets out,

> *a draft listing of basic principles that might be included in an ultimate "Digital Citizens' Bill of Rights."*

What sorts of rights does Westen assert? His nine types of rights can be usefully split into two groupings. The first amounts to the transposition of existing recognised rights principles into the digital environment – the "digital analogue" of existing rights, one might say. It includes the following:

- "right to privacy"
- "right to assemble"
- "right to freedom of expression"

To reinforce the idea that these are 'old' rights for the new era, all can be traced back to the UDHR and far beyond.[139] In effect, underlying Westen's document is an implicit claim that the online world is simply another arena in which humans interact, and should therefore be subject to the same rights and duties that exist in the physical world. For example, this leads the right to assemble to be transposed to a right to engage in online communities.

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[137] http://www.cgs.org/about/index.html (accessed 2007/04/04).
[138] Please see the Appendix for a full list of the rights listed in the Bill.
[139] Westen himself cites a number of historical landmarks, including various bills of rights from the United States (and its precursors) going back as far as 1776, and indeed the English Magna Carta of 1215.

As might be expected, Westen's notion of privacy is in keeping with the more modern understanding, such as that found in the CFREU, rather than the older notion found in the UDHR and the like. A right to inspect and correct data held by the state is coupled with a right to stop the state from disseminating private data to third parties. These rights fit closely with those found in Article 8 of the CFREU, although we may discern a greater concern to limit the dissemination of data on Westen's part.

The second group of rights asserted by Westen is characterised by a tendency to impose duties of provision on the state. As defined, the group is composed of the following:

- "right to vote"
- "right to petition"
- "right to information"
- "right to transparency"
- "right to access"
- "right to online services"

Of the list, following T.H. Marshall[140] (Marshall & Bottomore 1991), we might term the first two as "political rights", while the others are more akin to rights of access to information. But these latter rights go beyond mere access. While the right to information is held to include a "Right to access full-texts of all government research online", the right to online services is held to include a "Right to enter into government transactions (e.g., income tax filing) or obtain government services (e.g., auto registration) online". Westen's conception is not merely one of the state being required to open up the information it holds, but one in which the state is required to implement large parts of its traditional activities in an online way. Such an assertion of rights clearly goes some way beyond the existing bodies of law discussed above.

Yet Westen's bill of rights does not stop there. The duties that he seeks to impose on the state go beyond the mere dissemination of existing information and the digitisation of traditional services. He clearly sees the possibilities offered by digital communication as implying an obligation for the state to exploit these new opportunities. Thus, he asserts:

- a "Right to receive free government-supplied e-mail addresses and accounts", and;
- a "Right to participate in periodic, online, non-binding government-initiated public opinion polls, to express opinions on major items pending before local, regional, state and national governments (e.g., government would conduct public opinion polls, post the results, and publicly respond through committee hearings, legislative resolutions, etc.) (alternative to binding ballot initiative)".

It is this aspect of Westen's document – the expansion of the role of the state – that is likely to provoke most dissent. Given existing private provision, it may be argued that it is not clear why there should be a duty on government to supply these services.

(3) EUROCITIES – Charter of Rights of Citizens in the Knowledge Society (2005)

EUROCITIES[141] is a a Brussels-based group that seeks to represent the interests of the "major European cities", primarily to the EU institutions. As a network of 130 cities, it also has an important role as a body that can enhance collaboration and the sharing of ideas between its members. To

[140] See below for a fuller discussion of Marshall's framework and its relationship to the developments discussed here.

[141] http://www.eurocities.org/ (accessed 2007/04/06). Unless otherwise noted, all quotes in this section are taken from this website. Unfortunately, due to its design, it is not possible to provide direct links to sub-pages from which those quotes are taken.

this end, it conducts a number of policy research projects that fall within broad categories of interest.

One such category is the "Knowledge Society", and one project within that is "Charter of Rights of Citizens in the Knowledge Society" – or just the "Charter of eRights" (EUROCITIES 2005).[142] The charter,

> *is conceived as a European blueprint, that aims to be the European model from which local elected governments can draw up their own municipal Charter and determine their own ways of reaching a sustainable Knowledge Society in their local area.*

Of course, signing up to the charter is entirely voluntary, and even having done so, it provides no legally enforceable duties or rights. Even so, by early 2007, EUROCITES reports 39 cities as having signed up to the charter, with a further 18 having "expressed their interest in signing".

Launched in 2005, the charter itself is a short document. It is designed as a leaflet that can easily be carried around, and written in such a way that the signatory of the document is held to have personal responsibilities to pursue and defend the rights set out. For example the declaration that the signatory subscribes to includes the following;

> *I wish to progressively ensure the effective recognition and protection of particular and measurable rights of all citizens in the Knowledge Society needed to overcome any possible threat of the digital divide and to ensure social and territorial cohesion.*

The rights themselves are split into four "chapters"[143]:

- "Rights to Access"
- "Rights to Education and Training"
- "Rights to Online Information"
- "Rights to Online Participation"

"Access", here, is taken to be the combination of Internet access ("preferably via a broadband network") and "security and privacy of any personal data managed through online public services". Neither aspect is distinct to the eRights Charter, although the right to Internet access is only really implicitly present the Burger@Overheid and Westen documents.

The right to online information is composed of a right to the "best quality information produced by public administrations", together with an assurance that disability should not be allowed to preclude such access. As noted above, this kind of "access to information" right does have some support in the existing body of international law.

As with Westen's proposed bill of rights, the eRights Charter goes on to impose duties upon the state – or, in this case, the local government. The education and training chapter asserts a right for "every citizen of the European Union" to be given the opportunity to learn how to use the new information technologies that are now permeating into so many parts of our society. The state is seen as having a duty to provide the necessary training in this regard so that no citizen is unwillingly excluded from the burgeoning "knowledge society". This part of the eRights Charter is distinctive from the Burger@Overheid and Westen documents, neither of which explicitly deals with skills requirements.

The chapter referring to online participation is very similar in spirit to the political rights identified in Westen's Bill of Rights. It seeks to impose a duty on the state to enable a citizen to "participate through ICT platforms in the decision-making processes of his or her local government". Once again, the new possibilities opened up by digital technology can be seen to be harnessed as a tool for more democratic governance.

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[142] Please see the Appendix for a full list of the rights listed in the charter.
[143] N.B. that "chapter" in the context of this document is akin to an "article" found in declarations like the UDHR, amounting to two or three sentences only.

Having set out the features of the charter, an obvious question is: to what extent has it had an impact on eGovernment in Europe? The voluntary nature of its sign-up process, and the ensuing lack of legal effect even after sign-up might suggest a limited influence. This interpretation would seem to be correct. A personal communication from a person involved with the project indicated an impression that cities are tending to sign up only after they feel themselves to be treating the issues raised in the charter seriously. That is, sign-up is "more like 'reconfirming' their commitment to the development of an inclusive knowledge society".

Civil Society Activity

Having set out the historical context and the more recent developments in the field of digital citizen rights, in this section we provide a brief discussion of the rights issues that appear to be most prominent among civil society organisations (CSOs). In contrast to growing concentration on rights to information and services that we found in the previous section on emerging DCR frameworks, the pattern among CSOs is one of overwhelming focus on issues of privacy and security.

The European Digital Rights organisation (EDRI)[144] was formed in 2002, and is a representative organisation of "25 privacy and civil rights organisations from 16 different countries in Europe". It states that,[145]

> *Members of European Digital Rights have joined forces to defend civil rights in the information society. The need for cooperation among European organizations is increasing as more regulation regarding the Internet, copyright and privacy is originating from the European Union.*

As the description of the membership and the preceding declaration of intent makes clear, privacy is a foundational issue for EDRI. This can be further highlighted by examining the "campaigns" that they are currently engaged in. They are:[146]

- Copyright
- Biometrics
- Data Retention
- Airline Passenger Data

That is, three of the four campaigns can directly be related to concerns of privacy and security.

Taking another organisation, the Open Rights Group (ORG)[147], a similar emphasis emerges. Operating with a UK-focus, and supported by several directors and advisory council members of great prominence in the Internet sector, ORG states its goals as being:

- To raise awareness in the media of digital rights abuses
- To provide a media clearinghouse, connecting journalists with experts and activists
- To preserve and extend traditional civil liberties in the digital world
- To collaborate with other digital rights and related organisations
- To nurture a community of campaigning volunteers, from grassroots activists to technical and legal experts

Its tag line is "Protecting your rights in the digital age". In principle, these goals are commensurate with a broad understanding of digital rights as they relate to the citizen and state. However, analysis

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[144] http://www.edri.org/ (accessed 2007/04/07).
[145] http://www.edri.org/about (accessed 2007/04/07).
[146] http://www.edri.org/campaigns (accessed 2007/04/07).
[147] http://www.openrightsgroup.org/ (accessed 2007/04/07).

of the categories under which ORG's weblog postings are made[148], 10 of the 21 substantive topics can be interpreted as being concerned with privacy and security.[149] While the other 11 categories are nearly all directly related to access to information in one form or another, it is notable that none of them are concerned with state-held information, or the duties of the state in relation to it. Taken together, they bear a distinct resemblance to the traditional rights of freedom of expression.[150]

The Open Knowledge Foundation (OKF)[151] might seem to offer some promise as a CSO concerned with access to state-held information, and the provision of eGovernment more generally. Supported by an advisory board composed of, amongst others, several prominent academics[152], the organisation's stated aim is "Protecting and Promoting Open Knowledge in a Digital Age". However, consulting the list of projects in which they are engaged, we find no relation to issues of eGovernment provision.[153]

Despite the preceding discussion, it may be contended that the sample of CSOs discussed here is not representative of the full population of CSOs concerned with the issues under discussion in this case study. Nonetheless, it is remarkable that these leading civil society advocates of "digital rights" that we have identified nearly all ignore the rights issues surrounding access to government information and services. That is, at the very least, we can claim to have found a disjuncture between groups concerned with privacy, security, and freedom of expression, and those concerned with issues around rights to information and eGovernment services. Moreover, we are not the first to note such a divide. Drake & Jørgensen (2006: 5) claim that,

> *the specialized CSOs launched in the 1990s to defend cyber civil liberties have usually stuck to their original mandates, such as freedom of expression and privacy protection, instead of expanding their focus to the broader human rights agenda.*

DCR and Citizenship

What broad patterns can we discern from those elements of the rights discourse associated with eGovernment? As should be clear from the preceding sections, the trend has been one in which issues of privacy, security, and data protection were joined by developing notions of rights of access to information. Initial, and contested, understandings of this right became progressively more recognised by the WSIS and then each of the other subsequent rights documents that we have discussed. But these subsequent documents have then developed the notion of DCR even further. Each, in one way or another, has found it necessary to assert duties on the part of the state to provide services to the citizenry.

Given this pattern of development, we invoke T.H. Marshall's seminal work on citizenship, originally published in 1950. In Citizenship and Social Class, Marshall distinguishes between three types of citizenship: civil, political, and social. He presents a thesis in which these three types developed separately – indeed sequentially, with each tending to lead to the other. First,

> *The civil element is composed of the rights necessary for individual freedom – liberty of the person, freedom of speech, thought and faith, the right to own property and to conclude valid contracts, and the right to justice.*
>
> *[...]*
>
> *By the political element I mean the right to participate in the exercise of political power, as a member of a body invested with political authority or as an elector of the members of such a body.*

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[148] The ORG weblog appears to be its primary method of communication, so this is arguably a reasonable metric for the concerns of the organisation.
[149] Automatic Vehicle Tracking, Data Protection, Data Retention, DRM, eVoting, Identity, NHS, Police Records, Privacy, Regulation of Investigatory Powers Act, and RFID.
[150] Computer Law, Content Blocking, Copyright, Creative Commons, Intellectual Property, Net Neutrality, Open Source, Public Domain, Release The Music, and Software Patents.
[151] http://www.okfn.org/ (accessed 2007/04/07).
[152] http://www.okfn.org/advisory_board/ (accessed 2007/04/07).
[153] http://www.okfn.org/projects (accessed 2007/04/07).

> *[...]*
>
> *By the social element I mean the whole range from the right to a modicum of economic welfare and security to the right to share to the full in the social heritage and to live the life of a civilised being according to the standards prevailing in the society.*
>
> *(Marshall & Bottomore 1991: 8)*

From this classification, a parallel with the different strands found in the development of DCR can be seen. The early concerns with privacy and security are an obvious analogue to Marshall's civil rights – indeed are an expression of them. They constitute a foundational aspect of what liberty means in the digital era.

While the connection with the "political element" is less obvious at present, a case for it can be made – and it seems inevitable to develop much further in the near future. At one level, the coupling of technology with an emergence of (albeit contested) rights to information has led to increased access to data on political representatives and their activities for citizens. Whether citizen engagement has increased commensurately is another question, but the availability of information has undoubtedly expanded. Less developed, but more relevantly, electronic voting and political participation of other sorts – e.g. see the eConsultation case study in this report – can obviously be mapped onto Marshall's political citizenship.

Finally, it is plain to see an emergent kind of digital social citizenship. Each of the DCR frameworks discussed above had, to varying degrees, aspects that imposed duties on the state to enable citizens to participate in what EUROCITIES termed the "knowledge society". As access to communication technologies – and the government services that accompany them – becomes an ever larger part of what it means to "live the life of a civilised being according to the standards prevailing in the society", this aspect of DCR will surely grow in importance. In Marshall's terms, rights of access to the Internet and its associated technologies appear to set to be foundational. He assesses that,

> *The institutions most closely connected with [social citizenship] are the educational system and the social services.*

In this light, the "rights to education and training" found in the EUROCITIES charter appear particularly well matched.

However, despite seeing similarities with Marshall typology of citizenship, it is relevant to note that the sequence of development that we see for DCR appears to be somewhat different from that discerned by Marshall. While the more civil rights have clearly preceded the others, it has not really been the case that political rights have come before social rights. Instead, the pattern has been one of a simultaneous development of these two elements into the digital context. If anything, social rights are the more developed and recognised, as seen by the widely held concern over the "digital divide".

Furthermore, Marshall's framework does not seem to comfortably fit the developing rights claims to online service provision and eGovernment more generally. Furthermore, to the extent that access to information does not sit easily within Marshall's "political element", this too seems to be partially distinct from the citizenship trio. Perhaps, then, it is possible to start to see the emergence of a fourth aspect to citizenship. One that is based on rights to government transparency, responsiveness, and efficiency – rights to online service provision. While sure to be controversial, it is in this area that digital citizen rights may be most obviously distinct from the past.

At this point, it is worth noting that our analysis of parallels between Marshallian citizenship and the developing digital citizenship is certainly not the only one possible. For example, Bovens (2002) considers a right to government information to be distinct from the civil, political, and social elements of Marshall. Thus, he considers that it is this right that forms a fourth, extended, element. Logically, then, Bovens' conception stops short of identifying a right to service provision. While not positing an extension to Marshall's typology, Moore (1998) also offers an outline of "rights and responsibilities in an information society" that makes explicit reference to Marshall.

Finally, it is interesting to note that the trend has been a development from what can be termed “claim rights” or “rights of non-interference” towards claims of “rights of provision” (Knowles 2001: 140). Our sense is that this trend is set to continue.

Conclusions

To conclude, we have attempted to provide a history of the development of DCR from its ancestors to its present-day young contenders. Up until only about five years ago, the main emphasis has been on what T.H. Marshall called “civil citizenship” rights – those revolving around privacy and security that can be held to lie at the foundation of digital liberty. Given their fundamental importance, it is hardly surprising that civil society organisations have been, and continue to be vigorous advocates in debates around these issues.

As communication technologies and the associated possibilities that they offered for information dissemination and service provision developed, much of the high level policy debate moved on as well. While civil citizenship is largely concerned with limitations on the power of the state, the emergence of digital counterparts to political and social citizenship has been notable for its tendency to try to impose new duties of action on the state. Equality of access to digital communications, and the associated training and skills issues have come to prominence in many contributions to the field recently. It is, therefore, striking that the civil society organisations professing to operate in the area of DCR have largely not adopted this new part of the agenda for themselves. The tendency is clearly for them to continue to operate in the civil citizenship realm.

Finally, the recent DCR frameworks that we analysed are, at least, suggestive of an emerging category of rights claim that is distinct from those discerned by Marshall. This category appears to be comprised of claims of rights to government transparency, information dissemination, and online service provision.

Conceptualising information rights

In the previous section, we identified three strands of digital citizenship: privacy, security and equality of access to digital communications. We also suggested that there is evidence of the development more recently of a fourth strand of digital citizenship; one that is concerned with rights to government transparency, responsiveness, and efficiency. The essence of this fourth strand is a duty on the state to provide digital service.

In this section we develop these strands into a new typology of digital rights. In contrast to Marshall's concentration on “citizenship” as the founding principle for his derivation of categories, the focus in this section is on “information” as the common element. Taking the term “digital” simply to denote an encoding of information, in effect, Marshall's typology can be viewed as drawn from the “C” of DCR, while ours is drawn from the “D”. Despite this differing emphasis, the alternative typology offered here is meant to be purely complementary to Marshall's. Indeed, the issues raised in his Citizenship and Social Class are plainly of a more fundamental nature than those that stem from our typology. Instead, the aim of drawing the distinctions that we do is very much as a useful heuristic for the empirical work that we pursue later in the case study.

An Information Rights Typology

Approaching DCR at the conceptual level, we suggest that DCR can be considered as a body of information rights. Once anything is digitised, it is merely a representation of information that happens to be easily processed. In this sense, when we write about “digital rights” (be they for the “citizen”, or otherwise), we are, in effect, writing about rights over information.

This point leads us directly to a typology of actions that are associated with information. We suggest that a typology of these information actions is the following.

1. Access / Permissions

2. Storage
3. Reuse / Modification
4. Transmission

With each of these actions, it is now possible to conceive of various associated rights. Table 2 sets out a selection of these as they apply in the realm of the citizen-state relationship. The aim is to use the typology of actions to lead us to a set of DCR issues that our case study may examine.

Table 2: A Typology of Information Rights

Information Action	Laws or Claims Relating to DCR
Access / Permissions	Data Protection Rights to information Connectivity and skills for technology use Software requirements Use of non-proprietary data formats Use of software freely available to citizens
Storage	Data Protection Data retention requirements e.g. keeping tax records for a certain period
Reuse / Modification	Correction of state-held information
Transmission	Rights to digital communication with government e.g. email, web, SMS Online services Rights to non-digital communication with government e.g. in person, telephone, letter

Table 2 indicates that Data Protection laws are likely to straddle our conceptual distinction between access and storage rights. They provide limits on both who can access personal information, and what personal information can be stored in the first place.[154]

Finally, legal theorists have distinguished between different "fundamental legal conceptions" that relate to rights (Hohfeld, 1913). Hohfeld termed these:

- No right;
- Duty;
- Right;
- Privilege.

This classification can be seen as a way of assessing the strength of various DCR laws. Thus, for each of the information actions, we may say that citizen-state interactions will be governed by the status that each party has on this scale with respect to the information at issue. A recognisable example of this would be the correspondence between a state's duty to protect personally identifiable information and an individual's right to inspect that which applies to their self. A rather less well known case is in the application of these levels to the sphere of citizen-state communications. Normative and practical questions surround the issue of how each party can expect to communicate with the other[155]. Different jurisdictions have rather different answers to

[154] This issue can be seen, for example, in the accompanying "Eurodac" embedded case – part of the "Public Registries" case study – where restrictions on both what data could be stored in the first place and which agencies would have access to it are noted as important aspects of the case.
[155] These questions flow into the debate around television's "analogue switch-off".

these questions. For example, Denmark has created one of the more concrete rights environments in these respects by giving both administrative units and individuals the right to demand electronic communication – and we discuss this more extensively below.

While we persist with the DCR acronym, it should be clear that "rights" is meant in the broader sense implied by the levels discussed above.

With the typology thus defined, how does it relate to the various historical conceptions of DCR and to the empirical analysis that follows this section? On the former, it is plain that the historical emphasis on privacy and related issues is mostly found within the "access/permissions" category, finding expression in legal rights of privacy for citizens and duties on the state to protect these rights. With the development of digital technologies, data protection laws came to recognise the importance of both the "storage" and the "modification" categories. Limitations – positively asserted conditions of "no right" – came to be imposed on what types of information could be stored in the first place, and rights of access to personal information for individuals became coupled with rights to correct that information where appropriate. In additions, the issues of access to information – both that held by and about the state – discussed in the previous section obviously fall within "access" category in our typology.

The tendency, then, has been for the more established and more recognised DCR issues to fall predominantly within the first three information action categories set out above: access/permissions, storage, and modification. However, in the suggested extension category to Marshall's trio, we may discern a tendency for information transmission rights to be predominant. Rights to the provision of eGovernment services, in the abstract, can be seen as rights on behalf of citizens to communicate electronically with the state. While at one level this may be in the form of simple unstructured emails, the fundamental action taking place is the same when it is in the form of highly structured and controlled transactional eGovernment services. The previous section, then, suggests that future developments in DCR may be concentrated in the area of transmission rights to a much greater extent than we have seen up to now. We should probably expect to see more claims associated with what McIver et al (2003) term a "right to communicate".

Empirical Application

As we have seen, the concept of human and citizen rights, even when limited to the digital realm, can be extremely expansive. More general (and sometimes contested) normative rights common to liberal democracies can have a wide range of implications as societies begin to operate more and more in an "online" way. These broader rights issues are not even limited to the citizen-state relationship. Rights claims revolving around protections of, say, "digital property" may also be asserted. Debates in this non-citizen-state area influence the actions of governments in more regulatory ways. That is, they will tend to lead to legislative action rather than impinge on the administrative activities of the state.

While recognising these broader societal rights issues, our empirical approach takes a somewhat narrower view. We concern ourselves only with how rights issues relate to the provision of eGovernment services. The evolving area of citizen rights may require legislative action from government in order to give statutory force to normative principles, but this lies within scope for our study only to the extent that these normative principles and/or legislation are found to have a discernible impact on eGovernment provision. Our concern is therefore in the area of what political scientists term public administration.

Forming part of the broader Breaking Barriers to eGovernment project, the approach that pursue focuses on the extent to which DCR affects both the ways in which, and the extent to which, eGovernment services are provided. In this way, DCR is conceived of as an intermediary factor that can either inhibit or enable eGovernment projects. For example, rights of privacy that are often given statutory force through "data protection" acts may form a barrier to the sharing of personal information across government departments. They may also act as an enabler to take-up of eGovernment services as citizens have more confidence that any personal information that they supply will not be used inappropriately. Similarly, legally enforceable rights to communicate with the state through electronic means are also likely to act as a boost to the provision of eGovernment

services as branches of government become required to invest in their IT infrastructure to service those rights.

An approach of this sort may not limit itself to those rights that are legally enforceable or recognised, however. Political theorists have found it possible to distinguish between “moral” rights and “legal” rights.[156] While this kind of legal positivism that perceives the law itself as devoid of moral content is highly contested, it nonetheless lends weight to the idea that some rights claims will have found legislative or judicial support, while others will not. However, it remains an empirical question as to whether this distinction is important in practice. The effect of legally enforceable rights and duties may not be very large if they are of limited practical importance to citizens or the state. By contrast, widely-held normative values that imply rights and duties, but have no legal recognition, could very well be an important factor affecting the decisions of policy-makers and eGovernment implementers.

Relevant normative concerns are not difficult to think of. Issues such as the “digital divide” are grounded in normative concerns over equity. If societies harbour notions of rights to equal treatment, then provision of eGovernment services that are empowering only to those with Internet access or large amounts of skill and experience in the digital realm are likely to be controversial and contested. Concerns over equity may lead to the requirement that the provision of enhancement of digital services be coupled with investments in the upgrading of more traditional modes of contact – e.g. telephone call centres and over-the-counter interactions at post offices and the like. In this way, amorphous notions of a right to equitable treatment may have important implications for eGovernment provision.

[156] c.f. Dworkin (2005: Chapter 7)

Case Study: Denmark

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In this embedded case study, we present the results of field research into the DCR issues surrounding prominent eGovernment projects in Denmark. During a three day visit to Copenhagen, we conducted interviews with a number of civil servants and civil society representatives. We sought to investigate the impact that Digital Citizen Rights (DCR) issues have had on the extent, implementation, and take-up of eGovernment in Denmark. Applying the conceptual framework set out above, we use the evidence that we gathered to show how the Danes have ignored, approached, or (often) answered the questions that arise regarding the relationship between information, citizens, and the state. In doing so, one of our aims was to uncover the extent to which DCR has been integral both explicitly and implicitly to eGovernment strategies in Denmark, and thus the extent to which it may be seen as an important underpinning for successful eGovernment. While our findings are obviously applicable to Denmark specifically, the aim is to draw implications for the broader European context.

Denmark was chosen as an embedded case because initial research suggested that (at least some) DCR issues have been explicitly addressed. The "eDays" of September 1st 2003 and February 1st 2005 (discussed more fully below) represent unusually overt governmental attention to the rights issues around electronic transmission of information – culminating in numerous legislative changes[157]. The Danish government, in pursuing its "modernising" agenda, has also appeared to acknowledge rights associated with data sharing as a necessary consideration in how to structure new eGovernment programmes[158]. Thus Denmark provides an example of the application of the higher levels of Hohfield's 'scale' of rights discussed above.

In keeping with the approach set out above, our research aimed to draw out the ways in which DCR issues – which we defined using the theoretical framework developed earlier – have impacted upon the provision of eGovernment programmes. The particular focus of our research was into the evolution of the central citizens' portal(s) – now named borger.dk, but taking various guises in the past. The portal has been through various incarnations over a period of at least 10 years. Originally designed as a purely static information service – what might be termed "Web 1.0" – there have been efforts to increase the interactive and personalised elements of the site. These efforts continue, and even as the newest version of borger.dk was launched in January 2007, a new version that aims to be a platform for individualised services was (and is) actively being planned.

Based on the availability of sources, we concentrate on just two iterations of the borger.dk project. The first, which went "live" in January 2007 was produced by one of the two main eGovernment agencies in Denmark (the ITST[159]), while the second is currently in the planning stages, and is under the auspices of the other main agency (the Digital Taskforce).

Specifically, our interest in borger.dk revolved around issues of "access" to information. Before embarking on the field research, our expectations were that the most relevant issues would be those around data protection and privacy on the one hand, and the duty to make publicly-held information available to citizens on the other. During the field research, we also took the opportunity to learn more about the impact that the eDays have had on the eGovernment landscape in

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[157] In 2002, there were 88 amendments to 21 laws with the aim "to remove the legal obstacles to digital communication". http://www.e.gov.dk/english/results/2002/the_removal_of_legal_requirements/ (accessed 2007/02/17)

[158] "New technology must contribute to the creation of increased collaboration across the boundaries of the public sector. With regard to the legal rights of citizens, it must be ensured that the exchange of information is possible between state IT systems, so that people come to experience the public sector as a well-functioning whole." (Government of Denmark 2002: 21)

[159] See below.

Denmark. Our goal was to discover the extent to which these obvious digital citizen rights reforms have influenced the plans and achievements of those concerned with online government service provision. While eDays may reasonably be expected to have had an impact on the design of borger.dk, any effect that they have should go far beyond citizen portals.

Before setting out the findings of our research, the next section provides some institutional context for the Danish eGovernment actors. The section following that sets out a more detailed description of the various reforms and projects that the study focuses on. With the context for the case study thus set out, we finally move on to a discussion of the interaction between DCR and eGovernment in Denmark.

Institutional Context

The institutional context in which eGovernment projects are directed and implemented, even purely at the central government level was described as "typical[ly] Danish... the relationships [between different agencies] are very messy". Despite this – or perhaps because of it – the division of concerns between the two main central government agencies concerned with eGovernment appeared to be clear to all concerned.

IT- og Telestyrelsen (ITST)

The ITST (the National IT and Telecom Agency) is an agency under the auspices of the Ministry for Science, Technology, & Innovation. It asserts that its[160],

> *principal task is to develop and implement initiatives within key areas of the Government's IT policy strategy. A strategy that aims to ensure an optimal framework for IT and telecommunications and conditions that will enable citizens, businesses and the public sector to realize the network society.*

Involved in numerous eGovernment projects, the primary interest we had in the ITST was its input into the various centrally organised portals in Denmark (which are further discussed below). While not actually directly implementing projects itself – i.e. all software development is outsourced to contractors – the ITST is the closest of the state agencies to the technical end of the development process. A team of 36 ITST employees was tasked with implementing the first generation borger.dk portal (again, discussed below), although this was augmented by a small development team and call centre staff.

