

EUROPEAN COMMISSION  
Information Society and Media Directorate-General

**STUDY ON THE MEASUREMENT OF  
eGOVERNMENT USER  
SATISFACTION AND IMPACT**

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## Management Summary

For the purposes of clarity, we examine separately the actual findings that emerged from the survey itself, and observations with regard to the survey instrument and methodology used.

### The objectives and findings of the study

The European Commission Information Society and Media study on measurement of user satisfaction and impact has developed a multilayer user-satisfaction and impact measurement toolkit aimed at providing both policy makers and public agencies with the necessary information and tools for the analysis of public sector service provision. This standardized survey framework provides a hands-on approach to a set of customizable survey tools. Its methodology offers a rich and solid foundation for analysis based on state-of-the-art experiences accumulated both on the EU and international levels.

The measurement toolkit was piloted in September 2008 in ten different Member States and the results were used to fine-tune the measurement instrument and to develop first policy recommendation aimed at fostering inclusive eGovernment. The study was undertaken by a consortium composed of Deloitte Consultants and Indigov (a spin-off of the University of Leuven, Belgium) in collaboration with Prof. Cristiano Codagnone of the University of Milan, Italy.

The survey results clearly indicate a number of crucial issues that have been brought to light with this study. Among these are a number of notions that relate to trust-building. Others relate to the kinds of benefits that governments aim to achieve through eGovernment and, indeed, do appear to be achieving. Yet others relate to what government service providers need to know better about their clients and customers while consciously needing to enhance the privacy of those citizens. Finally, a wealth of information is beginning to be unearthed in terms of supply-side services – a field as yet little explored by European public administrations:

**Trust:** The first important element shaping the use of and satisfaction with eGovernment services is trust. This includes both the trust that people have in using the internet as a tool to interact and exchange personal information and trust in government and public sector agencies. Variations in these levels of trust correspond to the differing levels of use and satisfaction with public services



provided online. Scores on satisfaction of eGovernment services increase significantly with the level of trust in the Internet and with the level of trust in government. Concrete European initiatives aimed to support the enhancement of trust in the Internet by the means of privacy, security and identity management development must be continued and reinforced.

**Easy access:** On the supply side of eGovernment services, the availability and findability (ease-of-finding) of public information and services, its level of quality and its level of sophistication all play a highly important role. Analysis of the channel preferences of eGovernment non-users shows clearly that the reasons for non-use (expressed as 'no ability to find the information or services') was reported by 44% of the respondents. Public administration should ensure that their e-services are well tagged on the different internet search platforms.

**Awareness:** Similarly, the reason for non-use (described as 'lack of awareness') was reported by 49.10% of the non-users of eGovernment. In contrast, the likelihood of future use of eGovernment is relatively high. Clearly, an important barrier to the use of eGovernment is therefore the lack of awareness, and thus the lack of communication on the part of eGovernment itself. As a result, it is essential to create awareness of, and communicate the existence of the electronic services on offer. From the pilot survey results, this element appeared as critical in the take-up and use of eGovernment services. Targeted communication campaigns for e-services should be stimulated.

**Perceived benefits:** From the eGovernment services pilot survey results, it is clear that users care most about saving time and getting things done as fast, smooth and efficiently as possible. There is high demand by users to handle their cases fully electronically, especially once they have had the opportunity to do so. Positive experiences certainly stimulate respondents' preference to use Internet/eGovernment and the likelihood of their future use. Once eGovernment services are provided, citizens or businesses are keen to use them. It is critical for public administrations to address those eGovernment services that provide the most valuable perceived benefits of for users. Time saving, and efficient and simple services are paramount.

**User profiling:** Particularly interesting and rich analyses, and subsequent results, can be achieved by fine-tuning the survey instrument. It can be accommodated to the specific needs surrounding the evaluation of specific services and their use. It is important to consider carefully the steps in setting up the instrument. The analysis also requires in-depth knowledge of statistical methods and methodology.

From this analysis, we can conclude that Europe has adopted the appropriate eGovernment strategy by stimulating the supply of highly interactive transactional public e-services in domains of high demand and high interest. There seems to be evidence that eGovernment take-up follows supply. Nevertheless an imbalance between supply and take-up remains an important challenge for different public sector services.

When analyzing the correlation between supply, use and satisfaction on a country level, for the 10 countries included in the pilot, the differences between the countries are remarkable: some countries have a high correlation between well developed sophisticated public e-service delivery and the use and satisfaction of their citizens and businesses with their eGovernment services. In other countries, there is an important gap between both. Member States can learn from each other and share experiences on which services to concentrate, on good ways of providing services, and on methods of analyzing the success of the services. For the purposes of equity, democracy, and especially social cohesion, throughout Europe, it is imperative to ensure that the standards in the various Member States are brought increasingly into balance.

It is clear from the results of this study that balanced efforts concerning the development of more highly sophisticated public e-services as well as trust- and awareness-creating actions are necessary. The road towards actual user-centric public services requires a more extensive form of user profiling that provides measurements of the essential dimensions of use, satisfaction and impact. Using the standardized framework developed under this study makes available the tools and methodology to do so. It enables policy makers and public agencies to develop and monitor trusted, innovative eGovernment services in an inclusive and continuous manner.

Close monitoring of the essential elements that guide the use of and satisfaction with eGovernment services provides policy makers and public agencies with the appropriate information to address their target user groups. As the online services evolve, the perceived benefits and other elements of user satisfaction are expected to evolve as well. It is essential to monitor these elements regularly in order to continue to create public value through ICT-enabled services.

These major observations derived from this pilot study reinforce the importance of using this standardized framework for the measurement of user satisfaction and impact. On the road to

iGovernment, the element of user satisfaction requires these important factors to form an integral part of service provision. Regular, continuous, and longitudinal measurement of User Satisfaction and Impact, through the use of a standardized framework, is an unmistakable part of keeping in touch with the quickly evolving world of online public services. It is an intrinsic element of creating public value through ICT-enabled government services.

### The survey instrument

One of the first initiatives of the study was to undertake a state-of-the-art review in relation to eGovernment services and Europe's citizens' experience of these. The work was conducted using a cross-European perspective, and also involved desk research of the scene worldwide. Here, we highlight the main findings of that review.

Overall experience of eGovernment user surveys is limited. Standardization of the frameworks and methodologies available for measuring eGovernment user satisfaction and impact in the EU27 Member States is generally lacking. There is certainly a need for more consistent measurement, taking place via standardized tools.

The state-of-the-art stage of the study highlighted two major sets of findings. It drew attention to the need for the diversity of valid measurements required in today's more complex, multi-cultural, and pluralistic societies. It also indicated how major surveys from countries outside Europe could be useful in designing Europe-specific survey instruments.

Common dimensions of user satisfaction imply the need to measure user expectations and perceptions of service quality. However, valid measurement of the overall levels of satisfaction in random sample survey designs requires a more effective control of preconceived judgements. In order to address aspects of customization, when dealing with citizen-centric service delivery, attention has to be paid not only to different types and profiles of citizens, in terms of their e-skills, attitudes, and use of information and communication technologies, but also their social groups and customer segments. Decisions have to be made with regard to the focus of measurement, possibly including eGovernment in general, stages of e-service delivery (such as information, downloading, and transaction), specific public e-services, customer life-events, user activities, and/or generic applications.

The survey instrument that was designed was based on a number of guiding principles. These were defined specifically to guarantee the final objective of the project. The most important starting point was the need to arrive at a standardized measurement framework that would have a customizable modular structure. An holistic approach was adopted. At the core of the instrument is a life-event based model.

Acknowledging the need for a policy-related instrument meant that the survey results needed to be translated into both advice and action. The advisory outcomes are handled in the first part of this management summary. Attention was therefore also paid particularly to a user typology approach, a multi-channel perspective, a follow-up of “non-use of eGovernment services”, and a pragmatic definition of impact elements.

**The survey instrument** is presented as a set of four modules. Each module is centred around a crucial issue, and consists of a set of related questions. In the **first module, users** (who are composed of both citizens and business users) are profiled by using traditional socio-demographic questions as well as by a more in-depth profiling of Internet use and experiences with various eServices.

The **second module** deals with the **use** of eGovernment services based on a life-events approach. Non-users are approached by using questions that concern perceived barriers and alternative channels.

The **third module** addresses, using a balanced set of questions, the users’ degree of **satisfaction** with eGovernment services. These are benchmarked in a broader context of eServices. The survey also takes into account *a priori* (i.e., previous) user expectations and actual achievement of objectives.

The final and **fourth module** poses questions about the perceived **impact** of using eGovernment, and concludes with various questions on channel preferences and likelihood of future use.

The fact that this survey instrument needed to be developed so as to enquire with Internet users about their use and satisfaction with public eServices, the choice of an online Internet panel approach as a survey methodology could seem self-evident. Of course, other fieldwork methods –

such as telephone or face to face interviews are feasible also. Nonetheless the authors of this studies are convinced that the online methodology guarantees the best price/quality for this kind of survey. For the pilot survey, the choice was made to test the survey instrument in a selection of 10 Member States where high standard, online panels were available.

Based on the results of the pilot survey, the survey instrument was evaluated, re-adapted and further developed into a set of re-usable tools. For the **two target groups of citizens and businesses**, two survey tools are presented. They are:

- a “**User Satisfaction Benchmark**” designed for a general level demand-side monitoring of user satisfaction and impact across European countries
- an “**eService Evaluation tool**” that public agencies may use to measure user satisfaction and impact of the specific services they provide electronically.

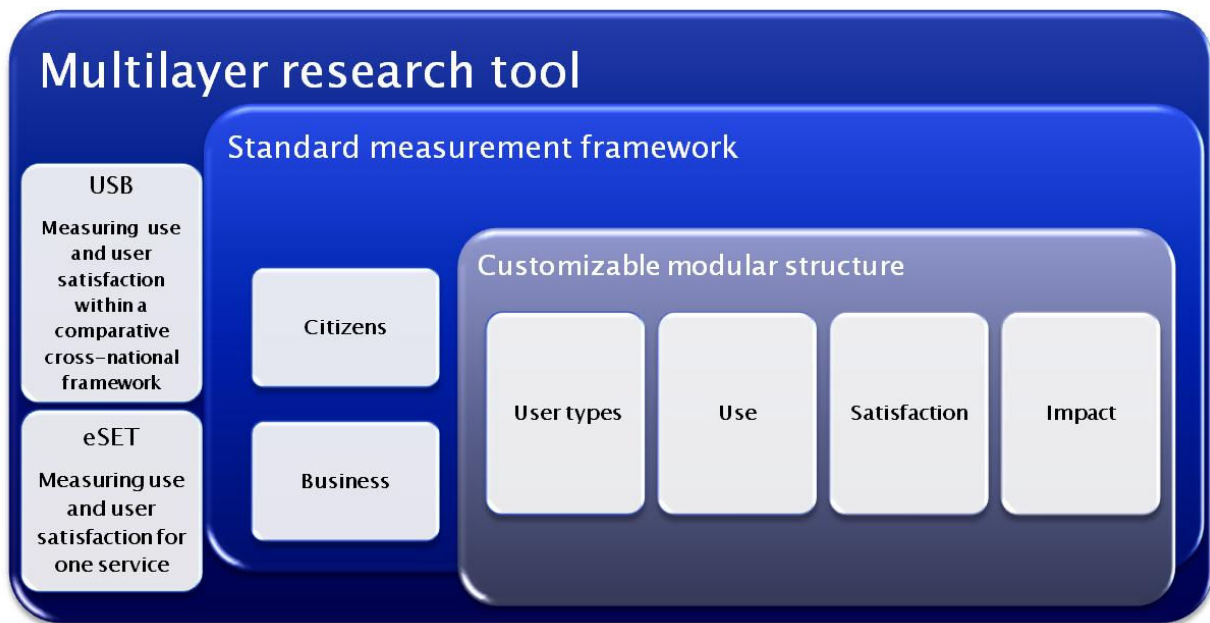


Figure 1: The survey instrument is composed out of 4 separated questionnaires in a modular structure

These two tools can be used at all levels of government from the overall EU level to the level of particular public agencies that offer specific eGovernment services in each of the 27 Member States. The 4 extended questionnaires are presented in the annexes of this study.

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## Introduction

In this introductory section, we outline the context and general objective of the study on eGovernment user satisfaction and impact commissioned by the European Commission, Directorate-General Information Society and Media, and the structure of the final report.

### Context of the study

Many challenges to eGovernment lie ahead. Information and communication technologies (ICT) increasingly permeate citizens' and businesses' work and activities. However, the persistent low access to and use of eGovernment services may pose a number of societal challenges. Among these may be the creation of new forms of exclusion, lost opportunities for more cohesion and growth, and – especially because of the large sums of public funds invested to bring government services online – the development of negative opinions of both public authorities' legitimacy and industry competitiveness.

Today, as a result of an increasing consumerist culture based on rising social and commercial expectations, citizens tend to expect the same level of quality and responsiveness from government services that they experience generally when dealing with the private sector. Moreover, citizens who most need government services risk being left behind or excluded as a result of the innovative potentiality of eGovernment services. If eGovernment services do not optimize user impact and increase user satisfaction, further socio-economic challenges may result. For instance, there could develop greater social apathy, less trust in government institutions, increased costs to social exclusion, while opportunities for citizens and businesses to benefit from the tangible gains that arise potentially from an increased take-up of eGovernment services may be missed.

Nowadays, among both scholars and policy makers a shift is occurring from a supply-side focus to a demand-side one. International eGovernment policy and research agendas have until recently been largely on the supply-side provided by government organizations and services rather than on the demand-side of the user/customer. Public sector organizations across all governmental layers are faced with major challenges and demands: these relate to all of the intertwined levels of back-office organization, front-office supply, actual use, and impact of services. Particular challenges

include: low levels of eGovernment take-up; potentially disappointing returns on investment; pressing demands from citizens and businesses to improve government transparency and service quality, and to reduce time-consuming administrative burdens; high internal organization requirements to save costs and increase efficiency; and the need to develop inclusive multi-channel service platforms. As a result, politically responsible bodies and governmental agencies will have to turn increasingly to developing and implementing **strategic action plans that are accompanied by specific measures which have a user-driven and citizen-centric orientation.**

Increased concentration on user-centricity is taking place at an international, not just at a European, level. Basically this is also the vision that the United Nations (UN) are advancing in their most recently published survey, the "UN E-Government Survey 2008: From E-Government to Connected Governance" (UN, 2008). The UN report discerns an evolving approach to public service delivery. This new approach involves a shift from the traditional model of a government that dispenses services *via* traditional means. It leads to an emphasis on eGovernment that provides eServices *per se* in an integrated approach – which is labelled as a second generation eGovernment paradigm – that uses ICT to increase the *value* of services to citizens. The contribution of ICT to improved service delivery at an external level is associated with an emphasis on achieving cost savings and enhancing efficiency on an internal level. The emerging paradigm, however, also maintains that – to achieve greater value in service delivery and increase cost-efficiency – integration and redesign of back-office organization and processes is a necessity. Hence, the UN report appeals for a transformation towards an interconnected and networked governance model. The holistic "(e-)government-as-a-whole" framework presented by the UN emphasizes a **shifting focus towards ICT-enabled public value creation.** At the same time, it acknowledges the way in which this eGovernment outcome is dependent ultimately on all the preceding components of the entire public service delivery chain.

User-centricity also needs to be measured and evaluated. As argued, among others, by Richard Heeks in the iGovernment Working Paper (Heeks, 2006) – and acknowledged by the EC – the shift in focus towards the customer and the public benefits of eGovernment should be reflected in the development of appropriate research frameworks and measurement tools. It is envisaged that such a re-orientation will gradually take place. Mere examination and benchmarking of the supply-side of eGovernment (with its focus on e-readiness, and the availability and maturity of electronic public services) should be supplemented by the **measurement of demand-side aspects of ICT use in government services.** This demand-side focus will include take-up/usage,

satisfaction, perceived and actual individual user costs and benefits, trust in (e-) government, and political-democratic and economic impacts. This shift is evidenced in two principal ways: by the integration of the user/citizen-centricity concept in a number of established international studies, and by the development of new measurement frameworks that concentrate on concrete issues such as impact, the reduction of administrative burden, and financial and non-financial costs and benefits of public e-services (Capgemini, 2007; Accenture, 2006; eGep, 2006; CCeGov, 2007; and a 2008 OECD e-Government Project report regarding eGovernment impact and cost/benefit analysis).

These issues are also on top of the European Commission (EC) agenda for eGovernment. The EC is stimulating the re-orientation of the eGovernment agenda, at the policy and research levels, towards a strong emphasis on user satisfaction and impact. The EC's 2006 i2010 eGovernment Action Plan and the September 2007 eGovernment Ministerial Conference both called for inclusive eGovernment - more specifically, a reduced administrative burden, efficiency and effectiveness gains, openness/transparency, accountability and democratic engagement. The targets include: to increase quality, user-centricity, take-up, satisfaction and inclusiveness of public e-services and to stimulate further improvement. In his keynote address at the "Alliance with Users" eGovernment Conference 2008 in Brdo, Slovenia, EU Commissioner Siim Kallas advocated the necessary move from eGovernment services to iGovernment services in order to remove electronic barriers in Europe. This plea implicitly addresses the issue of a multi-channel digital service delivery. Yet, by the iGovernment concept, the Commissioner can be understood to refer to a need for integrated, interoperable and user-centric services; these will enable cost-efficient exchange of information across borders and the provision of services that are driven by users' needs and expectations. Through this appeal for a connected iGovernment approach to public services, that links eGovernment service integration with a citizen-centric focus, the EC clearly advances a similar perspective to that which is present in the UN eGovernment Survey 2008 report.

Measuring eGovernment user satisfaction and impact is a key instrument to assess progress towards these targets.



## Objective of the study

The main objective of this study was the development of a **standardized, multilayer user satisfaction and impact measurement toolkit for inclusive public e-services**. An extensive review of the state-of-the-art in and beyond Europe was undertaken in close collaboration with those public agencies in the EU27 that hold jurisdiction over eGovernment-related matters. As a result, a measurement framework has been developed and piloted in 10 Member States. The framework includes a toolkit and context-based methodology. Overall, this study and the instruments it produced were intended to create and foster awareness of eGovernment user satisfaction by involving institutional stakeholders in the Member States.

The study explicitly aimed at : a) developing a methodology that could be re-used and made freely available on the EC Good Practice Exchange portal ([www.epractice.eu](http://www.epractice.eu)); and b) carrying out a pilot survey on user satisfaction with, and impact resulting from, eGovernment services that use such a methodology.

As a result of our work, public agencies across all of the EU27 Member States will be able in the future, if interested, to use the toolkit. This flexible and context adaptable toolkit can be customized to Member States' specific interests in monitoring progress in user satisfaction with their eGovernment services. As this methodology and tool are adopted by an increasing number of public agencies in all EU27, it will become possible to standardize and mainstream these instruments into a repeatable and comparable demand-side eGovernment benchmarking tool. It would provide a counterpart to the traditional survey instrument on the supply-side that has been carried out since 2001.

To pursue these outcomes, the first step of the study was to produce an in-depth analysis of public (e)service user-orientation, user satisfaction and impact measurement systems in place in the EU27 Member States and in other leading countries worldwide in the area of eGovernment measurement (including Australia, Canada, Singapore and the United States (US)). The lessons learned from this extensive review enabled the team to design the survey instrument framework in such a way as to incorporate and improve some of the best international practices in the field. To test the robustness and validity of the proposed methodology and toolkit, an online panel survey was conducted, as planned, with 10,000 citizens and 4,000 companies in 10 EU Member States.

The pilot results were given at an open workshop held in Brussels on the 9–10<sup>th</sup> of December 2008 at which feedback was received from both experts and official eGovernment correspondents of the EC's DG Information Society and Media. In this way, it is considered that the standardized measurement tool has been evaluated appropriately. The result is a toolkit manual that can be found as an annex to this report.

The lessons learned from this ground-breaking pilot in the field of cross-national eGovernment demand-side measurement have served to attain the final objective of this study: preparing the way for a standard in eGovernment use, satisfaction and impact measurement for the EU27.

### Structure of the report

The report consists of the following parts:

- Part 1 outlines an extensive review of the literature and state-of-the-art in the field of eGovernment satisfaction measurement.
- Part 2 focuses on the survey instrument designed, by describing the guiding principles and the building blocks of the conceptual and methodological framework.
- Part 3 describes the design and methodological set-up of the pilot survey.
- Part 4 presents the key results of the pilot survey in 10 EU Member States, following the structure of the framework and including country level highlights:
  - o results of the Citizen survey
  - o results of the Business survey
- Part 5 reports and reflects on the survey instrument methodology, presenting the lessons learned from the pilot.
- Part 6 reports the proceedings of the workshop held end of December presenting the findings of this study to the eGovernment community.
- Part 7 of the report combines a policy-related set of conclusions with recommendations for improvement and next steps in measuring eGovernment satisfaction and impact across the EU27.
  
- Annexes "Toolbox"
  - o Instrument manual
  - o Questionnaires:
    - User Satisfaction Benchmark for Citizens
    - User Satisfaction Benchmark for Business

- eService Evaluation Tool for Citizens
- eService Evaluation Tool for Business

Annexed to this report, are four questionnaires and a set of guidelines on how to use these for benchmarking and evaluating eGovernment services in Europe.

These four instruments are the direct result of this 12-month study initiative which started with a state-of-the-art study of eGovernment measurement in Europe and beyond. Based on the existing experiences uncovered, and in close collaboration with the European eGovernment agencies, a measurement framework, that includes a toolkit and methodology, has been developed. The toolkit can now be considered as a new standard for inclusive eGovernment user measurement.

### Five-step process

The objective of this study, the development of a new measurement standard, was reached through a 5-step process:

#### **First step:**

The study began in January 2008. In a first stage of the study, all Member States were inventoried regarding their recent or ongoing eGovernment user studies. In this phase, Indigov and Deloitte worked closely with the eGovernment contacts of the Commission in the 27 Member States. The most significant studies worldwide were also analyzed with the aim of developing a feasible and functioning survey instrument.

#### **Second step:**

Based on the lessons learned and the good practices uncovered in the first step, a survey instrument was designed. Two questionnaires (one for citizens, one for businesses) were fine-tuned. They were pre-tested and translated into eight European languages (the translations were pre-tested also).

#### **Third step:**

In the first half of September 2008 a total of 10,000 citizens and 4,000 businesses in ten European pilot countries (Austria, Belgium, France, Germany, Italy, the Netherlands, Poland, Spain, Sweden and the United Kingdom) were surveyed using the pre-tested questionnaires. The results of this survey were analyzed in order to evaluate the validity of the instrument. The aim of the

survey was to understand the following questions: How can satisfaction and impact be measured in relation to eGovernment services? Is a European benchmark instrument feasible? How can we extract relevant policy information from the results?

**Fourth step:**

Based on the results of the pilot survey, and with the study objectives in mind, the survey instrument was evaluated, re-adapted and further developed into what are proposed to be re-usable tools. Hence, the study results include a set of four questionnaires, two of which are intended for citizens as target group and two as business surveys. For both target groups, two types of survey tools are presented. They are: a “User Satisfaction Benchmark” for a general level demand-side monitoring of user satisfaction and impact across European countries, and an “eService Evaluation tool” that public agencies may use to measure user satisfaction and impact concerning specific services which they provide electronically.

**Fifth step :**

The results of this study were assessed in a workshop (December 2008) with Member State experts and final conclusions were formulated in a policy recommendations chapter. This will locate the study and its deliverables in the broad perspective of European Union policy on the Information Society. They offer both the Commission and the Member States a number of concrete suggestions on how to use the deliverables which constitute the major outcome of this study.

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# 1 State-of-the-art in eGovernment measurement

The state-of-the-art overview presented in this chapter provides **a synthesis and analysis of accumulated experience and ongoing activities within and beyond the EU with regard to user satisfaction and impact of eGovernment**. This review of practices and insights was essential as it provided key input for the standardized survey instrument developed in the study.

A state-of-the-art overview of eGovernment user satisfaction and impact measurement was based on an extensive landscaping and information gathering process. The overview is developed on three levels: at the international and non-EU level, at the EU level, and at the national level of the individual EU27 Member States. The synthesis of accumulated experience **clusters comparable approaches** in three ways: it brings together the specific objects of the measurement initiatives, the conceptual and analytical frameworks, and the data gathering techniques used. Common elements as well as novel approaches are considered and a set of **good practices and trends** is presented. The review concludes by outlining specific **key lessons learned** as cornerstones towards the construction of a standardized survey methodology.

## 1.1 Approach to the state-of-the-art review

The information outlined in this review was collected mainly via the EU network of official eGovernment correspondents of the European Commission, DG Information Society and Media (the i2010 eGovernment subgroup), information from the ePractice website, and information from the research team's own database of eGovernment reports and studies.

The research team took into account information from all the Member States, but it focused more deeply on a subset of them that are forerunners in user satisfaction (such as the Netherlands, Slovenia and the UK). Ongoing and earlier activities by the EC and other institutions were also taken on board in this overview. They especially include the following EU sponsored studies: CCeGov (2007), eGep (2006), eUser (2004) and Top-of-the-Web (2004). In addition, close attention was paid to leading initiatives undertaken in various non-European countries (Australia, Canada and the US).

Together with this review of materials, a network of experts was set up that focused on user satisfaction and impact within all the relevant EU Member States. It provided a means of getting in touch with the appropriate agencies, and a process to gather data. It enabled up-to-date information to be gathered on the systems used in Member States and their most recent results.

The information on which the state-of-the-art is based has thus been gathered by following three approaches:

- Desk research that started from existing knowledge and a research database (Indigov) and was extended by an Internet search of resources and organizations;
- Information from a network of representatives of national eGovernment agencies and administrations in EU27 Member States (facilitated by Deloitte);
- Additional information provided by Prof. Cristiano Codagnone on relevant national and international cases of eGovernment user satisfaction and impact.

Starting from this broad, general perspective – illustrated by a long list of relevant sources, studies and cases, and the information provided by key representatives on the state-of-play in each EU Member State – four useful intermediary outcomes of the study were derived. They constitute a specific set of building blocks, several comparable approaches, good practices, and lessons learned.

The necessary information gathering for this state-of-the-art review was thus based on a double strategy.

First, desk research was conducted that was based on access to web sources and research reports. The database of national and international studies, reports and sources of ICT and eGovernment measurements and benchmarks developed by Indigov in the process of conducting different studies commissioned by the Belgian federal government acted as a major starting point for this phase of the study. This database was supplemented in two ways: through a further web-based search that concentrated on sources of eGovernment user-oriented studies, and by Prof. Cristiano Codagnone's knowledge of the field.

Second, the gathering of relevant information and material gained significantly from the international structure of Deloitte and its networked presence in the EU Member States. This has guaranteed close contact, collaboration with and feedback from public service agents and national

eGovernment representatives throughout the EU27. These resources were combined to build up a concise overview of the state-of-the-art in eGovernment user satisfaction and impact in all EU27 Member States.

A general and consolidated listing of recent and relevant sources, surveys and reports on eGovernment user satisfaction and impact was developed. It contained measurement frameworks, methodological tools, and report results at three different levels:

- Research frameworks set up by international organizations (Organization for Economic and Cultural Development (OECD) and the UN); experience accumulated in Australia, Canada, and the US; and studies with an international or pan-European scope performed by private market research companies.
- Programmes initiated and studies co-financed by the EC.
- Cases and experiences in individual European countries (EU27 and others).

From this accumulation of materials the general state-of-the-art overview that is outlined in the following chapter was made possible.

## 1.2 The current state-of-play: general findings

This chapter explores the present context of the state-of-the-art developments in user satisfaction and impact internationally, at the EU level, and in terms of what is occurring in the individual EU27 Member States. The chapter is therefore divided into three sections which reflect the different levels of coverage of documentation and materials that are currently available.

### 1.2.1 International or non-EU level

Many eGovernment measurements and ICT-related benchmark activities are undertaken by different international forums. These include the International Telecommunications Union (ITU), OECD, various divisions of the United Nations (UN), World Bank, and World Economic Forum. They contain a recurrent focus on e-readiness issues which often takes place in a socio-economic development context (cf. the UN eGovernment Survey 2008 and previous Global e-Government Readiness assessments; the Networked Readiness Index reported by INSEAD and the World Economic Forum). Most projects and studies with an international, comparative focus have been

strongly directed towards the eGovernment supply-side (such as government websites and public e-services).

Increasingly important initiatives are being taken at the micro- and macro-level of impact and the perceived costs and benefits of eGovernment for citizens, enterprises and public agencies. A key reference is the OECD eGovernment Project which, in early 2006, released the Proposed Outline for assessing eGovernment benefits. (OECD, 2006)

In addition, national-level tools and reports in eGovernment leading countries outside the EU – notably the Australia, Canada, and the US – offer some of the most advanced cases in the field of measuring users' satisfaction with eGovernment<sup>1</sup> (Jeff Chamberlain & Tanya Castleman, 2002). It was therefore the team's initial opinion that the development of a standardized EU27 measurement tool for eGovernment user satisfaction and impact should **rely on the longstanding experience offered by the frameworks developed and implemented in the eGovernment leading countries elsewhere in the world.**

The following three frameworks in particular contain reference model values and characteristics that could inspire the build-up of a survey instrument to be applied in the EU27:

- The American eGovernment Satisfaction Index (AeGSI) of the Federal Consulting Group, US Department of the Treasury.
- The Australians' Use and Satisfaction with e-Government Services studies of the Australian Government Information Management Office (AGIMO);
- The Government Online (GOL) and Common Measurement Tool (CMT) – applied in the Citizen First and Taking Care of Business studies – of the Treasury Board of Canada Secretariat and the Institute for Citizen Centred Services (ICCS/ISAC).

The relative strengths and weaknesses of these frameworks will be elaborated in the next chapters which present a cross-analysis of major studies and experiences.

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<sup>1</sup> Among many other studies we can refer to: Jeff Chamberlain & Tanya Castleman, Deakin School of Information Systems, *E-Government Business Strategies and Services to Citizens: An analysis of the Australian e-tax system*, 2002, [http://www.deakin.edu.au/infosys/research/working\\_paper.htm](http://www.deakin.edu.au/infosys/research/working_paper.htm); NIC – Momentum Research Group, *Benchmarking eGovernment: Year 2000 Report on Citizen and Business Demand*, 2000, <http://www.nicusa.com>; Ipsos, *Government services and satisfaction 2006*, <http://www.ipsos.ca/pa/syndicated/index.cfm?catID=94>.



Specifically, as far as the US AeGSI is concerned, this is a particular example of the private sector-based American Customer Satisfaction Index (ACSI) that has been applied, with some conceptual modifications, to the public sector and to eGovernment websites at the US federal level. Initiatives similar to ACSI also exist in Europe, but do not yet have the same kind of weight or legitimacy and are not yet applied to eGovernment-related services. Moreover, information on the development and implementation of its pan-European counterpart, the European Customer Satisfaction Index (ECSI) and comparable commercial initiatives like the European Performance Satisfaction Index (EPSI)<sup>2</sup> rating is scarce. Similarly, to the study team's knowledge, a national-level satisfaction index framework for the private sector, such as exists in Switzerland, has not yet been transposed into a public (e)Service delivery context.

### 1.2.2 European level

The main reference points for the development of a user satisfaction and impact survey tool at a European level include several relevant research programmes and studies commissioned by the EC.

Major references in this respect are at least four in number:

- The annual Capgemini benchmark of the supply of online public services, the seventh measurement of which took place in 2007 and was entitled "The User Challenge".
- The Handbook for Citizen-centric eGovernment (2007) delivered within the CCeGov (Organisational change for citizen-centric eGovernment) programme.
- Eurostat is also an essential starting point. The ICT Household and Enterprise Surveys, however, do not focus on user satisfaction with Internet-based government contacts. On a periodic basis, Eurostat nevertheless brings together the most reliable EU-wide benchmark data on general eGovernment take-up. In 2006, Eurostat initiated measurement of the use

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<sup>2</sup> This is part of the Pan-European quality programme. In partnership with the leading European quality organizations, the European Foundation for Quality Management (EFQM) and the European Organization for Quality (EOQ), Svenskt Kvalitetsindex (SKI) has developed a common European standard for measuring customer satisfaction. This initiative, called the EPSI Rating (EPS stands for European Performance Satisfaction Index), has been launched. It has been established to offer European organizations a common frame of reference in order to measure customer satisfaction and loyalty independently and to analyze improvement measures. The EPSI Rating framework and approach, including SKI, are based on the EFQM's "Excellence Model". This has been developed over the last 10 years. Such harmonized measurements have been performed and presented in a large number of countries since 1999. From 2004, all five Nordic countries are included.

being made by citizens and businesses of the 20 basic public services implied in the eGovernment supply benchmark. Since then, this survey has not been repeated.

- Furthermore, in various Member States, the ICT surveys in households and companies conducted by national-level statistical agencies appear to be the only systematic, national-level measurement of eGovernment.

With particular regard to user satisfaction and impact, close attention should be paid to the following three studies that are described in more detail in chapter 1.3.3:

- eGep (eGovernment Economics Project), Measurement Framework – Compendium to the Measurement Framework (2006).
- eUSER (Evidence-based support for the design and delivery of user-centre online public services), eUSER Conceptual and Analytical Framework – eGovernment (2004).
- Top-of-the-Web, User Satisfaction and Usage Survey of eGovernment Services (2004).

Other highly relevant initiatives previously taken by the EC for developing measurement frameworks, indicators and instruments include the SIBIS and BISER projects.

Although they have not been converted into operational year-to-year monitors and benchmarks, these **EU sponsored research projects provide fundamental cornerstones in terms of methodological approaches and relevant indicator frameworks** to be considered when measuring eGovernment user satisfaction and impact.

### 1.2.3 National and EU27 Member States level

Besides these international and/or EU-level studies, at the national level, various nationwide or local public and/or private sector initiatives have been undertaken in the EU Member States. In the following chapter 1.3, we make a cross-analysis of these experiences, re-group them in different clusters of approaches, and describe some good practice examples.

At this point, however, **the state-of-the-art in the EU27 Member States** can be summarized by a number of **general observations, trends and characteristics**. The trends constitute five in number. At a national level, the Member States' experience with user satisfaction and user impact is generally limited; it shows a lack of standardization, a lack of transparency mainly in terms of methodological approaches, and considerable variety in terms of progress: there is also a general

need for common standards. The issue of how Member States might be most effectively placed to overcome these discrepancies is handled most appropriately, in this study, at the pan-European level rather than at the individual State level.

#### 1.2.3.1 Limited experience

**In the EU27, overall experience with surveying user satisfaction and impact is rather limited and dispersed.** If experience is present, it often arises from *ad hoc* initiatives undertaken by individual government agencies. For most EU27 Member States, the current landscape can be described as follows:

- There is a **current lack of general, national-level eGovernment user satisfaction measurement frameworks**. When more generalized initiatives exist, they focus mainly on levels of take-up/usage and on identification of user needs and expectations with regard to eGovernment services.
- Through their statistical offices, Member States produce surveys dedicated to eGovernment. For national-level studies, many countries rely strongly on the regular ICT surveys on households and enterprises conducted by national statistical institutes and included in the Eurostat statistics on the development of the Information Society. However, these contain only a limited number of eGovernment take-up/usage indicators. Generally, they do not address the issue of user satisfaction and impact. The same observation is valid for ICT benchmark studies that monitor the adoption and use of new technologies.
- Dispersed initiatives do, however, take place in most Member States. Typical examples are user satisfaction polls/surveys published on national government portals or on specific public agencies' websites. Examples include Cyprus, Greece, Hungary, Slovenia, and the UK. Only in a limited number of cases, such as Denmark and Luxemburg, is a standardized approach for user evaluation of government websites used.
- In general **individual public sector organizations conduct their own *ad hoc* user satisfaction surveys**. These focus on their individual products and e-services supplied, and use their own methodology.

#### 1.2.3.2 Lack of standardization

As can be concluded from the previous observations, **the current level of standardization in surveying is low, both at a EU-wide level and within individual EU Member States**. Generalized

frameworks and systematic measurements are lacking, as has been reported by the Netherlands and Sweden, among others.

- The activities undertaken by public sector agencies in Member States are most often *ad hoc* and unsystematic. They neither use a standardized methodological instrument nor are they repeated periodically as part of a monitoring or benchmarking process.
- From a EU-wide perspective, individual Member State and public agency initiatives are based on a variety of conceptual and methodological approaches, tools and questionnaires, and lead to only partially comparable results.

### 1.2.3.3 Lack of transparency

Across the EU27 experiences, **a general lack of transparency concerning the methodologies used for customer satisfaction measurement** by both public and private agencies in the field can be witnessed.

- The results of customer satisfaction studies are fairly well publicized in summary format. However, “technical” descriptions of measurement tools are often lacking or are strictly limited. Such reports would imply the inclusion of descriptions of how the methodology and data were developed; results analyzed; and statistical techniques used. Examples of these technical limitations include insufficient information on several methodological items that could cover conceptual indicators, operational development of the indicators into survey questionnaire designs (and, more importantly, the questionnaires themselves), sampling methods and characteristics, and the data gathering, handling, analysis and reporting processes in general.
- This lack of transparency hampers a number of potential approaches to benchmarking among and between Member States that are more fundamental: the standardization of approaches; the verification and comparability of data; the exchange and accumulation of experience; and the identification of and benchmarking from good practice.
- Apart from this methodological obscurity, little is known about the transposition of results into recommendations and actual actions/plans for eGovernment and service delivery improvement.
- These observations are not only of immediate importance for this study. They are also particularly useful for e.g., statistical departments of government bodies, statistical

agencies, and commercial companies doing similar commercial or contracted governmental work.

#### 1.2.3.4 Variance in progress

**Large differences exist among EU Member States** as far as the development of eGovernment user satisfaction and impact is concerned.

- In general, the countries that lead in terms of eGovernment supply (cf. the European benchmark of online services availability) are also to the fore in respect of the measurement of user satisfaction and user impact. Not only large European countries like Germany, Sweden and the UK, but some smaller countries both in Western parts of the EU (Denmark and the Netherlands) and Eastern parts (Lithuania and Slovenia) have produced important eGovernment user-oriented studies, instruments, and measurement frameworks.
- Based on a review of all the study and case material gathered, the following eleven Member States emerge as **EU27 forerunners in measuring eGovernment user satisfaction and impact**. Due to their actual experience with, or development plans for, common measurement tools and initiatives, we can cite as leading examples: Austria, Belgium, Denmark, France, Germany, Lithuania, Luxemburg, Slovenia, Sweden, the Netherlands and the UK.
- From these Member States in particular a range of good practices can be observed in terms of theoretical and methodological approaches to user satisfaction and impact measurement of eGovernment. Several studies and activities provided useful input for developing a EU27 common toolkit, and were therefore picked up for exploration in greater depth in this study (see next chapter 1.3.). **The good practice basis of user satisfaction and impact in EU27 however, appears to be somewhat limited in scope. It presents a few outstanding examples but not enough to present a real European benchmark.**

#### 1.2.3.5 Need for common standards

Given the low degrees of experience, standardization and transparency, **the need and importance to monitor frameworks and develop common standards for the evaluation of eGovernment services by users** is clearly felt.

- Partly generated by the relatively low take-up of eGovernment services, user satisfaction, and citizen-centricity, the provision of qualitatively high and inclusive public e-services are a major concern. They appear high on the political ICT/eGovernment agenda of most Member States (as is evidenced by Member States' state-of-the-art annual reports and strategic policy programmes and action plans). As the need to deliver citizen-oriented services grows, so does the need to test whether the objective of citizen-centricity is being achieved.
- In several Member States, the responsible ICT and eGovernment agencies are planning or plan in due course to develop more generic evaluation and/or monitoring frameworks. Examples include Austria, Latvia, Malta, and Slovakia.
- In several Member States, general handbooks and common guidelines for practitioners have been developed by national eGovernment agencies to support public sector agents in conducting user demand and satisfaction surveys. Examples include Germany and the UK.
- Hence, **the EC initiative to develop and disseminate a more standardized methodology is welcomed**, the willingness to cooperate, contribute and be informed about the project is considerable.
- However, one should take into account **varying needs with regard to an EU-wide standard** for measuring eGovernment user satisfaction and impact. Feedback from eGovernment officials reveals varying needs and demands. Member States that until now have not accumulated a lot of experience or developed general level frameworks express most demand for a EU standard measurement/methodology. Member States that are more advanced in this respect express more reservations with regard to **a generalist EU-wide benchmarking of eGovernment user satisfaction**.

A final general observation concerns **the wide variety of objectives, scopes, conceptual models, questionnaires and data-gathering techniques** used within and across Member States to measure eGovernment user satisfaction and impact.

Chapter 1.3 provide a cross-analysis of experiences in order to structure and cluster these approaches, to identify common aspects that might be generalized into a common standard framework and to highlight a variety of original approaches **and innovative elements**. **In doing so, this report maps the possible options** and building blocks available that have helped to inspire and develop this study's common framework for EU-wide eGovernment user evaluation.

