

ICT Research

The policy perspective



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e-Government and e-Participation



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ICT Results is an online editorial service established on behalf of the Information Society and Media Directorate-General.

The service's main aim is to:

- raise the visibility of ICT-funded research results
- support projects' access to markets and encourage uptake of innovations
- raise awareness of European ICT programmes and activities

ICT Results website: <http://cordis.europa.eu/ictresults>

Modern government, modern society, modern technology

In this report produced for the publication series *ICT Research: The Policy Perspective*, we examine how information and communications technology, or ICT, is revolutionising the way citizens, businesses and public administrations interact.

The EU is investing heavily in e-government to help boost growth while delivering on the benefits of the information society, including greater cross-border collaboration, less fragmented research effort, and access to ICT anywhere, any time and by any one.

In Denmark, for example, electronic (or 'e') invoicing saves taxpayers €150 million and businesses €50 million a year. If introduced all over the EU, annual savings could add up to over €50 billion. In Italy, e-procurement solutions cut over €3 billion in costs. Full take up of electronic invoicing and procurement (purchasing) in Europe is predicted to have a huge impact in Europe, saving some €300 billion a year.

Elsewhere, in Belgium, disabled people can obtain benefits over the internet in seconds, something that previously took weeks. All of this is possible thanks to e-government, the on-line and digital services that give citizens fast interaction with their local, national, or regional authorities.

E-government promises, and can deliver, better services at lower costs – something citizens are increasingly expecting. As such, it was considered an important addition to the i2010 Action Plan.

Eye on 2010

The i2010 Action Plan is a concerted European Union effort to equip Europe for its leading role in the information age – the 21st century's Industrial Revolution which is changing how information is produced, transmitted and used by business, government and society.

The Plan is helping to address any remaining obstacles to Europe achieving its Lisbon ambitions of more and better growth and jobs, and it is enabling the spread of new technologies and the development of novel approaches to many of the major challenges facing communities and economies today (and tomorrow).

The Action Plan is a highly detailed strategy outlining key areas that require support. It establishes, for example, the Single European Information Space, offering affordable, secure high-bandwidth communications, rich and diverse content, as well as myriad digital services. It sets out investment and innovation priorities, and it highlights specific flagship initiatives, such as developing intelligent cars or finding ways for Europeans to age well in the information society.

Last but not least, the i2010 Action Plan also outlines a strategy for attaining e-government – part of the "digital economy" component of the Lisbon Strategy. Member States expect e-government to contribute to high user satisfaction while cutting the administrative burden on businesses and citizens. The public sector, for its part, should boost efficiency while increasing transparency and accountability through innovative use of ICT by 2010 – a win-win for everyone.

Good e-government services are also a benchmark for a competitive economy. Countries that score high on public-sector openness, efficiency and e-government readiness also rate well on the economic performance and competitiveness scoreboards, according to the World Economic Forum and several other international bodies.

Competitiveness and innovation go hand-in-hand, while ICT is a vital tool mediating the two. So, policy initiatives aimed at one should not ignore the other – an assertion made amply clear in the EU's Competitiveness and Innovation Programme (CIP) – and both are better served through the wider uptake and optimum use of ICT by citizens, governments and businesses, especially SMEs.

What about in practice?

Noble ambitions, you might think, but does it all work in practice? The answer is mostly 'yes'. The examples in this report and eTEN market implementation projects and cases provided via ePractice.eu (which merges the eGovernment Observatory with the Good Practice Framework) show how e-government research really does make a difference for citizens and businesses dealing with public administrations at all levels.

Meeting the challenges

i2010, are we there yet?

Although Europe is starting to see the benefits of investment in e-government, there is more work to be done. For example, only around 5% of cross-border procurement by public administrations in France and Germany is managed electronically. If all public administrations across Europe had the technical capability to carry out e-procurement – and in a way that is accessible to all European companies – this would shake up the supply market through enhanced competition.

We need to pass on the good practice and raise acceptance and take-up by citizens and public administrations alike of new developments which can provide better services and tools. Here, the i2010 Action Plan and its e-Government cousin provide a roadmap to guide the way.

To make e-government both real and effective, the e-Government Action Plan identifies five main priorities.

For example, it promises that no citizens will be left behind. It advances inclusion through e-government so that, by 2010, all citizens will benefit from trusted, innovative services that are easy to access.

It also focuses on the **efficiency and effectiveness** of such service delivery. E-government must significantly contribute, by 2010, to **high user satisfaction**, and greater government transparency and accountability, while reducing the administrative burden and boosting efficiency gains.

The strategy will implement key **high-impact services** for citizens and business. For instance, by 2010, 100% of public procurement will be available electronically, with 50% actually used. The EU is also targeting other high-impact initiatives, such as services for mobile citizens (i.e. better job searching across Europe), or social security services (i.e. patient records and electronic prescriptions).

