Signposts towards eGovernment 2010

November 2005

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Executive Summary

The public **sector plays a major role in Europe's social and economic development**, providing legislative basis and services for citizens' welfare, socio-economic cohesion and a competitive market environment. However, Europe's public sector is today at a crossroads, facing economic and social challenges, institutional changes and the profound impact of new technologies.

The **evidence that eGovernment helps administrations rise to these challenges is growing**. Many citizens across Europe now submit their tax declaration electronically – and together saving millions of hours. In several countries electronic public service cards are starting to appear in citizens' wallets and help them to obtain official documents at a click, such as proof of residence. Less visible for citizens, but much more so for companies is electronic reporting for social security and other economic purposes. Hours saved by them means real money saved.

But these appear to be the quick wins. **Full impact of eGovernment means measurably more efficient, effective, inclusive and open government** in all areas of administrative services and democratic participation. **ICT alone is not sufficient**. eGovernment usually will not come to full fruition without significant **transformation** of administrations, and adequately skilled and motivated staff delivering maximum value for taxpayers' money through **high quality, efficient and effective public services for citizens and business**.

This **"Signposts towards eGovernment 2010"** summarises the discussions of the leaders and representatives of the national **eGovernment initiatives in the eGovernment subgroup,** which held meetings in 2005 addressing the future of eGovernment in the 2010 horizon.

> 1. **No Citizen Left Behind.**
> 2. **Efficient and Effective Government.**
> 3. **Delivering high impact services designed around customers' needs.**
> 4. **Key enablers for eGovernment.**

This document is conceived as an evolving one in which currently four priority policy areas have been identified. They are the 4 signposts to guide work towards eGovernment 2010. Within each of them, the mid-term focus has been taken in order to achieve visible benefits for citizens, business and the society at large. However, this could evolve in the future and references to the discussions about possible subjects to cover in the future are also included for completeness.

This document has to be seen as a snapshot of the issues discussed at the moment of going to print. It does not in any way propose or represent European Commission policy or a formal position of the eGovernment subgroup.

Introduction

Accelerating Progress
Towards eGovernment 2010 in Europe

Accelerating Progress Towards eGovernment 2010

Objective

eGovernment[1] is one of Europe's foremost challenges. At European level it plays a central role in Europe's i2010 Information Society initiative and figures prominently in many policy plans such as the modernisation of EU customs, public procurement and immigration policies. The Commission's research, deployment and structural fund programmes support Member States and their regions to give a high priority to the development of eGovernment. The Commission is advised on eGovernment by the eGovernment subgroup of leaders and representatives of national eGovernment initiatives of the eEurope Advisory Group[2].

The work of the eGovernment subgroup is well documented through the Bloomsday and CoBrA recommendations[3]. From these it is clear that next steps need to be identified to ensure the pace of eGovernment implementation is maintained or, preferably, accelerated towards eGovernment 2010.

Responding to CoBrA General Recommendation 6 (see box), this paper focuses on the opportunities widely discussed by the eGovernment subgroup on common targets, milestones and objectives for eGovernment 2010, or 'Signposts 2010'[4] and aims to provide a starting point and shared reference point **to accelerate progress towards eGovernment 2010** in Europe.

> **CoBrA General Recommendation 6.**
>
> **NOW IS THE TIME TO START DEFINING TARGETS FOR 2006 TO 2010**
>
> Targets for impact and transformation towards 2010 should be agreed upon. Now is the time to start defining clearly understandable and measurable targets

Signposts and i2010: The way forward

This signposts document contributes to the future shape of eGovernment in the 2010 horizon with a clear focus on its contribution to achieve Lisbon objectives for jobs and growth making Europe a more attractive place to live, work and invest.

At the same time, the European Union has given a new start to the Lisbon Strategy emphasising the partnership for growth and jobs and has launched "i2010 – A European Information Society for growth and employment"[5] which will contribute in making Europe more attractive to investment and innovation in knowledge-based goods and services.

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[1] eGovernment is defined here as "the use of information and communication technologies in public administrations combined with organisational change and new skills in order to improve public services and democratic processes and strengthen support to public policies", as in the Communication of 2003 COM(2003)567.

[2] Policy guidance is also provided by the Network of Ministers of Public Administrations (EUPAN, see www.eupan.org). At the programme level various EU programme committees are active (e.g. ISTC, eTEN Management Committee, PEGSCO, and others).

[3] http://europa.eu.int/information_society/activities/egovernment_research/documentation/index_en.htm#beyond_2005

[4] Inspired by the usage of the word 'signposts' in the Danish eGovernment initiatives.

[5] The Commission adopted on 1 June 2005 the initiative "i2010: European Information Society 2010" which is a comprehensive strategy for modernising and deploying all EU policy instruments to encourage the development of the digital economy: regulatory instruments, research and partnerships with industry, europa.eu.int/information_society/eeurope/i2010/index_en.htm

eGovernment is one of the key elements within i2010 in which it is planned to adopt an Action Plan on eGovernment and strategic orientations on ICT-enabled public services.

Policy areas towards eGovernment 2010

The eGovernment subgroup has identified four policy areas in which Europe can benefit from sharing common objectives. They are 4 signposts towards eGovernment 2010:

1. **No Citizen Left Behind - inclusive eGovernment**
2. **Efficient and Effective Government**
3. **Delivering high impact services designed around customers' needs**
4. **Key enablers for eGovernment,**

Preparatory work

A series of meetings of the eGovernment subgroup have taken place[6] to explore priorities and targets for eGovernment 2010 as part of i2010, the successor to eEurope 2005[7]. The intention, as set out in the CoBrA recommendations, was to define concrete, clearly understandable and measurable targets and objectives for European eGovernment policy for the period 2006-2010, based on an in-depth discussion on their relevance, ambition level and feasibility. This also implies analysing the necessary steps towards realising objectives, e.g. which actions to take and by whom.

Objectives and targets are intended to be **relevant**, **ambitious** and **realistic**.

Relevant: aiming to clearly contributing to economic growth and social progress.
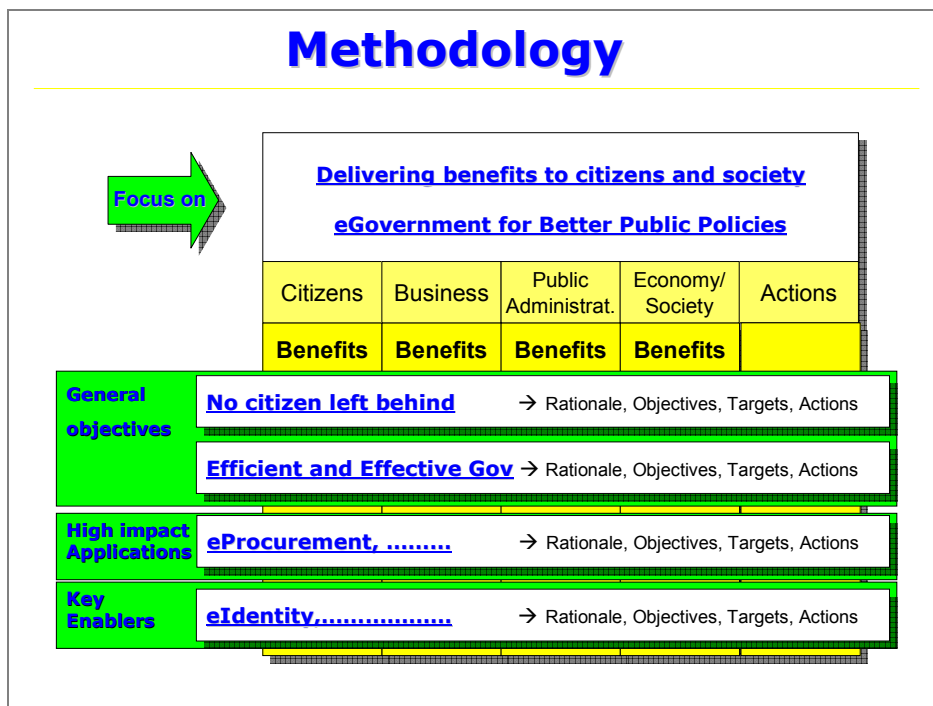
Ambitious: in order to live up CoBrA General Recommendation 2: "modernisation and innovation of public administrations are essential to realise the Lisbon goals".

Realistic: in line with CoBrA General Recommendation 8: "Europe is well-placed to achieve world-class administrations".

The methodology followed is summarised in the picture below. For each of the 4 policy areas the focus was on analysing the benefits for each of the target groups (citizens, business, and public administrations) as well as the overall benefits for economy and society. The analysis was supported by the use of 'benefits matrices' which helped to identify possible objectives, targets and actions.

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[6] The meetings were held under the auspices of the Luxemburg and UK Presidencies from February to November 2005.

[7] Previous recommendations of the eGovernment subgroup as well as their discussions, as reflected in this Signposts document, are taken as important be it not the only inputs for the future eGovernment Action Plan.

Methodology

Delivering benefits to citizens and society

eGovernment for Better Public Policies

Focus on →

Citizens	Business	Public Administrat.	Economy/ Society	Actions
Benefits	**Benefits**	**Benefits**	**Benefits**	

General objectives
- **No citizen left behind** → Rationale, Objectives, Targets, Actions
- **Efficient and Effective Gov** → Rationale, Objectives, Targets, Actions

High impact Applications
- **eProcurement, ………** → Rationale, Objectives, Targets, Actions

Key Enablers
- **eIdentity,………………** → Rationale, Objectives, Targets, Actions

Key assumptions

The key assumptions when formulating objectives can be summarised as follows:

- Progress to be based on joint action with a strong and clear role for Member State action plans and targets, as called for in the Commission's report for the Lisbon revision as well as the Kok report;
- Realisation of objectives should be anchored in ongoing and foreseeable actions in Member States and at the European level;
- Realising objectives can be and should be supported by shared means, such as making good practices available, EU-level action plans, EU-level programmes;
- Partnerships with the private sector will be easier when objectives are shared, creating credibility with banks for investment, e.g. the EIB, as well as creating economies of scale for the ICT industry;
- It is important to monitor progress towards the targets and objectives through a solid measurement framework, generating quantitative evidence which complements the qualitative evidence from good practices[8] and case studies.

