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eGovernment in the EU in the next decade: The vision and key challenges

**Based on the workshop held in Seville, 4-5 March 2004:
*“eGovernment in the EU in 2010:
Key policy and research challenges”***

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Executive Summary

eGovernment has become an explicit component of public sector reform, as an instrument to increase efficiency, strengthen competitiveness and enhance modernization. In this context, the present paradigm on the use of Information and Communication Technologies (ICT) in eGovernment focuses on greater quality and efficiency in public services. This can be achieved mainly by delivering existing services through cheaper ICT-based distribution channels or by complementing existing services with added e-features.

However, a number of observations and emerging trends in Europe suggest this strategy should be reviewed, especially when taking a European and prospective approach. For example, the EU will, over the next decade, undergo a number of social and economic transitions (such as increasing cultural and religious diversity, ageing of the population and changing living, working and consumption patterns) which will require new services as well as innovative ways of delivering existing ones. Technological advances in the miniaturisation and portability of ICTs suggest that, in the future, eGovernment will form part of an Ambient Intelligence (AmI) environment which will also raise new issues to be addressed (such as surveillance, identity management, and the distinction between public and private spheres). Finally, the potential of eGovernment as a tool to strengthen democracy will need more attention.

This report summarizes the results of a workshop held at IPTS on 4-5 March 2004. It aimed to:

- (a) develop a balanced vision of what eGovernment in the EU would look like in 2010 and,
- (b) define the key challenges to realising this vision.

The vision: eGovernment in the EU in the next decade

The vision that emerged from the workshop defines eGovernment in the EU in the next decade as a tool for better government in its broadest sense. It places eGovernment at the core of public management modernisation and reform, where technology is used as a strategic tool to modernise structures, processes, the regulatory framework, human resources and the culture of public administrations to provide better government, and ultimately, increased *public value*.

The creation of public value is a broad term that encompasses the various democratic, social, economic, environmental and governance roles of governments. Concrete examples of these roles are: the provision of public administration and public services (health, education, social care); the development, implementation and evaluation of policies and regulations; the management of public finances; the guarantee of democratic political processes, gender equality, social inclusion and personal security; and the management of environmental sustainability and sustainable development.

Furthermore, four key issues must be considered in the implementation of such an ambitious vision. These derive from the political, social, economic and technological trends identified:

- the increasing importance of managing knowledge in governance and in democratic processes;
- the needs of the citizens and businesses (so far unaddressed);
- the need to incorporate in the delivery chain a growing number of intermediaries, which play an increasingly important role in both the delivery of public services and in democratic processes;
- and, the importance of networking, co-ordination and collaboration for better government.

Thus eGovernment will need to be more knowledge-based, user-centric, distributed, and networked.

In a developing knowledge-based society, more efficient *creation, management and use of knowledge* will be needed in order to create public value. Processes will need to be more participatory, and governments more networked. The efficient management of knowledge should allow governments to be more *flexible, so that they can adapt to changing and diverse environments and needs*.

In order to create public value for the citizen, governments must better understand and address the *citizen's needs* and understand to what degree they should *empower* users of eGovernment. Governments must also take account of *business needs*, such as the need to minimise the costs of interacting with public administration, and the need for increased competitiveness in an increasingly global economic environment.

The eGovernment vision highlights the *increasing importance of intermediaries* – i.e. private, social and public partners in the delivery of public services and in the exercise of democratic governance. Governments will need to better understand the potential of these actors, in order to develop stronger, more innovative and longer term collaborative models and partnerships with them. Governments must also consider the growing needs of intermediaries as users of eGovernment services.

Finally, there are several trends in public administrations in Europe towards the development of a *networked eGovernment*, which will require strong co-ordination and collaboration among actors. Networked eGovernment is crucial for knowledge creation, sharing and dissemination, and for the creation of public value. However, it also raises new governance challenges that need to be addressed.

The key challenges to realising the eGovernment vision.

Some of the *implementation challenges* identified during the workshop are already well known and have been well documented. Examples of these are: interoperability and standardisation, usability, the need for back office re-engineering and one-stop shop approaches, and the need for political commitment and strong leadership.

Furthermore, it is expected that the implementation of eGovernment vision will not only bring to the fore new challenges, but it will also make existing challenges more acute. These are related to the political and strategic leadership needed, the implicit structural transformation that must take place, achieving a citizen-centric approach and addressing the digital divide, the increasing need for interoperability and standardisation and for technological and methodological implementation tools.

Using their knowledge of current state of the art research, the experts at the workshop identified the major *eGovernment-specific research challenges* to realising the eGovernment vision (based on the implementation challenges mentioned above). These are summarized in the table below:

Key areas of eGovernment-specific research challenges

Techno-logical	<ul style="list-style-type: none"> ▪ Access technologies to ensure eGovernment for all ▪ Specific technologies for a knowledge-based networked eGovernment ▪ New models for harmonisation ▪ Open source tools for eGovernment applications development ▪ Quality monitoring tools
Socio-economic	<ul style="list-style-type: none"> ▪ New models for eGovernment service provision and delivery and governance ▪ The role of intermediaries in eGovernment service delivery and governance ▪ Understanding individual user needs ▪ Tools and methods for ensuring trust and security ▪ Resistance to change in the public sector
EU level	<ul style="list-style-type: none"> ▪ eGovernment at the EU level ▪ eGovernment and the creation of public value

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1. Introduction

1.1 Emerging trends in eGovernment

eGovernment drivers can be clustered around the modernization and reforms in public administration and the development of the Information Society.

eGovernment has become an explicit component of public sector reform, as an instrument to increase efficiency, strengthen competitiveness and enhance modernization. In this context, the present paradigm on the use of IST in eGovernment focuses on greater quality and efficiency in public services, mainly by delivering existing services through cheaper ICT-based channels of distribution or by complementing existing services with added e-features.

However, a number of observations and emerging trends in Europe suggest this should be reviewed, especially when taking a European and prospective approach:¹

- Driven by different political, economical, technical and social factors, the EU will, in the next decade, go through a number of social and economic transitions (such as increasing cultural and religious diversity, ageing of population and changing living, working and consumption patterns) posing new challenges for the delivery of public services. New public services will be required, as well as innovative ways of delivering existing ones. As a result, the current approach to eGovernment implementation, mostly based on the provision of existing services through new delivery channels, will not suffice.
- Furthermore, technological advances in the miniaturisation and portability of ICTs suggest that, in the future, eGovernment will form part of an Ambient Intelligence (AmI) environment (ISTAG, 2003). In such an environment, technology surrounds people and serves them in their roles as citizens, customers and professionals. Citizens' expectations of what government should provide will change, and eGovernment services in an AmI environment could become truly citizen, customer and business friendly, anyplace and anywhere. However, while it has clear benefits, AmI also raises new issues (such as surveillance, identity management, and the distinction of what are the public and what the private spheres), which will also need to be addressed by eGovernment services in the future.
- Service provision to citizens and businesses, which has, up to now, been the main focus of attention, is only part of the potential of eGovernment. Although ICTs can strengthen the involvement and participation of citizens and businesses in public decision making (OECD, 2003a), there has not been necessarily a link between successful eGovernment and strengthened democracy (Coleman et al, 2001).