The Action Plan will put **key enablers** in place. Electronic identity management, digital document authentication and archiving are among the essential technological enablers needed for on-line citizen services to be realised across Europe.

Finally, the Plan aims to strengthen **participation and democratic decision-making** by demonstrating tools for effective public debate and participation in democratic decision-making.

E-government is a long-cherished dream of citizens and civil servants alike. With the i2010 Action Plan in place, Europeans will see how forward-looking policy and targeted research combine for a better life for all.



New digital solutions to old social problems

On-line access to government for all is not only a moral and competitive necessity, it can also help solve some of society's most intractable problems, including social exclusion. As an added incentive, it simplifies public services, too. A series of EU-funded e-government projects help to transform a noble ideal into a practical reality.

Public internet kiosks in Austria, tax returns in Ireland and electronic patient records in the UK are all evidence that e-government is increasingly becoming a reality across Europe, but barriers remain.

Today, around 30% of Europe's population still does not use any e-government services. Ironically, a large proportion of these 'excluded' Europeans relies heavily on government support – and stands to benefit the most from accessing them on-line. The savings to authorities providing services to this group electronically are therefore significant.

There are two, broad types of barriers: institutional and social. Re-engineering a public institution to deliver e-government services is a huge task, not least because many departments are using a system essentially perfected in the 19th century. Social barriers affect citizens who are unable to benefit from on-line services, or who are unfamiliar and even intimidated by new technology.

The European Union is working on ways of overcoming both barriers (institutional and social) via its i2010 Action Plan. It is a concerted effort to propel Europe into the information age, enabling the spread of new technologies and developing novel approaches to key issues. E-government is a major thrust of this strategy. For e-government to become a reality, breaking barriers to services is a crucial target.

Member States expect e-government to contribute to high user satisfaction while cutting the administrative burden on businesses and citizens. Moreover, the public sector should boost efficiency while increasing transparency and accountability through innovative use of ICT by 2010.

Inclusive e-Government at a glance

Access to government services for all is a civic right, but it is hardly a simple process. Indeed, reaching the socially excluded – such as the poor, the elderly or the infirm – is one of society's oldest problems. A series of EU-funded projects demonstrate that e-government can simplify services and reach the excluded ...

Countries that score high on public-sector openness, efficiency and e-government readiness also tend to be top economic performers. This means on-line access for all is more than a moral obligation, it is an economic necessity, too.

Clearing the roadblocks

Despite the urgency of the task, significant barriers remain. **Breaking Barriers to e-Government**, a major study funded by the European Union, identified many of the roadblocks. There were seven key categories of barrier. First among them were leadership failures, which happens when e-government does not receive priority, or there are no e-government champions within local, regional or national authorities.

Financing deployments is also a problem, as are digital divides and poor choices. It is not enough to give citizens access to on-line services, these services must be compelling enough that citizens choose to use them.

Poor coordination and workplace and organisational inflexibility can stop projects in their tracks, while lack of trust and poor technical design mean that, when deployed, services are rarely used.

The findings are "shattering the very common view that there is one 'killer issue' – a single major barrier to e-government," comments Professor Dutton, Director of the Oxford Internet Institute, the lead project

partner. "To the contrary, we are finding a wide range of barriers at many levels." Knowing these barriers will direct attention to the many initiatives required to advance electronic government, he suggests.

"The top challenge now is to use our knowledge of the barriers, such as their legal foundations, to speed up, rather than slow down, the process," notes Dr Rebecca Eynon, project manager of the study.

Projects in action

COSPA

ELOST

Access-eGov

The **COSPA** project examined the technical and logistical case for Open Source Software (OSS). OSS has the potential to be a major ally in the search for effective e-government deployments. It is low-cost but sophisticated and, crucially, it is fundamental programming code that can be customised to suit a specific function. It is ideal for public services. Indeed, COSPA discovered that, if a migration to open source is planned correctly, worker productivity does not suffer and it can fulfil all of the functions required, which gives public administrations another technical solution to their problems.

More needs to be done to combat barriers to e-government, but the EU is already responding to many of the problems. This is seen especially in relation to social inclusion, which is a major thrust of the i2010 e-government plan. The EU believes that digital services can deliver more help to those who need it most, and at lower costs, thus combating one of society's oldest problems: empowering the isolated. The poor, long-term unemployed, the elderly and people with disabilities face a degree of isolation from the mainstream of public life.

Another project, **ELOST**, discovered two key causes of the digital divide. "Our preliminary results show that there are primarily two reasons why low socio-economic groups are less likely to use the internet and related services," says Liana Giorgi of ICCR International in Austria, one of ELOST's partners. "Financial problems and old age."

In fact, the i2010 e-government Action Plan anticipated many of these barriers. It sets out clear targets and priorities that help foster leadership, while funding, sharing best practice and technology help combat financial problems, for example. Many projects funded by the EU also directly tackle e-government barriers and foster e-inclusion.