Digital Taskforce

Closely related to the operations of the ITST is the Digital Taskforce. This 20-strong group is located across town at the heart of government in the Ministry of Finance. Its,

> *task is coordinating cross-government IT policy, not on the technical stuff but on the more policy stuff, and running cross-government projects like borger.dk. (Interview 2)*

Commensurate with this purpose, it is a truly cross-government agency with staff seconded to it for periods of up to around two years. Those staff are drawn from the Ministry of Finance itself, from other central government ministries and agencies (including the ITST), from the regions, and from the municipalities – including their association, KL. This structure is intended to allow the Taskforce to operate both "cross-government and also cross-government-levels", which seems likely to be a response to the strongly decentralised nature of the Danish state.

Like the ITST, the Digital Taskforce has been involved in numerous eGovernment projects since its inception. These have ranged from the production of common IT-related contracts, to the design of versions of the borger.dk portal, to mass media marketing campaigns to publicise the availability of

[160] http://itst.dk/wimpdoc.asp?page=tema&objno=95024027 (accessed 2007/03/06)

eGovernment services.[161] For the purposes of the research for this case study, our main interests in the Digital Taskforce stemmed from its leading role in both the second (under development) borger.dk portal, and the various eDays.

Kommunernes Landsforening (KL)

Denmark has a long history of a highly decentralised state. Until 1970, local government consisted of "86 boroughs and approx[imately] 1300 parishes within 25 county council districts" (Ministry of Interior & Health 2006 : 5). In 1970, with the intention of increasing the size of local government units so that they were better able to benefit from economies of scale in service provision, "the number of counties was reduced to 14 and the number of municipalities to 275" (Ministry of Interior & Health 2006: 6). Decentralisation of service provision continued after the 1970 reform, and the degree of discretion available to local governments was further enhanced by the introduction of block grants rather than earmarked funding from central government. Finally, in January 2007, a further reorganisation of local government was completed. Based on a similar logic to the 1970 reform, the new structure is one of 98 municipalities and five regions – counties are abolished. Despite these reforms, local government retains its important role in the provision of the welfare state, including health care and education. The point being, local government is at the heart of the Danish state, and therefore vital to numerous eGovernment programmes.

Partly as a result of these recent reforms, the KL is an evolving institution that acts as the representative association for the municipalities. Membership is voluntary for each municipality, and those who join pay a fee to do so, but central government also provides KL with funds. As the principal agent representing the views of municipalities, KL has been closely involved in many centrally run eGovernment projects, not least the two borger.dk and the eDay projects under consideration here.

eGovernment Projects

In this section, we provide a little background information on each of the eGovernment projects that we focussed on during our field research. The aim being to make the issues discussed in the following section regarding the impact of DCR on those projects more comprehensible.

The borger.dk Portal

First Generation

Development of the first generation portal involved the joining together of "two large websites". One (danmark.dk) "was mostly a state [central] government portal [...] which was quite strong on information". The other was a more "self-service" oriented portal "made mostly by the municipalities and their organisation". In this way, this first generation portal is something of a hybrid in that it offers relatively large amounts of static information, together with some facilities for online transactions. The functionality is such that,

> *you can choose your municipality, and you will be shown the services that you can use [based on that location]. (Interview 1)*

Underlying this portal is an information architecture that is expected to survive into the second generation portal. This structure is one in which the various pieces of functionality are componentised, and joined together by standardised interfaces. This allows different organisations – such as ministries, municipalities, and even private sector actors[162] – to produce different services

[161] A selection of projects can be found at http://www.e.gov.dk/english/egov_projects/index.html (accessed 2007/03/17).
[162] The inclusion of private sector actors into the portal is currently not possible only on policy, not technical, grounds. However, it is being actively explored by the government and appears to be viewed very positively (Interview 1).

as pluggable components for the portal. Furthermore, they can do so based on the availability of common tools, such as “single sign-on” (i.e. authentication). The role of the ITST group is, then, to define the standard interfaces and common tools that service providers can use.

> *We don't make the services ... We make the overview, we make the methods... kind of a toolbox to make good services, but we don't make the services. (Interview 1)*

In terms of project oversight and resources, the ITST team implementing this first borger.dk was supervised by an eight member board comprised of civil service representatives from central and local government[163]. The board was chaired by a Director from KL, and financing for the project came from ITST and KL.

Second Generation

As noted above, even while the first generation borger.dk was being prepared for launch, a second generation portal was already in the planning stages. The aim of this second generation borger.dk portal is to more fully unite the services that are, and will be, offered by all levels of government. To this end, the portal will be restructured so that the information and service options that you are presented with are far more personalised than is currently the case. Where citizens now select their municipality and are then presented with relevant information for their area, the second generation portal will, after logging in, present the citizen with options that relate specifically to their own (perceived) needs and interests. Services will be channelled through a number of “themes”, such as “My Home”, “My Kids”, and “My Economy”. Transactional services of the sort that appear in these themes will be at the heart of the portal, which will therefore go very much beyond being a simple information dissemination tool.

The second generation portal is scheduled for launch in the “first quarter of 2008”, but there exist plans stretching further into the future. Central government has declared a roadmap for “all kinds of public agencies” to put services on borger.dk, so that in 2008 “they can do it, in 2010 they should do it, and in 2012 there's no way back – you have to do it”.

In a noteworthy change, the supervisory board for the second generation borger.dk portal only has municipality representation through KL. One interviewee noted that they felt the change was stemmed from KL wanting to be the single point of representation for municipalities, and that the board structure for the first portal was rather unwieldy - making it “one of the barriers” that were experienced. This view was corroborated by another interviewee.

The eDays

eDays 1 and 2

In the area of DCR as it applies to information transmission, Denmark may be considered to be a leader. September 1st 2003 was declared by the government to be “eDay” in Denmark. After that date,[164]

> *all Danish state, regional and local government authorities have a general right to demand that communication with other authorities be exchanged electronically, and thus the right to refuse paper-based communication.*
>
> *In this initial formulation, the right to digital communications was limited to “non-sensitive” information.*

However, from February 1st 2005,[165]

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[163] But not the regions (Interview 1) – presumably the only reason being that they were not in existence when the first generation *borger.dk* portal was being developed.
[164] http://www.e.gov.dk/english/egov_projects/eday2/eday/index.html (accessed 2007/04/09)
[165] http://www.e.gov.dk/english/egov_projects/eday2/index.html (accessed 2007/04/09)

> *eDay2 took this general right an important step further - even sensitive communication had to be exchanged electronically. The goal was for 40% of current letter post to be replaced by electronic post by November 2005.*

Further, it was claimed that,[166]

> *eDay2 will not only bring benefits to the public sector; as a key initiative in realising the Danish vision for eGovernment eDay2 will also mean that citizens and businesses will be given the right to communicate electronically with the central public authorities, using digital signatures. They will as far as possible also receive electronic replies, if they so request.*

The assertion of rights in this area is clearly meant to have an impact on government efficiency. In fact, the Danish government estimated that eDay 1, alone, would "generate savings of about €25 million a year in stamps and more efficient workflows for mail handling"[167].

In discussion on the two eDays, the Ministry of Finance source indicated that their significance had only really been felt within the state – albeit at all levels: from municipality, to county, to central government. That was obviously the case for eDay 1, which limited electronic communication rights only to those documents that did not have privacy implications for individuals – i.e. documents that identified individuals in any way. This limitation precluded citizens from using the right established in eDay 1 as any electronic communication from them to a branch of the state would inevitably reveal their identity.

While eDay 2 removed this restriction, thus giving citizens the right to communicate with the state in electronic form, again it was felt that the effects of the reform were almost exclusively felt by the various branches of the state, and not directly by citizens. The state has become far more likely to exchange data internally in electronic form, and there is a perception of increased efficiency as a result. However, the requirement that citizens utilise digital signatures[168] for all communications with the state was felt to be, currently, too large an impediment to take-up of the right established by eDay 2. Lack of usability for such signatures meant that for most citizens, email exchanges with the state were not really possible. Even for those who could be deemed capable of using email with the current technical solutions, a further problem appears to be relevant.

> *Because, I think, one of the very big problems is that the councils are very, very, bad at [responding by email] [...] You can wait up to two weeks [for an email response]. [...] When you call, you get the answer right then. (Interview 4)*

In one large municipality, it was said that only about 1% of citizens were using email to communicate with their local government. The respondent felt that this was the result of a combination of bad organisation and rejection of email as an efficient channel that stops use of email by municipalities.

By contrast, the use of authenticated email communication using digital signatures within the state was held to be very prevalent – possibly as a result of specific training that can be afforded to users in this environment.

eDay 3?

Recognising that more user-friendly services will be needed in order to draw the citizenry into greater reliance on electronic communication with the state, those involved with the second generation borger.dk portal suggested that a third eDay – "eDay 3" – was likely, perhaps even within the next two years. Still in the formative stages, it is felt that such a reform would have to couple an improved webmail-like service that provided a more comfortable user-interface to the secure signature functionality, together with some form of more strongly-articulated citizen right to

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[166] ibid.
[167] http://www.e.gov.dk/english/egov_projects/eday2/eday/index.html (accessed 2007/04/09)
[168] Which are themselves provided by a government project: c.f. http://www.egov-goodpractice.org/gpd_details.php?&gpdid=1786 (accessed 2007/03/06).

electronic communication with the state. Unfortunately, no further information as to the latter is currently available.

The Impact of DCR on eGovernment Projects

With a clearer picture of the relevant eGovernment projects, and the institutional context in which they operate, we now move to the substantive discussion of the ways in which DCR issues have affected the those projects. The discussion initially centres around the two most prominent rights issues to emerge from our research: data protection and privacy on the one hand, and 'rights to information' on the other. We then turn to a more general discussion of some of the other issues that stood out.

Access: Data Protection and Privacy

> *When we talk about citizen digital services and the Danish ICT policy, privacy is probably the one core right that is challenged. (Interview 3)*

Perhaps unsurprisingly, issues surrounding data protection and privacy were found to be easily the most prominent in the thoughts of eGovernment implementers and civil society groups, alike. While several interviewees expressed puzzlement and intrigue at what we could be referring to when speaking of “digital citizen rights”, their responses to questions quickly turned to data protection laws and the normative value of privacy.

With respect to borger.dk, the chosen architecture has important implications both from an implementation and a rights perspectives. Potentially, then, this could be an area in which DCR, in the form of data protection and privacy, imposes difficulties on the provision of eGovernment services. However, the interviewees, with only minor disagreements, were quick to assert very little in the way of a conflict of this sort. The reasoning of the civil servants was that the chosen architecture is optimal from both implementation and data protection perspectives.

In the first case, it removes the need for a single agency to implement and provide all online services and thus removes a potential bottleneck in the roll-out of new services. Not only that, it allows for better services to be developed as the particular agencies, ministries, municipalities who have direct expertise with the policy area are the ones that implement the portal service/component. With respect to data protection and privacy, the architecture makes it possible for the databases underlying each service/component to be independent of all others, thus limiting the possibilities for data sharing across previously separated parts of the state. In essence, this reasoning amounts to a claim that the portal project will not necessarily act as a driver for ever greater data integration.

So, although the presence of data protection legislation meant that the chosen architecture was effectively required by law, the civil servants felt that “it was also the most appropriate one”. While this was the broad impression given by most respondents, one interviewee did express some frustration at the perceived restrictions of compliance with data protection laws. Referring to government legal advisers involved in the eGovernment policy process, the interviewee noted that, “Sometimes, I think, they stop some innovation”.

As might be expected, the civil society rights representative that we interviewed had a somewhat less positive view regarding the prospects for privacy in the developing Danish eGovernment environment. Unfortunately, full details of the portal architecture had yet to be revealed to non-governmental organisations (NGOs).[169] Still, it is fair to conclude from the views expressed to us that there remains some distance between the civil servants and rights groups over the steps necessary to guarantee privacy. As one civil servant remarked,

> *We think that we have a schism between what the Danish citizens want... They want joined-up services - 'Just bring it together and show it to me!'. And then we have some privacy professionals who are very much worried, but it's not the citizens. The citizens*

[169] Consultation on the issues is due to happen in the next few months (Interview 2).

> *trust that we use their data in a proper way and insist that we use it for delivering more timely services.(Interview 2)*

Perhaps inevitably, this differing emphasis on privacy leads advocates of the latter to propose different technical solutions to eGovernment services, as the following quote from the civil society representative makes plain.

> *There is a core conflict, definitely, but I think it's also often emphasised maybe too much. So you get the feeling that you have to choose basically between convenience and privacy. A lot of the more technical people I know that, for instance are involved with privacy-enhancing technology, would argue that that debate is wrong from the very premise of it... that it doesn't have to be either or. But that would imply rethinking solutions in a more radical way on the technical level. (Interview 3)*

It was suggested that one solution that might emerge from such a “rethinking” is that of “pseudonymity”, whereby citizens utilise different unique identifiers when interacting with different parts of the state. This provides greater protection against the state 'joining the dots' between the transactions of an individual.

Despite the differences of opinion regarding privacy, there was near unanimity from both camps on the question of whether data protection and privacy impose a barrier to eGovernment. While they often impose requirements on the design and implementation of online services, these requirements are not felt to be problematic to fulfil.

Access: Rights to Information

The bearing of issues revolving around 'rights to information' appear to have had relatively little bearing on the recent development of eGovernment in Denmark. Not only is this true from the perspective of both civil servants and civil society organisations, but the view was expressed that there had actually been a reversal away from that kind of thinking in the past five years, or so. The following quote makes this plain.

> *With the borger.dk project, we are aiming to give the citizens a right to data. We are aiming to give them access to data. But not as much in a rights-based thinking – that you have a 'right' to see the data, and then you have some long list. [...] More in an empowerment-influenced thinking. We will give you the data that enables you to act to improve your own situation. And what is important is that we give data that is relevant to you and can help you in your situation. It is not so much an ambition to give you 100% [of the] data. So they [the previous rights-oriented projects within the Digital Taskforce] are both an inspiration, but also we have moved away from the rights aspect and more engage in an empowerment thinking. (Interview 2)*

That quote is very revealing. Previous concerns with abstract rights were seen to have led to a dead-end in which services and procedures were developed, but met with no public demand. Despite the claim that “we are aiming to give the citizens a right to data”, it is clear that doing so is to a very large extent simply instrumental to achieving higher take-up of eGovernment services by the public.

More specifically, the idea of 'rights to information' seems to have had very little influence, if any at all, on the types of information and services that are either currently or planned to be available via borger.dk. With respect to the “themes” for the second generation,

> *The ones that we have chosen now as the first four... that is quite coincidental. What departments are ready... have good projects that we could integrate... have been positive. (Interview 2)*

To that list was also added the idea of high impact services that are in great demand by citizens. So,

> *From the outset we knew we had to get the tax department, because that is so big in digital government.(Inteview 2)*

This kind of viewpoint – one of pragmatism rather than rights – was , to some extent, expected of the civil servants. The views of civil society in this area were, however, less predictable a priori. Our research revealed, in the first instance, little concern for these issues from a leading rights organisation as well. Speaking of the first generation borger.dk, the interviewee commented,

> *I must say, I haven't really looked at the one that was just launched. I haven't really used it. [...] It hasn't really been present in my mind. (Interview 3)*

However, this absence of concern for the information and service content of the portal was only applicable in the limited area of whether citizens could be seen to have a right to find certain information on the site. Further questions yielded noteworthy concerns about the extent to which the provision of eGovernment services would effectively exclude members of the Danish public. That exclusion could be the result of lack of Internet access, lack of technical skills, lack of language skills, or physical disability. In this sense, rights conceivably offer a normative barrier to eGovernment. A right of equal access to information for all citizens imposes higher accessibility requirements for online services. Implicitly, at least, this issue was recognised by some of the civil servants.

> *This [the portal] is a supplement. There is a 'canal strategy', I think we call it. A strategy where there's the phone, there's email, there's e-dialogue, [...] there's the personal – the possibility to go personally to the office – and there's this one [the portal]. But of course, it is an aim for the public sector to move some of those who actually want to do the things on the Internet [onto that channel]. But there's [sic] still all the other [channels ...] available. (Interview 1)*

Further,

> *When we are making this citizen-centric focus [portal], we are aware[170] that there are, of course, a part [sic] of the Danish population who will never use the Internet. And actually, they use a lot of public services, but they won't be able to access this [portal].(Interview 1)*

Despite this stated strategy, there is some movement towards compulsion in the area of eGovernment. The unemployed are required to provide an electronic CV as a condition for receiving benefits, and there are moves to make certain aspects of university student finance entirely online.

The final 'right to information' point worth making is that, by virtue of its very decentralised structure, Denmark is potentially very susceptible to claims of “postcode lottery”, whereby different citizens receive different services simply by virtue of where they live. The interviews revealed that this is, indeed, the case as there are “very big” differences in the availability of eGovernment services across municipalities.

For two related reasons, this seems set to continue. First, central government bureaucrats appear very wary of taking on responsibility for more direct service provision.

> *The responsibility to make digital services is still locally placed. We find it to be a very bad idea for us to overtake [sic] that responsibility. (Interview 1)*

Our impression is that this is due to a perceived benefit of a division of labour in which the centre provides core tools, and local government provides (most of) the actual services for the citizen with these tools.

Second,

> *The councils are also afraid of too much [sic] [central] government decisions, because they think, and I also think, that the local government is very good [at making] new things and realis[ing] a need in the community or for the citizens [...] If you make a portal where everything has to be decided from the top, it will be very difficult to make new solutions from day to day.(Interview 4)*

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[170] “Approximately, I think, 8 percent of the Danish population is conceived to be totally out of reach digitally. And there is, actually quite new analysis, which says there is about 40 percent of the Danish population has quite poor skills [...], which is mostly elderly.” (Interview 1)

It appears, then, that the Danes are comfortable with trading some extra innovation and customisation for a little less equity and uniformity.

Further Discussion: Efficiency

Common to all respondents was the view that the drive for greater efficiency is an extremely important driver for just about all eGovernment programmes. One might see this as being the primary motivation on the 'supply side'. On the 'demand side', we inevitably find the expectations of citizens.

> *There are, I think, two things [...] There are fewer and fewer young people, and more and more retiring, so you need to be more efficient [...] But the other thing is also to, I think maybe, accommodate the expectations in the Danish population that of course it should be possible to sign up your child for daycare through some kind of digital service, and so forth. (Interview 1)*

The drive for efficiency necessarily creates a drive to increase take-up of service provision so as to maximise the returns to the eGovernment investment.

> *We have very big unrealised, ungained, potential for efficiencies if more citizens use our applications. (Interview 2)*

Our impression from all interviews was the efficiency agenda was highly pervasive. In effect, with the partial exception of data protection and privacy, rights issues were incidental to eGovernment actors. That is, where rights-based policies were employed – most notably for each of the eDays – they were mainly aimed at increasing take-up of digital services by forcing particular actors to respond to the wishes of early adopting citizens.

Rights can be seen as incidental in another sense as well. One civil servant implicitly suggested that there were democracy-enhancing possibilities for the eGovernment agenda.

> *We hope to engage the citizens in the public welfare more. And we see that we can use the digital opportunities to do this. (Interview 2)*

However, this appeared to be a held to be a secondary benefit. That view is certainly shared by the civil society interviewee, who commented that,

> *the political rhetoric, as I read it, around eGovernment is so focussed on efficiency, more than these democratic aspects of getting the citizen different means to participate, or better means, or using it to create a different kind of interaction between state and citizen... creating new spaces for that meeting. It's very much an effectiveness agenda. (Interview 3)*

In many respects, this differing emphasis on the potential benefits of eGovernment provision parallels an earlier debate in Denmark over 'citizen cards'. Hoff and Rosenkrands (2000) highlight two competing strategies regarding the purpose and design of those cards in the mid-1990s: one “efficiency-oriented” and the other “citizen-oriented”.

In keeping with this idea of competing strategies, the civil society interviewee also felt that the efficiency agenda was even dominant over the privacy agenda.

> *For instance, if you take the Digital Taskforce, they haven't focussed on this [privacy] very much. They are completely on the line of effectiveness – all the stuff that you can do with technology and how you can exchange... And then privacy considerations would be more like an appendix at the end saying 'yeah, by the way, we have to, of course comply with Danish data protection legislation. But they wouldn't so much think it up front as a core issue, because there would be an assumption that [...] it's not really a problem in Denmark... the government [are] good guys. (Interview 3)*

This final remark was echoed more than once, and in multiple interviews. “Trust” seems to be held as an important aspect of the Danish attitude towards eGovernment. To the extent that it is true that the Digital Taskforce, along with other state actors in the eGovernment policy realm, see privacy as

a low priority, this may very well be a reflection of the underlying ambivalence of the citizenry to the issue.

> *Denmark [... is] different from many other European countries in that the Danish citizens have very high trust in the government and in Danish authorities (Interview 2)*

Broader Barriers to eGovernment

The Seven Barrier Categories

The Breaking Barriers Project, funded by the EC, identified and explored the key barriers to eGovernment in Europe. The project team proposed seven key barrier categories of obstacles to eGovernment progression. The categories are intentionally broad and tied to a multitude of more specific barriers relevant at different governance, institutional and jurisdictional levels. This categorization is particularly valuable when discussing the barriers relevant to this case which may have relevance for other eGovernment initiatives. In summary the barriers are: leadership failures, financial inhibitors, digital divides and choices, poor coordination, workplace and organizational inflexibility, lack of trust and poor technical design[171].

While not directly related to DCR, this case falling within the broader Breaking Barriers to eGovernment project makes it appropriate to deal with the specific barrier categories that have been found during the broader research project. In this section, we briefly describe the applicability of each category to the Danish borger.dk project.

Leadership failures: We found little to suggest that leadership failures were relevant to the Danish portal project. One respondent suggested that many of the ideas that are currently being implemented were being considered as early as the mid-1990s, and suggested a lack of will to pursue them at that time. However, it should be emphasised that this was but one view among several.

Financial inhibitors: None of the interviewees made any reference to financial inhibitors. Indeed, one of the primary justifications for the project was to achieve efficiency savings.

Digital divides & choices: We found some evidence to suggest that digital divides and extending access to digital services may be something of a barrier. However, its path of effect was slightly indirect. That is, the need to maintain more traditional channels or to provide training and assistance to sections of the population imposed increased costs on the project rather than precluding specific provisions.

Poor coordination: There was some evidence to suggest that coordination among the various state actors has posed problems. The adjusted structure of the new borger.dk project board – excluding municipalities from direct representation and using KL to provide this instead – was held to be a response to earlier difficulties in decision-making. The larger project board that operated previously was felt to be somewhat unwieldy.

Workplace and organizational inflexibility: We found no evidence of this barrier category being important. However, it should be noted that our research design was not aimed at detecting it. Our interviews concentrated on those agencies that were involved in the architecture of eGovernment services. The more likely venues for this barrier to be felt would be in departments and agencies that utilise this architecture to implement electronic versions of services that they already provide.

Lack of trust: Civil servants and civil society actors, alike, held that lack of trust was not a major problem. On the contrary, several interviewees noted that Danish citizens have distinctively high levels of trust in their state.

Poor technical design: We found no evidence to suggest that poor technical design has been a barrier.

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[171] For more details about the Breaking Barriers to eGovernment project please see http://www.egovbarriers.org

Conclusions from the embedded case

What conclusions can we draw from this case study on the interaction between DCR and eGovernment provision?

One of the clearest things to emerge from our research is that data protection and privacy are the most oft cited DCR issues surrounding eGovernment. Although potentially a constraint on service provision and design, nearly all interviewees expressed the view that it would be wrong to characterise privacy as a barrier to eGovernment per se. While views on what would constitute best practice for the design of the state information architecture differ between state and non-state actors, resolution of those differences would likely leave privacy issues as a relatively minor considerations for future eGovernment projects. Until that time, privacy will probably remain a rather contested issue in the policy process.

Another clear conclusion is that the notion of eGovernment service provision being driven by a perceived 'right to information' is wide of the mark. We found no evidence that normative values were applied over decisions about which sorts of information or services to provide to citizens. Efficiency, and by extension, pursuit of take-up, were by far the most important justifications expressed for the development of services.

Following on from that finding, it also appears to be the case that the prominent 'transmission rights' that have been asserted and proposed in Denmark (i.e. the eDays) are largely seen as instrumental to increasing take-up of digital interaction with the state. In that sense, the eDays are, in the main, simply policy tools to increase state efficiency, rather than rights with particularly normative underpinnings.

The very fact that digital rights have been used in Denmark to increase take-up and provision is evidence to the idea that DCR can be seen to have positive impacts on eGovernment. In sum, we have found that the most prominent DCR issue (privacy) need provide very little in the way of a barrier to eGovernment. Meanwhile, other rights policies can and are seen as positive enablers.

Conclusions

So, following the analysis in each of the sections above, what broad conclusions can we draw regarding the relationship between digital citizen rights and eGovernment? In this final section, we draw together the findings from above and highlight what should be considered the most relevant from a policy-maker's perspective.

DCR Development

In the section on historical and recent developments in DCR statements, a number of conclusions stand out. At the most basic, DCR is very clearly an emerging field. This is true in two senses. While concerns over individual privacy and security are hardly new – being widely acknowledged in the context of human rights – it is fair to say that governments and societies are still contending with what implications these established principles have in the digital era. Technological advances have, in effect, removed some of the historically unspoken barriers to state intrusion into the more private parts of citizens' lives. In this light, it is unsurprising that we find a concentration by civil society organisations active in the field of digital rights on privacy, security, and the like. The core of claims made in this area are over rights of non-interference – of limitations on the state.

But despite the prominence of disputes, this part of DCR is actually very much the more developed. Following EU action, data protection legislation is now in place right across the member states. Limitations on the access to and storage of data have legal force. Individuals have rights to inspect and correct the data held about them. Seen through T.H. Marshall's citizenship lens, the relative strength of this aspect of DCR seems logical. Marshall showed that “civil citizenship” – “the rights necessary for individual freedom” (Marshall & Bottomore 1991: 8) – was the first of three elements

of citizenship to develop. Taking privacy to be foundational for “individual freedom” in the digital age, its early development seems apt.

While these issues of civil digital citizenship are widely acknowledged, we have found that there are other nascent aspects to DCR that are both less well understood, and less well recognised. Recent attempts to codify these emerging aspects have met with mixed receptions and made only limited impacts on policy and service provision. These newer statements appear to be largely concerned with staking out the territory, and can be characterised as aspirant rather than applied practice.

Although in the early stages of development, these newer categories of DCR seem set to be the most prominent moving forward. In contrast to those rights that are associated with civil citizenship, a distinguishing feature of these emerging categories is that they are composed of claims of rights to provision – of duties on the state to provide information and services through digital channels. Coupled with these are claims of rights to connectivity and the skills that amount to prerequisites for its use. In our view, it is these areas that current developments in DCR that most clearly move beyond Marshall's three-part typology of citizenship. Thus, it is in the sphere of rights over information transmission that we see scope for an emergent fourth part to the Marshallian scheme.

DCR Influences on eGovernment – Empirical Evidence

In many respects, our empirical research in Denmark reinforces the findings from other sections. In accordance with the prevalence of privacy and security in historical debates and current civil society discourse, civil service eGovernment implementers overwhelmingly referred to the same issues when questioned about what aspects of DCR were most relevant to them. Given the nature of these issues – as limitations on the actions of the state – it might be reasonable to expect that DCR, as currently experienced, provides only barriers to eGovernment.

The surprising truth, however, seems to be that individual privacy is not held to be a barrier. Strong disagreements remain between civil service and civil society actors over the most appropriate ways to safeguard privacy in the burgeoning eGovernment environment. However, there was near unanimity across groups in claiming that the restrictions stemming from such concerns were not necessarily impediments to the implementation of online services. When asked whether the architecture for eGovernment in Denmark had effectively been imposed by data protection legislation, the emphatic response was that “it was also the most appropriate” architecture from both technical and administrative perspectives.

In keeping with our finding of an under-developed DCR as it relates to rights to information and service provision, we found very little evidence of influence from these types of claims on Danish eGovernment services. Developments of online service provision are being driven not by normative claims from the citizenry, but by an efficiency-seeking public sector. Interestingly, this has not precluded a prominent role for DCR in Danish eGovernment. With the aim of increasing service usage among citizens, and thus achieving higher efficiency gains, the Danish state has conferred rights over communications with the public sector – the “eDays”. In essence, DCR is instrumental to achieving other goals, rather than the goal in and of itself.