### 1.3 A typology of approaches and cases

Across the variety of experiences and initiatives taken by individual countries and organizations, we can distinguish some common types or clusters of approaches. In this chapter, these types of approaches are presented. They are illustrated with good practices that are among the most typical used to document the approaches.

#### 1.3.1 Common standard tools for user satisfaction measurement

Two sets of options for common standard tools appear to be available in Europe: first, practitioners' handbooks and, second, actual tools or surveys. Good practice examples of measurement tools also exist in Canada and the US.

As indicated, general national-level measurement frameworks and toolkits are lacking in nearly all EU27 Member States. One notable exception is the practitioners' guidebook recently published by **HM Treasury and Cabinet Office, UK (2007): How to measure customer satisfaction: A toolkit for improving the customer experience in public services**.<sup>3</sup> However, even this good practice is more of a "how-to-guide" (as exists also, for example, in Germany) than a standardized methodological framework that includes survey questionnaires and the like. For the latter kind of elaborated framework, we can look especially at the **Common Measurements Tool (CMT)**<sup>4</sup> in Canada. The CMT combines a customizable survey tool (question bank) with benchmarking objectives through a standard set of core questions and a central database to upload results and produce reporting.

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<sup>3</sup> [http://www.cabinetoffice.gov.uk/public\\_service\\_reform/delivery\\_council/workplan.asp](http://www.cabinetoffice.gov.uk/public_service_reform/delivery_council/workplan.asp)

<sup>4</sup> <http://www.iccs-isac.org/eng/default.asp>

## Common Measurements Tool (CMT), Canada

The Common Measurements Tool (CMT) developed by the Institute for Citizen-Centred Service in Canada is a survey framework for measuring citizen/client satisfaction as part of a larger Government Online (GOL) performance measurement framework. The CMT is a tool for satisfaction and performance measurement of specific government products or services delivered through different types of channels. It provides public organizations with an easy-to-use set of standard questions and standard measurement scales for use in surveying their clients. It is a comprehensive collection of potential survey questions that an organization may select from, to custom design a client satisfaction survey that meets its information requirements. The use of standard questions allows the organization to benchmark progress over time. Since questions are standard, organizations can compare results with other organizations within the same line of business. To ensure this ability to benchmark performance, several core questions are required for inclusion in all surveys and a benchmark database is set up to upload research data. The CMT is designed to provide client feedback to any public organization, ensure that all aspects of client service/interaction are considered, and identify the impact that these factors have on client satisfaction. The CMT is conceived around five key elements:

- Client expectations;
- Perceptions of the service experience;
- Satisfaction levels;
- Levels of importance;
- Priorities for service improvements.

During the OECD eLeaders Conference 2008 “The Future of eGovernment – Agenda 2020 (The Hague Netherlands, 6–7 March 2008) Prof. Cristiano Codagnone had the occasion to discuss this approach with Mr Brian Marson (Senior Adviser, Chief Information Officer Branch, Secretariat of the Treasury Board of Canada). Mr. Mason explained that the Canadian approach to government services in general and to eGovernment in particular is entirely citizen-centric and based on “listening” to citizens’ needs and views (as he commented, “We have only one mouth and two ears because listening is more important than talking.”). This means that, in using the CMT, Canada runs a large-scale overall satisfaction survey every two years which includes both macro-level questions and micro-level (service-specific) questions. Moreover, additional surveys are run as and when needed on specific topics (for instance, for different channels of delivery). The CMT can also be used by individual agencies for their own specific purposes. Mr. Marson explained that the building block for this systematic listening in terms of eGovernment is a panel of 12,000 Internet users that has been built, and constantly updated and refreshed, since 2002.

Broad standard frameworks like the Canadian CMT are an exception. However, in some EU27 Member States, specific tools are provided to measure user satisfaction in a standardized manner



across all government levels and organizations. Important examples of such standard tools, which are used mainly for government website user evaluation, are to be found in:

Denmark: 'Bedst på Nettet' (Best on the Net)<sup>5</sup> that undertakes a user measurement of the usability and quality of public websites through pop-up surveys.

Luxemburg: A standardized questionnaire<sup>6</sup> is used on every online site and portal that enables citizens to send their feedback on services. This operates together with a close monitoring of usage statistics of the government websites.

The Netherlands: The 'Servicemeter'<sup>7</sup> is a free-to-use standardized – but to some extent flexible and customizable – questionnaire that public agencies can use to measure customers' satisfaction with services after their visit to a website. It has a direct reporting tool that enables a comparison of scores with other public agencies.

Another example of standardized tools to measure and benchmark user satisfaction with eGovernment services is the **American Customer Satisfaction Index (ACSI)**<sup>8</sup>, which is applied to US federal government agencies' websites.

#### **American eGovernment Satisfaction Index (AeGSI), US**

Developed by the University of Michigan School of Business in partnership with other organizations, the American Customer Satisfaction Index (ACSI) was originally conceived to measure and benchmark customer satisfaction periodically in private industrial sectors. It has also been adapted to the public sector and is used by the Federal Consulting Group (FCG), US Department of the Treasury, to benchmarking federal agencies' website scores. The composite ACSI uses customer interviews as input to an econometric cause-and-effect model. The model consists of a set of causal equations that link indices for drivers or determinants of satisfaction – customer expectations, perceived quality, and perceived value – with customer satisfaction (ACSI). In turn, this is associated with consequences or outcomes of satisfaction in terms of customer complaints and customer loyalty (including customer retention and price tolerance). The AeGSI model used to measure satisfaction with government agencies is identical to the private sector model, except the component in the private sector model that concerns price and "repurchase" intentions has been adjusted for the public sector into another "outcomes" component of the model. The composite indices are multivariable components. They are measured by a set of questions that assess customer evaluations of the determinants of each index and that are weighted within the model. The methodology quantifies the impacts of the drivers of satisfaction and of customer satisfaction on outcomes such as customer loyalty.

<sup>5</sup> <http://www.bedstpaanettet.dk/brugervurderingsvaerktoej>

<sup>6</sup> <http://www.eluxembourg.public.lu/functions/vosreact/index.php>

<sup>7</sup> <http://www.e-overheid.nl/thema/overheidsloket/servicemeter>

<sup>8</sup> <http://www.theacsi.org>; <http://www.foreseeresults.com>; <http://www.fcg.gov>

### 1.3.2 National-level surveys of user take-up and satisfaction

National-level surveys on eGovernment have been conducted in several countries. In many cases – including, among others, Austria, Finland, France, Latvia and Slovakia – these surveys focus on citizens' take-up, attitudes and demands regarding eGovernment. They do not tackle the issue of user satisfaction or they do so only marginally.

Here, the Australian survey example provides a useful comparison. Together with the AGIMO survey on Australians' Use of and Satisfaction with e-Government Services<sup>9</sup>, some notable exceptions are research projects commissioned or sponsored by national/federal level government agencies and programmes. Among those that are be cited are, in Belgium: Fed-eView Citizen<sup>10</sup>; in the Netherlands: several studies by the private research company Dialogic and academic contributions at the University of Twente within the "ICT en Overheid" programme of the Dutch Ministry of Internal Affairs<sup>11</sup>; in Slovenia: the Institute for Public Administration Informatization, research that is conducted by Faculty of Public Administration, University of Ljubljana<sup>12</sup>.

#### **Australians' Use of and Satisfaction with e-Government Services, Australia**

This initiative of the Australian Government Information Management Office (AGIMO) is an ongoing study of Australians. They are those Australians who are over the age of 18 and who use government services provided through the Internet, telephone, and the more traditional service delivery methods of in-person and mail. The study measures and tracks over time the take-up of, and satisfaction with, eGovernment services across all tiers of governments as compared with the more traditional methods of service delivery. In addition to exploring the evolving needs of those who use eGovernment services, this information enables Australian government to plan for the future, identify priority areas, and deliver more responsive, people-focused services through the Australian Government's eGovernment strategy.

The main objectives of the survey were to:

- Explore current usage levels of all government services, in general, by level of government, by type of interaction and by channel of delivery (in-person, mail, telephone, internet);
- Identify motivations for use and barriers to use of eGovernment services (government services provided through the Internet and telephone);
- Measure user satisfaction with government services through all channels, including reasons for satisfaction and dissatisfaction, and identify possible future service delivery expectations;
- Compare 2006 findings to the 2004–5 findings to reveal any changes in behaviour, preferences, expectations or experiences with eGovernment interactions.

<sup>9</sup> <http://www.agimo.gov.au>

<sup>10</sup> <http://www.epractice.eu/cases/2158>

<sup>11</sup> "ICT in public services" <http://www.dialogic.nl>; <http://www.ictenoverheid.utwente.nl>

<sup>12</sup> <http://www.iiu.si/>

Studies, such as those recently conducted in Belgium and Slovenia, often adopt a broad, holistic perspective. The concept of user satisfaction is frequently embedded in research frames that concentrate on such issues as eGovernment take-up, user needs and expectations, attitudes and channel preferences, barriers and motivators for current and future use, and/or are included in projects that aim to quantify user experience, and general satisfaction with and trust in government services.

### **Fed-eView Citizen, Belgium**

The primary objective of the federal government research programme Fed-eView Citizen was to monitor trends and evolutions with regard to the adoption and use of ICT, the expectations, use and satisfaction with eGovernment services and broader issues related to the Information Society. The research design was a longitudinal panel study. In several successive waves, it followed representative samples of Internet users (CAWI-based) and non-users (CATI-based). From the eGovernment use and satisfaction perspective, the Internet users' survey focused on:

- use of government websites (federal and regional portals and municipal websites) and a range of specific eGovernment applications and services, including eParticipation tools;
- (frequency) of use of other Internet services (eCommerce, eCulture, ...) so as to compare the usage level of eGovernment services;
- levels of satisfaction with these websites and Internet services;
- quality criteria set regarding (electronic) provision of government services (relative advantages or added value of traditional versus online public service delivery);
- channel preferences and the relationship between used and desired channels for the most recent contact with the government;
- barriers and motivators for eGovernment use;
- attitudes concerning privacy and security.

The Slovenian case is also pertinent to this study in so far as a series of five studies was conducted. The studies were aimed at studying the levels of user satisfaction of all the typical groups of eGovernment users in Slovenia. The studies consisted of a telephone survey of citizens, a telephone survey of companies, an e-mail survey of public servants, a regular mail survey of societies, and a field survey of citizens at administrative units and municipal offices. A multi-target group research design of this sort is quite unique.

## Measuring E-government User Satisfaction, Slovenia

The studies were conducted by the Institute for Public Administration Informatization at the Faculty of Public Administration, University of Ljubljana. The objectives of the study were to:

- establish the level of awareness of possibilities offered by eGovernment;
- establish the level of interest in using eGovernment;
- establish the extent of use of eGovernment and the reasons for its non-use;
- establish the level of satisfaction with eGovernment services;
- identify the most desired eGovernment services.

The study focused in particular on: the gap between interest in eGovernment (including attitudes, preferences and intentions to use) and actual use of eGovernment; user satisfaction with eGovernment and future eGovernment development (motivators and barriers for future use); and factors influencing the use of eGovernment that included: eGovernment supply, public awareness, added value or relative advantages (perceived benefits, usefulness), channel preferences, experiences (perceived quality, user-friendliness), and trust (security). Inspired by both the ACSI and the ECSI, an explanatory cause-and-effect model was constructed to determine the key drivers or factors with the highest impact on eGovernment use and satisfaction, in order to select those elements that should be prioritized for improvement.

Although Slovenia plans to reproduce its user survey framework, other national-level measurements in the EU27 appear generally to be occasional studies. In most countries, the ICT household and enterprise surveys conducted by national statistical agencies stand alone as monitoring devices; this is unlike the benchmark initiatives in Australia and Canada (Citizen First, Taking Care of Business). Also, as indicated earlier, studies at the level of individual government organizations or user satisfaction surveys concerning specific products and services such as online tax-systems (cf. Australia<sup>13</sup>, Slovenia<sup>14</sup>) are in general conducted on an 'as and when needed' basis.

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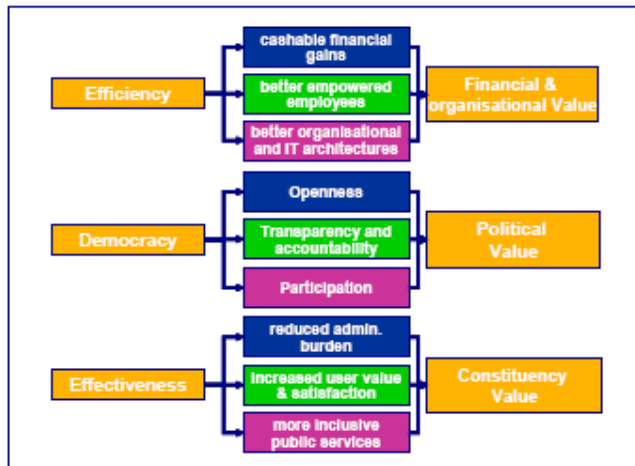
<sup>13</sup> Jeff Chamberlain & Tanya Castleman, Deakin School of Information Systems, E-Government Business Strategies and Services to Citizens: An analysis of the Australian e-tax system, 2002. [http://www.deakin.edu.au/infosys/research/working\\_paper.htm](http://www.deakin.edu.au/infosys/research/working_paper.htm)

<sup>14</sup> Faculty of Administration, University Ljubljana, E-public services: the case of e-taxation in Slovenia, 2005. <http://www.iiu.si>

### 1.3.3 Measuring user satisfaction in eGovernment impact assessment framework

The **eGep Measurement Framework Analytical Model** is built around the three value drivers of efficiency, democracy, and effectiveness. It is elaborated in such a way as to produce a multidimensional assessment of the public value potentially generated by eGovernment. It is not limited to strictly quantitative financial impacts, but fully includes also more qualitative impacts.

#### ***eGEP Measurement Framework Analytical Model***



Within this global eGovernment impact measurement framework, user value and satisfaction is treated as only one of the possible areas of impact. In the eGep framework, the following source-driven decomposition of indicators is proposed for this area of impact. They include observable, unobservable, and externally measurable outcomes:

#### Observable (objective) Tangible Quality Outcomes

- Reduction in the number of officially filed complaints;
- Time Saved;
- Flexible usage;
- Users loyalty (repeated and cross-usage).

#### Unobservable (subjective) Intangible Dimensions of Quality

- Correspondence of services to users' needs (perceived usefulness of services);
- Perceived accuracy and credibility of information provided;
- Satisfaction on how security and privacy issues are handled;
- Overall users satisfaction rating of eGovernment services.

#### Externally Measurable (third party judgement) Functional Dimensions of Quality

- Usability;
- Seamless service provision (cross-agency delivered services);
- Innovative service provision;
- Proactive communication and user education/help.

As the eGep Measurement Framework report indicates, the data for the preliminary, most objective and quantifiable outcome dimensions can be found in administrative records and/or Standard Cost Model calculations and in web metrics. At this point, some initiatives in EU27 Member States have reported on the use of web metrics tools to analyze usage of government websites, including in Austria, Luxemburg, Malta and the UK (see further: the Directgov case). Linked with government portals and websites, levels of user satisfaction are increasingly being measured by deriving or extracting them from data on actual take-up, repeated visits and cross-usage.

The second, less intangible dimension, that deals with perceived quality and the subjective perspectives of users, relies on survey data. Depending on the conceptual model applied, indicators of this kind (such as perceived usefulness) are included in user survey initiatives. Clearly, to measure improvement in service quality and increase in user satisfaction, systematic monitoring schemes have to be set up.

Despite the existence of “theoretical” frameworks for impact measurement and eGovernment cost/benefit analysis, proposed by eGep and the OECD, current practice in EU27 Member States is limited or non-existent. The impact of eGovernment for the individual citizen or enterprise and, in particular, for economic growth/productivity or for society as a whole, is still left largely unaddressed.

Important initiatives in this respect, however, are efficiency and public value assessment framework methodologies such as the ones that exist in France (MAREVA)<sup>15</sup> and Germany (WiBe 4.0)<sup>16</sup>. To a certain extent, these are also inspired by the development of the eGep model. These frameworks are principally directed at impact measurements for/within public administrations, but they do integrate measurement of external user/public value and satisfaction as well.

Furthermore, we observe that attention is devoted at a strongly increasing rate to strategic actions. In certain countries, this is developing within a frame of intention to reduce the administrative burden and to make use of ICT and eGovernment for achieving time and cost savings for customers (cf. Belgium, Greece, the Netherlands, and Sweden). The Belgian “Kafka” example is widely accepted as a successful model of how to involve citizens and businesses actively in a process of making government service delivery more efficient. In “Kafka”, more or less

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<sup>15</sup> <http://synergies.modernisation.gouv.fr/>

<sup>16</sup> <http://www.kbst.bund.de>

regular measurements of administrative burden are based on surveys with end-users and intermediary agencies, and on Standard Cost Model calculations.<sup>17</sup>

#### 1.3.4 Measuring satisfaction in real-time (eGovernment visitor evaluation)

An important tendency observed through current experiences in several Member States is the growing application of tools, such as pop-up surveys, to obtain feedback from actual users in real-time. This is done immediately after they have visited a national portal or an individual public agency website or after they have used a specific e-service. Examples are to be found, among several others, in Bulgaria, Greece and Hungary. The **Top-of-the-Web**<sup>18</sup> surveys commissioned by the EC were based on a real-time survey methodology.

#### **Top of the Web: User Satisfaction and Usage Survey of eGovernment Services, EU**

In 2003 and 2004 PLS RAMBOLL Management A/Sand EWORX S.A produced, for the DG Information Society and Media of the EC, two Top of the Web surveys on users of public websites that provide public e-services. They investigated the perceived quality of the sites and user satisfaction. Both surveys were conducted using the pop-up survey methodology (a “pop-up” questionnaire activated by the users *via* a link on the website). The citizens and businesses were asked questions while in a given user situation: the questionnaire was presented after the user had finished using the specific e-service in order not to interfere with the actual user situation. In the course of the 2004 survey, a total of 38,228 users (9,896 citizens and 28,332 businesses) answered the questionnaire. Thus, Top of the Web represents the largest survey conducted so far on how European users perceive public e-services’ quality.

The overall objectives of the survey were to:

- measure indicators of usage on the demand side of e-government i.e. what kind of public e-services are used by citizens/businesses;
- discover how citizens and businesses perceive the value provided by these e-services;
- assess their satisfaction i.e. how do these services meet the needs and expectations of citizens/businesses.

The perceived quality of online services was measured based on three basic dimensions: overall evaluation/satisfaction, usability, and perceived benefits. The research design also involved the providers of the public e-services in question as well as the users of these services. A telephone and online survey questionnaire for the webmaster/e-service providers was designed to measure the usage of on-line e-government services as on-line percentages of the total number of transactions (including public service delivery through traditional channels).

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<sup>17</sup> Dienst voor Administratieve Vereenvoudiging (DAV), De administratieve lasten in België voor het jaar 2004. <http://www.belgium.be>; <http://www.kafka.be>; <http://www.plan.be> (The Belgian Services for Administrative Burden)

<sup>18</sup> [http://ec.europa.eu/information\\_society/activities/egovernment\\_research/index\\_en.htm](http://ec.europa.eu/information_society/activities/egovernment_research/index_en.htm)

### 1.3.5 User centricity included in the European eGovernment benchmark

Since 2001 the EC's DG Information Society and Media has measured the supply of public services online in Europe. The 2007 edition of this study introduced elements of user centricity.

The study extended the existing four level sophistication model of public service provision online. It went from information, over one-way interaction, two way-interactions, and transaction, with a fifth level taking into account elements of pro-active service delivery, automatic service delivery and public service delivery *via* intermediaries.

It also introduced a composite measure for user-centricity taking into account elements of data security, reducing data entry burden, multi-channel access, and accessibility.

The methodology used for this survey is the "third party web-survey": researchers assess the eService delivery through the websites of the agencies providing the service.

Although this study is not a user satisfaction assessment, it is interesting to observe that user centricity of eGovernment – that is, measuring the extent to which services are built around the need of the users – is still generally in a pre-mature phase. Important differences towards user centricity, however, exist between the different Member States.

A comparison between the level of user centricity, measured from the supply side, and user satisfaction measured through user surveys would therefore be a useful exercise.

### 1.3.6 Novel approaches to user satisfaction measurement

The desk research also revealed some novel methodological approaches and tendencies, both at the conceptual level of approaching the issue of user satisfaction and at the level of specific measurement tools applied to it, including web metrics and tracking methodology.

One highly interesting approach is being developed and piloted by the Dutch Ministry of Internal Affairs. It intends to measure quality of and satisfaction with service delivery by the government as a whole based on customer life-events and the quality guidelines of the eCitizen Charter (Burger Service Code). The starting point is the fact that many Dutch government organizations are



conducting client satisfaction studies on the government's behalf. They are doing this in a wide variety of ways, so as to gain insight into the functioning either of their individual organization or of specific products delivered by their organization.

The Dutch approach uses a standardized tool that looks at public services from a customer life-event point-of-view instead of doing so from the viewpoint of an individual government agency's perspective/product(s). The approach exposes the problems and pitfalls that citizens experience throughout the whole chain of service delivery (that could stem, for example, from insufficient cooperation among government agencies). Thus, the approach moves Dutch government from an eGovernment to an iGovernment measurement framework. Multi-channel service delivery and interoperable/connected governance are thus subjected implicitly to end-user judgements.

### Measurement Quality of Service, The Netherlands

Initiated by the Ministry of Internal Affairs, the objective of this quality measurement framework is to evaluate the service of government as a whole. It uses a standardized tool that looks at public services from a customer life-event point-of-view instead of doing so from an individual government agency's perspective and from a single service delivery channel perspective (whether digital or not). Basic fundamentals for the questionnaire are the:

- ten normative guidelines for the quality of (digital) public service delivery as contained in the BurgerServiceCode which can be applied to all services of all government agencies;
- life-events of citizens (for example: looking for a job, getting married, ...) which provide a recognizable entry point for citizens in their dealings with government (and in which most government organizations are involved).

The measurement will deliver a specific index score as well as suggestions for service improvement. The questionnaire will be usable for individual organizations so that they can measure customer satisfaction in a standardized way. The possibility of organizing a platform where citizens themselves, on their own initiative and following the same kind of method, can provide information about their experiences with government will be explored

Another important, novel, development is the initiatives that are being taken to **involve the end-user in participative measurement designs and processes of co-designing** the actual delivery of services in order to improve and optimize their citizen-centric configuration.

One example is the innovative approach that is currently implemented by the Greek Observatory for Information Society for the evaluation of the online services of the Greek Tax Agency. The

approach is called **Mystery User Methodology (MUM)**. It is an adaptation and application of the online delivery of public services of a well-consolidated technique used in the retail industry, known as Mystery Shopping. This is the practice of using real customers who are shoppers to evaluate customer service, merchandising, and product quality anonymously. Most often, such a technique is used to evaluate customer service at retail points of contact and to produce suggestions from actual customers who are engaged in the mystery shopping exercise. The application of this technique provides: a) front-line employees with insights on what is important in serving customers; and b) headquarters with feedback from front-line operations. As a result, it helps to fine-tune service delivery and improve its quality and thus to increase/retain customers. To these ends, a panel of potential users of the Tax Agency online services for income tax has been recruited. At randomly selected times, the panellists use the services and, more generally, the Greek Tax Agency's website, to perform a number of assigned tasks. As they try to execute these tasks, they complete, in real time, a semi-structured questionnaire. The semi-structured questionnaire has been elaborated so as to include questions on *ex ante* defined evaluation parameters and allow free comments to be made by the users with regard to whatever they consider to be relevant. The data produced are already in digital format and the answers to the structured questions can be directly and easily handled statistically. With the support of an elaboration based on ontological techniques, the free text comments provided by users is assessed both qualitatively and quantitatively.

Another example of an innovative approach is the technique of **Customer Journey Mapping (CJM)** which, like mystery shopping, has been developed in the private sector. It takes place in the context of the UK's Transformational Government Strategy and the Customer Insight Forum (CIF). This innovative form of user engagement has been taken up as complementary to traditional customer satisfaction measurement. It enables closer engagement of customers and their needs in the design and delivery of public services. CJM is the process of tracking and describing all the experiences that customers have as they encounter a service or set of services, taking into account not only what happens to them, but also their responses to their experiences. Used well, it can reveal opportunities for improvement and innovation in relation to that experience, and act as a strategic tool to ensure that every single interaction with the customer is as positive as it can be. In practice, different qualitative tools can be applied to map customer experience with a service design and delivery process.

Apart from these experiments with qualitative customer-focused approaches, structures like **e-complaint mechanisms and call centres** have been set up or are being installed in several EU27 Member States so as to provide direct feedback mechanisms which can be used to improve public e-service delivery. The eGovernment Contact Centre being set up in Malta is one such case that could be followed in more detail.

Holistic, comprehensive and integrated approaches to user satisfaction and impact, however, are found relatively rarely. In many ways, the UK looks to be a forerunner in the exploration of different paths to measure and improve user-centric public service delivery. Thus, the approach of the UK national eGovernment portal DirectGov is worth mentioning as a final case.

#### **Citizen portal DirectGov, UK**

The UK citizen portal Directgov is based on an innovative approach to the provision of services based on a strong and thorough process of targeting specific citizen groups (such as parents, over 50s, disabled people, carers, 'learners', and motorists) and of a joined-up delivery mechanism. The portal brings together the services delivered by various different government departments and agencies. DirectGov is of interest because of the integrated, multi-methodology approach it uses to measure users' perceived quality and satisfaction as an indication of the citizen-centricity of services delivery. Directgov has gone through different stages of research on users' acceptance and satisfaction, by using a number of different qualitative and quantitative methodological tools such as:

- qualitative focus group work;
- omnibus surveys (without construction of composite indexes);
- pop-up user surveys;
- one-on-one accompanied browsing (usability);
- a Web analytics tool to monitor access and usage.

#### 1.4 Options and building blocks for a common standard

In this section, various options and building blocks to enable a common standard to be built are examined. As individual countries and organizations have adopted their own methodological tools and frameworks, it is obvious that many different conceptual and analytical perspectives exist and diverse data gathering methods are used. By looking at common research design elements as well as new yet promising ways of approaching user satisfaction and impact, we bring together what appear to be the most useful illustrative materials on which to build further.

These materials are composed of the most valuable views on concepts and indicators, their relationships within explanatory models (covariance, causality etc.), the construction of composite indexes, the ways in which relevant parameters are translated in operational measures (use of scales, formulation of questions, etc.), and the manner in which the necessary research data are obtained, analyzed and reported.

This cross-analysis of experiences is structured along the following three axes:

- Focus, object and scope of measurement
- Conceptual and analytical frameworks
- Data gathering, analysis and reporting.

#### 1.4.1 Focus, object and scope of measurement

eGovernment user satisfaction and impact studies differ widely in object, focus and scope of measurement. Several layers can be distinguished. Each offer relevant options for a research framework. These elements are explored in detail below.

##### 1.4.1.1 Levels of eGovernment

Obviously, user satisfaction and impact studies may focus on different levels of government:

- National/Federal
- Regional
- Local.

As the aim is to develop a standardized methodological framework, the notion of government levels is less relevant. Rather, the focus is on eGovernment processes and service delivery in general, on specific public e-services and/or other relevant perspectives such as customer life-events. This is because life-events are not necessarily related to one specific government level. Nor are they situated at the same government levels in each Member State (since each Member State has its own political and administrative structures). This does not, however, mean that some well-defined elements, such as municipal websites, should be excluded from measurement of specific sets of eGovernment services.

#### 1.4.1.2 Customers of eGovernment

Here a basic distinction can be made according to the relationships of government agencies with different customers (or clients) such as the following four groupings:

- Citizens (G2C)
- Businesses (G2B)
- Governments – Public Administrations (G2G)
- Civil society organizations, and other stakeholders (G2N)

Overall, two observations can be made with regard to current research experience in the EU27 Member States. First, the majority of actual cases of eGovernment service usage in the different EU Member States concentrate on individual citizens; to a lesser extent, they focus on business use, and not – or very little – on other organizations/stakeholders or public administrations as users of eGovernment themselves. As the use of eGovernment services is encouraged, and by a wider range of types of users, this oversight may be perceived as a weakness. Second, little attention is paid to the integration in the research designs of different target groups and **user/citizen types, subgroups or profiles**, which might affect the degree to which the important customization dimension of a user-centric approach is addressed. Currently, traditional user characteristics are gathered that incorporate classic socio-demographic breakdown of data (age, gender, education, region). Other elements of a user profile that might influence eGovernment use and satisfaction are often left untouched. Examples that can be cited include: attitudes concerning use of ICT, levels of e-skills (for example, Internet skills, and whether the individual user is: not a user yet, or a beginner, intermediate, advanced, or expert), and behavioural patterns of Internet use (frequency and context of use and e-services regularly accessed).

#### 1.4.1.3 Components of eGovernment

Depending on the measurement objective, satisfaction and impact surveys and studies focus on different aspects, include:

- eGovernment in general: such as electronic public service delivery, use of the Internet for interaction with government;
- Government websites: national portals, municipal website, public sector agency websites;

- Specific public e-services: for example, one or more out of the supply of public services for citizens and businesses benchmarked annually in the Capgemini study for the EC; e-procurement or a selection of other high impact services;
- Customer life-events, as entry points to (e-)government contacts of citizens and business, that encompass different individual organizations, products and services;
- eGovernment user actions: searching information, downloading forms, e-mail communication, applying online for government services, electronic transactions;
- Generic services, applications and key enablers: handling of privacy and security, eID and methods of authentication, search engines, pro-active communication, Web 2.0 devices for active user participation, etc.

### Examples of focus on different eGovernment services

AeGSI: Public agency websites

Top-the-the-Web: (Selection of frontrunner) 20 basic public services

Belgium: Mixed focus on specific e-services, user activities and generic applications

Slovenia: Use and satisfaction of eGovernment in general by four types of eGovernment supply:

information

e-mail communication with civil servants

downloadable application forms

public e-services.

Special attention was paid to the assessment of three life-events and the 12 basic public services for citizens defined by and included in the benchmarking of the EC.

The Netherlands: Quality of and satisfaction with service delivery by the government as a whole based on customer life-events.

To develop a standardized methodological toolkit that is easy-to-use at each level in every EU Member State, a holistic approach is necessary. It could involve generic eGovernment satisfaction indicators and standardized sets of questions that can be applied to a wide range of eGovernment components. User activities and generic eGovernment enablers can be anchor points in this respect. At the same time, however, the different cultural contexts and government traditions of

the EU Member States and the different types and levels of development and take-up of public e-services and eGovernment applications have to be taken into account.

When focusing on **specific public e-services**, different kinds and levels of services need to be tested. For reasons of comparability and the benchmarking of services, the services to be investigated should be well defined and have a certain generic background in most of the Member States. The basic 12 citizen and eight business services included in the EC-commissioned measurement of the Online Availability of Public Services benchmark act as a solid starting-point. Apart from focusing on high impact public services – most notably by including public e-procurement in the measurement framework – it is important to consider different types of eGovernment services.

A useful typology in this respect can be adopted, with some adaptation, from one of the eUser project deliverables. It distinguishes three different types of government services that can be provided online<sup>19</sup>:

- Legally enforced administrative services (paying taxes, making a declaration, applying for a licence or permit);
- Administration services that enable citizens to apply and obtain welfare and other kind of benefits to which they are entitled;
- Elective everyday life, and opportunities to provide public services (communication about life-events, enrolling in education, housing, information on jobs and job applications, education and eLearning, health-related services, housing, culture, and transport).

These types of government services differ in terms of potential benefits and impacts for governments and end-users. Services in all three categories should be evaluated, and the results for each typology of services closely compared.

Apart from different types of public e-services, for reasons of comparability one must also take into account the different levels of development, sophistication or maturity of these services in different Member States. This includes not only the information, two-way communication and transactional levels of online public service delivery, as classic stage-models define them, but also higher levels of pro-active service and the automatic provision of benefits to which citizens are

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<sup>19</sup> eUser, Work package 5: Synthesis and Prospective Analysis (D.5.1: First Synthesised Inputs to Knowledge Repository, Including Initial Survey Results and Good Practice Examples).

entitled. Obviously, any research framework for user satisfaction and impact must consider the differentiated and often low levels of take-up of specific eGovernment services.

Most of these remarks are equally valid when using **customer life-events** as entry points to measure satisfaction, as these are also embedded in specific cultural contexts and imply different levels of ICT-enabled development. Customer life-events is a valuable approach for a minimum of three reasons. Life-events provide a means to measure satisfaction with a whole service delivery chain that implies access to and supply of different products and agencies (which should be efficiently connected), they are highly recognizable concepts for citizens and businesses, and they are associated with different user types and target groups.

#### 1.4.1.4 Channels of eGovernment

In general measurement designs include multiple channels of public service delivery. They consist of traditional as well as new digital – eGovernment – channels, with a focus on:

Face-to-face/In-person

Mail

Telephone

Internet/Website

E-mail.

As such, a **multi-channel service delivery perspective** is often present in national-level survey frameworks, but usage of channels, user experience and satisfaction dimensions are often measured in a different way. Comparisons are thus encouraged between traditional and digital channels. More occasionally, the focus is on channel preferences for future use. The eGovernment category, however, has until now largely been limited to the Internet, websites and e-mail contacts. Rather, frameworks should be open to more recent technological developments (such as mobile government applications, and interactive digital television (IDTV)). Member States currently appear to hold different views on multiple delivery channels: some are more restrictive in this regard than others.

#### 1.4.2 Conceptual models and analytical frameworks

The generic survey frameworks encountered within the EU and abroad for measuring eGovernment user satisfaction often incorporate various dimensions related to the drivers, components and outcomes of user satisfaction.



Commonly measured elements at the heart of user satisfaction measurement, apart from user characteristics and indicators of actual use or take-up (by type of channel), are:

Expectations – anticipation of quality/performance/(added) value

Perceptions – experiences, perceived quality/performance/(added) value

Satisfaction – overall levels of satisfaction

Priorities – measures of importance of service elements (priorities for service improvement).

These elements are reflected – and also extended – in the Canadian context.

### Example of commonly measured user satisfaction elements

The Common Measurements Tool (CMT) service model in Canada is conceived around five key elements:

Client expectations;

Perceptions of the service experience;

Satisfaction levels;

Levels of importance;

Priorities for service improvement.

As explained in the CMT User Manual<sup>20</sup>, customers react to a combination of stimuli. These include their own expectations, the importance of the particular service to them personally, and the actual service experience, which results in an internalized response or perception. Satisfaction levels are a result of this perception and an internalized assessment process. Perception is an initial response and satisfaction is a judgement about that response in relation to the individual's own needs. Measurement of the importance of service quality dimensions is also important to identify service improvements and priorities that will have the highest positive impact on customer satisfaction. Importance and performance of service elements can be measured using separate scales that allow the calculation of correlations and gaps between the two. Importance also can be derived statistically from performance scales: the drivers of satisfaction are the performance indicators that contribute most strongly to the overall level of user satisfaction.

Commonly measured dimensions of (perceived) service quality and performance – the drivers of satisfaction – include (although not exhaustively):

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<sup>20</sup> Government of Canada, Institute for Citizen-Centred Service, Common Measurement Tool: CMT User Manual, 2003, <http://www.iccs-isac.org>

Accessibility (ease of access)  
Usability (ease of use)  
Timeliness  
Completeness, accuracy, credibility of information  
Usefulness/Utility (correspondence with user needs)  
Privacy and security  
Achievement of objectives  
Overall satisfaction.

### Example of measurement of drivers of user satisfaction

The Top-the-the-Web survey measured three issues indicating the user satisfaction and perceived quality of public e-services:

1. Usability – The users were asked five questions about whether they have experienced any problems using the service:

- Was it easy to find your way to this website?
- Did you find what you were looking for?
- Is it easy to use the service?
- Are you satisfied with the speed by which the pages appear on the screen?
- Is the language clear and easy to understand?

2. Benefits – Seven suggestions of possible benefits were made to the users to choose from:

- Save time
- Gain flexibility
- Getting more and better information
- Receive better help
- Getting a faster case/reply
- Getting better control over the process
- Save money.

3. Overall evaluation – The users were asked to rate the service on a scale from one to six. The most important factors in this evaluation were the user's overall *satisfaction* with the service and whether the users' *expectations* were met or not. Furthermore, all aspects of the service can influence the overall evaluation, therefore it is relevant to analyze the answers to this question in relation to the answers about usage and benefits, to see how the different aspects influence the overall evaluation of the service.

The following four aspects were less common in the user satisfaction measurements that have been reviewed, but are nonetheless relevant:

Motivators and barriers for (future) use

Likelihood of future use

Channel preferences

Outcomes and perceived impacts (trust, simplified administrative procedures, decreased paper consumption, ...).

#### 1.4.3 Data gathering, analysis and reporting

With regard to the use of data gathering methodologies, especially surveys that measure eGovernment user satisfaction and impact, some important considerations should be borne in mind.

An important distinction has to be made between effects, qualities, costs and benefits of eGovernment as “**perceived**” by users, and more “**objective**” measures such as actual time or costs saved by using government services online. A mixed and/or integrated research design seems to be needed. It could tackle two elements, if we are to assess the outcomes and impact of eGovernment properly. A combination of a survey questionnaire with other techniques, such as the examination of back-office administrative records, web metrics, or, possibly, more participative forms of measurement<sup>21</sup> such as the mystery shopping concept might therefore prove useful/necessary.

The eGep study observed that there are at least four sources of data that can be used to measure perceived quality and users’ satisfaction. The first source of data is direct, and the latter three forms are indirect:

1. Directly asking users through traditional random sample surveys and/or interactive online surveys (at a more explorative stage also focus groups and one-to-one browsing can be used);
2. Taking the tangible and measured gains produced in terms of time saving, cost avoided and flexibility/convenience as observed indirect measures of quality of services improvement produced by eGovernment, and assuming that they translate into increase in users’ satisfaction;

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<sup>21</sup> In participative measurement, the service users, that is individuals as citizens or as owners of businesses, are brought into a participative and deliberative evaluation and measurement process. They have a say in the outcomes, not simply as passive respondents to classic user satisfaction surveys but, by providing input as to which are the relevant criteria and dimensions of measurement. This is a step beyond traditional surveys which tend to be insufficiently interactive: traditional surveys rely on top-down structured questionnaires and do not necessarily capture access to responses from that segment of a community that is most active and willing to participate.

3. Using web tracking tool to observe online users' behaviour and gain indirect evidence of satisfaction from elective repeated and/or cross usage of services;<sup>22</sup>

4. Defining basic quality parameters of online services and then performing an experimental web-based assessment through external auditors who will attempt to use the services and register their own experiences (this is an approach used in the latest Accenture eGovernment study (Accenture, 2007).

Another lesson learned from the Top-of-the-Web experience was that interactive surveys of online users (pop-up surveys) can produce robust and replicable data, but that such surveys share the drawback of using self-selected samples. Thus, they reflect the attitudes, preferences and perceptions of a particular population. On the other hand, they have the advantage of gathering the opinions of respondents who have actually used the online public services. They are therefore clearly less subject to expectations and pre-formed judgement distortion as well as to failures or distortions of recall.

As far as the use of survey techniques to assess user satisfaction is concerned, research requirements of validity and reliability are to be met (together with statistically representative sampling). In the case of eGovernment, as in any other domain, to ensure good results, such surveys should respond to standard requirements. They should:

- avoid the four most common measurement errors related to sampling techniques<sup>23</sup>;
- ensure data reliability, that is, if replicated by others, the survey should yield similar results;
- ensure data validity, that is to say, the questions and answers should reflect and adhere as much as possible to the phenomenon they intend to investigate.

Random sample surveys on user satisfaction with government or eGovernment services can have **problems with data validity due to effects of respondents' expectations and pre-conceived judgements** about the government and/or expectations, possibly rooted in different traditions of civic culture and citizen-government relationships. When asking the public to express a

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<sup>22</sup> Web tracking methodologies can provide very rich data on traffic patterns, user behaviour, site performance. They use so-called "click stream" (data left by web users), visitor log files, and server data.

<sup>23</sup> 1) Insufficient sample size; 2) Coverage error (the sample does not reflect the target population); 3) Measurement error (mostly due to context effect: e.g. survey taken on the quality of public services in concomitance with a recent unpopular decision by the government); 4) Non-response error (high level of non responses).

judgement on the performance of the public sector, in those countries that are characterized by a cultural tradition of low confidence in the civil service (e.g. Italy), negative replies might derive more from tradition than from an objective evaluation of the services. This may also be a particular issue of which to be aware if the proposed study investigates the experiences of socially disadvantaged persons. In other cases, especially in countries with a tradition of efficient and effective public sectors (e.g. Denmark, Netherlands, and Sweden), citizens' expectations would tend to be high and could possibly be adjusted upward so as to lead to a negative assessment of quality that does not necessarily reflect the objective situation.

In general, the marketing principle formulated by Maister (1995)<sup>24</sup> can be applied: **"satisfaction = perception – expectation"**. In brief, both perceptions and expectations are influenced by a number of variables that have little to do with the actual level of the quality of the services measured.<sup>25</sup> The problem is that the effect of perceptions ("public bureaucracy is generally bad") and expectations ("public bureaucracy should offer more") cannot be removed from survey responses without using relatively sophisticated models to control for the predispositions of respondents towards government and thus produce a valid measure of user satisfaction.