ELOST is analysing data, studying more technical solutions and developing effective policy recommendations, such as increased training and more public access computers and grants to purchase computers. The project is studying the challenges posed by internet and website navigation. In Austria, for example, every government website follows the same basic format, so once navigation is understood for one service, it makes every service more accessible.

Meanwhile, **Access-eGov** gives citizens and businesses a "virtual personal assistant" that guides them through a menu of choices for the problem they are seeking help with. The system then tries to match the need to a service or a combination of services. It provides a plan consisting of electronic services, if they are available, as well as traditional face-to-face services. Unlike other projects, it combines traditional and electronic services, guiding users to either.

These are just some of the many examples of EU-funded projects finding new IT solutions to, in many cases, old problems.

More information

Breaking Barriers to e-Government project:

<http://www.egovbarriers.org/>

ELOST project: <http://www.elost.org/index.html>

Access-eGov project:

<http://www.accessegov.org/acegov/web/uk/index.jsp>

COSPA project: <http://www.cospa-project.org/>

Modinis: http://ec.europa.eu/information_society/eeurope/i2010/modinis/index_en.htm

DG Information Society and Media:

http://ec.europa.eu/information_society/index_en.htm

E-government EU-funded research projects:

http://ec.europa.eu/information_society/activities/egovernment_research/projects/egovernment_projects/index_en.htm

ISTweb: <http://cordis.europa.eu/ist/>

i2010: http://ec.europa.eu/information_society/eeurope/i2010/index_en.htm

Government teleports from 19th to 21st century

Most public services across Europe are still delivered using systems designed in the 19th century. However, a key thrust of the i2010 e-government strategy will use 21st century technology to give a radical boost to both service efficiency and effectiveness.

The line of freight trucks at the Finnish-Russian border can be over 20-km long, and a container can need scores of different documents to reach its destination. It is essential security and taxation, but it is an enormous burden on business.

Similar problems abound in many other public services across Europe. Queues and delays collecting benefits, repetitive form filling, cumbersome manual bureaucracy. All of these problems share two things in common: they are a legacy of a bygone age and they can be radically overhauled by leveraging IT.

That is the logic behind one of key goals of the i2010 e-Government Action Plan, making 'efficiency and effectiveness' a reality.

The i2010 Action Plan is a concerted European Union effort to propel Europe into the future by boosting the spread of new technologies and paving the way for fresh solutions to key challenges.

Integrated e-gov behind a competitive economy

The EU target of a 25% reduction in administrative costs by 2012 is estimated to yield benefits of up to 1.5% savings at the overall GDP level. That is about €150 billion!

Currently, the administrative burden varies among Member States from 1.5 to 7% of GDP. Using ICT can help to cut these costs but it is a means to an end and must be implemented with due care and planning so that the solutions are integrated and widely taken up.

Efficiency and effectiveness at a glance

New technology promises to deliver on a vital thrust of the i2010 strategy, radically boosting the efficiency and effectiveness of public services. It is happening already. In one case, unemployment benefit delivery was cut from one month to a few days. This is just the beginning ...

If successfully done, Member States expect e-government to contribute to high user satisfaction while cutting the administrative burden on businesses and citizens. Furthermore, the public sector should boost efficiency while increasing transparency and accountability through innovative use of ICT by 2010 – a win-win arrangement.

Good e-government services are also a benchmark for a competitive economy. Countries that score high on public-sector openness, efficiency and e-government readiness also rate well on the economic performance and competitiveness scoreboards, according to the World Economic Forum and a handful of other international bodies. Good e-government services can also help attain fundamental political objectives, such as social inclusion or transparent government.

The EU will foster the deployment of efficient and effective e-government services with a two-pronged strategy. It will promote co-operation and exchange of best practice and technical standards through the benchmarking and impact assessment of services. It will also direct important funding towards key IT e-government projects.

Projects in action

ITAIDE TERREGOV IntelCities SEEMP

Several ICT research projects funded by the European Commission are leading the way in developing more efficient and effective solutions for e-government services and tools.

The **ITAIDE** project, for example, hopes to do just that. The project is taking a three-pronged approach: creating a single customs window, establishing Authorised Economic Operators (AEO) and creating interoperability across Europe. The single window means all services can be accessed through one point, electronically. The AEO service will recruit business to track the transport of goods themselves.

"This [is] for operators who have sophisticated enterprise resource planning systems who can show they can securely track their products," says ITAIDE's coordinator Yao-Hua Tan of the Free University Amsterdam's Information Management Group. ITAIDE achieves interoperability through a suite of redesigned tools, web services and standards to make all of the different systems work together. The result is a better customs service with less messy administration. It could save billions.

A similar aim inspired the **TERREGOV** project, which helps small local authorities to develop digital services. "Many local authorities in Europe are extremely small and do not have the resources to develop complex solutions for e-services," project coordinator Norbert Benamou, Director of Business Flow Consulting, explains. "The TERREGOV platform makes it very simple. A local authority simply registers their specific applications on the system as a

web service and TERREGOV more or less takes care of what information is transferred to the regional TERREGOV hub and who can access it."