Inputs to this paper

The key inputs to this paper include:

1. CoBrA Recommendations on eGovernment Beyond 2005

2. Bloomsday Recommendations on eGovernment in eEurope 2005

3. Scenario building by eGovernment subgroup

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[8] See Cobra recommendation "common metrics on benefits", "good practices of public value", "concrete and common measurement framework"; use should be made of the extensive work that is going on at the OECD, the Modinis study on eGovernment financing/benefits/economics (measurement framework), measurements by Eurostat, eUser R&D project, eGovernment Good Practice Framework, etc.

4. Comments in eEurope Advisory Group to the Recommendations

5. Inputs received for previous subgroup meetings from the Member States

6. Inputs from the ad-hoc groups of the eGovernment subgroup, including the 'benefits matrices'

7. Commission consultation on Challenges for Europe's Information Society beyond 2005"

8. The i2010 initiative (launched by Commissioner Reding on 1 June 2005)

9. Commission report on Lisbon mid-term of 2 Feb 2005, "Working Together for Growth and Jobs"

10. Commission public eGovernment policy stakeholders meeting of 21 September 2005.

For links to the documents mentioned above see the policy section on http://europa.eu.int/egovernment_research.

eGovernment subgroup

The eGovernment subgroup consists of leaders and representatives of national eGovernment initiatives. It has been given its mandate as a subgroup of the eEurope Advisory Group. Chaired by the eGovernment unit of the European Commission Directorate General Information Society and Media DG INFSO, its agenda has been developed in close cooperation with other units of DG INFSO (eTEN, eEurope, i2010), DG ENTR (IDABC) and the involvement of DG MARKT, DG JLS, DG DIGIT, DG Admin of the European Commission.

For the purpose of the Signposts development the eGovernment subgroup has formed 4 ad-hoc groups involving a subset of Member States and led by a Member State as follows:

- Inclusive government led by Latvia (Mr Anatolijs Zabasta),
- Electronic Public Procurement led by France (Mr Jean-Jacques Leandri)
- Efficiency and Effectiveness led by the Netherlands (Mr John Kootstra).
- eID led by Austria (Mr Reinhard Posch).

Each of the ad-hoc leaders has kindly provided a national example to illustrate the signposts of his group and included in this document.

The eGovernment subgroup has also been requested by the UK Presidency to help draft the Ministerial Declaration for the Ministerial Meeting in Manchester on 24th November 2005.

eGovernment

Key Policy Areas

The 4 Signposts
towards eGovernment 2010

1. No Citizen Left Behind.

2. Efficient and Effective Government.

3. Delivering high impact services designed around customers' needs.

4. Key enablers for eGovernment.

1. NO CITIZEN LEFT BEHIND – INCLUSIVE EGOVERNMENT

Some of the key problems faced by disadvantaged and socially excluded people can be effectively addressed by the imaginative use of ICT. Although such people are often the biggest users of public services, access, service design, personal capacity and awareness can present barriers when those services are delivered electronically. Nevertheless, examples are emerging where innovative use of ICT by public administrations is providing a key part of the solution to social exclusion, rather than increasing the problem – "texting" parents when their children are missing from school, or online benefits calculators which allow people to find out what they are entitled to across all welfare benefits in one go for example.

Phones, particularly mobile phones, ICT access on local level, advisers and intermediaries all form part of a "multi-channel" approach which can help overcome barriers and deliver benefits to these groups.

A clear focus on Inclusive eGovernment can help realise the opportunity to both make excluded groups the major beneficiaries of eGovernment, and at the same time to also avoid creating a "*digital* underclass".

> Objective discussed: By 2010, disadvantaged groups will have become major beneficiaries of eGovernment

1.1. The importance of human aspects

Inclusiveness is about individuals, their needs, living environment, capabilities, hopes and fears. Technology continues to develop at an incredible pace, exciting some people while leaving others scared and rejected. Whatever the technological developments, inclusive eGovernment must have a compelling, citizen centred story for everyone:

- **"What's in it for me?"** Being very clear and open about what people have to gain if they deal with administrations electronically rather than traditionally is important. Is the service better? Do they save money and/or time? Do they potentially get more? What do they lose out on if they don't?
- **"How do I know?"** If people don't know about services and their benefits, in a form and language they can understand, how can they take advantage of them? A recent study in Belgium highlighted better communication as the leading action to improve take up and use of electronic services.
- **Can I get support from my social assistant, trade union, or mutuality?** Some people will never want to make use of electronic channels, regardless of the technology. For them, effective support from via an intermediary is key.
- **I can't do that – I don't know how!** Developing and enhancing skills in people is an empowering process in itself. But the disadvantaged and marginalised groups are often the least likely to engage with the 'establishment' for structured training. Smarter ways of enhancing skills is necessary to be employed, using the best practise from unstructured, informal and community learning, as well as more standard approaches.

- **I can't use this – it doesn't make sense!** Accessibility and user friendly interfaces, intuitive menus and well structured content in their own language all help users to find their way through what is often a complex issue. Accessibility standards and guidelines should be harmonised and widely implemented.
- **I need help.**   If people don't understand online instructions, can they phone and talk to someone who will take the time to explain things in a friendly way?
- **Can I trust it?** Engendering trust is a crucial element of the inclusive eGovernment approach. Trust in the technology used to deal with Government. For some, trust in the Government. Creating a broader, trusted climate will also help people to access and use services elsewhere such as education, health, commerce, transport and tourism.

> Objective discussed: By 2010, European public administrations will have significantly increased the ease of access to public information and services for all.

1.2.   Inclusion by Design

Already in the design of new public policy implementations, ICT has the potential to improve inclusiveness, e.g. through reaching previously excluded groups, and offering increased and easier compliance with regulatory and legislative requirements. For example, linking entitlement for child benefits payments to birth registrations removes the need for parents to engage in a separate process on child benefits and increases take up of the benefit automatically by those entitled.

This 'Inclusion by Design' approach can increase the access and take up of benefits to those in need, while at the same time reducing the costs to administrations of dealing with excluded groups in special ways. Public administrations may need to consider enhancing skills of staff in using ICT for designing and developing services are more accessible and friendly for users. Specialist support may help, especially at community level, by enhancing existing skills and capacity. For example, Latvia plans to develop competence centres focussed on enhancing and empowering public servants.

Inclusion by design focuses on a citizen centred approach to service design and delivery. People will not need to communicate with different government offices or service providers, because services are designed to be delivered where they are needed, be that at home, in the office or community centre, on the bus or train, in the cafe or library. This means analysing and improving processes in and between the public administration and services providers to strengthen the citizen centred approach in provision of services.

Transforming these back-office activities and the associated organisational change is a challenge administrations must rise to. When social and economic policy-makers can grasp the full potential of ICT, then creative policy can be inspired and designed to benefit the disadvantaged.

1.3.   Technology and standards

With the pace of technological development, more and more solutions are becoming available to avoid digital exclusion as well as to better realise personal development and active inclusion. For example, telecare technology can be used to help older or disabled people to maintain their independence and quality of life in their own homes and communities. Web sites such as NetMums in the UK provide information, support and advice to combat isolation and empower new mothers on deprived estates. The technology-related challenges are in access, design and provision of these ICT-enabled services. eGovernment service platforms and infrastructures need to offer flexibility, diversity and to ensure that all citizens are encouraged to interact with their administration through eGovernment, in the way that is easiest to them individually. Focussed attention can help address a number of important technology and standards gaps:

- **Efficiently providing services on multiple channels.** The dominant platform is the PC but this is dependent on broadband Internet penetration. While access rates across Europe continue to rise, they are unlikely to reach 100%. Traditional and mobile phones are much more pervasive and digital television is on the rise. Online kiosks are widely present in several countries. Yet delivery architectures for several platforms are still incomplete ("m-Gov, t-Gov"). Integrated multi-platform architectures are not yet available; and there is a lack of interoperability and standards. There is a need for consistent and efficient content management across channels.

- **Understandable interaction for all users** User interface technology is advancing, allowing for more natural interaction, such as speech support or online assistants. Yet for many people, this still falls short of their ideal.

- **Personalising services.** Services need to adapt to each user and their context; Semantic technologies can address this challenge.

1.4.   Achieving Inclusive eGovernment

eGovernment offers policy makers and service providers considerable potential to support solutions to exclusion problems. Inclusive eGovernment exploits technology to improve the conditions of disadvantaged people and communities and ensures that everyone participates and is empowered. Examples of innovative use of technology to achieve this are appearing – information sharing, telemedicine, community support websites, alerts and advice sent by mobile phone. Yet, there is not enough evidence of profound evaluation, rollout, or awareness of successful examples.

Achieving "No citizen left behind" will require action by Member States. Many already have, or are working on, broader eInclusion strategies, some of which highlight the important role that public services have to play, particularly through the innovative use of ICT, increasing public trust and awareness of eGovernment benefits, enabling and empowering people to acquire higher levels of ICT skills and ensuring adequate support for all EU citizens however they wish to access public services.

Equally, "No citizen left behind" is well suited for EU-level leadership and cooperation. Inclusion is one of the three main pillars of i2010 and will be directed through a new European initiative on eInclusion in 2008. There are economies of scale in joint EU-level research, particularly into user needs. Exploring and understanding the generic motivations,

aspirations and experiences of the socially excluded in relation to ICT is important so that eGovernment services and support can be more appropriately tailored to their needs.

Research into converging and multi platform technologies, test beds and pilots at all levels, exchanging good practices, experiences and solutions, formalising joint specifications, agreeing common indicators, and ensuring longer-term continuity of solutions can all benefit from EU focused activity.

Next Steps:
Many are at an early stage of realising these potential benefits. Much learning, sharing of experiences and development of the capability of policy-makers and service providers remains to be done. Nevertheless, making progress towards these objectives and the associated benefits will contribute significantly to making Europe thrive as an exciting and diverse place for people to live, learn, work and play.