The lesson that we draw from this is that, far from imposing barriers, thoughtful DCR regimes can very well act as enablers to eGovernment. In order to encourage the development, implementation and uptake of eGovernment services aimed at citizens, the project team has proposed to establish an eRight for citizens to use electronic media to access public services. This recommendation is clearly related to Directive 2006/123/EC on services in the Internal Market that has included some interesting provisions addressed to Member States. These aim to facilitate the exercise of the freedom of establishment for service providers and the free movement of services, some closely related to the use of ICTs. A new Directive related to rights and freedoms of citizens following the model of Directive 2006/123/EC on services in the Internal Market could be considered by all stakeholders (please see solutions for eGovernment (deliverable 3) for more details).

Appendix

(1) Burger@Overheid – eCitizen Charter

The following is an extract from Burger@Overheid (2005).

1. Choice of Channel - As a citizen I can choose for myself which way to interact with government. Government ensures multi channel service delivery, i.e. the availability of all communication channels: counter, letter, phone, e-mail, Internet.
2. Transparent Public Sector - As a citizen I know where to apply for official information and public services. Government guaranties one-stop-shop service delivery and acts as one seamless entity with no wrong doors.
3. Comprehensive Rights and Duties - As a citizen I know which services I am entitled to under which conditions. Government ensures that my rights and duties are at all times transparent.
4. Personalised Information - As a citizen I am entitled to information that is complete, up to date and consistent. Government supplies appropriate information tailored to my needs.
5. Convenient Services - As a citizen I can choose to provide personal data once and to be served in a proactive way. Government makes clear what records it keeps about me and does not use data without my consent.
6. Comprehensive Procedures - As a citizen I can easily get to know how government works and monitor progress. Government keeps me informed of procedures I am involved in by way of tracking and tracing.
7. Trust and Reliability - As a citizen I presume government to be electronically competent. Government guarantees secure identity management and reliable storage of electronic documents.
8. Considerate Administration - As a citizen I can file ideas for improvement and lodge complaints. Government compensates for mistakes and uses feedback information to improve its products and procedures.
9. Accountability and Benchmarking - As a citizen I am able to compare, check and measure government outcome. Government actively supplies benchmark information about its performance.
10. Involvement and Empowerment - As a citizen I am invited to participate in decision-making and to promote my interests. Government supports empowerment and ensures that the necessary information and instruments are available.

(2) Westen – Digital Citizens' Bill of Rights

The following is an extract from Westen (2006).

1. Right to Information

- Right to identify the name, title, contact information and duties of each elected official directly responsible to each citizen (e.g., a citizen should be able to access an online government database, enter his/her address and identify their city council member, county supervisor, state assembly member, etc.)
- Right to obtain elected officials' voting records and positions on range of issues
- Right to access full-texts of all government research online and, where feasible, through other media (TV, Video-on-Demand)
- Right of access to online search engine to locate government research

- Right of access to government information in multiple languages where appropriate (e.g., English & French in Canada)

2. Right to Transparency

- Right to view online agendas of all upcoming governmental meetings
- Right of notification (e.g., e-mail, text message), upon request, of specific upcoming governmental decisions (e.g., citizens would indicate they are interested in specific issues, and city council would e-mail them notification a week before issues are considered, so citizens can participate in public hearing or comment by e-mail)
- Right to access online streamed and/or archived video coverage of public government decisions (e.g., video coverage of city council, state legislature), via TV, the Web or Cable TV/DBS/Cellular Video-on-Demand retrieval systems

3. Right to Petition

- Right to access software that will allow citizens to transmit their opinions on pending issues to government officials
- Right to expect that information transmitted to elected officials electronically will not be ignored (officials will log comments, respond in timely manner, etc.)
- Right to participate in periodic, online, non-binding government-initiated public opinion polls, to express opinions on major items pending before local, regional, state and national governments (e.g., government would conduct public opinion polls, post the results, and publicly respond through committee hearings, legislative resolutions, etc.) (alternative to binding ballot initiative)

4. Right to Vote

- Right to vote online in manner that is private, secure and accurate
- Right to sign online petitions to qualify citizen initiatives for the ballot, in jurisdictions which utilize the ballot initiative process
- Right to receive voter information on all candidates for elected office and ballot measures in textual and/or video formats via the Web, Internet or Cable TV/DBS/Cellular Video-on-Demand retrieval systems

5. Right to Privacy

- Right to inspect any information collected by government and to correct it for errors or omissions
- Right to prevent government and private vendors from selling, disseminating or making public any private information collected by government, where that information personally identifies specific citizens

6. Right to Access

- Right of universal access to government information and services via the Internet (e.g., free government supported public points of access through libraries, kiosks, etc.)
- Right of access to government via electronic technologies (e-mail, Internet) should exist irrespective of age, gender, race, income or disability (e.g., voice activation for blind, sub-captioning for deaf)
- Right to receive free government-supplied e-mail addresses and accounts
- Right to explicit governmental policies designed to keep Internet access costs low (tariffs, antitrust enforcement policies against media monopolization, etc.)

7. Right to Assemble

- Right to create or join online communities and forums without constraint
- Right to privacy in online memberships

8. Right to Freedom of Expression

- Right to free and uncensored personal communication without governmental intervention
- Right to free and uncensored communication in un-moderated public forums or networks

9. Right to Online Services

- Right to enter into government transactions (e.g., income tax filing) or obtain government services (e.g., auto registration) online
- Right to obtain online answers to specific questions relating to government (e.g., hours of park operation, ways to obtain camping permits)

EUROCITIES – Charter of Rights of Citizens in the Knowledge Society

The following is an extract from EUROCITIES (2005):

Chapter I. Rights to Access

1. Every citizen of the European Union will have access to the Internet through Public Internet Access Points, preferably via a broadband network.
2. Every citizen of the European Union must be guaranteed the security and privacy of any personal data managed through online public services.

Chapter II. Rights to Education and Training

3. Every citizen of the European Union will have the right to acquire the basic skills for an effective use of services and information through ICT.
4. Every citizen of the European Union will have access to personalised assistance when accessing public and ICT-based equipment and facilities.
5. Every citizen of the European Union will have access to lifelong e-learning platforms to benefit from all the available resources generated by communication technology facilities and thus take part in the Knowledge Society.

Chapter III. Rights to Online Information

6. Every citizen of the European Union will have access to the best quality information produced by public administrations.
7. Every citizen of the European Union will have access to online information regardless of disabilities.

Chapter IV. Rights to Online Participation

8. Every citizen of the European Union will be ensured the right to participate through ICT platforms in the decision-making processes of his or her local government.
9. Every citizen of the European Union will receive public administration feedback on any online consultation results.

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6. Cross Border eProcurement

Background

eProcurement can increase the efficiency of government through the simplification of administration systems affecting the tendering process (e.g. saving time, increasing transparency and improving coordination).[172] Indeed, the i2010 eGovernment Action Plan estimated that electronic procurement and invoicing could result in annual savings of tens of billions of euros (OECD 2003)[173]. An emerging challenge is cross border eProcurement Indeed, the eGovernment Action Plan sets out plans covering 2006–2010 for cooperation between the Commission and Member States to investigate and develop cross border eProcurement solutions (European Commission 2006). eProcurement was again identified as a priority policy action at the Lisbon Ministerial declaration in September 2007 noting the launch of a number of large scale ICT PSP Pilots on cross-border eProcurement. However, cross border initiatives can present a number of challenges due to the diversity of the institutional and legal settings of different Member States. Digitization can either work as an emancipator from existing hurdles, or add more difficulties to the process of public purchasing.

The embedded case studies

In the discussion below two case studies are explored that illustrate how the difficulties of and solutions adopted by different Member States presented themselves vis-a-vis the general scheme of barriers and legal dimensions identified by the Breaking Barriers to eGovernment Project. In the first of these cases, some of the Northern European Countries are devising a set of open standards to be used by companies and governments in building interoperable eProcurement processes. In the second, Belgian and French authorities decided to join forces to share the costs of developing an open source eCatalogue software[174] for public eProcurement, and faced a number of barriers related to the mutualization of their administrative processes.

It is important to note that, in spite of the importance that a pan-European cooperation in developing cross-border eProcurement processes would assume, the initiatives in this area are rare. If not even the participation of economic operators in foreign tendering processes within the European Union has really taken over, the situation is even worse with regard to the cooperation between different Member States in developing common platforms and processes for public eProcurement. In this sense, we believe that a systematic focus on the projects in question may offer some guidelines on practices to be replicated or avoided in future initiatives, pointing to some issues that could otherwise remain hidden or unexpectedly present themselves at some point during the life of those initiatives – and that this may to some extent encourage and facilitate the development of other like projects on cross-border electronic public procurement within the European Union.

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[172] OECD (2003)

[173] http://europa.eu.int/information_society/activities/egovernment_research/doc/highlights/egov_action_plan_en.pdf

[174] See European Commission, IDABC, “Cross-border sharing of eProcurement software development – can it work?” (2006) 06 Synergy: The IDABC Quarterly 13 at 14

Case study: The Northern European Subset: An Open Platform for Cross-Border eProcurement

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Introduction

The case study examined in the lines below is the Northern European Subset (NES) Project. In NES, a group of Northern European countries is devising a set of open standards to help companies and governments to build open and interoperable eProcurement processes. The aim of this article is to understand the barriers encountered by the parties in implementing the NES project, the actions undertaken to address these barriers, and which lessons can be learned from them. The article approaches the subject from a multiplicity of perspectives which have a clear interplay with law and policy aspects surrounding eProcurement in the European context.[175] Nonetheless, it also enlarges on points beyond the legal intricacies of public procurement to bring a comprehensive portrait of one of the incredibly few cross-border initiatives on eProcurement in the EU. In doing so, the aims of this article are two-fold. On the one hand, it offers lawyers a large view of factual issues potentially faced in the implementation of projects alike. On the other hand, it offers administrators some hints on how these issues may interact with law and policy aspects surrounding eProcurement.

The article departs with a brief background on the current stage of EU law and policy on public procurement, providing some notes on the importance of a harmonized pan-European framework. Section 3 defines NES technical scope and its goals in light of the European Commission Action Plan on Public Procurement. Section 4 draws a more comprehensive overview of NES, portraying its historical background and the barriers found by the partners in many different settings, which I group in five overarching categories: financial, organizational, legal, technological, and social. Section 5 provides a systematic picture of the internal (to NES) and external (to eProcurement in general) dimensions of the barriers found the partners, in light of the general categories of barriers defined by the Breaking Barriers to eGovernment Project. It also portrays the actions undertaken by the partners to overcome these barriers.

Background

Public procurement, as governmental processes in general, is like a statue of Janus – at the same time facing the past and the future, tradition and change. It can be a gateway to the effective management of public purchases and to the achievement of important public policies, or it can be a backdoor to excessive bureaucracy, cumbersome organizational cultures, painstakingly detailed and diversified regulations, and resistance to technological adoption. This non forward-looking face was perhaps the most visible face of public procurement until some years ago – a process of which small and medium enterprises tended to stay apart, incapable of coping with all the red-tape and

[175] For more topical notes on the rules concerning eProcurement in the EU as well as on the understanding of the European Commission with regard to them, see Roger Bickerstaff, "The New Directives' Rules on E-communication Mechanisms in Public and Utilities Procurement" (2004) 13 P.P.L.R. 277. See also Roger Bickerstaff, "Review: Commission Staff Working Document on the Requirements for Conducting Public Procurement Using Electronic Means" (2005) 14 Public Procurement Law Review NA17. Many of these rules do not have a direct relation with the activities currently undertaken by NES, as they either deal with procedural aspects of electronic procurement, or with applications not presently encompassed by the scope of the project – such as those which would enable electronic auctions, the use of electronic signatures, time-stamping, amongst others. That is to say, they do not constitute barriers to NES or relate to barriers which NES is trying to solve. To the extent that these rules do relate to NES, however, they will be mentioned in the lines that follow.

demanding efforts involved.[176] Now however, we live a moment of opportunity and change. New Directives on public procurement were adopted,[177] and came into force in 2006, an Action Plan for their implementation defines some milestones to be achieved with regard to electronic procurement,[178] and most European countries are seeking to embrace good practices on electronic procurement, to a lesser or larger extent.

However it is not all hearts and flowers. Several of the objectives described in the Commission's Action Plan seem to have been widely ambitious at this point.[179] To start with, the very cornerstone of the envisioned objectives – the implementation of the legal framework correctly and on time did not take place. From the countries involved in the NES Project,[180] only Denmark and the UK had implemented the Directives by the scheduled date (January 1st 2006).[181] As noted by Trybus (2006), "most member states, including those who made the deadline appear to have left implementation to

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[176] In a public consultation carried out by the European Commission by the end of 2004, and which lead to the Action Plan on Electronic Public Procurement, more than 60% of the respondents (in majority small and medium enterprises) pointed out that what they would expect from public electronic tendering would be more transparency, better usability, and less efforts than tendering in traditional paper means. See European Commission, "Commission eProcurement Business Survey" (17.01.2005), on-line: http://ec.europa.eu/ internal_market/publicprocurement /docs/eprocurement/consult-stats_en.pdf.

[177] Directive 2004/17/EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors (30.04.2004) [Utilities Directive]; Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts (30.04.2004) [Public Procurement Directive]. Reference in this document to "the Directive" or "the public procurement Directive" are to be understood with regard to the latter, as well as any references to isolated articles hereinafter.

[178] European Commission, "Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions: Action plan for the implementation of the legal framework for electronic public procurement" (13.12.2004), on-line: http://ec.europa.eu/ internal_market/publicprocurement/docs/eprocurement/actionplan/actionplan_en.pdf [Action Plan].

[179] Early noting that, more than ambitious, the actions suggested could hinder the development of the very market place they seek to foster (understanding that I do not share, though), see Roger Bickerstaff, "The Commission's Action Plan for the Implementation of the Legal Framework for Electronic Procurement" (2005) 3 Public Procurement Law Review NA62: "The extent to which this ambitious programme of activities can be carried through by the Commission is open to question. In any event, given the early stage of development of the public sector eProcurement market, there must be a risk that the market place will be deterred rather than incentivised by the Commission's activities" at NA68.

[180] See section 4.2 infra.

[181] "According to Danish law the public procurement directives are directly applicable since they are incorporated telles quelles. The directives have been implemented by the following governmental orders: (...) Governmental order number 937 of 16 September 2004 concerning the procedures for the award of public works contracts, public supply contracts and public service contracts (...) Governmental order number 936 of 16 September 2004 concerning procurement procedures of entities operating in the water, energy, transport and telecommunications sectors. The above mentioned governmental order number 937 implements the procurement directive 2004/18/EC on public works, supplies and services. Governmental order number 936 implements the utilities directive 2004/17/EC. Each directive is printed as an annex to the respective governmental order. Thus the actual text of the directives constitutes the current legislation in the field of public procurement in Denmark". See Danish Competition Authority, "Procurement Rules in Denmark - Legislative Framework" (October 2005), on-line: http://www.ks.dk/english/ procurement/legislation/pro/. A legal package was approved in Norway only shortly before easter in 2006, as a proposal to the Storting (the Norwegian parliament), having the 1st January 2007 as its original target date for implementation. The proposal revises the current Norwegian Public Procurement Act, and is expected to mark "the day when electronic means in public procurement was fully adopted" in Norway. See Ehandel: The Norwegian Electronic Public Procurement Portal Breakthrough for eProcurement , "Breakthrough for eProcurement ", on-line: http://www.ehandel.no/index_en.php/Artikkel/item/705.html. See also European Commission, IDABC, "eGovernment Factsheet - Norway - Legal framework" (February 2007), on-line: http://ec.europa.eu/idabc/en/document/6755/407. In the same sense, Iceland has only recently (October 2006) sent a proposal to its parliament so as to modify its existing Public Procurement Law. European Commission, IDABC, "eGovernment Factsheet - Iceland - Legal framework" (January 2007), on-line: http://ec.europa.eu /idabc/en/document/6597/399.

the last minute".[182] The Directives can be considered to be immediately effective and enforceable[183] since that deadline has passed. However, the big-bang effect of their sudden materialization in different legal systems, without harmonized laws that discipline the way this will happen, may prompt the establishment or protraction of different barriers to public procurement, and to governmental functions that it is instrumental to.

In reality, albeit public procurement corresponds to 16% of the EU's GDP,[184] it has not received as much attention in European law and policy as it would be[185] compatible with its direct importance as a public service and with the benefits that may stem to contracting authorities from the effective implementation of public procurement processes.[186] This lack of more in-depth consideration is not compatible either with the indirect though strategic effects of public procurement in the achievement of broader societal goals in areas such as trade, innovation, environment and social policies – areas which the new directives came expressly to reinforce, drawing upon previous European Court of Justice case-law.[187]

From a cross-border perspective, the establishment of a harmonized legal framework can prevent the conversion of public purchases into a significant non-tariff barrier to trade – as countries tend to devise protectionist regimes for their national industries by means of public procurement law.[188] At the European level, this is something the new directives seek to avoid, as otherwise undermining the very freedoms the Treaty on European Union provides for. At the global level, harmonization initiatives are carried out within the scope of the WTO's Agreement on Government Procurement, which is mostly subscribed to by developed countries, and by the UNCITRAL Model Law on Procurement of Goods, Constructions and Services, which will arguably fill an important gap by providing for "sound international or supranational procurement rules".[189] But, more than trade, from the perspectives encompassed by the "Breaking Barriers to eGovernment" project, the absence of harmonized public procurement laws internalizing the directives may create problems to contracting authorities, and other stakeholders, ranging from leadership and organizational issues, to technical design and trust aspects. It may also prompt difficulties of coordination among authorities of

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[182] Martin Trybus, "The Morning After the Deadline: The State of Implementation of the New EC Public Procurement Directives in the Member States on February 1, 2006" (2006) 3 Public Procurement Law Review 82

[183] As indicated by the European Court of Justice, since its early decisions in *Van Gend en Loos* and *Costa*. See Case 26/62 *Van Gend Loos* v. *Nederlandse Administratie der Belastingen* [1963] ECR 1; and Case 6/64 *Costa* v. *ENEL* [1964] ECR 585. As Chalmers et al point out in their "European Union Law", in these cases "the Court held that the Community was a sovereign legal order, which gave rise to rights that could be invoked before national courts and that in cases of conflict, the Community law took precedence over national law". Damian Chalmers, Christos Hadjiemmanuil, Giorgio Monti, and Adam Tomkins, *European Union Law: Texts and Materials* (Cambridge: Cambridge University Press, 2006) at 14.

[184] Action Plan, *supra* note 6.

[185] Christopher Bovis, *Public Procurement in the European Union* (Oxford: Oxford University Press, 2005) at 1.

[186] "If online procurement is generalised, it can save governments up to 5% on expenditure and up to 50-80% on transaction costs for both buyers and suppliers. While it is difficult to quantify competition and efficiency benefits for the EU as a whole, greater competition and efficiency in public procurement markets can impact - directly and indirectly - on the whole economy and play an important role in achieving the Lisbon objectives". Action Plan, *supra* note 6 at 3.

[187] See Public Procurement Directive, *supra* note 5, particularly recitals 1, 5, 23, 28, 29, 33, 34, 46.

[188] Governments may intervene in economic activities by raising tariff – i.e. taxes on imports of commodities – and non-tariff barriers to trade. With regard to the latter, besides public procurement law, different kinds of laws and policies can be used, such as state subsidies, environment and sanitary restrictions, labour law, exchange rate management policies, intellectual property law, amongst others.

[189] International Chamber of Commerce, Secretary General, "ICC support for the revision of the UNCITRAL Model Law on Procurement of Goods, Construction and Services" Letter January 25 2007 GS/EO/ev, on-line: http://www.iccwbo.org/uploadedFiles/ICC/policy/commercial_law/pages/Final_Comments_UNCITRAL_Model_Law_on_Procurement.pdf. For more a detailed discussion on the context of those instruments, see, for instance, Attila Kovacs, "The Global Procurement Harmonisation Initiative" (2005) 1 Public Procurement Law Review 15. For a specific discussion on the UNCITRAL Model Law, covering electronic procurement related aspects, see Don Wallace Jr, Christopher R. Yukins, and Jason P. Matechak, "UNCITRAL Model Law: Reforming Electronic Procurement, Reverse Actions, and Framework Contracts" (2005) 40-WTR Procurement Lawyer 12.

different countries.[190] As the e-invoice aspects we are going to address below[191] prove, certainties with regard to the legal framework are essential to prevent the emergence of these barriers.

Of course regulation is not only made up of laws. Architectural constraints embedded in code and standards are also important to determine how the use of a technology will influence behaviour at the individual and collective dimensions. Choices and normative perceptions take a concrete expression in the design of a technology, affecting policy decisions as much as law does.[192] So, it is important to understand, with the European Commission's Action Plan, that, besides legal, "technical and organisational barriers ... may result from procurement online"[193] - and also that organisational barriers themselves can result from or be addressed by technological choices.[194]

The Northern European Subset project provides an auspicious way of coping with existing barriers to electronic procurement and with barriers that other kinds of electronic procurement processes may create, and have created in the past. We will see how in the lines that follow.

Definition of the Case Study

In his recent overview on European eProcurement,[195] Emilio Castrillejo, representative of the IDABC on eProcurement, and member of the European Commission's Enterprise and Industry Directorate-General, summed-up that the main challenges faced by eProcurement in the EU relate to: catalogues, signatures, and standards. Undefeated, those challenges would hamper interoperability in European eProcurement. Mr Castrillejo's perception reflects to some extent the Commission's view set forth in the Action Plan, that: i) the completion of the legal framework with appropriate basic tools, ii) the removal / prevention of barriers in carrying public procurement procedures electronically, and iii) detecting and addressing interoperability over time are key objectives to a well functioning Internal Market in electronic procurement.[196] In effect, all these key

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[190] "Early adoption of the new eProcurement provisions is essential to avoid barriers to and distortion of competition. It is also very important for the rapid development and the effective use of eProcurement by economic operators. Member States should deploy all efforts to comply with the Directives' deadline. Erroneous or divergent interpretation of the new rules can create barriers to cross-border trade and ultimately fragment the market". Action Plan, *supra* note 6 at 3.

[191] See sections 4.1 and followings.

[192] For all, see Lawrence Lessig, *Code and Other Laws of Cyberspace* (NY: Basic Books, 1999), arguing, for instance, that "Code constitutes cyberspaces; spaces enable and disable individuals and groups. The selections about code are therefore in part a selection about who, what, and, most important, what ways of life will be enabled and disabled". See also David Post, "The Unsettled Paradox : The Internet, The State, and The Consent of the Governed" (1998) 5 Indiana J. Global Legal Studies 521, online: Author's Website http://www.temple.edu/lawschool/dpost/Sov.html See also Dan Burk, "Cyberlaw and the Norms of Science" (1999) B.C. Int. Prop. & Tech. F., online: http://www.bc.edu/bc_org/avp/law/st_org/iptf/commentary/content/burk.html.

[193] Action Plan, *supra* note 6 at 3.

[194] In this respect, it is clear that the Public Procurement Directive is concerned not only with regulating procedures, but also with addressing the underlying technological infrastructure of electronic procurement. As Bikerstaff notes with regard to Annex 10 of the Directive, which establishes requirements for devices for the electronic receipt of tenders, requests to participate and plans and projects in contests: "the preamble in Annex 10 states that the "devices" "must at least guarantee, through technical means *and* appropriate procedures" the matters set out in the Annex. This language and, in particular the use of the "and" in relation to "technical means and appropriate procedures" appears to have the effect that establishing administrative procedures governing the use of e-communications technology will not be sufficient to comply with the requirements of the Annex. The wording appears to suggest that there must be technological solutions to satisfy the requirements of the Annex". See Roger Bickerstaff, "The New Directives' rules eCommunication mechanisms in public and utilities procurement", *supra* note 3 at 281.

[195] Emilio Castrillejo, "European eProcurement: An Overview" (June 2006), on-line: European Commission, IDABC http://ec.europa.eu/idabc/servlets/Doc?id=25046.

[196] Action Plan, *supra* note 6 at 3.

measures encompass to some extent the establishment of standards, and relate to the different dimensions of interoperability addressed in the Commission's Communication on Interoperability.[197]

To address interoperability concerns and promote the development of a common-standard to be used in electronic procurement is what the Northern European Subset (NES) project is mainly about. As such, it hits the nail on the head by focusing on those which were identified as the utmost challenges and objectives by the European Commission, and seems to follow step by step the recommended actions for addressing interoperability requirements as set forth in the communication on interoperability.[198] Targeting priorities, and allowing for the development of a phased approach,[199] the NES project focuses on basic eProcurement functions (at this point ranging from electronic catalogues, ordering, and invoicing), and envisions the facilitation of electronic collaboration, based on international standards, towards a common platform, a common infrastructure to support the development of eProcurement in the EU. In sum, its core purposes are: i) to facilitate interoperability and practical use of eProcurement both in domestic and cross border trade; ii) facilitate harmonization of different eProcurement documents; and iii) contribute to the development and use of an international standard for eProcurement.

Technically what NES does is to develop a common library and generic eProcurement documents as a subset by refining the Universal Business Language (UBL) common library and documents. From this subset, NES devises context specific documents, grouped in different profiles, which may have a narrower or a larger scope. Both the subset and the profiles are devised by NES so as to meet different businesses processes (e.g. e-cataloguing, e-ordering, e-invoicing) that may take place either in a business-to-government or in a business-to-business relationship. The profiles, range, for instance, from a "basic invoice profile", which is the basis of a business process of invoicing involving a standalone invoice document, to "basic eProcurement", which, besides invoicing, also involves other phases such as an order, an order response, among others. The profiles, thus, are instrumental to basic eProcurement functions.[200]

Box: Universal Business Language (UBL)

> "UBL, the Universal Business Language, is the product of an international effort to define a royalty-free library of standard electronic XML business documents such as purchase orders and invoices.
>
> Developed in an open and accountable OASIS Technical Committee with participation from a variety of industry data standards organizations, UBL is designed to plug directly into existing business, legal, auditing, and records management practices, eliminating the re-keying of data in existing fax- and paper-based supply chains and providing an entry point into electronic commerce for small and medium-sized businesses".
>
> The UBL standard was devised mainly "to avert a crisis in electronic business caused by competing XML business-to-business document standards by choosing as a starting point an existing XML business document library as the basis for creating a new "Universal Business Language" that [would] be a synthesis of existing XML business document libraries".

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[197] European Commission,"Communication from the Commission to the Council ant the European Parliament: Interoperability for Pan-European eGovernment Services COM(2006) 45 final" (13.2.2006), on-line: IDABC http://ec.europa.eu/idabc/servlets/Doc?id=24117 at 6.

[198] Those actions involve, amongst others: setting priorities; policy documents and guidelines; encouraging communication between administrations; management of generic elements; standardisation; an architecture for the effective delivery of eGovernment services; common infrastructure to support eGoverment interoperability etc. Ibid at 7-11.

[199] In the Action Plan, the Commission exposes the view that "a phased development of eProcurement is most likely to maximise benefits for both the public and the private sector", and that "[g]overnments should ... be able to modulate and adjust implementation of the new electronic tools over time". *Action Plan*, supra note 6 at 7. By the same token, the UK Office of Government Commerce's guide to public eProcurement, suggests that a "big bang" approach should be avoided, acknowledging: "[e]xperience shows that taking a gradual approach and not trying to implement too much too quickly is the best method of achieving success". Office of Government Commerce, "eProcurement in Action: A guide to eProcurement for the public sector" (2005), on-line: http://www.ogc.gov.uk/documents/cp0025.pdf at 4.

[200] Jostein Frømyr, and Martin Forsberg, "Common platform for eProcurement – Presentation at the UBL symposium" (November 16, 2006), on-line: NES http://www.nesubl.eu/download/18.6f606810f80ad8ee38000276/NESPresentation_20061116.pdf at 3.

Its development took into consideration the "standards/specifications issued by UN/CEFACT, ISO, IEC, ITU, W3C, IETF, OASIS, and such other standards bodies and organizations as the UBL TC [deemed] relevant". As its ultimate goal, the UBL Technical Committee intended, "to promote UBL to the status of an international standard for the conduct of XML-based electronic business."