The benefits are considerable. It helps authorities to deliver public services consistently. Authorities, on the other hand, can use TERREGOV to deliver e-services at minimal cost using familiar, legacy systems. However, citizens are the biggest winners. They enjoy shorter processing times – one trial cut unemployment benefit applications from a month to a few days – and more "joined-up" thinking.

Similarly, in cities across Europe there are endless legacy systems but they are all essentially delivering similar urban services, whether it is garbage collection, cultural promotion or simply road repair. The **IntelCities** project developed a common e-government platform that responds to these roles and enables citizens to interact speedily with city services, creating living spaces that are smarter than your average city.

The project delivered some 21 new or enhanced e-government and e-planning services through practical "living labs" in host cities around Europe. In the Arabianranta living lab experiment in Finland, for example, residents of a new housing development are kept informed on local matters using an electronic bulletin board. Similarly, IntelCities partners Tampere City boosted citizen participation in planning. It uses advanced visualisation techniques, inhabitant profiling tools and interactive features – such as gauging opinions of urban redevelopment plans or building designs – to engage the public and help planners to model and build a purpose-built district called Vuores.

All of these projects use new technology to tackle old functions, but there is enormous scope for projects to develop new services, too. For example, the **SEEMP** project which is developing an on-line platform to match job vacancies with applicants across Europe.

Until now, pan-European job hunting was dogged with repetitive and difficult tasks, such as locating recruiting agencies, finding vacancies and arranging for a move. It means the EU's cherished worker mobility is an unrealised potential.

SEEMP will soon make that potential real, by developing a platform that can hook into national employment agencies and link job offers with job seekers. It is just the beginning. These are a handful of the projects aimed at making efficient and effective e-government a reality. Say goodbye to the legacy systems of a bygone age, and say hello to 21st century e-government!

More information

TERREGOV project: http://www.terregov.eupm.net/my_spip/index.php

ITAIDE project: <http://www.itaide.org/>

IntelCities project: <http://intelcities.iti.gr/intelcities>

SEEMP project: <http://www.seemp.org/>

i2010: http://ec.europa.eu/information_society/eeurope/i2010/index_en.htm

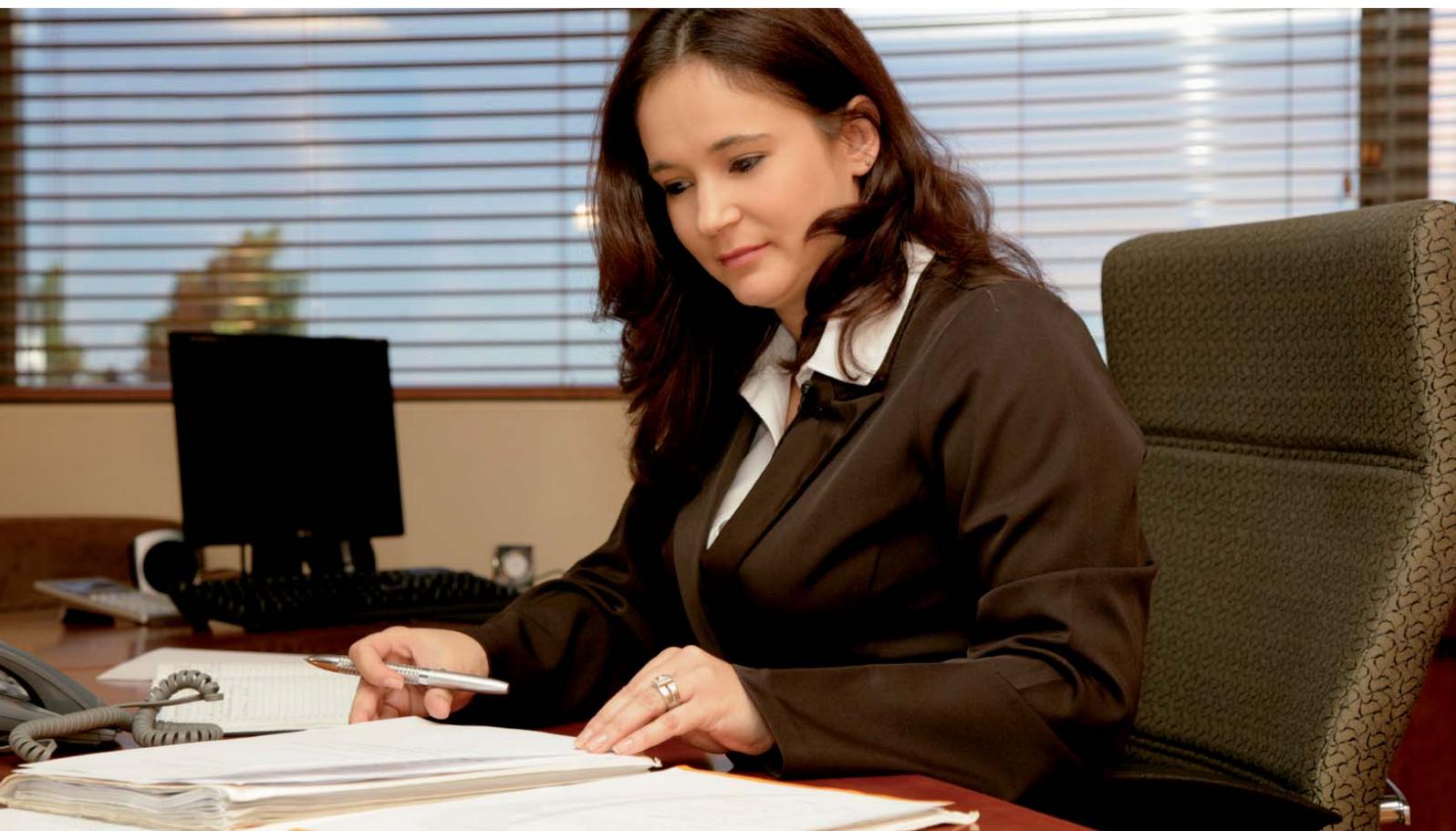
Efficiency strategy: http://ec.europa.eu/information_society/eeurope/i2010/inclusion/index_en.htm