In order to avoid this validity problem there are two possible alternatives. One option is more technically sophisticated, and is probably not feasible within the scope of this study. The other is more pragmatic and applicable.

The first option is to elaborate relatively sophisticated models that correlate the subjective answers obtained with other objective parameters (possible measurable outcomes that concern the services on which the survey is focused) by using econometric and causal modelling techniques. The consolidated ACSI and its application to eGovernment services is based on this kind of model. The directly observable outcomes that are assumed to shape satisfaction are included in the construction of the aggregate score that measures users' satisfaction.

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<sup>24</sup> Maister, D. "The Psychology of Waiting Lines", in J Czepiel, M. Solomon, and C. Suprenant (eds), *The Service Encounter: Managing Employees–Customer Interaction in Service Business*, Lexington, Lexington Books, 1995.

<sup>25</sup> As shown, for instance, in a study of dissatisfaction and trust regarding six Flemish public agencies, of which three distribute subsidies and three levy taxes. Not surprisingly, the study found that, regardless of actual service quality, the former three scored much better than the latter three in citizens' attitude surveys (Kampen, Jarl K., Steven Van de Walle and Geert Bouckaert (2003) "Interpreting soft indicators of performance in the public sector. The impact of the predisposition of citizens towards government.", working paper, Public Management Institute, K.U. Leuven, Belgium, [http://soc.kuleuven.be/io/pubpdf/io05060015\\_egpa.pdf](http://soc.kuleuven.be/io/pubpdf/io05060015_egpa.pdf)).

The second option is that, if the elaboration of such a sophisticated model is not feasible, the subjective bias of the respondents can be minimized in two ways. First, respondents should be asked questions both in general and on the services they have used not earlier than one month before answering the questionnaire. Second, besides asking general questions about the services questions should be asked on specific parameters that refer to outcomes (such as, for instance, waiting times, time saved, and convenience of the possibility of using the services 24/7, etc). By doing this, the more general evaluations can be checked against very specific answers and any possible bias due to prejudice and/or expectation be uncovered in the former.

With regard to the AeGSI, a final remark may be made regarding the use of models that integrate indicators or user satisfaction into a **single composite index**. On the one hand, this is highly appropriate for benchmarking, over time and across government agencies, government websites and specific public services. On the other hand, there is a risk that such a generic composite index might send out a biased message if other important aspects of satisfaction with public e-service delivery are left out of the model.

## 1.5 Lessons learned

The descriptions of developments, common elements and novel approaches, that have been extracted from key cases and experiences, have enabled the formulation of the most important lessons learned from the state-of-the-art analysis. This chapter, that concludes this state-of-the-art review, provides a necessary step towards the development of the measurement framework.

### 1.5.1 Summarising comments

Here we comment on a set of specific issues. These issues connect with the various differences between Australia, Canada, and the US when compared with the EU, on the one hand, and Member States' specificities and the diversity of approaches to the provision of government services, on the other.

#### 1.5.1.1 Level of methodological sophistication

In general, we conclude that the approaches of Canada and the US are relatively more sophisticated and consolidated than those found in the EU27 countries. The approach used in Australia was also interesting.

First, it is worth emphasizing that, in both Canada and the US, the measurement of users' satisfaction with eGovernment services has been periodic and has been repeated at different levels of administration while using a standardized methodology. A baseline has been established. Measurements have been undertaken repeatedly and have been compared across time so that a longitudinal database of observations has been, and continues to be, built. This allows an assessment of whether changes in the levels of user satisfaction are correlated with changes – in terms of improvements – in the supply of services. Nothing of this sort is yet in existence in Europe, either at the aggregate EU level or at the national level. Accordingly, it is evident that the output of this **study on user satisfaction and impact** should be used in the future to establish such a periodic and longitudinal exercise.

Second, in these most advanced cases, large panels of online users have been built and are constantly refreshed and used to conduct the surveys. This element is currently lacking in Europe and should be established at the EU level at the end of this study. Candidature and selection of such a panel that provides an appropriate and valid reflection of users across Europe poses methodological challenges in its own right.

Third, with the exception of the ACSI, in no country other than the US has such a complex index of user satisfaction been built that uses econometric and causal modelling techniques to enable to reduce users' answers from built-in prejudices and expectations.

Fourth, overall the level of transparency of the methodologies and approaches found is fairly low. Only very rarely is the source questionnaire and the method of elaboration of the answers clearly illustrated and publicly available. In this respect, the objective of this study to provide a fully open, easy-to-use toolkit definitely represents an innovative approach.

### 1.5.1.2 Diversity of services and consumers

Moving to the issue of the services that should be the object of measurement, it is worth starting from a typology of different public services adapted with some changes from the EU-financed eUser project:

- Legally enforced administrative services and obligations: declaring income taxes, making a declaration, registering, applying for a licence or permit;
- Administrative services that enable citizens/companies to apply for and obtain benefits to which they are entitled such as social welfare services;
- Public services that provide everyday life opportunities: enrolling in education, housing, culture, information on jobs and job applications, health related and/or care services.

Including services in all three categories in the measurement of user satisfaction would be advisable from a policy perspective, because it can provide insights on the best supply mix that could optimize both usage and satisfaction. Certainly the easiest and readily available point to start from is focusing on the basic 12 citizen and eight business services that are included in the consolidated supply-side benchmarking of online public services. These include services that fall into the three categories of the typology described the first paragraph of this chapter.

There are also other dimensions and categories that one may want to consider however, such as stages in the delivery process (information, downloading, transaction, ...), customer life-events, generic services/aspects (e.g. search, security, personalization, authentication, etc.). Furthermore, it might be also possible to depart partially from the list of the 20 basic services. It would be possible to include instead other applications that are currently gaining a lot of policy attention such as eParticipation/eConsultation and Web 2.0 (or social networking) services. Additionally, a dimension to take into account is the level of service provision: whether it is at the local, regional or national/federal level government. So, there is a wide range of options and analytical dimensions that can be used ultimately to select the services to be included in the measurement mechanism.

We can, nevertheless, anticipate that one general guideline/constraint to be considered concerns the issue of comparability that is crucial in any benchmarking exercise. The services selected to be investigated should be well-defined and have a certain generic and common background in most of the Member States. In this respect, it is worth emphasizing the trade-off between sticking to



the 20 basic services and choosing new services instead. In the first case, the level of innovation decreases, but there are fewer problems with acceptance since all Member States have already approved the list of these 20 basic services. In the second case, there are considerable innovation; however, there could be greater problems in terms of acceptance since it is likely that Member States would raise the issue of comparability.

Besides the selection of services, a very strategic and little researched issue is how satisfaction and usage varies across groups of users. In this respect, it is worth noting that in none of the sources reviewed, were the results on user satisfaction broken down into socio-economic groups or into psychographic profiles (as is done instead by marketing specialists working for the private sector). User characteristics measured often remain limited to the classic socio-demographic variables of age, gender, education and region.

#### 1.5.1.3 Standardization versus Member States' specificities

As stated, the EU27 eGovernment measurement landscape in general is characterized by a lack of standardization and by a level of development and sophistication not comparable to that found, for instance, in Canada and the US. Nonetheless, among the EU27 there are some countries that are relatively more advanced and have developed some general guidelines and/or surveys. In general, while user satisfaction can be considered a topic that could be tackled in the same way regardless of its specific context of applications, the sources analyzed for the EU27 States do show some commonalities but also some remarkable differences. This is not surprising given the richness of and diversity of cultural and administrative traditions that can be identified in Europe. At times, such traditions are reflected in the different criteria for public service quality as well as in different types and levels of development and take-up of public services. Inevitably, this reverberates into different approaches to the measurement of user satisfaction.

This consideration is important since one of the goals of this study is to develop a toolkit that should be used and applied as widely as possible within the EU27 and, thus, should obtain acceptance from Member States. For those Member States where no guidelines are yet available, and a low level of user satisfaction activities have been carried out, this toolkit could emerge as a highly added-value service that would be likely to be applied and used. On the contrary, Member States that have already developed their own guidelines and approaches would probably stick to

them, unless the toolkit is designed in such a way that it reflects their own measurement objectives.

### 1.5.2 Key lessons learned

The ten lessons learned listed below summarize the key findings of an extensive analysis of accumulated experiences in the EU27 and beyond. They form the cornerstones for the development of the survey instrument, and for the ten Member States' pilot survey.

#### **Key lessons learned**

1. While overall experience is limited, standardization of frameworks and methodologies for measuring eGovernment user satisfaction and impact is lacking in the EU27 Member States, and the need for more standardized measurement (tools) is present.
2. A standardized EU framework should incorporate a move from eGovernment to iGovernment, in terms of integrating interoperability and connectedness of public agencies and in terms of a multi-channel perspective and flexibility to include future developments.
3. A holistic framework is recommended, that includes eGovernment take-up, user expectations, channel preferences, perceived benefits, future use and priorities for service improvement.
4. Common dimensions of user satisfaction imply user expectations and perceptions of service quality, but valid measurement of overall levels of satisfaction in (random sample) survey designs asks for more effective control of preconceived judgements.
5. Attention has to be paid to different types and profiles of citizens, in terms of e-skills, attitudes, and use of ICT as well as in terms of social groups and customer segments, in order to address aspects of customization in citizen-centric service delivery.
6. Decisions have to be made with regard to the focus of measurement, possibly including eGovernment in general, stages of e-service delivery (information, downloading, transactions, ...), specific public e-services, customer life-events, user activities and/or generic applications.
7. These decisions should take into account the various levels of development and take-up of eGovernment components in the EU27 Member States (which is often low or moderate).
8. Longitudinal, systematic monitoring of user satisfaction is needed to measure eGovernment impact and service quality improvements.
9. The ACSI is an important model because of its highly sophisticated approach and its building of a composite satisfaction index score.
10. After analysis of a wide number of experiences, the CMT emerges as a key source of inspiration to develop a standardized EU framework, because it combines three separate elements (a set of standardized core questions, a database for benchmarking purposes, and a customizable evaluation/question toolkit).

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# 1. The survey instrument

In this part of the report we illustrate the **general approach to, and basis for, the structure of a standardized survey instrument** that is easily re-usable for the evaluation of user satisfaction with, and impact from, eGovernment services throughout the EU27.

To this end, first the ten **guiding principles** of our approach are described. Then a **conceptual framework** is proposed that introduces the relevant concepts and indicators to be measured, describes the structural relationships between these components within a measurement model, and outlines the general structure of the survey questionnaires created around this model.

Based on the general structural approach of the survey instrument described in this chapter, **standardized question modules are developed and adopted in citizen- and business-specific questionnaires for the pilot survey**. The general analytical framework is trialled in ten different EU Member States in order to evaluate its strength, validity, feasibility and outcomes.

## 1.6 The state-of-the-art as starting point for the conceptual framework

The **state-of-the-art overview** consists of a review and analysis of accumulated experiences and useful practices in the EU and beyond (i.e. Australia, Canada, and US). It provides input for the development of a EU-wide standard survey tool for the measurement and evaluation of user satisfaction with and impact of eGovernment.

For the development of this standard tool, we used the review in two ways:

- the building blocks and lessons learned from the state-of-the-art analysis that offer the cornerstones to construct a standardized framework;
- the material gathered throughout the process, that is, the repository of research reports, conceptual frameworks, methodological notes and survey questionnaires accumulated through desk research and from the valuable and up-to-date input delivered by the network of public sector agents and national eGovernment representatives in the EU27.

Drawing on both the lessons learned and the raw materials, our closest attention was paid to the “good practices” and experiences that emerged. These provided the most useful insights to develop a standardized tool for measuring eGovernment user satisfaction and impact.

The framework proposed is inspired mainly by experiences from Australia, Canada and the US, from EC-sponsored studies (such as eGep, eUser and Top-of-the-Web) and from individual Member State initiatives (most notably Belgium, the Netherlands, Slovenia and the UK).

The conceptual framework draws explicitly from the ten-point chart of lessons learned that are presented as conclusions of the state-of-the-art. These lessons concentrate on such issues as the need for standardization of survey instruments, and especially the standardization of this survey instrument; the usefulness of an holistic approach; the need for measurements of dimensions of user satisfaction, types and profiles of citizens; the particular focus of measurement; levels of eGovernment take-up; the need for longitudinal monitoring; and those international models of surveys which can be relevant and useful in designing the survey instrument.

### 1.7 Guiding principles

The chart which follows outlines the ten guiding principles that may be used to design the conceptual framework of the survey instrument.

#### **Guiding principles for a standardized framework**

1. Standardized measurement framework
2. Customizable modular structure
3. Holistic approach
4. A life-event based model
5. User types and target groups
6. Multi-channel perspective
7. Non-use of eGovernment
8. Dimensions of user satisfaction
9. Measurement of user impact
10. Control for preconceptions

These principles can be considered as the foundations of our measurement framework and are explained more in depth in the following paragraphs.

### 1.7.1 Standard measurement framework

Standardization of frameworks and methodologies for measuring eGovernment user satisfaction and impact is lacking in the EU27. Building on relevant components that could be generalized from traditional approaches, novel approaches, and good practices in the EU and abroad, the framework design provides a generic structural logic. This logic is described in detail in chapter 3. It indicates sets of conceptually-related indicators to be operational throughout different sets of questions, from which their measurement is extracted. These indicators and questionnaires will serve the purpose of evaluating in a valid and reliable way a vast range of eGovernment processes and public e-services provided by national eGovernment agencies or individual public sector organizations. In this context, we mean by the validity of a measurement the degree to which it captures the phenomenon it aims to measure. Further on its reliability is the likelihood that, when it is applied by others in other contexts, it produces similar results. While we can claim validity and replicability for the actual survey instrument, we cannot absolutely claim reliability for the results of the pilot as they are highly dependent on the profile of our sample. **Standardization** will be built into the framework design.

### 1.7.2 Customizable modular structure

It is clear that eGovernment services and applications differ widely within and across individual countries in terms of such issues as structure of government and supporting administration tradition and legislation, objectives and targeted groups, conceptual designs, technological platforms. To cite a single example, in some countries a new company can be set up directly online, whereas in others it is impossible by law since such an action requires a face-to-face meeting with a public notary. Therefore, varying stages of development and levels of take-up of eGovernment components in the EU27 Member States have to be taken into account. Also, public sector agents may well want to focus deployment and monitoring on quite different services and applications, issues and objectives.

Therefore, **we do not propose a single, rigid survey questionnaire, but rather a customizable framework that consists of separate modules** tackling different aspects of user take-up, satisfaction and impact. Each module comprises sets of conceptual indicators and operational questions. The general survey instrument can be adapted to the specific measurement objectives of individual public agencies (for example, for social security services, could be cited elderly

people's satisfaction with a social security web service), through an appropriate selection of modules, indicators and questions from the framework shelf.

While these observations relating to both standardization and customization could cumulate in a view that the eventual survey instrument may contain a certain notion of 'off-the-shelf', it is important to emphasize that **any resulting questionnaire – including the one(s) used for the pilot survey – will always require some customization** in order to adapt it optimally to specific contexts, objects and objectives of measurement.

### 1.7.3 Holistic approach

The modular structure of the framework proposed in this report is closely associated with the adoption of **a broad, holistic perspective**. It includes issues such as eGovernment take-up and channels used, specific drivers and overall levels of user satisfaction, perceived benefits, channel preferences, likelihood, barriers and motivators of future use and priorities for service improvement. The framework encompasses a broad spectrum of issues related to the demand-side of the public service delivery chain. Furthermore, it is important to note that user satisfaction is not only measured in its own right, but that it is also linked explicitly to possible priorities, policies and actions for public service improvement.

### 1.7.4 A life-event based model

A standardized approach to measurement should take account of the variety of eGovernment applications and issues that public agencies might want to evaluate or address by conducting user surveys. Therefore, we propose to develop a conceptual framework that can be applied both to **customer life-event processes** in which eGovernment channels and applications are used as well as the **specific public e-services** that are linked to such life-events. The life-events include such statements as, for example, "I bought a house" or "I went to work abroad" (for citizens), or "My company hired new personnel" or "My company started-up business abroad" (for businesses). The specific public e-services can include, for example, the 20 basic public services of which online availability and sophistication is measured in the annual benchmark study commissioned by the EC. At the same time, **various types or levels of interaction with government** will be explicitly addressed in accordance with the different stages of development of online public service delivery (from information to electronic transactions and beyond).

While acknowledging the fact that individual public sector organizations often focus on the evaluation of their specific eGovernment services and products, we believe that a **customer life-event approach** is central to the development of a standardized methodology. As recent research directions – embraced most notably by eGovernment agencies in the Netherlands – seem to argue, this “higher level” kind of approach more closely connects with **user-centric and iGovernment perspectives** on public service delivery. A customer life-event approach sees eGovernment primarily as a process in which different government levels, public agencies and products/services are or may be involved. However, citizens may not be aware of it or may not make the abstraction since they tend to deal with “government-perceived-as-a-whole” only occasionally, whenever a specific problem or event occurs in their lives. In going beyond individual public sector organizations’ products, and in measuring satisfaction with the way (electronic) interactions with government developed in the course of a certain life-event, the issues of the interoperability and connectedness of public agencies are implicitly addressed. Moreover, customer life-events, such as “I retired” or “Our company hired new personnel”, are more highly and universally recognizable entry-points for a survey questionnaire than the specific, often more abstractly labelled products/services, offered by the public sector agencies in different countries.

#### 1.7.5 User types and target groups

Not only are eGovernment take-up and satisfaction to a certain extent determined by individual users’ background, characteristics and experiences, but targeting specific user segments through customized services is considered to lie at the heart of a successful user-centric eGovernment approach. Therefore, **it is essential that the standardized framework allows identification of and analysis in terms of different types and profiles of eGovernment users and enables the categorization of citizens and businesses into customer target groups** (for example, students, retired persons, self-employed persons, small- and medium-sized enterprises (SMEs)).

An important and highly relevant category – in general and for the pilot survey in particular – is that of what could be called **“mobile citizens” and “mobile, or cross border companies”**. By “mobile” citizens, is meant the group of European citizens who live, study and/or work and/or are in the last phases of preparing to move to, study or work in another country than their native country.

Three groups of companies that are considered to be companies involved in cross-border activities include:

- companies which are considering to or already generating sales and/or deliver services in at least one other European country;
- companies which are considering to or already have set-up legal entities in two or more European countries;
- those which employ or are considering employing Europeans who are living in another country.

The rationale behind giving prominence to “mobile citizens and businesses” is that they have a special interest in finding accurate information in relation to the public services in the new Member State where they exist or where their employees do or will reside, study, work or deploy business activities, as well as an interest in having public services delivered online.

Relevant types of citizen and business customers can, however, not only be defined by traditional **socio-demographic and socio-economic data** (age, gender, household and professional situation, company size, etc). In an eGovernment context, it is also essential to differentiate people along levels of **ICT use, e-skills and experiences** with Internet-based services. The use, experience and satisfaction of customers concerning **private, commercial Internet-based services** such as eBanking and eBusiness applications are highly relevant as reference points. They will help to capture user expectations concerning eGovernment and provide a comparative context for actual eGovernment take-up and satisfaction. At the same time, it is important to complement factual sociological data with **psychological attitudinal components** to differentiate actual and potential users of eGovernment services.

Apart from a categorization based on citizens’ demographics, functional business profiles and levels of ICT experience, the survey design also specifically includes **frequency of contacts with and general attitudes to government and public services** – in different roles (private or professional, whether as intermediary or not) – into the measurement design. These are additional factors that might differentiate among and impact on eGovernment users and non-users.

#### 1.7.6 Multi-channel perspective

A multi-channel perspective is adopted in the standard by incorporating into the research design the whole range of **traditional (in-person, telephone, mail, ...)** as well as **newer digital channels (e-**



**mail, websites, mobile technologies, ...)** used by citizens and businesses to interact with government (agencies). The use of and satisfaction with eGovernment channels is put in a comparative context by asking respondents about their take-up of and overall level of satisfaction with traditional channels for using government information and public services, as well as about their channel preferences for future use. Although the Internet holds a central position in the general framework and the pilot survey, flexibility is built into the listing of channels of service delivery in order to include or add future technological developments, such as the supply of interactive government services on interactive digital television (IDTV). This multi-channel perspective is currently reflected in some of the Member States with the most innovative approaches to customer survey methods.

#### 1.7.7 Non-use of eGovernment

By no means do we intend to neglect or minimize the issues of eInclusion, the digital divide, and the lack of access to and/or necessary skills to use the Internet and other ICT for considerable groups and certain minorities in all Member States.

The scope of the framework designed, however, is clearly on “user satisfaction with eGovernment”. As a result the methodological framework focuses quite directly on “eReady” citizens and businesses, i.e., **the extent to which “actual users” of eGovernment services are satisfied with them.**

Hence, specific attention in the framework design is devoted to **non-use of eGovernment by “potential users”**, that is people who have access to the Internet and may even use it frequently for other services such as eBanking or eCommerce but who do not yet use eGovernment services. Their reasons for non-use of (specific) eGovernment services including barriers such as lack of awareness, as well as possible motivators for future use are integrated in the design. This approach will provide government officials with vital information that can contribute towards policies and actions to improve eGovernment supply and user centrality.

#### 1.7.8 Dimensions of user satisfaction

The most central module in the measurement framework deals with actual users’ satisfaction. Here the Canadian Common Measurements Tool (CMT) offers a distinctive approach by looking at a set of common dimensions or drivers of user satisfaction, measuring levels of overall satisfaction with

the quality of services, and taking into account the actual achievement of user objectives. The CMT also includes cross-analysis of **satisfaction levels with and perceived importance of a set of service quality and performance parameters**, in order to construct opportunity or priority matrices for service improvement. As the basic ingredients of the CMT approach have been encountered in many instrumental designs reviewed in this study, the standard for measurement of satisfaction in our framework will be built on these common features and those factors that are widely accepted as responsible for user satisfaction and dissatisfaction. Examples are cost and timeliness of service, accessibility, usability, utility and comprehensibility of information, provision of assistance, privacy and security.

#### 1.7.9 Measurement of user impact

As the eGep model clearly implies, **systematic monitoring frameworks** are needed to measure eGovernment effectiveness impacts for citizens and businesses in terms of:

- reduced administrative burden – examples: % change in time and costs saved by citizens and businesses, or in number of users reporting e-service saved time over traditional methods for a standard bundle of services;
- increased users' value and satisfaction – examples: % change in waiting times for a standard bundle of services, or in number of users reporting eGovernment services to be useful;
- more inclusive public services – examples: % increase of eGovernment use by socially disadvantaged groups, or of number of SMEs bidding for public tenders electronically.

These three examples illustrate the major distinction that has to be drawn between objectively observable and subjectively perceived outcomes and impacts of eGovernment processes. Within the user survey context of our measurement framework, attention is limited to **subjective perceptions of eGovernment benefits**. However, we do emphasize the need to go beyond single, *ad hoc* measurements and to integrate user satisfaction into a systematic monitoring framework in order to gain insight in the impact of eGovernment on citizens and businesses as well as to evaluate the results of actions to improve public service delivery.

#### 1.7.10 Control for preconceptions

Valid measuring of overall levels of satisfaction in (random sample) survey designs asks for effective control of user expectations and preconceived judgements about government and public services. Measurement of **attitudes towards and preliminary levels of trust in government**, together

with user experiences of non-governmental e-services, are essential to contextualize the questions and to act as a control for ratings of satisfaction with eGovernment.

## 1.8 Conceptual framework

The conceptual framework is based firmly on the guiding principles outlined. In this section, therefore, a conceptual framework or standard is described that provides public agencies with the necessary building blocks to conduct surveys on user satisfaction with their eGovernment services. Operationalization and translation into structured citizen and business questionnaires is applied in the actual pilot survey.

The standardized framework consists of four different parts or layers:

- User types and target groups
- Take-up of eGovernment processes
- Satisfaction with eGovernment processes
- Perceived impact, channel preferences and future use.

What follows is a textual description of each of the four layers separately before the global framework is synthesized and presented graphically at the end of this chapter.

Note that the generic conceptual and structural logic is addressed here. The specific survey questionnaires are not yet described. Example questions and answer categories are, however, given as illustrations at times so to clarify selected indicators.

### 1.8.1 User types and target groups

As far as the categorization of eGovernment users/non-users is concerned, we distinguish five important modules:

- Citizen and business profiles based on personal socio-demographic and socio-economic data and information; this layer also includes identification of “mobile citizens and businesses”;
- Users’ levels of ICT use, skills and experience, incorporating a profiling along psychographical dimensions;
- User experience with non-governmental Internet-based services;

- Attitudes to and perceptions of government and public services;
- Frequency of contacts and dealings with government in general in different roles (such as private person versus professional, as an intermediary or not, and through an intermediary or not).

The basic logic that underlies these five modules is the intention to do the following:

- Identify user types and profiles along different relevant axes (socio-demographic, psychographical, and relationships with ICT and with government);
- Categorize citizens and businesses into customer target groups, for example: students, retired persons, self-employed persons, SMEs etc.;
- Identify “mobile citizens” (preparing to) living, studying or working abroad, and “mobile businesses” (preparing to) being involved in cross-border activities;
- Differentiate users according to levels of use, skills and experiences with ICT in general and with Internet-based services in particular;
- Compare take-up of and satisfaction with eGovernment to other Internet services;
- Control for user expectations concerning eGovernment (it is assumed that a high level use of and satisfaction with private, commercial services and applications will result in a high(er) level of expectations concerning public, governmental services and applications);
- Control for preconceived judgements concerning government and public services by taking into account general attitudes, perceptions of quality and levels of trust.

The five layers or modules are described and discussed in more detail in the following five sub-sections.

#### 1.8.1.1 Personal citizen and business profiles

For citizens, socio-demographic data include:

- Gender
- Age
- Educational level
- Region (urban/rural) in which the citizen is resident
- Type of household in which the citizen is resident
- Social or professional situation
- Household income

- Disability
- Mobility (in relation to the citizen's native country and country of (future) residence, study or work).

For businesses:

- Sector
- Number of employees (SME ...)
- Turnover
- Respondent's position/function
- Mobility as a business (regional locations of (future) cross border activities).

#### 1.8.1.2 ICT use, skills and experiences

ICT-related indicators, such as those appearing in the Eurostat household and enterprise surveys on ICT, are:

- Access to ICT (computer, Internet, broadband connection at home/work)
- Use of a range of ICT (computer, Internet, personal digital assistant (PDA), mobile phone, IDTV)
- Since when use of ICT (computer, Internet)
- Place of use of Internet (at home, at work, at school, in public places, elsewhere)
- Means to access the Internet (mobile phone, PDA, wireless away from home/work)
- Frequency of use of ICT (Internet/e-mail)
- Purpose of use of ICT (Internet/e-mail) (for private and professional reasons respectively)
- Computer skills/competence
- Attitudes towards ICT.

Among these, the frequency of use of ICT is of prime importance in order to differentiate among light, moderate and heavy users.

#### 1.8.1.3 Use of and satisfaction with Internet-based services

This module measures the use, and the frequency of use, of ICT (specifically, use of the Internet) for a range of activities in private and public e-service domains as well as the overall level of satisfaction with these application domains. These may include:

- e-banking
- e-commerce
- e-business
- e-travel
- e-culture
- e-learning
- e-health
- e-democracy
- e-government.

#### 1.8.1.4 Attitudes towards government

This module implies a measurement scale of agreement with statements about government in general (such as quality and trust) in order to be able to control for preconceived judgments. The in-depth study of quality of and trust in government by Van de Walle and Bouckaert (2002) provides important input in this respect. Overall evaluation of, satisfaction with, and trust in eGovernment and “traditional” government (service delivery) respectively is also included in the research design developed by the Faculty of Public Administration, University of Ljubljana, Slovenia (Vintar, M., Kunstelj, M. et al., 2006).

The figure below is extracted from the latter research report. It illustrates different levels of user satisfaction and trust with eGovernment and traditional government service delivery. It appears to indicate higher satisfaction with eGovernment services than with traditional government services, at least in respect of the sample of persons questioned.

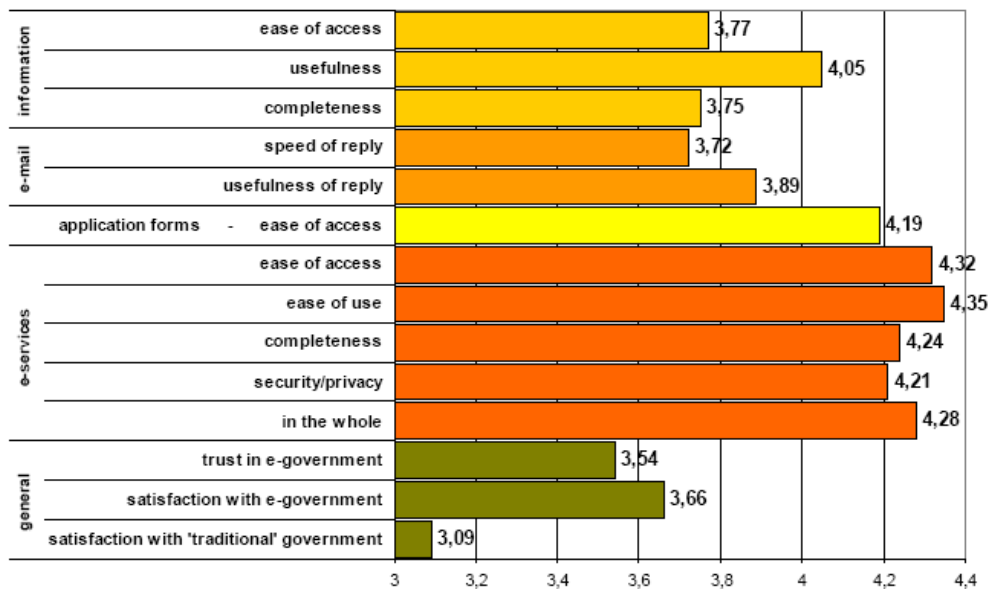


Figure 9: Satisfaction with information (n=210), e-mail communication with public servants (n=83), application forms (n=159), government e-services (n=355), trust in e-government (n=421), satisfaction with e-government as a whole (n=417) and satisfaction with traditional government (n=421) among citizens surveyed

#### 1.8.1.5 Contacts with government

Citizens and business representatives can be categorized according to the frequency or degree to which they have contact with government (including government agencies) and make use of government services. Relevant distinctions are to be made concerning contacts which take place for:

- Different types of interaction (information, communication, services...)
- Private/professional purposes
- Individuals' own purposes / on behalf of others (i.e. acting as intermediary)
- Personal use / through an intermediary.

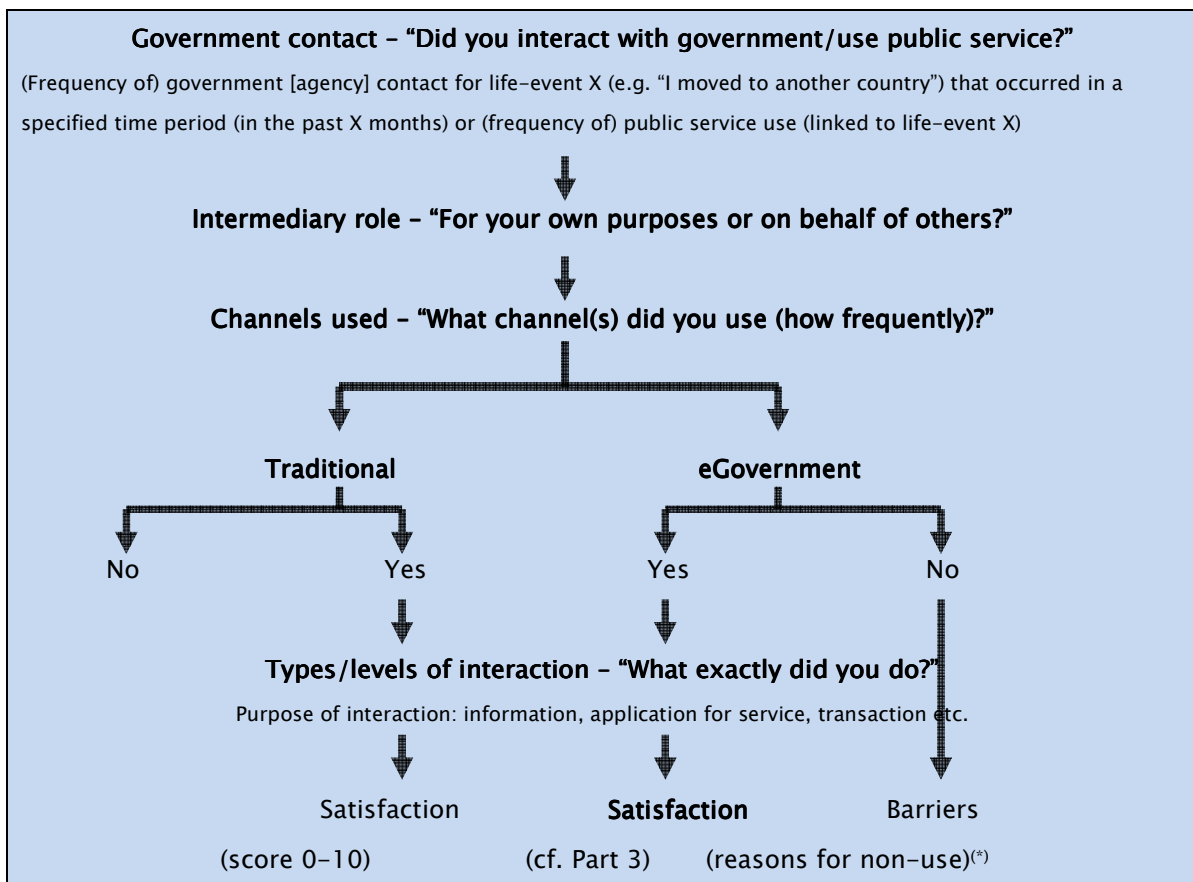
#### 1.8.2 Take-up of eGovernment processes

This part of the framework intends to measure the take-up of eGovernment processes preliminary to the measurement of customer satisfaction with the eGovernment applications that are actually used.

The end-recipients of an eventual survey instrument are the various government services, whether national, regional, local or specialist of the individual Member States. Depending on the specific

research issues and objectives of the public agencies which wants to conduct a user satisfaction survey, the structural approach illustrated in Box 1 can be applied both to **customer life–event processes** in which “eGovernment” channels (e–mail, websites and web services) are used for certain types or levels of interaction (seeking information, communicating with public servants, applying for a particular service, etc.) as well as to **particular public services** (linked to broader customer life–events).

**Box 1: A proposal for a structural approach to designing a survey questionnaire instrument according to a life–event based model**



(\*) Non–users are rooted to questions belonging to the fourth part of the measurement framework that deals with channel preferences, likelihood and motivators of (future) use

This module starts off by questioning whether and how frequently a respondent has had contact with government (agencies) due to a life–event or has made use of a specific public service within a particular time–period (yet to be specified). Subsequently the respondent’s potential role as an intermediary is probed (e.g., whether the contact was made for personal purposes or on behalf of friends, relatives or clients).



Potential methods of interaction include traditional and “eGovernment” channels:

- In-person, face-to-face
- Mail, posted letter
- Telephone
- Fax
- Call centre / automated phone system
- Kiosk
- Website
- E-mail
- Chat / instant messaging
- Mobile phone /short messaging service (SMS)
- IDTV
- Other ...

Satisfaction may depend on the kind or level of interaction:

- Searched for information
- Communicated question, suggestion, complaint [via e-mail/form]
- Checked/updated my personal data/file/account [electronically]
- Applied for service [by downloading form]
- Applied for service [by uploading form]
- Got service delivered [electronically]
- Paid for service [electronically]
- Got particular service pro-actively without asking for it
- Got service delivered automatically without applying for it.

Other important aspects of experience may have to be considered with regard to take-up, that may potentially influence the level of satisfaction:

- The initiator of the contact/interaction: the user or the government, e.g., as a result of a legal requirement (note that this depends highly on the type of service evaluated);
- The actual status of service delivery which may influence satisfaction, e.g., no service requested; service requested/applied for, but service delivery is ongoing; service received (service delivery process is completed);

- The user’s prior knowledge and expertise: whether the use is first time or not will make a difference to users’ knowledge about where to go to look for information or to apply for services;
- The concept of pro-activity and push-services proposed to the client, e.g., “was the service proposed to you by the supplier?” and “were extra related services proposed (e.g., school transport when enrolling in education)?”;
- *For web services*: The ways of getting to the location of the information or services needed (e.g., using Google or other search engine, national government portal, specific “typed-in” or “bookmarked” website);
- *For web services*: Methods of authentication used for transactional services, i.e., “did you need to identify yourself?”, and, if so, “how did you have to do that (e.g., userID/password, eID, token, digital certificate)?”

### 1.8.3 Satisfaction with eGovernment processes

This module is central to the whole framework design. It provides the basic conceptual standard for measuring user satisfaction. It should be applicable to any public agency in the EU Member States which wishes to use it to measure customer satisfaction with a particular citizen/business life-event or service/product.

The survey proposal follows closely the structural set-up of the Common Measurements Tool (CMT) in Canada. Hence, satisfaction with eGovernment processes is measured by three components:

- User experiences and perceptions of quality and performance;
- Overall evaluation or level of satisfaction;
- Achievement of objectives.

These three components are explored in the next paragraphs.

#### 1.8.3.1 User experiences and perceptions of quality and performance

User experiences and perceptions of quality and performance are measured. They are based on evaluations of a standard set of service parameters (drivers of satisfaction). These drivers include accessibility, usability, the quality of the actual information available and its content, and a range

of more specific criteria ranging from esoteric, to aspects of privacy/security, and also referring to the critical elements of time and cost.

The Canadian CMT survey model is supplemented in its approach with indicators that are a common focus of other studies. We propose the following set of indicators that are presented in Box 2.

**Box 2: A proposal for a standardized approach to measuring dimensions of user satisfaction**

<p>Access</p> <ul style="list-style-type: none"> <li>• Easy-to-access</li> <li>• Multi-channel access</li> <li>• Accessibility (for disabled persons)</li> <li>• Authentication</li> </ul>
<p>Usability / user friendliness</p> <ul style="list-style-type: none"> <li>• Easy-to-find (location, navigation)</li> <li>• Easy-to-use (interface, functionalities)</li> <li>• Easy-to-understand (comprehensibility)</li> <li>• Pro-activity</li> </ul>
<p>Quality of information / content</p> <ul style="list-style-type: none"> <li>• Usefulness / utility (relevance and correspondence to user needs)</li> <li>• Complete (comprehensive)</li> <li>• Accurate (credible, reliable)</li> <li>• Up-to-date</li> </ul>
<p>Appearance (attractive, appealing)</p>
<p>Quality of interaction / assistance (responsive, helpful)</p>
<p>Timeliness - reasonable time</p>
<p>Cost - reasonable cost</p>
<p>Privacy</p>
<p>Security</p>

The following example, which is also inspired by the Canadian CMT, illustrates the manner in which these indicators can be measured.

*Example: How much do you agree with the following statements?*

Indicator	Statements	Agreement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree)					
		1	2	3	4	5	Not applicable or Don't know
Access	I could access the service by various channels						
Usability	The information I looked for was easy to find						
Information	The information provided was up-to-date						
Timeliness	It took a reasonable amount of time to get the service						
...	...						

Indications or perceptions of the importance of each of these service parameters are needed in order to cross-analyze satisfaction and importance. They provide a key to identify priorities for service improvement (i.e., what needs improvement the most or what needs mainly to be done to improve service delivery?). In the context of the Canadian CMT, the issue at stake here is formulated as in Box 3.

### **Box 3: Assessment by the Canadian CMT of importance and performance measures/scales**

Cross-analysis of satisfaction and importance variables will identify priorities for improvements and thus promote well-informed planning decisions and efficient allocation of resources. By requesting that clients select the top service priorities, a manageable portfolio can be provided for planning purposes. A satisfaction/importance cross-analysis matrix is a tool that can be used in planning.

#### **Both importance and performance measures are needed**

Several sections of the CMT present items with two-paired response scales, one measuring performance – how well the service was delivered, and the other measuring importance – how important that aspect of service is to the client. The purpose of these questions is to pinpoint the elements of service delivery process that will lead to the greatest improvements in client satisfaction. A careful analysis of client responses will identify what changes to the service delivery process will produce the biggest payoffs in client satisfaction. There are two approaches to this task. One uses just the performance measure while the other uses both the performance and the importance scales.

#### **Performance scale only**

The “drivers” of satisfaction can be determined with just performance scales. The drivers are the performance measures that contribute most strongly to client satisfaction. The statistical procedures most commonly used in this analysis are multiple regression and structural equation modelling.

#### **Performance and importance scales together**

- Using the paired scales provides an additional source of information, but it also lengthens the survey.
- It allows calculation of the gaps (differences) between importance and performance. An “opportunity matrix” is a plot of these differences.
- The correlations between importance and performance should also be examined. High positive correlations are good – a high correlation would indicate, for example, that people who find timely delivery important are getting timely delivery.