A prospective and European approach to eGovernment needs to address all of these issues. IPTS therefore set up a research project to:

- (a) develop a balanced vision of what eGovernment in the EU would look like in 2010, and,
- (b) define the subsequent key policy and research challenges to realising the vision.

As an initial preparatory action for this research project, a workshop was organized in Seville on 4-5 March 2004.

¹ Results from the FISTERA project (see <http://fistera.jrc.es>) have shown that while there is a general recognition among European researchers that eGovernment is an important area for research, current eGovernment research is lacking a prospective and EU-specific dimension.

1.2 About the workshop

The workshop sought to develop consensus among the expert group of invited leading thinkers and researchers on what European eGovernment might look like in the future. In particular, the workshop aimed to establish:

- a vision of eGovernment applications, services, technologies and regulation in the EU 2010 Ambient Intelligence environment, encompassing both national and European dimensions,
- the major technological, socio-economic and policy challenges to realising the vision, and,
- the key research challenges and bottlenecks.

The workshop was organised around three dimensions of eGovernment (see Annex 3), namely Government to Government (G2G) relationships (including the local, regional, national and EU dimensions), Government to Citizens (G2C) relationships, and Government to Businesses (G2B) relationships. For each, the workshop addressed the drivers for change and foreseeable demands for new services. Building on these, participants explored what eGovernment would look like in 2010 and the main technological, socio-economic, and policy research challenges to realising this vision.

The purpose of this report is to present the main themes, ideas and conclusions that emerged from the discussions among the experts during the workshop.

2. The vision: eGovernment in the EU in the next decade

The vision that emerges for eGovernment in the EU for the next decade defines *eGovernment as a tool for better government* in its broadest sense. Current eGovernment strategies which focus on delivering greater quality and efficiency of public services will be widened. This new vision also encompasses the provision of better public administration, more efficient, transparent, open, and participative governance and the implementation of more democratic political processes.

Furthermore, the implementation of such an ambitious vision needs to address four key issues, which derive from the political, social, economic and technological trends identified. These are:

- the increasing importance of managing knowledge in governance and in democratic processes;
- the needs of the citizens and businesses (so far unaddressed);
- the need to incorporate in the delivery chain a growing number of intermediaries, which play an increasing role in both the delivery of public services and in democratic processes;
- and, the importance of networking, co-ordination and collaboration for better government.

Thus eGovernment will need to be more knowledge-based, user-centric, distributed, and networked.

This chapter describes in more detail the vision of eGovernment in the EU in the next decade and explores the four key issues that will need to be addressed if this vision is to be implemented.

2.1 eGovernment as an enabler for better government

The vision of eGovernment in the EU for at least the next decade, defines eGovernment as a tool for better government in its broadest sense. It places eGovernment at the core of public management modernisation and reform, where technology is used as a strategic tool to modernise structures, processes, the regulatory framework, human resources and the culture of public administrations (OECD, 2003c) to provide better government, and ultimately increased public value.

The creation of public value² is a broad term that encompasses the various democratic, social, economic, environmental and governance roles of governments. Concrete examples of these roles are: the provision of public administration and public services (health, education, social care); the development, implementation and evaluation of policies and regulations; the management of public finances; the guarantee of democratic political processes, gender equality, social inclusion and personal security; and the management of environmental sustainability and sustainable development.

Providing better government for greater public value depends on government structures, processes, people and culture delivering more (cost) efficiency (cost reduction, greater value for taxpayer's money, better financial management, and simplification of administrative

² “Public value refers to the value created by governments through the provision of services, the passing of laws and regulations, and other actions” by Gavin Kelly and Stephen Muers, quoted in UN, “World Public Sector Report 2003: eGovernment at the Cross-Roads”

procedures), more effectiveness, better quality of services, more accountability, transparency and openness, greater participative governance and more accessibility.

However, this vision will need to address a number of challenges, some of which have already been identified.

IT has become an essential instrument in the transformation of structures, operations and culture of governments. For example, the cross-cutting nature of eGovernment promotes the reshaping of existing government structures. It also supports open and accountable government which helps to prevent corruption. Finally, it acts as a driver in speeding modernisation and organisational change, including the facilitation of greater teamwork and the enhancement of knowledge management practices (OECD, 2003c).

However, the use of IST in eGovernment has mostly focused on greater quality and efficiency in public services and eGovernment has not necessarily enhanced democratic processes in terms of the citizen's political participation or his participation in policy formulation. Indeed, modern or good governance is not just about delivering services. This notion includes democratic and cooperative policy formulation, citizen and civil society involvement, transparent and participative implementation of policies, as well as continuous independent evaluation of their results, and accountability of public decision makers so as to improve policy making in the future (EIPA, 2003; Coleman et al., 2001). *Up until now, the link between eGovernment (or use of ICTs) and good or better governance has not necessarily been made.*

Furthermore, although ICTs can act as enablers and facilitators for more democratic policy development, implementation and evaluation, more accountability, transparency and openness, and for greater accessibility, *the technology on its own will not suffice to modernise governments.* A strong political commitment, coherent long-term strategies and implementation plans need to drive these changes, which ICTs will then enable and facilitate. Lastly, these changes will need time.

Finally, these varied and ambitious goals might sometimes appear to be conflictive. For example, an emphasis on efficiency alone could lead to ignoring the needs of marginal groups. *Potential conflicts within government itself* could also appear. Long-term objectives supported by civil servants (for example, increasing efficiency and effectiveness or citizen political participation) may need investment that takes significant time to generate a clear return. These objectives could be in conflict with the shorter term objectives of politicians, who need visible results.

2.2 Knowledge-based eGovernment: The increasing importance of managing knowledge

The emerging *vision* for eGovernment in the EU in a developing knowledge-based society and economy points at a shift in governance. From being control-based, or concerned largely with the efficiency of public administration, it will become more service- and content-based oriented, where the emphasis will be on the creation of public value (Millard et al., 2004). This would be achieved through efficient creation, management and use of knowledge, which implies more participatory processes and a networked government (UN, 2003).³

³ See an analysis on the creation of public value through the management of information and the creation of knowledge in the UN(2003) report, in chapter II.5.4 Information and knowledge, pp 79-83.

Emphasising the role of knowledge in government, however, is nothing new. *Knowledge* has been and is still government's most important resource. The presence of highly trained, legally educated and specialized civil servants has been considered as one of the main characteristics of bureaucracy ever since Weber began writing about it. However, the rapid diffusion of ICTs and the unprecedented opportunities they offer for knowledge sharing – in tandem with the development of the knowledge economy – have rekindled the discussion on the role of knowledge in government.

The knowledge economy refers to a structural transformation in which the rapid creation of new knowledge and the improvement of access to knowledge bases increasingly constitute the main resource for greater efficiency, innovation and competitiveness. Over the last two decades, information technologies and the Internet have transformed the way companies do business, the way students learn, the way scientists carry out research and the way in which governments provide services to their citizens. Increasingly knowledgeable citizens also have new expectations regarding the responsiveness of governments to their interests and concerns.