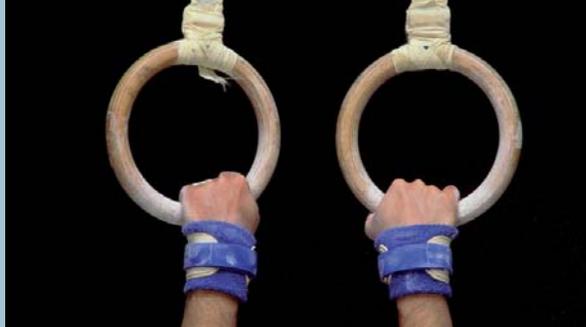
DG Information Society and Media: http://ec.europa.eu/information_society/index_en.htm

E-government EU-funded research projects:

http://ec.europa.eu/information_society/activities/egovernment_research/projects/egovernment_projects/index_en.htm

ISTweb: <http://cordis.europa.eu/ist/>





High-impact e-government delivers more than just savings

Public administrations across Europe stand to save billions of euros by adopting high-impact e-government services such as e-procurement. However, high-impact projects go way beyond the bottom line.

Government revenues account for some 45% of GDP and public authorities purchase services and goods to the value of some 15 to 20% of GDP, or €1500 to €2000 billion in Europe every year. Electronic procurement and invoicing could save 5% in total procurement costs and reduce transaction costs by 10% or more, leading to savings of tens of billions of euros annually.

It is already happening. E-government initiatives in Europe already deliver significant savings in time and money. Public service e-procurement in Italy cut the procurement bill by an impressive €3.2 billion. There was an average saving of 34% on PCs, for example.

Meanwhile Portugal reported savings of 30% thanks to electronic public procurement. Full deployment of e-procurement across the European Union could reduce the overall procurement bill by up to €80 billion a year.

This kind of success singles out e-procurement as a very high-impact priority for public and private organisations – as it delivers major benefits quickly. It is also a function that transfers easily, so it can be perfected in one country and then easily deployed across the EU, with enormous benefits for all.

For this reason, the EU's i2010 e-Government Action Plan made high-impact services such as e-procurement one of its key goals.

"The e-government agenda is advancing through the modernisation of hundreds of public services," notes a communication from the European Commission. "While most of these are local, regional and national, a number of services delivered across borders make a significant difference to citizens, businesses and administrations and can act as flagships for European e-government."

The i2010 Action Plan is a concerted EC effort to propel Europe into the future by enabling the spread of new technologies and developing novel

High-impact services at a glance

Deploying high-impact e-government services such as e-procurement can save billions of euros for European public administrations, which means more taxpayers money available for essential services. It can even do much more than that, such as supporting other major thrusts of the EU's i2010 e-government strategy ...

approaches to key issues. High-impact services are essential to these goals.

E-government plays piggy-back

As high-impact services go beyond (way beyond) the bottom line, they can also drive development and deployment of e-government services by galvanising leadership commitment to the task, leading to accelerated adoption of the service.

Even better, once one e-government service becomes established, it is much easier to deploy simpler, relatively low-impact services, too. Modest e-government functions can piggy-back on high-impact initiatives.

This leads to yet another benefit. As services multiply, they drive demand for key information society enablers, such as electronic identity management, electronic document authentication or electronic archiving. All of these electronic features are considered critical to making the 'information society', built round knowledge-based economies, a reality.

High-impact services are not only a valuable goal in themselves, they promote and facilitate parallel goals in the EU's i2010 e-government strategy.