### 1.8.3.2 Overall evaluation

Overall satisfaction should be measured (e.g., “How satisfied were you with this service?”), but should also be related or compared with prior user expectations (e.g., “How did the service you got compare to what you expected?”)

The following example, extracted from the Canadian CMT, illustrates the manner in which the overall level of user satisfaction can be measured.

*Example: How satisfied were you with the following aspects?*

Indicator	Questions	Satisfaction on a 5-point Likert scale (1 = very dissatisfied, 5 = very satisfied)				
		1	2	3	4	5
Time	Overall, how satisfied were you with the amount of time it took to get the service/product?					
Cost	Overall, how satisfied were you with the amount of costs it took to get the service/product?					
Overall evaluation	Overall, how satisfied were you with the quality of service delivery?					

### 1.8.3.3 Achievement of objectives

Achievement of objectives will determine satisfaction. This comes down to the basic question: “In the end, did you get what you needed?”

### 1.8.4 Perceived impact, channel preferences and future use

This module builds on the experiences of respondents identified in the previous parts or layers of the framework / questionnaire(s) in order to measure:

- Perceived benefits, outcomes and impacts
- Channel preferences and likelihood of future use
- Barriers and motivators for (increased) future use.

#### 1.8.4.1 Perceived benefits, outcomes and impacts

Examples of perceived benefits of using electronic services/eGovernment channels are to:

- Save time
- Gain flexibility

- Get more and better information
- Receive better help
- Get a faster case/reply
- Get better control over the process
- Save money
- Shorten administrative procedures
- Simplify administrative procedures
- Decrease paper consumption
- Increase trust/confidence/reliability
- Increase transparency
- Improve customization.

#### 1.8.4.2 Channel preferences and likelihood of future use

This module measures the preferences of citizens and businesses towards future use. That is, if the respondents were to use a service again, how likely is it that they would re-use the same channel for contact or access. What other channels or means of access would they prefer?

A whole spectrum of traditional and “eGovernment” channels can be presented:

- In-person, face-to-face
- Mail, posted letter
- Telephone
- Fax
- Call centre / automated phone system
- Kiosk
- Website
- E-mail
- Chat / instant messaging
- Mobile phone / SMS
- IDTV
- Other ...

The issue of future use can be further elaborated by measuring indications on specific barriers to and potential motivators for (increased) future use. Examples of the motivators that imply user expectations and actions for improvement include:

- Greater security/privacy (of data transfer)

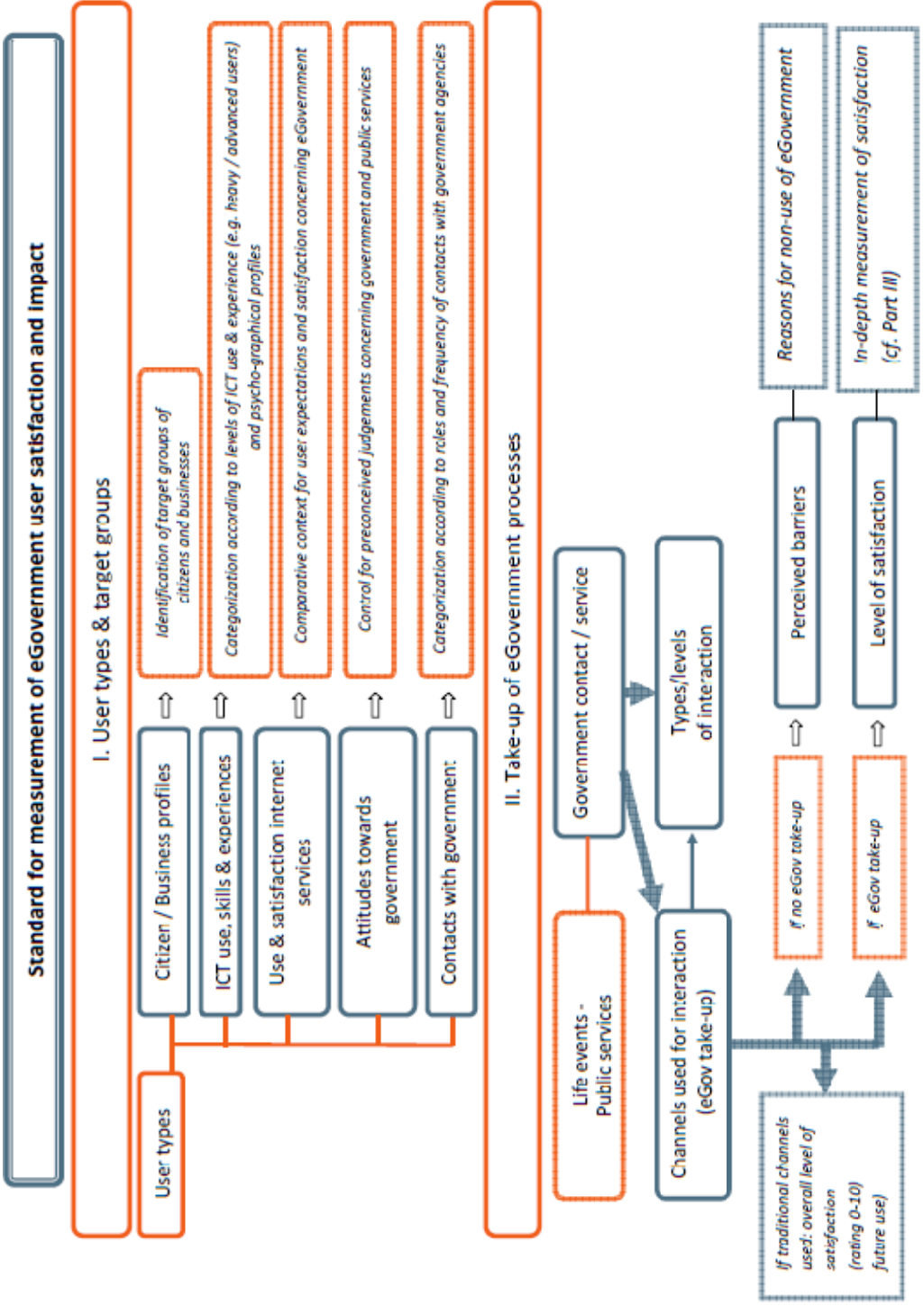
- Introduction of a single website for entire e–government supply
- Simplification of administrative procedures
- Simplification of e–services use
- Expansion of the supply of e–government
- Introduction of life–event based e–services
- Introduction of access to e–government in public places
- Simplification use of electronic data interchange with public administration bodies
- Faster procedures compared to traditional ones
- Possibility of personal assistance at all times during use of e–service
- Easier use and a more complete offer of e–government services
- Better awareness of e–government possibilities
- Lower fees for e–services and other financial benefits.

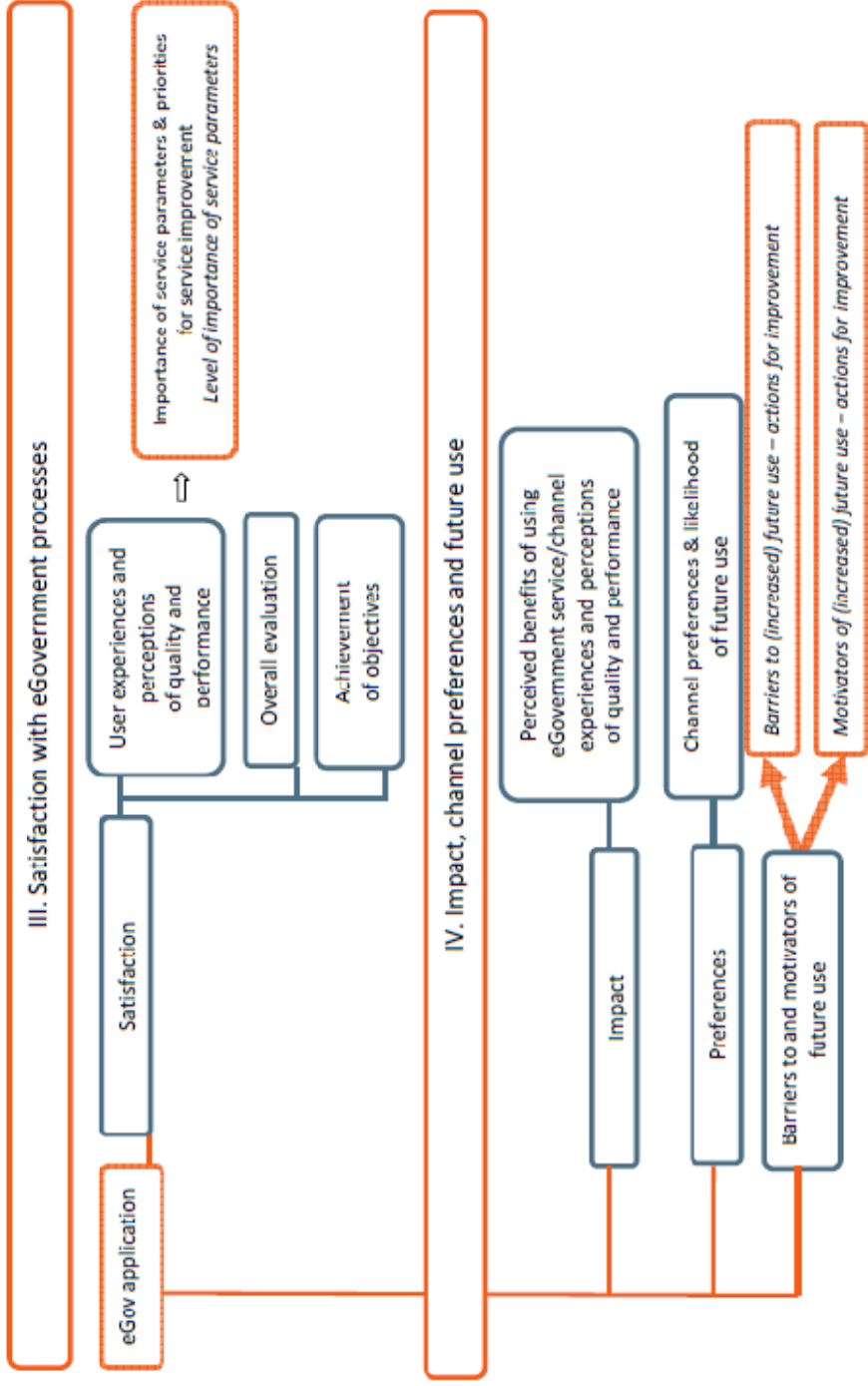
As noted earlier, this chapter culminates with a synthesized graphic illustrating the four parts or layers of our proposed **standard for measurement of eGovernment user satisfaction and impact**.

These conceptual framework layers can be listed as:

- I. User types and target groups
- II. Take–up of eGovernment processes
- III. Satisfaction with eGovernment processes
- IV. Impact, channel preferences and future use.







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## 2. Pilot survey methodology

In this chapter, we translate the overall standard conceptual framework into a specific pilot survey design. The actual questionnaires designed are presented as the toolkit in the Annex to this report.

The main aim of this chapter is to clarify the crucial choices that were made in order to put this standard into practice. First, we describe the pilot survey “content”: the structural logic of the citizen and business questionnaires, based on the general conceptual framework. Then, we focus on the data gathering technique: the online panel survey methodology that was used to conduct the survey. Justification of the method and information on sampling, fieldwork and data analysis are also provided here.

### 1.9 Pilot survey design

The following important choices were made to make the overall analytical model operational in the context of a cross-national pilot survey.

#### 1.9.1 User profiling

The five modules of this part of the framework (socio-demographics; ICT use, skills and experiences; use and satisfaction of Internet services; attitudes towards government; and contact with government) have been included and implemented. Their purpose is to define a broad range of user types and target groups in the sample on which the pilot survey is based.

#### 1.9.2 Customer life-events

The general conceptual framework we propose is based on a **customer life-event model**. The reasons for this were described earlier (cf. the ten guiding principles of this report, section 2.2).

For the pilot survey, therefore, we chose to apply the general framework by presenting the citizens and those responding on behalf of the businesses included in the sample with a set of life-events. These life-events can be dealt with administratively by using the online

public services commonly available in all ten pilot Member States, preferably at the transactional level. By the transactional level we mean that a user can obtain a service interactively and online, in other words, the customer can achieve a complete service fulfilment online.

The set of citizen and business life-events proposed in Box 4 below has three elements. It includes the issue of citizen and business mobility within EU, represents all types of public services as categorized in the EU eUser project, and captures a very broad range of target groups.

**Box 4: Proposal for customer life-events as objects of measurement in the pilot survey**

<b>Citizen life-events</b>	<b>Business life-events</b>
I declared the birth of a child in my family	I became/started as self-employed
I got married or my marital status changed	We started a new company or branch (within our country)
I moved and changed the address of where I live (within my country)	My company invested, started-up or undertook business abroad
I needed a passport or visa to travel abroad	My company bought or built new offices or plants
I went to live, study or work abroad	My company had to declare corporate taxes / VAT / social contributions
I or one of my children enrolled in higher education	My company searched and applied for public funds
I applied for a study grant for myself or (one of) my children	My company hired new personnel
I looked for a job	My company had to declare customs taxes
I am or I became unemployed	My company needed environment-related permits
I retired	My company was involved in a public procurement exercise
I had to declare income taxes	My company applied for a patent
I bought, built or renovated a house	My company had to close down (a branch)
I bought a new car	My company went bankrupt
I reported a crime	
I made use of the public library	
A close relative died	
I came into an inheritance	

### 1.9.3 Take-up, satisfaction and impact

Applying the measurement framework displayed earlier, in the pilot of the survey, for each **life-event** we used the following logic of indicators/questions<sup>(\*)</sup>:

#### **Box 5: Application of the framework to measure take-up of eGovernment per life-event**

1a. Did you, in the past X months, have contact with the government because [life-event X] happened to you personally? YES/NO

1b. Did you, in the past X months, have contact with the government on behalf of friends, relatives or other people because [life-event X] happened to them? YES/NO

IF 1a and/or 1b = YES

2. What channel(s) did you use?

- In-person
- Mail
- Telephone
- E-mail/Internet

IF 2 = E-mail/Internet

3. What exactly did you do?

- Searched information
- Contacted government via e-mail
- Applied for service by downloading form
- Applied for service by uploading form
- Got service delivered electronically

4. Measurement of satisfaction

One general question for ALL life-events for which 1a/b = YES but 3 = not e-mail/Internet:

5. What was (were) the (three) most important reason(s) for not using e-mail/Internet?

<sup>(\*)</sup> If none of the life-events applies or the respondent did not use e-mail/Internet for any of the life-events, the respondent is asked whether he/she, in the past X months, did have any contact with government by e-mail/Internet and, if so, for what purpose(s). (This is an open-ended question.)

To measure satisfaction with the eGovernment processes associated with events that occurred in a citizen's or company's life in a specified period of time, the satisfaction measurement modules of the general framework have been applied (i.e., measurement of specific dimensions or drivers of satisfaction, of the overall level of satisfaction, and of the achievement of personal objectives).

Perceived benefits, channel preferences and likelihood of future use are issues that also have been dealt with at the level of specific life-events for which a respondent had contact with the government by e-mail/Internet in a specified period of time.

## 1.10 Methodological set-up

The methodological framework of the pilot survey is described in terms of the overall approach (method used) and the specific steps taken in the survey process.

### 1.10.1 Online panel survey

For the execution of this user satisfaction and impact survey, we have used an **online survey approach**. The main reason for choosing an online approach lay with the validity of the sample. We aimed at users of eGovernment services, of which many are online. The online population of the EU forms an important basis for this survey. We aimed to reach this online population by making use of an online panel survey as a data-gathering method. The consortium had direct access to these panels throughout the EU countries.

Panels of online Internet users have a large advantage as compared to offline surveys, even when these panels include large numbers of individuals who use the Internet. This advantage here is the validity of their potential answers, that is the degree to which the answers and indicators extracted from them really reflect the phenomenon under study. It is clearly different to a) ask a question by telephone of a respondent who might have used the Internet three months ago about his/her experience with several services and b) to ask a respondent who is part of an online panel and who is, thus, using the medium of the Internet much more frequently. In the latter case, the answer is more likely to reflect real experience (and not pre-judgement and expectation) than in the former case.

On the other hand, the reliability of the results of a survey based on an online panel is limited to other surveys also using an online panel (This is the likelihood that similar results are produced at a different time and by other researchers using the same instrument.) So, it must absolutely clear that this survey instrument and tool must be evaluated as such.

For all the advantages of surveys based on online panels that we cite, we nevertheless wish to emphasize that they tend to include fewer sporadic users of the Internet.

The benefits of an online panel are several. With an online panel survey approach, the Internet user population as a whole is addressed and not solely visitors of specific websites or services within a specific period of time.

For each of the participating countries, **a representative sample of Internet users** was questioned based on the international online panels to which we had access. The data gathered online were compared with figures from Eurostat and a weighting was performed *per* country based on the variables gender and age to correct for any skewness in the distribution.

The approach also provided the necessary data on the reasons for non-use of eGovernment by people who nevertheless have access to the Internet and Internet-based services.

Advantages of an online panel survey approach are:

1. Optimisation of the data gathering method with citizens and (people working in) enterprises through actively monitoring a representative subset of online respondents:
  - a. This method allows the fact that some respondents are easily re-contacted for research purposes.
  - b. This method makes it easy to set up a standard that can be re-used afterwards
2. ....at low cost
  - a. Online panel research is one of the cheapest forms of interaction with a representative subset of internet users in particular because follow-up can easily be organised (for example reminder e-mails), there are no paper- or

- mailing nor interviewer related costs and scale advantages are present for large populations
- b. Every survey has field costs to contact respondents. By using existing permission based online panels for this survey of people whom are recruited on various ways, the field cost of finding and contacting respondents can be set very low. This because the relatively high cost of the recruitment of respondents can be spread over different surveys.
3. ...with an emphasis on validity and reliability
    - a. All members of these panels are recruited based on an intake questionnaire. This intake questionnaire contains a set of socio-demographical, attitude and use variables. To become a member of the online research panel, respondents have to fill in the intake questionnaire. Based on this information the representativeness of the sample can be monitored.
    - b. Online panel research poses the possibility to set up a rich set of complex interlaced questions. Building on previous answers within the same questionnaire very complex but to the point routings can be set-up. This way questions can be very precisely targeted towards certain profiles, users etc.
    - c.
    - d. Online research requires a limited field time thus stimulating the accuracy of the gathered data.
  4. ...with high respect for the time of the respondents
    - a. Respondents can fill in the questionnaire on for them convenient moment. The panels are permission based: we do not disturb anybody and respect people's privacy.
    - b. We have tested the usability of our online questionnaires by means of route path analysis and the analysis of response rates
    - c.
  5. ...with an emphasis on representativeness and scientific approved methods
    - a. Based on the data gathered in the intake questionnaire we are able to:
      - i. guarantee the representativeness of the survey due to the fact that, after the termination of the field work, we can very precisely statistically control the realised response whereby the obtained sample can be compared with the population figures and interlaced weight factors can be calculated.
      - ii. target very precisely certain target populations because this information is gathered in the intake questionnaire
      - iii. realise a very broad reach controlled and monitored through one online back-office. Geographical boundaries that usually threaten classic face-to-face interviews are not present.
  6. to guarantee the fact that we make use of scientifically approved online survey methodologies, we make use of:



- a. Randomisation of response categories in our questionnaires. Based on methodological research we know that some respondents have a tendency to make more use of the first presented answers. By randomising response categories this effect is neutralised.
- b. The method proposed by the consortium allows real-time monitoring of the gathered data. This makes it possible to correct the data collection during the fieldwork.

#### 1.10.2 Step-by-step approach

In the following sections, we explain the different steps in the set-up and execution of the survey, as shown in Box 6.

#### **Box 6: Step-by-step approach for the pilot survey**

1. Designing the survey questionnaires  
=> Blueprint of instrument
2. Testing the survey instrument
  - i. Testing Content on English version
  - ii. Testing translations
 => Consolidation of instrument
3. Defining the research sample
  - i. Deciding on the sample size
  - ii. Selecting the EU Member States in the sample: 10 countries
  - iii. Selecting the individual panels, based on the result objectives:  
1,000 citizens + 400 business representatives per country  
(number of completed interviews)
4. Executing the survey (online fieldwork)
  - Step 1. Programming of the questionnaires
  - Step 2. Selection of the panel members
  - Step 3. Contacting the panel respondents by e-mail invitation
  - Step 4. Contacting the panel respondents by e-mail reminder
  - Step 5. Follow-up and control of the fieldwork
  - Step 6. Ending the "live" fieldwork/data-gathering
  - Step 7. Data-export and data-filing
5. Analyzing and validating the results
6. Reporting and presenting the results
7. Feedback  
=> Consolidation of final instrument

#### 1.10.2.1 Designing the survey questionnaires

Based on the structural framework described in this report, a blueprint of the survey instrument was constructed. This blueprint had a user-friendly and Internet-specific questionnaire design.

#### 1.10.2.2 Testing the survey instrument

The blueprint was tested in two ways that comprise both qualitative and quantitative end-user tests. These tests enabled further improvement of the questionnaires from the perspective of the respondents and testing of the set-up for data analysis, validation, reporting and presentation of the results. After this test scheme, the survey instrument was consolidated.

#### 1.10.2.3 Defining the research sample

A good survey stands or falls by a good sample. To create a good sample, one should consider three questions:

1. What size should the sample be to ensure appropriate reliability?
2. Are the costs of the sample in an acceptable relation with the potential profits?
3. Are the respondents selected in a methodologically acceptable way?

The first two questions relate to the size of the sample, the last to the selection of the individual Member States and respondents.

### **Step 1. Deciding on the sample size**

The first question is: **What size should the sample be to ensure appropriate reliability?**

To answer this question appropriately, we have to make use of the concept of “confidence interval<sup>26</sup>”.

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<sup>26</sup> A confidence interval is a statistical range with a specified probability that a given parameter lies within the range. More precisely, a confidence interval for a population parameter is an interval with an associated probability  $p$  that is generated from a random sample of an underlying population. Thus, if the sampling were to be repeated numerous times and the confidence interval recalculated from each sample according to the same method, a proportion  $p$  of the confidence intervals would contain the population parameter in question.

Here two questions should also be answered:

1. How wide or narrow must our confidence interval be? In other words what is the maximum difference in % that the result of our survey may differ from the actual population value? Confidence intervals are the most prevalent form of interval estimation.

2. What risk of a less than optimal confidence interval will we allow ourselves? In other words: how certain do we want to be that the given confidence interval is correct?

In the proposed approach, we used a confidence interval of  $\pm 3,10\%$  with a reliability of 95%. We therefore used a very strict scientific criteria. We allowed a maximum difference of  $\pm 3,10\%$  between the results obtained and the population results. We are thus, on a statistical level, for 95% sure that the score (frequency) of a population parameter and lies between a maximum range of  $\pm 3,10\%$  of the observed result. Based on these severe criteria we needed a minimum realized sample of 1,000 respondents in each country.

#### Calculation of the sample size

How wide or narrow must be our confidence interval?

- We allow a confidence interval of  $\pm 3,10\%$  (two sided)

What is the risk we allow ourselves

- $\alpha=5\%$  (95% reliability)
- z-score = 1,96

Given the formula :  $N(p,?p(100-p)/n)$

As a consequence is correct that :  $1,96*?p(100-p)/n'=3,10$  and thus that  $n'=(1,96/3,10)^2*p(100-p)$ , whereby p equals the (at this point unknown as it is yet to be measured) percentage in the population of a certain indicator or variable. To be able to obtain a concrete N we will make a conservative interpretation of the possible distribution in the population i.e.  $p=50\%$  (meaning an equals distribution in the population) . If p equals 50 ( $p=50$ ) then  $n' = (1,96/3,10)^2*50*50=1000$

Thus, a sample of 1,000 respondents *per* selected Member State was needed to be able to obtain reliable conclusions based on a reliability of 95% that the obtained results differs a maximum of  $\pm 3,10\%$  from the (mostly immeasurable) population figure.

The second question is: **Are the costs of the sample in an acceptable relation with the potential profits?**

The sample size is also influenced by the cost of obtaining the sample. This can be understood very easily. The best possible sample is to research a total population (i.e. interviewing a total target population). But most often this would require a huge budget and, moreover, the impact on the confidence interval and the reliability % would most often only be minor.

An example can clarify this case. For instance, given a reliability of 95% the impact of an increase in sample size given an endless population is the following:

N = 1.000 => confidence interval =  $\pm 3,10$

N = 2.000 => confidence interval =  $\pm 2,19$  (increase of CI 0,9%)

N = 10.000 => confidence interval =  $\pm 0,98\%$  (increase of CI 1,2%)

N = 100.000 => confidence interval =  $\pm 0,31\%$  (increase of CI 0,7%)

While the estimated impact on the budget for a sample of online citizens would be:

N = 1.000 => budget = 100%

N = 2.000 => budget increase estimated between 160% and 180%

N = 10.000 => budget increase estimated between 500% and 750%

N = 100.000 => budget increase estimated between 3000% and 4000%

We can easily conclude that a bigger sample of a certain target group will take a larger budget for fieldwork than a smaller sample for the same target group.

Not only is the size of the sample important, so too is the type of target group. Some target groups respond more easily to a survey questionnaire than others (e.g., citizens reply more easily than companies; but also from a demographic point of view within the

same target population, some respondents respond more willingly (e.g., women aged between 25 and 45 participate more compared with older women (+65 years) or compared with the higher or top management members of a company. Thus one can easily see that, if it is more difficult to obtain a certain number of validated, filled-in questionnaires from respondents within a specific target group who participated in the study, this will have an impact on the survey price (i.e., it will cost more to obtain the completed questionnaires). Due to this fact, we made a distinction between the target group citizens and the target group businesses. Based on years of previous applied experience in the market research sector, we were aware that it is easier to obtain a representative sample of citizens, than a representative sample of companies. Based on market prices, to obtain responses from companies costs more than double the price *per* completed questionnaire when compared with citizens. Due to the widely-differing costs of the data gathering for the two target groups, we made a distinction in sample sizes between the target group citizens and the target group companies.

Based on methodological and budget considerations, with regard to the citizens' questionnaire, we chose a sample size of **1.000 respondents (target group citizens) for each of the 10 countries** in our selection (N= 1000; 95% reliability, maximal theoretical CI = +/-3,10) . Thus, we obtained a total sample of N = 10.000 citizen respondents for the whole survey. This figure is important because it allowed us to do a more detailed reliability analysis of the proposed measurement instrument on a subgroup level (e.g., males versus females, different age categories or different types of users).

For business customers, we chose to propose a sample size of **400 respondents (target group enterprises) for each of the 10 countries** in our selection (N= 400; 95% reliability, maximal theoretical CI = +/-4,90). This means that there were 4.000 business executives contained in the whole survey. (This total number is also of relevance, for example, for the measurement of pan-European services.)

## **Step 2. Selecting the relevant EU Member States**

The third question is: **Are the respondents selected in a methodologically acceptable way?**

This question concerns the representativeness of survey research based on the recruitment of the respondents.

To guarantee a good representativeness and reliability, two elements are of importance: the size of the sample (in other words the number of respondents), and the way in which the number of respondents is recruited and reached. It is important to select a sample from a population database that has both an appropriate size and a good distribution of population parameters. Based on such a database, a proportionally interlaced stratified sample can be drawn.

A proportional interlaced stratified sample implies that the sampling is based on quota for socio-demographic variables (for example, gender: 50% men, 50% women), that reflect the actual proportion of men and women in the total population of a given country, and – in this case – the Internet-using population. Uncrossed quota sampling based on several socio-demographic variables, however, would be not exact or would be less exact, because there would be no composition control (for example, it might be that men are over-represented in a certain age category). To avoid this, the quota are crossed, i.e. interlaced. In a crossed scenario, the sample is made up of a balanced stratified proportion of each combination of relevant variables. If, for example, 5% of the total Internet-using population consists of women older than 55 years, a representative sample of 1.000 citizens should include 50 women over the age of 55.

The following approach for the selection of the countries was used in the study's fieldwork.

Selection was based on the following criteria:

- Cultural: countries from the north, south, central and eastern Europe
- Size: smaller and bigger countries in population size
- Identification of the responsible public sector agency directly involved in strategy and execution
- eGovernment development/ranking: using the results of the 7th Measurement of the Online Availability of Public Services (Capgemini, 2007), we extracted several countries out of the top five (Austria, UK), at the tail of the ranking (Poland), and two which were to be found in the middle (Belgium, Spain).

Based on these criteria, the following countries (listed in alphabetic order) were chosen: Austria, Belgium, France, Germany, Italy, the Netherlands, Poland, Spain, Sweden and UK.

### **Step 3. Selecting the individual respondents**

For the next step, we suggested the following approach for the selection of the respondents to be involved in the fieldwork.

A proportional interlaced stratified sample, which is representative for the population of Internet users in each selected country, was drawn from the databases of online panels to which the study team has access. These online panels have recruited respondents through many diversified online and offline channels who are willing to participate in online research. This guarantees a broad and representative panel population from which to select samples. Consequently, these databases are permission-based databases (i.e. panels or databases of people who have granted the study consortium permission to contact them for research purposes). These panels were built up while respecting the privacy laws of the different Member States, (i.e. they are permission-based by means of a double opt-in). We made use of a proportionally interlaced, stratified sample design to set up a representative sample within each EU Member State selected.

For the sample of 1.000 citizens per country, proportional interlaced stratification was minimally based on gender, age and education.

For a sample of 400 companies, professional category/function, sector and company size were considered to be relevant parameters. Professional Internet users aged between 25 and 55 years old, working independently, as an employee or employer in either an SME or a large company were chosen to be the principal target group. Diversified professional profiles were also important (commercial, legal, financial, human resources, etc.).

In this way, we drew correct samples that are a reflection of the composition of the Internet population and the universe of companies in the selected countries.

#### 1.10.2.4 Executing the survey

The online fieldwork process consists of the following steps:

##### **Step 1. Programming the questionnaires**

The survey instrument was input using a chosen template (lay-out, colour, logos etc.). The online survey tool offers a very large range of possibilities for choice in terms of question types, graphic possibilities, intelligent routing flexibilities and other kinds of usability increasing features. Also included in the software is a facility for multi-language design so as to program translations of the questionnaires efficiently in different languages, to offer language choice to the respondents, and to obtain a single dataset that is independent of language choice. After programming, the questionnaires are “published” i.e. they go “live”.

##### **Step 2. Selecting the panel members**

The selection of members of the online research panels that was invited to participate, was based on the principle of a proportional interlaced stratified sample that is described above. A sufficient number of respondents was selected/invited in order to ensure a final response of 1,000 citizens and 400 companies in each country.

##### **Step 3. Contacting the panel respondents by e-mail invitation**

The respondents were invited by a personal introduction sent by e-mail to participate in the survey. In this e-mail invitation was located a personal link to the questionnaire. To ensure the best response possible, the research design was based on Dillman’s Tailored Design Method (Dillman, 2000) When working with an online questionnaire, it is very important to design the methodology, timing, content and layout in such a way that the respondent is invited in a friendly, sympathetic way to participate.

##### **Step 4. e-mail reminder**

After a week, a reminder e-mail was sent. In this e-mail the respondents, who did not yet fill in the questionnaire yet, were reminded to participate. In practice, this led to a higher response rate.



### **Step 5. Following-up and controlling the fieldwork**

We monitored progress of the online fieldwork: real-time monitoring of response (e-mails sent, received, opened/read, number of questionnaires completed, identification of problematic drop-out points, ...). Whenever necessary, we reacted to any such difficulties in the following ways: e-mail reminders; recruitment of extra respondents; follow-up of feedback given by respondents; real-time statistical reporting tools (for example to control who filled in the survey, whether quota for different socio-demographic subgroups are being met, etc.).

### **Step 6. Ending the “live” fieldwork/data-gathering**

When the quota of completed interviews was met, the data-gathering process ended.

#### **1.10.2.5 Analyzing and validating the results**

The data were analyzed by a team of experienced researchers who have an in-depth knowledge of methodology and advanced statistical analysis.

Before the analysis took place, however, a **statistical validation of the results** takes place.

To control the representativeness of the obtained samples, the consortium statistically controlled the distributions obtained in the survey by comparing them with the population figures based on the figures of Eurostat (the agency possesses statistics on the use of the Internet for each European Member State). Interlaced weight factors were calculated to correct for the possible skewness of the realised sample.

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## 3. Key results of the pilot survey in 10 EU Member States

The survey results are handled in this report two parts: firstly, the results of the citizens' survey and, secondly, the results of the business survey. The survey findings enable the study team to give a more detailed overview of the opinions emerging from citizens than businesses.

### 1.11 Citizens Survey

In this part of the report, the key findings of the citizens' pilot survey are presented for the total sample of citizens (N=10,000) across the ten EU Member States selected. The results are presented in a manner that reflects the overall structure of the conceptual framework. There are four elements on which we concentrate: (1) pilot respondents' profiles; (2) use of eGovernment; (3) satisfaction with eGovernment; and (4) perceived benefits and impact of eGovernment services.

#### 1.11.1 Profiles of the pilot respondents

The purpose of this chapter is to provide a clear view of the citizen profiles (i.e., Internet users) in the pilot sample used across the ten EU Member States. It describes the Internet users in the pilot sample and the groups into which they can be classified.

We wish to emphasize that eGovernment take-up and satisfaction are measured in terms of the Internet population of each of the ten Member States. The survey thus focuses on those groups of citizens which have ready access to the Internet and therefore have the means at their disposal to adopt eGovernment and to make use of public services online.

This Internet user profiling is based on the following elements:

- The respondents' experience with the Internet: the year in which they started to use the Internet enables an Internet adoption curve of the respondents in the pilot sample to be drawn;

- The respondents' intensiveness of Internet use: measured by the frequency of use and the average number of hours a day the respondents are online;
- The respondents' use of Internet services for private purposes (e.g., eBanking, eCommerce and Social Networks). These figures function as an indicator of individuals' general appropriation of the Internet for their everyday life purposes and needs; this indicator helps to profile citizens as more or less digitally "native" users, and acts as a reference point for eGovernment take-up. Satisfaction with these privately used e-services plays a similar benchmarking role; it sets the scene for the expectations that users may have of online public services.

By considering all these dimensions, our approach is substantially more refined and better specified than most of other similar surveys produced so far (see *supra* in chapter 1.2), where frequency of Internet use is often the only indicator.

It is of high conceptual importance that we relate this form of Internet use profiling to, on the one hand, the "trust" that respondents have in the Internet and, on the other, their "trust" in government and public administration. As explained in chapter 1.9 which dealt with the survey instrument design, we use these data to put in perspective the results of respondents' eGovernment use and satisfaction, since these may be coloured to a certain extent by citizens' general underlying sense of "trust" in government.

Where possible, relevant and applicable, we look for, and present, relevant classifications of Internet users that are based on these indicators. We do so in order to enable useful breakdowns of the survey findings on eGovernment take-up, satisfaction and impacts on the following pages.

### 1.11.1.1 Socio-demographic description of the pilot survey sample

The citizens' sample data have been weighted for country (N=1,000 for each Member State) and, at country level, according to gender and age, based on the Internet population statistics per country available from Eurostat<sup>27</sup>.

The resulting total sample of Internet users is characterized by a fifty-fifty ratio in terms of lower-higher education and by a professionally active/non-active ratio of two-thirds, one-third. Only a small percentage of the respondents (3.3%) are aged 65 or more.

Pilot survey sample of citizens (N=10.000)		
<b>Gender</b>	Male	53,5%
	Female	46,5%
<b>Age</b>	16 - 24 years	23,8%
	25 - 34 years	22,7%
	35 - 44 years	22,4%
	45 - 54 years	17,6%
	55 - 64 years	10,2%
	65+ years	3,3%
<b>Education</b>	Primary or lower secondary	11,5%
	Upper secondary	39,0%
	Higher education	49,5%
<b>Activity</b>	Employed or self-employed	62,5%
	Student	15,3%
	Unemployed	5,0%
	Retired	7,3%
	Housewife/husband	5,2%
	Other (non-active)	4,8%

Table 1: Socio-demographic composition of the sample

### 1.11.1.2 Adoption of the Internet

A first indicator used to describe the Internet user profile of the respondents in the sample is the moment of adoption of the Internet and the corresponding number of years the respondents have already have been active online. Therefore respondents were asked since what year they had made use of the Internet.

<sup>27</sup>[http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=1996,45323734&\\_dad=portal&\\_schema=PORTAL&screen=welcomeref&open=/t\\_isoc/t\\_isoc\\_pi&language=en&product=REF\\_TB\\_information\\_society&root=REF\\_TB\\_information\\_society&scrollto=0](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/t_isoc/t_isoc_pi&language=en&product=REF_TB_information_society&root=REF_TB_information_society&scrollto=0)

The total sample of Internet users consists of a mix of experienced users, active online already for a considerable number of years, and users who started to use the Internet rather recently. 32% of the respondents in the sample are mature users who have been active online for 10 years or more; most of them started to use the Internet in the period 1995–1997. Internet adoption peaked between 1998 and 2000; as a result we observe that 40% of the sample went online in this period. Finally, 28% have started to use the Internet after the year 2000. Since then the adoption rate has decreased linearly: growth in Internet adoption was reduced from 6% in 2001 to 1% in 2007.

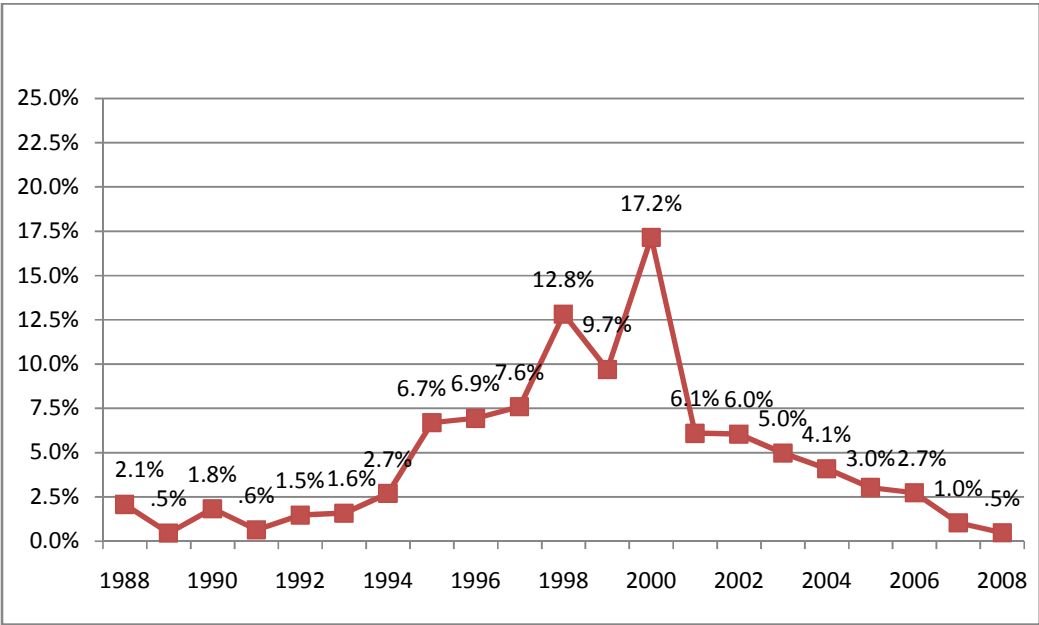


Figure 2: Adoption of the Internet (year by year)

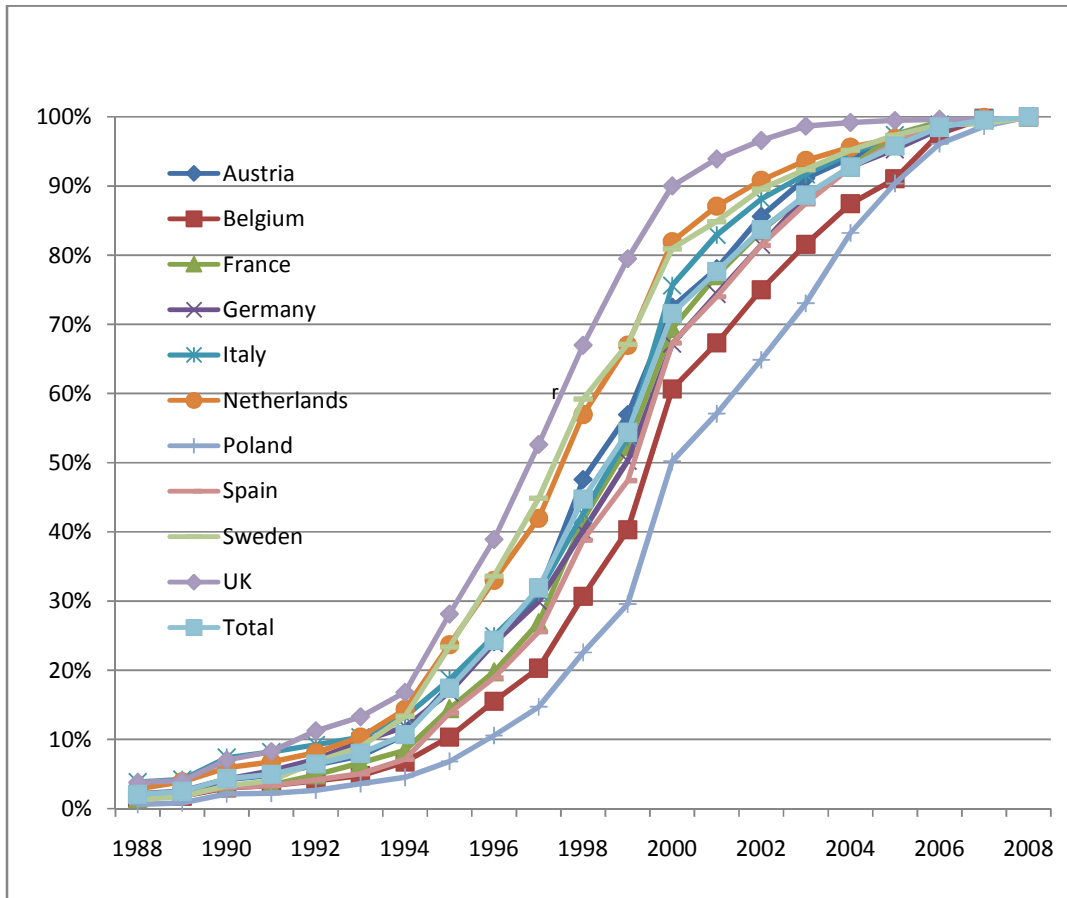


Figure 3: Adoption of the Internet (cumulative per country)

The mapping of respondents' years of experience on the Internet provides us with an adoption curve that matches almost perfectly Rogers' (Rogers, 2003) description of adoption profiles in his groundbreaking study on the diffusion of innovations. This Internet adoption curve holds for every country in the sample. The most obvious deviation from the common pattern occurs in Poland, where 70% of the respondents can be categorized as either late majority or late adopters. The Netherlands, Sweden, and the UK clearly emerge as forerunners in Internet adoption.