Source: Organization for the Advancement of Structured Information Standards201

Implementation and Settings of the NES Case Study

Background

The NES project finds its roots in the previous experience of eInvoicing in Denmark. In December 2003 the Danish "Act Pertaining to Public Payments", and a subsequent Regulation by the Minister of Finance, mandated that all invoices should be sent by companies to the Danish government in electronic means. The purpose of this was "to encourage companies to do more electronic invoicing",[202] and the result, since the regulations came into force, in February 2005, was an "instant critical mass of approximately 15 million digital invoices a year".[203] It also led to the conversion of public-sector entities systems from physical to digital handling of invoices, which is expected to save the Treasury more than EUR 120 million, in addition to savings in internal administrative processes.[204]

A specific standard was devised for the Danish eInvoicing procedures – the OIOXML,[205] as a subset of an early and still non-official version of the UBL standard (UBL 0.7). The premature adoption of a non-official standard happened due to financial constraints. There was a budget cut which was about to be made by the Minister of Finance, and due to this reason OIOXML was developed by implementing many alterations to UBL, which led to the incompatibility between both standards. The same thing happened in Sweden, with another version of UBL. This technical design problem ended up creating more difficulties to Danish and Swedish companies than helping them. Since those companies implemented the format and started to use it internally, their coordination with foreign companies or governments may have been hindered, as they would speak different languages with regard to the format of the document schemes they are using, which is not compliant with an international standard. This is a problem the NES project is now trying to address with its adoption of a subset based on UBL v. 2.0.

The Beginning

NES today involves Denmark, Sweden, Norway, Finland, England, and Iceland. Some other countries, such as Estonia, Romania, Austria, and the Netherlands, have shown interest in taking part in the project. Denmark and Sweden, as mentioned, have been focusing on UBL for some time, but that was not the case of the other partners in NES. The project was kicked-off by Denmark, who two years ago assumed the leadership and asked the other Northern countries if they would be interested in joining them in devising the requirements for the new UBL version which was released in December 2006. Although there was agreement on the importance of joining efforts for an

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[201] See OASIS, "Universal Business Language (UBL) TC" (December 2006), on-line: OASIS http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=ubl

[202] Mikkel Brun, and Ralf Cimander – National IT and Telecom Agency, Denmark, "Good Practice Database: eGovernment case details - Electronic invoicing to the public sector in Denmark" (January 2007), on-line: eGovernment Good Practices Framework http://www.egov-goodpractice.org/gpd_details.php?gpdid=1967.

[203] Ibid.

[204] Ralf Cimander, and Mikkel Brun – National IT and Telecom Agency, Denmark , "Good Practice Case: eInvoicing in Denmark – Prepared for the European Commission, DG Information Society and Media, eGovernment Unit." (January 2007), http://www.egov-goodpractice.org/download.php?&fileid=1145 at 2.

[205] OIOXML stands for Offentlig Information Online (public information online) Extended Markup Language – which, as the name says, is an XML Schema devised specially by the OIO, based upon the UBL XML Schema. See National IT and Telecom Agency, OIO "The Danish XML Project", on-line http://www.oio.dk/dataudveksling/danishXMLproject.

eProcurement initiative, the definition of a common standard to be adopted was more problematic, with some of the countries advocating the adoption of a UN/CEFACT[206] standard, such as EDIFACT.[207] However, on the one hand, UBL is expected to grow and at some point become a UN/CEFACT standard. On the other hand, UBL was the only suitable XML-based standard which was available at the time, because most of the rest was using EDI. So, after some thoughts, the group was formed.

The advantage that NES UBL would have over EDIFACT would be the possibility of offering a profiles-based harmonized subset, tailored for specific business needs, and prepared for cross-border trade. This would not be the case with EDI, where the possibilities of choice are arguably too vast, demanding bilateral agreements, pre-synchronization of data, and changes of internal processes – the result being that only a few parties with large volumes can come on board, leaving SMEs out of the process.[208] It seems, thus, that NES comes to solve the barriers of coordination posed by unrestrained choices, organizational inflexibility raised by difficulties of individually adjusting business processes on a bilateral basis, instead of relying upon a predefined set of documents and profiles which can be readily used, and digital divides which would result from the exclusion of small and medium-sized enterprises from cross border eProcurement processes.

Timeline

Tracing back the origins of NES, we could perhaps say that it found its most remote legal foundations in the 2001 European Directive on invoicing, which established that invoices could be "sent either on paper or, subject to an acceptance by the customer, by electronic means", and that Invoices sent by electronic means shall be accepted by Member States provided that the authenticity of the origin and integrity of the contents are guaranteed(...)".[209] This was the very basis for the e-Invoicing legal framework in Denmark, as we just mentioned above, which was approved in 2003, had its technical infrastructure (the OIOXML standard) in place by 2004, became enforceable in February of 2005, and reached the milestone of 90% of invoices sent to public institutions in electronic means by the Autumn of 2005. Two other projects that also contributed for the development of NES were the eProcurement initiatives of Denmark, in particular with respect to eCatalogues,[210] and eInvoicing in Sweden.[211]

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[206] See United Nations Centre for Trade Facilitation and Electronic Business, on-line: http://www.unece.org/cefact/index.htm

[207] Ibid.

[208] See also Jostein Frømyr, and Martin Forsberg, *supra* note 28 at 8. See NES, "NES Workshop: Brussels February 15th 2007", on-line: http://www.nesubl.eu/download/18.6f60681109102909b80002763/NES-workshop+minutes +15+feb+2007.pdf.

[209] Council Directive 2001/115/EC of 20 December 2001 amending Directive 77/388/EEC with a view to simplifying, modernising and harmonising the conditions laid down for invoicing in respect of value added tax. Art 2(2).

[210] Denmark is considerably developed with regard to the electronic ordering of goods and services. In a 2005 of report mentioned by the eNorway equivalent to the European Commission Action Plan on eProcurement, the international consultancy firm Rambøll Management concluded that Norwary is among the best in Europe in the area of electronic ordering services, which are carried out by Ehandel.no – The Norwegian Electronic Public Procurement Portal. On the other hand, the report also recommended that Norway should prioritize invoicing and electronic publication of tenders (See Norway, Ministry of Modernization, "Strategy and actions for the use of electronic business processes and electronic procurement in the public sector: A follow-up to eNorway 2009 – the digital leap" (October 2005), on-line: http://www.ehandel.no/data/file/file_283.pdf at 3. As Andre Hoddevik, Head of eProcurement Secretariat, Ministry of Government Administration and Reform, Norway notes "most public sector users of ehandel.no require the supplier to present their products in eCatalouges and many also require that the suppliers are able to respond to their orders via ehandel.no". The result is that "[a]n increasing number of suppliers acknowledge the importance of ehandel.no as a sales improving tool and are increasingly aware of the need for correct, sufficient and updated information in their eCatalouge". See eGov Monitor, "Q&A Andre Hoddevik, Head of eProcurement Secretariat, Ministry of Government Administration and Reform, Norway" (August 2006), on-line: http://www.egovmonitor.com/node/7221. The goal now is that all public sector authorities must be able to receive and process invoices in electronic means by 2009 (see Norway, Ministry of Modernization, ibid. at 8), or, slightly more optimistically, by the end 0f 2008 (see Ehandel: The Norwegian Electronic Public Procurement

By 2005, as well, Denmark invited the other countries to participate in developing the project which would turn into NES, and later that year the group was formed. In April 2007 the first official version of NES was released, supporting basic eProcurement functions. In its second phase, NES will maintain its current profiles, and incorporate new profiles, and countries willing to participate.[212] It is also expected to devise utilities related to the communication of text messages. A convergence between UBL and UN/CEFACT is expected, the latter having already acknowledged the former as a "first-generation XML document standard [which] provides a usable stepping stone to the future", in its 2006 plenary.[213] A CEN/ISSS workshop will also happen in May 2007,[214] possibly leading to NES UBL being acknowledged as a European Standard, if its business plan proposal is approved.

Financial settings

Although the involved countries may have individual calculations of the benefits that may stem from the adoption of eProcurement standards, there is no collective estimation of the savings that the NES project may generate. This does not seem to have been a financial barrier to generating resources, at this time, as the countries involved are sponsoring the project with their own internal resources. Denmark is investing around DDK 500,000 per year, Sweden around the same value, and Norway and Iceland a bit more than that. A small amount has been allocated to sponsoring a minimal centralized organization, which consists of a coordinator to organize the meetings, check minutes, etc.

Organizational settings

To date, NES has been adopting a quite discursive and decentralized structure. As described by the NES Steering Committee's Chair, all the partners have agreed upon is that they wanted to do cross-border trade using a common subset of UBL. Apart from that, they have merely been relying and trusting in each other, and sharing things using the Internet without a more centralized structure. The first effort towards some degree of formalization has been the application for a CEN/ISSS Workshop (See Box). The partners are undertaking this step as a prior milestone before the application to define NES UBL as a unified eProcurement standard within UN/CEFACT standard. In the future, it is also expected that some bureaucracy will need to be established as for how to maintain the NES UBL standard.[215]

Box: CEN/ISSS [European Commission for Standardisation / Information Society Standardisation System]

"CEN/ISSS provides market players with a comprehensive and integrated range of standardization services and products, in order to contribute to the success of the Information Society in Europe".

"In addition to formal CEN Technical Committees, CEN/ISSS provides a less formal environment through CEN/ISSS

Portal, "E-invoice in public sector by 2008", on-line: http://www.ehandel.no/index_en.php/Artikkel/item/684.html).

[211] See *infra* 4.6.2.

[212] See Jostein Frømyr, and Martin Forsberg, *supra* note 28 at 28.

[213] See CEN/ISSS, "Draft Business plan for a CEN/ISSS Workshop on 'Interoperability in the Implementation of electronic public procurement in Europe' (CEN/ISSS WS/ePPE)" (February 2007), on-line: http://www.cen.eu/cenorm/businessdomains/businessdomains/isss/activity/ebbebusinessplan.pdf.

[214] Research and interview carried out for this paper took place before May 2007. For follow-ups on the development of NES after the CEN/ISSS Workshop's kick-off meeting in May 11 2007, the reader is encouraged to refer to: CEN European Committee for Standardisation, "Workshop on 'Business Interoperability Interfaces on public procurement in Europe' - WS/BII", on-line: http://www.cen.eu/cenorm/businessdomains/sectors/isss/activity/ws_bii.asp. See also Dansk Standard, "Workshop on 'Business Interoperability Interfaces on public procurement in Europe' - WS/BII", on-line: http://www.en.ds.dk/3782,1.

[215] It is important to understand, though, how can the information that NES forms a coorporation, as provided by Jostein Frømyr and Martin Forsberg (*supra* note 28 at 3), be reconciled with this idea of decentralization discussed herein.

Workshops. These offer the opportunity for direct participation in the standardization process. They are ongoing working groups that are open to all interested parties, including vendors, service providers, regulators, users and consumer groups.

CEN/ISSS Workshops aim to arrive at a European consensus on an issue that can be published as a CEN Workshop Agreement (CWA). These deliverables may take the form of best practice agreements, codes of conduct or pre-standards, with the formal backing of CEN, one of the three European Standardization Organisations".

On the 11th of May, the "Interoperability in the implementation of electronic public procurement in Europe" will have its kick-off meeting. "The objectives of the Workshop are to provide a basic framework for technical interoperability in pan-European electronic transactions, expressed as a set of technical specifications that cross-refer to relevant activities, and in particular are compatible with UN/CEFACT in order to ensure global interoperability. The Workshop will be focused on implementation facilitations and coordinating pilots implementing the technical specifications output. The requirements and final specifications will be input into UN/CEFACT.

The starting point for the Workshop is the NES and CODICE customizations of OASIS Universal Business Language 2.0, which is recognized by UN/CEFACT as a stepping stone towards a unified business standard".

Source: European Committee for Standardization[216]

As noted above, with regard to its outputs, NES seeks to make cross-border eProcurement easier for their companies, at the first level, and for their governments, at the second one. The goal is to ensure that companies in the respective countries will use the same format whether they are dealing with other companies in the same country, with the public sector in their own country, or with companies in other countries. Though, it is understood that changing the way people work, especially in the public sector, is very difficult. The existing culture was always one used to deal with paper form, a hands-on approach to tendering, and a more or less localized supply. In Denmark, for instance, it has been 10 years since their first initiative of using a procurement portal begun, and there is still a long way to go in changing procedures. Governmental offices are seen as not being particularly eager to change their ways of doing things. The biggest purchasers, though, which spent generous amounts of money, are far advanced in using eProcurement (hospitals being the best examples) so as to be more efficient.[217]

Technological settings

(1) Interoperability

The coordination among the partners in NES has been marked by a uniform approach to the standards they are defining based on UBL 2.0. By focusing on the most relevant part of the extensive information present in UBL, the partners devise guidelines saying how it should be implemented in the countries involved. This solves the problem of information overload and interoperability for users, as it pacifies, with a uniform interpretation, diverging and incompatible interpretations that could be formed in the adaptation of NES to different business processes. An example of a definition which the partners needed to approach was that of an "address". What is an address, and how should it be represented? A problem here is that some addresses in the mountain area of Norway do not have street names or house numbers, but coordinates.

[216] European Committee for Standardization / Information Society Standardization System, "About ISSS" (February 2005), on-line: http://www.cen.eu/cenorm/businessdomains/businessdomains/isss/about_isss/index.asp. European Committee for Standardization / Information Society Standardization System, "About CEN/ISSS Workshops" June 2006), on-line: http://www.cen.eu/cenorm/businessdomains/businessdomains/isss/about_isss/about_workshops. asp.

[217] NES' Chair was also asked in the interview whether she sees network effects as a potential barrier to be overcome in the adoption of open standards in eProcurement , in changing an infra-structure which was likely dominated by proprietary software vendors. Though, the question didn't seem to find a wider resonance with regard to NES, this author believes this may be a strong barrier to consider in the context of organizational and workplace inflexibility.

Organizational and Semantic Interoperability: NES thus seeks to create interoperability at the business process level (organisational interoperability)[218] for the companies that intend to adopt the standards. Its focus on business-to-government, on eProcurement as a service of e-Government, happens at a mediate level, as the NES outputs are also expected to be used by governments in their public procurement processes. By agreeing on 8 basic business processes and devising 8 standard profiles, of more or less complicated structure, NES at the same time: i) avoids trying to be as generic as to pursue a one-size-fits-all approach, thus escaping unachievable and self-deceiving goals of neutral policies that only foster fragmentation and uncertainty with regard to technology; and ii) provides for the incorporation of companies and governments with different levels of development with regard to their implementation of standards, suiting the needs of different specialists, which may span from the most basic to the more complex profiles and processes. In a second instance, NES also focus on semantic interoperability, by narrowing down a unified interpretation of the different elements in UBL. This is being done, for instance, with regard to the address problem portrayed above, and with taxes, whose kinds and hypotheses of incidence vary from country to country.

Open Standards and Technical Interoperability: By devoting its attention to an XML based schema, the project is also concerned with technical aspects of software programming. Here, as well, interoperability is envisioned. At this stage, however, NES is mostly concerned with its subset of UBL documents and implementation guidelines on how to use them. However, as explained above, the partners also foresee the further development of eProcurement utilities related to text communication – and this is also expected to be open source.

(2) Usability

NES seeks to adopt a balanced approach to the usability of its standards and guidelines. The idea is to make things simple, but not too simple. On the one hand, NES must ensure the compatibility between its standards and the OASIS UBL, operating within that set, and excessively complex standards may hamper such desideratum. On the other hand, NES must avoid overly simple standards such as that devised for the Swede Svefakturan, which is based upon UBL 1.0 and arguably so simple that cannot be really used by any company. According to Senior Advisor Knut Øyvind Granli, of the eProcurement Secretariat under the Norwegian Ministry for Government Administration and Reforms, as the Swede "Svefaktura is based upon UBL 1.0 (...) [t]he authorities in Sweden have moved the starting date for using e-invoice up one year, to the summer of 2008".[219]

Legal Settings

The discussions on open standards and open source are deeply connected to the legal settings of the NES project. With regard to this, two points might be brought to our attention in here. The first relates to how the project interacts with the legal framework on public procurement in Europe. The second refers to how the project, in general, is legally structured and specifically to how it deals with the intellectual property over the intellectual creations it devises.

(1) The Law and NES: a Place for 'Ought'?

With regard to the first point, it is worth considering how the implementation of the EU procurement directives could further contribute to the establishment and development of the NES project. It is clear that without its new legal landmark on invoicing, the prior initiatives on e-invoicing in Denmark wouldn not have unfolded the way they have. As noted by the Danish Agency for Governmental Management in its "e-Invoicing in Denmark"[220], "[r]egulation by law and backing by parliament is

[218] In its communication on interoperability, the European Commission divides the concept of interoperability in three different dimensions: organisational, technical, and semantic interoperability. See European Commission, *supra* note 25 at 5-6.
[219] See Ehandel: The Norwegian Electronic Public Procurement Portal, "The race for e-invoice is on", on-line: http://www.ehandel.no/index_en.php/Artikkel/item/825.html.
[220] See Danish Agency for Governmental Management (Økonomistyrelsen), "eInvoicing in Denmark" (November 2005), on-line:

crucial. In the case of electronic invoicing, legislation has been crucial in enabling swift conversion of all administrative processes for the parties involved. Also, legislation has provided security in volume of orders for the private suppliers". As NES furthers the e-invoicing initiative, this gives food for thought on the current status of (non)implementation of the public procurement directives – and on whether specific regulations preserving and taking the current options of NES for open standards and open source further in eProcurement could not be as beneficial as the legal framework on e-invoicing was. On the one hand, vague defences of "technological neutrality"[221] ideals do not seem to work as an obstacle to the legal promotion of standards that can be embraced by any vendor. Differently from the understanding that some authors seek to inculcate,[222] the adoption and promotion of open source software, standards and architecture does not reflect a restrictive and anti-competitive choice for one kind of product or technology – rather, it embraces a legal and political option that at the same time widens the autonomy of governmental and private customers, and fosters the democratic values[223] enshrined in open regimes that empower society at large. The adoption of a common framework for electronic procurement, learnt on the e-invoice initiative, could be essential to contour coordination, and organizational flexibility barriers, providing legal security for the development of the NES project – and other projects that may draw upon it.

(2) The Law in NES: Hidden and Perceived Legal Issues

With regard to NES' legal structure (second point above), it is important to notice that some coordination barriers and legal problems that may normally take place when a mutual organization is set up have not yet made an express appearance in NES – for instance, intellectual property (e.g. shared ownership), and budgetary law related aspects, amongst other legal issues that usually arise from discussions on how to allocate resources in a centralized unity vis-a-vis further distribution of related outcomes. The fact that those barriers have not been expressly identified with regard to these discussions does not mean they may not affect the project even if this is configured in a distributed fashion – that is, if this lacks a central organization to which resources and outcomes can be allocated. The perception, though, seems to be that barriers will arise as some lesser or larger expression of formality and centralization develops. Before that, it is believed that no barriers existed, and that now, as the partners are introduced to more complex bureaucracy, the barriers are beginning to arise.

Tax and Authentication Technologies: The partners have identified some legal issues that could hinder the adoption of its deliverables – namely the existence of different tax regimes in the countries involved, which the NES documents must comply with. The countries have first discussed this issue separately with their respective tax departments, and then altogether, in a second discussion, how they must equalize their different tax requirements. Apart from this real and perceived issue with regard to tax law, the project avoided for the time being the issue of authentication technologies that would have the potential to hinder its future development. In effect,

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http://www.oes.dk/graphics/Filbibliotek_OES/OFFENTLIG/Betaling/Elektronisk_fakturering/Einvoicing_in_Denmark.pdf at 6.

[221] In an important interpretive document about the new procurement directives, the European Commission remarked that: "[t]he legal framework is technology-neutral and does not distinguish between open source and commercial products as long as they are interoperable with information and communication technology products in general use". European Commission, "SEC(2005) 959 Commission Staff Working Document: Requirements for conducting public procurement using electronic means under the new public procurement Directives 2004/18/EC and 2004/17/EC" (July 2005), on-line: http://ec.europa.eu/internal_market/publicprocurement/docs/eprocurement/sec2005-959_en.pdf. On the one hand its important to ponder on whether the document is right in supposing that open source is necessarily non-commercial. On the other hand, it is worth noting that one who opts for open source alternatives is not opting for a particular technology, but for a particular licensing scheme. It's a legal choice, not a technological one. If traditional proprietary systems are suddenly subject to an open source license, and have their source code disclosed as a consequence, won't they become open source too?

[222] See, for instance, McLean Sieverding, "Choice in Government Software Procurement: A Winning Strategy" (2006) 6 Public Procurement Law Review 338.

[223] See, for instance, Mark Perry, and Brian Fitzgerald, "FLOSS as Democratic Principle" (2006) 2:3 International Journal of Technology, Knowledge and Society 155. See also Marcelo Thompson Mello Guimarães, "The Democracy of FLOSS: Software Procurement under the Democratic Principle" (2007) University of Ottawa Law and Technology Journal [forthcoming].

even though the directives on public procurement encourage the adoption of authentication technologies,[224] which EC authorities (see 2. above) consider one of the biggest challenges to electronic procurement in the EU, the partners deliberately decided to merely leave room for their further adoption with NES eProcurement documents. Doing so, the project allows for a layered realization of its goals, purposefully not converting into a reality something which it rightly perceived as external to its immediate objectives as e-signatures are not a part of UBL.

Intellectual Property Rights: If on the one hand NES seems to have been pursuing a clear legal strategy for ensuring that the deliverables are juridically suitable to their users, on the other hand an internal aspect of the NES own legal setting has yet to come clear: its strategy for dealing with intellectual property rights. By devising a subset of standards, the NES partners have both co-authorship rights (copyrights / droits d'auter) on the original parts of such subset and the duty to clear rights for their usage of its non-original parts. As a result, with regard to their own rights, the NES partners need to have a defined strategy for licensing the subset's components; and, with regard to their duty to clear rights, the NES partners need to clarify to their potential users how do their works comply with the licensing policies of the original works they were derived from. Uncertainty about licensing policies may diminish degrees of trust and create problems with regard to coordination.

It seems clear from the NES website that the partners have agreed on licensing their works under a Creative Commons license. Creative Commons exists for facilitating the adoption of less restrictive licensing models by intellectual creators; it makes a wide range of possibilities available between the extremes of reserving all rights (as copyright typically entails) or no rights at all (which is the regime of works under the public domain) over intellectual creations. Its ultimate goal is "to build a layer of reasonable, flexible copyright in the face of increasingly restrictive default rules".[225] The project was born in Stanford Law School in 2001, inspired by ideals stemming from the free software[226] and open source movements[227], and since then has gained the world, being embraced by uncountable non-governmental and governmental organizations internationally. Governments, particularly, have seen in openness models fostered by licensing regimes like these a wider possibility of fulfilment of the democratic principle, besides other numerous reasons related to a "breaking barriers"' perspective, as noted above.

So, it is certainly laudable that NES is following this trend. However, NES needs to ensure that this has been done in a proper way, from both the perspectives described above: of dealing with its own rights, and of dealing with rights of others. On the one hand, if one follows the pertinent link on the NES website's home page one will be taken to the personal website of Mr Philippe Kerignard, who subjects his works to a Creative Commons license. The relation between Mr Kerignard and NES, if any, is completely unexplained, and no distinction between his works and those of NES is established. On top of that, in spite of the several different alternatives of licenses within the Creative Commons Project, NES merely says that it subjects its works to "the creative commons license". On the other hand, NES needs to clarify to its end users if it is possible to subject UBL derivative works to a creative commons license, or if OASIS has a specific IPR policy that prevents this from happening. In fact, OASIS does have an IPR policy, whose notices section reads:

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[224] See, for instance, Public Procurement Directive, *supra* note 5, recital 17: "Accordingly, the devices for the electronic receipt of offers, requests to participate and plans and projects should comply with specific additional requirements. To this end, use of electronic signatures, in particular advanced electronic signatures, should, as far as possible, be encouraged. Moreover, the existence of voluntary accreditation schemes could constitute a favourable framework for enhancing the level of certification service provision for these devices". This is also reflected in the modal verb *may* used in art. 42(5)(b): "Member States may, in compliance with Article 5 of Directive 1999/93/EC, require that electronic tenders be accompanied by an advanced electronic signature in conformity with paragraph 1 thereof". And though art. 71(2) requires that "[c]ommunications, exchanges and the storage of information shall be such as to ensure that the integrity and the confidentiality of all information communicated by the participants in a contest are preserved", this is not necessarily linked to the use of electronic signatures or to the scope of NES at this point.

[225] See Creative Commons, "'Some Rights Reserved': Building a Layer of Reasonable Copyright'", on-line: http://www.creativecommons.org/history.

[226] See Free Software Foundation, on-line: http://www.fsf.org.

[227] See Open Source Initiative, on-line: http://www.opensource.org.

> *"This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published, and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this section are included on all such copies and derivative works. However, this document itself may not be modified in any way, including by removing the copyright notice or references to OASIS, except as needed for the purpose of developing any document or deliverable produced by an OASIS Technical Committee (in which case the rules applicable to copyrights, as set forth in the OASIS IPR Policy, must be followed) or as required to translate it into languages other than English".*[228]

Whether the NES subset of UBL documents merely comments on or otherwise explains UBL may be open to discussion. But even if it is so, it seems that, at the very least, a notice as required by OASIS should be included together with the deliverables. In addition to this, it must also be considered that, if the Office of Government Commerce (UK) were to become one of the partners in the project, a more nuanced approach would be necessary with regard to the rules that govern Crown Copyright vis-a-vis the OGC's contributions. In the UK, Crown Copyright is subject to article 163 of the Copyright, Design, and Patents Act of 1988, which reads: "Crown copyright. 163.— (1) Where a work is made by Her Majesty or by an officer or servant of the Crown in the course of his duties— (a) the work qualifies for copyright protection notwithstanding section 153(1) (ordinary requirement as to qualification for copyright protection), and (b) Her Majesty is the first owner of any copyright in the work".[229] The OGC's website is also very clear in asserting that "[they] want to encourage the reuse of OGC best practice, but whatever the form of reuse, you will need a licence"[230]. In an interesting study commissioned by the Commons Information Environment, whose members range from the British Library to the British Archive and the BBC, the AHRC Centre for IP and Technology Law at the University of Edinburgh pointed out that Creative Commons Licenses are not applicable to works protected by Crown Copyright, where a specific kind of license introduced by the Office of Public Sector Information ("Click-Use license") must be used.[231] Add to all of this, still, the fact that the Directive on the Re-Use of Public Sector Information[232] "does not oblige Member States to allow re-use of documents",[233] what does not seem to shed any light into eventual obligations of the UK with regard to licensing its public documents in an open regime – for more politically correct[234] that this may sound, and have sounded to the partners in NES.[235]

In sum, the complexity of dealing with intellectual property matters in works of shared authorship is likely to have led to seemingly unsuspected coordination barriers not only between the partners, but in their relation to other actors as well – e.g. OASIS and the UK Office of Public Sector Information. The lack of more in-depth attention to intellectual property matters, however, is reflected in the way the very licensing of the NES' deliverables to the end-users is being undertaken (with a link to a

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[228] OASIS, "OASIS Intellectual Property Rights (IPR) Policy" (April 2005), on-line: http://www.oasis-open.org/who /intellectualproperty.php#licensing_req.

[229] Copyright, Designs and Patents Act 1988 (UK), c.48, www.opsi.gov.uk/acts/acts1988/Ukpga_19880048_en_1. htm s. 163.

[230] UK, Office of Government Commerce, "Intellectual Property - statement on OGC's guidance" (August 2006), on-line: http://www.ogc.gov.uk/intellectual_property_intellectual_property_from_other_sources.asp.

[231] Andres Guadamuz, Jordan Hatcher, Charlotte Waelde - AHRC Research Centre for Studies in Intellectual Property and Technology Law, The University of Edinburgh, "The Common Information Environment and Creative Commons: Final Report to the Common Information Environment Members of a study on the applicability of Creative Commons Licences" (October 2005), on-line: Intrallect http://www.intrallect.com/cie-study/CIE_CC_Final_Report.pdf.

[232] Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information, on-line: http://europa.eu.int/eur-/pri/en/oj/dat/2003/l_345/l_34520031231en00900096.pdf.

[233] Elizabeth F. Judge, "Crown Copyright and Copyright Reform in Canada" in Michael Geist, ed. "In the Public Interest: The Future of Canadian Copyright Law" (Toronto: Irwin Law, 2006) 550 at 587-588.

[234] The understanding is that the partners wouldn't join NES if this was not the model adopted.