There are many potentially high-impact e-government services. For example, citizen mobility services, such as better job searching across Europe, or social security services relating to patient records and electronic health prescriptions. Similarly, benefits and pensions across Europe, and educational services for study abroad will have a high impact. The EU will also consider others such as company registration and VAT refunding for businesses.

Projects in action

eUSER

SAFIR

OneStopGov

Use-me.Gov

HOPS

High-impact services and technologies exist beyond Europe-wide, single-focus initiatives such as e-procurement or e-health facilities. The EU also seeks to promote the deployment and use of e-government and information society services through new technologies and better tools to respond to user needs. To this end, the EU funds a wide range of projects to help users and foster service take-up.

For example, the **eUSER** project examined usability barriers to digital services and discovered that there is no such thing as an “average user”. Typically, usability studies focus on layout and access for people with disabilities, but eUSER went further, to examine social and cultural factors as well.

“Many older people are very comfortable with ICT, for instance, while others are afraid of computers,” says Karsten Gareis, coordinator of the eUSER project. “So, policies on on-line services need to focus on identifiable sub-groups.”

User orientation is at the core of the i2010 initiative and its emphasis on e-inclusion, he says. “[Our project] has given policy-makers much-needed evidence that there is still a lot to do when it comes to bringing the information society to all.”

It is vital work because, if users do not like engaging with a service, it is effectively useless.

That same philosophy drove the **SAFIR** project, which developed a platform that means databases can be updated using everyday speech, or natural language in IT jargon. The system will be deployed for the Beijing Olympics and it will mean users can access a satellite navigation service to find their way around the city, all in straightforward language. Using digital services could hardly be simpler.

Simplicity informs the **OneStopGov** project, too. It centres on life-events such as births, marriages, getting a driving licence and deaths. Most e-government services focus on one aspect of these life events, registering a car with one department and getting a licence with another. OneStopGov will unify these disparate services into one seamless event.

The **Use-me.Gov** project takes this simplification even further, onto the mobile phone. It developed a sophisticated service that enables any local authority to deliver services to mobile phones. Services such as traffic reports, registering complaints, and linking parents and children to a school notice board – all via mobile technology. These services proved so popular people were willing to pay!

Meanwhile, the **HOPS** project sought to redeem the terrible reputation of call centres. Users generally hate them, but HOPS developed technology to make interactions with voice-automated systems simpler and more like having another person on the phone.

The upshot is that all of these projects could have a huge impact on the use of e-services, by improving their quality. This will have a high impact that goes way beyond savings.

More information

OneStopGov project: <http://www.onestopgov-project.org/index.php>

HOPS project: <http://www.bcn.es/hops/>

Use-me.Gov project: <http://www.usemegov.org/>

SAFIR project: <http://www.safir-fp6.org/home.htm>

eUSER project: <http://www.euser-eu.org/>

DG Information Society and Media:

http://ec.europa.eu/information_society/index_en.htm

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ISTweb: <http://cordis.europa.eu/ist/>

i2010: http://ec.europa.eu/information_society/eeurope/i2010/index_en.htm



For e-government, insert key

On-line, digital government services promise enormous benefits for lower costs, but certain government functions are an essential first step for large-scale deployments. How will these key enablers be put in place?

E-procurement could save governments billions of euros. Digital social benefit applications can take days instead of weeks, while on-line medical booking takes just minutes. E-government can save both time and money, so it looks like an obvious choice.

However, without critical key enablers in place, the greatest gains from e-government could well remain out of reach. Powerful web-based functions, such as e-procurement, demand fundamental, universal services that are efficient, effective and robust. Universal services such as electronic identity management (eIDM).

Citizens, as they move across the EU, want easy access to public administrations and services. Businesses often need to verify the identity of their customers. Just like a plastic identify card in your wallet, eIDM guarantees the identity of any entity or person, fast and reliably without the person having to be physically present.

Electronic identity management means trade can be conducted on-line, in confidence. As with commercial businesses, government institutions are the target of determined and organised fraud gangs. Without absolute trust in the service, and without eIDM, only the foolhardy would venture on-line – this makes developing great e-services difficult, perhaps impossible.

This is principally why the e-government arm of the i2010 Action Plan made 'key enabling technologies' one of the five main thrusts of its strategy.

The i2010 Action Plan is a concerted EU effort to boost the spread of new technologies and develop fresh approaches to key challenges, among other aims.

For eIDM, the EU takes a pragmatic approach, seeking interoperability between national identity systems rather than taking on the onerous task of

Key enablers at a glance

The greatest gains from e-government services will remain an empty promise without critical key enablers. Electronic identity management, digital document authentication and failsafe archiving are core functions of government and are crucial for truly powerful e-government services...

inventing and deploying completely new identity management systems. This way, national regulations can be respected while still creating the essential function of eIDM.

E-signatures also offer a useful eIDM platform, and the EU is actively promoting mutual recognition between different systems.