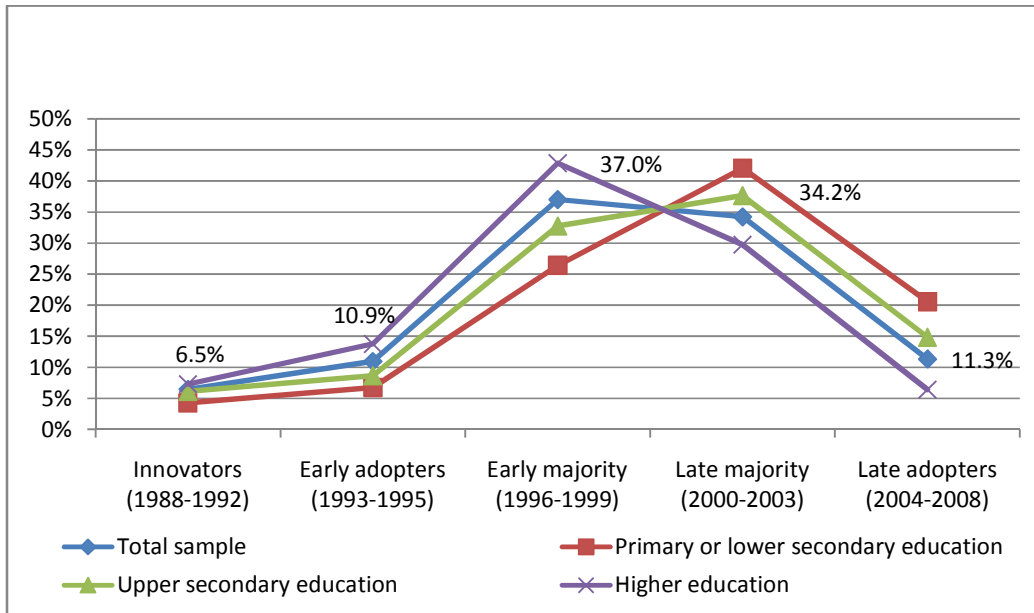


Figure 4: Adoption of the Internet by education

The sample confirms that the Internet in the 1990s was first adopted mainly by highly educated people. The Internet adoption curves of less educated groups show a delayed pattern so that they adopted the Internet largely in 2000 and thereafter.

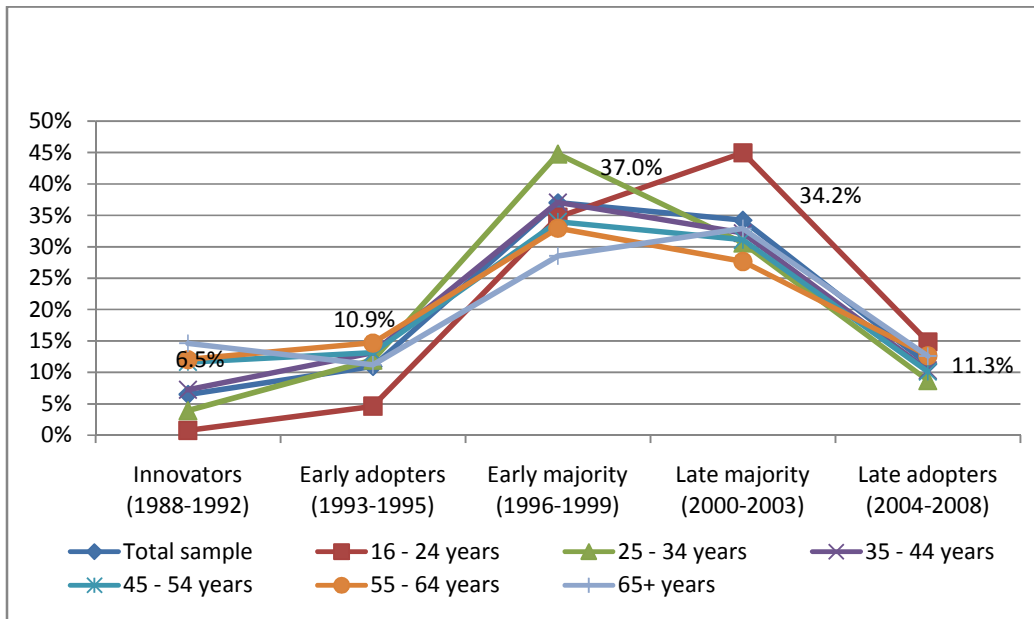


Figure 5: Adoption of the Internet by age

This adoption pattern is of course also related with age. On the one hand, 31.2% of both the late majority and late adopter groups consists of young people aged under 25 years old (this group represents 23.8% of the total Internet population). On the other hand, almost 70% of the late majority and late adopter groups consists of different age categories above 25. Late “starters” thus can be found across all age categories.

#### 1.11.1.3 Intensity of Internet use

In order to analyze the intensity of use as a second indicator of Internet user behaviour and profiling, respondents were asked how often, on average, they had used the Internet during the last three months and how much time on average a day they spend using the Internet.

The pilot sample of citizens consists of regular Internet users: 95% of respondents use the Internet on a daily basis. According to Eurostat<sup>28</sup>, 66% of individuals who, in early 2007, accessed the Internet in the last 3 months on average used the Internet every day or almost every day, ranged from 57% in Spain to 82% in Italy. Part of the difference with the Eurostat statistics on this point can be explained by differences in the context, methodology and time span between the two surveys; this survey took place a year and a half following the Eurostat survey. In that time-period, on the one hand, the Internet has become increasingly a feature of users’ everyday lives, thus leading to daily use. On the other hand, the online panel survey approach of this study has as a consequence that the highly occasional Internet users are more underrepresented.

It is an explicit objective of this pilot to relate variance in eGovernment take-up, satisfaction and impact to differences between Internet user categories and eGovernment target groups. This is already shown by the adoption curve in paragraph 1.11.1.2, and as will be further demonstrated by the profiling of respondents along other constructs. The

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<sup>28</sup>[http://epp.eurostat.ec.europa.eu/portal/page?\\_pageid=1996,45323734&\\_dad=portal&\\_schema=PORTAL&screen=welcomeref&open=/isoc/isoc\\_ci/isoc\\_ci\\_in&language=en&product=EU\\_MASTER\\_information\\_society&root=EU\\_MASTER\\_information\\_society&scrollto=0](http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/isoc/isoc_ci/isoc_ci_in&language=en&product=EU_MASTER_information_society&root=EU_MASTER_information_society&scrollto=0)



pilot sample of Internet users is quite disparate in many respects. The profiles are quite heterogeneous regardless of the regularity with which respondents go online.

Different groups of Internet users can be discerned according to the average time a day they spend using the Internet. 36.8% are heavy Internet users (three hours a day or more) while 14.4% are light users (on average one hour a day or less). The time spent on the Internet is related to age. The heavy Internet user group consists of proportionally more young people; light Internet users are more likely to be older people.

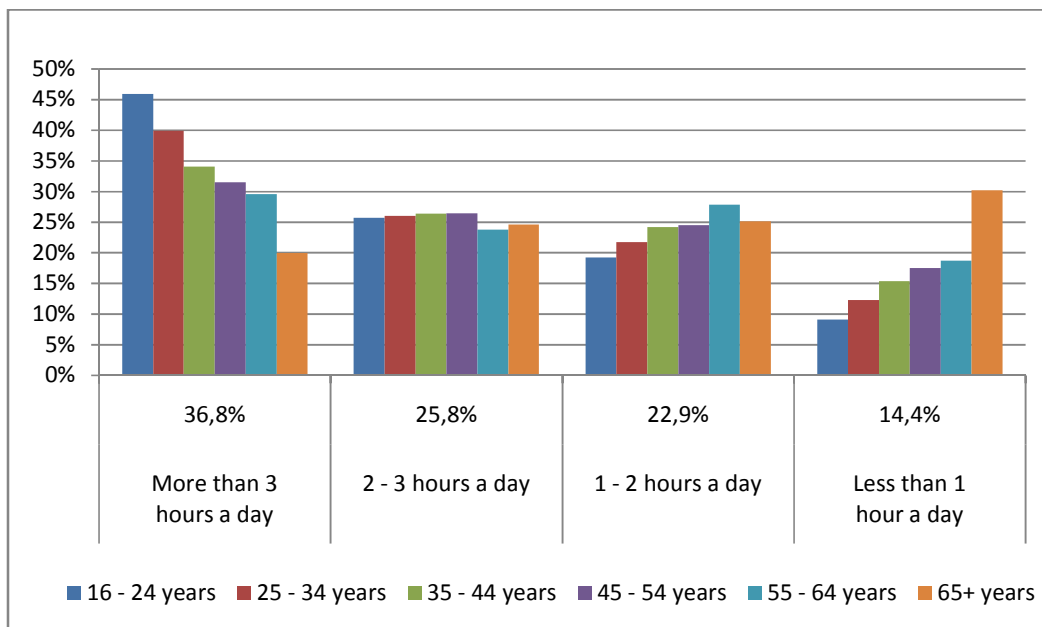


Figure 6: Intensity of Internet use

#### 1.11.1.4 Use of Internet services

Respondents' use of private Internet services (eBanking, eCommerce and social networking) is an indicator of the general appropriation of the Internet in individuals' everyday life. It acts as a reference point for eGovernment take-up. Therefore respondents were asked how often, during the past 12 months, they had used the Internet (1) to buy private consumer goods or services (for example: books, CDs, household goods, concert tickets, travel), (2) to administer their bank account (Internet banking), and (3) to participate in social networks (for example: Myspace, Facebook, Netlog).

A very high proportion (85–90%) of regular Internet users has used the Internet in the past 12 months at least once for eCommerce and eBanking applications. 58% even uses eBanking on a highly regular (i.e., weekly) basis. About 30% uses online platforms for social networking at least once a week, but at the same time 43.5% does not use them. Obviously, either respondents update their electronic social network details rather frequently or do not engage in such online behaviour at all.

Highly educated and professionally active individuals are the most typical users of eCommerce and eBanking services. Social networking *via* the Internet is highly correlated with age: 22.7% of the 65+ year olds has used these kinds of Internet applications at least once in the last 12 months, against as much as 80% of the less than 25 years old Internet users. Of the latter age category, about one-third (35%) of the sample even participates in online networking activities daily.

The more intense the Internet use, the more likely respondents are to buy products or services online and to engage in social e-networking. The same holds for Internet banking, but to a lesser extent: eBanking has become a common activity for all kinds of Internet users, including those older than 65.

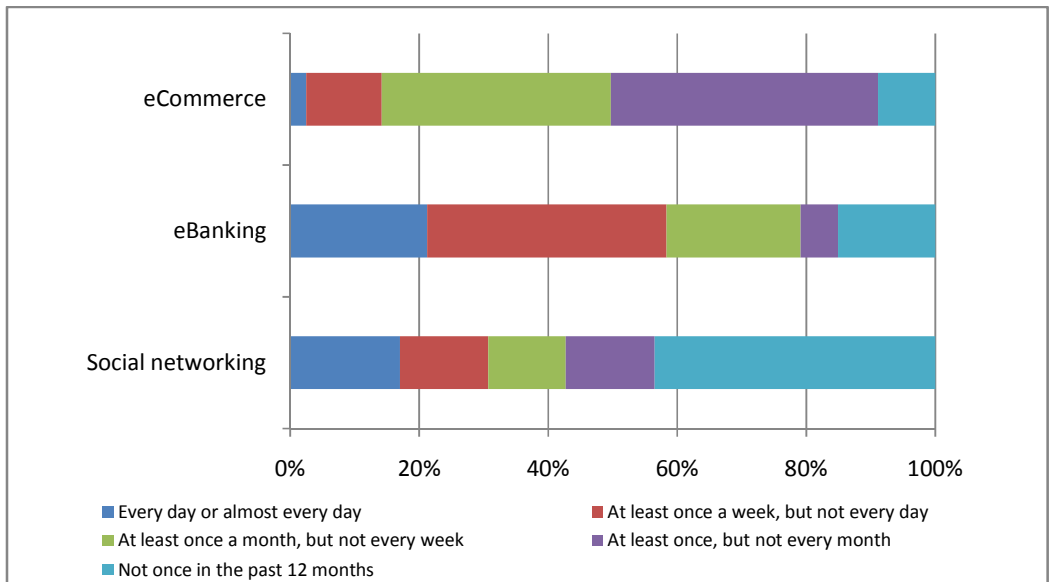


Figure 7: Use of private Internet services

### 1.11.1.5 Satisfaction with Internet services

For each of the three “private” Internet applications mentioned above, respondents expressed the extent to which they are satisfied with the applications on a scale from 0 to 10, with 0 meaning that they are totally dissatisfied and 10 that they are totally satisfied.

eBanking (9.5/10) and eCommerce (8,9/10) are very highly rated on this 10–point scale. One–third of the people administering their bank account *via* the Internet gives the maximum score for this service. Internet banking satisfaction on average rises from 9.3 with less than 25 year old users to 9.7 with those older than 65. Social networking gets an average score of 8.1, largely due to high ratings by heavy young users.

The more the Internet services mentioned are used, the higher the level of satisfaction.

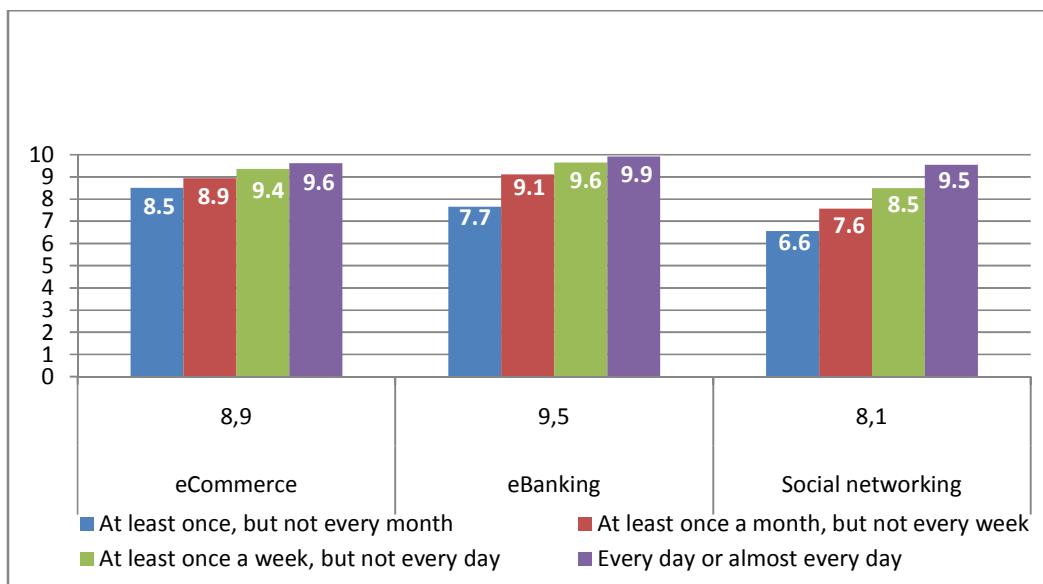


Figure 8: Satisfaction with private Internet services: average scores

### 1.11.1.6 Trust in the Internet

A first aspect of “trust” is the extent to which individuals trust the Internet. This was measured by scoring on a 5–point scale which ranged from “very little” to “very much” the extent to which respondents trust the Internet to undertake activities such as (1) to pay

online for private consumer goods or services, and (2) to submit personal data via government websites.

56.9% of Internet users trust the Internet to pay online for private consumer goods or services. Slightly fewer citizens (44.3%) have sufficient trust in the Internet to submit personal data *via* a government website.

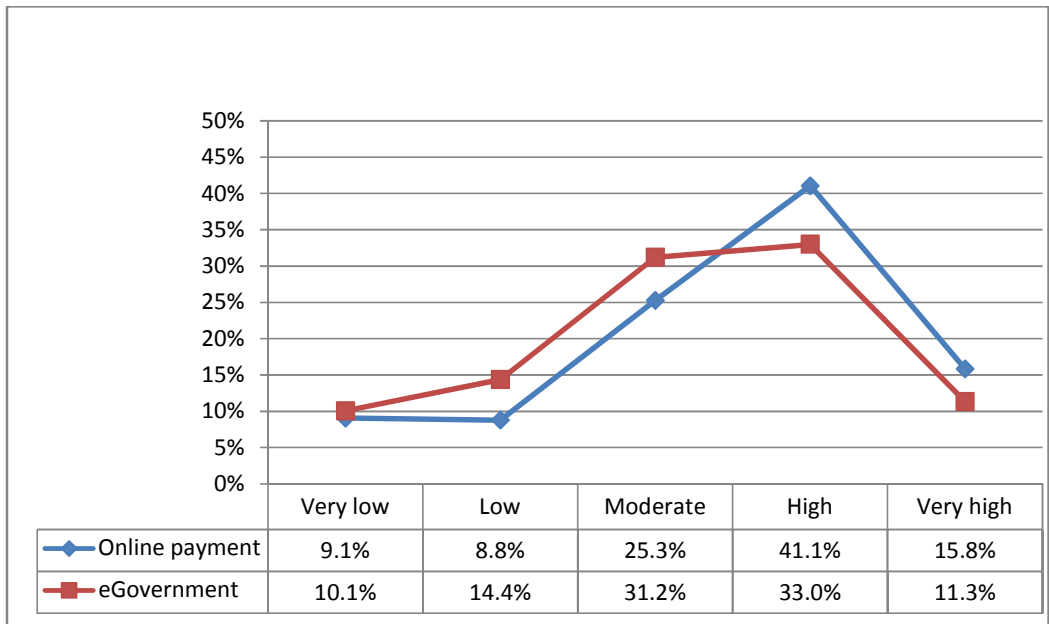


Figure 9: Trust in the Internet

The level of respondents' trust in the Internet varies only slightly across socio-demographically defined groups (gender, age, education, socio-economic situation). It does tend to be higher with highly educated and professionally active citizens who already have a considerable number of years of experience with using the medium. About half of the early Internet adopters expresses that it has a (very) high trust in the Internet and is therefore willing to submit data to public agencies. Late majority (40%) and the latest adopters (32%) are far more reticent.

At individual country level, we notice a very high level of confidence in online payment in the UK (78.7%) and generally above-average percentages of users' trust in the Internet in both France and the Netherlands. In Spain and Sweden, trust in the Internet as a channel to exchange data with government is relatively high, and is even slightly above the level of

trust to pay online for goods and services. Belgian, German and Italian Internet users are the most reserved. In Germany, with a 30% level only, trust in the Internet to submit personal data to government agencies is remarkably low. While the same holds for Poland in terms of government, making private payments online seems not to be distrusted by Internet consumers in this country more than in other Member States.

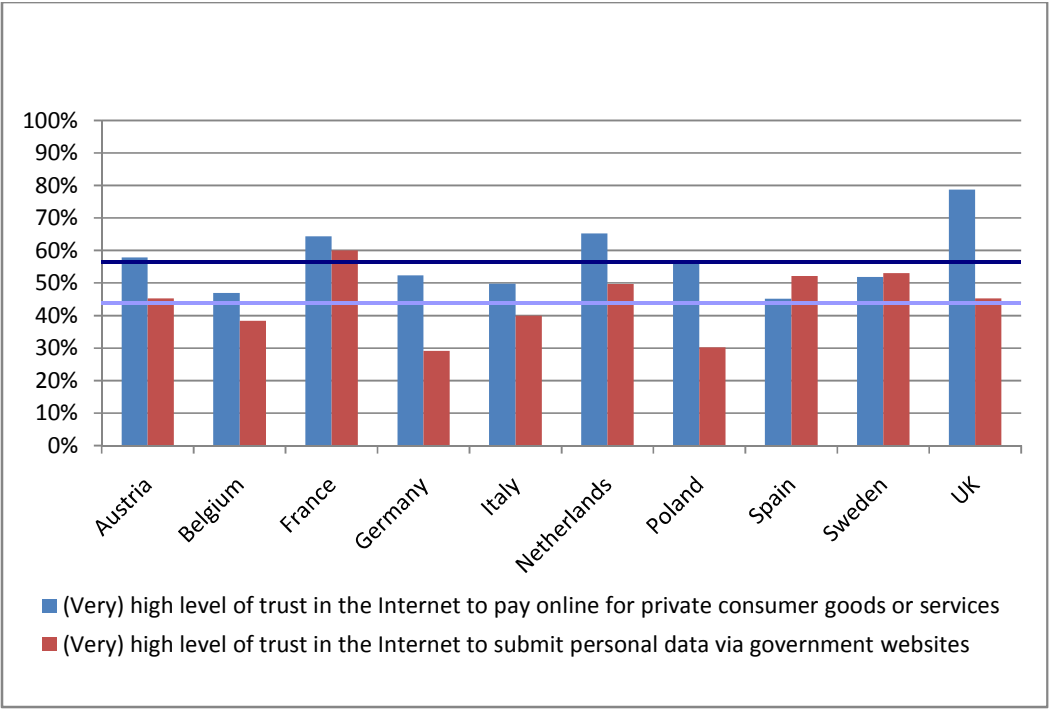


Figure 10: Trust in the Internet per country

The study provides evidence that trust is a crucial factor that underlies take-up of Internet services. The higher the level of trust in the Internet, the higher the probability that respondents will use eBanking and eCommerce.

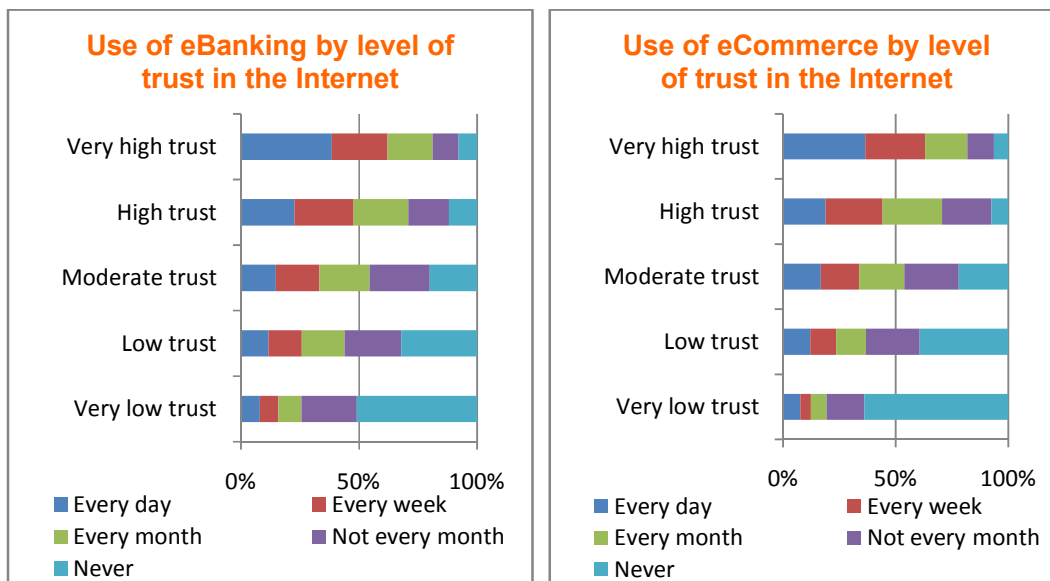


Figure 11: Use of private Internet services by level of trust in the Internet

Both aspects of trust that were measured are correlated, i.e., trust in the Internet for online payments is correlated with trust in the Internet for eGovernment applications (Spearman correlation=0,476, significant at the 0.01 level). However, these aspects of trust cannot simply be reduced to one single factor or scale that measures trust in the Internet. While equivalence in general is quite high, some people do combine a high level of trust in the Internet to pay online for consumer goods and services with an anxiety to submit personal data to government agencies, or *vice versa*.

#### 1.11.1.7 Trust in government and public administrations

A second aspect of “trust” that is of high importance in analyzing eGovernment use and satisfaction relates to the level of trust that individuals have in government and public administrations. On a 5–point scale that ranges from “very little” to “very much”, respondents could express the extent to which they have trust in both these institutions in their specific country.

Citizens trust their public administrations more than their governments. However, in both cases, the level of respondents’ trust is low quite regardless of their socio–demographic background. Contact with public administrations for professional reasons has a positive impact on the respondents in this respect. Not surprisingly, trust in government and

public administrations positively correlates with trust in the Internet to submit personal data *via* government websites (Spearman correlation=0,344, p<0,01).

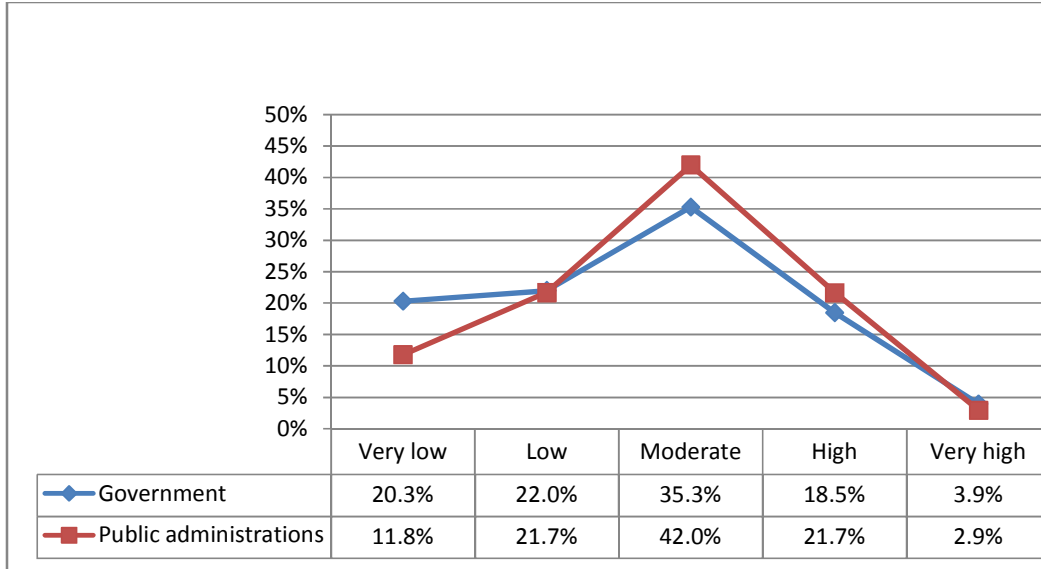


Figure 12: Trust in government and public administrations

The overall findings reflect different countries' traditions and cultures quite well in terms of general expectations with regard to trust in government. Trust in government is the highest in the Netherlands and Sweden, both of which are welfare states with a strong socio-democratic tradition. France and, to a lesser extent, Spain, both traditionally characterized by a strong central state level, show a considerable level of trust by citizens in their governments and public administration apparatus. Germany and the UK score below average. In Austria and Belgium there is a marked difference between the level of trust in government and public agencies. The same goes for Italy, but here public administration is trusted less than national government. Most striking is the fact that fewer than 10% of the Internet users in the Polish sample declare the public sector in their country to be trustworthy.

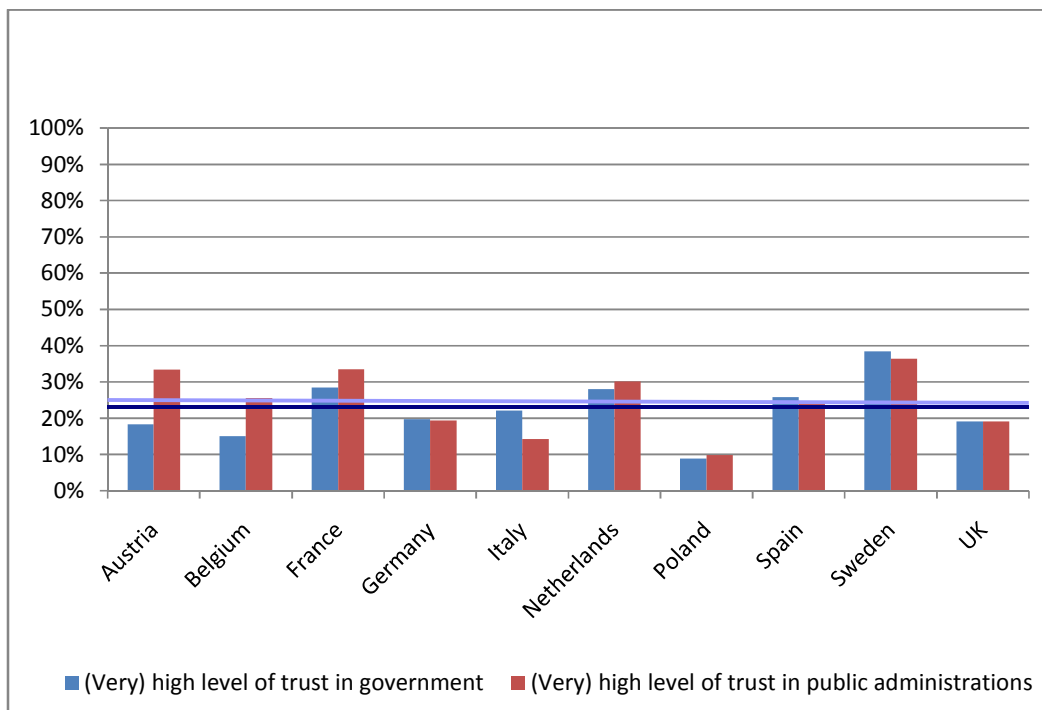


Figure 13: Trust in government and public administrations per country

#### 1.11.1.8 Satisfaction with public administrations

Extending the analysis on trust in government and public administrations, respondents were also asked how satisfied they are at present with the quality of service provided by public administrations in general in their country (on a 10-point scale, from 0=very dissatisfied to 10=very satisfied).

With an average 6.1/10 score, satisfaction with the quality of the services provided by public administrations in general is low when compared to satisfaction levels for commercial eServices.

Satisfaction with public service provision goes hand in hand with trust in public administration. This is reflected by the average scores per country, ranging from 6.9 given by Swedish government customers to 4.7 in Poland.



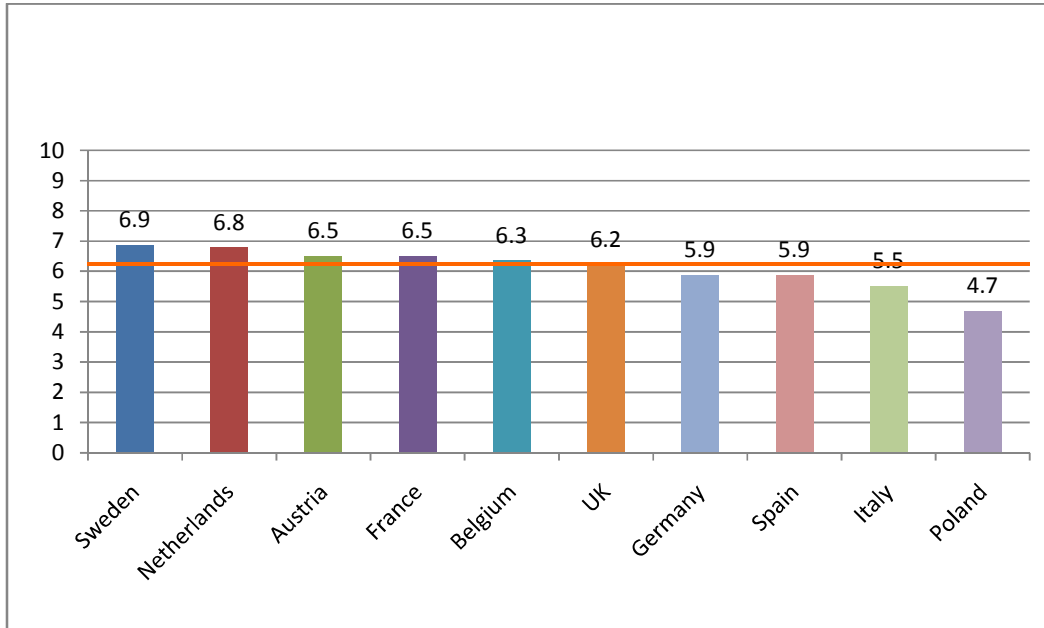


Figure 14: Satisfaction with public service provision per country

The three scales that measure trust in government, trust in public administration, and satisfaction with the quality of public services provision are measuring one single central concept. Using latent class analysis<sup>29</sup>, we were able to define the following three clusters of respondents in the sample based on their attitudes towards government and public services.

Profiles based on trust in and satisfaction with public agencies and services
<p><b>High level of trust and satisfaction (23,2%)</b></p> <ul style="list-style-type: none"> <li>• 55,4% is highly educated, 66,6% professionally active</li> <li>• More light Internet users (17,0%), more mature Internet users ( 61,4% before 2000)</li> </ul>
<p><b>Medium level of trust and satisfaction (41,6%)</b></p> <ul style="list-style-type: none"> <li>• 49,4% is highly educated, 62,0% professionally active</li> </ul>
<p><b>Low level of trust and satisfaction (35,2%)</b></p> <ul style="list-style-type: none"> <li>• 45,7% is highly educated, 60,4% professionally active</li> <li>• More heavy Internet users (41,1%), more late Internet adopters (48,6% after 2000)</li> </ul>

Table 2: Profiles of trust in government

<sup>29</sup> Latent Class Analysis (LCA) is a statistical method for finding subtypes of related cases (latent classes) from multivariate categorical data. For example, it can be used to find distinct diagnostic categories given presence/absence of several symptoms, types of attitude structures from survey responses, consumer segments from demographic and preference variables, or examine subpopulations from their answers to test items. The results of LCA can also be used to classify cases to their most likely latent class.

Based on the clusters defined, we found low levels of trust in, and satisfaction with, public agencies and services to be most prevalent in Italy and Poland. Higher levels occur mainly in Austria, France, the Netherlands and Sweden.

		Low level of trust and satisfaction	Medium level of trust and satisfaction	High level of trust and satisfaction	Total (N=10,000)
Total		35,2%	41,6%	23,2%	100,0%
Country	Austria	28,6%	37,4%	<b>33,9%</b>	100,0%
	Belgium	30,7%	46,7%	22,6%	100,0%
	France	24,3%	43,2%	<b>32,5%</b>	100,0%
	Germany	38,5%	42,8%	18,6%	100,0%
	Italy	<b>50,6%</b>	36,7%	12,7%	100,0%
	Netherlands	23,1%	48,8%	<b>28,2%</b>	100,0%
	Poland	<b>59,8%</b>	33,6%	6,5%	100,0%
	Spain	39,7%	38,1%	22,2%	100,0%
	Sweden	19,6%	44,6%	<b>35,8%</b>	100,0%
	UK	37,3%	43,9%	18,8%	100,0%

Table 3: Profiles of trust in government per country

#### 1.11.1.9 Conclusions on respondents' profiles

Based on the components of Internet use and trust, latent class analysis was applied as a statistical advanced technique for modeling groups of Internet users with corresponding characteristics and profiles. The resulting cluster model attained a minimum level of equivalence or so-to-speak “universality”, thus ensuring that the clustering is determined by variances in the indicators of Internet use and trust, and not — or only minimally — by variances between the countries involved.

In other words, our aim was to determine a classification of respondents that is based on their Internet behavior and levels of trust in the Internet, independently of the countries where they live. This does not exclude under- or over-representation of countries *per* cluster in the final model.

Such a classification would have been useful so as to put the findings on eGovernment take-up and satisfaction in perspective and to delineate clearly the corresponding target groups for policy objectives. However, such a clear-cut Internet user typology that is both

statistically robust and theoretically relevant could not be extracted from the available data. This is apparently a result of strong structural and cultural variances between the countries in the sample.

The influence of national structures and cultures thus appears to be stronger than changes in behaviour that can be produced by using a widely-used form of technology i.e., the Internet.

Nevertheless, some important **conclusions** can already be drawn from the results of the pilot sample, that are of high relevance for the analysis of eGovernment use, satisfaction and impact. They are as follows:

- Measurement of use and satisfaction of eGovernment in this study concentrates on regular Internet users. The use or reasons for non-use of this part of the population makes available essential information for improvement of public service take-up, quality and customization
- Different Internet user types are evident in the pilot sample. They have different socio-demographic profiles; adoption and intensity of use of the Internet; use of and satisfaction with other, non-public sector-related Internet services; trust in the Internet and in public sector agencies. Based on all of these aspects, levels of eGovernment take-up and satisfaction can be related to Internet users' background, attitudes and experiences.
- The use of private e-services (eBanking and eCommerce) is already considerably high, and the resulting experiences quite positive. While this may lower the barriers to use eGovernment services, at the same time it may set customer expectations quite high.
- The take-up of "private" Internet services such as eBanking and eCommerce is related to the level of trust people have in the Internet. Trust in the Internet is also likely to affect use of eGovernment applications.
- Trust in government and public administrations is low, as is, in close relation with this, the level of satisfaction with the general provision of public services. Based on the clusters of respondents that became apparent, it will be important to analyze the extent to which people's underlying sentiment of trust affects their eGovernment consumption.

### 1.11.2 Use of eGovernment

In this chapter, we focus on the take-up of eGovernment by the Internet users in the pilot sample.

First, the use of online information/websites and public services is looked at from a general point of view, by describing the intensity or frequency of these online interactions with government and comparing them with the use of private Internet services (eBanking and eCommerce).

Second, we analyze the use that respondents made of the Internet in the past 12 months to come into contact with public agencies as a result of a series of life-events. This analysis is extended by comparing the figures on take-up with respondents' preferences for actual channels (see 1.12.2.3). Measurement of satisfaction are based on the life-event for which respondents used the Internet most intensively in their contacts with public administrations over the past 12 months. In this chapter (1.12.3), this particular life-event is identified, together with the highest level(s) or stage(s) at which citizens interacted with government in the context of that specific life-event. These levels are matched with the corresponding stages in online public service provision as analyzed by the annual European front-office benchmark (supply of 12 basic public services for citizens) (Capgemini, 2007).

Before analyzing respondents' satisfaction with these processes, this chapter concludes with an analysis of non-use of the Internet, by a group of respondents, for their contacts with public agencies or officials in the last year. Here we will focus on the profiles of these "non-users" as well as on their reasons for non-use (which we consider potentially to form barriers to use).

#### 1.11.2.1 General use of eGovernment

In the same manner as with regard to the use of private Internet services (eBanking, eCommerce and social networks), respondents were asked how often, during the past 12 months, they had used the Internet (1) to find information on government websites, (2) to

use an electronic form to apply for a public service (for example: to obtain a certificate, licence, subsidy) and (3) to participate in government policy-making processes (for example: through online petitions, discussion forums).

40% of the respondents in our sample uses the Internet regularly to obtain information from government websites (that is, at least once a month). Applying for public services and participating in policy-making processes *via* the Internet are both regular online activities for 15% of these Internet users. In the last 12 months, nearly 40% of the Internet users did not apply for a public service online; about 60% is not inclined to engage in eParticipative actions.