[235] Still, it is interesting to ponder on why the license adopted was not the European Union Public License v1.0, approved by the Commission last January, for the distribution of software developed within the IDABC framework. See European Commission, IDABC, "European Union Public License (EUPL v.1.0)" (January, 2007), on-line: http://ec.europa.eu/idabc/en/document/6523

personal website). And even if the perception in the lines above is equivocal, at the very least all these points deserve further clarification in the NES' website so that other barriers are not raised – for instance, with regard to trust, which is the spot frequently squeezed by proprietary vendors in relation to open source / open standards technologies.[236]

Equality and Non-Discrimination Apart from these observations with regard to the real but seemingly not perceived issues related to intellectual property, it is important to mention that the open characteristic of the NES standard is that it is inherently suitable to promote the accomplishment of some of the very objectives and principles set forth in the public procurement directives. For instance, the requirements that "[t]he tools to be used for communicating by electronic means, as well as their technical characteristics, must be non-discriminatory, generally available and interoperable with the information and communication technology products in general use" (Art 42(4)) seems much more likely to be achieved within a scheme of openness than with a proprietary one.[237] In this sense, analysing this issue vis-a-vis the EC Treaty, Sue Arrowsmith understands that "a requirement to communicate through a proprietary system involving costly investment might not be justified. Under the EC Treaty, a requirement for a particular means of communication may be caught by the free movement provisions and need to be justified on the basis of public interest grounds under Art 43 and 48 or mandatory requirements under Art. 28 EC".[238]

Transparency: Besides equality and non-discrimination, one of the most important principles set forth in the Directive is that of transparency.[239] Commenting on it, Christopher Bovis argues that the principle of transparency serves two main objectives. On the one hand, by introducing a system of openness, it establishes a greater degree of accountability, and eliminates potential discrimination on grounds of nationality – which is essential for streamlining cross-border procurement. On the other hand, it fosters a wider system of good practices, granting to contracting authorities and economic operators alike the possibility of having a say in the needs of the demand side.[240] When Bovis speaks of transparency, here, he is focusing on the principles of mandatory advertisement and publication of public contracts. We can of course imagine an even broader perspective, where transparency is reflected throughout the whole infra-structure for electronic procurement. As such, it would work both in the first sense described by Bovis, where citizens would have the possibility to scrutinize the way their governmental systems work, and in the second sense, by allowing an active societal participation in the development of standards and software that the government uses – in a commons based peer production mode of development that is the very picture of NES itself. Both these dimensions are extremely intertwined with a wider perception of the democratic principle, as discussed above in this section. Both of them are widely promoted by the NES project.

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[236] See Wikipedia, "Fear, Uncertainty and Doubt", on-line: http://en.wikipedia.org/wiki/Fear%2C_uncertainty_and_doubt.

[237] Bickerstaff notes that "There is an issue with the requirement in Article 42(4) that the "technical characteristics" of the "tools" used for e-communication must be "generally available". Of course, most email packages are proprietary products and their technical specifications are kept confidential by the software developer. (Open source software, such as Linux[3], is different in that the source code for this software is available to all licensees). However, in this context it is unlikely that the term "technical characteristics" of the e-communication tools would require the full availability of the technical specification or the source code of the software package. Instead, for the purposes of the Directive, it would appear to be sufficient for the IT standards which are utilised in the software packages, such as SMTP and POP3[4], to be "generally available"". See Roger Bickerstaff, "The New Directives' Rules e-Communication Mechanisms in Public and Utilities Procurement", *supra* note 3 at 279. I must concur with Bickerstaff with regard to his note that open / available standards foster interoperability. Though, for reasons already explained above, I believe the adoption of free / open source software, which ensures broader possibilities of civic participation in the construction of technological systems that will ultimately shape how the interaction between citizens, organizations and governments is carried out, fits better within a democratic regime than closed, proprietary software does. In this sense, I understand that the expression technical characteristic may perhaps deserve that some lights are shed on it by broader principles that guide public administrations beyond mere procurement rules do.

[238] Sue Arrowsmith, "The Law of Public Utilities and Procurement" (London: Sweet & Maxwell, 2006) at 1164.

[239] Public Procurement Directive, *supra* note 5 Article 2: "Principles of awarding contracts. Contracting authorities shall treat economic operators equally and non-discriminatorily and shall act in a transparent way".

[240] Christopher Bovis, *supra* note 13 at 50.

Social Reach

(1) Bridging Digital Divides

As we noted above, the new procurement Directives embrace some broader societal goals that previous European Court of Justice case-law had already understood as legitimate to be pursued in public procurement processes. Electronic procurement, if optimally carried out, may be more inclusive of SMEs and contour traditional difficulties associated with paper bureaucracy. However, the use of electronic means itself can create more problems than it solves, if a suitable design is not adopted so as to increase usability of the chosen technologies and standards. NES, in this sense, can contribute to a better usability of eProcurement services, so that we can focus on the principle of "no citizen left behind"[241] with broader lenses, in the sense of including economic operators that so far have been excluded from procurement services[242] – especially considering a cross-border perspective – and spilling over its beneficial effects to society at large.

This being said, it is not expected that SMEs will start implementing NES by themselves. The NES documents and profiles are not so simple that they can be autonomously used by SMEs. Although, they are deployed so as to be easily integrated with ERP systems, Office Banking programs, e-mail clients etc, so that vendors can easily implement them and make things easier for the SMEs. In Denmark, the Danish UBL subset, of which NES is a subset, was released in November, and several ERP vendors have since then been implementing the standards in their ERP systems.

(2) Leveraging Trust

It is expected that NES will leverage trust in eProcurement with its common set of standards. By reflecting the convergence of 6 different countries on a specific subset, the NES project will contribute to lessening complexities and uncertainties in eProcurement. It will make it easier for software vendors just to pick the NES UBL subset as a common standard and eliminate confusion surrounding this.

Transparency and openness are also key in here for increasing the levels of trust, particularly in governmental implementations of current and future NES profiles. By shifting from proprietary to open standards, governments will be assigning to citizens broader possibilities of scrutinizing governmental purchases, and to economic operators the possibility of making sure about the competitive nature of tendering processes.

Systematizing the Barriers

Table 3 systematizes the barriers identified in the lines above within the overarching scheme of the Breaking Barriers to eGovernment project. The Breaking Barriers Project identified seven categories of barriers: leadership failures, financial inhibitors, digital divides and choices, poor coordination, workplace and organizational inflexibility, lack of trust and poor technical design[243]. The left column portrays some barriers related to public procurement in general, and eProcurement in particular, which may have been experienced in or addressed by the NES project. The middle

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[241] See European Commission, "i2010 eGovernment Action Plan: Accelerating eGovernment in Europe for the Benefit of All" (2006), on-line: http://europa.eu.int/information_society/activities/egovernment_research/doc/highlights/egov_action_plan_en.pdf.

[242] According to the Commission eProcurement Business Survey, around 50% of European SMEs don't bid in public tenders outside their countries more than occasionally. With regard to cross-border electronic procurement, the companies point out that the most significant barriers to its development are: incompatible IT standards; inappropriate design of tendering systems; inadequate legal framework; and linguistic barriers. Also among the reasons these companies believe as preventing the generalized use of eProcurement in the EU, the most salient are: different rules in Member States; and complex rules in tendering procedures (see European Commission, *supra* note 4). The NES project, in line with EU policy on eProcurement , was very sagacious in purporting to solve the technical and organizational dimension of these barriers. If the perception of EU SMEs with regard to the legal dimensions of these barriers will also shift at some point, remains to be seen.

[243] http://www.egovbarriers.org

column portrays some other barriers that NES itself have faced, explicitly or not. The right column portrays the particular insights and actions of the partners to prevent or address the several barriers foreseen or experienced in NES.

Table 3: Barrier Dimensions

	External Dimension (Barriers to eProcurement)	**Internal Dimension (Barriers to NES)**	**Insights and Actions**
Leadership	Last minute approach to the new Directives' implementation by many EU countries, unveiling a relative neglect of public procurement's importance in EU law and policy. May prompt or sustain other barriers of coordination, digital divides, organizational inflexibility, trust, and technical design.	Initial difficulty in motivating the partners to join the project.	Common understanding among the partners with regard to standards might contour lack of more in-depth legal certainty. Importance of Denmark's initial experience with e-Invoicing and UBL (the OIOXML Elektronisk Regning). Adoption of a phased approach, targeting basic priorities (e-cataloguing, e-ordering, and e-invoicing), discarding other issues (e-signature), and leaving some for a second moment (e-tendering). NES has been adopting a decentralized structure, and working in a commons-based peer production model in developing its subset. The informality of its bazaar-like architecture has so far worked as an instrument to contour the bureaucratic difficulties that a more centralized structure could pose in the beginning, and was instrumental for the project's uptake – though it is now expected that a more centralized structure will increasingly exist. NES adoption of open standards and open source democratizes possibilities of participation in the innovation process to society at large – that is to say, it shares leadership with citizens.
Financial	As in other eGovernment services in general, eProcurement may experience financial inhibitors which stem, mostly, from the fact that costs are more visible than benefits.	Urgency in granting resources for the project[244] carried out the premature adoption of a non-official version of UBL (this, on the other hand, generated initial interoperability / technical design problems).	Though there is not a centralized calculation of the project's benefits, each country has its own calculations of internal benefits. This does not seem to have posed any barrier to the development of NES, and to its raising resources internally within each country involved.

[244]Though this refers to Denmark's e-invoicing project and not directly to NES, we here assume that early barriers that could have hampered the former would have equally thwarted the latter.

		Difficulty in convincing the partners to coordinate financial resources to apply for a CEN/ISSS workshop.	
Digital Divide	Traditional Public Procurement processes tend to exclude SMEs, as much as electronic public procurement does if carried out through inconvenient and unaffordable forms.		By devising a basic set of open standards, and raising it to the level of a cross-border paradigm, NES will be instrumental to the Directive's desideratum that “[t]he tools to be used for communicating by electronic means, as well as their technical characteristics, must be non-discriminatory, generally available and interoperable with the information and communication technology products in general use”. This will be essential to include SMEs in eProcurement processes, and reduce the levels of inequality between these companies and bigger ones.
Coordination	Difficulties in agreeing on common standards.	Initial difficulty in agreeing on a common standard. Possible hidden issues with regard to intellectual property vis-a-vis the partners' existing copyright laws, and OASIS IPR policy.	In spite of the initial difficulty in agreeing on a common standard, there was the perception that openness was indispensable.
Workplace and Organization	Difficulty of changing an existing culture that always used to deal with paper form, a hands-on approach to tendering, and a more or less localized supply – even more serious with respect to public procurement.		By ensuring that companies from each of the countries involved will use the same format whether they are dealing with other companies or governments, from their own countries or from others, NES is believed to make cross-border eProcurement easier for their companies, at the first level, and for their governments, at the second – though, it should also be remarked that the implementation of the standards will be carried out by different software applications vendors, and benefits for users might thus come indirectly, from the harmonization of these applications, and, I would add, from the network effects that may positively stem from their collective adoption.
Trust	Obscure and cumbersome traditional paper-based public procurement processes may prompt lower levels of trust than open and accessible electronic	The lack of clarity with regard to NES’ intellectual property policies vis-a-vis those of OASIS and the governments involved	By reflecting the convergence of 6 different countries on a common standards' subset, the NES project might contribute to lessen complexities and uncertainties in eProcurement, and thus to

	procurement platforms.	may undermine the adoption of the subset.	leverage trust – which is likely to be potentialized by the openness and transparency of NES standards and guidelines.
Technical Design	Difficulties in promoting interoperability. Existing procurement systems for business-to-business are mostly based on EDI (UN/EDIFACT), which demands prior bilateral agreements, pre-synchronization of data, modification of internal processes, and is characterized by an overload of options to choose. Result: exclusion of SMEs (though being primarily an issue of technical design, problems of coordination, organization, and digital divides are also raised in here).		Addresses the need of promoting interoperability from a holistic perspective (focusing on semantic, organizational and technical dimensions of interoperability). NES focus on business-to-business procurement as a first stage towards adopting its same set of standards for business-to-government processes. By doing so, it offers a basic profiles-based harmonized subset of open standards, tailored for specific business needs, and prepared for cross-border trade, but also expected to be used to break these same barriers with regard to public eProcurement. The idea is to create something simple, but not so simple that can't be adopted by companies. NES seeks to avoid prior experiences such as the UBL 1.0 based 'Swefakturan', from Sweden, which is too simple, and cannot be really used by any company – though it was developed so as to make small companies happy. Balance between being simple but not to simple. In its further development, it is perceived as essential that NES is kept compatible with the UBL, operating within the frames of that set.

Conclusion

The NES project offers an auspicious informational platform to further cross-border electronic procurement among the countries involved and internationally. It comes to fill in an important lacuna, and addresses many existing barriers to eProcurement with a series of good practices that will hopefully find resonance within the United Nations standardisation body (UN/CEFACT) at some point. This, indeed, lies at the very core of NES ambitions for the way ahead, as much as attracting new countries to join the group.

As NES grows, the challenges the partners already face in trying to coordinate 6 countries will certainly grow together, and a more centralized structure will likely be necessary. At this point, problems of administrative law that thus far have not been perceived as a hurdle may surge, besides other hidden issues that dedicated legal bodies may then identify – as, for instance, the intellectual property aspect discussed above. A first sample of these problems will probably develop as the process towards the CEN/ISSS Workshop Agreement unfolds.

It is still very early to judge the progresses of NES, and the extent to which it will contribute to achieving the ambitious objectives set forth in the European Commission Action Plan. The NES

Steering Committee's Chair believes that until 2010 it will be possible that cross border public procurement will develop between some countries. Among the Northern Countries, themselves, she believes that maybe 50% of them will be able to fully conduct cross-border public procurement through electronic means.

More than objective numbers, though, NES already provides an elegant portfolio of good practices that should be praised for its own conceptual value: an open and transparent approach to standards, a phased strategy which was able to identify priorities, eliminate unachievable goals, postpone others, mobilize a different number of partners around its objectives, be fast enough so as to secure funds, and learned enough so as to reflect upon the unintended consequences of the hasty decision for a non-official standard, and, overall, focus on the normally less worked out dimension of public procurement practices – the market, devising usable instruments to streamline its adoption of eProcurement standards, which will inevitably carry out a better capability of SMEs to deal with electronic procurement processes, and, in the end, to do electronic business with governments. A virtuous cycle, which will hopefully be perceived by many other countries that will join NES, carrying out international recognition for this insightful project.

Case Study: Cross Border Tenders: A Joint Belgian–French initiative

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Definition of the Case Study

The Cross Border Tenders public procurement activity focused on in this study is a practical example of an experiment in computerized 'mutualization': the shared operation of, or investment in, ICT resources.

This initiative to develop software to manage an electronic catalogue of current supplies is a partnership between contracting authorities in two EU Member States: the Federal Public Service of Human Resources and Organization in Belgium and the French Ministry of Finances, Directorate-General of the Modernization of the State. They had defined common functional requirements for which the jointly developed eCatalogue software is expected to provide an answer. Similar needs are faced by many other contracting authorities, even when they have different characteristics and activities. In the second phase of the project, it was therefore planned to open the use of the software to other authorities who felt it would be of assistance in meeting their procurement needs.

The potential importance of their investment in this software led the project's Belgian and French contracting authorities to decide to become partners in sharing the costs of developing this solution. This is an example of the practice of 'upstream mutualization' (shared investments). Opening the rights to the use of the project's eCataloguing software later to other administrations with similar needs could also be of value to relevant authorities in other EU Member States. This prospect was a 'downstream mutualization' (resource sharing), which saves 'new' users very heavy investment costs while encouraging them to contribute, at least partially, to the expenses incurred by the two initial developers and users.

Setting of the Cross Border Tenders case study

This case deserves to be studied because some of the difficulties it encountered are related more broadly to the 'new' practice of computerized mutualization, whose importance is increasingly acknowledged as a factor in the promotion and success of eGovernment. For example, the need for administrations[245] to work in networks and to simplify their processes constrains them to ensure the interoperability of their information processing systems and to coordinate their initiatives, which leads them to move closer within the framework of collaborations and resource sharing. The positive effects of such unions, or from proximity to larger administrations, also enable small administrative bodies to benefit in the development of eGovernment projects they otherwise might not have had the means to carry out alone in the long term.

This view was supported by the declaration in November 2005 at the EU Ministerial Conference in Manchester. They highlighted the importance of, and Ministers' encouragement for, the development of practices of mutualization and the creation of networks of common data-processing/computerized resources within the framework of the EU's i2010 eGovernment Action Plan (European Commission 2006) and this was further highlighted in the Ministerial Declaration in Lisbon in 2007. As described by Schneider (2006: 25–6): 'Ministers agree to work together and with the European Commission to share existing tools, common specifications, standards and solutions more effectively and to encourage collaborative development of solutions where necessary (…). Member states will during the period 2006–2010, share technologies, where appropriate develop common solutions and work towards interface harmonization of existing solutions in the field of eProcurement and develop means of dissemination across all levels of the public sector'.

[245] Particularly the federal structure of the Belgian State.

Two dimensions of the institutional and geographical contexts of this case reveal the complexity of the interests involved:

1. The public procurement considered here was designed at the initiative of two ministry departments in Belgium and France, whose territorial competences correspond to the territories of the concerned States. Both have particular competences relating to the promotion and development of eProcurement. subject to the institutional specificities peculiar to each State[246], the projects of those two entities seem to be relatively similar.
2. The plan to open the use of the software developed within the framework of this public procurement to other administrations with an interest in it would extend its scope much wider than these territorial borders, potentially covering all Member States and institutions in the EU.

The study has had to be limited mainly to the first phase of the project, involving only the initial two contracting State authorities in Belgium and France, as it has not yet made substantial progress beyond. However, the second phase also offers valuable insights because the prospect of opening the right of the use of the software to other administrations has represented one of the main obstacles to the project's further development for the Belgian and French partners. These seem to have had a considerable influence among its founding partners since the project's initial conception.

Challenges and potential barriers faced

Planning for the kind of computerized mutualization project studied in this case is naturally likely to consider three areas where obstacles are likely to occur naturally:

1. The lack of political good-will from people responsible within the concerned States, such as the will to lead this kind of project and to assign the means necessary for its effective implementation. (Related to the leadership failures and poor coordination barriers.)
2. The psychological dimension of such a project. This can result in some resistance to change, for instance in introducing new practices for open public procurement, or in a reluctance to accept constraints imposed by the legal status of another State. (Related to the workplace and organizational inflexibility barrier.)
3. The difficulty in gathering potential partners around sufficiently close functional needs that could be able to justify common initiatives and investments. (Related to the leadership failures, poor coordination and financial inhibitors barriers.)

As the international character of this Cross Border Tenders project seemed to pose a significant obstacle to its success, the study team felt it was essential to collect information through two parallel routes and distinct sets of contacts within each partner. This was needed to establish if their respective analyses of the common experiment diverge, partially converge or match each others' views. In addition to establishing these parallel contacts, a key aim of the study's methodology[247] was to allow participants sufficient spontaneity to enable them to fully express their view of the encountered difficulties.

Adoption and implementation of Cross Border Tenders initiative

Perceived and real barriers

Participants in the study reported that they were conscious that certain difficulties concerning the three categories highlighted in the previous section could have compromised the launching of the project. In practice, however, they found they were not confronted by them or, at least, did not find they raised a sufficiently serious constraint to be of significant concern.

[246] Particularly the specific requirements of the federal structure of the Belgian State.
[247] For more details of the study's working method, see Appendix 2 at the end of this study report.

The study's working method revealed a particularly interesting insight into the project's adoption and implementation. Although its contacts indicated on behalf of each of the partner administrations a similar overall perception of the obstacles met, the study's researchers observed that their analyses diverged on certain significant points. For example, some obstacles identified by study participants from both administrations were located by different interlocutors in answers to different questions.

Even such divergences are not fundamental. But they do show the need—and the difficulty of doing so—to define and to speak a common language with all the partners in any project of computerized mutualization. It also indicates why the project prioritized the initial establishment of its functional needs and objectives (e.g. in the organization of its working method and the rules of behaviour between partners). This challenge becomes much more important, and delicate, when the project takes on an international dimension as this one did, when the partners can be influenced by their working within different operating modes or by their different sensitivities.

The main actual barriers encountered

From an early stage in the project, the legal aspects were found to be less easy to resolve than the technical ones, particularly questions about who is in charge and the precise nature of the contractual solution, such as: 'Who is the lead contractor?'; 'How do we combine budgets across national borders?'; and 'Where does responsibility lie?'[248] The resolution of such key issues in this case offers important insights for others undertaking similar ventures.

The most significant barriers actually encountered during the project's adoption and implementation were:

1. definition of the legal status/framework of the operation;
2. the operation's administrative framework;
3. organization of the collaboration between partners; and
4. the conditions for opening the rights of software use to users other than the initial two partnering authorities.

Definition of the legal status of the operation

The involvement of two administrations from different Member States seeking to agree a common approach to public procurement caused a primary difficulty in defining the legal status of such an international partnership, resulting from the combined effects of several laws to which the contracting authorities must conform. For instance, the methods of transfer and execution of public procurement are subject to legislation especially devoted to the public procurement, inspired by EU directives[249] (as transposed to laws within each Member State) and by general administrative laws specific to each Member State, which can vary significantly between States. The European 'inspiration' is only very partial, since the directives relating to the coordination of the procedures of public procurement primarily govern aspects related to the signing of procurements, while the execution of these is left within the control of the national authorities.

In addition, the relevant 'contracting authority' in the large majority of the cases is a 'public authority' that is subject to legislation framing administrative action in each State involved. This legislation can be concerned with a variety of factors, such as: the budgetary dimensions of any administrative operation; the formalities that administrative acts must meet (e.g. formal motivation of such acts); the mechanisms of delegation of powers within an administration; and the mechanisms of internal as external control which surround the adoption of these acts. These legal frameworks obviously vary within each State, according to the characteristics of each category of contracting authority (e.g. State; public companies; local authorities; public interest organization; or mixed structure).

[248] These questions are based on comments by Jean-Pierre Gennotte (2006) of Belgium's Federal eProcurement Service.
[249] See, for example, European Commission (2004).

These considerations suggest that, in spite of the existence of a common framework of reference constituted by EU directives, the legal status of each public procurement is likely to vary appreciably, according to the profile of the concerned contracting authority. The consequence is obvious: any public procurement carried out on the common initiative of several contracting authorities with different profiles will have the effect of increasing the complexity of the legal status, since it will be necessary to take account of all the diverse rules applicable to the operation. The difficulty becomes even greater when the public procurement involves several contracting authorities in different Member States. The common base formed by the directives does not offer to the contracting authorities more than very limited guidelines on the direction the operation needs to take.

Within the European framework, partnerships frequently link public actors from different Member States, as in this case. Nevertheless, the legal status of these operations remains uncertain, particularly because of the interplay of concurrent legislative framework. Appendix 1 at the end of this study highlights three such examples to offer further insights and reflections to those provided by this study, particularly in relation to the complex crucial demands posed by the need to coordinate cross border procurement within a consistent international framework while at the same time addressing national and institutional interests in sustaining local modes of operation.

The administrative operational framework

A number of legal and financial factors in the Cross Border Tenders case have raised concerns for the management of the administrative authorities involved, especially regarding their internal procedures and budgetary controls. For instance, the operating modes of the public authorities were characterized by a high degree of formality and a general rigidity that does not favour the modernization of practices, such as through eProcurement processes. An example of a specific institutional constraint was that the concerned Belgian contracting authority had available only a limited amount from its Ministry to spend within a particular financial year, as part of its annual budgets. This slowed the pace at which the development could progress, such as by limiting the undertaking of important studies and preliminary steps to help the project's initial definition.

This case, like any project of mutualization, naturally encounters difficulties of this kind because the participation of a number of public partners implies a rupture with the bilateral character (one contracting authority/one economic operator) of the traditional procedures for open public procurement. The complexity this entails is due primarily to the adoption of procedures affecting the responsibility of operations which are not generally adaptable to the creativity required to be effective.

Organization of the collaboration between partners

Participants in the case study clearly indicated that, from the launching of the project, they were conscious of the need for defining precisely the terms of collaboration between the public partners. Various instruments were considered in order to frame the political agreements and the choice of people from the administrations to manage this collaboration.

Obstacles seem to have resulted particularly from difficulties related to the provision of financial and human resources contributed by each partner to the management of the project. Our analysis supports the frequent observation on the management of experiments of mutualization that the enthusiasm of the principal promoters is not always enough to convince their own authorities of the need to place at their disposal the appropriate means for realizing such a project—or, in the absence of such means, the urgency to seek through a study of the project's legal aspects new ways in which those could be involved. The main problems hampering progress in this case seem to have arisen from the new character of such a partnership and the difficulty of locating it within familiar landmarks for the political and administrative authorities.

Opening the rights of use of the software to other users

The prospect for opening of the rights of use of the project's software outside the initial two contracting authorities has represented a substantial difficulty since the launching of the project.

The path recommended was to achieve this within the framework of open. Our analysis of this suggests the following observations:

- Extending the rights to use the software to new users could cause difficulties of a methodological nature, such as the definition of the aims of opening of the rights of use (e.g. diminishing the financial investment burden or developing a community of users for the future improvement of the software) and determination of the organization of the financial relations between all stakeholders. However, those do not represent an obstacle to the signing of a public procurement, which holds at a distance these 'new' users. The methodological requirements also do not exercise an influence on the management of the public procurement; at most, they affect some of the aspects of the partnership between the two original contracting authorities who, for example, will have to agree on the mode of the software intellectual property when there is a transfer of usage rights in their favour.

- At the stage of the signing of the public procurement, the founding Belgian and French contracting authorities must obviously take into account the prospect of opening the software to other users, particularly if the contract which binds them to the service provider does not operate, in their favour, a transfer of the software property, but constitutes only one licence of use. In this case, the contract's terms and conditions would offer much flexibility for the contracting authorities to support widening use of the software to other administrations. The study's participants from the relevant Belgian and French administrations suggested that although this kind of contractual issue is important, their actual experience was that this dimension may be more of a perceived than a real barrier. However, their concerns indicate that this aspect must still be taken into account in the management of such projects.

- The appeal of 'open source'[250] licences as a support for the opening of the community of users of the project's eProcurement software is not surprising. This type of licence is generally known to guarantee flexible conditions of use and diffusion of software. In addition, the open source model is often presented a favourable to the development of eGovernment, because it helps to support capabilities such as interoperability, the durability of its data or the independence of the authorities with regard to ICT service providers. Nevertheless, the recourse to open source software can, in certain cases, compromise the success of an operation of mutualization when it covers a downstream phase of resource sharing, as in this case here with the opening to new users.

- Allowing the greater freedom in use enabled by an open-source software (e.g. in important user adaptability of the software) could lead to a certain anarchy among the users that diminishes the benefits that can be obtained through diverse experiments among different user communities. In addition, a high degree of diversification of the software can place each user in a situation of dependence with regard to the people who contributed to this diversification by the customization of the original software.

Again, it is worth noting that any obstacles in this respect are not imposed by the international dimension as such.

Factors affecting this case of significance to wider eGovernment initiatives

The Seven Barrier Categories

The Breaking Barriers Project, funded by the EC, identified and explored the key barriers to eGovernment in Europe. The project team proposed seven key barrier categories of obstacles to eGovernment progression. The categories are intentionally broad and tied to a multitude of more specific barriers relevant at different governance, institutional and jurisdictional levels. This categorization is particularly valuable when discussing the barriers relevant to this case which may

[250] For example, the Modinis Free/Libre/Open Source Software initiative (http://www.flossworld.org).

have relevance for other eGovernment initiatives. In summary the barriers are: leadership failures, financial inhibitors, digital divides and choices, poor coordination, workplace and organizational inflexibility, lack of trust and poor technical design[251].

The following are the main issues that arose during the implementation of the in the Cross Border Tenders initiative of relevance to the seven key barrier categories identified by the Breaking the Barriers to eGovernment project (no new barriers were detected in this case study outside these categories).

Leadership failures: The failure to resolve certain key areas of direction between the main partners, such as over re-use of the eProcurement software, was a significant obstacle. Questions about who is in charge of what required much attention and have at times been difficult to resolve.

Financial inhibitors: Some financial constraints with the timing of the Belgian budget affected the pace of progress. Combining budgets across national borders was a general inhibiting factor.

Digital divides and choices: This was not a significant factor in this case.

Poor coordination: Different legal frameworks and modes of operation in the different States and contracting authority involved made the coordination of efforts among the stakeholders complex and difficult in some areas. In such circumstances, the legal status of each public procurement is likely to vary appreciably as the result of different local interpretations of the legal requirements of the local contexts, even when there is a common framework of reference (e.g. relevant EU directives). In addition, difficulties in identifying where responsibility lies made it harder to have effective coordination. Lack of agreement on extending use of the software was a coordination as well as leadership obstacle.

Workplace and organizational inflexibility: Constraints on financial and human resources made the management and running of this project more difficult. More generally, legal and financial constraints created difficulties in opening the authorities to new ways of management and modernization to improve the effectiveness of open public procurement.