The *management of knowledge*,⁴ including such concepts as knowledge sharing and the management of tacit knowledge (accumulated experience and expertise), has thus been a common feature in government. Today, knowledge management strategies and practices in government rank high on the management agenda of most national governments across the OECD and involve organisational arrangements, personnel development and management of skills, managerial changes and incentives for staff to share knowledge (OECD, 2003b). There is an increased awareness of the importance of good knowledge management practices for new ways of working, greater teamwork, structural changes and networked government.

However, a wider approach to knowledge management will need to be taken if governments are to have the capacity to evolve towards learning organisations⁵ or towards *learning governments*. This approach encompasses the creation and collection of information, the conversion of information into institutional knowledge, and the governmental decision-making based on that knowledge (OECD, 2003b). The creation and use of such knowledge for democratic governance will also require new public spaces for policy deliberation (Blumler et al., 2001).

The exact shape that government services, public administrations, and the exercise of democracy and governance could take in a knowledge-based society, has still to be determined. So has the way in which knowledge will be created and used in government. However, a notion is beginning to emerge of government which is based on the knowledge of the end user's need for value (the 'user' being a citizen, a business, a government body, a policymaker or a civil society organisation), rather than on data or document handling. It will also be *based on efficient management of knowledge, which will allow it to be sufficiently flexible to adapt to changing and diverse environments and needs*.

⁴ Knowledge management could be defined as the strategies and processes that promote a collaborative and integrative approach to the creation, identification, share, capture, organization, storage, access, dissemination and use of information assets, including the tacit, uncaptured knowledge of people, with the purpose of enhancing competitiveness.

⁵ Possible definitions for a Learning Organization could be an organisation that is capable of developing, capturing and applying knowledge, or an organization that makes continual learning a way of organisational life, especially improving the performance of the organisation as a total system.

2.3 User-centric eGovernment

2.3.1 Empowering the citizen and addressing his needs

If eGovernment is to be an enabler for the creation of public value for the citizen, governments need to better address public *demand*. As services become more complex and expensive, it is increasingly important to assess this demand and incorporate user feedback (OECD, 2003c). However, assessing demand remains a major weakness in OECD countries' eGovernment programmes.

One of the reasons for this weakness is that assessing demand for eGovernment services is difficult, as it seems to be limited or unclear. Overall, it could be said that the degree of citizens' democratic participation is low in Europe, if measured, for example, by the electorate's voluntary participation. The extent to which citizens interact with public bodies on-line in order to access public services also tends to be low.⁶ Thus there is an argument for focussing on public *needs*, rather than demand.

Several issues on *the provision of eGovernment services* on the supply-side need to be considered when addressing the needs of the citizen. The interest in, and use of, government on-line public services depends on a number of supply-side factors that include: what is available, the quality and usability of the services, the services' ability to address citizens' true needs, the provision of help with using the services, and the value – in terms of time saving and flexibility – they provide to the user. eEurope eGovernment benchmark studies⁷ report that, in the task of building a citizen-focused government approach, although the sophistication of electronic public services provided is significant, there is still *a need for greater emphasis on the citizen*. Services must be developed where citizens receive value in return for their taxes (i.e. access to public libraries), rather than services which mostly interest governments (such as tax collection).

Also on the supply side, citizens' *participation in the democratic process requires elements* such as trust in governments and politicians, efficient access to politically relevant information, capabilities for managing knowledge, commitment and ability of policy makers to take into account citizen's views and to feed-back to the contributors, etc. (Coleman et al., 2001). Furthermore, democratic participation, which is a key element of democratic governance as well as a contributor to knowledge creation and usage (learning), needs public spaces for policy deliberation.

On the demand side, *public needs* will be influenced by the political and socio-economic trends in Europe, which include the need for increased mobility, the changing demography characterised by an increasingly ageing population, the development of a mosaic society, increased immigration and ongoing migration, the emergence of new life styles (24-hours-a-day and 7-days-a-week life styles, individualisation, post-materialist values, well-being and leisure, ecological awareness), the changing communication patterns induced by (new) media such as the Internet and the global trends (such as terrorism, cyber threats, and globalisation).

Currently, there is limited knowledge about what type of public needs will result from the above. However, some basic trends with regard to generic public needs are emerging (see Box 1).

⁶ See for example Eurostat Statistics in Focus, Theme 4 – 16/2004 on Internet usage by individuals and enterprises, which shows for 2003 in EU15: 50% of Internet usage by individuals, 21% of individuals interacting with public authorities for obtaining information, 10% for obtaining forms, and 6% for returning filled forms.

⁷ Capgemini, "eGovernment benchmark study", February 2003 and "Online availability of public services: how is Europe progressing? Web-based survey on electronic public services, Report of the fourth measurement on October 2003", January 2004

Furthermore, *eGovernment should not mean that citizens have to increasingly deal with IST* but rather that the use of IST should make time available for valuable personal contact by supporting routine processes, information searches, etc. In many instances, technology will not always be visible to the citizens but will support operations in the back office so that services can be more effective and personalized (EIPA, 2003).

Box 1: Some emerging trends in public needs for eGovernment services

Needs related to service provision

- Personalised and effective services addressing the different needs of different citizen groups (for example, those deriving from a more mobile life style, those specific for elderly, for professionals, etc.)
- Government pro-active services (tax declaration)
- Access to public sector information
- Services and public spaces facilitating citizens' and NGOs' democratic participation
- Cross-border services (e-health, education, internal market)

Needs related to service delivery

- Quality, reliability and usability (for example, the creation of user interfaces that match the existing skills and cultures)
- Simplification of procedures and processes
- One-stop shopping and high level of process and channel integration
- Possibility for end-user customization
- Interfaces and usability for all (the most important customers of governments are the least technologically-educated, hence the need to address low functional literacy across the different delivery channels)
- Security of the data and infrastructure, the protection of personal data as well as transparency

Needs related to access

- Provide multi-channel access mix, with a diversity of contact points (i.e. home, mobile, kiosk, citizen office, multi-functional service shops, virtual and physical one-stop shops and the possibility to use letters and fax)
- Ensure the necessary access infrastructure is available
- Provide services which are accessible round-the-clock
- Ensure inclusiveness across a diversity of needs (ensuring access for all social / age / economic / cultural / gender / disabled groups) by providing appropriate skills and education and addressing the digital divide

From the point of view of government delivery of public value, there is an observable trend towards *the devolution of decision-making and service provision to the lowest administrative level* (to be as close as possible to the final user). The relationship between administrations is shifting from hierarchies to networks (in order to realise, as far as possible, a one-stop shop approach). Also, *in some countries, regions are emerging as key actors* between bottom-up initiatives of local government and top-down initiatives at a national level (Cattaneo, 2004).

Finally, an opportunity to *empower the user* has been identified. That is, an ICT-skilled user would be able to make use of the new technologies, configure the available self-services according to his or her individual needs and, through use, gradually increase demand. He

could even play an increasingly active role in the definition of new, advanced services. Thus the *user driven configurability* of eGovernment services at different levels emerges, which encompasses usage, development and design and deployment (usability).⁸ These advanced services would strongly contribute to increasing efficiency and competitiveness - at the risk, however, of deepening the digital divide. The two complementary approaches (addressing user needs and empowering the citizen) point to a number of challenges, such as the potential conflict between simplification of eGovernment services to ensure inclusion, with potentially less efficiency gains, and the skills and complexity required by applications that aim to stimulate active user participation.