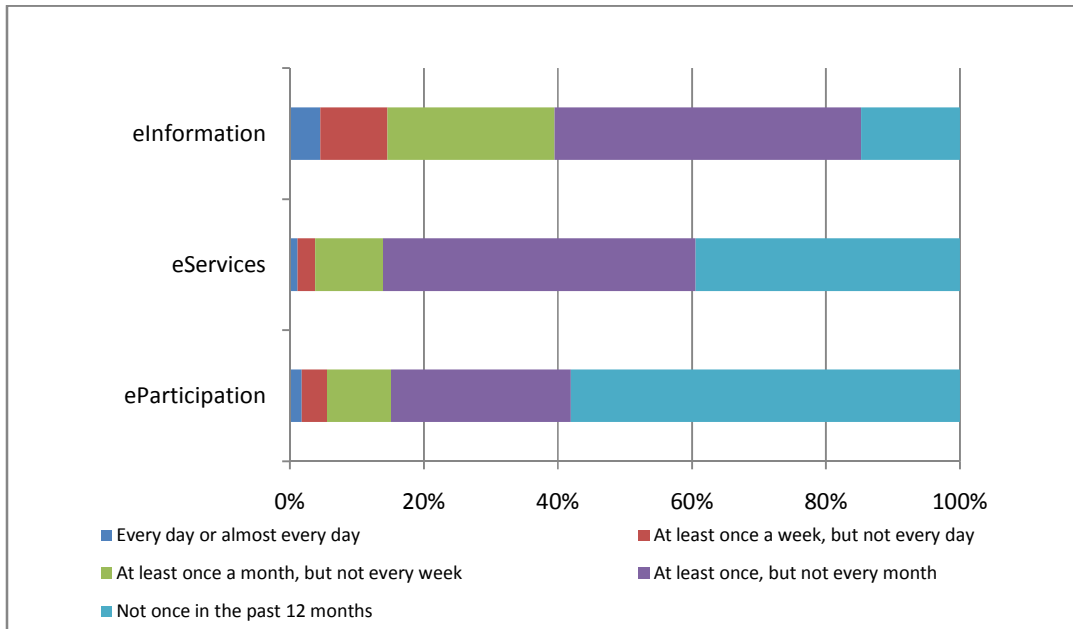


Figure 15: Use of eGovernment

Referring back to the figures for private Internet services, we see that the use of eGovernment is less than when compared to eCommerce and eBanking. One could take into account, however, that in general people probably have contact with public services far less frequently than with private sector agencies (such as banking and commerce).

	Not once in the past 12 months	At least once, but not every month	At least once a month, but not every week	At least once a week, but not every day	Every day or almost every day	Total (N=10.000)
eCommerce	8,9%	<b>41,4%</b>	<b>35,5%</b>	11,7%	2,5%	100,0%
eBanking	15,1%	5,8%	20,8%	<b>37,1%</b>	<b>21,2%</b>	100,0%
eGovernment information	14,8%	<b>45,7%</b>	25,0%	10,0%	4,6%	100,0%
eGovernment services	<b>39,4%</b>	<b>46,6%</b>	10,2%	2,7%	1,1%	100,0%
eParticipation	<b>58,1%</b>	26,8%	9,6%	3,8%	1,8%	100,0%
Social Networking	<b>43,5%</b>	13,8%	12,0%	13,7%	<b>17,0%</b>	100,0%

Table 4: Use of eGovernment compared to use of private Internet services

Highly educated, professionally active people are more intensive users of eGovernment information and services. eGovernment consumption correlates with respondents' maturity and intensity of use of the Internet, and goes hand in hand with the consumption of other, private services. The strongest relationship exists between the use of eCommerce applications and the take-up of opportunities to apply for public services through electronic forms. Also, social networking and political participation via the Internet appear to be two sides of the same coin. People involved in social networking are more likely to engage in eParticipation.

The extent to which citizens have trust in their public administrations, and in the Internet to interact with them, plays a significant role as far as the use of online public sector information and services is concerned. Non-users of eGovernment information services are more likely to have a very low level of trust in both the Internet and in government. Daily use of public e-services coincides with a very high level of trust in those services. Correlations between the use of Internet services and trust in the Internet however are less strong for eGovernment applications than is the case for eBanking and eCommerce.

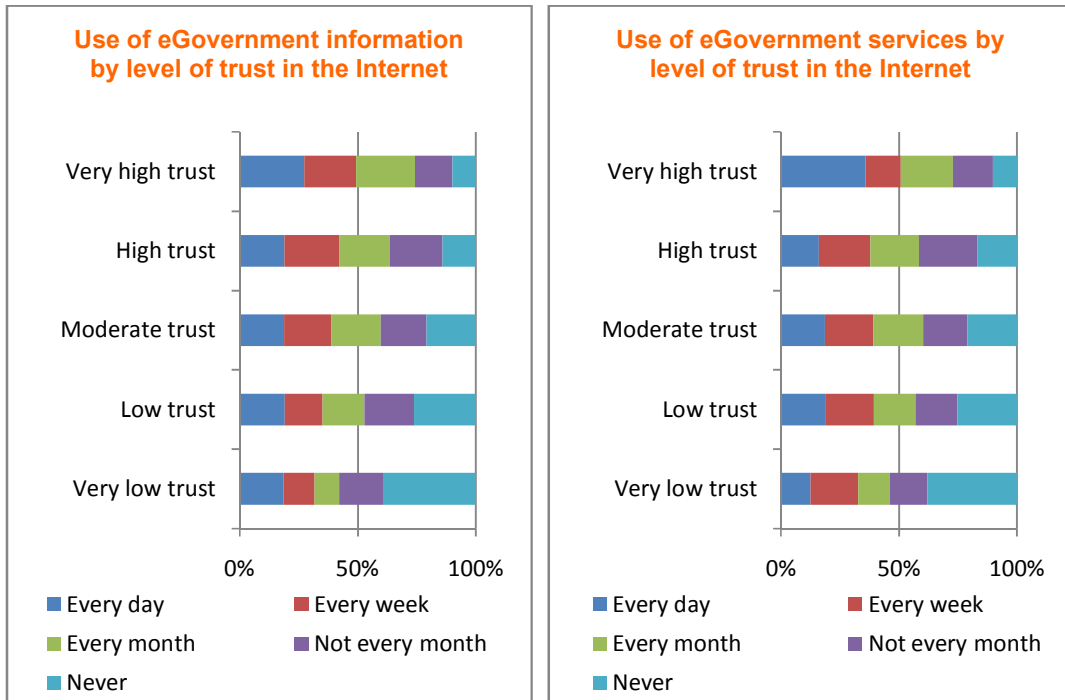


Figure 16: Use of eGovernment by level of trust in the Internet

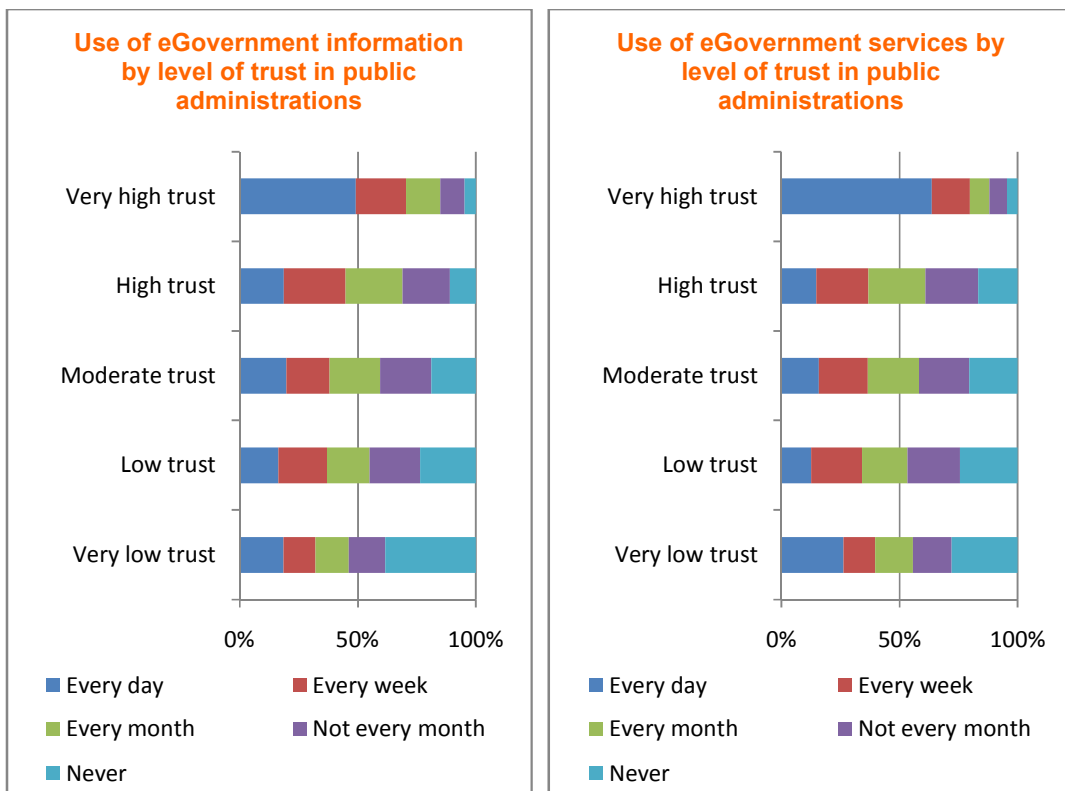


Figure 17: Use of eGovernment by level of trust in public administrations

#### 1.11.2.2 Use of eGovernment in citizens' life-events

The survey instrument that was developed can be applied to measure use of, and satisfaction with, a single public service or application provided by a government agency through electronic means. It can also be applied to broader eGovernment processes. In the context of the pilot survey, we chose to integrate a customer-oriented model of life-events. Satisfaction of respondents is thus measured in relation to the life-event for which they used the Internet most intensively in their contacts with public agencies or officials over the last 12 months.

First, in order to identify a life-event, respondents were asked for which kind of life-event, out of a key list of 20 customer events, they had come into contact with public administrations in the past 12 months. Second, for each life-event respondents indicated as applicable, they were asked what channels they used in the process: contact in person, contact by mail, by telephone and/or *via* the Internet (including e-mail). If the Internet was used in the context of more than one life-event, respondents were asked for which specific life-event they had used the Internet the most to interact with government. By doing this, when either one life-event applied to a particular respondent or, when several applied to that same person, a single life-event was identified for which the Internet was used most intensively.

Respondents who did not come into contact with public agencies *via* the Internet in the past 12 months for any of the 20 life-events proposed in the questionnaire, were offered the possibility to describe another life-event for which they had used e-mail or the Internet to interact with public administrations. Measurement of satisfaction is then based on this particular event. If no such life-event occurred, two possibilities remained. Either respondents did not have any contact with public administrations in the past 12 months, or they did not have any contact through the Internet.

We concentrate on the latter group of "non-users" in chapter 1.11.2.4 so as to gain an insight into both their profile and their reasons for non-use.



In what follows figures are presented for all these various elements. First, we focus on contacts with public administrations for life-events. Second is the extent to which the Internet was used in the context of these life-event-related contacts. In chapter 1.11.2.4.1, we compare these take-up figures with respondents' declared preferences for not using the Internet. Third, we present the number of respondents that used the Internet most intensively for a specific life-event. The events on which satisfaction measurements are based in this pilot study are then made clear. Fourth, we describe the levels on which respondents interacted with public agencies or officials in the context of these specific events. These stages of interaction range from e-mail communication, information, downloading electronic forms and uploading filled-in forms to apply for public services, to a level of interaction that implies full electronic case handling (by this we mean, that a specific life-event was handled electronically from the very first interaction between the citizen and the public administration until the very end).

We will conclude this chapter on the use of eGovernment in the context of citizens' life-events with an analysis of actual non-use: who did not use the Internet to make use of public services and why?

#### 1.11.2.2.1 Contact with public administrations for life-events

In the questionnaire, a series of 20 life-events was presented that may occur in the course of an individual's personal life. Respondents were asked whether they had come into contact with public agencies or officials (e.g., in-person, by phone, mail, e-mail or websites) as a result of such an event in the past 12 months, either for their own personal purposes, on behalf of someone else (such as family members, friends or other people) or for both their own and other people's purposes.

**Declaring income taxes** (55.3%), **looking for a job** (41.3%) and **making use of the public library** (34.2%) are the three life-events as a result of which the largest proportions of citizens came into contact with public agencies in the past 12 months.

	For my own personal purposes	On behalf of someone else	For myself and for others	No	Total (N=10.000)
Declaring income taxes	40,2%	4,2%	10,9%	44,7%	100,0%
Looking for a job	27,1%	7,7%	6,5%	58,7%	100,0%
Making use of the public library	24,8%	3,5%	5,9%	65,8%	100,0%
Enrolling in higher education	17,4%	7,1%	2,2%	73,3%	100,0%
Buying a car	13,7%	4,9%	4,2%	77,1%	100,0%
Buying, building or renovating a house	12,9%	3,8%	4,9%	78,4%	100,0%
Needing a passport or visa to travel to another country	12,8%	4,7%	4,1%	78,4%	100,0%
Moving and changing address within one country	11,8%	3,7%	4,0%	80,5%	100,0%
Being taken into hospital	8,7%	6,0%	2,8%	82,5%	100,0%
Applying for a study grant	9,4%	5,8%	1,7%	83,1%	100,0%
Becoming unemployed	9,2%	3,4%	1,9%	85,6%	100,0%
Reporting a crime	8,5%	3,0%	2,2%	86,3%	100,0%
Applying for a driver's licence	7,6%	4,1%	1,9%	86,4%	100,0%
Marrying or changing marital status	4,7%	2,3%	2,0%	90,9%	100,0%
Retiring	3,9%	3,3%	1,9%	91,0%	100,0%
Death of a close relative	4,6%	2,6%	1,7%	91,0%	100,0%
Declaring the birth of a child	5,0%	2,1%	1,5%	91,5%	100,0%
Starting or preparing to study or work in another country	4,0%	2,8%	1,6%	91,6%	100,0%
Coming into an inheritance	3,2%	2,3%	1,8%	92,7%	100,0%
Moving or preparing to move to another country	2,7%	2,1%	1,7%	93,5%	100,0%

Table 5: Contact with public administrations for life-events in the past 12 months

#### 1.11.2.2.2 E-mail/Internet contact with public administrations for life-events

For each life-event that applied, respondents were asked by what means or channels (in person, by mail, telephone and/or e-mail/Internet) they had come into contact with public agencies or officials, no matter for what reason (e.g., to obtain information, send or receive a question, request an official document or apply for a service). In doing so, for each life-event we obtained, as a measure of take-up, the percentage of individuals in the sample who used the Internet to interact with public administrations, compared to the total number of respondents. These respondents are those who had contact with public administrations, as a result of that particular event, in the past 12 months. These percentages are presented in the table below, both for the total sample and per country.

In all countries, the large majority of respondents (73.3% on average) **looking for a job** uses the Internet as a channel to get government information or services about this

	Total sample	Austria	Belgium	France	Germany	Italy	NL	Poland	Spain	Sweden	UK
Looking for a job	73,3%	79,0%	78,3%	77,2%	62,9%	60,4%	82,6%	72,1%	71,4%	77,7%	83,7%
Declaring income taxes	62,5%	80,6%	53,2%	79,3%	45,4%	33,9%	86,6%	14,3%	70,2%	74,8%	59,8%
Starting or preparing to study or work in another country	56,4%	75,3%	66,1%	60,3%	51,8%	37,0%	72,0%	51,1%	54,0%	69,8%	60,0%
Enrolling in higher education	55,5%	58,9%	44,5%	64,4%	41,9%	38,6%	75,1%	60,0%	50,0%	76,7%	66,1%
Buying, building or renovating a house	51,4%	55,6%	64,8%	59,3%	41,8%	31,9%	64,9%	42,3%	45,2%	62,5%	60,4%
Moving or preparing to move to another country	51,0%	59,3%	63,2%	42,4%	53,9%	35,7%	80,9%	42,5%	44,4%	72,3%	64,3%
Buying a car	49,3%	47,4%	42,2%	55,5%	47,1%	32,7%	45,3%	52,8%	45,6%	63,0%	58,9%
Applying for a study grant	48,4%	45,7%	60,4%	53,8%	30,0%	41,6%	87,3%	26,3%	44,2%	61,6%	61,0%
Making use of the public library	45,3%	59,9%	50,9%	47,1%	43,2%	31,2%	56,6%	38,6%	44,0%	54,0%	34,2%
Retiring	45,2%	29,5%	39,7%	53,9%	30,3%	38,9%	59,5%	44,7%	38,6%	57,8%	60,1%
Moving and changing address within one country	45,1%	31,7%	34,1%	58,0%	28,4%	22,3%	53,0%	30,0%	44,1%	84,4%	55,1%
Becoming unemployed	33,8%	24,4%	33,0%	64,2%	14,1%	27,4%	62,1%	12,2%	17,7%	45,6%	36,0%
Needing a passport or visa to travel to another country	32,4%	34,5%	22,9%	36,7%	21,6%	26,5%	27,3%	26,2%	36,4%	35,3%	48,9%
Applying for a driver's licence	30,0%	23,3%	17,6%	25,8%	20,6%	17,1%	26,1%	18,2%	31,0%	60,4%	61,0%
Marrying or changing marital status	28,9%	26,2%	15,8%	31,2%	29,8%	18,4%	53,2%	14,2%	44,2%	44,4%	29,5%
Coming into an inheritance	28,5%	32,6%	35,4%	25,7%	22,8%	13,1%	39,6%	26,4%	36,7%	39,0%	24,0%
Reporting a crime	24,6%	17,7%	23,8%	14,6%	27,9%	19,4%	48,3%	14,0%	33,5%	35,4%	14,5%
Declaring the birth of a child	24,1%	29,0%	12,2%	25,4%	28,2%	18,8%	12,1%	16,2%	36,5%	43,3%	19,1%
Death of a close relative	22,1%	28,6%	16,2%	19,6%	12,3%	12,3%	44,6%	15,3%	31,0%	32,1%	27,3%
Being taken into hospital	14,4%	13,5%	15,1%	10,9%	10,8%	13,2%	26,0%	13,0%	21,2%	19,8%	8,5%
<b>Average % for all 20 life-events</b>	<b>41,1%</b>	<b>42,6%</b>	<b>39,5%</b>	<b>45,3%</b>	<b>33,2%</b>	<b>28,5%</b>	<b>55,2%</b>	<b>31,5%</b>	<b>42,0%</b>	<b>55,5%</b>	<b>46,6%</b>

Table 6: Use of e-mail/Internet if in contact with public administrations in the past 12 months

specific life experience. The same holds to a lesser extent for **declaring income taxes** (62.5%) although there are some notable exceptions, such as in Germany, Italy and Poland.

Apart from these top two life-events, for which many Internet users readily go online to interact with the responsible public administrations, eGovernment use is at its highest for use with events that are either related to **education** or that have to do with **cross-border mobility**. This is exemplified the most by the Netherlands and Sweden where — for several life-events — eGovernment take-up reaches 75% or more.

In Figure 18 we compare the available EU benchmark data on the online availability and sophistication of 12 basic public services for citizens with the pilot sample findings concerning the use of eGovernment in the context of 12 corresponding life-events. (Capgemini, 2007). This comparison has only an indicative value, since there is not a perfect match between the service-related definition in the supply side study and the life-events interpretation of the user satisfaction and impact study. The high online availability and maturity scores for **income taxes** and **job search services** correspond with high levels of take-up. There are, however, several remarkable discrepancies between supply-side provision and development, on the one hand, and actual take-up, on the other. Most notable examples include **declarations to the police, certificates and health-related services**. Also the comparison between countries is interesting. The order of importance is changing and for some countries there is a rather small use of governments services despite the high availability and sophistication of these.

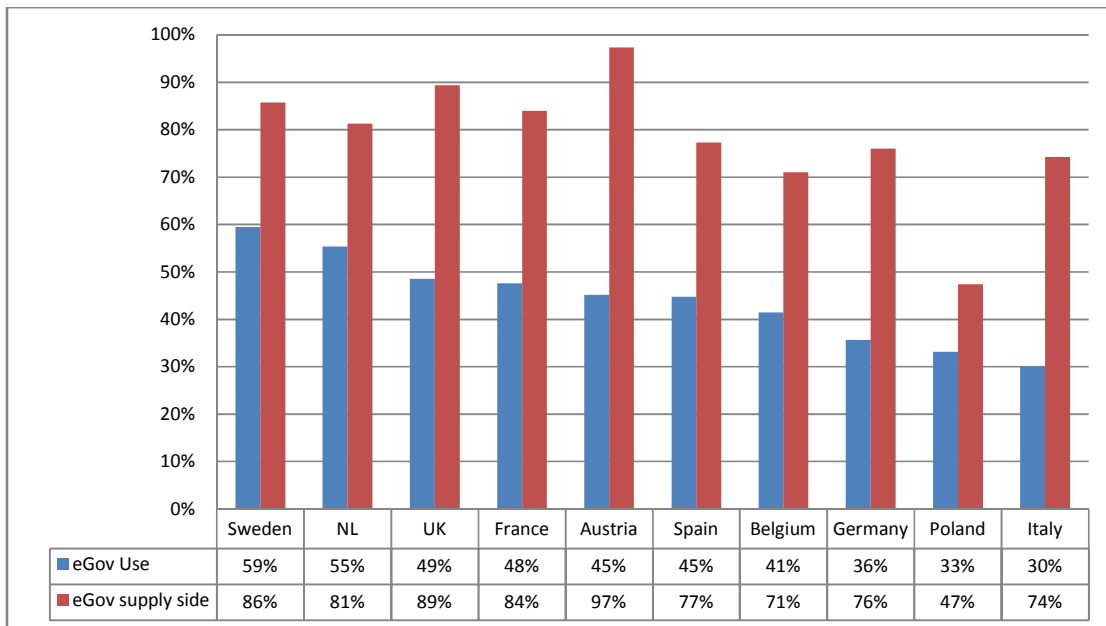
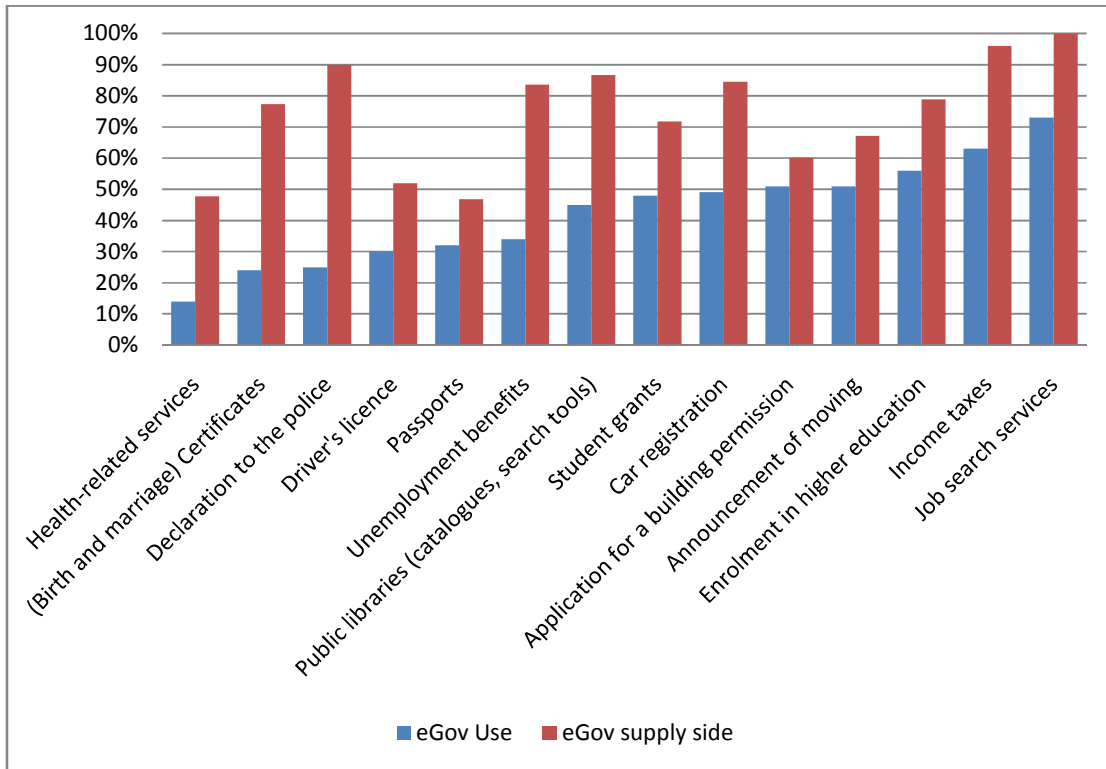


Figure 18: Use of eGovernment services compared to front office availability of the 12 basic public services for citizens

### 1.11.2.2.3 Developing an eGovernment user typology

From a cross-analysis of two main factors which are as follows: (1) the life-events that as a result of which respondents came into contact with public administrations over the past 12 months, and (2) whether or not respondents used the Internet in the context of these life-events, we developed the following **eGovernment user typology**. This typology is based on the extent to which the Internet is used by respondents for all those life-events that apply to their specific situation (N=9,117). However, we do wish to note that, for 883 respondents (8,8%), none of the 20 life-events applied as a context for their contact with public administrations in the past 12 months.

**Trust in the Internet and in government** appear to be the main differentiators between these eGovernment user groups, rather than socio-demographic characteristics or other indicators of Internet behaviour (adoption, intensity of use, or use of private e-services).

eGovernment user typology
<p><b>Heavy users (36,2%): used the Internet in the context of more than 2/3 of the life-events for which they had contact with public administrations in the past 12 months</b></p> <ul style="list-style-type: none"><li>• Highest levels of satisfaction with government information and public services online</li><li>• Higher proportion of highly educated (53,7%) and socio-economic active individuals (67,1%)</li><li>• Most intensive users of eBanking (64,3% at least weekly), and most satisfied with it</li><li>• High level of trust in the Internet to submit personal data to government websites (53%)</li><li>• Relatively high level of trust in government and public administrations (29%), satisfaction with the quality of public service provision = 6,5/10</li></ul>
<p><b>Medium users (29,4%): used the Internet in the context of at least 1/3 but not more than 2/3 of the life-events for which they had contact with public administrations in the past 12 months</b></p> <ul style="list-style-type: none"><li>• Higher level of trust in the Internet and in government</li></ul>
<p><b>Light users (34,3%): used the Internet in the context of less than 1/3 of the life-events for which they had contact with public administrations in the past 12 months</b></p> <ul style="list-style-type: none"><li>• Nearly half of this group in the past 12 months did not use public services online, 20% did not look for information on government websites (also lowest level of satisfaction with both kinds of Internet services)</li><li>• 50% of this group, in the past 12 months, did not have any contact with public administrations via the Internet</li><li>• Higher proportion of non-active people (42,3%)</li><li>• Often more recent adopters of the Internet (52,6%)</li><li>• Low level of trust in the Internet and in public agencies and services, with level of satisfaction with public service provision = 5,7/10</li></ul>

Table 7: eGovernment user typology

When we reproduce this typology at the country level, we observe that there are large groups of heavy eGovernment users in France, the Netherlands, and Sweden. Light users are most present in Italy, Germany and Poland.

		Light users of eGovernment	Medium users of eGovernment	Heavy users of eGovernment	Total (N=10.000)
Total (N=9117)		34,3%	29,4%	36,2%	100,0%
Country	Austria	29,0%	33,1%	37,9%	100,0%
	Belgium	38,6%	27,0%	34,4%	100,0%
	France	19,6%	29,6%	50,8%	100,0%
	Germany	50,2%	25,5%	24,3%	100,0%
	Italy	52,3%	26,4%	21,3%	100,0%
	Netherlands	19,0%	33,8%	47,2%	100,0%
	Poland	47,1%	29,5%	23,4%	100,0%
	Spain	32,9%	30,2%	37,0%	100,0%
	Sweden	20,7%	29,2%	50,1%	100,0%
	UK	35,4%	29,7%	34,9%	100,0%

Table 8: eGovernment user typology per country

#### 1.11.2.2.4 Most intensive e-mail/Internet contact with public administrations

In order to focus the measurement of satisfaction on the eGovernment process that is particularly related to one specific life-event, the respondents were asked to indicate for which life-event, in the past 12 months, they came into contact with public agencies or officials the most by e-mail and/or via the Internet (websites). As indicated earlier, this could be one of three options: it could be either one of the 20 life-events listed, another event if none of these 20 applied, or no life-event/Internet contact whatsoever.

Citizens use e-mail and the Internet the most in their contacts with public agencies or officials in the context of their **declaration of income taxes** or the necessity/desire of **looking for a job**.

The survey results on user satisfaction that follow are based on the evaluation by each respondent/citizen of the particular life-event for which he or she had contact with public administrations the most in the past 12 months by e-mail and/or via the Internet.

Satisfaction scores therefore often relate to the e-services the ten Member States provide concerning tax declarations and job searches. Some exceptions occur in Italy and Poland.

Of all the Internet users who had been in contact with their public administrations during the past 12 months (94% in total), 19.1% (18% of the total sample) did not use the Internet to interact with public agencies or officials. This group of **19.1% non-users** will be looked at in more detail in chapter 1.11.2.4 on the non-use of eGovernment services.

On average, 6% of the total sample claims not to have had any contact with public administrations in the past 12 months.



	Total sample	Austria	Belgium	France	Germany	Italy	NL	Poland	Spain	Sweden	UK
Declaring income taxes	20,7%	34,0%	15,8%	35,7%	13,9%	6,5%	35,0%	2,5%	24,0%	30,2%	9,8%
Looking for a job	17,2%	14,7%	12,7%	20,7%	16,6%	19,7%	8,8%	29,7%	19,0%	12,2%	18,4%
Making use of the public library	6,5%	5,6%	11,0%	2,7%	5,6%	2,6%	10,7%	7,7%	4,1%	7,1%	7,4%
Enrolling in higher education	5,9%	4,8%	3,2%	4,7%	2,9%	9,4%	5,9%	9,5%	6,8%	6,7%	5,6%
Buying, building or renovating a house	3,6%	2,8%	5,9%	4,2%	2,2%	3,0%	2,7%	4,6%	1,1%	4,5%	4,6%
Buying a car	2,7%	1,8%	2,4%	3,6%	3,0%	2,6%	1,6%	5,8%	1,1%	2,9%	1,8%
Applying for a study grant	2,3%	1,8%	4,2%	1,4%	1,0%	2,6%	3,1%	1,3%	3,0%	2,2%	2,3%
Needing a passport or visa to travel to another country	1,9%	2,4%	0,8%	0,7%	1,0%	1,9%	1,1%	1,6%	3,0%	1,4%	4,6%
Moving and changing address within one country	1,7%	1,3%	1,2%	2,9%	1,3%	0,7%	1,6%	0,6%	1,2%	4,2%	1,7%
Retiring	0,9%	0,3%	1,3%	1,2%	0,6%	2,1%	0,6%	0,6%	0,1%	1,1%	1,5%
Becoming unemployed	0,8%	0,4%	0,7%	4,1%	0,2%	0,4%	0,6%	0,1%	0,4%	0,9%	0,6%
Starting or preparing to study or work in another country	0,8%	1,8%	0,2%	1,1%	1,2%	1,1%	0,5%	0,8%	1,2%	0,5%	0,1%
Applying for a driver's licence	0,8%	0,2%	0,4%	0,1%	0,5%	0,8%	0,7%	0,3%	0,5%	2,1%	2,4%
Reporting a crime	0,8%	0,0%	1,5%	0,3%	1,0%	0,4%	2,0%	0,1%	0,9%	0,8%	0,9%
Moving or preparing to move to another country	0,4%	0,2%	0,3%	0,6%	0,5%	0,4%	0,4%	0,5%	0,2%	0,4%	0,6%
Marrying or changing marital status	0,4%	0,2%	0,1%	0,3%	0,6%	0,2%	1,1%	0,1%	0,2%	0,6%	0,3%
Death of a close relative	0,3%	0,4%	0,3%	0,0%	0,4%	0,3%	0,4%	0,0%	0,3%	0,5%	0,7%
Being taken into hospital	0,3%	0,2%	0,5%	0,0%	0,5%	0,3%	0,3%	0,5%	0,1%	0,3%	0,5%
Declaring the birth of a child	0,3%	0,1%	0,1%	0,0%	0,2%	0,5%	0,0%	0,3%	0,3%	0,8%	0,4%
Coming into an inheritance	0,2%	0,3%	0,3%	0,0%	0,1%	0,1%	0,1%	0,3%	0,3%	0,1%	0,2%
Other	7,5%	6,7%	9,4%	5,4%	8,6%	13,2%	3,4%	4,6%	7,9%	6,1%	9,7%
None : No e-mail/Internet contact	18,0%	14,1%	21,2%	7,9%	27,0%	24,6%	10,9%	22,9%	21,6%	12,8%	16,8%
None : No contact whatsoever	6,0%	6,1%	6,3%	2,4%	11,2%	6,5%	8,3%	5,6%	3,0%	1,6%	9,1%
Total (N=10.000)	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 9: Life-events for which e-mail/Internet was used most intensively in past 12 months

#### 1.11.2.2.5 Level of interaction

Contacting or interacting with public administrations can take many different formats, depending also on the level of sophistication of the services that are provided online. (Cappgemini, 2007) Therefore we asked respondents what format their most intensive Internet contact with public agencies or officials had taken and whether it consisted of: e-mail, information, downloading, uploading forms and/or transactions. From their answers, we determined both the extent at which contacts took place at these subsequent levels of online sophistication as well as the highest level at which each respondent interacted with public administrations. Note that highest interaction levels in this analysis are always related to life-events and to the corresponding services that are specific to each respondent's situation.

In two-thirds of the cases in which citizens had contact with public administrations most intensively via the Internet (N=7,599), they received or were looking for information. In about half of the cases, respondents communicated by e-mail. Both downloading and uploading forms for declarations, registrations or service applications involved both +/- 32% of all users. Finally, 19% of the respondents undertook a full electronic transaction.

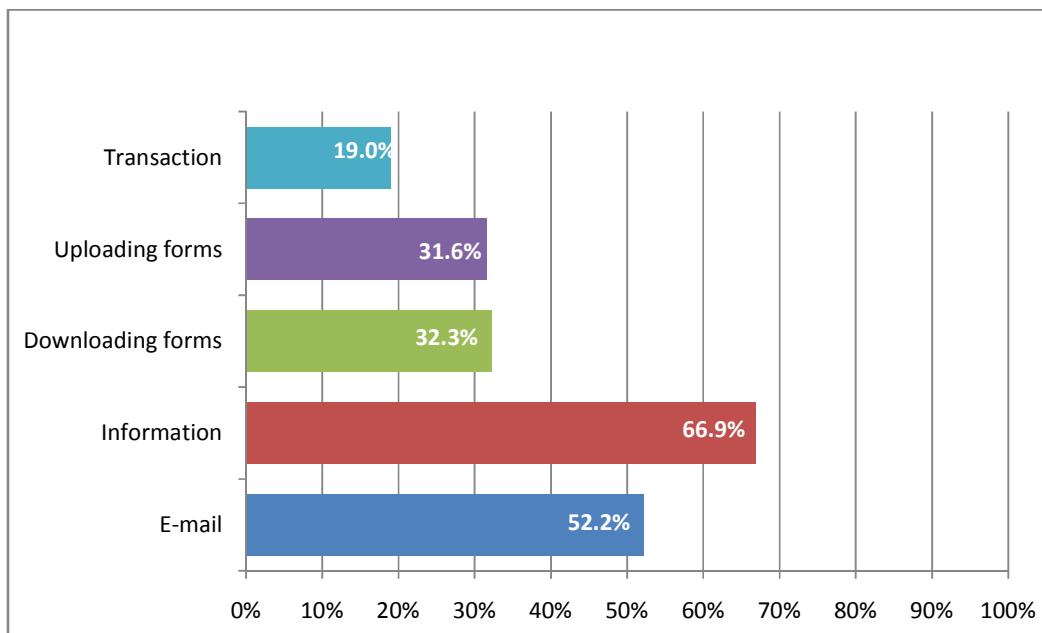


Figure 19: Interaction levels of eGovernment contact

Translated into figures that relate to the highest level on which each respondent interacted with public administrations, we see that 14% did not go any further than sending and/or receiving e-mail, and that receiving/searching information was the highest form of interaction for 29% of those who had Internet contact. Conversely, this means that 57% did make use of a service that was provided online, whether this occurred through downloadable or electronically filled-in and returned form or, ultimately, as an actual transaction (19%).

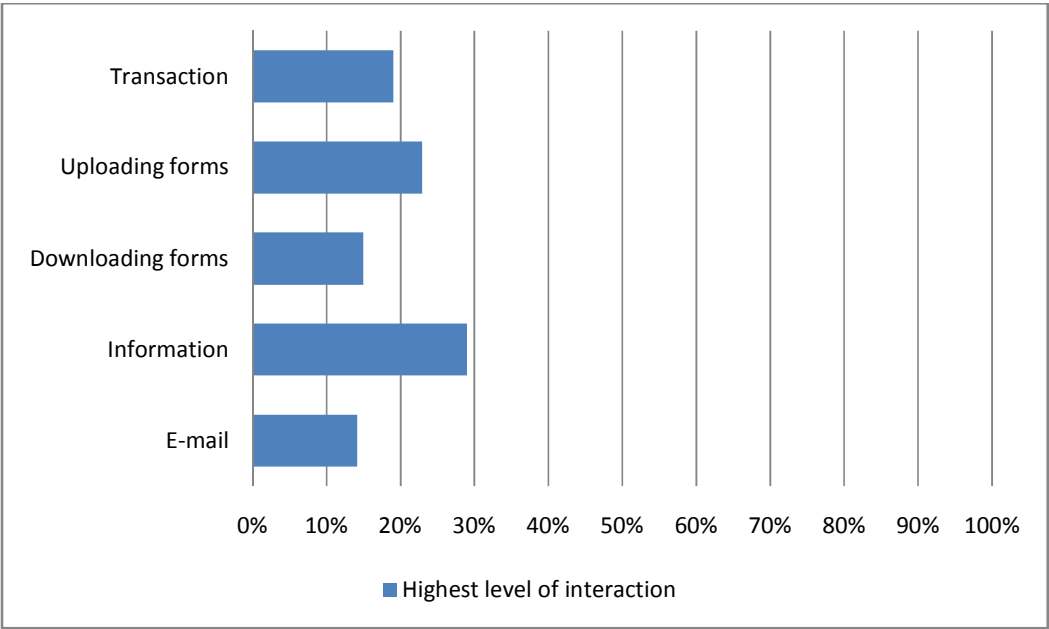


Figure 20: Highest interaction level of eGovernment contact

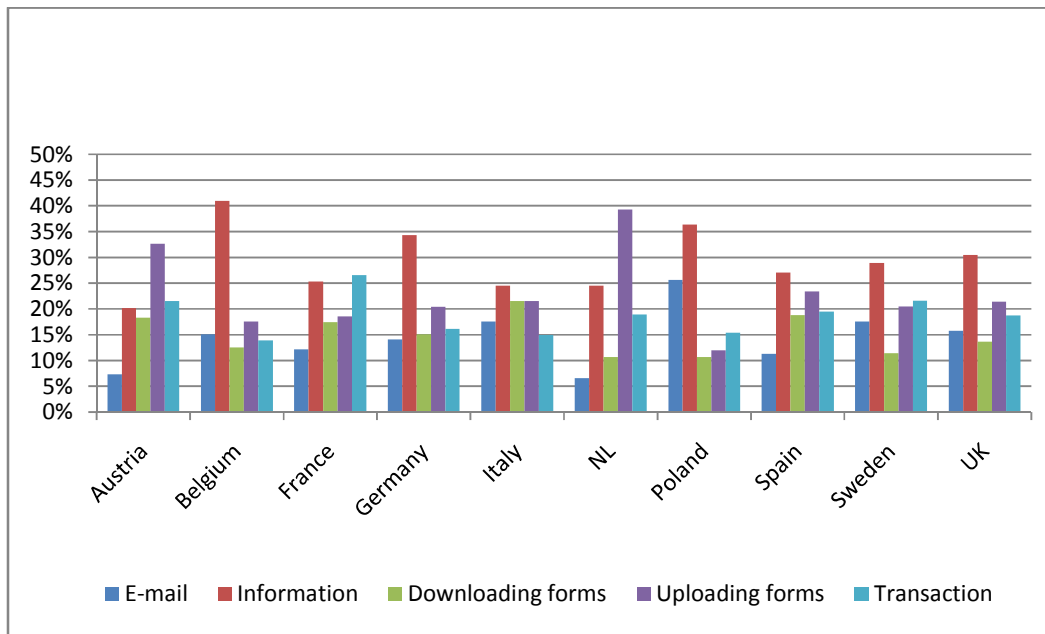


Figure 21: Highest interaction level of eGovernment contact per country

Care needs to be taken when comparing countries at this level of generality. The numbers of respondents that used the Internet the most for various life-events, as well as the level of sophistication of online services available in the context of these life-events, differ from one country to another. For example, in the Netherlands, analysis is based mostly on Internet applications for declaring income taxes (35%) and far less for looking for a job (9%), while in Poland almost 30% of the most intensive eGovernment experiences relate to looking for a job, and only 2.5% to tax declarations.