Lack of trust: Full trust between partners in a computerized mutualization project like this is essential, but can be made more difficult by the international dimension in cross border procurement.

Poor technical design: Technical software design and implementation problems punctuated the project's progress but did not affect the overall fate of the operation, so could not be seen as significant obstacles.

Relative levels of influence of key factors that could affect eGovernment projects

On a 100% scale, the following are approximate relative levels of influence on Cross Border Tender's case of some key factors that could affect eGovernment projects:

- Political, administrative and organizational (40%): the need for administrations to work in networks and to simplify their processes constrains governments to take into account not only the national dimension of barriers to eProcurement procedures, but also those related to pan-European projects. Furthermore, when problems of interoperability of the information processing systems and the coordination of such systems could become key factors to their success.

- Legal (30%): This is related mainly to public procurement and eProcurement regulations, intellectual property rights (open source software, etc), and trade law (contract law, contractual relationships, etc) in its international/European dimension. The resolution of such key issues in this case offers important insights for others undertaking similar ventures.

[251] For more details about the Breaking Barriers to eGovernment project please see http://www.egovbarriers.org

- Financial (20%): the annual budget accountancy system within public administrations may block any further attempt to create such partnerships, if there would not be a clear political will at the European level to get over this financial dimension.
- Social and economic (5%): some of the difficulties this case encountered are related to the 'new' practice of computerized mutualization, whose importance is increasingly acknowledged as a factor in the promotion and success of eGovernment. Difficulties related to the provision of financial and human resources contributed by each partner are key factors to a good management of such projects.
- Technological issues (5%): to develop such initiatives the technical architecture of the software may take into account the interoperability of the systems. Such barrier should be overcome by previous partnership between the contracting authorities, as it was the case here.

Conclusions

The case examined in this report is characterized by an international dimension that is still rather new in the field of public procurement, at least in terms of the involvement of several contracting authorities from different Member States. The diverse perceptions and interests of the different stakeholders indicate the importance of developing a common language with all the partners in any project of computerized mutualization. Some issues perceived as potential barriers at the outset of this study did not prove to be the cause of actual failures, such as technical software difficulties.

Many of the main difficulties were of an administrative nature that needed to be addressed by legal and methodological methods designed to overcome recurring constraints, such as budgetary timing and licensing the rights for software use. A fuller examination of such issues in this case required further investigations, but the administrations concerned were not been able to organize this. This inability to undertake the necessary research to throw more detailed light on why the management of the new eProcurement operations had difficulty in overcoming some obstacles could be a reason why the study as reported here does not reveal particular obstacles of a political or psychological nature. Nevertheless, these factors seemed to play a significant role in the project's failure to make more progress, as indicated by the problems with the Belgian authority's budgetary timing and licensing the re-use of the software.

At first sight, the failure to make more progress in the second phase could be attributed to the international dimension, as a number of harmonization and related issues need to be addressed (e.g. by the relevant European authorities). However, it is essential to observe that the encountered difficulties largely went beyond the international dimension of the operation (e.g. extending to the operating modes of the public authorities and general characteristics of mutualization projects that constrain the ability of public authorities to depart from their traditional practices).

The study did not reveal many obstacles directly related to eGovernment developments as such. For example, it did not identify particular difficulties arising from the use of 'dematerialized' electronic digital means in the relationship between administrations and their interlocutors (citizens, companies, associations, etc.). Instead, the main obstacles identified in this report could also be found in fields other than eGovernment (e.g. in mutualization for procuring machines to support work common to several local governments).

However, an important issue as highlighted above is the consideration of whether or not to take up the potentially valuable use of an open source model. This needs to be done through a careful objective evaluation of its appropriateness for achieving the specific aims of each mutualization project—rather than perceiving it as an ideological matter. For other operations similar to those of this case study, it should be possible for the contracting authorities who wish to acquire rights in the software to develop a hybrid form of 'made-to-measure' licence. This could incorporate some clauses from the open-source license model, while taking account of other requirements imposed by objectives suited to mutualization operations but which might not conform to open-source standards.

A deeper general and systematic study of the methodological and legal aspects identified in this report—with the aim of benefiting the greatest number—is needed to ensure the nascent practice of open public procurement as illustrated by this case is given the chances to succeed that it deserves, particularly in eGovernment.

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Appendix 1: Other examples of international public procurement partnerships

The Sustainable Cities Project SUS-CIT[252]

Several territorial communities of Belgium, France and Germany joined together within the framework of a partnership seeking to realize a working programme granted by the European structural funds. The coordination of the initiative is led by the Walloon Region in Belgium. Although the relationship between the EU and this consortium of communities from different States is not directly related to the kind of public procurement focused on in this study, it is of relevant interest for the following main reasons.

The organization of the Walloon Region leadership facilitates the management of the operation and the running of the exchanges with their common interlocutor (the European Union). This kind of arrangement is a guarantee of the success necessary in any complex operation, such as the management a project of mutualization[253]. This leadership arrangement also suggests which legislation should be applicable to relations between the members of the partnership. In this case, it is the Belgian legislation which was indicated as the applicable law. Such a unique legal reference frame facilitates the ability to take account of the legal aspects of the partnership. This arises from the contractual clauses governing, on the one hand, the principles of accountancy and, on the other hand, the cooperation with third parties. Each public procurement that a partner (one of the local authorities) makes must be subjected to the applicable law of its Member State. Thus, here there is no difficulty related to the choice of a legal status.

With regard to public procurement, this experiment is not directly exploitable in the definition of the legal status of a cross border tender as each public procurement likely to be passed within the SUS-CIT framework does not have an international characteristic. However, this example does

[252] An initiative within the in the framework of the European Commission's INTERREG IIIB ENO programme (see: http://www.nweurope.org/page/projet.php?p=&id=592).
[253] With or without an international dimension.

suggest—indirectly, but certainly—that the facilitation of operations with international characteristics between public partners require solutions that support to the maximum the application of a single/unique legal status.

Contract of Concession for an international high speed railway line

An international agreement was reached between France and Spain in 1995 that created a procedure attributing a concession relating to the realization and exploitation of a section of high speed railway line between Perpignan in France and Figueras in Spain. The international dimension of this unique operation is obvious as it involves partners from two different States, which suggests the need for determining the law applicable to the concession. This was addressed, for example, in Article 30.5 of the concession contract:

> *The law applicable to the Concession is:*
>
> *the provisions of this convention, and*
>
> *the common principles of the rules applicable in France and Spain to sub-contracting works and public services including the rules released by the supreme administrative jurisdictions on the matter; if no common principle can be worked out to solve a determined question, the referees observe the rule which, taking into account the public interests in question, appear to them best adapted to the interest of the Concession, chosen among the applicable rules in France or Spain, or inspired by those.*

This concern for finding an appropriate legal status corresponding to a “common denominator” to the systems of both States appears ideal at first sight. However, it isn’t clear that it is a realistic aim. For instance, the definition of common rules in the relevant legislation and case law of both States supposes that their national systems are sufficiently close and are founded on common concepts, without which the definition of a common base would not be possible.

In addition, following the terms of this clause and of Article 30 read as a whole, the applicable law is primarily regarded as an instrument for helping the resolution of any litigations by, if necessary, helping to choose the referees for the litigations. These referees will determine *a posteriori* the law applicable to the management of this concession. A similar approach is not really compatible with the elementary requirements of legal security. This legal security concern is not met in a system which refers to common rules from two different national systems. The clarity of the legal status is completely lacking. A similar manner of proceeding therefore does not appear favourable to supporting the leadership of projects of mutualization with international dimensions, where the lack of reliable reference points can be a real obstacle to their effective management.

Franco–Belgian joint public procurement relating to cremation facilities

A convention of cooperation has been established to govern the collaborative methods of signing joint public acquisition and maintenance of installations of cremation between partners from France and Belgium. This involves two structures of inter-municipal cooperation: the inter-municipal IDETA in Belgium and French ‘Urban Community of Lille’. The international dimension is again essential here, particularly for the definition of the legal status of the public procurement, as it covers two contracting authorities from two different States (and two legal systems).

The Belgian law has been declared applicable here (e.g. with the procedures of signing a joint public procurement in execution of the partnership). IDETA is charged with ensuring the coordination of the operations and carrying out public procurement in the name of both contracting authorities. This leadership by IDETA does not exclude intervention by the Urban Community of Lille in the selection procedure, in particular by giving its approval prior to the notification of the choice of the supplier at the end of the signing procedure.

This Franco-Belgian co-operation relates, however, only to the operations regarding the signing of the public procurement. After this, the execution of the public procurement will be carried out in accordance with each national law. Any litigation during this execution process will thus be regulated according to the law and the procedures in force in the State concerned with the services.

The following general observations are relevant to these mechanisms:

The choice of one (unique) national legislation applicable to the signing of the joint public procurement facilitates the definition of the legal framework and avoids the insecurity caused by reference to rules common to both States. Although this alignment of the respective choices of the leadership and applicable law is ideal from many perspectives, it can also raise certain practical obstacles to the management of the operations which should not be minimized. For instance, it is necessary for one of the partners to agree to intervene in an operation in ways that is not governed by 'its' national law; in certain cases, this can create obstacles of a political or psychological nature. In addition, an elementary climate of trust must reign between the partners as one must giving up part of its control of the operation to the benefit of the other partner.

The need for public procurements to follow each national law regarding their execution can help to avoid difficulties resulting from a joint international public procurement (e.g. with regard to different modes of payment). Each contracting authority can regain control of its operations after having benefited from the advantages of a common signing. This approach lends itself well to the execution of a joint public procurement where there is a supply contract in which the services need to be rather easily individualized.

Franco-Belgian public procurement of data processing departments

Two solutions were considered initially for an agreement between France and Belgium on public procurement for data processing/computerized departments. These reflect characteristics outlined in the Cross Border Tenders case that is the focus of this report: ie a reference to the common framework traced by EU directives relating to public procurement, from which Belgian and French legislation proceeds (and appear to be extremely close to each other).

The choice of one of the two national legislations to govern the signing of the public procurement, and the search for a solution that takes account in its execution of the differences in treatment in each administrative system (e.g. the procedures for paying for the services).

The first solution may seem tempting, but this does not in itself make it possible to define with sufficient precision the mode of the public procurement, as discussed earlier in this report. The directives do not govern all aspects of the signing of a public procurement. For certain activities, they give to the Member States only an indication of minimal obligations to observe, leaving to each one the 'translation' of those obligations into more precise rules. The directives also do not tackle the administrative dimension of the contracting authority's actions. As previously explained, this aspect is left to the discretion of the Member States and refers to each national system. Finally, it needs to be stressed that the EU directives do not relate to the execution of public procurements. It is therefore necessary to refer to the concerned national legislation, or to a base of common principles. The unsatisfactory character of this arrangement has been previously discussed.

The second solution seems to have been favoured by the promoters of this case, who were confronted with the difficulties presented by the management of differentiated procedures for the execution of public procurements. This situation is similar to the above example in this Appendix of the Franco–Belgian joint public procurement relating to cremation facilities, which ensured a common attribution of public procurement requirements by allowing the execution to be differentiated.

However, it is not clear that the same solution could be transposed to the joint public procurement of data processing departments, since the services provided by the operator (data-processing/computerized service provider) cannot be so easily differentiated. The dematerialized character of the electronic services does not lend itself to a 'cutting up' of the financial contributions corresponding to the shares of the services from which each contracting authority profits. Such cutting would be possible only if the public procurement granted two licences for the use of the software developed. The total amount of the public procurement would be thus divided in two amounts, each representing the cost of a licence from which each contracting authority would be titular.

The aim of opening the use of the eCatalogue software to other administrations in the Cross Border Tenders initiative of this case study required sufficiently flexible conditions to encourage a preferred

solution that grants a licence of use involving a complete transfer of the rights of the software, so that both contracting authorities could control its later diffusion. However, this question is less related to the international dimensions of the project than the management of the intellectual property rights within the framework of the public procurement.

Appendix 2: The study's information gathering strategy

As explained in the main study above, its prime research aims were to prioritize parallel contacts in the two administrations and to encourage the spontaneous expression by participants of their experiences and perceptions of the project. This was carried out in the following planned phases:

- End of September 2006: Description of the project (context, subject, needs, etc.) by the principal correspondent of the Belgian administration. This was not concerned with obstacles to the realization of the project, as it was unnecessary at this first stage to duplicate subsequent steps of information gathering.
- Beginning of October to mid-November 2006: The phase of 'spontaneous' expression (in writing), when representatives of both administrations were invited to identify the obstacles they perceived as hindering the success of the project. During this period, the researchers wrote a questionnaire intended to be sent later to participants to enable them to react to what the researchers had imagined the obstacles would be. This questionnaire was designed without knowing the content of opinions and analyses expressed spontaneously by participants during this period.
- Mid-November 2006–beginning of January 2007: Processing of the questionnaire by the representatives of the concerned administrations. During this period, the researchers identified similar cases likely to nourish, by comparative data, the study the eProcurement experiment of mutualization being studied (see Appendix 1). This involved the examination of questions related to the international dimension of the project, as well as the intrinsic characteristics of mutualization experiments.
- Mid-January–February 2007: Drafting of the report on the research.

Conclusion

Both the projects examined here have an international dimension which could be expected to introduce new co-ordination problems into the initiatives, particularly for NES with a greater number of countries involved from the outset. In the future, the challenges faced by partners already in the co-ordination of six countries can be expected to grow and a centralized structure may be necessary. For CBT the international dimension was a clear barrier to development to the second phase, particularly through harmonization and related issues. Different legal frameworks and modes of operation in the different States and contracting authority involved made the coordination of efforts among the stakeholders complex and difficult in some areas. However, as noted above the encountered difficulties went beyond the international dimension of the operation, for example extending to the operating modes of the public authorities and general characteristics of mutualization projects that constrain the ability of public authorities to depart from their traditional practices.

Some of the barriers experienced in these projects were distinctive to cross border procurement, rather than the most commonly experienced barriers identified by the Breaking Barriers project. The study did not reveal many obstacles directly related to eGovernment developments as such. For CBT, the main obstacles identified in this report could also be found in fields other than eGovernment (e.g. in mutualization for procuring machines to support work common to several local governments) and barriers identified in other cases, such as poor technical design, were not observable.

Both projects are at an early stage and it can be expected that further, possibly also distinctive barriers will emerge in the future. It is still very early to judge the progresses of NES, and the extent to which it will contribute to achieving the ambitious objectives set forth in the European Commission Action Plan. If centralization is required, problems of administrative law that thus far have not been perceived as a hurdle may surge, besides other hidden issues that dedicated legal bodies may then identify – as, for instance, the intellectual property aspect discussed above.

Overall though, these business facing projects constitute an auspicious start to the development of further cross-border electronic procurement among the countries involved and internationally. As noted above, NES already provides an elegant portfolio of good practices that should be praised for its own conceptual value: an open and transparent approach to standards, a phased strategy which enabled effective prioritization and a focus on the normally less worked out dimension of public procurement practices – the market.

7. Employment Mobility: Online job search in the EU

Background

Mobility, an underlying principle of the EU, can have a number of potential benefits for the economy, society and the individual citizen. Employment or occupational mobility (i.e. mobility between jobs) and geographical mobility (i.e. between Member states and/or regions) can enhance economic competitiveness; potentially reducing the mismatch in supply and demand for labour across sectors and regions of Europe thus increasing the flexibility and adaptability of the labour market. Mobility can also lead to a better quality of life for individuals, for example leading to better pay and working conditions. Employment and geographical mobility are key aspects of fulfilling the Lisbon Strategy of making the EU "the most competitive and dynamic knowledge based economy with improved employment and social cohesion by 2010" (European Commission, 2002); and the importance of promoting mobility across Europe is evident within numerous legislative and practical initiatives at the local, regional, national and pan European levels.

However, mobility in Europe is quite limited (Eurobarometer, 2006). There are a number of reasons for this, including, lack of relevant skills, language, recognition of qualifications in different member states, access to health care, fragmentation of information and lack of transparency of job opportunities, finding a job for a spouse / partner, and a "weak mobility culture" (European Commission, 2002; Eurobarometer, 2006)[254].

One strategy to enhance employment mobility is the provision of online job search services across Europe. Online job search can assist with increasing the transparency of job opportunities and collating all information about available positions into one place. Such services have the potential to increase the efficiency of the job market by increasing the number and quality of matches between employers and job seekers (Autor, 2001). For job seekers online job search can provide a convenient way to search for opportunities related to their skills and interests; for employers job search websites can be a cost effective and efficient way of recruiting staff. Online job search is one of the 12 citizen services that are measured in EC funded benchmarking activities; and was highlighted in the i2010 eGovernment action plan as a high impact, ePublic Service designed around citizens and business needs (European Commission, 2006).[255]

Online job search services in Europe

Online job search services have been created by the EC at the Pan-European level and each member state (or its regions) is responsible for providing a similar service to its citizens. There are two Pan-European online job search facilities facilitated by the European Commission: the European Job Mobility Portal (EURES)[256] and the European Researchers Mobility Portal[257]. In 24 of the 27 member states, job search is primarily the responsibility of central government; and online job search is available in all member state. In Belgium, Italy and Spain the responsibility for online job search services is held either jointly between the national and regional level (Spain), is in the

[254] See also mobility website: http://ec.europa.eu/employment_social/skills_mobility/index_en.htm
[255] Other services highlighted include social security services and services relating to studying abroad.
[256] See the portal at http://europa.eu.int/eures/home.jsp?lang=en
[257] See the portal at http://ec.europa.eu/eracareers/index_en.cfm

process of being decentralised to the regional level (Italy) or is based purely at the regional level (Belgium). An overview of these initiatives is provided in Table 4.

Table 4: Public online job search services in Europe

Country	URL	Level
Pan European (EURES)	http://europa.eu.int/eures/	EU
Austria	http://www.ams.or.at/	N
Belgium: Wallonia, Flanders, Brussels region	http://www.leforem.be/ http://www.vdab.be/ http://www.orbem.be/	R
Bulgaria	http://www.az.government.bg	N
Cyprus	http://www.pescps.dl.mlsi.gov.cy/	N
Czech Republic	http://portal.mpsv.cz/sz	N
Denmark	http://www.jobnet.dk/	N
Estonia	http://www.amet.ee/	N
Finland	http://www.mol.fi/	N
France	http://www.anpe.fr/	N
Germany	http://www.arbeitsagentur.de/	N
Greece	http://www.oaed.gr/	N
Hungary	http://www.afsz.hu/	N
Ireland	http://www.fas.ie/	N
Italy	http://www.borsalavoro.it/	R
Latvia	http://www.nva.lv/index.php?id=139	N
Lithuania	http://www.ldb.lt/	N
Luxembourg	http://www.adem.public.lu/	N
Malta	http://www.etc.gov.mt/	N
Netherlands	http://www.cwinet.nl/	N
Poland	http://www.epuls.praca.gov.pl/	N
Portugal	http://portal.iefp.pt/portal	N
Romania	http://www.anofm.ro, www.semm.ro, http://www.mcti.ro/888.html	N
Slovakia	http://www.upsvar.sk/	N

Slovenia	http://www.ess.gov.si/	N
Spain	http://www.inem.es/	R
Sweden	http://www.ams.se/	N
UK	http://www.jobcentreplus.gov.uk/	N

The features of online job search offered by member states and the EC tend to be quite similar. In general, they include: an online searchable database of vacancies for job seekers, additional guidance (e.g. about working in a different countries or career guidance), email alerts of jobs that match the users profile, facilities to post CVs to the website, the ability to manage job applications and in a small number of cases, such as in Finland and Malta, apply for jobs online. For employers the most frequent service offered is for them to publish and manage job vacancies and search the CV database, and to a greater of lesser extent have direct online contact with potential applicants. These online services are typically supported and complemented by job centres and call centres (European Commission, 2006b).

Success of online job search

Valuable indicators when measuring the success of online job search services include: usage statistics of the service, views about the usefulness of such services, sophistication / facilities available online, efficiency gains for businesses, efficiency gains for government, number of job matches and broader impacts on employment rates and occupational mobility. However, in the public sector the data available is limited; and predominately focuses on usage of sites, user views and the online features available on the website. In part this is due to the complexity of determining the role online job search plays within a whole range of employment services and mobility initiatives. Yet without improved indicators it is difficult to assess the value of online job search. In the remainder of this section the available data is summarised.

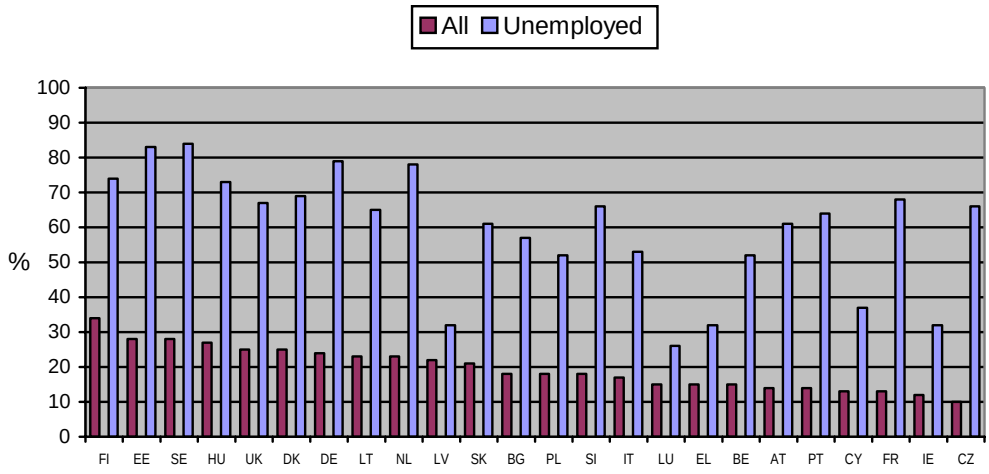
In terms of usage of online job search, in 2006 21% of Internet users in EU (25) had used the web in the last 3 months for looking for a job or sending a job application; and this figure rose to 67% for those who were unemployed (Figure 2)[258]. To put this statistic in context, 44% of Internet users had used the Internet in the last 3 months for interaction with public authorities, 49% of Internet users had used the Internet in the last 3 months for using services related to travel and accommodation, and 80% of Internet users had used the Internet in the last 3 months for finding information about goods and services (Eurostat, 2006)[259]. Thus, the proportion of Internet users who access this service fares relatively well when compared to other online activities but could be improved. However, this figure does not distinguish between rates of usage of government or commercial online job search nor between those who search for a job online and / or send a job application online.

From the available data online job search is a relatively popular eGovernment service. In a survey of EU(15) countries Internet users participants were asked about their preference for interacting with government for seven specific services (tax declaration, job search, request for personal documents, car registration, declaration to police and book search in libraries. Preference for online job search was the second highest, with around 58% of Internet users preferring to conduct job searches online as opposed to traditional methods (Graafland-Essers and Ettedgui, 2003).

[258] This data was accessed from the Eurostat database in January 2007 which was last updated in December 2006. The first year the data is available is for 2005. In 2005 EU (25) 19% of Internet users had used the web for in the last 3 months for looking for a job or sending a job application; and this figure rose to 59% for those who were unemployed. Please see: http://epp.eurostat.ec.europa.eu

[259] This data was accessed from the Eurostat database in February 2007 which was last updated in January 2007. Please see: http://epp.eurostat.ec.europa.eu

Figure 2: % of Internet users who used the Internet in the last 3 months to search for a job or send an application



Internet users who used the internet in the last 3 months to search for a job or send an application

Source: Eurostat, 2006.

In addition to the Eurostat data some public employment services do collect data on the usage of their websites, including data on: the number of unique visitors, number of job searches, the number of CVs uploaded and the number of vacancies available. As part of the study all 27 member states and EURES were contacted for this information; 8 of whom replied and 7 gave some or all of the data requested[260]: Belgium (Flanders region), EURES, France, Germany, Netherlands, Slovenia and the UK. This data is detailed at appropriate sections throughout this report. Other usage data can be collected from commercial online intelligence services, such as hit wise[261], which will also be referred to in the text below.

From the supply side, in the 7th measurement of electronic public services conducted by Capgemini[262] all EU27 countries apart from Luxembourg were given a stage 4 out of 4 rating for sophistication (CapGemini, 2007). Yet such measures are not indicative of use; and given the commercial context the 4/4 rating defined as, "The publicly accessible website managed by the service provider or by the administrative responsible level offers the possibility of an electronic supply of pre-selected jobs related to the given profile of the job searcher" is not in reality that sophisticated.

Why online job search is a good case study

Online job search services provided by government are a particularly interesting case for the Barriers study as they operate within a very competitive commercial environment. There are numerous commercial online job search services in Europe both at the pan European level and at the national level. The majority of these, such as Monster[263] and StepStone[264] offer citizens and

[260] Cyprus (no data available)
[261] http://www.hitwise.co.uk
[262] This study focused on EU(27) plus Norway, Iceland, Switzerland and Turkey.
[263] http://www.monster.co.uk/
[264] http://www.stepstone.com/

businesses similar services to those provided by government, such as, online search, company profiles and a searchable database of CVs for employers although they tend to be more vibrant and "sales focused" compared to government websites. In addition, a high proportion of companies advertise vacancies on their websites that can be browsed by job seekers.

A second reason why online job search is a good case study is the possibility for technological innovation in this sector. The group of web-based applications commonly called 'Web 2.0' provide major possibilities for overcoming barriers to recruitment and job-seeking on-line. Examples include the growing number of business orientated social networking sites based on social networks (such as LinkedIn[265], Passado[266] and Doostang[267]) that enable employers to advertise jobs and search for appropriate applicants, whilst job seekers can find out about those who are hiring and identify existing contacts who may be able to introduce them to the employer they are interested in. Another "job 2.0" site, Jobster.com encourages users to make use of a range of services including posting a Youtube video on their personalized homepage. A third interesting example is the recruitment website Zubka.com, where users can earn a recruitment fee which can be in the region of several thousand pounds for placing their contacts into new jobs. Web 2.0 applications are relatively absent from e-government in European countries (NAO, 2007), but these private sector examples highlight what might be possible for government employment agencies in developing their on-line services and could provide lessons in using innovations of this kind to overcome barriers to e-government more generally.

In short, online job search in the EU is an important case for a number of reasons. First, it is a key priority of the European Commission. Second the commercial context within which public services are operated is a challenge facing governments in a number of areas; and third web 2.0 applications (that are increasingly common in the commercial recruitment sector) provide potential solutions to overcome barriers to eGovernment development.

The embedded case studies

In the discussion below barriers to successful online job search services are identified and ways to overcome these obstacles are explored via case study research which included document analysis and interviews with key stakeholders involved with each initiative. The three embedded cases of online job search are: EURES, the online job search services provided by Slovenia and the UK.

These three cases were selected as interesting examples of online job search services provided at the national and Pan European level. As the number and sophistication of Pan-European services increase it is important to explore the challenges and advantages of those already in existence. EURES is particularly interesting as it attempts to provide a service for all job seekers in Europe; and in its 13 year history has had to adapt to changing circumstances, such as the increase in EU member states, technological innovations and increased competition from the commercial sector.

As all member states have had to provide an online job search service and the vast majority of these have done so at the national level it is interesting to explore two different countries – Slovenia and the UK. There are similarities and differences between the two countries. For example, both have been rated as 4 / 4 in terms of online sophistication, have similar proportions of people using online job search services (see Figure 2) and have similar unemployment rates of around 6%[268]. On the other hand, they differ in terms of the average number of jobs citizens have had in their working life (the UK is higher and Slovenia is lower when compared to the EU(25) average); on their views about the positive effects of changing jobs every few years (the UK is lower and Slovenia is higher when compared to the EU(25) average) (Eurobarometer, 2006); levels of Internet penetration (UK is

[265] http://www.linkedin.com
[266] http://www.passado.com
[267] http://www.doostang.com
[268] Average figure and Slovenia data from Eurostat. UK data from NSO, UK. No Eurostat data is available for the following countries: Greece, Italy or UK.

higher and Slovenia is lower when compared to the EU(25) average (Eurostat, 2006); the size of the country; the date of joining the EU; and the legal context.

Each of these cases is explored in turn below.

Case Study: The European Employment Services (EURES)

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Definition of the case study

The European Employment Services (EURES) network was set up in 1994 to enhance job mobility across the European Economic Area (EEA) in accordance with regulation 1612/68. EURES is designed to support mobility within European labour markets by enhancing information and transparency about working and living in another country and providing information about the obstacles to increasing geographical and occupational mobility in Europe (e.g. problems with the recognition of qualifications from overseas or problems with transport networks in cross border regions). Thus, EURES can both be viewed as an instrument for decision makers and a service for citizens and businesses (COM 1998 - 413).