Possible actions discussed by the eGovernment subgroup were the following:

During 2006 Member States will together agree a roadmap for eGovernment inclusion objectives that synchronises, where relevant, with i2010 ICT for inclusion activities.

During 2006 Member States will start to exchange experiences in developing policies which are inclusive by design, for example, in the use of multi-channel architectures.

1.5.   A practical example

LITTA EQUAL project „Training in Computer and Internet Usage of Unemployed in Latvia" in the framework of the Initiative Latvia@World

The main objectives of the **EQUAL project „Training in Computer and Internet Usage of Unemployed in Latvia"** are:

- To create environment for integration and reintegration of people into labour market by developing their digital skills (including skills to use computer and Internet).

- To promote equal opportunities for people endangered by social exclusion risks and to support their integration into labour market

- To develop methodology of social integration of peoples by development their digital and internet skills.

The EQUAL project is financed from the means of the European Social Fund and the state budget. It started in January 2005 and will last till December 2006. Leading partner of the project is the Latvian Information Technology and Telecommunications Association (LITTA), which partners are four regional municipalities (Kraslava, Preili, Valmiera and Ventspils regions of Latvia). The strategic partner is the State Employment Agency.

The main activities of the EQUAL project are:

- Research needs and problems of the target groups relating ICT and Internet usage etc.

- Develop training programme and e-training courses of computer and Internet skills

- Analyse necessary changes in legislation

- Develop IT training service

- Disseminate project results and information to wider public.

*The project is realised in the framework of the **Initiative „Latvia@World" (L@W)** - an information society development project. Objectives of the L@W are:*

- to assist Latvia's population in overcoming the digital divide

- To promote access to public and private business services, available via the Internet.

The Initiative L@W aims to provide opportunity for all inhabitants of Latvia to acquire skills for using computer and Internet, as well as to achieve that each inhabitant has access to Internet. The main target audience of the EQUAL project and the Initiative L@W are:

- people without any experience in using computers and the Internet, mostly SME employees, individual business people, small town and country-dwellers

- people who have some experience with computers but who have never used Internet services, such as on-line banking, paying utility bills, or e-mail

- people which are difficult to involve in usage of ICT services and municipal employees, who need to acquire supplemental abilities

2. EFFICIENT AND EFFECTIVE GOVERNMENT

2.1 Making a reality of effective and efficient eGovernment

Public administrations everywhere are under considerable pressure to improve the quality and effectiveness of their services. Effectiveness from the perspective of citizens and businesses - means that government is addressing the real needs of its citizens in a satisfactory way. It has to be done by public administrations being responsive and transparent, imagining the position of the citizens, informing them about the rights they are entitled to, and the duties they have, while not bothering citizens with redundant questions or helping them with only partial solutions, or even worse not helping them at all. Public administrations have to offer more personalised services, where possible in a proactive way, through multiple use of information and one-off (once-only) data provision, which helps reducing unnecessary administrative burdens (less information obligations) and delivering better quality of services. This of course with due respect to the privacy of citizens, mostly safeguarded by national legislation and data protection rules in force in Member States, and with respect to the different perceptions of data protection issues in Member States.

At the same time, downward pressure on public sector spending is driving efficiency gains; doing more for less. Efficiency from a more internal view means that government is offering best value for money. Standard ICT tasks also offer a potential of saving money or achieving higher productivity and quality; relieving administrative staff of routine tasks gives them more opportunity to dedicate time to individual non-routine cases and customer service. And digitizing tasks can improve management information.

Since citizens and business should be in the centre of services delivery, the primary focus for them is effective government. But when reshaping processes, efficiency benefits should be delivered as well for citizens (and businesses) and the administration itself. Collectively, these benefits should achieve a multiplier effect for society at large.

At the European level the supportive measures indicated below could be undertaken to facilitate the development of effective and efficient governments, and raise attention for a European perspective of eGovernment. In addition to this the European Commission is facing the same challenge as Member States. The European Commission could also indicate how it can meet these objectives by making effective use of ICT. This could also be reflected in the e-Commission initiative.

Objective discussed: By 2010, eGovernment will be contributing to high user satisfaction with public services

For a transparent, responsive and user oriented government the ultimate reward of good performance is a high user satisfaction. As citizens expectations change, usually upwards, over time, it's harder to meet them. Rather than aiming at a continuously increased user satisfaction, it could be useful to have a target to achieve an ambitious minimum level of user satisfaction.

Objective discussed: By 2010, eGovernment will have significantly reduced the administrative burden on businesses and citizens

Administrative burden reduction is an important issue on the European agenda. Closely related to the Lisbon goals is the Commission's plan to reduce administrative burden caused by European legislation. To some extent better regulation can reduce administrative burden (i.e. the cost/time caused to comply with the information obligation imposed by legislation/regulations). eGovernment is also considered an important tool for better fulfilment of the information obligations.

Instead of asking again for the same data, already known data should automatically be processed, as long as this provides some benefit to the user and is with due respect to the privacy protection rules in force.

Objective discussed: By 2010, the public sector will have achieved considerable gains in efficiency through the use of ICT

The Lisbon strategy aims at increased productivity in the European Union in order to compete with the other world economies. The public sectors is also a large employer, and increased productivity in the public sector will also increase overall productivity with a considerable share. Beyond that, this will increase value for tax payers' money. Intelligent use of ICT, together with skills and organisational change, is seen as an important enabler to achieve this. Productivity is hard to measure in public administrations and should be considered as a long term achievement. It is rather efficiency that can be addressed. Improving efficiency is not just a cost saving objective; quality of service is also a priority. Freed sources could be re-invested in funding further improvements and delivering better services.

Objective discussed: By 2010, European administrations will have significantly increased transparency and accountability through innovative use of ICT

ICT creates an enormous potential for improved transparency of the functioning of public administrations. Citizens should be able to understand easily how government functions, what their rights and duties are, and what is on the agenda of their representatives, and the decisions they have taken. This could improve accountability of government and stimulate citizens' participation in the democratic processes.

In respect to the forthcoming eGovernment action plan, the European Commission is called upon to indicate what could be done at the European level to support the modernisation programmes in the Member States, and in particular, to consider:

- aiding the development and sharing of strategic knowledge;
- achieving useful benchmarking and sharing best practises;
- sustainable mechanisms for sharing concepts and software;
- stimulating the effective and appropriate use of open standards;
- providing leadership through its own actions, acting as a role model.

A topic related to efficient and effective eGovernment is value creation in business by easing access to and re-use of public sector information. However, this was not discussed in detail.

2.2 Aiding the development and sharing of strategic knowledge

Identifying the relationship between eGovernment and productivity is crucially important in view of the objectives of the Lisbon strategy and European competitiveness. Exploration of the social and economic impact of eGovernment, such as in the eGEP study[9], must continue.

Other strategic issues could also be further investigated:
- involved citizens
- increased trust
- ICT sector growth
- public-private partnerships
- information aspects of a more mobile Europe (four freedoms).

It should be examined to what extent the research programs offer possibilities to explore these more strategic policy questions.

2.3 Benchmarking and sharing of best practices

An important added value of European action would be to measure progress on the objectives by Member States. Measuring progress and performance can help stimulate actions, and share the many lessons learnt, sometimes including negative experiences, in other countries in Europe and beyond.

Although countries have different arrangements, this should not be an excuse for not benchmarking. It's better to benchmark a proxy rather than benchmark nothing. But the indicator should be meaningful.

There are two important elements to any measurement framework:

Quantitative measurement
- Measuring overall progress against objectives based on concrete indicators (starting with zero-measurement)
- Benchmarking conducted by the European Commission, based on an agreed methodology, without much administrative obligations for the Member States
- Selection of cases for further exploration (can differ from country to another; depending what is high impact service; frequency, volume and time effort)

This would follow the direction originally started with eGovernment benchmark on the availability of 20 basic services (performed by CapGemini) but with a new focus on impact, and possible a distinct set of services (high impact services).

Important criteria for new indicators would be:
- Measuring use/impact rather than availability
- objectively measurable elements
- suitable for international comparison (robust enough for international differences)
- pragmatic (directly related to eGovernment).

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[9] http://europa.eu.int/information_society/activities/egovernment_research/projects/i2010_studies/index_en.htm#economics

These should where possible be developed for the above mentioned objectives.

Possible actions discussed by the eGovernment subgroup were the following:

> Methodology developed by Commission and agreed by Member States (early 2006), zero measurement (2006) and yearly measurements (2007, 2008, 2009, 2010)

Qualitative Measurement
This could include analysis of comparable services across countries, based on an analysis framework that takes account of national contexts and covering different benefits (e.g. in terms of less administrative burden, increased transparency, improved satisfaction, shortened response time, productivity or efficiency gains).

Differences between the developed services could be analysed, both in terms of benefits and their impact, and the strengths and weaknesses of the service delivery process, and the lessons learned.

Possible actions discussed by the eGovernment subgroup were the following:

> Development of an analysis framework by the end of 2006 (Commission) and yearly case analyses

With regard to measuring transparency and accountability, the availability of democratic key information could be measured. Information that citizens need to participate in the democratic process, and key information: regulations (national, regional and local), agenda and decisions of the democratic bodies (councils etc), a citizen's guide that explains how government functions, etc.

Current Good Practice

Preparatory work is being conducted for **customer satisfaction** measurement in the European Public Administrations Network. If this progresses well, it can contribute to the challenge laid down in these Signposts. **Denmark** has gained experience in employing actual use of eGovernment services as a proxy for customer satisfaction, from the idea that satisfied citizens come back. The **Netherlands** is running a pilot, measuring the extent to which data are requested when applying for services.

2.4 Sustainable mechanisms for sharing concepts and software and for encouraging cooperation

In the context of this Efficiency and Effectiveness Signpost, discussions were held on sharing and open standards. Additional comments on sharing and standards are made in the Key Enabler Signpost, see chapter 4.

Rather than reinventing the wheel over and over again, policy makers and public service providers in Europe should be assisted to learn from each other, and where possible, re-use proven solutions and cooperate, where necessary, in developing new solutions.