Still, the highest level of interaction respondents attained in the context of their most intensive eGovernment experience in the last 12 months has indicative value in its own right. As such, we notice that particularly in Belgium and Poland higher levels of eGovernment interaction are quite limited. However, above 50% of the respondents in Austria and the Netherlands uploaded official forms or performed transactions with public offices. Transactions took place the most in France (26.6%).

The level at which citizens engage in online interaction with public administrations is related to their trust in the Internet to submit personal data via government websites: the higher the confidence in online data exchange with public agencies, the more likely respondents are engaging in the higher levels of eGovernment (i.e. uploading filled-in

forms and transactions). As a result, respondents enter into transactions with public administration more often when their trust in the Internet to submit personal data is high (23%), compared to Internet users with low levels of trust (of whom only 13% is involved in undertaking transactions).

Hence, e-mail communication is often the highest level on which light eGovernment users interact, while medium and heavy users engage more frequently in the uploading and transactional forms of interaction.

### 1.11.2.3 Channel preferences

Apart from their actual use or non-use of the Internet, for each life-event respondents were asked to select the one channel they would prefer as their main means of interacting with public administrations (if they were to come into contact with it again): in person (face-to-face), by mail, telephone, or e-mail/via the Internet.

In the following table we present:

1. The percentage of respondents (N=10,000) who had contact with public administrations for a given life-event in the past 12 months;
2. The percentage of respondents who used the Internet when they had contact with public administrations for a given life-event in the past 12 months;
3. The channel respondents would prefer if they would have contact again with public administrations for a given life-event: in person, mail, telephone or e-mail/the Internet.

In a separate table, *per* country, the percentages of respondents are presented who would prefer to use the Internet in the event that they would have contact again with a public administration for a given life-event.

Most of the time, the preference expressed to use the Internet to obtain a service is higher than the actual use. There are some exceptions, however, for example: looking for a job, housing and car purchase matters. For those life-events for which citizens use the Internet the least, the declared preferences to handle matters online are systematically higher than respondents' actual experience of the events (e.g., marriage, birth, death).

At the individual country level, we notice that high levels of use coincide with high preference to use the Internet, e.g., for declaring income taxes in the Netherlands and Sweden. In Belgium, people want to manage cross-border mobility issues *via* the Internet. Preference to use the Internet for interactions with government is quite low in Germany and Italy.

For a more in-depth analysis of channel preferences, we take a look, through cross-tabulations, at the channels preferred by users and non-users respectively. To illustrate this approach, we use the example of income tax declaration as the life-event for which respondents in our sample used the Internet most intensively. The example shows how over 90% of the respondents who, in the past 12 months, used the Internet for tax declarations, prefers to use this channel again in the future. Among those who did not use the Internet — although they had to deal with declaring income taxes in the past year — 38% claims to have a preference for using the Internet, while 62% prefers other ways to interact with the responsible public agencies.

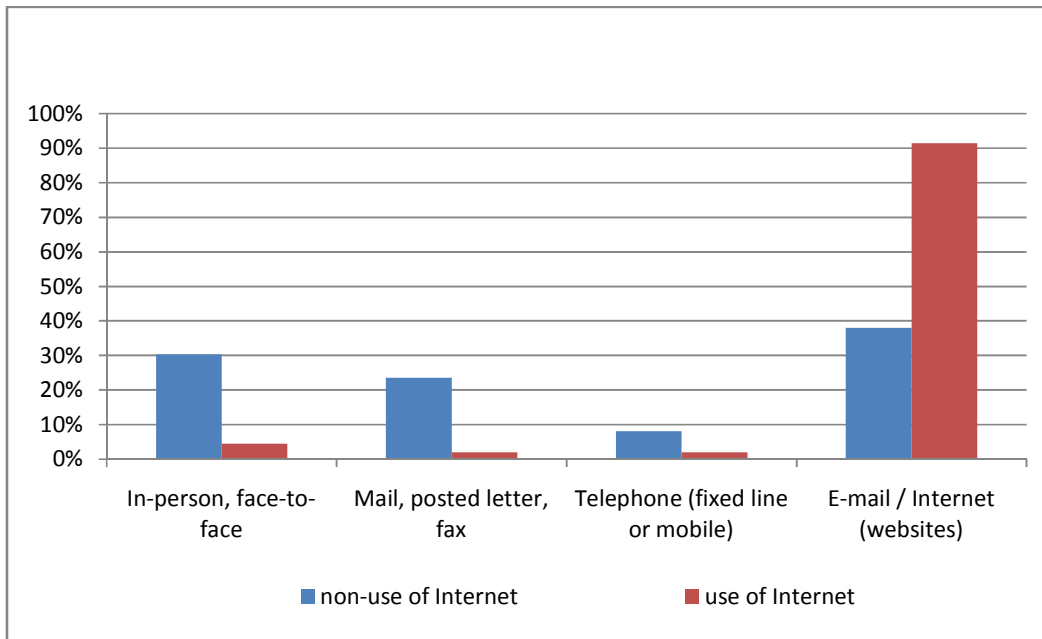


Figure 22: Channel preferences for declaring income taxes

	% of respondents who had contact with public administrations in the past 12 months	% of respondents who used the Internet for this contact with public administrations in the past 12 months	Channel preferences (in % of respondents who had contact with public administrations in the past 12 months)			
			In-person, face-to-face	Mail, posted letter, fax	Telephone (fixed line or mobile)	E-mail / Internet (websites)
Declaring income taxes	55,3%	62,5%	14,2%	10,1%	4,3%	71,4%
Looking for a job	41,3%	73,3%	32,1%	4,2%	6,4%	57,3%
Enrolling in higher education	26,7%	55,5%	30,0%	7,2%	5,8%	57,0%
Moving and changing address within one country	19,5%	45,1%	29,5%	6,8%	7,9%	55,9%
Applying for a study grant	16,9%	48,4%	25,6%	12,0%	7,1%	55,3%
Starting or preparing to study or work in another country	8,4%	56,4%	25,8%	10,2%	11,8%	52,1%
Needing a passport or visa to travel to another country	21,6%	32,4%	38,2%	6,4%	5,2%	50,1%
Applying for a driver's licence	13,6%	30,0%	35,6%	8,4%	7,2%	48,8%
Moving or preparing to move to another country	6,5%	51,0%	27,7%	13,2%	12,0%	47,1%
Retiring	14,4%	33,8%	41,2%	6,2%	8,7%	43,9%
Becoming unemployed	9,0%	45,2%	30,6%	13,5%	12,0%	43,9%
Buying, building or renovating a house	21,6%	51,4%	42,7%	5,2%	9,1%	43,0%
Making use of the public library	34,2%	45,3%	52,6%	2,2%	2,9%	42,3%
Buying a car	22,9%	49,3%	50,0%	4,9%	5,8%	39,3%
Declaring the birth of a child	8,5%	24,1%	43,9%	8,9%	10,1%	37,1%
Marrying or changing marital status	9,1%	28,9%	45,2%	8,3%	9,5%	37,0%
Reporting a crime	13,7%	24,6%	42,9%	5,6%	17,6%	33,9%
Coming into an inheritance	7,3%	28,5%	41,3%	15,0%	12,5%	31,2%
Death of a close relative	9,0%	22,1%	51,8%	9,5%	14,0%	24,6%
Being taken into hospital	17,5%	14,4%	65,2%	5,5%	10,7%	18,7%

Table 10: Channel preferences for contact with public administrations

	Preference to use the Internet for future contact with public administrations (in % of respondents who had contact with public administrations in the past 12 months)										
	Austria	Belgium	France	Germany	Italy	NL	Poland	Spain	Sweden	UK	
Declaring income taxes	80,8%	61,1%	79,9%	49,0%	46,6%	85,1%	70,3%	71,7%	82,1%	65,9%	
Looking for a job	68,5%	58,0%	61,5%	46,3%	47,6%	66,0%	56,3%	55,6%	58,0%	63,9%	
Enrolling in higher education	58,7%	44,0%	60,7%	37,9%	46,2%	71,9%	65,0%	50,6%	79,2%	67,7%	
Moving and changing address within one country	47,6%	41,4%	59,5%	39,7%	37,0%	74,1%	48,5%	51,2%	82,0%	75,4%	
Applying for a study grant	48,3%	58,0%	56,0%	35,0%	40,9%	81,3%	58,2%	53,7%	72,9%	58,6%	
Starting or preparing to study or work in another country	59,5%	77,7%	46,6%	39,6%	33,9%	74,3%	60,3%	50,3%	66,7%	56,9%	
Needing a passport or visa to travel to another country	49,4%	40,4%	41,5%	36,0%	43,4%	48,5%	63,7%	54,6%	50,2%	65,0%	
Applying for a driver's licence	38,7%	33,5%	37,3%	25,6%	32,3%	54,3%	59,0%	48,6%	75,8%	68,4%	
Moving or preparing to move to another country	52,5%	82,0%	47,8%	47,9%	33,4%	56,1%	38,6%	40,3%	61,1%	55,7%	
Retiring	47,1%	41,7%	48,2%	23,9%	38,4%	55,6%	50,3%	34,6%	52,2%	50,9%	
Becoming unemployed	51,0%	30,9%	61,5%	27,6%	29,2%	57,9%	45,4%	39,4%	54,4%	35,3%	
Buying, building or renovating a house	43,3%	50,8%	42,7%	37,1%	27,3%	54,1%	37,2%	40,2%	48,0%	64,0%	
Making use of the public library	49,9%	40,9%	40,1%	32,7%	38,9%	47,5%	52,0%	43,7%	42,1%	32,0%	
Buying a car	39,4%	36,7%	43,5%	32,4%	26,1%	49,1%	40,2%	38,0%	47,4%	44,9%	
Declaring the birth of a child	35,2%	15,4%	32,1%	31,4%	39,9%	17,8%	44,1%	44,5%	56,0%	28,0%	
Marrying or changing marital status	42,6%	18,9%	30,6%	41,9%	25,7%	41,7%	31,3%	45,2%	41,7%	60,0%	
Reporting a crime	30,2%	42,2%	23,7%	33,3%	24,9%	43,2%	36,4%	37,7%	40,0%	28,8%	
Coming into an inheritance	37,1%	31,3%	22,8%	20,4%	22,0%	41,1%	34,6%	31,0%	30,1%	49,9%	
Death of a close relative	24,7%	14,0%	21,7%	21,5%	19,8%	40,6%	23,9%	41,1%	22,9%	24,8%	
Being taken into hospital	18,8%	18,4%	14,7%	14,7%	22,9%	20,4%	22,8%	25,5%	16,4%	9,8%	

Table 11: Internet preference for contact with public administrations per country



#### 1.11.2.4 Non-use of eGovernment in citizens' life-events

Here, we focus on the profiles, barriers to use, channel preferences and likelihood of future eGovernment take-up of the group of respondents who did not use the Internet to come into contact with public administrations in the past 12 months. We draw attention to the fact that 76% of the total sample had contact with public agencies via the Internet as a result of at least one event in their lives. 6% indicated that they did not have any contact with public agencies or officials for whatever reason in the past 12 months. As a result, the following analysis relates to 18% of all respondents in the sample (N=1,798).

##### 1.11.2.4.1 Non-use and non-users' profiles

19.1% of all Internet users who had contact with public administrations in the past 12 months (94% of the total sample) did not use e-mail/Internet to interact with government. 44% of light eGovernment users (as defined in the previous chapter 1.9.1) did not come into contact with public services online in the past 12 months.

The non-use percentage amounts to 29% of **late adopters** and of **lower educated people**.

However, no significant differences exist between heavy, medium or light Internet users. The readiness to use e-mail and/or the Internet to come into contact with public agencies is related to the level of trust respondents have in public administrations and in the Internet as a channel to exchange data with them. Non-use varies from 11% of respondents with a high level of trust to 25% of people with a **low level of trust** in government and public administrations.

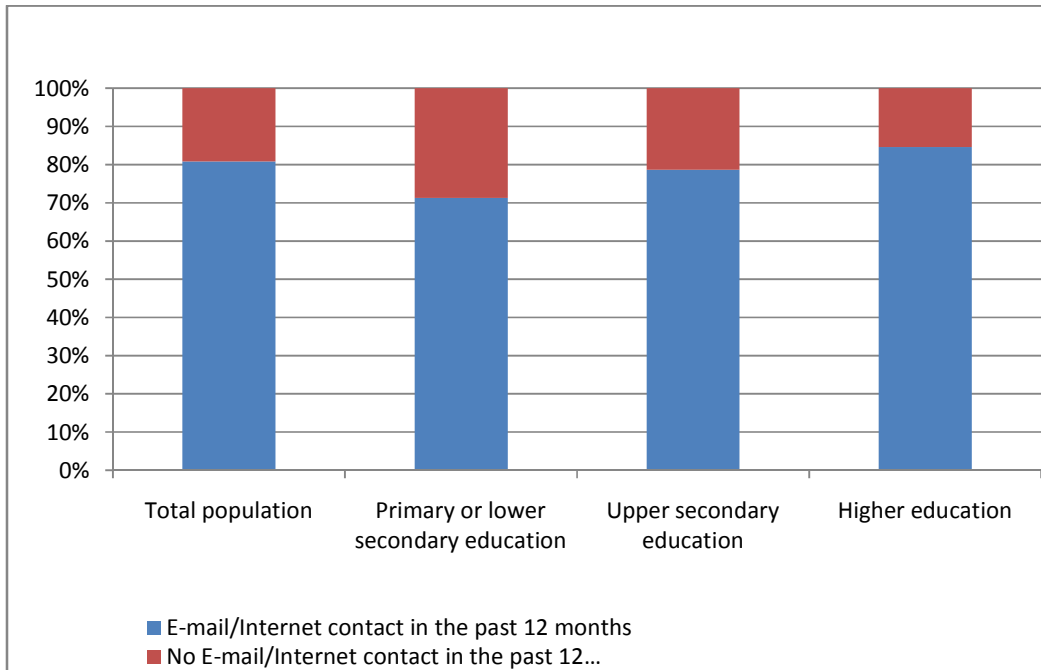


Figure 23: Use and non-use of the Internet for contact with public administrations

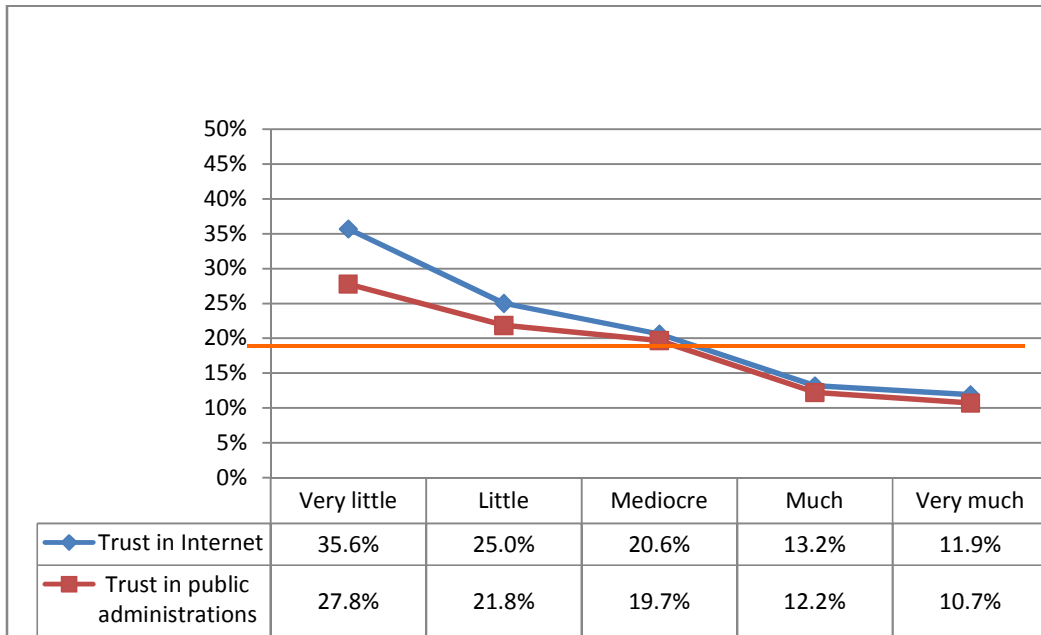


Figure 24: Non-use of eGovernment by level of trust

Non-use of the Internet in the context of citizens' life-event-related contacts with public administrations is lowest in France, the Netherlands and Sweden (where it is less than

15%). It is highest in Italy, Germany and Poland (where it ranges from between 25% and 30%).

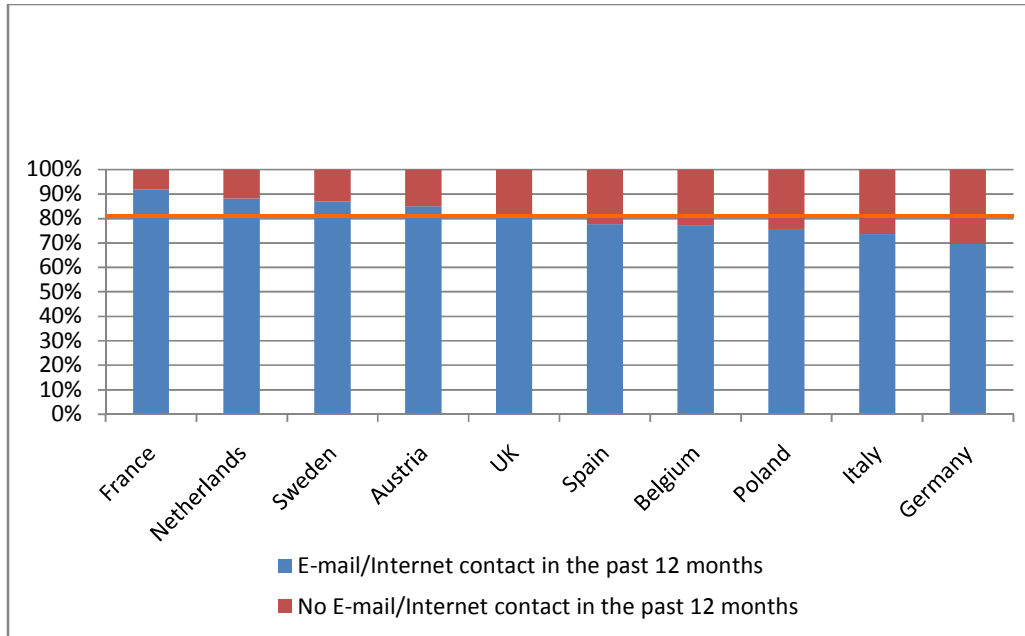


Figure 25: Use/non-use of the Internet for contact with public administrations per country

#### 1.11.2.4.2 Reasons for non-use

When respondents, in the past 12 months did not come into contact with public agencies or officials *via* the Internet they were asked to indicate all the reasons that applied to them for not having used e-mail or the Internet (including websites) to come into contact with public agencies or officials.

There are three main reasons why people who have Internet at their disposal do not use it to interact with public administrations:

1. No need to use the Internet to get what they want or need (44.5%)
2. Lack of awareness of existing information sources or services (27.4%)
3. No willingness to use the Internet for these purposes (14.7%).

Other important reasons why people with Internet access do not use it to interact with public administrations can be grouped into two categories:

1. Perceived or expected quality of service, inability to find the information or service, and lack of trust to use the Internet (each indicated by about 10% of the non-users);
2. Accessibility, usability and lack of personal skills (each about 5% of the non-users).

Need and willingness seem to be the most important determinants: people either do not need or do not want to use the Internet to interact with public sector agencies.

From a policy perspective, communication about eGovernment initiatives and applications may prove to be a crucial element in stimulating take-up. Lack of awareness of availability of particular services certainly is a key issue.

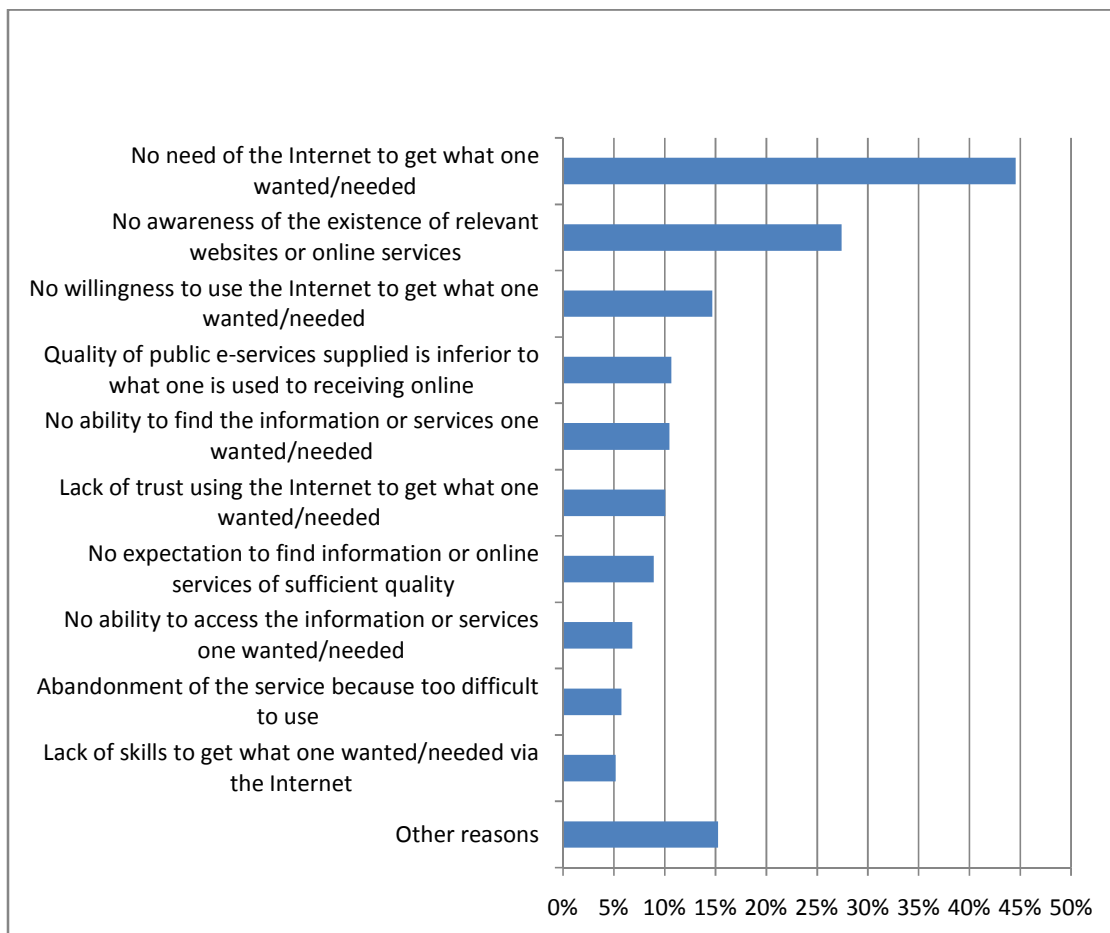


Figure 26: Reasons for non-use of the Internet for contact with public administrations

#### 1.11.2.4.3 Channel preferences and likelihood of future use

Non-users were asked about two issues: (1) by which means they would prefer to interact (in person, mail, telephone or the Internet), and (2) how likely it is that they would use the Internet (a 5-point scale ranging from very likely to very unlikely), if they were to come into contact with public agencies in the future.

eGovernment take-up still seems to have a remarkable possible margin of growth within the Internet population. About 35% of the people who did not use eGovernment services within the past 12 months nevertheless pointed out that the Internet is the channel they prefer to use to interact with public agencies. At the same time, 15% of current non-users is quite certain to use eGovernment in the future. Almost 50% of the non-users prefers personal contact.

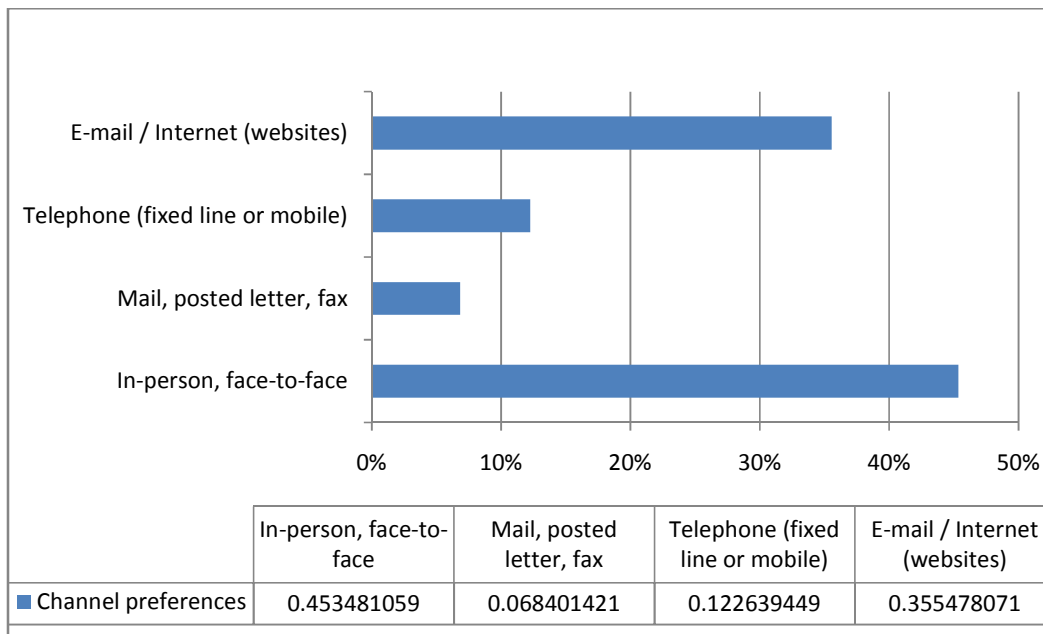


Figure 27: Channel preferences of current non-users

	Channel preferences				N
	In-person, face-to-face	Mail, posted letter, fax	Telephone (fixed line or mobile)	E-mail / Internet (websites)	
Lack of awareness	36,60%	4,70%	9,70%	<b>49,10%</b>	493
No need to use the Internet	<b>51,00%</b>	5,40%	12,50%	31,10%	801
No willingness to use the Internet	<b>62,70%</b>	5,80%	14,90%	16,60%	264
Lack of trust using the Internet	<b>58,30%</b>	7,80%	12,70%	21,20%	181
Lack of skills to use the Internet	38,90%	<b>12,10%</b>	<b>20,50%</b>	28,60%	93
No ability to find the information or services	40,30%	5,30%	10,40%	<b>44,00%</b>	188
No ability to access the information or services	<b>50,00%</b>	4,20%	11,40%	34,40%	122
Service is too difficult to use	43,20%	7,50%	<b>19,70%</b>	29,60%	103
No expectation to find sufficient quality	49,80%	4,90%	14,30%	31,00%	160
Inferior quality of public e-services supplied	47,40%	6,20%	13,80%	32,50%	192
Total	45,30%	6,80%	12,30%	35,50%	1798

Table 12: Channel preferences of current non-users by reason for non-use

Improving the **awareness** of and **ease of finding** public sector information and services online are the two measures most likely to stimulate higher take-up. Nearly half of the non-users who indicate both elements as barriers to use would nonetheless like to use the Internet as a way of interacting with government. Preferences for eGovernment are lowest among respondents who either are not willing to use the Internet in this context or who do not trust the Internet for these purposes. In both cases, people feel most comfortable with personal, face-to-face contacts. Non-users who claim that eGovernment services are/were too difficult to use — either due to problems of usability leading to online services being abandoned or to a lack of skills on the part of potential consumers — are most inclined to try to get what they want or need by using the telephone.

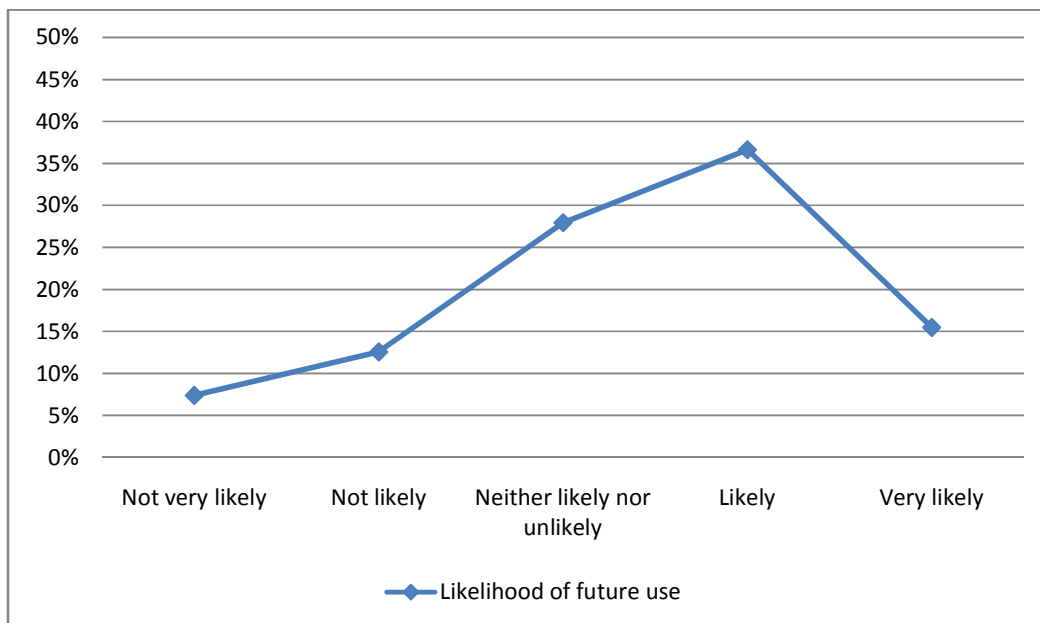


Figure 28: Likelihood of future use by current non-users (N=1.798)

### 1.11.3 Satisfaction with eGovernment

This core section of the report focuses on the measurement of satisfaction with eGovernment at two levels. First, at a general level, we analyze the overall level of satisfaction of respondents with the use of government website information, with applying for public services online, and with participating in policy-making processes *via* the Internet. Second, we focus on the evaluation by respondents of the life-event for which they interacted with public administrations the most per e-mail/via the Internet in the past 12 months.

#### 1.11.3.1 General satisfaction with eGovernment

Respondents expressed the extent to which they are satisfied (on a scale from 0 to 10) with three Internet applications: finding information on government websites, using an electronic form to apply for a public service, and participating in government policy-making processes.

eGovernment in general receives a quite moderate satisfaction score of 7.4-7.5 on a 10-point scale. eParticipation receives an average 7.0/10 score from Internet users who

engaged in this kind of online activity at least once in the past 12 months. A large gap exists between these scores and those given to private eBanking and eCommerce activities. Moreover, the reality behind this average scores shows that nearly one-third of the respondents are not at all satisfied with eGovernment (a maximum score of 5/10).

On average, female users are more satisfied with eGovernment than their male counterparts. The youngest Internet users, with average 7.1/10 scores for looking for information and applying for public services online, are the most critical regarding eGovernment applications. In the age category of users who are aged 55–64 years old, eGovernment information and services score highest with a 7.7 and 8.0 respectively.

Overall, eGovernment satisfaction is not correlated with citizens' educational level. Neither did we find significant differences according to the year of adoption or the intensity of use of the Internet.

The most important differentiators between users who are generally satisfied or dissatisfied with eGovernment appear to be (1) corresponding satisfaction or dissatisfaction with private Internet services, and (2) trust in public administrations and in using the Internet to interact with them.

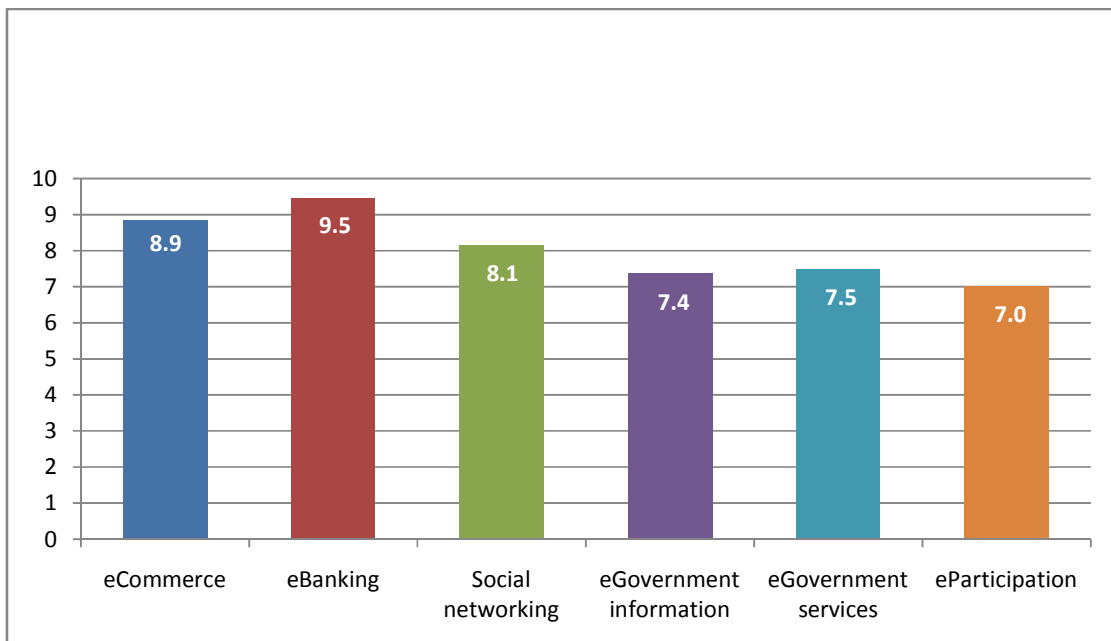


Figure 29: Satisfaction with private and public Internet services



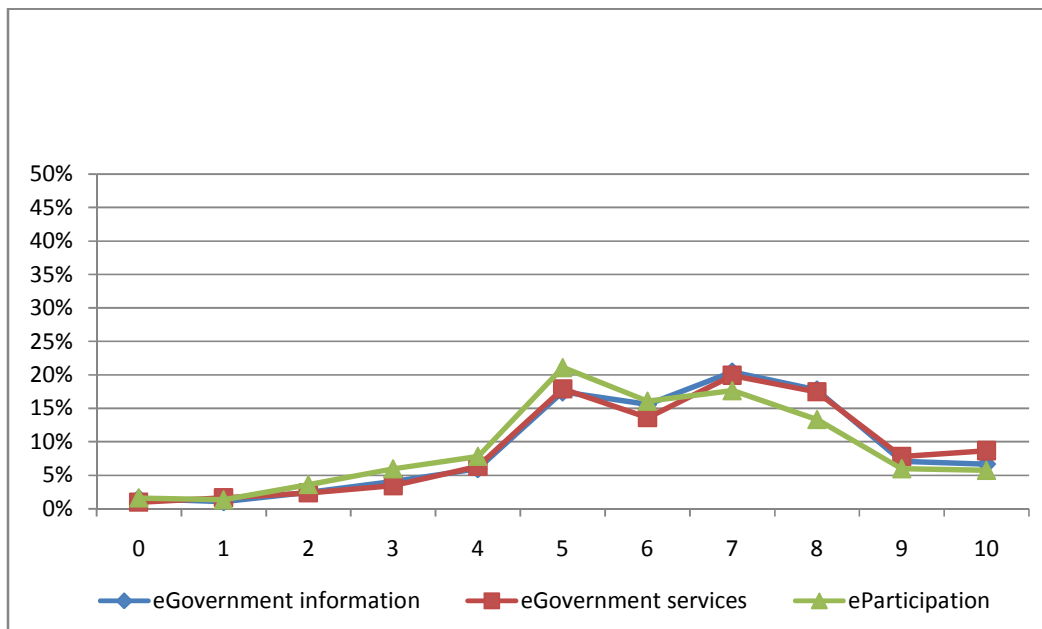


Figure 30: Satisfaction with eGovernment: overall scores

Two basic observations are of high importance. The first is that there is no evidence that positive experiences or high satisfaction with private Internet satisfaction leads to a more critical evaluation of eGovernment applications. On the contrary, satisfaction scores for private and public Internet services correlate positively.

The second observation is that factors of trust and levels of satisfaction with eGovernment services are correlated, more strongly than either of these two components' correlations with frequency or intensity of use. A positive relationship between use of and satisfaction with eGovernment applications exists, even when controlled for trust in government. In other words, more intensive use of eGovernment and higher levels of satisfaction with it are related to a certain extent. This relationship exists no matter what the degree of trust users have, or the extent to which they are satisfied with, general service provision by public administrations.

		Overall level of satisfaction (average score on 0 - 10 scale)		
		eInformation	eServices	eParticipation
<b>Trust in the Internet</b>	Low level of trust in the Internet	6,6	6,8	6,2
	Medium level of trust in the Internet	7,1	7,3	6,8
	High level of trust in the Internet	7,9	7,9	7,4
<b>Trust in Government</b>	Low level of trust in government	6,6	6,9	6,4
	Medium level of trust in government	7,5	7,5	7,0
	High level of trust in government	8,2	8,2	7,7
<b>Use of eGovernment</b>	Light users of eGovernment	7,2	7,2	7,0
	Medium users of eGovernment	7,4	7,4	7,0
	Heavy users of eGovernment	7,6	7,8	7,1

Table 13: Satisfaction with eGovernment by levels of trust and take-up

As a result, we see that the average eGovernment satisfaction score increases with:

1. The level of trust in the Internet: from 6.6 for government website information to 7.9 for both information and services in the category of users with a high level of trust.
2. The level of trust in government: ranging from 6.6 for government website information to as high as 8.2 for online information and services.

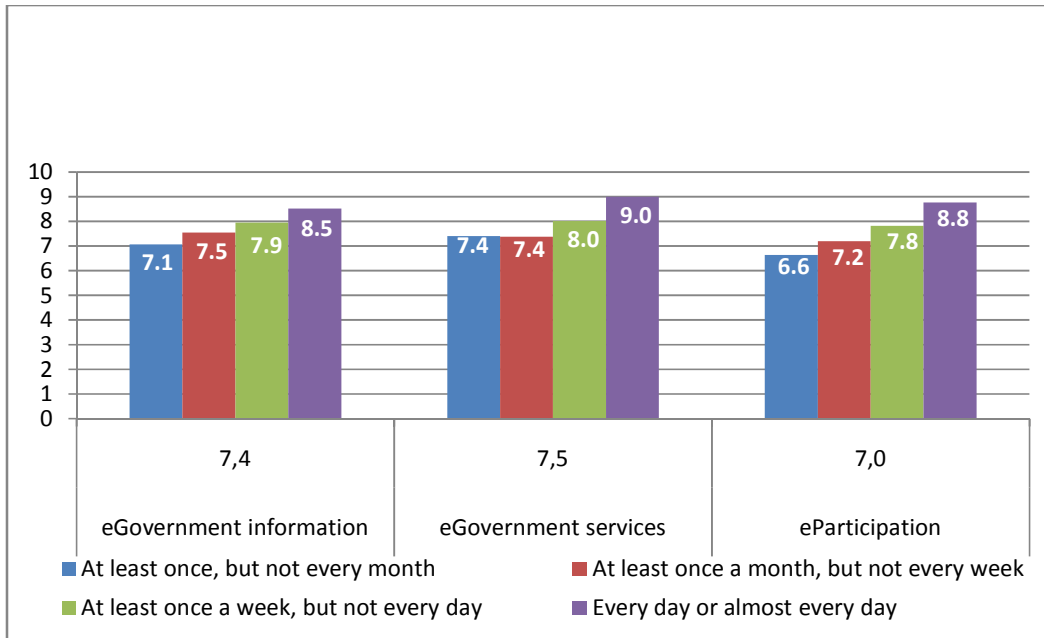


Figure 31: Satisfaction with eGovernment: average scores

Looking at general satisfaction with eGovernment, we do not observe huge differences between the ten EU Member States in the pilot. France and the UK lead the group of ten

Member States, closely followed by the Netherlands and Sweden (although satisfaction with eParticipation is low in Sweden).