EURES has three main service aims: 1) to provide information, guidance and advice to individuals who are seeking a job within the EEA; 2) to aid employers who are aiming to recruit individuals within the EEA; and 3) to provide advice to employees and employers in cross border regions.[269] Since 2003 EURES services have been accessed via the European Job Mobility Portal. Through the portal individuals seeking employment can look for jobs on the vacancy database, post their CVs that can be searched by prospective employers, find out information about the labour market, living and working conditions, and educational opportunities (provided by Ploteus – see http://europa.eu.int/ploteus/portal/home.jsp) in different countries. Businesses can advertise their vacancies on the website and can search CVs of job seekers.

The on-line portal is run alongside face to face and telephone services provided by EURES advisors, assistants and helpdesks that are based within national public employment services or other partner organisations.

Setting of the case study

The EURES network is one aspect of the mobility strategy within Europe; and is set within the wider political context of the Lisbon Objectives, the European Employment Strategy and the EC Action Plan for Skills and Mobility. Other initiatives to enhance occupational and geographical mobility include the European Health Insurance Card (2004), the EU Links and Information on Social Security Portal (EUISS) (2006); and the European year of workers mobility (2006).[270]

The goals of EURES are to facilitate transparency and the exchange of information about the job market in Europe and to provide information on the labour market to inform mobility strategy. As noted above these goals are not easy to achieve and EURES faces a number of specific challenges including: co-ordination of the network, co-ordination with other EC initiatives, competition from the private sector (e.g. commercial websites such as Jobpilot[271], Monster, StepStone and iWork[272]); and assessing and justifying the value of the network. This will be discussed in detail below.

The service is provided by the Directorate-General of Employment and Social Affairs at the European Commission. Membership of EURES is made up of regional, national and EU levels and includes the national public employment services (PES), trade unions and employers' organisations. At the EU level there are three key actors in the network: the EURES High level strategy group, the EURES working party and the co-ordination office. At the national and regional levels of the network there are four key actors: EURES managers, cross border co-ordinators,

[269] See the portal at (http://europa.eu.int/eures/home.jsp?lang=en)
[270] Workers mobility website: http://ec.europa.eu/employment_social/workersmobility_2006/index.cfm
[271] http://www.jobpilot.com
[272] http://www.iagora.com/iwork/index.html

EURES advisors and often EURES assistants (i.e. front office staff from the public employment agency that provides EURES services (ECORYS – NEI, 2005).

The financial investment in the EURES network has been significant. The annual budget for 1996 and 1997 was 10.5 MECU (with an additional contribution from EFTS of 165.200 ECU in 1996 and 6 MECU in 1997 due to participation of Norway and Iceland). In 2000 and 2001 the budget was 11.6 million EUR and 12.46 million EUR respectively. In 2002 and 2003 the budget was 14.5 million EUR in each year (although only 85% was spent in 2002) and rose to 17.5 million EUR in 2004 and 2005 (in part to account for the growth of the network) of which 16.7 million was spent in each year (COM, 2007-116).

Milestones in the development of EURES

1994: EURES network launched

2002: Reform of EURES

2003: Launch of the revised job mobility portal

2004: New member states and Switzerland joined the EURES network

2006: Launch of new online vacancy exchange system

2007: Bulgaria and Romania joined the EURES network

Adoption and implementation of EURES

There are three key documents that form the legal foundations of the inception and development of EURES. The overall framework for EURES, i.e., the structures and procedures for exchanging information, the computer system, the role of the members of the network and its co-ordination, were set out in regulation (EEC) 1612/68, part II and EURES was launched by the Commission in 93/569 in1993. The legal base for EURES was reformed when the Commission updated this council regulation in 2002. In this act, the role of the EURES network as a key element of employment and mobility strategies of Europe was emphasised; and improvements in the roles and responsibilities of the actors within the network were set out. These changes included the creation of a High Level Strategy Group (HLSG) to encourage greater involvement and steering of EURES from public employment services and social partners, introducing measures to encourage mainstreaming of EURES into current PES activities; and integrating cross-border activities into national EURES organisations (ECORYS-NEI 2005). The third legal act, related to the second, was the EURES Charter (2003/C 106/03) that set out the operation of the EURES network in detail. For more details of the reform of the EURES legal base see COM, 2004-467.

The technology utilised by the EURES network has been subject to revision since the beginning of the initiative when two EURES databases were set up; one for working and living in Europe and the second for vacancies. At the start Euroadvisors had to manually add and modify vacancies; and over the years further developments have included the facility to provide more detailed information about each vacancy, the creation of a job classification system to facilitate searching, the development of a CV database for job seekers that employers can search and the replacement of the centralised database with a new decentralised system in 2005. The later developments for the decentralised system were set out in the 2003 EURES charter alongside the expectation that all partners submit all their national vacancies into this system. However, while the majority of EURES members had connected their national database with this new platform by the end of 2005 some missed the deadline. The next stage of technical development is focusing on the usability of the system, including personalised My EURES accounts, online newsletters, links between online CVs and EUROPASS and links with jobs on the European Researchers Mobility Portal. Indeed, some of these initiatives are already operational (COM 2007-116).

The 10 new member states joined the EURES network in 2004. Preparations for the enlargement of the network began in the latter half of 2002; led by the EURES co-ordination office in collaboration with the member states. A number of activities were conducted in readiness for the expansion, including training and recruitment of new EURES managers and advisors, the development of

appropriate technical systems, establishing infrastructures, developing the transitional arrangements for the free movement of workers and twinning each new member of PES with the PES of an old member state. Overall, the progress of the new member states has been good; new member states have been able to build on the experience of older members and the development and implementation of EURES in these member states has been rapid. Plans for the joining of Romania and Bulgaria have been in place since 2005 (COM 2007-116).

Impact of EURES

Four measures that can be explored are the number of visitors to the portal, the number of people who have found a job through EURES, the online visibility of the site (as measured by inlinks and outlinks) and the success of EURES in identifying barriers to mobility.

Usage of EURES is somewhat below what might be expected, given the original aims and level of investment in the service. The number of visits to the EURES portal in January 2005 was 541,790, fell to 435,340 in July 2005 and rose to just over a million in January 2007. These numbers made the portal one of the most popular websites maintained by the European Commission by 2005 (COM 2007-116); yet this is still not a high "hit rate" in comparison to national public employment sites and commercial employment services that operate on a European level. For example, Monster Europe has around 7.5 million hits per month.

In the past there were attempts to calculate the number of people who have found a job through EURES (both from online and offline services). In 1995, 1996 and 1997, 5,700, 9,505, and 22,729 people found a job via EURES. After this date no figures are reported as it was acknowledged that the data is unreliable; as it is based on self report estimates from EURES advisors, successful job seekers reporting back to EURES who are not obliged to do so, and does not reflect the indirect impact of EURES (e.g. through support, advice and information) (COM 1998-413).

One indication of a websites visibility is the number of links pointing to a site (inlinks) and the number of links pointing outside the site (outlinks). The more inlinks and outlinks a website has the more visible the website is in terms of being at the centre of social and informational networks – i.e. it is more "nodal" (see Petricek et al., 2006). When comparing EURES to other commercial European job search sites the site does not fare well. EURES has ? outlinks compared to 42 outlinks for stepstone.com and 19 outlinks for jobpilot .com. In terms of inlinks EURES has ??? compared to 787 and 816 inlinks respectively for stepstone and jobpilot. This data combined with the usage data analysed above suggests EUREs needs to significantly improve its online presence.

The wider goal of EURES to assist in identifying and overcoming barriers to mobility is also relevant here. From the available data this seems to have been an indirect impact of the initiative. Many PES collect data on trends in the labour market and a number have set up bi-lateral recruitment projects between EURES members to counteract imbalances in the labour market (COM 2007-116).

Challenges and barriers faced

The Seven Barrier Categories

The Breaking Barriers Project, funded by the EC, identified and explored the key barriers to eGovernment in Europe. The project team proposed seven key barrier categories of obstacles to eGovernment progression. The categories are intentionally broad and tied to a multitude of more specific barriers relevant at different governance, institutional and jurisdictional levels. In summary the barriers are: leadership failures, financial inhibitors, digital divides and choices, poor coordination, workplace and organisational inflexibility, lack of trust and poor technical design[273].

[273] For more details about the Breaking Barriers to eGovernment project please see http://www.egovbarriers.org

From analysis of this case study four emerge as being relevant: leadership failures, financial inhibitors, poor co-ordination and poor technical design.

Leadership Failures: Leadership failures result in slow and patchy progress to eGovernment. There are two key barriers in this category:

- A lack of commitment for the EURES network by some partners: a lack of commitment can arise due to the different and competing goals of achieving national labour marker strategy and fulfilling the aims of the EURES network (ECORYS-NEI 2005).
- Visibility of EURES: Awareness of EURES by employers and job seekers varies across partner countries (ECORYS-NEI 2005). While overall awareness of EURES is difficult to measure; based on the relatively small numbers of visitors to the portal and link analysis, online visibility of EURES is very low.

Financial Inhibitors: Financial inhibitors limit the flow of investment to eGovernment innovation. There are two related barriers in this category:

- The cost of EURES: EURES costs the Commission around 16.5 million EUR per year. This is a significant amount of money.
- No cost benefit analysis: There are limited ways to assess the effectiveness of EURES; and thus no cost benefit analysis has been conducted. There is no way of knowing if EURES is doing a good job or if mobility across Europe could be enhanced in other more cost effective ways.

Poor Coordination: Poor coordination across jurisdictional, administrative and geographic boundaries holds back eGovernment networking benefits. There are three main barriers in this category:

- A lack of co-ordination between EURES and other EC initiatives: the information available on EURES is also available in different forms on other parts of the EC site, thus EURES needs to co-ordinate with these other initiatives to eliminate duplication of effort and improve ease of use.
- A lack of co-ordination between EURES and commercial recruitment sites: there are a significant number of other online services that aim to facilitate match between demand and supply of jobs in Europe. It is important EURES positions itself within this wider context (ECORYS-NEI 2005).
- Delays in updating information on the portal due to the different languages in Europe: each country has to submit updates on living and working in the member state every 6 months. Yet there is a delay (sometimes of several months) in this information being published online due to the time taken to translate the information into all the different languages.

Poor Technical Design: There are four key barriers in this category leading to incompatibilities between ICT systems or difficult-to-use eGovernment services:

- Interoperability of IT systems: from interview data moving to the new decentralised system was a significant challenge due to differences in IT systems, IT providers / consultants, job classifications, national ID numbers and the use of different software in the different partner countries. Significant progress has been made but some issues still remain.
- Difficulties with search: employers and job seekers have experienced some problems finding jobs on the site due to differences in categorisation of jobs because keyword searches have to be in the appropriate language.
- Inadequate information on the portal: for some specific professions in some countries interviews felt there was a lack of detailed information on the portal.
- Poor online visibility of the portal: limited inlinks and outlinks means that EURES is not at the heart of online information and communication networks about online job search in Europe

Legal Issues arising from the study

In the Breaking Barriers Project eight legal areas were identified that underpin the seven barrier categories: Authentication and Identification, Intellectual Property Rights, Liability, Privacy and Data Protection, Public Administration Transparency, Relationships between Public Administrations, Citizens and other ICT actors, and Re-use of Public Sector Information. However, legal concerns did not emerge during this case study. Of the eight legal foundations the four areas that were thought to be most likely to arise were: identification and authentication, re-use of data, liability, and privacy and data protection. However, no significant issues became apparent. Privacy and data protection has been considered and the privacy statement is clear on the website; and a disclaimer regarding the quality of the vacancies on the site reduces liability issues for EURES.

Relative influence of eGovernment challenges

The summary below gives an indication of the relative significance of the kinds of barriers EURES is facing.

- Political, administrative and organizational (35%): a lack of commitment to EURES by partners in some member states and difficulties with co-ordination between EURES, other EC initiatives and commercial job search sites are key issues to be considered.
- Legal (5%): the key legal issues such as privacy and data protection and liability have been considered and addressed by EURES.
- Financial (25%): EURES costs a significant amount of money each year yet the impact of the initiative is not known.
- Social and economic (10%): differences between national labour market strategy and the European mobility strategy can be problematic and language issues present a challenge to Pan-European initiatives.
- Technological issues (20%): technological interoperability and poor online visibility are key issues for EURES.

Overcoming the barriers

It is important to note that efforts have been and are being made to overcome these obstacles.

For example, in terms of raising the visibility of EURES many attempts and initiatives have been made to raise awareness. Initiatives at the pan European level include: working party recommendations to enhance the profile of EURES amongst employers in 2002 (COM 2004-467); recruitment fairs and company visits in 2004; the re-launch of the EURES ad hoc working group on Employers Services in 2005 (COM 2007-116); and the year of mobility in 2006. From the interviews it is apparent that significant effort is also made at national level in some countries. However visibility and in particular online visibility is low and this is a significant challenge. More attention to online presence and ensuring that the website is as attractive to users as commercial sites would be valuable.

Secondly, in terms of cost benefit analysis, there are more detailed measures of wider EURES activity (e.g. numbers of queries dealt with via telephone, email and in person in any given month (COM 2007-116)) which is valuable and would assist with a cost benefit analysis of the initiative. However, these are also problematic due to: the reliance on self report by EURES advisors, a lack of clear guidance over what “counts” as a query and inconsistencies in the way interactions with the public and employers are recorded. It is clear that some attempts have been made to evaluate the cost-effectiveness of the system which should be recognised yet more work is required on this complex issue. Indeed, interviewees were well aware of the inadequacies of the system and were very supportive of more moves to try to measure the value of the service but in a way that did not add excessive administrative burdens to any EURES stakeholders.

Thirdly, the co-ordination of the network has improved over time; and from the interviews it is the emergence of the informal networks amongst EURES actors that are perceived to be the most useful. Within these informal networks EURES actors exchange advice and support about a wide range of issues that can benefit both the running of EURES within that country and also the running of the national PES service.

Potential solutions to the barriers could include:

- A good EURES manager at the national level to overcome a lack of commitment to EURES (ECORYS-NEI 2005)
- The development of effectiveness indicators
- More strategic positioning of EURES amongst EC initiatives
- Collaborating with other (more visible) commercial operations
- Greater segmentation of the needs of different users of the site
- Improving the nodality of the site and making it as attractive to users as commercial websites

Conclusions

Thus, for EURES the three biggest challenges are to: raise online visibility; develop tools to analyse the costs and benefits of the service; and to improve co-ordination and the positioning between EURES, other EC initiatives and commercial job search sites. Despite the challenges EURES is one of the first pan-European services and provides a number of interesting lessons that can be utilised as the EC takes forward its i2010 eGovernment strategy to provide seamless public services for citizens and business across borders (COM 2006 -173).

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Case Study: Online Job Search in Slovenia

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Definition of the case study

The focus of this case is the online job search service provided by the Employment Service of Slovenia (ESS). Online job search forms a part of the ESS website (http://www.ess.gov.si) that is aimed at a number of target groups: the unemployed, individuals who wish to change their career, young people in education and employers. The ESS website as a whole offers citizens a number of services. For example, job seekers can find out information about social security benefits, scholarships and training as well as use the online job search facility. The online job search facility enables citizens to search databases with job offerings, register their details on the database and subscribe to receive email alerts specific to their skills and interests and upload a CV. Employers can post vacancies and search the CV database of candidates. This online facility is provided alongside call centres and local offices.

Setting of the case study

The employment policy in Slovenia is the responsibility of the Ministry of Labour, Family and Social Affairs (MLFSA) and the ESS. The ministry defines the legal framework and supervises policy implementation and the ESS is responsible for the delivery of the service. The ESS is an independent public institute that is financed by the state and is a mediator between supply and demand of the labour market.

The activities of the ESS were defined within the 1991 Employment and Unemployment Insurance Act (Official Gazette of the Republic of Slovenia (OGRS), Nos. 5/91, 12/92, 71/93, 38/94, 69/98 and 67/2002). These activities are regulated by a number of laws and regulations directly affecting employment and are also regulated by other related areas: the Pension and Disability Insurance Act; the Health Care and Health Insurance Act; the Employment and Work of Aliens Act; the Vocational Rehabilitation and Employment of Disabled Persons Act; the Education legislation (vocational guidance and counselling and education); the Labour regulations (redundancy, apprenticeships, labour contracts, inspections etc.); Social security (maternity pay, registration of insurance period in labour booklet, means-testing calculations, cadastral income, revaluation etc.); and complies with EU legislation.

The mission of the service is,

> *"to offer unemployed people professional assistance in obtaining work; to offer employers professional assistance in meeting their labour needs; to offer unemployed people and scholarship-holders effective protection of their rights and professional assistance; to work with professional institutions, providers of employment measures and social partners in developing the labour market; and to offer professional assistance to other legal entities and individuals in the areas of activity of the Service." (Annual report 2005)*

To fulfil this mission the ESS engages in a number of activities including: job mediating and careers advice, implementation of unemployment insurance, issuing of employment and work permits for foreign workers, provision of national programme of scholarships for young people and conducting and disseminating research on the activities of ESS and the Slovenian labour market (Annual report 2005).

The ESS operates at the central, regional and local level. Citizens have direct contact with one of the 59 local offices that assist with employment, vocational and training and benefits guidance. The 12 regional offices provide support, monitor and evaluate the work carried out at the local level and the head office provides analytical, legal, personnel, financial and organizational support to the local

and regional offices. The ESS is managed by an administrative board and general director (made up of representatives from employers, trade unions, the council of workers of ESS and government officials) who are responsible for organization, management and expertise in the implementation of Employment and Unemployment Insurance Act, and of other laws and regulations which define the tasks of ESS.

The organisation of the offices is clearly defined[274], with different departments having responsibility for different aspects of the service. For example, there are departments who are responsible for placement services and vocational guidance, legal affairs, scholarships, the computerised information system and organisation and development of the institution. Online job search is the responsibility of the central office.

The online job search service was developed because the ESS felt that the Internet was becoming an increasingly important channel for employment services; particularly as comparatively Slovenia were fairly quick to adopt the Internet. This was mainly the case for younger people in the mid to late 1990s in Slovenia but now the Internet is important for all age groups. It was felt that online job search would provide job seekers with more up to-date information that was accessible at any time and straightforward to use. Online job search forms part of a multi-channel strategy for job seekers.

All the development of the online service was conducted in house; and apart from a small number of specialised appointments (e.g. project manager and webmaster) the work was carried out by existing members of staff.

Interestingly there is another online job search site provided on the e-government portal of Slovenia (http://e-uprava.gov.si) yet this is a separate initiative to the ESS website[275]. This second initiative has also been rated as 4 / 4 in terms of online sophistication in 2007 benchmarking exercise (CapGemini 2007); and while there are some links between the two e.g. there are links to each others service and the ESS has provided information (e.g. FAQs) for the e-government portal the two remain relatively separate.

There are also significant numbers of private sector employers operating in Slovenia both at the global or European level and at the national level. The ESS has attempted to work with commercial employment services in two main ways: 1) the ESS puts out calls for tender for a range of activities they are responsible for (e.g. short courses, workshops) and private recruitment firms are sometimes awarded these contracts; and 2) private companies can set up a contract with ESS whereby the are paid if they find a job for a individual who is registered unemployed. The recruitment agency will also receive the typical finders' fee from the employer. The payment increases depending on the difficulty of finding a suitable placement for the unemployed job seeker. However, this second initiative has not been a great success as commercial providers argue they only make enough money from the long term unemployed or other individuals who are difficult to employ for it to be worth their time – yet these are not the people the companies who are paying for their services wish to recruit. The philosophy behind this approach is that ESS sees themselves not in competition with commercial providers – they just want to get people back into work as quickly as possible – it doesn't matter how. This is supported by the fact the ESS website contains links to other commercial job search sites.

The ESS has been involved in the EURES network since 2004. In 2005 there were 7 trained EURES advisors who provided 13,691 information and advice sessions for 6,605 job seekers, 3,282 employers and 3,804 other clients. A total of 951 job seekers from other EU members were referred to job vacancies with employers from Slovenia (Annual report, 2005). In 2007 there were 4 advisors. While there are concerns about certain professions e.g. doctors, nurses etc who are already lacking in Slovenia moving to other countries; the EURES arm of the ESS network promotes job flows both to and from Slovenia and is well integrated within ESS.

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[274] See http://www.ess.gov.si/eng/Introduction/Organization.htm) for more details of the organisational structure

[275] More details about e-employment on the eGovernment portal are available ePractice. Please see: http://www.epractice.eu/cases/317

Milestones in the development of online job search in Slovenia

1991: Employment and Unemployment Insurance Act

1995: The ESS website set up in 1995

1997: Job vacancies published online

1999: Further additions to the ESS website (e.g. CV database added)

2003: ESS website interface re-designed.

Adoption and implementation of online job search

As noted above job vacancies began to be published online in 1997; and then in1999 ESS developed online job search services to include the CV database and email alerts. As privacy is an important issue for Slovenian citizens there is an option for those who wish to upload their CVs to remain anonymous; i.e. employers cannot contact them directly but the job seeker is informed via email that an employer is interested in them and then it is up to the job seeker to contact the company. In 2004 further development took place in order for the national database system to fit with EURES.

In Slovenia, employers are required by law to notify ESS of all their job vacancies[276] and these appear on the boards in the local and regional employment offices. ESS will publish job vacancies online and in other media such as newspapers and teletext at the employers request; and around 67% of employers choose to do so. At this point employers are also asked if they would like their vacancy to be added to EURES. Those who submit a vacancy online are automatically given a unique id number for the vacancy that will be used when reporting who got the job (for health insurance purposes etc) and can use their unique business number to register a vacancy.

As noted above the development of the website was done in house as the costs were too high for the ESS to employ outside experts. A lead on the website was employed who was responsible for the day to day implementation and running of the website, along with analysing and reporting on progress; and a small number of other technical experts were employed. All other tasks were carried out by existing members of the ESS central office team. Now the online component of ESS is perceived as part of the daily routine. If a big change to the online service is planned then a working group is set up to plan the development and implementation of the new initiative.

In 2005 ESS received SIT 6,161,719,000 (25,712,398 EUR) from the Ministry of Labour, Family and Social Affairs for the operation of the Service. There is not a dedicated budget to the online service – it forms part of the operational budget; and because the online service is integrated it is difficult to separate out the specific costs involved.

Future plans for the online job search are based around making the service far more personalised to the individual user, linking the back and front office more closely, making the interface as user friendly and personalised as possible and enabling job seekers to interact with ESS purely online if they chose to do so (whilst keeping all other channels open). Later this year there are plans to enable citizens and business to use digital certificates as opposed to username and password to gain access to the system.

Impacts of Online Job Search

As discussed in the introduction the impact of online job search is hard to measure. In 2005, ESS helped 53,857 unemployed people find work. Yet the contribution of online job search to this statistic is difficult to determine. Below the following indicators are summarised: online sophistication, usage, and awareness and usefulness of the service as perceived by job seekers.

[276] Exception: Article 24 of the Employment Relationship Act

As noted above, in terms of online sophistication, the service has been rated as 4/4 in the 6th and 7th measurement of electronic public services conducted by Capgemini.

Table 5: Statistics on interactive job-search pages on ESS web side (http://www.ess.gov.si)

Month / 2006	Job Vacancies (JV)			Subscriptions to e-mail JV notices (JV information e-mails)			Job seekers CV (on-line CV)					Inquiry among job seekers	
	Average No of JV published per day	No of inquiries among JV	No of inquires among JV per day	No of new sub-scriptions	No of active sub-scriptions	No of e-mails sent	No of newly entered CVs	Active* job seekers - CVs			No of entered CVs - passive	No of inquiries	No of e-mails to anonymous job-seekers *
								anon*	non-anon *	Total			
January	977	418,825	13,510	2,269	8,475	33,900	458	455	544	999	27,261	243	102
Feb	1,228	384,154	13,719	1,667	8,424	33,696	366	423	578	1,001	27,530	189	38
March	1,216	450,741	14,540	2,249	8,809	35,236	442	479	606	1,085	27,900	215	31
April	1,205	336,997	11,233	1,485	8,485	33,940	280	402	504	906	28,359	144	22
May	1,205	402,459	12,982	1,810	8,654	34,616	302	438	494	932	28,737	276	157
June	1,433	366,068	12,202	2,131	9,177	36,708	298	480	486	966	28,952	209	244
July	1,239	370,072	11,937	1,797	9,642	38,568	277	658	674	1,332	28,931	191	239
August	1,239	265,462	8,563	1,765	9,711	38,844	310	761	789	1,550	28,918	230	661
Sept	1,587	n.a.	n.a.	1,601	9,745	38,980	337	904	973	1,877	28,909	239	417
October	1,623	n.a.	n.a.	1,635	9,691	38,764	294	1,167	1,249	2,416	28,252	197	497
Nov	1,383	n.a.	n.a.	1,493	8,735	34,940	237	1,516	1,499	3,015	28,252	180	160
Dec	1,383	n.a.	n.a.	924	8,725	34,900	190	1,527	1,513	3,040	28,252	125	60
Total		2,994,778		20,826		433,092	3,791					2,438	2,628
Average	1,310	249,565	12,336	1,736		36,091	316	768	826	1,593	28,354	203	219

** Job seekers can present themselves in an anonymous or non-anonymous way. If employer is interested in an anonymous job-seeker (can't see his/her personal data), the application will send an e-mail to the job-seeker with info on employer. Job-seekers must choose the period for advertising his/hers CV (maximum 1 months), with possibility to prolong the period before its expiration*.

In 2006, usage of online job search services in Slovenia was slightly lower than the EU(25) average; 18% of Internet users had used the web for in the last 3 months for looking for a job or sending a job application; and this figure rose to 66% for those who were unemployed (Eurostat 2006)[277]. Usage of the ESS website specifically is growing annually. In 2005 the ESS website received a daily average of 48,698 page hits to the Slovenian pages of the website, an increase of 49.5% on 2004. This figure rose to 61,764 in 2006 (the number of unique visitors are not collected).

[277] This data was accessed from the Eurostat database in January 2007.

Job seekers can subscribe for suitable job alerts by a weekly email. In 2002, an average of 16,982 email messages was sent out per week (Annual report 2002). By the end of 2002, 12,364 jobseekers had registered with site, which allows jobseekers to enter data about themselves which is searchable to by future employers. Data for 2006 is provided in Table 5.

In addition to collecting usage statistics ESS carry out an annual survey of a sample of individuals who are registered unemployed. In order to reduce the burden on citizens only four questions are asked to which they could reply yes or no. They are:

1. Do you have a possibility to access the Internet regularly?
2. Have you heard about the ESS web site?
3. Have you visited the ESS website to find information?
4. Have you already searched for a job by using the ESS web job search? (added in 2004)

In 2000 the positive responses to each of the three questions were as follows: 1) 26%; 2) 52%; and 3) 13%. These figures have steadily increased. In 2004 the response was 34% to question 4. In 2006 the responses to the four questions were: 1) 65%; 2) 86%; 3) 56%; and 4) 47%.

Challenges and barriers faced

The Seven Barrier Categories

Overall, the online job search service provided by ESS has been a successful initiative and few challenges have been identified. The Breaking Barriers Project, funded by the EC, identified and explored the key barriers to eGovernment in Europe. The project team proposed seven key barrier categories of obstacles to eGovernment progression. The categories are intentionally broad and tied to a multitude of more specific barriers relevant at different governance, institutional and jurisdictional levels. In summary the barriers are: leadership failures, financial inhibitors, digital divides and choices, poor coordination, workplace and organisational inflexibility, lack of trust and poor technical design[278]. In this case two emerged as significant:

Financial inhibitors: Financial inhibitors limit the flow of investment to eGovernment innovation. There was one key barrier within this category:

- No cost benefit analysis: there are limited ways to assess the effectiveness of online job search in Slovenia and it is difficult to assess the cost of the initiative; thus there is no way of knowing if online job search is a valuable delivery channel.

Poor Coordination: Poor coordination across jurisdictional, administrative and geographic boundaries holds back eGovernment networking benefits. There was one barrier in this category:

- A lack of co-ordination between ESS and the e-gov portal: there is another online job search site provided on the e-government portal of Slovenia yet this is a separate initiative to the ESS website.

Legal issues

In the Breaking Barriers Project eight legal areas were identified that underpin the seven barrier categories: Authentication and Identification, Intellectual Property Rights, Liability, Privacy and Data Protection, Public Administration Transparency, Relationships between Public Administrations, Citizens and other ICT actors, and Re-use of Public Sector Information. Legal issues did not seem to significantly effect the development or implementation of the online job search service. In terms of liability, the website states that all information provided on the website is the responsibility of the job seeker or employer and from interviews it appears that there have been no reports of misuse of

[278] For more details about the Breaking Barriers to eGovernment project please see http://www.egovbarriers.org

the service. In terms of authentication and identification currently all job seekers and employers must register to use the service and are given a username and password. There are plans to move to the use of digital certificates both for employers and citizens later this year. Privacy of users is respected; as job seekers have the option to post anonymous CVs on the website.