2.3.2 Addressing the needs of businesses for cost-reduction and increased competitiveness

Governments need to address business needs, just as they address citizens' needs, when using eGovernment to create public value. The current situation in both service provision and service usage is, however, more favourable for businesses.⁹ Indeed, electronic public services for businesses are more sophisticated and available than they are for citizens. As a result, the percentages of enterprises using the Internet for interaction with public administration is more than double the percentage of citizens who use it.

Unlike the limited demand from citizens mentioned above, the demand from businesses is easier to define, as it is related first and foremost to the need to *minimise transaction costs* generated by the interaction with the public service administration and to increase speed, simplicity and scalability – particularly important for SMEs. The fact that demand from businesses is stronger may explain why they use eGovernment services more, and why Internet penetration in business has increased partly motivated by the eGovernment services.

Businesses are operating in an increasingly global economic environment, where there is increasing competition and where national economic boundaries are blurring. This generates the need for businesses to *increase competitiveness*. Here too, government may have an important role to play, which might need to be better understood and addressed.

2.4 Distributed eGovernment: The increasing role of intermediaries

Intermediary private, social and public partners are increasingly important in the delivery of public services and in the exercise of democratic governance. These intermediaries already play diverse roles as key partners in the provision of government services or democratic processes, but are seen as crucial for the implementation of more dynamic and knowledge-based eGovernment in the future:

- Private sector organisations are already playing an important supporting role in the implementation and delivery of eGovernment services, such as providing experience and advice (e.g. in the use of technologies in the private sector for work flow automation, process re-engineering, and change management), skills and education, financial resources, infrastructure access and capacity building, hardware and software products, and integrating provision of government services into private sector channels.

The private sector is also playing a significant role in the delivery of public services (education, health care, intermediary agents) following the increasing trend for outsourcing and privatisation. This role might even grow under new economic and legal frameworks. Examples of intermediaries in government service delivery in different countries today could point to possible future models of co-operation in the digital space.

⁸ In this model, however, shifting the burden to the citizen should be avoided, and mechanisms to monitor these possible negative trends could be introduced.

⁹ See same above references to Eurostat (2004) and Capgemini (2003, 2004)

- Civil Service Organisations (CSOs) and Non-Government Organisations (NGOs) play a role in defending citizens' interests, in front of local, regional, national and international government organisations. Their role in the development of eGovernment could increase to include shaping and communicating citizens' needs as well as supporting the eGovernment implementation process with education and guidance. However, if CSOs are to play such a role, there must be better understanding of how their representativeness and accountability will be ensured.
- Civil servants' unions have an important role to play in defending their members' rights in the face of new technologies that contribute to the delivery of public services, as these could have a significant impact on their working conditions (including organisational responsibilities, accountabilities, skills or job content and security).
- Government service providers (or 'street level bureaucrats'), not-for-profit organisations providing services such as housing, education and research, social care, child and youth care, medical care, police, firemen, etc., are key players in the overall provision of public value. Their particular needs for eGovernment services (potentially stronger than citizens' needs) as well as their current and future role in the context of eGovernment development needs to be better understood and taken into account.
- It is also expected that new players, both virtual (e-agents or e-brokers) and physical (social actors, trainers, or citizens themselves) will emerge as new technologies and eGovernment applications are developed, to address cognitive overload and functional or procedural complexity. Even if usability is improved, it is expected that not everyone will have access to electronic public services – intermediaries will be needed, i.e. people who provide access to others, particularly in rural areas. The potential role and needs of these new players in the delivery of eGovernment services needs to be better understood.

This vision raises the importance of *developing stronger, more innovative and longer term collaborative models and partnerships* between the public sector and diverse new intermediaries, sharing risks and rewards, which could help governments respond to changing technologies and opportunities (OECD, 2003a). Furthermore, it raises the need to better understand and consider the needs of these intermediaries as both users and actors of eGovernment.

2.5 Networked eGovernment: The key importance of networking, co-ordination and collaboration

The increasing number of public, private and social actors and intermediaries at EU, national, regional and local levels in the implementation of the eGovernment vision, indicates the need for a *networked eGovernment* with strong co-ordination and collaboration among actors as a key requisite for knowledge creation, sharing and dissemination, for the delivery of public services and for the creation of public value.

Other trends also drive this need for networked eGovernment. Firstly, modern governance is multilevel and polycentric by nature. In this respect, most EU Member States are traditional federal states or former unitary states that have entered into a process of federalisation, quasi-federalisation or large scale regionalisation and decentralisation – a phenomenon sometimes referred to as "new federalism" (EIPA, 2003). In this kind of socio-political context, co-ordination and collaboration (collaborative governance) *within and among agencies and government levels* are essential to ensure interoperability, to avoid duplication, to ensure coherent action in a range of crucial areas such as security and privacy, and to provide a framework and capacity for seamless services. eGovernment initiatives are thus refocusing attention on how to collaborate more effectively across agencies (OECD, 2003a, 2003c).

Secondly, it has become apparent recently that governments could create a considerable amount of public value just by reproducing themselves as networks. The use of ICTs by

governments would be instrumental in *transforming the hierarchical structures of public administrations into networked structures*. This would be a complex undertaking, however - it would need political will, popular support, and skills and persistence, as well as ICT. It would be pointless to assume that technology alone can change the way in which governments work by affecting organizational practices and structures (UN, 2003).

Thirdly, other trends point at new public service production and delivery models, based on an architecture which distinguishes *front offices* from *back offices*. This new architecture is paving the way for a one-stop shop model comparable to the retail trade. Further more, while Internet-enabled online citizens have enabled this new delivery mode, it is expected that online access will not remain the only modern way of delivering public services. Physical neighbourhood one-stop shops, providing assistance services, will profit from eGovernment potential. Thus, front offices may materialise as Internet portals, call centres, or physical one-stop shops, all enabled and assisted by ICTs. Typically, several back offices will be accessed from the different front offices. Front offices are coming closer to citizens and enterprises, while back offices can be located anywhere. Service production and service delivery centres will be on different locations, and their interconnection, collaboration and co-ordination will become more crucial than ever (EIPA, 2003).

This new service production and delivery model provides an opportunity for *down-sizing and integrating back offices* and developing *high quality services with more relational approaches* in the front offices. This will make administration more efficient and streamlined and government more user centric (Millard et al., 2004). This integration would, however, bring new challenges that would need to be addressed. From a political perspective, organisational boundaries play an important role – they are functional and have normative consequences. They have been created because they mark, or demarcate, jurisdictions, protect against misuses of power, provide checks and balances, and assign accountability and responsibility. Therefore, while it is important that boundaries between services begin to blur if they are to integrate successfully, it is also important that the necessary checks and balances remain in place.