Identity and beyond

Nevertheless, putting public services on-line requires more than identity: document authentication is critical, too. A physical birth certificate can be examined for its provenance, but currently there is no pan-European digital equivalent.

The EU will, therefore, set up a reference framework for authenticated electronic documents across the continent and will develop a work programme for co-operation around management and authentication of electronic records and archives in public administrations. It will even facilitate cross-border access to archived documents.

The final key enabler is interoperability. The best identity management system in the world will fail at the first step if computer systems are not linked in. Hence, the EU uses common specifications, interoperability guidelines and re-usable software as building blocks of high-impact e-government.

Projects in action

GUIDE

BalticTime

Egov-Bus

iWebcare

Picture

European research is focusing effort on building two linked foundations so vital to the construction of an information society: security and trust. Towards this, the EU is devoting substantial, tightly focused funding aimed at practical research. For example, being able to live and work in any Member State is a big part of what the EU stands for – but it is often easier to move your suitcase than your social security records. It is impossible to transfer such sensitive data unless all of the actors are absolutely confident that the data is true and that it can be transmitted securely.

This is why the **GUIDE** project has created an independent forum to help governments apply common standards for the secure exchange of personal data. **GUIDE**'s aim is not to store information about people, or to authorise access to e-services, but to pave the way for trusted "identity providers" in different Member States to supply reliable information on the identities of individuals and businesses.

However, the transferral of records is about more than just data. When the data was created can be vital, too. The EU-funded **BalticTime** project is establishing a digital 'timestamping' service to this end. It will set this up for Estonia, Latvia, Lithuania and Poland, and so provide a model that could be applied across the European Union.

Projects such as these are developing essential elements for e-government, but one project, **Egov-Bus** (Advanced e-Government Information Service Bus), goes further. **Egov-Bus** is creating a "virtual agency" that will seamlessly integrate diverse public services from different government bodies into a single point of contact. Even more, the project's tools combine key security features, such as electronic signatures and data protection, to maintain users' trust in e-government. As well as making services easier to access, one-stop-shops like these reduce the cost of integrating e-government services in the future.

It does not matter how many secure services are developed for e-government, fraud remains a regrettable problem; and even here, new digital services are aiding in the battle against crime. Right now, medical welfare fraud across Europe, for example, costs over €30 billion (possibly more) which means administrations need to track and identify suspicious transactions.

The **iWebcare** project is developing a computer investigator to detect cases of healthcare fraud. The digital detective is a self-learning program, guided by an experienced investigator that can spot unusual or suspicious patterns in medical billing data, such as repeated treatments, overly expensive treatments and other unusual trends.

Security and trust are essential to social and business interaction, on- or off-line. However, the **Picture** project tackles a different sort of trust entirely. It helps technology managers to trust in their decisions. It is working towards supplying technology managers with a web-based tool to help them develop sound, long-term ICT investment strategies. Public administrations will be better able to identify and acquire ICTs adapted to their needs as a whole, and to reshape their processes into a more efficient service for their communities.

In the end, all of these technologies and services offer the prospect of secure and trustworthy e-government available to all citizens across Europe. This will be the key to unlocking the information society.

More information

GUIDE project: <http://istrg.som.surrey.ac.uk/projects/guide>

Picture project: <http://www.picture-eu.org/>

iWebcare project: <http://iwebcare.iisa-innov.com>

BalticTime project: <http://www.baltictime.lt/>

Egov-Bus <http://www.egov-bus.org>

DG Information Society and Media:

http://ec.europa.eu/information_society/index_en.htm

E-government EU-funded research projects:

http://ec.europa.eu/information_society/activities/egovernment_research/projects/egovernment_projects/index_en.htm

ISTweb: <http://cordis.europa.eu/ist/>

i2010: http://ec.europa.eu/information_society/eeurope/i2010/index_en.htm



Democracy, but not as you know it

The EU's strategic plan for e-government aims to increase public participation in the political process. Information technologies can potentially renew democracy for the 'internet age'. Here is a little look at how it can do this.

On-line diaries, or so-called 'blogs', are now commonplace in elections, while on-line video-sharing sites offer political debates and news, and many voters use the internet as their primary news source as the basis for their political choices. On-line technology could do more. It could reinvent democracy for the internet age.

However, more must be done before this becomes a reality. Democratic decision-making and participation face several challenges. Across Europe, voter turnout is generally low. Decision-making is often felt to have become more complex.

Citizens are becoming ever-better informed – in part thanks to the internet – and, as such, demand a greater say. Meanwhile, governments want to build policy support to take effective action and avoid political and social divides. Thus, better decision-making and more citizen involvement (at all levels) are critical for European society and democracy.

This is where information and communication technologies (ICT) can help, involving large numbers of citizens in public debate and decision-making, from municipal to European-level.

21st century democracy

For this reason, the e-government arm of the i2010 Action Plan has made e-participation one of its five primary strategic thrusts.