Currently a good practice framework is evolving[10]. But to what extent can people in Member States effectively learn? Is a framework alone adequate? Most probably it is not. More effective learning methods should be developed, to increase the effectiveness of the rich information already collected.

In many countries specific software solutions have been developed with public money. These solutions are sometimes based on open source software, and re-usable by others. In different Member States there is a growing trend to use open source software. It would be efficient if these solutions (together with reference material, standards and components) would be made available in a coherent manner.

The Commission could develop a mechanism that facilitates the reuse of developed tools, concepts and software and provides easy access to other existing resources, such as the Good Practice Framework, eGovernment Observatory and others, and that would provide an authoritative reference.

The Commission should use such a mechanism to show how existing activities within the different European programmes are related, rather than setting up new activities.

Possible actions discussed by the eGovernment subgroup were the following:

> During 2006 and 2007, develop an eGovernment Resource Network in order to share existing tools, common specifications, standards and solutions more effectively and encourage collaborative development of new solutions where necessary; and establish the management policies required for such a Resource Network

2.5 Stimulating the effective and appropriate use of open standards

Open standards are considered to be of great importance to interoperability and, in that regard, for effective and efficient government. Although open standards are not necessary for interoperability, they do have large additional advantages, reduction of risk of vendor lock in, freedom of choice, and future proof solution.

The importance of open standards was stressed by the European Public Administrations Network (DG-resolution 22 November 2004). Also the stakeholders meeting stressed the importance of open standards as key enabler.

Use of open standards within public administrations should be promoted. National programmes should involve this element in their national strategies and a suitable governance structure should be developed.

Addressing this issue at European level also offers important added value:
- as a means of organising pressure towards the market, in order to open up closed standards (e.g. requiring open standards in procurement issues)
- from the perspective of pan-European interoperability, a minimum set of standards is required

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[10] http://www.egov-goodpractice.org .

- making studies and evaluations, made by different administrations, on the maturity and value of different open standards, available via the Resources Network .

In that regard, policy on open standards at EU level is required, including these elements as well as a good definition of open standards, a demand driven catalogue of them, and involvement of open standards in identification of best practices.

The Commission has already undertaken action in the field of the open document format, and attention is needed to build further on this and related developments.

2.6 Commission as a role model

Effective and efficient government is not only for Member States, but also applicable for the European Union own institutions. The Commission could investigate which processes cause administrative burden for businesses and citizens, and to what extent the burden could be lightened by effective use of ICT and sharing of data. This is also true in their relations with the Member States, who can be considered as important 'customers'. This would also be applicable to the other objectives (e.g. transparency, accessibility, efficiency etc).

In addition, transparency and administrative burden for border crossing formalities should where possible be improved. The Commission could also consider how it could assess the information and ICT consequences of new Commission initiatives in their impact assessments (e.g. the interoperability requirements for the one-stop-shop in the proposed Internal Market services directive.)

Certain of the above mentioned issues have already been touched upon, in different programs like Modinis, e-TEN and e-Content, and their future successor the CIP/ICT policy support fund and in the IDABC program. The Commission is called upon to indicate in its action plan how these goals could be addressed by the different programs in a coherent way.

2.7 A practical example

The Reduction in Administrative Burdens Programme
The Dutch government has decided that the quality of public services should be improved as well as red tape and bureaucracy reduced. The target is to cut the amount of red tape (in official jargon: 'administrative burden') by a quarter by 2007 for citizens and enterprises.

In order to realise this objective, a special Reduction of Administrative Burdens Programme has been launched to reduce the amount of bureaucracy in collaboration with interest groups and local, provincial and national authorities. Possible ways of achieving this might include reductions in the amount of regulation, better cooperation between public authorities, or more intelligent use of ICT.

The Reduction of Administrative Burdens programme involves:

- Baseline measurement
  As a first step, a 'baseline measurement' has been carried out across the entire government to identify which rules and schemes are the most time-consuming and therefore produce most administrative burden.
- Reduction proposals
  Based on the outcomes of the baseline measurement all ministries, local and provincial authorities have drawn up plans to tackle the amount of bureaucracy: the reduction proposals.
- Involvement of citizens and businesses
  Citizens and businesses are involved in the programme. This resulted in a good insight into the most important obstacles of Dutch regulation for citizens and businesses. In addition to the reduction proposals, the government is therefore giving priority to tackling these obstacles/problems.
- Hotline
  In order to ascertain what administrative burden people are confronted with in practice, a hotline (website) has been opened. Incoming reports are used as policy information to help public authorities in drawing up their reduction proposals.
- Practical examples
  In order to show that efforts are already being made to cut red tape, the Programme describes a number of practical examples, focusing on government agencies which have adopted an intelligent approach and have successfully reduced the amount of bureaucracy for citizens.

eGovernment and Administrative burdens
The government tries to reduce administrative burdens by changing regulation to reduce information obligations, limit the target groups for information obligations and reduce the frequency of periodical actions. ICT forms a strong enabler to streamline processes, reduce and simplify administrative actions. The Dutch eGovernment programmes form an important instrument to reduce administrative burdens. Because within the administrative burdens programme the information flows between the government and its clientele (e.g. companies, citizens, institutions, etc.) has been researched, the administrative burden programme form a strong impulse for the eGovernment programmes. One-off data delivery forms a main principle. Measuring progress of this principal is an important feature. Therefore the Dutch government is running a pilot, measuring the extent to which data are requested when applying for services. The data asked when applying for these services are often the same and already known within the public administration. In the next few years, the amount of data asked will diminish, or will be provided automatically, saving time and money for citizens and business.

eGovernment

> ## 3. DELIVERING HIGH IMPACT SERVICES DESIGNED AROUND CUSTOMERS' NEEDS

Why focus on high Impact applications and services?

The initial priority of eGovernment was to bring public services online. For example, the European Commission's benchmarking measured online availability of 20 key services, the German BundOnline addressed the online availability of some 390 services, the UK's objective was to bring all government services online by 2005, etc.

Certainly eGovernment objectives should include online availability of a broad spectrum of services indeed. However, in addition, and in the context of an EU eGovernment Agenda for 2010, a focus on both **availability and take-up** of a limited number of high impact applications and services is a useful complement. A focus on a handful of high impact services should:

- Deliver visible, measurable significant benefits to many businesses, citizens or administrations all over Europe
- Provide a compelling case to combine efforts in resolving common and difficult challenges such as interoperability across the EU
- Provide highly relevant test cases for the key enablers that are identified and/or developed elsewhere as part of the common EU eGovernment agenda.

In the discussions in the eGovernment subgroup, rapid consensus was arrived at that **electronic public procurement** is such a high impact application, since public eProcurement:

- Provides major and measurable direct benefits for businesses and administrations, as illustrated below;
- Requires to resolve interoperability across the EU as the EU Public Procurement Directives require public procurement without barriers in the Internal Market;
- Relies upon electronic signatures (related to the key enabler on electronic identification and authentication) and is an excellent testing ground for their interoperability in the business world within a common EU agenda.

However, there was less common ground regarding **other high impact applications and services** in a European agenda. Other potential examples are discussed below and include pan-European services, in particular citizen mobility services across Europe in situations of study, work and employment; geographic information; simplified reporting between business and authorities; and ICT-enabled participation to democratic decision-making. The eGovernment subgroup could explore in the future other and in particular citizen-oriented high impact applications. Exploring and defining these during 2006 would fit with the concept of an evolving framework for eGovernment policy and actions towards 2010.

3.1 Electronic public procurement

The economic impact of moving towards electronic public procurement is generally assessed to be considerable, in terms of increasing efficiencies and reducing procurement costs. Estimates are in the order of 5% of total procurement costs. Given the size of public procurement (some 16% of GDP) and even if just half of the saving would be realised this would represent over €40 billion p.a. in the EU.

Good practices in electronic public procurement have demonstrated that such savings and more are quite well possible. Direct financial savings are twofold: reduction of the cost of goods and services purchased due to more choice and more competitive offerings as information transparency increases, as well as a reduction in the transaction costs both inside the purchasing administration as in the supplying companies. In addition there are other very significant benefits, namely increased choice leading to better quality and increased transparency and accountability, in other words, reduction of fraud and corruption.

Nevertheless, public e-procurement is not always easy to introduce (beyond announcing tenders online). IT systems in administrations and in companies may have to be upgraded e.g. to bring catalogues online and ensure the required levels of security. New skills in companies and administrations may have to be acquired, e.g. in statistical analysis. Barriers between departments may have to be broken down, for example to combine purchasing across Ministries which is made possible by electronic data management, etc.

Moreover, beyond the simplest form of electronic public procurement (namely online announcement of public tenders and electronic submission of bids) more advanced forms are already to be considered such as electronic auctions and the post-procurement handling of supply such as electronic invoicing (which are already a reality in some countries).

There is an important additional benefit of introducing wide scale electronic public procurement. It can be a major catalyst in the introduction of modern information systems and connectivity in businesses, especially SMEs if backed up with appropriate business support programmes. This will have obvious spill-over benefits for business-to-business electronic supply chain management and procurement in general, as well as the ICT industry. Particular opportunities are likely to exist for local ICT industry in customization and enhancement, language versions, support and training.

More specifically some examples of the impact for public authorities will be:
- More involvement in procurement strategies and increase of professionalism of civil servants involved in public procurement.
- Costs reduction of procurement management, by means of:
  - process re-engineering and harmonization,
  - availability of digital tools;
- Less administrative burden to launch and follow-up public procurement.
- Better quality of service from public administration to businesses.

The impact for businesses is a significant improvement of access to information, more transparency and more competitiveness among private actors. This strategy will also contribute to drastically reducing administrative burden for the applying businesses in particular. Some specific examples are:

- Obtaining information as soon as possible to profit from full period for reply;
- Forwarding digital information to potential subcontractors rather than paper photocopies;
- Making substantial economies in tendering on-line;
- Personalized notification mechanisms to be warned of interesting calls for tender;
- Benefiting from shorter time to payment.

Specific cases in the boxes throughout this text illustrate such benefits.