Finally, another challenging question to be addressed is who has the power in a networked eGovernment. It is therefore important to examine “who wins” and “who loses” in this concept of networked government, and to decide which values should be protected. In any event, burden (responsibility, cost, effort) should not be shifted to the end user.

2.6 Summary

Better public services and better governance is being demanded of European governments in tandem with the changes generated by a host of political, economic, social, demographic and technological trends. Thus, *eGovernment in the EU* is seen as a tool for *better government* in the next decade, and, ultimately, increased *public value*. Furthermore, to address these trends, eGovernment will need to be *more knowledge-based, user-centric, distributed and networked*.

Indeed, in a developing knowledge-based society, more efficient *creation, management and use of knowledge* will be needed in order to create public value. Processes will need to be more participatory, and governments more networked. The efficient management of knowledge should allow governments to be more *flexible to adapt to changing and diverse environments and needs*.

In order to create public value for the citizen, governments must better understand and address the *citizen's needs* and understand to what degree they should *empower* users of eGovernment. Governments must also take account of *business needs*, such as the need to minimise the costs of interacting with public administration, and the need for increased competitiveness in an increasingly global economic environment.

The vision of eGovernment highlights the *increasing importance of intermediaries* – i.e. private, social and public partners, in the delivery of public services and in the exercise of democratic governance. Governments will need to better understand the potential of these actors, in order to develop stronger, more innovative and longer term collaborative models and partnerships with them, and finally, to increasingly consider their needs as users of eGovernment services.

Finally, there are several trends in public administration in Europe towards the development of a *networked eGovernment*, which will require strong co-ordination and collaboration among actors. Networked eGovernment is crucial for knowledge creation, sharing and dissemination, and for the creation of public value. However, it also raises new governance challenges that need to be addressed.

3. eGovernment implementation challenges

As a means of identifying the most important eGovernment specific research challenges, the expert group debated the major government political, socio-economic, and technological challenges in the construction of the eGovernment vision in the EU.

Some of the challenges identified are already well known and have been well documented. Examples of these are: interoperability and standardisation, usability, the need for back office re-engineering and one-stop shop approaches, and the need for political commitment and strong leadership.¹⁰

Furthermore, it is expected that the implementation of the eGovernment vision will not only bring to the fore new challenges in the next decade, but also it may make some existing challenges more acute. All these are related to the political and strategic leadership needed, the implicit structural transformation that must take place, achieving a citizen-centric approach and addressing the digital divide, the increasing need for interoperability and standardisation and for technological and methodological implementation tools.

These emerging challenges, most of which appear to be common to the three themes analysed (G2G, G2C, G2B), are presented more in detail below.

3.1 Political and strategic challenges

Challenges deriving from the very nature of the political structures and their respective roles appear as the *strategic and political leadership* necessary for a successful eGovernment strategy:

- The politicians' resistance to address fundamental changes or questions, which would bring the risk of computerising what exists (substitution) as the most straightforward approach, vs. the need for more fundamental changes;
- The conflicting political goals of *transparency* for the different actors. For example the tension between transparent governance vs. privacy and data protection;
- The conflicting political goals of *eDemocracy* for different actors: more participatory processes in policy development vs. a potential challenge to the representative democracy;
- The conflicting interests and priorities at national level (standardisation, harmonization, cohesion, long term planning) vs. those at local level (personalisation, effectiveness, political accountability, short term planning);
- The conflicting short-term interests driven by political mandate timeframes and longer term planning needed for transformation of structures, processes and culture;
- The budgetary barriers: the need for cost-benefit and costs-saving monitoring of ICT investments, the need to account for training and change management costs in addition to direct ICT investment costs, etc;
- The need to better understand how the public institutions and eGovernment can contribute to knowledge creation and development, to innovation in society and to economic competitiveness.

¹⁰ European Commission (2003), OECD eGovernment project, UN(2003), etc.

3.2 Structural challenges

The following implementation challenges emerge when *structural transformation* for an efficient and effective approach to eGovernment is addressed:

- The need to deal with different administration cultures and different administration structures, powers and strategies which derive from distribution of power;
- The legacy of organisational structures, processes, skills, mindsets, culture, and the resistance to change;
- The need to develop specific skills at both the organisational and the personal level;
- The need for building trust, collaboration and co-ordination of initiatives across government levels and agencies and across actors;
- The need to re-design public-private partnerships, balancing public / private tasks and interests.

3.3 Social challenges

The current mismatch between demand and supply of eGovernment services for *citizens*, aggravated by the existing *digital divide* linked to other social, cultural and economical divides, results in the following challenges:

- The need to understand and address the diversity of *user needs* for services (at local, regional, national and trans-European levels), usability, personalisation and for access channels;
- The need for tools and mechanisms to monitor and *guarantee user satisfaction*;
- The need to address the *digital divide* to ensure eInclusion at citizen and business level. A particular challenge that the digital divide poses in the eGovernment context is that the most disadvantaged tend to have the lowest level of access to the Internet, while having the highest need for interaction with government;
- The need to ensure *security* of the infrastructure and data, *protection of private data* across agencies and actors, and to build citizens' *trust*.

3.4 Interoperability and standardisation challenges

The already acknowledged need for *interoperability* and *standardisation* might be amplified in the future by the trend towards an increasingly networked eGovernment. This will involve a growing number of government agencies at local, regional, national levels, and other actors for the delivery of eGovernment services, giving rise to the need for the following:

- Legal and administrative semantic / conceptual standards as a basis for interoperability of procedures, data formats and technology platforms;
- Standardisation and interoperability for the provision of trans-European services for mobile citizens and for businesses operating on different countries;
- Interoperability of services and procedures that could avoid the huge impact that a strict standardization approach would generate.

3.5 Technological challenges

Although many of the technologies needed by governments for the implementation of eGovernment exist already, a number of *technological and methodological implementation challenges* emerge, specifically related to the implementation of ICTs in the public sector:

- The risk of technology lock-in, aggravated by the large scale of the implementations;
- The need to avoid counter-effects generated by over-sized technological solutions;
- The need to develop functional services scalability, particularly for businesses, which addresses the needs of both big enterprises and SMEs;
- The need for tools and methods for the application of ICTs to achieve more efficiency, effectiveness, structural and cultural transformation and addressing resistance to change.
- The need for specific knowledge management tools to deal with the complexity and large scale of the information base in highly structured organisations.
- The need for technologies to address the cognitive overload which comes as a consequence of knowledge sharing and democratic consultation.

3.6 Legal and regulatory challenges

Finally, the existing *legal and regulatory framework(s)* pose a number of challenges to the implementation of the eGovernment vision:

- The need for greater harmonisation, co-ordination or integration of the legal and regulatory frameworks for interoperability, for the provision of cross-border services, for ensuring security, privacy protection and for providing identity management;
- The need to find the balance between a harmonised framework and a mandatory legislation.

4. eGovernment-specific research challenges

Based on these implementation challenges and on knowledge of current state of the art research, the experts identified the major eGovernment-specific research challenges to achieving the eGovernment vision. Although there is not always a clear separation between themes, for clarification purposes these challenges have been grouped into technical, economic, social and political.

This chapter describes these eGovernment-specific research challenges in more detail.