E-participation at a glance

If democracy is the bedrock of European society, e-democracy must be the foundation of Europe's information society. The EU's strategic i2010 e-Government Action Plan aims to boost public participation in the political process through innovative digital services ...

The i2010 Action Plan is a concerted European Union effort to propel the continent into the future with a knowledge-based economy helping to spread new technologies and develop novel approaches to key challenges.

For e-participation, the EU will foster co-operation and boost understanding. It will accelerate the transfer of best practice among Member States, and use ICT to support transparency among European institutions.

Already the EU has embarked on two broad initiatives. The eCommission and the European Transparency initiatives are major efforts to boost participation and accountability. Furthermore, the EU will explore best practice and common specifications for tools to bring citizens closer to the parliamentary decision-making process.

It goes further still, directly funding exemplary projects that not only offer e-participation benefits among partners, but that can transfer these benefits to other Member States, too.

Projects in action

DEMO-net
EPRI Knowledge
QUALEG
eRepresentative
Transfer-East

European funding for ICT research is also focused on developing ways to boost participation in European governance and for decision-making to be more transparent and consultation based. EU projects show the benefits of e-participation, and offer a blueprint for refitting democracy to Europe's vision of a true 'information society'.

DEMO-net will strengthen Europe's fragmented research, exploring the use of ICT in the democratic process. The project's work will also help to uncover the barriers to e-participation and suggest criteria for how schemes should be evaluated and ultimately improved. Key issues already identified include poor transparency of political processes – perhaps caused by a lack of political support – insufficient promotion of the social benefits, and vague legal frameworks for building e-participation.

Partners are now investigating how to overcome these obstacles, whether technical, socio-economic or psychological. Lack of ICT skills is high among the reasons. Workshops and exchanges within DEMO-net help to ensure best practice spreads.

To make the most of e-government, it makes sense to start at the top. The EU-funded **EPRI Knowledge** project is encouraging politicians, not renowned for their grasp of technology, to more fully embrace ICT. For more than a decade, the European Parliaments Research Initiative (EPRI) helped to change politicians' view of the internet from a threat to a useful tool. Its latest project builds on that good work.

The first task of EPRI Knowledge was to find out how the parliamentary assemblies of the EU and the accession countries are using ICT and knowledge management techniques. Some of the newest democracies, such as Estonia, turn out to be the biggest innovators. Other Member States have more entrenched processes. The next tasks are to help key decision-makers keep abreast of new ICT developments, and turn their ideas into practical results.

EPRI's latest tool is a specialised 'Parliament & ICT Knowledge-base' that offers relevant links, documents and initiatives posted behind headings such as 'e-democracy' and 'political decision-making on ICT'. Not only are politicians now more familiar with ICT, they are learning about innovative applications for e-participation, too.

Another initiative, the **QUALEG** project, is showing how technology can improve participation in local government. Drawing on the business world for inspiration, QUALEG developed software to help local administrations better manage their "policy lifecycles" – from concept and planning stages through to implementation and feedback. The platform uses data management to create a "policy evaluation scorecard", indicators comparing citizens' expectations with the quality of public services and their global satisfaction. This paves the way for policy-makers who are better equipped to respond to citizens' needs. In return, citizens can see their opinions make a difference by the policy changes implemented.

The Polish city of Tarnow tested the platform, using the feedback to improve its public works policies. With the QUALEG system, the council receives timely feedback from both citizens and businesses on current and planned works. A similar service is deployed in Saarbrücken, Germany, to help organise cultural events.

For politicians, the European **eRepresentative** project explores the potential of a virtual parliamentary desktop to help them do their job more efficiently. The virtual desktop could be used to draft a law, debate it, propose an amendment and then vote on it without actually having to be physically present in the assembly. All of this comes with appropriate identity protection and security built in.

Business is part of society too, and it also needs to have its concerns addressed. In many of the EU's new Member States, such as Hungary and Poland, the vast majority of transactions between government and business (G2B) still take place on paper. The EU-funded **Transfer-East** project is speeding the adoption of electronic alternatives.

Guided by new Member States and by considerations of transferability, the consortium drew up a long list of 34 exemplary e-government services, then whittled this down to ten by a vote of the administrations themselves. The final ten are now

being implemented.

More information

DEMO-Net project: <http://www.demo-net.org/>

EPRI Knowledge project: <http://www.epri.org/epriknowledge>

QUALEG project: <http://www.qualeg.net>

Transfer-East project: <http://www.transfereast.net/>

eRepresentative project: <http://www.erepresentative.org/page/nl/home>

Information Society and Media home:

http://ec.europa.eu/information_society/index_en.htm

E-government EU-funded research projects:

http://ec.europa.eu/information_society/activities/egovernment_research/projects/egovernment_projects/index_en.htm

ISTweb: <http://cordis.europa.eu/ist/>

I2010: http://ec.europa.eu/information_society/eeurope/i2010/index_en.htm

What's inside?

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