Relative influence of eGovernment challenges

The summary below gives an indication of the relative significance of the kinds of barriers ESS is currently facing.

- Political, administrative and organizational (30%): coordination and management of the initiative within ESS appears strong, yet greater coordination between the job search on the e-gov portal and the service provided on ESS could be beneficial as could developing relationships with the commercial sector
- Legal (5%): the key legal issues such as privacy and data protection and liability have been considered and addressed by ESS.
- Financial (45%): the costs and the impact of the initiative are not known.
- Social and economic (5%): user needs are clearly considered throughout this initiative.
- Technological issues (15%): this initiative has benefited significantly from developing the service in house; yet greater interoperability between the front and back office and the use of digital certificates may be presented new challenges for this case.

Overcoming the barriers

The cost benefits of the online service are extremely difficult to determine given the lack of information about the resources allocated to the initiative. However, there have been some valuable attempts to measure the impact of the service via collecting some usage data and the use of a short survey since 2000. Indeed, representatives from ESS confirmed the difficulties of measurement of impact of online job search and were interested in ways this could be overcome. One future possibility that was explored was to “track” a sample of registered unemployed job seekers who gave their permission to do so. However, interviewees stressed the need to find ways to develop indicators that did not put additional burdens on the user of the services; and felt the nature of the web makes it difficult to measure and control activities on it. For some, there was too strong a tendency to measure cost effectiveness which may not always be possible or appropriate with online services.

From document analysis and interviews there appears to be good management and coordination of activities relating to online job search within ESS; and the development of the website in house which was a decision primarily made for resource reasons may have in fact had a significant benefit ensuring involvement of members of staff, an incremental approach and the development of a service that net the needs of ESS and perceived needs of users. There are some connections with commercial companies which could be built upon and there is also a relationship between the e-employment service on the e-government portal and the ESS website. However, currently there are two government sites that provide a similar service. It is possible there may be future collaboration between ESS and the e-gov portal. Although some interviews from ESS felt that as users can link to each service it is not a problem; improved co-ordination could increase efficiency and usability for job seekers and employers.

Potential solutions include:

- The development of effectiveness indicators
- Further development of partnerships with the commercial sector (as ESS have records of all vacancies they are in a strong position to do so)
- Greater co-ordination with the eGovernment portal of Slovenia

Conclusions

Overall, online job search in Slovenia appears to be progressing well; two current issues are the development of cost effectiveness indicators and co-ordination between the ESS site and the eGovernment portal. Future plans, to adopt the use of digital certificates for authentication and identification and greater personalisation of services may pose new challenges. Yet this case provides a number of valuable characteristics that may be of benefit to others developing similar services in other Member States.

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Case Study: Jobcentre Plus

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Jobcentre Plus is an agency of the UK Department of Work and Pensions, providing services via a national network of around 750 local offices, call centres and the Jobcentre Plus website at www.jobcentreplus.gov.uk. It has an administrative budget of £3 billion and employs around 70,500 staff. Jobcentre Plus was formed in 2001 out of the Employment Service and the Benefits Agency, so has responsibility pertaining both to jobs and benefits. Explicitly, the aim of the agency is to:

- Put more people into paid work
- Help employers fill their vacancies
- Give people of working age the help and support which they are entitled to if they cannot work

On-line Job Search

The job search section of the site is concerned with the first two of these aims. It accesses an 'Internet job bank', a national database of vacancies with around 400,000 vacancies. Its target audiences are jobseekers, employers and providers.

Registered employers can submit, amend and close vacancies on the site on-line through Employer Direct online which was launched in May 2005. These tend to be the larger employers, who apply to be an 'approved user' via the Government Gateway and there are various statutory requirements such as complying with disability rules, which is difficult for smaller employers). Other employers use an 'Employer Direct' telephone call centre, which were established in 2000. By 2007, about one quarter of jobs put up by individual employers go up on-line, the remainder through a call centre. The proportion registering on-line is growing (the original assumption was 10 per cent which was achieved by August of the service's first year) and obviously is much cheaper for Jobcentre Plus, so is marketed via a national sales team and advertising in trade publications. Jobcentre Plus do not charge employers.

Jobcentre Plus also runs a job warehouse (launched as a trial in 2004), with a facility for organisations that have large numbers of vacancies to feed them into the Job Bank in a single bulk upload transaction. There are 30 partners regularly uploading vacancies including recruitment agencies, job boards and NHS England and around 140 other more intermittent users. Vacancies are also supplied by the European Employment Service. The system is still a business trial, but the number of jobs notified by the Job Warehouse is now consistently more than those notified direct by employers via Employer Direct. In March 2007, for example, a record 641,000 unique vacancies were uploaded (although there may be some duplications with Employer Direct).

Jobcentre Plus lacks the facilities for jobseekers provided by other countries, such as Slovenia. It does not have a CV bank, for example, although the possibility has been discussed and agency staff are aware that other European countries have them. It is not regarded as a priority for the target audience of the agency; staff believe that people who are able to post their CVs on-line are those most likely to get jobs anyway. The lack of this facility to some extent excludes the site from further development using Web 2.0 facilities (allowing employees to post video or audio clips, for example).

Impacts of Online Job Search

Usage of the online services of Jobcentre Plus is impressive in comparative context. The site is the seventh most used job search site in Europe, with around 2 million visitors a week and 7.8K job

searches a day. Of public sector sites, only the German site Bundesagentur fur Arbeit (4.1 million users) and the French ANPE site (2.6 million) get more traffic. Monster is the clear leader in Europe with 7.5 million (ComScore), although less dominant in the UK, where it receives only 4 per cent of market share, making it the third most used job site behind Jobcentre Plus and Total Jobs (Hitwise). Traffic has increased over 90 per cent in the past year. It is the most visited jobs site in the UK with 13 per cent of the total market. Of these visitors the vast majority (88 per cent) are looking for jobs.

However, visibility of the website could be improved. An experiment was conducted with Internet users in the UK to explore where people go when asked to look for job information online. In an experimental setting participants were asked the following question "You are planning to move to Manchester and are looking to find a job there (as a shop assistant in a supermarket) before you go. Can you find a list of shop assistant positions available in Manchester? Participants' had to use the Internet as their information source and their online behavior was tracked. Half the participants could use open search and half were required to use the UK gov portal direct.gov.uk. Of the participants in the "open search" group almost all used Google to begin their search and ultimately only 15% found the answer on a government site in the UK. Thus, from this study it appears that the visibility of jobcentre plus as compared to other online sources is relatively low.

From a user perspective, customers are generally satisfied with the overall service provided by Job centre plus (Sanderson et al. 2005); and in another survey conducted by the agency 90 per cent of customers are satisfied with the web site. However, while the website was considered user friendly it did not have a significant impact on efficiency success of job search in 2002 (GHK 2002a)

Jobcentre Plus personnel observe a distinctive market for Jobcentre Plus, as noted above. The type of jobs on Jobcentre Plus tend to be office work, factory work, drivers and other manual and blue collar jobs, rather than more professional posts. Research by the NAO in 2006 supports this view where professional higher paid jobs are underrepresented and lower skilled lower paid jobs are over represented by Jobcentre Plus –inline with the customer base for the service. Jobcentre Plus feel however, that there is 'no point in taking trade away from specialist sites such as the Guardian' and that these other jobs are well covered by private sector sites.

The role of JobCentre plus within the overall labour market is also apparent when examining the different levels of support for job seekers provided by Jobcentre Plus depending on the individuals' skills and past employment history. For example, customers with a poor employment history are anticipated to have a reliance on Jobcentre Plus channels and New Deal provision for finding a job; and are likely to need help to improve job seeking skills. In contrast, customers with a good employment history, who have been out of the labour market for a while (e.g. a parent returning to work) are expected to search for a job using a mixture of Jobcentre Plus and external channels, including job points, Jobseeker Direct, newspapers and websites (NAO 2006).

There used to be a 1973 convention which said that each country had to have a job bank, so that it was legally required for the state to advertise all jobs to the state (not in the UK) – and actually in countries like France and Germany most jobs still are, although this is no longer a legal requirement. Britain withdrew from the convention so it was never a requirement here, and this legislative change has a legacy in that a lower percentage of jobs are advertised via state agencies.

A selection of vacancies are uploaded from the job bank of Jobcentre Plus to EURES – employers choose whether they want their jobs to be advertised there. There is a slight dilemma here, because the more jobs are advertised abroad, the more UK jobseekers are having to compete with jobseekers from other countries. But Jobcentre Plus cannot currently break down their usage statistics by country, so they do not know how many of their users come from abroad.

Challenges and barriers faced

The Seven Barrier Categories

The Breaking Barriers Project, funded by the EC, identified and explored the key barriers to eGovernment in Europe. The project team proposed seven key barrier categories of obstacles to eGovernment progression. The categories are intentionally broad and tied to a multitude of more specific barriers relevant at different governance, institutional and jurisdictional levels. In summary

the barriers are: leadership failures, financial inhibitors, digital divides and choices, poor coordination, workplace and organisational inflexibility, lack of trust and poor technical design[279]. Of the seven barrier categories four barriers were of importance to this case: financial inhibitors, digital divides and choices, poor co-ordination and poor technical design.

Financial inhibitors: Financial inhibitors limit the flow of investment to eGovernment innovation. There are limited ways to assess the effectiveness of online job search in the UK and it is difficult to assess the cost of the initiative; thus there is no way of knowing if online job search is a valuable delivery channel.

Digital Divides and Choices: Digital divides and choices are barriers that occur where inequalities constrain and fragment eGovernment take-up. In this case, unemployed people are less likely to use online services provided by Jobcentre Plus than others who use Jobcentre Plus to move to another job (Coleman et al. 2002). The introduction of 9,000 touch screen kiosks in 1,000 job centre offices between April 2001 and February 2002 may increase access to Internet services. However, from a staff perspective the kiosks are not that efficient and have been mixed reviews (GHK 2000b)

Poor Coordination: Poor Coordination across jurisdictional, administrative and geographic boundaries holds back eGovernment networking benefits. In line with current UK eGovernment strategy, the current Jobcentre Plus job site is going to close, and parts will move to the citizen and business portals, direct.gov and business link, while Jobcentre Plus will retain a corporate site. Job Centre Plus will continue to host the job bank, jobs warehouse and Employer Direct Online (there is a big hosting structure) but direct.gov will move its current pilot for accessing these services into full operation. Jobcentre Plus are concerned that their branding and market recognition will be lost particularly as some parts of the site will move to business.link (which only covers England, a further complication) and others to Direct.gov.

Secondly, the motivation for not providing a facility for jobseekers to post their CVs seems to arise from a lack of co-ordinated thinking across the agency as a whole. Jobcentre Plus do offer people help through leaflets and in their local offices with preparing CVs. There would seem to be scope for simultaneously providing an on-line service for posting CVs and offering jobseekers help specifically geared to using it (along the lines of tax Internet cafes in Chile, for example). Under the current arrangement, there must be many employers (particularly smaller ones) who want to search for employees and their options are only to use private sector sites. So UK jobseekers using Jobcentre Plus are excluded from consideration for these vacancies.

Finally, the jobs warehouse is a good example of collaboration widening the scope of the public sector job search facility. However, there does seem good scope for extending it, particularly given the dominance of Monster as a private sector leader across Europe. The current arrangement is clearly exacerbating the segmentation of the jobs market in the UK, noted above, with the public sector site in general providing lower status, lower paid jobs than private sector sites.

Poor Technical Design: Poor technical design barriers lead to difficult-to-use eGovernment services and/or incompatibilities between ICT systems. The inability of users to upload CVs to the site is problematic, as users are at a disadvantage compared to those who use other commercial websites. Developers of the initiative should consider what technical features need to be available on the website to benefit and attract users. Poor online visibility of Jobcentre plus is a further barrier to encouraging increased usage of the site.

Legal issues

In the Breaking Barriers Project eight legal areas were identified that underpin the seven barrier categories: Authentication and Identification, Intellectual Property Rights, Liability, Privacy and Data Protection, Public Administration Transparency, Relationships between Public Administrations, Citizens and other ICT actors, and Re-use of Public Sector Information. There were no significant legal issues that affected this case. As there is no cv facility then this reduces issues around privacy

[279] For more details about the Breaking Barriers to eGovernment project please see http://www.egovbarriers.org

and data protection. There is a clear legal disclaimer of the website[280] that covers copyright, the information on the site and the information on external sites.

Relative influence of eGovernment challenges

The summary below gives an indication of the relative significance of the kinds of barriers Jobcentre Plus is currently facing.

- Political, administrative and organizational (35%): coordination within Jobcentre plus, between Jobcentre plus, direct.gov and business link, and further collaboration with the commercial sector are key issues to consider
- Legal (5%): legal issues such as privacy and data protection and liability have been addressed by Jobcentre plus and tend not to be that much of a concern
- Financial (20%): the costs and the impact of the initiative are not known
- Social and economic (15%): digital divides are important to this initiative both in terms of enabling people to access the online site and ensuring those who use Jobcentre Plus are not a disadvantage to those who use commercial job search sites
- Technological issues (25%): Jobcentre plus needs to explore the possibility of adding additional features to its website in order to encourage usage of the site and increasing effectiveness. Online visibility also needs to be improved.

Conclusions

The UK case provides an example of public-private collaboration, which is clearly expanding the range of opportunities available on the Jobcentre Plus site and increases its competitiveness. However, there is clear potential for extending such co-operation. A distinctive feature of the UK case is the perception of a clearly demarcated target market for the public sector job search service, which has resulted in a widening gap between what the site provides for jobseekers and what private sector facilities provide, which seems likely to work against such further collaboration in the future.

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[280] See http://www.jobcentreplus.gov.uk/JCP/Aboutus/Legal/index.html

Box: Zubka.com

Zubka.com enables people to refer their past colleagues, friends and other contacts for jobs and get rewarded if their referrals are successful. Referrers can sign up for free and get paid a fee between 6-8% of the starting salary of the person referred. Hirers can pay to advertise their jobs directly to the network of Zubka Referrers - at a third to a half of the fees typically charged by recruitment companies. It was launched in September 2006 by David Shieldhouse and Armando Ruffini. David Shieldhouse had the idea for Zubka, after being inspired by the growing interest in web 2.0, the increasing investment in online business, a significant amount of experience in the recruitment industry and the book, The perfect store: Inside eBay, by Adam Cohen.

The concept has been supported by the findings from a 2006 YouGov survey commissioned by Zubka which concluded that: 1) around 66% of people had referred someone to another job opportunity; 2) 89% of these referrers did not get compensated for this service; and of the 11% who did many received a very small prize e.g. a bottle of wine; and 3) around 50% of the time these referrals actually led to jobs (which is far higher that the success rate in traditional recruitment agencies). Thus, Zubka replicates what is going on in everyday life but rewards people for their actions. The UK recruitment industry amounts to around 30 billion EUR and Zubka can facilitate the redistribution of some of this wealth.

In March 2007 there are around 250 jobs on the website with around £600,000 (840,000 EUR) of rewards available. In November 2007 there were around 1200 jobs with around £3, 000,000 (4.2 million EUR). The types of jobs available on Zubka range from an office manager to a CEO. From the perspective of the founders of Zubka, the site is intended for everyone and anyone could be recruited or be a referrer. They believe that being a Zubka referrer is likely to have different implications for different people. For some, Zubka could change lives. For example, an individual could give up their job and work as a referrer full time for others it could be an occasional activity that pays for a holiday and / or viewed as a game with big prizes.

Challenges for Zubka.com

Given the global context and the nature of Zubka there were a number of legal issues that needed to be addressed. Zubka has a set of terms and conditions both for hirers and referrers that are very stringent and clear. Individuals have to agree to them before they sign up. One issue was how to pay referrers who are from across the globe? (They are paid a gross fee). A second key issue was how to create a system that is self regulating as when Zubka grows and is dealing with billions of transactions it is no longer possible to chase up individual cases (see future section below). The employment and recruitment agencies act in the UK is not applicable to Zubka as referrers are not providing a full service. Also, in practice, hirers simply do not use recruitment agencies that have provided them with a poor service more than once – they don't look to the recruitment agency act.

The future of Zubka

Despite only launching in 2006 there has been a significant amount of interest in Zubka and by the beginning of February 2007 Zubka had received a multi-million pound investment from Benchmark. Zubka are currently redeveloping the technical platform so it can deal with millions more referrers and recruiters. This is important to improve the success rate of referring prospects. In early 2007 problems occurred as there were not many jobs on the site; so the fit between the prospect and the job was not as good as it could be. This issue was further exacerbated as people were learning how to use Zubka. Yet these problems are diminishing as the number of jobs available on the site increases and users become more experienced. In the future there are plans to introduce a rating system for hirers and referrers in a similar way to eBay. So those who are good get the most attention – a kind of Darwinian approach. The system will also use Artificial Intelligence to determine who are the good hirers; so if a company tends to always rate referrers negatively yet the referrer always gets good feedback then the system will identify hirers who are saying people are no good but then hiring people independently of Zubka. The result will be a self regulating community; responsibility then rests with the individual. There are also future plans to work with other online job search sites and to franchise out Zubka to ISP providers.

Conclusion

These three case studies – the UK, Slovenia and EURES at the pan-European level – combined with private sector evidence highlight the most important barriers to the development of public sector on-line job search. The most important relate to co-ordination issues, particularly the issue of collaboration with the growing private sector market in this field. Financial issues are also important,

with respect to the difficulty of evaluating the costs and benefits of online job search services. The implications of these difficulties is a growing gap between public and private job search services, with equity implications.

Our case studies revealed a number of co-ordination problems with the development of on-line job search. First, with respect to levels of government, online job search requires ways of working that crosses existing government jurisdictions, administrative and departmental boundaries. A lack of co-ordination between these different groups can have implications for online job search services at all levels from the regional level to the Pan-European level. For example, EURES depends on the willingness of national administrations to upload their job offerings onto the database and the case had to address the challenges of matching jobs and cvs that were in different languages and formats. To some extent, EURES is in also in competition with national on-line job search services, as in the two country case studies discussed above.

Second, there is an often un-met need for co-ordination between government and business. Clearly, government agencies face strong competition from private sector players in this sector. Although some agencies (such as the UK Jobcentre plus) claim that there is no point in competing with specialist players in the field, public agencies do face a dilemma; if they don't compete, then a bifurcation opens up between the type of jobs that are advertised on their sites, which tend to have lower status and less professionalized jobs than commercial sites.

Third, the UK case highlights an additional co-ordination problem, between central portals and employment agencies. Moving job search services onto the Directgov portal may actually reduce visibility of the service and further exacerbate public/private differences in job search capability. Directgov is a relatively 'low-tech' solution and it may be even more difficult for the employment agency to innovate with on-line job search in the future.

Co-ordination and competition challenges are particularly evident in terms of the visibility of such sites to the general public. In a survey of EU(15) Internet users' awareness of the availability of online job search was quite low (Graafland-Essers and Ettedgui, 2003). If the phrase 'working in Europe' is keyed into Google's search engine, EURES (nor any other public sector site) does not appear in the first 20 search results, beyond which most Internet users do not look. Failure to promote online search facilities may further affect the usage of public sector online sites both by citizens and commercial companies.

Another barrier which was important comes into the category of **financial inhibitors** – that is the difficulties we identified in establishing the costs and benefits of providing online job search services. Commercial online job search can raise revenue in a number of ways, for example, through charging companies to advertise their vacancies on the website or placing advertising links on the portal. What cost benefit models are governments using, and if, as is typically the case this service is developed alongside face to face and telephone channels what costs are involved in implementing and maintaining these initiatives?

Another piece of data which could be important to measuring the performance of on-line job search but is difficult to collect is the extent to which there is a 'culture of mobility' across countries; citizens' choices about changing jobs should be taken into account. While occupational and geographic mobility is positive for the economy; views amongst citizens about the potential benefits of changing jobs every few years varies significantly. In Denmark and Sweden the percentage of people who think that changing jobs every few years is good for people is high (72% and 79% respectively) compared to respondents from Belgium and Estonia where less than a third believe this to be the case (Eurobarometer, 2006). How do such views influence usage of online job portals?

Other issues, particularly legal ones, have shown themselves less important in the field. Utilising the eight legal foundations analysed within the barriers study there were four areas that were anticipated to cause difficulties: identification and authentication (e.g. to log on and register to the website); re-use of data (e.g. is it used, what could it be used for, useful for tracking success of policies, where to market, development of new strategies); Liability (who is responsible for the content); and privacy and data protection (linked to re-use, who can access the cvs, how easy is it, are privacy statements on the website)? Privacy and data protection were mentioned by interviewees, but did not arise as a major issue. In general we did not find lack of trust to be a major barrier to the development of on-line job search. EU Citizens tend to prefer eGovernment services

which do not require them to provide a lot of personal information and job search has been identified as one such service (Graafland-Essers and Ettedgui, 2003). But it could be that in the future, concerns about misuse of personal data or other breach of privacy may inhibit uptake of eGovernment services. As the level of sophistication of online job search portals grows and citizens are encourage to place CVs online that can be searched by potential employers a lack of trust may become more of an issue. Indeed, advice to citizens planning on using online job search facilities is now available[281].

In general therefore, the usage figures of public sector on-line job search services may be impressive in comparison with other e-government offerings, but there is great scope for improvement. As job search moves almost exclusively on-line for a significant sub-section of jobseekers, then public sector agencies must either compete or collaborate or both if they wish to remain as significant players in the field. Given the significant investments that are being made (particularly in EURES), there is a strong need to overcome the problems with evaluation noted above, with difficulties in measuring both the costs and benefits of on-line job search.

A key implication of the co-ordination issues we have identified is the emergence of digital divide issues, in terms of a growing gap between the type of jobs that are offered on public sector and private sector job search sites in those countries where companies are not obliged to advertise there jobs with the Public Employment Service. As job search in the private sector moves to an ever increasing degree online, this gap means that those without Internet access are likely only to have access to public sector sites, which also offer other channels. Such disparities will have the effect of limiting the number and the type of jobs these individuals can identify and the number of employers who are likely to approach them. Citizens without Internet access will also be excluded from other potential advantages for citizens using online job search, such as greater convenience and the ability to search according to specific criteria (Freeman, 2002). In the UK, this process is somewhat of a vicious circle, as the perception of the government agency's clientele prevents some developments from taking place.

Solutions

There seem to be three solutions to the barriers we have identified. First, collaboration between public and private agencies is one way of ensuring that job seekers at the less professional end of the market have access to the same pool of jobs as other users. Although some government employment agencies show an understandable reluctance to overlap with the provision of specialist job search agencies, it maybe that doing so is the only way to avoid the growing gap between public and private provision. The jobs warehouse developed by Jobcentre Plus is a good example of how collaboration can work, and there would seem to be a good argument for such provision being extended. Duplication in advertising of jobs can be viewed as collaboration rather than competition - as to some extent the sites will always serve distinct markets – opening up the possibility of applying for a wider pool of jobs for traditionally 'public sector' applicants.

Second, the potential for newer technologies, particularly Web 2.0 applications, is clearly under-exploited in this area of e-government. Private sector sites show what can be possible, with Zubka providing the most radical example of innovation. If private sector agencies continue to innovate at the same rate while public sector agencies lag behind, this gap will widen. It seems likely, for example, that in the future prospective applicants will be able to post video clips and other supporting material, with obvious attractions for prospective employers. The next step would be the conducting of preliminary interviews on-line, reducing the costs of job seeking for both employees and employers and with particular potential for increasing mobility across national boundaries, in line with EU aims. If public sector agencies fail to innovate in response, then a significant subsection of jobseekers will be excluded from this increased potential for mobility. They need to build capacity for such innovation into their systems, for example by maintaining the bandwidth necessary to transmit audio and video clips.

[281] For example, see http://www.worldprivacyforum.org/resumedatabaseprivacytips.html

Third, there could well be benefits for public sector agencies in providing support for jobseekers to use on-line services. Agencies like Jobcentre Plus already provide help for jobseekers in how to prepare cvs and job applications. If such support were geared at on-line applications, some of the equity problems noted above might diminish. Such a move could be cost effective, as once jobseekers can use on-line provision, they are less likely to need assistance and more likely to find jobs. As job search moves on line and innovation in this area increases (with employers able to view video clips of potential applicants and to conduct interviews on-line, for example), then tackling such problems will be of increasing importance, otherwise they will be exacerbated by technological innovation in this fast moving field.

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8. Conclusion

This case study report has summarised the key findings of the case study research carried out by the Breaking Barriers to eGovernment project team. These 5 cases studies (eConsultation, Public Registries, Digital Citizen Rights, Cross Border eProcurement and Employment Mobility) were selected to provide practical examples of case studies that varied across eGovernment applications (eDemocracy, ePublic Services, eCommerce and eAdministration); the five key goals of the i2010 eGovernment Action Plan (No citizen left behind, Making efficiency and effectiveness in public services a reality, Implementing high impact key services Strengthening participation and democratic decision making and Putting key enablers in place); and local, regional, national and pan-European levels.

These cases represent a good range of e-government developments, according to their stage of development. Cross border eProcurement and Digital Citizens Rights are eGovernment initiatives just starting to emerge. eConsultation is more patchy, with some relatively innovative developments in specific localities representing advances towards more deliberative forms of (usually local) government. Public Registries and Employment Mobility are clearly more universal developments, present across all member states and at the EU level, established for long enough to encounter many of the key barriers to eGovernment progress and, in the more advanced countries, for solutions to emerge.

Each of these case studies have enabled the team to explore the barriers and their legal and institutional foundations identified in the Breaking Barriers Study; and assist in pointing towards possible resolutions of the key issues. It is clear from the research that the seven barrier categories are robust and are a valuable grouping of the main barriers to eGovernment; and that the eight legal areas are of significant importance to the obstacles to eGovernment progression. We found evidence of all in one or more of our case studies, yet none were ubiquitous. For the emergent case studies, we found less barriers, reflecting the fact that only in those countries where the administrative context is most favourable (Denmark, for DCR and northern Europe for Cross Border eProcurement) have projects in these areas emerged. For example, coordination is currently a key issue for these promising cases of cross Border eProcurement but other barriers specific to eGovernment may be experienced at a more advanced stage of these initiatives.

For eConsultation leadership, financial planning, digital divides, coordination, data protection, authentication and identification and innovative use of technology were all identified as factors that might significantly influence the outcome of eConsultation initiatives in Europe. There is a tendency for eConsultation initiatives to be project-based and relatively self-contained. While this can help mitigate the potential barriers to their development, particularly co-ordination, it can also limit their value to democratic participation, if they are not incorporated into the routine of policy-making. The continued success of the UK ePetitions project, for example, will probably rest on the perception that popular petitions are actually making a difference in terms of influencing policy-making, but there is little evidence so far to suggest that this will be the case.

For the more developed areas of public registries and employment mobility, we found a wide range of barriers and legal issues playing a part. For public registries, digital divides, leadership failure, lack of trust were present in one or other of the two national level case studies, but at the EU level a wider range of barriers kicked in, particularly co-ordination issues. Technological issues did not prove an issue in this case, reflecting the tried and tested nature of this well established area of eGovernment. For employment mobility, co-ordination was a key issue, again particularly at the EU level. Here, technological issues may well be an increasing issue for the future as this is an area of high innovation in the private sector, with potential effects on public sector job search services. In this case specific legal issues: identification and authentication (e.g. to log on and register to the website); re-use of data (e.g. is it used, what could it be used for, useful for tracking success of policies, where to market, development of new strategies); liability (who is responsible for the

content); and particularly privacy and data protection (linked to re-use, who can access the cvs, how easy is it, are privacy statements on the website) were considered but any potential problems had been addressed e.g. through the use of a disclaimer on the website and thus were not considered important obstacles to the progression of these cases.

As well as legal solutions, these cases suggest that there may be technical solutions, in terms of imaginative use of so-called 'Web 2.0' technologies, characterized by user-generated content and the creation of on-line communities, for some of the barriers encountered in some of the cases. In particular, specific areas of eConsultation (the No. 10 petitions web site, for example) and the rapidly growing on-line recruitment market (where competition acts as a driver) have highlighted the potential for eGovernment progress through innovation. Potential legal and organizational solutions are presented in the project report, Solutions for eGovernment (deliverable 3).

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