4.1 Technical research challenges

4.1.1 Access technologies to ensure eGovernment for all

A particular dimension of government services, as opposed to business services, is that governments need to ensure services are accessible to all citizens. A number of groups may be excluded from eServices because of their specific needs: inhabitants in rural areas (of particular relevance in the enlarged Europe which has a higher percentage of rural population), older people, disabled, illiterate users, economically disadvantaged, etc. The potentially small economic relevance (for businesses) of these groups may hinder the development of alternative access channels, technologies and interfaces adapted to their needs. Furthermore, as eGovernment services evolve towards user personalisation and need-driven services, different user groups (for example young vs. older, high education vs. lower education, etc) will need different access channels and interface technologies.

Therefore, research is needed in the following areas:

- technologies, interfaces and related service delivery models to ensure access for all (for example: voice recognition, video, pictograms, texts and multi-lingual systems); and,
- technologies for managing and ensuring coherence, synchronisation and maintenance of the different information elements of information in a multi-channel (mobile, TV, PC, paper, etc.) and multi technological environment (voice, video, picture, text, etc).

4.1.2 Specific technologies for a knowledge-based networked eGovernment

In the vision of knowledge-based eGovernment in the enlarged EU in 2010 described above, information will be exchanged, managed, and processed through knowledge-based and knowledge creation applications. Seamless interactions among the different networked actors (politicians, civil servants, businesses, citizens, NGOs, CSOs, and public service providers) will take place in the provision of public and administrative services, the exercise of democracy, policy making and governance.

The specific environment of eGovernment has particular characteristics, with specific technological needs, such as:

- the massive amount and complexity of information to be managed for the provision of eServices: regulatory, administrative, procedural, formal, multi-lingual, etc., which require tools for simplification of content and tools for management of content overload;
- the high number of actors of different types involved in the information exchange and knowledge creation process creates a need for aggregation, filtering, prioritization, linking of information and archiving. Examples are the exercise of democracy (millions of citizens) or the regulatory debate around a new legislation;
- the specific needs linked to the exercise of democracy which requires government exchange with and feedback to contributing citizens and organisations, to stimulate participation.

This vision calls for research into:

- specific technologies for creation, capture and management of knowledge, based on the representation of complex information types: regulatory, administrative, procedural, formal, multi-lingual (semantic web, ontologies for eGovernment and meta description languages):
 - to support networking and government inter-relationships (peer-to-peer eGovernment), and,
 - to support organizational learning in a networked government;
- the related business models supporting the above processes;
- specific technologies able to process huge amounts of information for knowledge creation (filtering, prioritization, aggregation, linking, decision making, and archiving); and,
- technologies and tools to allow shared public spaces in support of democratic governance. These spaces would allow knowledge creation and management, moderation, decision making, policy making and the participation of the citizens, businesses and politicians.

4.1.3 New models of harmonisation

A number of drivers call for different levels of harmonisation of government (and consequently eGovernment) procedures, applications and underlying infrastructures (systems and solutions):

- the increasing mobility of European citizens, who need similar services in different countries in the EU, in different regions within one country or in different cities;
- the increasing pressure on governments with decreasing budgets for cost-efficiency, which calls for the use of common (standard) solutions or open source software;
- the citizen's need for usability and user-friendliness, which would be facilitated by common approaches and standards; and,
- the provision of seamless eGovernment services which require information and knowledge exchange, and thus interoperability, between different administrations and organizations in the public sector, within a country or across countries in EU.

An important barrier to achieving this harmonisation is the difference in administrative procedures in different institutions, countries, regions and cities. On top of that, significant technological barriers for the development of seamless eGovernment services have also been reported. These are partly due to the diversity of existing (legacy) information systems run by the different actors who support government functions today, the challenges of co-operation, and the diversification and fragmentation that is taking place in the implementation of eGovernment solutions and services (at city, regional and national levels).

In addressing harmonisation, a combination of different approaches may need to be considered. While the use of standards (together with standardisation and certification bodies) may be helpful in some areas, these may not be viable in all cases, where replacement or adaptation of huge legacy systems would be required. There is a need for research into:

- better understanding of how and in which areas standardisation could support harmonisation, as well as,
- potential methods, technologies, architectures and related sustainable business models for achieving the semantic, procedural and technical harmonisation such as: standardisation, translation of procedures, translation of formats, creation of common ontologies, concentration of the demand, share of good practices, methods for development of systems which are platform and device independent (i.e. divorce the data from the technology which conveys it), use of intermediary actors, and use of open source software tools.

4.1.4 Open source tools for eGovernment applications development

The drivers for harmonization (see 4.3), and the opportunity to share good practice in order to speed up deployment and leveraging on lessons learnt, point at the possibility of using an ‘open source’ approach for the development of eGovernment applications.

Such an approach could encompass sharing open source application software or open source application modules, sharing ‘eGovernment building blocks’ such as for example e-signature, e-payment, e-register, e-Identification, etc. or sharing testing tools for specific interfaces and user targets.

It would require specific research on:

- The opportunities and challenges for the use of open source software in the public sector;
- Open platform tools (open source software, open standards), systems and related sustainable business models for the sharing of applications, application modules, and testing tools in the public sector.

4.1.5 Quality monitoring tools

So far, surveys have pointed to low levels of usage and usability of electronic public services. These results show there is a need for tools and methods for service and interface quality, usability and user satisfaction measurement and monitoring.

Some of the research challenges, specific to eGovernment, are:

- Application of quality management principles to the delivery of electronic public services;
- Development of technologies able to capture service and interface quality, usability, user preferences and user satisfaction; and,
- Development of testing tools and systems adapted to specific needs.

4.2 Economic research challenges

4.2.1 New models for eGovernment service provision and delivery and governance

The vision developed for eGovernment in the EU in 2010 suggests there may be alternative models for delivery of electronic public services for better government, for example, public service delivery by institutions such as banks and post offices (for, say, payment of taxes) or garages (for paying car registration).

Some of the research challenges, specific to eGovernment, are:

- What role could private organisations play in the provision of eGovernment services?
- Which business models would be viable for multilingual services provided by local government?
- What are the implications of an evolution in the provision of government service from a personalised to a self-service model?
- How can greater cost-efficiency be achieved through new channels of service provision if, at the same time, traditional channels need to be maintained?
- What sustainable co-operative (i.e. what do people expect to get in return) and business models (i.e. how to cover the platform costs) could support the creation and sharing of knowledge that is implicit and built-in in government processes?
- What changes could be expected in the role of civil servants in the delivery of public services (as ICTs are incorporated in public services)?
- In the longer term, where will new technologies emerge and how will they influence the shape of eGovernment in the future knowledge-based society? What form will

government take, or should it take, in this future society? What structures would be adequate? This last question would include consideration of the relevance of a zero-based concept of government.

4.2.2 The role of intermediaries in eGovernment service delivery and governance

The vision developed for eGovernment in the EU in 2010 predicts an increase in the role of intermediaries in the provision of public services (for example, public service delivery by institutions such as banks and post offices for, say, e-payment of taxes as already mentioned above).