Some key conditions for electronic procurement are already in place. The new legal framework for electronic public procurement (adopted in April 2004 as part of the legislative package of Procurement Directives, 2004/18/EC and 2004/17/EC and to be transposed by 1 January 2006) is accompanied by an eProcurement Action Plan for <u>cross-border</u> electronic public procurement, with key targets by 2007.

The question is then whether a target can be defined for 2010 that is ambitious yet realistic. It should be able to be translated into national and regional action, be in line with the developments going on already (where the eProcurement Action Plan has to be addressed with priority) and help to orient and mobilise means so that a path towards its realisation can be envisaged such as national funding, the Competitiveness and Innovation Programme (CIP), IDABC, Structural Funds, and (semi-)private investment.

> The ultimate objective is 100% e-procurement, from the call for tender to the purchase order and including follow-up, control and archiving.

Realising such an objective, coordinated at European level, this would also encourage the development, on the larger scale of cross-border public procurement, a strong lever for growth and competitiveness in Europe.

In other words the question is whether it is appropriate and feasible to achieve (by 2010) *full availability and take-up of electronic public procurement, meaning that public procurement will be both generally available electronically and any interested company is enabled to and is fully participating in electronic public procurement in its own or other EU Member States.*

To perform the required gap analysis a number of issues were discussed in the public eProcurement ad-hoc group of the eGovernment subgroup, chaired by France. Firstly, a large number of issues were summarized visually in a common structure of enabler – targets – indicators - actions. Secondly, a complementary and more detailed objectives- benefits – actions matrix was developed and agreed upon. Thirdly, a tentative roadmap was provided. These three results are provided below. As a result of this analysis the following signpost objectives have been set:
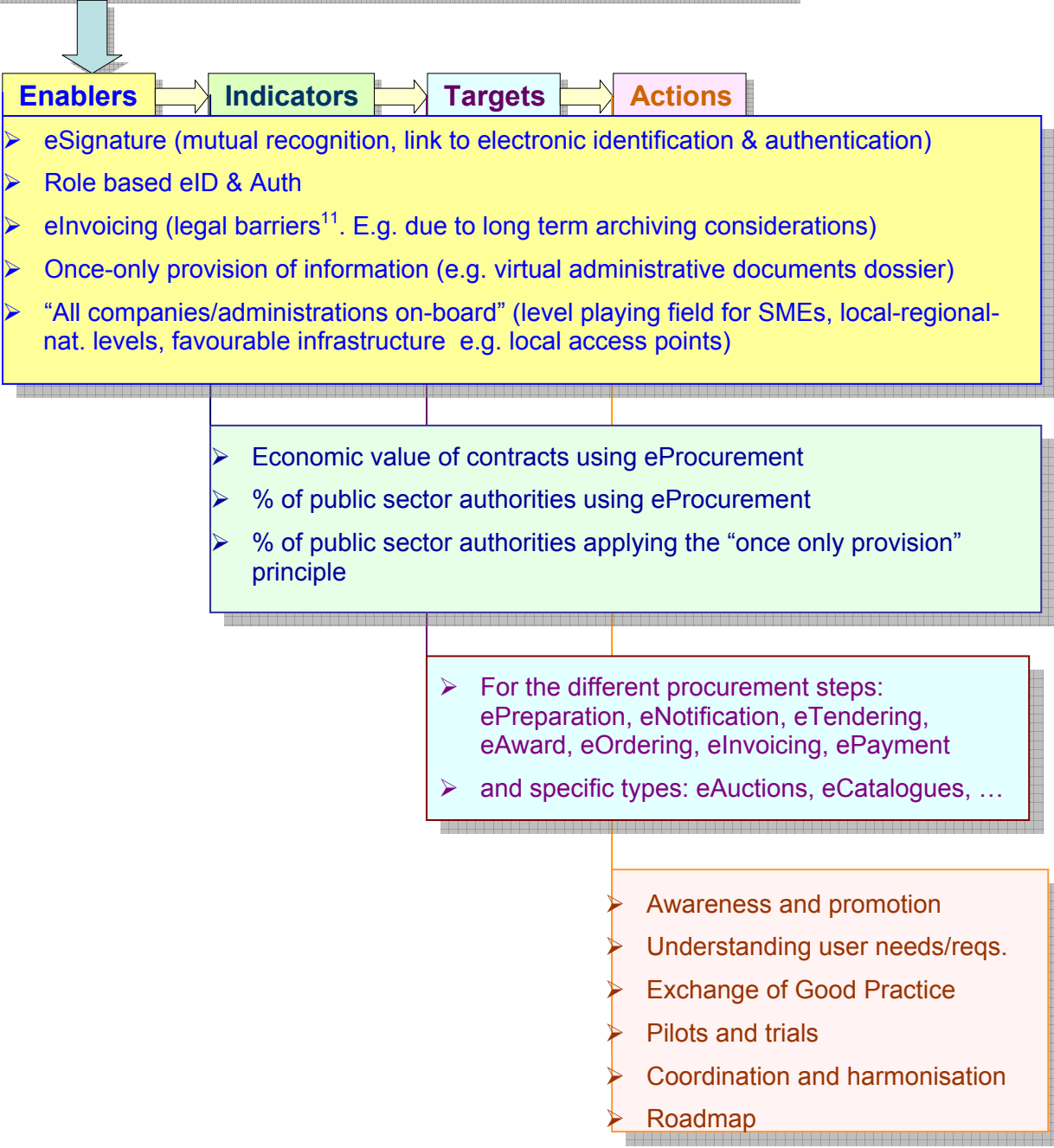
> Objective discussed: By 2010, 100% of public procurement, where legally permissible, will be electronically enabled by public administrations, creating a fairer and more transparent market for all companies independent of a company's size or location within the single market.
>
> Objective discussed: By 2010, at least 75% of public procurement above the EU public procurement threshold will be carried out electronically

eGovernment

Overview of issues: enablers, targets, indicators, actions

eProcurement: Objective and key elements

Wide take-up of eProcurement by 2010 *(national/cross-border)*

Enablers	Indicators	Targets	Actions

Enablers

- eSignature (mutual recognition, link to electronic identification & authentication)
- Role based eID & Auth
- eInvoicing (legal barriers[11]. E.g. due to long term archiving considerations)
- Once-only provision of information (e.g. virtual administrative documents dossier)
- "All companies/administrations on-board" (level playing field for SMEs, local-regional-nat. levels, favourable infrastructure e.g. local access points)

Indicators

- Economic value of contracts using eProcurement
- % of public sector authorities using eProcurement
- % of public sector authorities applying the "once only provision" principle

Targets

- For the different procurement steps: ePreparation, eNotification, eTendering, eAward, eOrdering, eInvoicing, ePayment
- and specific types: eAuctions, eCatalogues, …

Actions

- Awareness and promotion
- Understanding user needs/reqs.
- Exchange of Good Practice
- Pilots and trials
- Coordination and harmonisation
- Roadmap

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[11] For example, original required by law or due to long term archiving considerations as is the case e.g. in France for all procurement related documents, not only invoices.

A number of issues require coordination and possibly harmonisation in order to enable public eProcurement, whether across Europe, or (sub-)nationally. Issues discussed include:

1. Virtual administrative dossier for business

2. Agreement regarding the elements of company identification (starting from ISO models) to ensure interoperability between the terminologies used in different national systems;

3. Mutual recognition of electronic signatures (related to electronic identification and authentication, see the chapter on Key Enablers)

4. Standards-based interfaces to various eProcurement platforms (for example, based on "Service-Oriented Architecture"), that would ensure:

 ➢ Glossary of terms and steps in the procurement process
 ➢ Multilingual interfaces
 ➢ Outline description of functionalities of each platform in multiple languages and using agreed terms and procurement steps
 ➢ Further attention to improving interfaces

5. Publication in the Official Journal of the European Union

 ➢ Commitment from MSs to publish notices online (100% eNotices)
 ➢ Automatic notifications to companies about tenders of potential interest for them (registered on their own initiative for that purpose) ; would require to revisit the CPV

6. Standardisation of information concerning purchase orders and invoices

 ➢ Harmonisation of purchase orders and invoices
 ➢ Long term archiving of e-documents (technically / organisational / legal).

These issues should make best use of existing (and preferably open) standards available and emphasise the need for interoperability at point of use.

Roadmap for Public eProcurement

Elements for a roadmap towards 2010 for public eProcurement are given below. This is presented as a starting point for further discussion, rather than an agreed way for action.
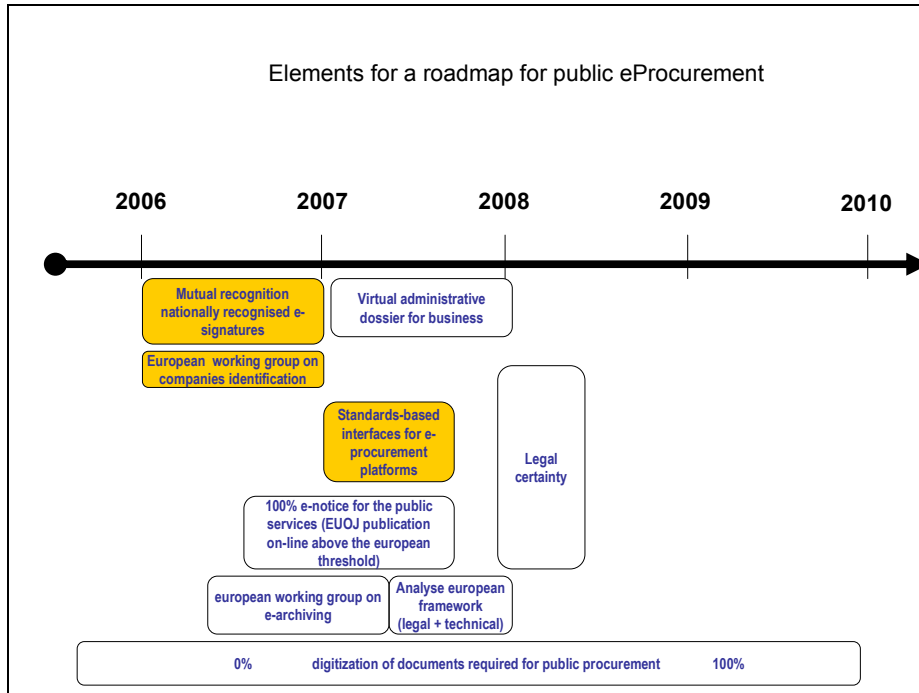
Public eProcurement in Practice in France

www.marches-publics.gouv.fr enables administrations in France to publish its calls for tender and companies to answer on-line.