Some of the research challenges, specific to eGovernment, are:

- What new intermediaries are expected and what will the related models for electronic public services delivery and governance be?
- What eGovernment and eGovernance service intermediaries and technological intermediaries are expected?
- What roles will be played by actors, such as civil society organisations, non-governmental organisations, social actors, public service non-profit organisations, etc, in the delivery of public services and governance? How can their representativeness and accountability be ensured?

4.3 Social Research Challenges

4.3.1 Understanding individual users' needs

The lack of understanding of specific individual user needs has been reported by the experts as a key challenge for the development of eGovernment.

Some of the research challenges, specific to eGovernment, are:

- Identification of different target user groups and their particular needs for electronic public service governance tools (e.g. urban vs. rural; groups with different education, connectivity, and functional literacy levels, multi-cultural and ethnic groups, or different social or economic groups). In particular, the techno-socio-economic factors that contribute to the digital divide must be understood and the tools, methods and policies to overcome it should be identified.
- Understanding the profile, motivation, individual and social behavioural patterns of an eCitizen as a starting point for future development of citizen-focused eGovernment services and encouraging citizens to engage in the democratic governance processes.
- Identifying technologies and tools that would allow public knowledge to be incorporated into service and application design.
- Finding appropriate models which will allow government services to migrate from a *demand* to a *needs* orientation. This will be necessary as it is assumed that the citizen does not have the time to engage with government or the knowledge of the policy environment to know what services can be demanded.
- Along the same lines as the point above, finding what technologies, tools and methods can be used to capture democratic information with minimal effort and cost for the citizen (ergonomics of democratic participation).
- Identifying citizens' new needs for public services in a changing societal reality. In the next decade, the EU will go through a number of socio-economic transitions (increase of population, society with extreme cultural and religious diversity, multi-lingual, ageing of population, changing living, working and consumption patterns, etc.), raising new needs for public services for the citizen who is adapting to these changes.

For example, will there be a need for mobile, location based, personalised public service bundling? Will there be a need for government pro-active, personalised services? To what extent will there be a need for the self-service delivery model?

Identifying, in particular, the needs of different target groups for specific access channels (such as TV, mobile, PC, phone, personal interaction, paper), interfaces and related multi-media technologies (such as voice recognition, video, pictograms, texts and multi-lingual systems, etc.). What are the implications of generational change on technology take-up in this context?

- Supporting the eCitizen. In order to realise the vision of an empowered citizen who is able to configure eGovernment services adapted to his needs and plays an active role and participates in new services definition, we need to understand how technology, methods and policies could support citizen empowerment. What would help the citizen become pro-active with regard to his education, work activities, social and civil relations, and relations with government? What conditions and tools are needed to support this empowerment?

Examples could be: computer support services, education, data mining tools (which could tell, for example, what stage government debate has reached in a particular legislation change, or what the current government projects on road infrastructures are), charter of e-rights for citizens (so they know what their rights are as regards service providers), translation tools (to allow citizens to understand complex political-legal documents) or virtual agents (to mediate against functional or procedural complexity), navigation tools (to help citizens to find what they need even if they are unaware of how to do this or how it is officially described), user-friendly e-deliberation software, e-alerts (to inform citizens when an issue of interest to them is being discussed at government level).

4.3.2 Tools and methods for ensuring trust and security

While trust and security are topics of general concern in the Information Society, other topics are specific to eGovernment.

Some of the specific eGovernment research challenges are:

- What tools, methods, technologies and policies could be used for building and maintaining citizens' trust in eGovernment applications?
- Is there a role for intermediaries in the building and maintenance of trust?
- How can the challenges of security and privacy of eGovernment data (including those arising from the use of Grid technology) be addressed?
- How can privacy and responsibility in the management of independently-owned databases be ensured?
- What are the specific requirements for security in the public sector and what security solutions can be applied?
- What are the specific requirements for identity and authorisation management, and for related solutions in the public sector? And how can these be met?
- How can a balance be struck between maintaining sufficient security in eGovernment applications (including identification services) on the one hand, and respect for individual privacy on the other?
- How can a balance be achieved between technical security and the current trend away from hierarchical and controlled organisations towards networked and more loosely linked organisations that put more responsibility on the user?

4.3.3 Resistance to change in the public sector

The implementation of eGovernment implies change in the organisation, roles, skills, job profiles of civil servants in public administration organisations. The resistance to these

changes (due to fear or inertia) has been identified by the experts as an important challenge for eGovernment implementation.

Some of the research challenges, specific to eGovernment, are:

- What tools and methods can support institutional, organisational, relational, individual change (skills, attitudes) in the public sector?
- How could the public sector, the private sector, the unions, or other actors support such a change?
- How can a balance be maintained between protecting the stability of institutions and encouraging necessary evolutionary change?

4.4 Political research challenges

4.4.1 eGovernment at the EU level

Interoperable and secure eGovernment is identified in the eEurope 2005 Action Plan as a tool for achieving the Lisbon objectives. At the same time, the experts have identified the need for a better understanding of the potential role of the EU in the development of eGovernment, both at national and at European level.

Some of the research challenges are:

- Understanding how the long term vision for the European Union will influence the long term vision of EU (e)Government. What are the possible scenarios?
- Understanding how, and to what extent, eGovernment can support European integration, and, in particular, support the full integration of those countries that have recently acceded to the EU, helping them to overcome recognised differences in their economies and administrations.
- Better understanding of how eGovernment contributes to the achievement of the Lisbon strategy: for example, what is the contribution of eGovernment to the knowledge-based economy (in terms of jobs and GDP growth)?
- Understanding what shape a pan-European eGovernment could take.
- Understanding what the opportunities for added value EU level initiatives (EU initiated, EU managed) are, taking into account the principle of *subsidiarity*.
- Understanding how to support the development of synergies among the different national research and innovation efforts in eGovernment, through the instruments of the EU.
- Better understanding of what could be the role of the EU and the potential impact of increasing administrative cooperation in the light of the draft Constitution, Art 185.¹¹
- Identifying the remaining legal, regulatory and organisational barriers to pan-European eGovernment. How could the implementation of pan-European services, compatible in the back offices and harmonised in the front offices, be advanced? How could EU practices be integrated into a standardization body and good practice be shared across

¹¹ Article III-185 of the Treaty Establishing a Constitution for Europe adopted by consensus by the European Convention on 13 June and 10 July 2003, submitted to the President of the European Council in Rome - 18 July 2003 - (2003/C 169/01): 1. Effective national implementation of Union law by the Member States, which is essential for the proper functioning of the Union, shall be regarded as a matter of common interest. 2. The Union may support the efforts of Member States to improve their administrative capacity to implement Union law. Such action may include facilitation of exchange of information and of civil servants as well as supporting training schemes. No Member State shall be obliged to avail itself of such support. European laws shall establish the necessary measures to this end, excluding any harmonisation of the laws and regulations of the Member States. 3. This Article shall be without prejudice to the obligations of the Member States to implement Union law or to the prerogatives and duties of the Commission. It shall also be without prejudice to other provisions of the Constitution providing for administrative cooperation among the Member States and between them and the Union.

borders? How could the protection of eGovernment data that is shared across borders be ensured?