For companies, marches-publics.gouv.fr is a website where they can consult calls for tender issued by the State and answer electronically contracts over the regulatory thresholds. Companies have thus a secure means of response to the contracts issued by the State. In addition to traceability and transparency, the platform reduces stamping or delivery costs and brings time savings thus allowing more time for the constitution of the bids. Functionalities include:

- Search engine of the notices;
- Subscription to notifications;
- Simplified access to the technical and administrative specifications (DCE);
- Personalisation, memorising details of the user to facilitate DCE downloading;
- Posing questions to the contracting authorities with traceability of communications;
- Secure deposit of the candidatures and offers including time-stamping of deposits.

For the civil servant, marches-publics.gouv.fr consists of a back-office application to manage any type of contract in accordance with the public contracts regulations. Functionalities for civil servants include:

- Publication of notices; if necessary, also in European publications office, press;
- DCE publication, with warning of updates to those who have previously downloaded it;
- Mass communication to the companies;
- Management of the various cycles of the procedures;
- Call for tenders subcommittee management: guarantees of confidentiality, equal treatment;
- Statistics.

The deployment of this tool was accompanied by training and assistance of civil servants and consultancy for local authorities and public organisations which were to set up their own tool.

The service, fully operational since 1 January 2005, enabled the companies over the first 4 months of activity to reach more than 2500 contracts and 1300 contract documents. The tool is used by almost 5000 public state employees.

www.marches-publics.gouv.fr responds to needs common to all contracting authorities and in particular State authorities. By working with all the ministries in a concerted way, the project brought sharing of purchasing needs, pooling of costs and substantial economies of scale:
- time savings on the management of the DCEs (up to 150 personyears);
- economy of the stamping and reproduction costs (€10 per download i.e. for almost 7000 downloads €70,000 in first 4 months of activity);
- publication at cut prices of the notices of the contracts below the thresholds.

3.3 Pan-European high impact applications and services

It is believed that in due time the cross-border dimension of eGovernment will generally become more important. By facilitating the free circulation of people, capital, goods and services, cross-border eGovernment will help the EU to address its economic and social challenges. This would not only hold true for public e-procurement across Europe but also for example for citizens who wish to study, travel, work or retire in another European country

eGovernment that has been designed and implemented to work seamlessly across Europe, will contribute to a more efficient implementation of EU policies in areas such as the environment and education, health and consumer protection or transportation.

A survey of in the framework of the IDABC programme[12] gave a first indication of interest in cross-border (or pan-European) eGovernment services for citizens and businesses:

For citizens
- Social security (covering issues like pension and health care),
- Access to employment (covering issues like job search and work permits),
- University studies and recognition of university diplomas,
- Residence permits/registration certificates.

For businesses
- eProcurement at European level,
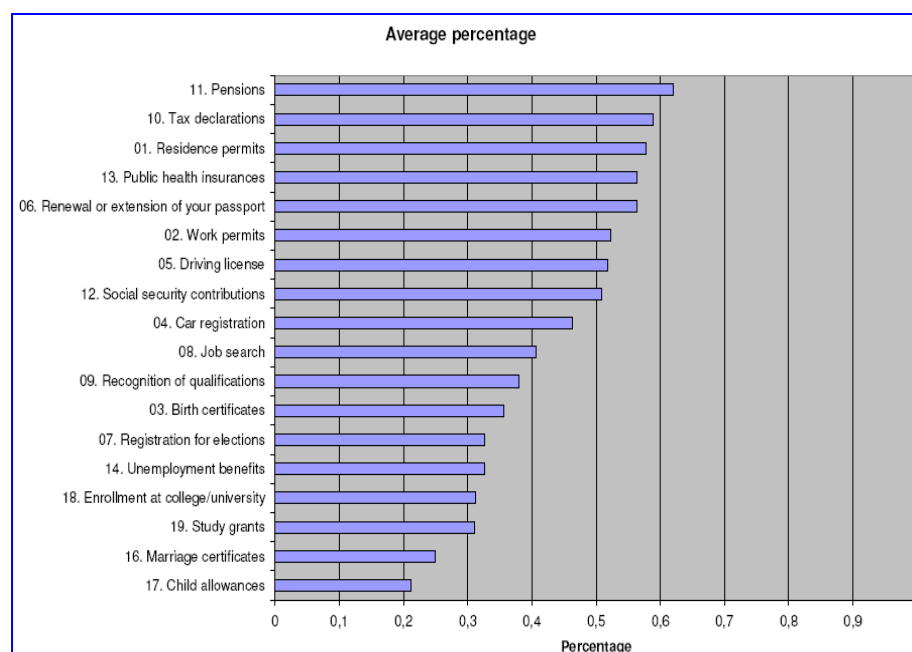- Registration of companies,
- VAT refunding.

Figure 1 Priority pan-European services for citizens (IDABC Stakeholder Survey, 2004)

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[12] See also the Study on Stakeholder Requirements for European eGovernment Services http://europa.eu.int/idabc/en/document/3880/5644

Research and development projects are or have been addressing such services (e.g. the INFOCITIZEN and BRITE IST R&D projects for respectively citizen life-time mobility and company registration). Trans-European validation pilots are foreseen in eTEN. In IDABC implementation-oriented pilots on pan-European eGovernment services for citizens and businesses will be carried out in these 7 areas.

Similar to public eProcurement, it is necessary to develop benefits matrices, gap analysis and roadmaps for other high-impact application and services (whether pan-European or not).

3.4 eParticipation

One of the suggestions in the eGovernment subgroup was to consider the potential of ICT-enabled participation in democratic decision-making, as a possible emerging area of high impact in eGovernment. There was no final position achieved in the subgroup regarding the desirability of including work in this area at EU-level in an eGovernment 2010 agenda, with some countries having reservations.

For completeness elements that are part ICT for improved democratic decision-making are included below. There are various manifestations of eDemocracy of different degrees of interaction and involvement. Examples can be found at all levels, several of these are being reported in the eGovernment Good Practice Framework[13].

E-Voting and e-Polling can be seen as one-way means, they are technically well-developed, and results from the Cybervote and eVote IST/eGovt and eTEN projects have been used in the recent Constitution vote in France. E-Voting is regularly used in the Geneva Canton. Nearly 10% of votes were cast by e-Voting using electronic ID cards in local elections in October in Estonia. Issues in e-Voting have shifted from technology to cultural acceptance and legal recognition.

E-participation aims to involve citizens more through debates and mobilization. The Commission's own Interactive Policy Making can be placed in this category. EU projects have been Webocracy, allowing citizens to provide feedback on local public services, and Demos for Delphi-based opinion-formation. eParticipation has been tried out in the INTELCITIES project, where decision-making about city planning e.g. urban regeneration is supported by visualisation and simulation and dialogue tools for citizens.

E-Rulemaking addresses the ICT for the design of laws and rules. In this area much theoretical work has been happening, with successful work on the structure of legal systems as in the E-POWER project. It is an area that is also actively pursued in the USA.

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[13] www.egov-goodpractice.org.

4. KEY ENABLERS FOR EGOVERNMENT

4.1 eGovernment electronic identification & authentication

Objective discussed: By 2010 all European citizens, businesses and administrations shall benefit from secure means of electronic identification (eID) that maximise user convenience while respecting data protection regulations. Such means shall be made available under the responsibility by Member States but be recognised across the EU.

The further development of the concept of electronic identity enables public administrations to make full use of the opportunities that maturing technologies provide,

Citizens and businesses sometimes see the issues surrounding "electronic identity" as a threat rather than as an opportunity: a chance for public administrations to simplify their own procedures and a further infringement of civil liberties.

More positively, the opportunities that maturing technologies can now offer should be underlined, in particular making administration more effective and less costly and creating better services for citizens and thus placing their concerns – whether as an individual or acting within a business – firmly centre stage.

Three key ideas should underscore this positive approach:
- "**Electronic identity**" (as a means for people to prove electronically that they are who they say they are and thus gain access to services) and **digital identity cards** (as a replacement for current or proposed national identity cards) are separate and distinct concepts. Combined implementations can be beneficial, but it is a matter for Member States to decide if and how they may be related and/or bound to each other, but this paper is only concerned with electronic identity. This will require an electronic identification model that complies with the legal provisions in force in Member States whilst offering a common denominator that opens possibilities for pan-European interoperability;
- a high-level of data-protection that ensures that the principles of proportionality, specificity and finality are respected in all handling of personal data by third parties;
- a citizen-centred approach that underlines personal *control* over personal data – in its broadest sense – by the individual, even if *stewardship* of that data is by a public authority or other third party. Means of electronically authenticating these data and other official documents relating to a person or business need to be agreed and ubiquitous.

Citizens, businesses and indeed administrations all face common problems regarding their online "personae":
- They all need to have available both rudimentary and (often sector-specific) detailed descriptions of themselves, based on trusted and authenticated data. Whether it is a citizen filling-in an online administrative form, a business offering a service or preparing a tender, or an administration wishing to share information with an another,

they should all be able to dispense with the time-wasting and cost involved in forever answering the same questions in ever more forms;

- They all need to have an electronic presence that serves as an authenticated proxy in electronic transactions. Their online identity should be protected at all times from abuse and misuse. While their electronic identity should be secure enough to confirm unequivocally who they are, it should be able to take different forms according to the citizens' wishes and to take account of the differing levels of authentication that might be required to enable access to specific services;
- Information and service assets (particularly online ones, and whether public or legal documents, services components, entities, or procedures) require permanent identifiers that are platform, software and media independent. This will provide a predictable basis for interoperability and long-term stability.

By 2010, Europe should be a region in which citizens, businesses and administrations alike can benefit from an online presence that is secure, authentic, reliable and durable, a veritable web of trust. These principles together with the specific targets below aim to build user awareness and acceptance of the tools offered to strengthen electronic identity and the reliability of their "electronic presence" through reliable and trustworthy authentication.

Electronic identification and authentication are key facilities underpinning most transactional online public services including those that deliver the largest benefits to citizens and businesses, such as simplified online tax declarations, e-procurement and social security.

Initiatives have been taken or are being investigated therefore in all Member States to introduce electronic identification and authentication (eID) for public services. There is an inevitable range of different approaches and solutions proposed (e.g. federated versus centralised, private sector versus public sector driven, different degrees of security strength, different trade-offs between convenience and privacy).

Both within a single country and between countries, different schemes are being introduced for different services. The concern is that this variety may become a barrier to inter-organisational, cross-border or pan-European services.

> *A clear and agreed eID terminology will help in common understanding and thus contribute to overall interoperability.*

In addition, fragmentation may lead to loss of economies of scale and restricting innovation for the ICT supply side. Evidence is still being collected on whether this concern holds true. Technical work is also progressing (R&D, piloting) in order to cope with the variety.

Independently of the outcome of these investigations and experiments, a general objective should be to achieve generalised online access to public services, seamlessly and independently of any specific technology.

By 2010, citizens, businesses and administrations shall benefit from effective, sustainable and secure means of electronic authentication that maximises user comfort whilst observing data protection needs.

In order to meet the requirements of mobility and common provisions across Europe, a policy framework is required that ensures that electronic identification can be used consistently

throughout the EU. It must use a model that is both **federated** (under the responsibility of each Member State in order to respect the autonomy of different administrations) and **multi-level** (to allow different levels of authentication that might be needed to face differing security and authentication requirements). It must meet the needs of different administrations and legal requirements in place.

In achieving the objectives of supporting pan-European eServices, two viable approaches have been considered for such a model for *eID.*.

The first would require a specific and complementary EU-level infrastructure that could provide the authentication service required at an agreed supra-national level. Member States would have to agree which services and authentication levels would be managed at this supranational level.

Such an EU-level infrastructure would require an explicit mandate being given to the European Commission by the Member States.

In the absence of such a mandate therefore, a second approach is strongly favoured. This would require a framework and policies which respect current national infrastructures and permit the mutual recognition of national eIdentities between countries. The authentication requirements for a particular eService in one Member State would accept as equivalent the levels of security provided by the equivalent authentication requirements and mechanisms of another Member State, and for those services and authentication levels for which each Member State is prepared to cooperate. These policies do not require any specific EU-level infrastructure to be established.

By 2010, and in accordance with the principle of subsidiarity, a federated, multilevel e-Identity model will be agreed that is open and flexible enough to match national, regional, local and sectoral requirements based on a common policy framework (referred to in this document as eID). Appropriate governance principles will be developed in order to facilitate trust and security in line with Member States specific needs and as such provide the basis for the equal treatment of electronic identities throughout the EU, irrespective of originating Member State.

The *eID* will serve as a "quality mark" for electronic authentication systems that are conformant with this policy framework. In situations where users may choose between different means of electronic authentication, this quality mark will serve to guide them regarding conformance to the framework and indicate the level of authentication provided (and that should match that required by a particular service). A number of levels could be used to reflect, for example, different levels of proof required in equivalent "real world", paper-based transactions, such as: provision of a birth certificate as sufficient proof of identity in some situations, whereas in others, the physical presence of the person may be required.

By 2010, electronic authentication should be possible by a choice among different means, each conforming with the eID framework. Any particular means that conforms with a level of authentication agreed within the eID framework should be considered sufficient to gain access to eGovernment service requiring that level of authentication. Each Member State shall determine which services to include in the framework.

Beyond the core of data used to uniquely determine identity, citizens often have to manage considerable volumes of personal data, understood in a broad sense: whether userIDs, passwords, documents or site-specific data, they must keep these to hand for different types of service, and this represents a further burden on the citizen.

The range of media, coupled with the range of data repositories that carry multiple (and often contradictory and erroneous) copies of such data and documents, represent an enormous waste of time, effort and money, both for citizens and agencies that have to correct those errors. This is even more the case when one adds the range of services available from the private sector.

The *eID* framework could open the way to systems being introduced in the future that allow citizens greater control over the management and authentication of their personal data and documents. The need often for a specific card or authentication method per transaction type or per service would disappear as the *eID* framework would provide a basis for identifying and authenticating both the user and the data used in any transaction.

By 2010, electronic authentication of entities (e.g. citizens and businesses) as used for government processes will also be available for the private sector, to the extent that data protection legislation allows.

One current restriction regarding online identity concerns the related issues of "delegation", "intermediary" and "roles" management.

In line with the principle of "no citizen left behind" (see following section), any eID framework, including the *eID*, must allow citizens to nominate intermediaries to manage their electronic presence on their behalf (their *authenticated presence* not their electronic identity), for as long as they determine, and in accordance with their instructions (as bank and post office tellers carry out client instructions against signature of a paper authorisation). In such situations, these intermediaries need to have explicit and authenticated *roles* that distinguish actions on behalf of another citizen from their own actions as citizens themselves.

Further, many individuals may need other roles, determined by delegation. One person can, for example, be the Treasurer and account holder of a local club and be CEO of a company in additional to his/her base role as a citizen. As such, different "keys" are required according to different roles. Furthermore, the conceptual model for the *eID* must be able to take account of the role that an entity is playing in a given transaction.

By 2010, eID compliant systems will support mechanisms to identify and authenticate natural persons together with their different roles (principal, delegate, intermediary, authorised agent, etc.) including on behalf of legal persons (administrations or businesses).

4.2 eGovernment authentication of electronic documents

> Objective discussed: By 2010 Member States will have agreed a framework for reference to, and use of, authenticated electronic documents across the EU.

As online transactions become more widespread, so will the use of electronic documents. This will require agreement on electronic document formats that should be recognised by all administrations as equivalent to their paper representations.

By 2010, a framework will be in place that supports the use of electronic documents in agreed formats in administrations across the EU. Such documents and the infrastructure supporting them shall be able to include text, picture, audio, and video. Properly authenticated[14] electronic documents will be recognized in the same manner as paper documents. Standards shall be agreed for such digital formats.

Those agreed formats shall be deemed acceptable for long-term storage and archiving, whether signed or not. A common understanding must to be reached regarding permanent infrastructure to be made available for long-term document storage and authentication. Administrations should be given clear guidance as to the methods for long-term archiving that are considered as acceptable throughout the EU.

By 2010, electronic archives should be able to store documents in acceptable formats for as long as is necessary to fulfil specific legal or cultural obligations. Recognized methods for preserving usability will be made available.

Furthermore, if eServices – whether provided by public agencies or private organisations – are to be able to interoperate across the EU, they will require that official documents are identifiable and addressable, and thus ensure that they can be authenticated and assert their official and reliable nature. This is an important element in building security and trust.

By 2010, official documents – however and wherever stored – should preserve their permanent identifiers. Member States shall work together to establish a document recognition framework also considering technologies that enable long-term storage and the availability of authenticated representations of documents. This Framework shall ensure permanence beyond any specific technology, medium or platform and shall guarantee availability and allow users to identify which representations of any document are considered authentic by one member state and recognised as such in another.

In order to meet these targets, due attention will be paid to existing standards in the relevant domains, for example from ISO/IEC, CEN, W3C and OASIS. Such standards will be favoured – when compliant with requirements – above tailor-made standards and should cover:
- interfaces and methods for electronic identification and authentication, in particular the data, security, encryption, authentication and policy issues relating to the proposed *eID* framework;
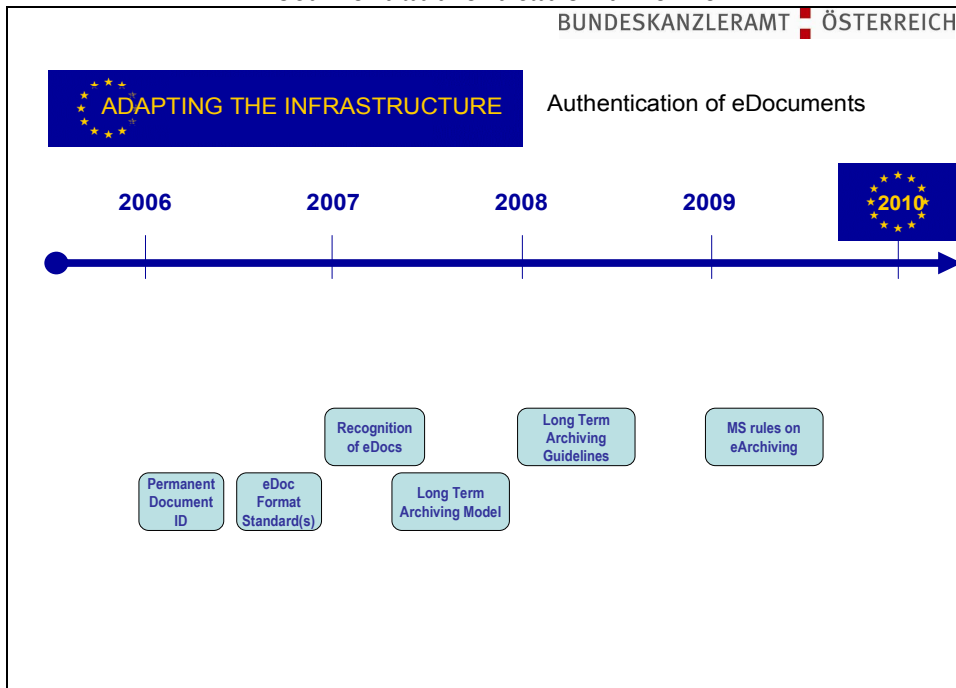
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[14] The definition of authentication with respect to the eSignatures Directive is still subject to some discussion.