4.4.2 eGovernment and the creation of public value

eGovernment has emerged as a means for improving government, and, ultimately, increasing public value. However, clearer understanding on how, and in what areas, eGovernment can contribute efficiently and effectively to increase public value is still needed.

Examples of research questions in this area include:

- Better understanding of how eGovernment can support the policy and law-making process (simulation, drafting, inconsistencies).
- Understanding of the socio-political, legal and technological significance of transparency for the specific stakeholders in eGovernment, and how eGovernment can sustain this transparency.
- Better understanding of what the different aspects (levels, conditions, cultural traditions, organisation specificities, etc) of the emerging concepts of *e-rights* and *e-obligations* are, both between users and administrations and between administrations themselves, in the vision of a distributed eGovernment.
- Understanding the opportunity for eGovernment to provide administrative Alternative Dispute Resolution (ADR) mechanisms.

Annex 1: References and background documentation

- Burgelman, J-C.; Clements B.; IPTS, “A New Paradigm for eGovernment Services”, IPTS Report, Issue October 2003, <http://www.jrc.es/home/report/english/articles/vol78/ICT1E786.htm>
- Blumler Jay G.; Coleman S.; *Realizing Democracy Online: A civic Commons in Cyberspace*, IPPR / Citizens Online Research Publications No.2, March 2001, <http://www.ippr.org.uk/publications/covers/Realising%20Democracy%20Online%20-%20in%20.pdf>
- Cattaneo, G.; Databank Consulting (Italy), *Building eGovernment: European Regions alternative strategies*, April 2004, http://www.databank.it/star/index_2.html
- Coleman, S.; Götze, J.; *Bowling together: Online Public Engagement in Policy Deliberation*, 2001, <http://bowlingtogether.net>
- EIPA (European Institute of Public Administration), 2003, *eGovernment in Europe: The State of Affairs*, 2003, <http://www.eipa.nl>
- European Commission, Communication *The Role of eGovernment for Europe's Future*, COM(2003)567 of 26 Sep 2003, http://europa.eu.int/eur-lex/en/com/cnc/2003/com2003_0567en01.pdf
- ISTAG, IST Advisory Group, *Ambient Intelligence: from vision to reality – For participation - in society & business*, Sep 2003, <http://www.cordis.lu/ist/istag-reports.htm>
- Millard, J.; Danish Technological Institute, “*ePublic services in Europe: past, present and future*”, Research findings and new challenges, Final Paper, September 2003, <ftp://ftp.cordis.lu/pub/ist/docs/epublic-services.pdf>
- Millard, J.; Iversen J.S.; Danish Technological Institute and Kubicek, H.; Westholm, H.; Cimander, R.; University of Bremen, “*Reorganisation of Government Back Offices for Better Electronic Public Services – European Good Practices (Back-office reorganisation)*”, Report to the European Commission, January 2004, http://europa.eu.int/information_society/programmes/egov_rd/documentation/text_en.htm
- OECD, 2001, *Public Management Policy Brief No. 9*, Jan 2001
- OECD, 2003, *eGovernment Imperative*, 2003
- OECD, 2003a, *The eGovernment imperative: main findings*, Policy Brief, March 2003, www.oecd.org/publications/Pol_brief
- OECD, 2003b, *The learning government: Introduction and draft results of the survey of knowledge management practices in Ministries / Departments / Agencies of Central Government*, 27th Session of the Public Management Committee, 3-4th April 2003, Paris, March 2003.
- OECD, 2003c, *Checklist for eGovernment Leaders*, Policy Brief, September 2003, www.oecd.org/publications/Pol_brief
- United Nations, Department of Economic and Social Affairs, *World Public Sector Report 2003: eGovernment at the Crossroads*, 2003

Annex 2: List of participants

Name	Title, Organisation	Country
Mr. Antonio Alabau	Universidad Politécnica de Valencia	Spain
Mr. Victor Bekkers	Erasmus University of Rotterdam	The Netherlands
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Mr. Marco Diani	CNRS	France
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Mr. Olavi Kongas	Ministry of Finance	Finland
Mr. Werner Korte	Empirica	Germany
Mr. Herbert Kubicek	University of Bremen	Germany
Mr. Jeremy Millard	Danish Technological Institute	Denmark
Ms. Montserrat Mirman	Junta de Andalucía	Spain
Mr. Jim Norton	UK Parliamentary Office of Science & Technology	United Kingdom
Mr. Roberto Saracco	Telecom Italia Lab	Italy
Mr. Jerzy Szeremeta	UN Division for Public Economics & Public Administration	UN
Mr. Ivar Tallo	eGovernance Academy Foundation	Estonia
Mr. Roland Traunmüller	University of Linz	Austria
Mr. Leo Van Audenhove	SMIT-VUB	Belgium
Ms. Agnes Bradier	European Commission, DG INFSO	EU
Mr. Thanassis Chrissafis	European Commission, DG INFSO	EU
Mr. Paul Timmers	European Commission, DG INFSO	EU
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Ms. Corina Pascu	European Commission, DG JRC, IPTS	EU
Mr. Yves Punie	European Commission, DG JRC, IPTS	EU
Mr. Rene van Bavel	European Commission, DG JRC, IPTS	EU

Annex 3: Workshop agenda

Chair: Jean Claude Burgelman, EC – DG JRC, IPTS

Day 1: Thursday March 4th, 2004

- 9h00 Introduction
- *Welcome by B. Clements, Head of ICT Unit, IPTS*
 - *Introduction by P. Timmers, Head of e-GOV Unit, DG INFSO*
 - *Research Background & Workshop Objectives by J.C. Burgelman (Project Leader, ICT Unit, IPTS)*
 - *Roundtable presentation of participants*
- 9h45 Roles and relationships within and between Governments
- a) Social, economic, technological and political drivers for change
 - b) Foreseeable demands for new services in 2010
 - c) Vision statement
 - d) Major challenges and bottlenecks
- *Presentation by R. Traunmüller, University of Linz, Austria*
 - *Presentation by G. Cattaneo, Databank Consulting, Italy*
 - *Discussion*
- 12h15 Relationship between Governments and Citizens
- a) Social, economic, technological and political drivers for change
 - b) Foreseeable demands for new services in 2010
 - c) Vision statement
 - d) Major challenges and bottlenecks
- *Presentation by H. Kubicek, University of Bremen, Germany*
 - *Discussion*
- 16h00 Relationship between Governments and Businesses
- a) Social, economic, technological and political drivers for change
 - b) Foreseeable demands for new services in 2010
 - c) Vision statement
 - d) Major challenges and bottlenecks
- *Presentation by J. Millard, Danish Technological Institute*
 - *Discussion*
- 18h00 Consolidation of Day 1

Day 2: Friday March 5th, 2004

- 9h00 Integrating the three dimensions
- *Presentation by IPTS*
 - *Discussion*
- 10h30 What are specific eGovernment key technical and non-technical research challenges to realize the vision (back-casting)?
- *Post-it session*
- 11h30 What are possible ICT/IST policies to realize the vision?
- *Post-it session*
- 12h30 Workshop Conclusions