- representations (where necessary, digitally signed) of any document destined for long-term archiving.

eID timeline
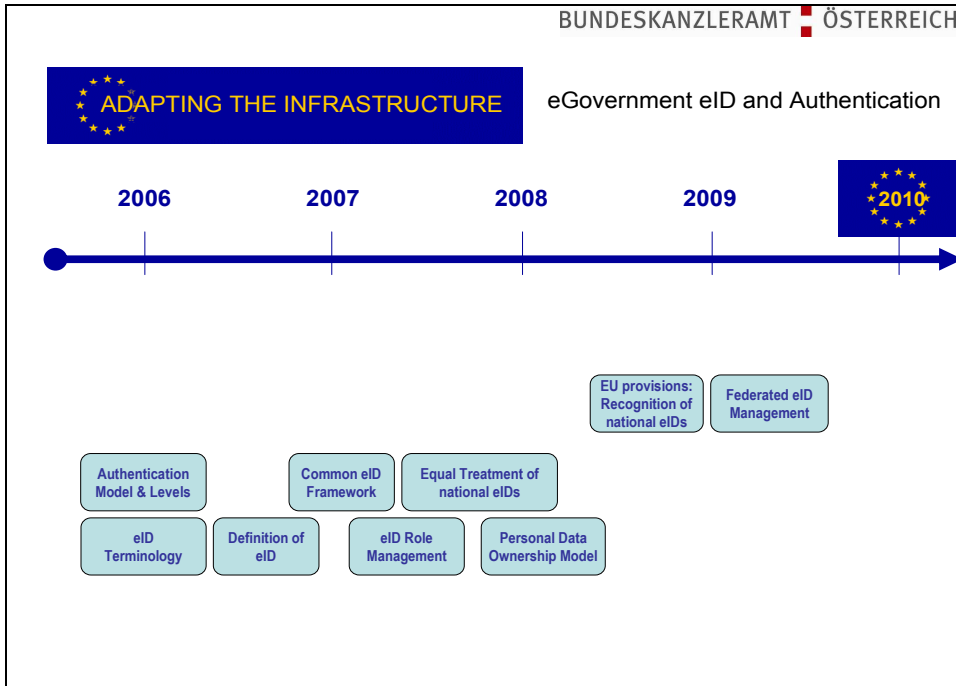
Document authentication timeline

DIGITAL ▪ AUSTRIA

The Austrian Citizen-Card concept in action – from initial contact with a public administration through to secure electronic delivery of documents

The Austrian Citizen-Card (the "Bürgerkarte") concept combines ease of use with maximum efficiency and security. It provides electronic identity (eID) management throughout the lifecycle of many online transactions and using a range of implementations provided by both the public and private sectors.

The electronic identification scheme is based on a system of generating secure 'sector specific' digital certificates for different e-government applications, and is already capable to some extent of incorporating foreign eIDs into Austrian e-government processes.

fill in electronic form   eSignature   ePayment   eBack-Office   eDoc   eDelivery

At the root of eID in Austria is the source PIN (personal identification number). Every person in Austria is assigned a unique source PIN, which is generated from identification numbers held in Austria's base residents registers. Whilst the identifiers are indicated in some official documents and thus may become known, the source PIN is secret and under the sole control of the citizen. Neither governmental nor private organisations have the right to store source PINs.

The source PIN can then be built into the Austrian Citizen Card, which is used for accessing e-government services and for electronic signatures. No identity card is required in Austria and the Citizen Card concept should rather be understood as an enabling framework for electronic administrative procedures rather than as a uniform identity card. Because of the open, technologically neutral approach taken by Austria, a variety of entities can issue Citizen Cards. These include both public bodies (including Federal ministries and universities) and private bodies (certification authorities, banks) and can even involve other technologies such as mobile phone signatures.

Together with secure electronic payments systems and a fully-integrated electronic workflow and dossier management system ("ELAK") to manage the "back office" operations in all government departments, citizen interaction with public authorities is thus simplified and fast, all the way through to the electronic and authenticated delivery of documents.

The ELAK system is a central part of the seamless back-office integration and ensures a complete paperless workflow and ensures that all dossiers are automatically routed to the right department for treatment. Thanks to the Austrian eGovernment Act, electronically documents can be digitally signed and considered authentic in all transactions, further streamlining administrative processes.

AUSTRIA CONNECTED

4.4 Cooperation and sharing as key enablers

Cooperation and sharing for interoperability and open standards

Interoperability is one of the key issues in eGovernment: to offer smarter services to citizens, reduce the need to over and again submit the same data, and to ensure that the single market functions smoothly for electronic public services. Without interoperability and various ways of reciprocal recognition we would end up with a fragmented European reality, in other words closed national markets and reduced competition. As an example, in a well-functioning single market it should be possible to use for comparable e-services one e-signature independently of the issuing Member State and of the technology behind it (mobile phone, smart card, or other tokens). Interoperability is also a key element in ensuring competitive markets. Citizens will benefit from increased choice and competition and cheaper prices. Providers will face more competitors but at the same time have access to a much larger market.

Many activities touch upon interoperability, ranging from directives such as the Public Procurement Directives, the EU programmes IST, eTEN, CIP, IDABC and MODINIS exploring and resolving interoperability each within their remit, and resolutions such as from Directors General for public administration (EUPAN), and the work of *de facto* and *de jure* standardization organizations such as CEN, ETSI, W3C, etc.

Open standards are one of the most important ways to achieve interoperability. They also meet the need in the public administrations to reduce the risk of vendor lock-in, provide freedom of choice, and offer future proof solution or longevity.

Measures for the promotion of open standards that have been mentioned, but not concluded upon in the eGovernment subgroup, included removal of legal barriers to the use of open standards in government procurement, giving a preferred legal status in procurement for open standards, exclusive use of open standards in pan-European services, monitoring the compliance to open standards, creating a catalogue of open standards, and raising awareness within and outside government organizations of open standards.

Facilitating access to competence on open standards (e.g. as an aspect of the proposed eGovernment Resource Network) fits with the CoBrA Implementation Cooperation and Coordination Recommendation (see box).

> COBRA RECOMMENDATION ON IMPLEMENTATION COOPERATION AND COORDINATION: SHARED EUROPEAN RESOURCE OF BUILDING BLOCKS
> *It is necessary to build a shared European resource of building blocks for eGovernment.*
>
> *Key elements of this shared resource are a fully developed European Interoperability Framework for pan-European services, specifications based on open standards, a network of competence centres, take-up and impact measurement tools, a limited number of well-defined EU-wide 'infrastructure services' such as those needed for identification (e.g. people, companies, location, services) and authentication (e.g. people, companies, providers, services, documents), good practice cases, implementation studies and case analyses, etc.*

Interoperability and open standards are needed at the technical level for example to make IT systems 'talk to each other' with common message formats. It is also about the administrative processes so that these are compatible, for example to clarify whether or not a registration process is needed before participating to public procurement. Finally, it is about semantics, that is, the meaning of the information exchanged in administrative processes, for example the definition of "income". For each of these there can be a link to legal requirements, which may turn out to be obstacles for interoperability and cross-border eGovernment services. Clearly then, interoperability is about technical, organisational, legal and institutional issues.

Leveraging eGovernment for innovation by cooperation and sharing

An important dimension in this phase of the knowledge society is innovation. The Conclusions of the European Council suggest the development of innovation policies at national levels. i2010 in general. **Innovative eGovernment** specifically can contribute to the success of these (see CoBrA Recommendation in the box below).

Synergies in innovation between the public and private sector can for example come where technical solutions for eGovernment are based on open standards and are thus made available for the private sector as well. Experiences of organisational and technical kind gained within the implementation process can be exchanged between both sectors.

Especially SMEs can benefit from such synergies by using guidelines, resources, procedures, recommendations, handbooks, etc. elaborated for public administrations for their own orientation. This implies easy access to all these various information made available by public administrations. An eGovernment Resources Network (a virtual service centre were information and resources can be accessed) can serve as a support mechanism for SMEs. Specifically this can benefit the regional and local level, where the larger part of eGovernment is implemented.

Obviously in leveraging eGovernment for innovation co-operation between public administrations and businesses is needed. Business-oriented eGovernment services have to be designed taking into account the needs and realities of the companies adopting the new services. Local businesses and companies are often providing hardware, middleware or software for public services or are taking over the role of service provider. Such co-operation can lead to stimulating 'partnerships for innovation'.

Building blocks such as secure electronic payment, delivery, documents and identification and authentication introduced for eGovernment can be taken over by companies as well. eGovernment has to implement severe security and data protection requirements in order to ensure the level of trust which can be met between citizens public administrations. While currently businesses and companies offering eBusiness and eCommerce are at times struggling with lack of trust of their customers, one way out for the private sector is to boost the security of their services, profiting from secure eGovernment solutions already approved by the public sector.

New technologies are difficult to take up in a market which has still to be evolved. Single companies often are too weak to launch new services or products if there is no economy of scale and immediate profit guaranteed. Not to mention standardisation and interoperability issues. eGovernment, however, is not led by purely economical factors. Public

administrations are less constrained in having to think in terms of market share and short-term return of investment. The public sector can help to prepare the way for innovative solutions which have initially been developed for eGovernment purposes. For example, identification and authentication used for eGovernment is adopted by companies for their own e-services (e.g. online-banking in Austria or secure access in Belgium). The same opportunity of large scale implementation exists for e-payments, e-delivery, authentic documents, etc.

> *COBRA TRANSFORMATION RECOMMENDATION ON AN INNOVATION FRAMEWORK*
>
> *There is a need for an eGovernment innovation framework addressing innovation in a systematic way such as in the use of innovation partnerships with the private sector, novel technologies, emerging delivery channels, etc. It should be accompanied by a European-wide gap analysis as an instrument to maintain the innovation framework frequently up-to-date.*
>
> *Public administrations not only need to adopt new technologies for modernisation and innovation, they are also major contributors themselves to shaping technological and organisational innovation in society at large.*
>
> *Innovation partnerships (public administrations – private sector – academia) should be stimulated and accompanied by better insight into innovation involving the public sector, including (but not exclusively) in the field of public procurement. This will also contribute to increasing R&D efforts in Europe towards the Lisbon target of 3% of GDP.*

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