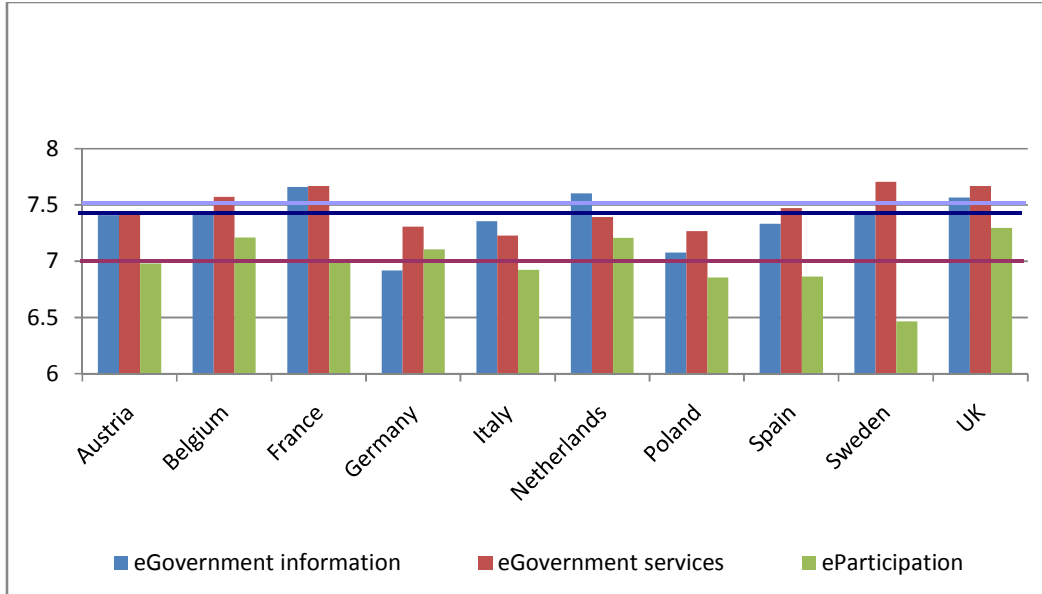


Figure 32: Satisfaction with eGovernment per country

### 1.11.3.2 Satisfaction with eGovernment in citizens' life-events

Here, we return to the life-events for which citizens used the Internet most intensively to interact with public administrations in the past 12 months (N=7,599). What is their overall level of satisfaction with the eGovernment process involved? How did their experience compare with what they had expected? Did they achieve their objectives with contacting public agencies or officials? What are the main factors of satisfaction or dissatisfaction with the online information/service delivery process? How likely are they to use the Internet again for future contacts with government in the context of the same life-event?

#### 1.11.3.2.1 Overall level of satisfaction

Based on the life-event for which citizens in ten EU Member States had e-mail/Internet contact with public administrations the most intensively in the last 12 months, the overall level of satisfaction with their life-event-based experience, expressed on a 0-10 scale, reaches a 7.4/10 score. Over 30% of the users rate their eGovernment experience with a

score of at least 8/10. At the same time, however, 30% gives a maximum 5/10 score (14.4% of the sample rate their experience at less than 5/10).

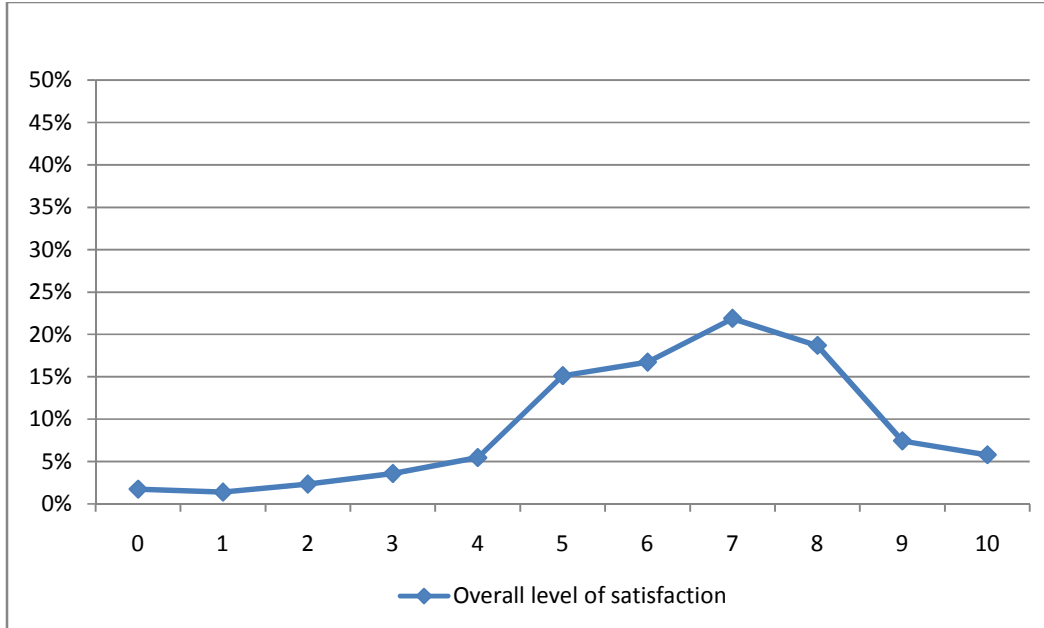


Figure 33: Satisfaction with the most intensive e-mail/Internet contact

For a respondent, the level of satisfaction with the most intensive Internet contact with public agencies in the past 12 months does not differ much according to socio-demographic characteristics. The average score does increase from 7.2 (16–25 years old) to 7.7 (+55 years old), but correlation with age is weak.

The degree of satisfaction with both private and public Internet services at the general level resonates with a more or less corresponding level of satisfaction in the context of the single life-event for which eGovernment was used most intensively. The most important correlates of the expression of satisfaction or dissatisfaction in the latter context, once again, appear to be trust in the Internet and, most of all, trust in government. Stronger use of eGovernment combines with a higher level of satisfaction.

		Overall level of satisfaction (average score on 0-10 scale)
<b>Trust in the Internet</b>	Low level of trust in the Internet	6,8
	Medium level of trust in the Internet	7,1
	High level of trust in the Internet	7,7
<b>Trust in Government</b>	Low level of trust in government	6,3
	Medium level of trust in government	7,5
	High level of trust in government	8,6
<b>Use of eGovernment</b>	Light users of eGovernment	7,0
	Medium users of eGovernment	7,4
	Heavy users of eGovernment	7,7

Table 14: Satisfaction with most intensive Internet contact by levels of trust and take-up

One of the most crucial findings of this study is the fact that the level of satisfaction increases with the level of interaction at which eGovernment users dealt or were able to deal with their needs for information or services. While e-mail communication (7.0/10), looking for information (7.1) and downloading forms to apply for services (7.3) on average score quite modestly, satisfaction with the possibilities of applying for services online (7.8) and full electronic case handling (7.9) is considerably higher.

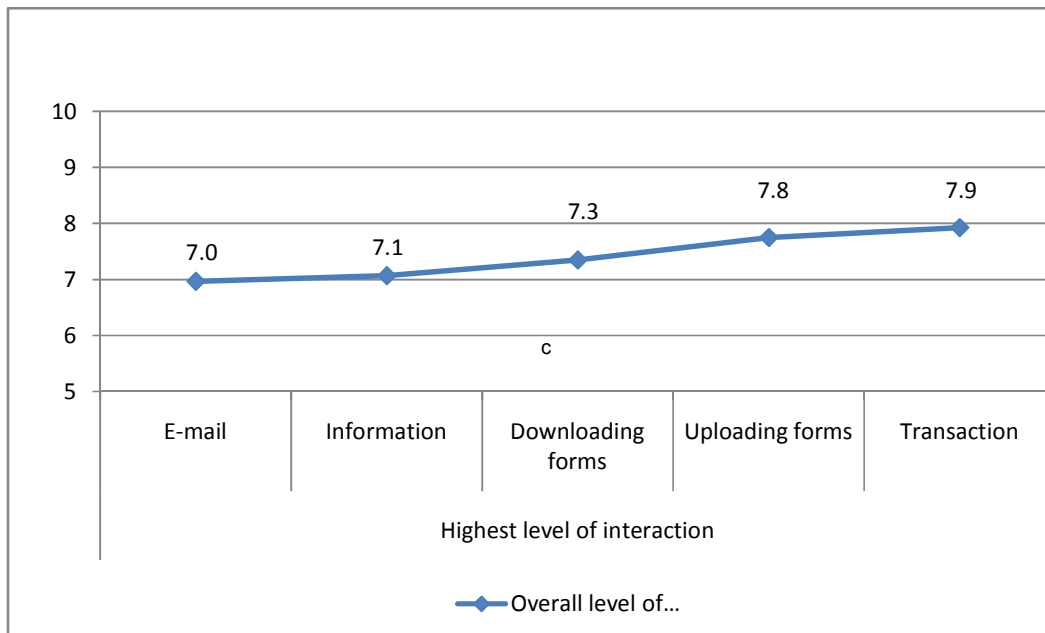


Figure 34: Satisfaction with the most intensive e-mail/Internet contact by interaction level

Analysis from a country perspective shows that, in Austria, Sweden and the UK, satisfaction on average is relatively high (7.9/10). In Italy, Germany and especially Poland, there is a gap. Taking into account the variety of events and related services being evaluated by users in the 10 countries of the pilot sample, these figures should be approached with care. Generally speaking, in each country we do however observe that the pattern of overall satisfaction increases with the level on which citizens interact with their public administrations.

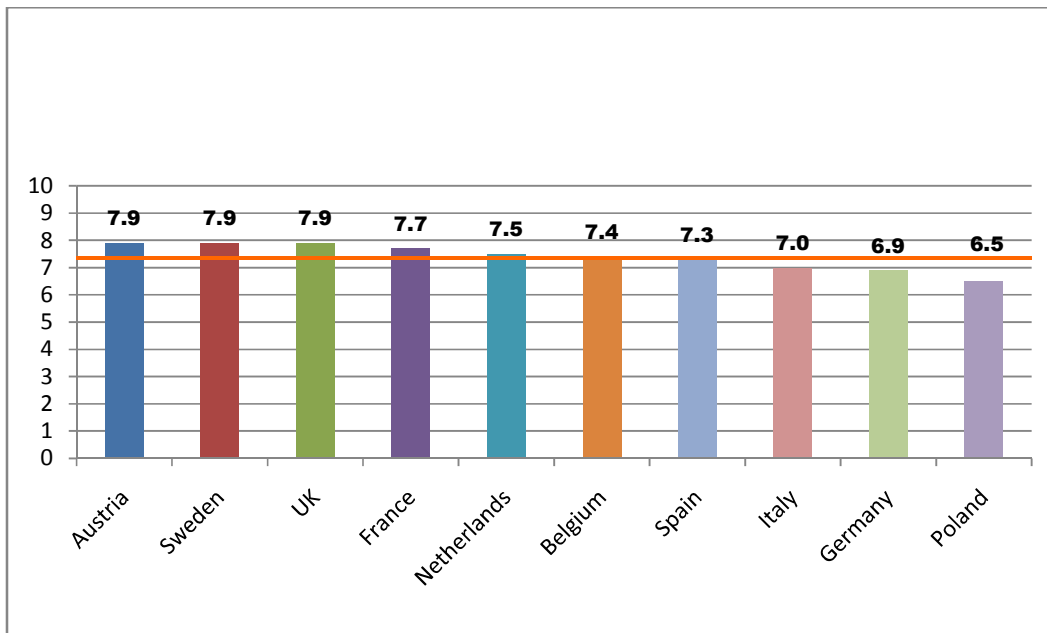


Figure 35: Satisfaction with the most intensive e-mail/Internet contact per country

	Total	Austria	Belgium	France	Germany	Italy	NL	Poland	Spain	Sweden	UK
E-mail	7,0	7,3	7,1	7,4	6,5	6,7	6,6	6,1	6,8	7,4	7,9
Information	7,1	7,3	7,0	7,4	6,6	6,9	7,5	6,4	6,6	7,5	7,6
Downloading forms	7,3	7,6	7,4	7,5	7,1	6,9	7,3	6,4	7,2	8,1	7,7
Uploading forms	7,8	8,3	7,6	7,9	7,1	7,1	7,6	6,9	7,7	8,3	8,1
Transaction	7,9	8,4	8,2	8,3	7,5	7,1	7,7	6,9	8,0	8,3	8,1

Table 15: Satisfaction with most intensive Internet contact by interaction level per country

#### 1.11.3.2.2 Comparison with expectations

User expectations were integrated in the survey questionnaire in an explicit manner, through the following question: “Looking back, how did the contact with public agencies

or officials by e-mail and/or via the Internet (websites) compare with what you had expected?”.

36.3% of the users evaluates the eGovernment experience as better than they had expected, and only 7.5% as worse. Obviously, this affects the users’ overall level of satisfaction . Citizens who remarked that there were better served than expected rate their most intensive eGovernment contact with a score above 8/10. Those who were most disappointed (compared to their expectations) are the users who were looking for information; those most positively affected were the ones who were engaged in a transaction.

There were no significant differences found on this point between heavy, medium and light users of eGovernment (41.6% of the latter group obtained a better result than they had expected).

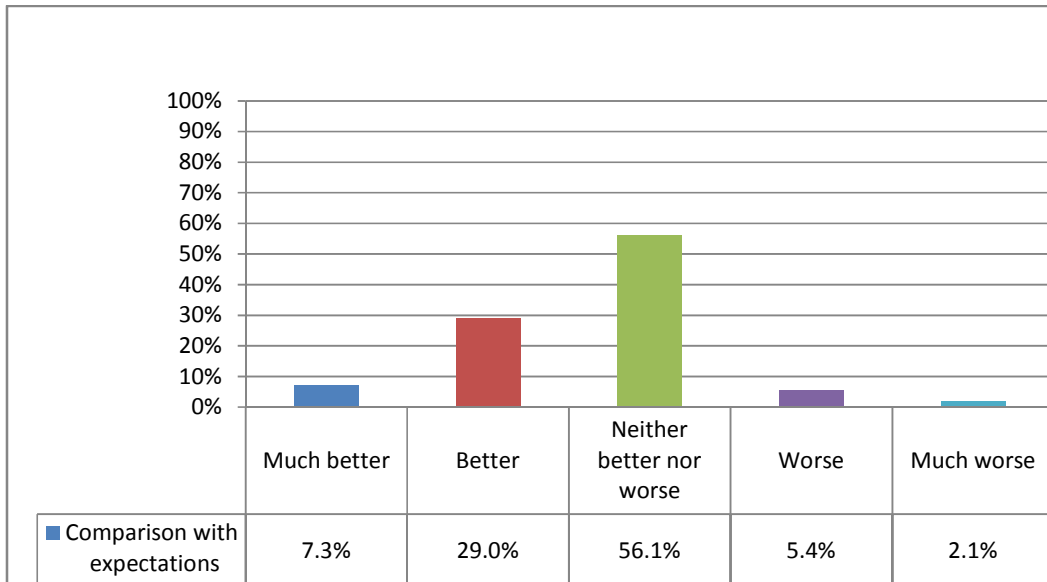


Figure 36: Most intensive e-mail/Internet contact compared with expectations

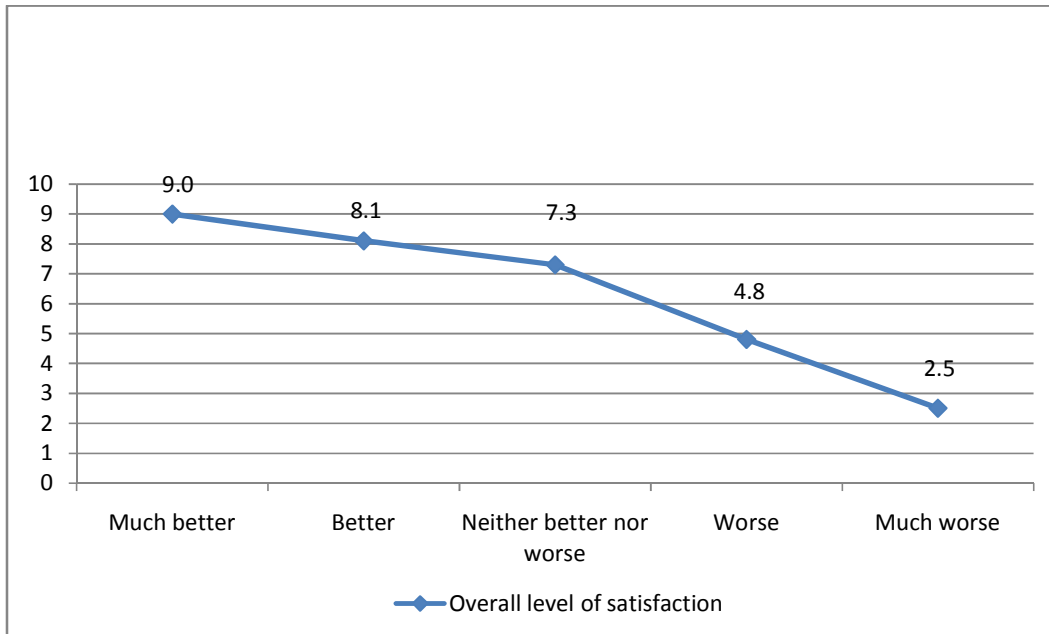


Figure 37: Satisfaction with most intensive Internet contact compared with expectations

#### 1.11.3.2.3 Achievement of objectives

An important question related with satisfaction is whether the user of a particular service obtained what he or she wanted or needed, either totally, partially or not at all.

Satisfaction is indeed related to the extent to which people felt they achieved their objectives through their e-mail/Internet interactions with public administrations. This was totally the case for over half of the users (54%) and partially for 37.4%. A percentage of fewer than 5% claims not to have obtained what they wanted or needed by contacting government by e-mail or through the Internet.



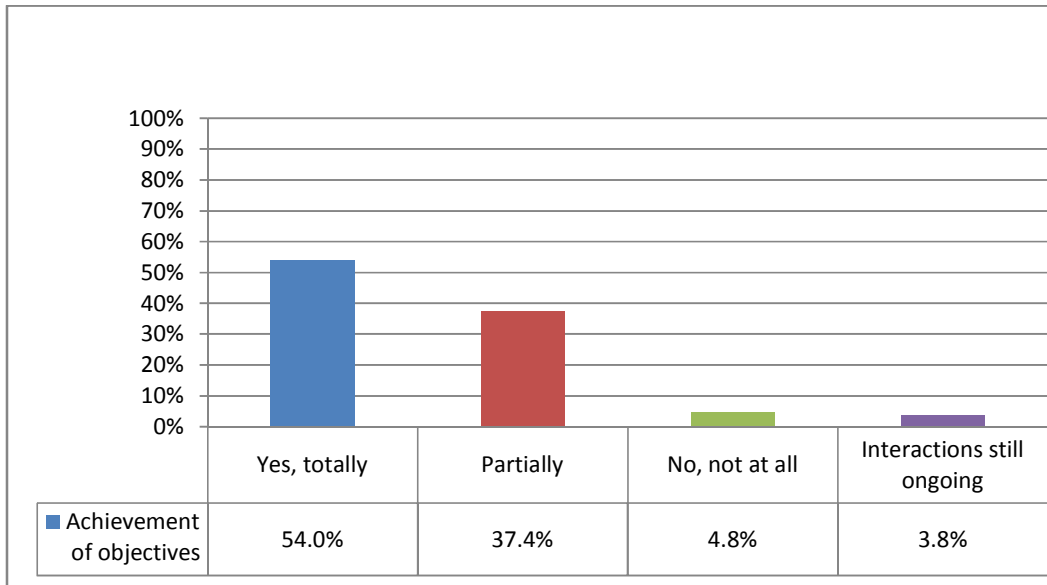


Figure 38: Achievement of objectives of most intensive e-mail/Internet contact

Obviously this achievement of objectives also affects the overall level of satisfaction. Highly important in this respect is that total achievement of objectives increases from only 40.2% and 44.2% in case of e-mail and information as highest level of interaction respectively to 65% for uploads and transactions.

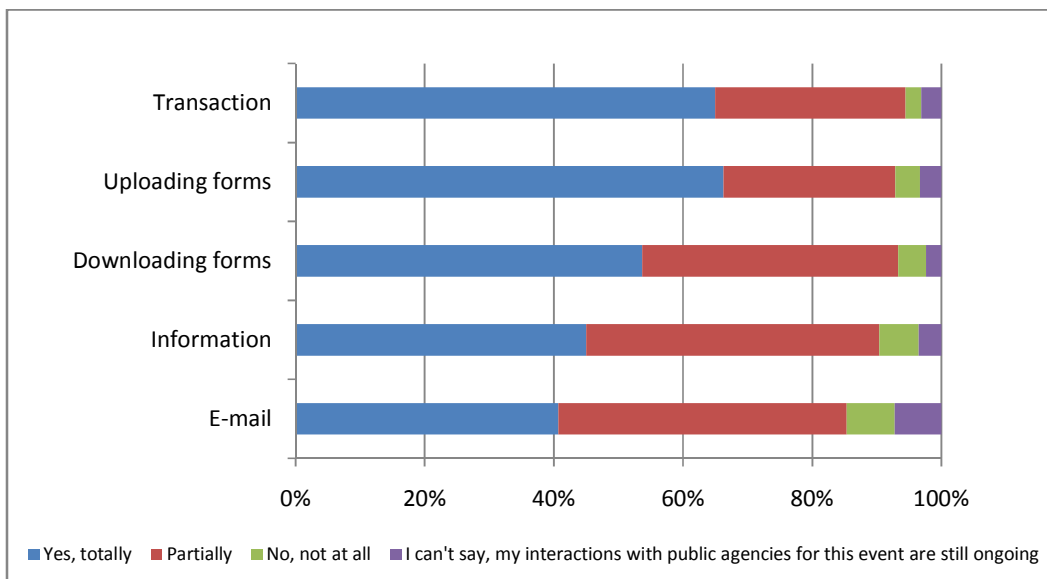


Figure 39: Achievement of objectives by level of interaction (N=7599)

44.3% of light eGovernment users claims to have achieved totally what they wanted or needed through their Internet interactions, against as many as 58.7% of the heavy users.

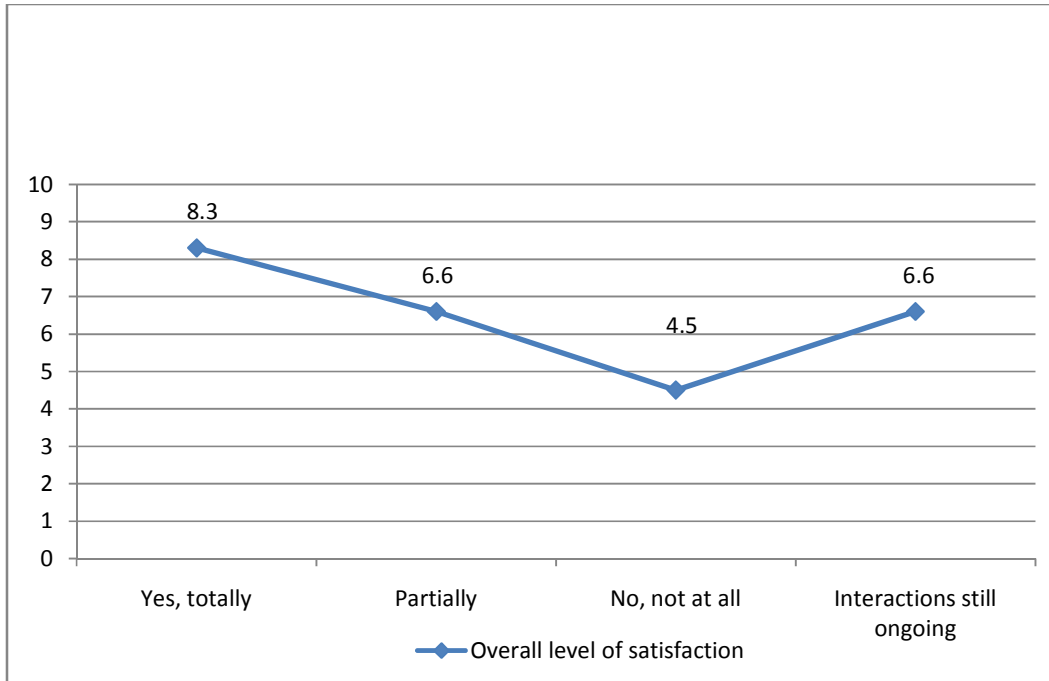


Figure 40: Satisfaction with most intensive Internet contact by achievement of objectives

#### 1.11.3.2.4 Factors of satisfaction and dissatisfaction

To refine the measurement of overall satisfaction, a series of 12 information and service requirements were presented in the questionnaire. These constituted factors that contribute to either satisfaction or dissatisfaction. Respondents were asked to what extent they agree or disagree with these 12 statements with regard their e-mail/Internet contact, using a 5-point Likert scale. All factors positively correlate with the overall level of satisfaction in the sense that they all, with slight differences in importance (which form correlations), contribute to overall satisfaction.

The services/events evaluated by respondents overall score best on three elements: these are those that are related with **trustworthiness, usability and timely delivery**. The weakest points of satisfaction are issues with regard to customization/personalization of information and information about the progress of service delivery. The 12 different

aspects of online service delivery are systematically evaluated more positively by heavy eGovernment users. In particular, heavy users seem to have fewer problems with issues relating to accessibility and usability (i.e., is information easy to access, find, use and understand).

It can also be observed that agreement on all issues is related with the level of interaction. The higher the level of interaction, the more users perceive the 12 requirements of online information/service delivery as being fulfilled. This is most notably the case for delivery in a reasonable time and at a reasonable cost, and for trustworthiness. The latter finding is remarkable, since (1) privacy and security issues are most pressing in relation to transactions and (2) trust (in the Internet) in general influences take-up of and satisfaction with eGovernment.

Factors of (dis)satisfaction	Agreement	Disagreement
The service was trustworthy: one was not worried about privacy or security issues	69,8%	8,0%
The service/information was easy to access	68,6%	11,1%
The service was delivered in a reasonable time	68,4%	9,3%
The service/information was easy to use	67,3%	10,8%
The service/information was easy to understand	65,8%	11,5%
The service/information was easy to find	61,9%	15,0%
One could depend on being given complete and accurate information	61,3%	11,0%
One could rely on having sufficient information and online help to make use of the service	60,8%	12,2%
The service was delivered at a reasonable cost	59,7%	8,4%
One was not asked to give the same basic information about oneself more than once	57,8%	14,0%
The service/information was tailor made for one's needs	51,6%	15,3%
One was kept informed about follow-up actions and the progress of service	46,7%	20,5%

Table 16: Factors of ((dis)satisfaction

In the next Table 17: Evaluations of dissatisfied users (overall level of satisfaction < 5/10), analysis of the factors of satisfaction and dissatisfaction have been restricted to the group of dissatisfied users whose overall satisfaction with their eGovernment experience is lower than 5/10 (about 15% of all users). Here, we can see that follow-up information, customization and online assistance are the major factors of dissatisfaction. Time, cost and trustworthiness cannot be disregarded, but nevertheless seem less of an issue.

Factors of (dis)satisfaction	Agreement	Disagreement
One was kept informed about follow-up actions and the progress of service	17,9%	49,3%
The service/information was tailor made for one's needs	20,0%	45,1%
One could rely on having sufficient information and online help to make use of the service	22,5%	43,2%
The service/information was easy to find	26,1%	42,1%
One could depend on being given complete and accurate information	21,1%	41,9%
The service/information was easy to use	28,4%	38,3%
The service/information was easy to understand	28,6%	38,0%
The service/information was easy to access	30,6%	36,7%
The service was delivered in a reasonable time	31,1%	35,4%
One was not asked to give the same basic information about oneself more than once	31,2%	33,3%
The service was trustworthy: one was not worried about privacy or security issues	36,8%	26,5%
The service was delivered at a reasonable cost	31,5%	25,6%

Table 17: Evaluations of dissatisfied users (overall level of satisfaction < 5/10)

#### 1.11.4 Perceived benefits and re-use of eGovernment

The final part of the survey was concerned with the benefits respondents perceived by using the Internet in the context of the life-event for which they used it most intensively to interact with public administrations. Respondents were asked to what extent they agree or disagree (on a 5-point Likert scale) with eight potential benefits of using the Internet compared with other means of coming into contact with public agencies or officials (e.g., in-person, by phone or mail).

##### 1.11.4.1 Perceived benefits

The most important benefits perceived from using the Internet to interact with public administrations are: **time savings**, more **flexibility**, and **simplification** of the process of public service delivery. Using the Internet improves the quality of service delivery according to fewer than 40% of the respondents/users. 30% of respondents argue, however, that eGovernment has a positive impact on trust in government and public administrations.

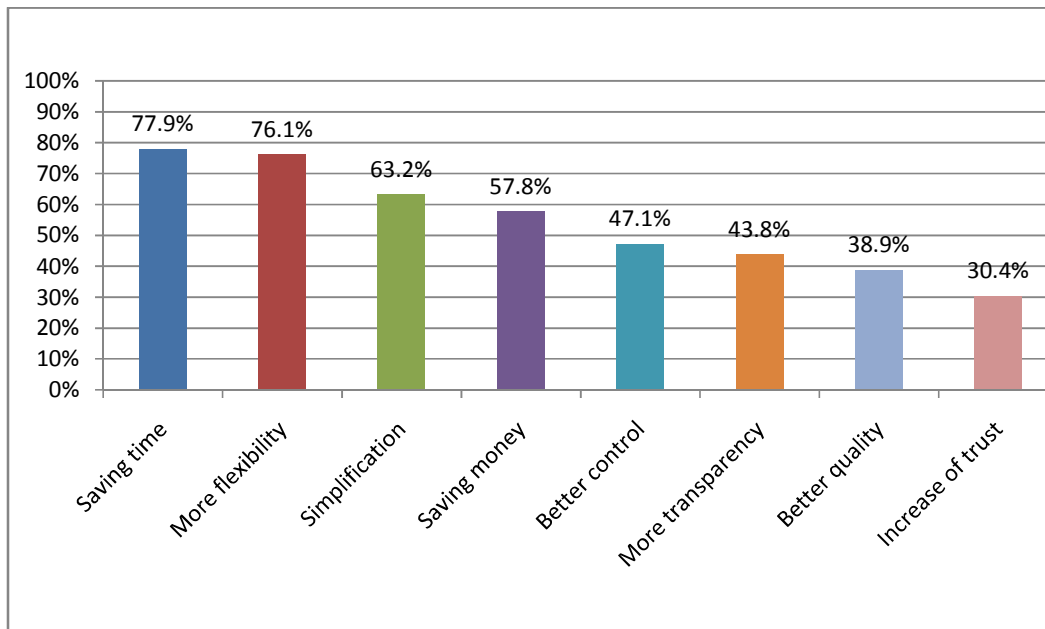


Figure 41: Perceived benefits of eGovernment

Heavy eGovernment users are more likely to attribute all of these components of impact to eGovernment than are light users. This is particularly the case for saving time, gaining more flexibility and obtaining better control over the service delivery process. The more intensely eGovernment is used by respondents, the stronger they feel the benefit of it.

At the same time, the perceived benefits are related to the highest level on which respondents interacted with the public administration. When they move away from simple e-mail communication towards the so-called transactional level, an increasing proportion of respondents perceives a benefit from eGovernment services at all the proposed elements of “impact” that were proposed to them. Time savings, increased flexibility and simplification of processes are felt to result most strongly from using the Internet at the level of transactions with government agencies.

Level of interaction	Perceived benefits (in % of users)							
	Saving time	Saving money	More flexibility	Better quality	Better control	Simplified Process	Trans- parency	More trust
Total	77,9%	57,8%	76,1%	38,9%	47,1%	63,2%	43,8%	30,4%
E-mail	65,7%	52,9%	63,0%	38,2%	38,5%	52,0%	40,7%	33,3%
Information	75,3%	56,5%	72,8%	33,4%	43,5%	56,8%	40,3%	25,9%
Downloading forms	79,0%	58,6%	78,5%	38,7%	46,6%	64,6%	42,8%	29,2%
Uploading forms	82,7%	56,5%	81,9%	41,6%	50,1%	69,7%	45,0%	30,8%
Transaction	84,1%	64,1%	81,9%	44,4%	55,5%	71,8%	50,5%	35,6%

Table 18: Perceived benefits by level of interaction

#### 1.11.4.2 Likelihood of re-use

If eGovernment users were to come into contact again with public agencies or officials, as a result of the same event for which they used the Internet the most in the past 12 months, how likely would it be that they would use the Internet again?

More than 80% will be very likely or likely to use the Internet again to come into contact with public administrations as a result of the same life-event in the future. About 5% of respondents would not use the Internet service again as they were extremely dissatisfied with the experience (that is, they gave a score of less than 5/10).

Again huge differences exist according to the highest level at which citizens interacted with government (going from e-mail up to Internet transactions): 58% of citizens who uploaded forms to apply for public services or who transacted online with public administrations are likely to re-use this service again. Only 30.0% of those using e-mail and 36.9% of information seekers claims to wish to use the Internet channel again for the same purpose in the future.

The likelihood of using the Internet again increases from 72.9% of the light eGovernment users to 87.8% of the heavy users.

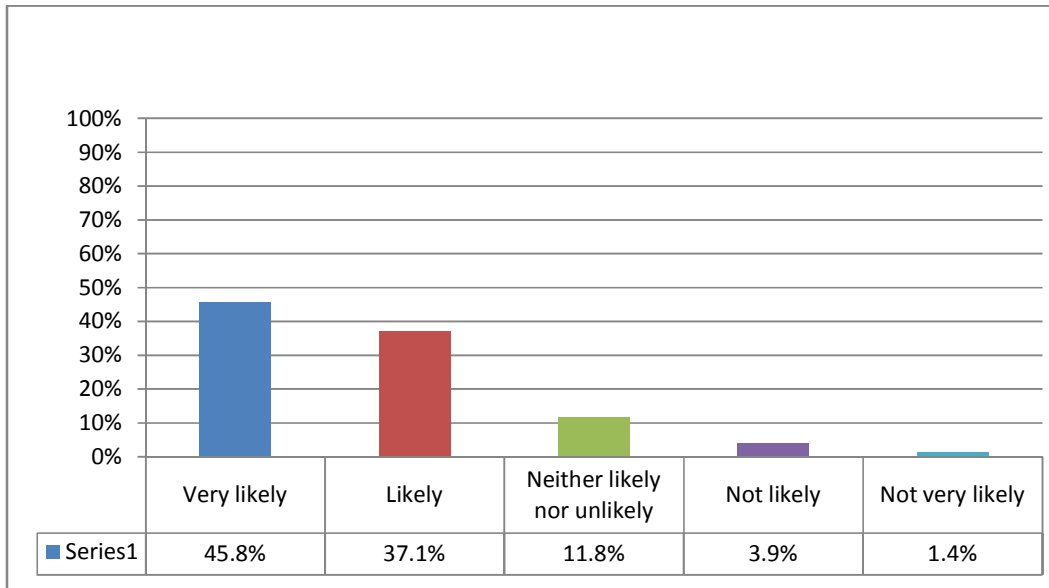


Figure 42: Likelihood of re-use of eGovernment

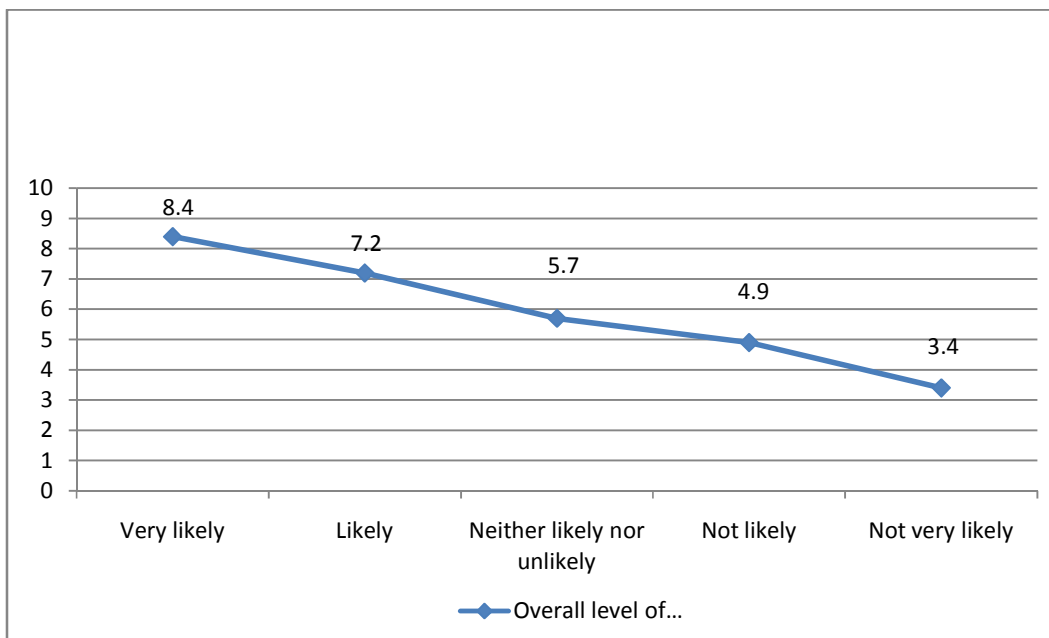


Figure 43: Satisfaction with most intensive e-mail/Internet contact by likelihood of re-use

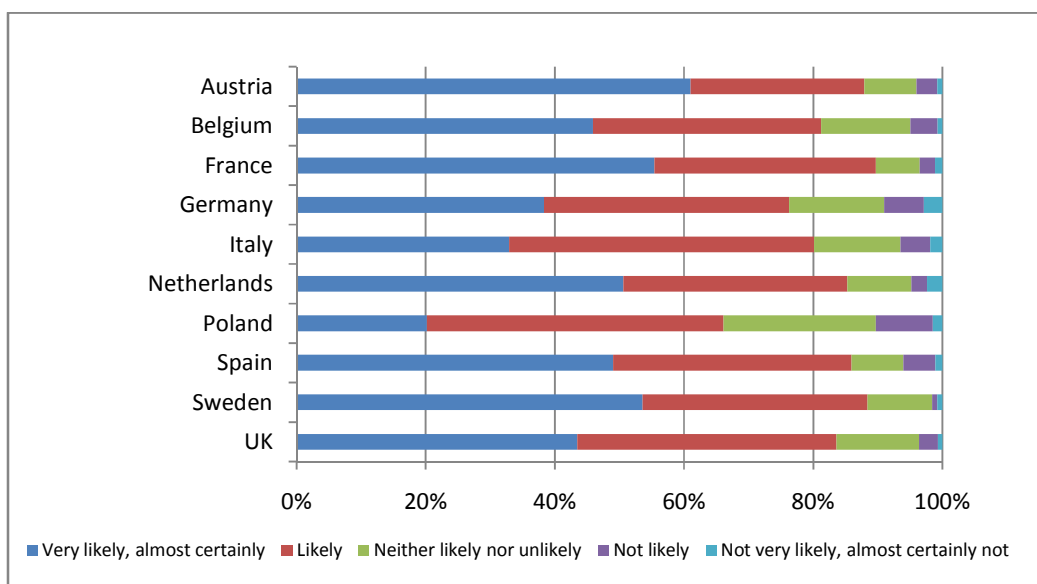


Figure 44: Likelihood of re-use per country (N=7599)

#### 1.11.5 Conclusions: the components of impact

The Internet has become an everyday tool in the lives of the growing number of people who have access to it. This is exemplified by the current uptake and use of eBanking and eCommerce. Compared to the use of these Internet service domains, eGovernment still has a way to go both in uptake and as far as general satisfaction of consumers is concerned. Overall satisfaction with eGovernment, in all the countries of this pilot sample, is quite modest. Furthermore, one-third of eGovernment users can be classified as a group that is dissatisfied.

Internet users differ in background, attitudes and experiences. However, based on the accumulated data (which comes from 10,000 completed questionnaires), it appears that traditional socio-demographic factors (such as age, formal education, gender, and socio-economic activity), adoption (years of experience), and frequency of use of the Internet do not play the most decisive role in explaining differences in respondents' use of and satisfaction with eGovernment applications. Other factors, barriers and motivators play a more significant role. There are principally four important elements.



The first important element is the underlying element of **trust**. Trust has two main aspects. It involves both the trust that people have in using the Internet as a tool to interact and to exchange personal information with public or other third parties, and the extent to which they trust government and public sector agencies. In general, trust in government and the level of satisfaction with public service provision is low. Variations in these levels of trust correspond to differing levels of use and satisfaction with public services provided online.

A second highly important element is the **supply side**. Of considerable importance is the availability and “findability” of public information and services, and the quality and level of maturity or sophistication of these applications.

A third extremely important barrier or reason for non-use has to be added the factor of **awareness**, and thus communication, about eGovernment itself.

Clearly the **level of sophistication of eGovernment services** plays a fourth, significant role. One of the most important findings from this citizens’ pilot survey is that satisfaction is co-related with the level of interaction at which Internet users are able to act with public administrations. Respondents are not happy with this lack of findability of government information online. Respondents want to get things done as fast, smooth and efficiently as possible. They want to handle their cases fully electronically. Once they have the opportunity to do so, positive experiences do stimulate respondents’ loyalty, Internet/eGovernment preference and likelihood of future use.

Much of this becomes crystal clear from the main benefits people perceive that they experience from using eGovernment: saving time, gaining more flexibility of use, and using more simplified procedures. By encouraging eGovernment to development its levels of transaction, creating awareness, and playing on the aspects of simplification, flexibility and time-saving, EU countries can stimulate their citizens’ use of and satisfaction with eGovernment. Once citizens have overcome the perceived and actual barriers to making use of eGovernment applications, in the majority of cases their positive experiences will encourage them to use eGovernment again in the future.

## 1.12 Business Survey

The key findings of the business pilot survey are presented based on a total sample of 4,000 companies in ten EU Member States. As in the previous section of the report which outlines citizens' use of eGovernment (referred to here as the citizens' report), the results are presented following the structural logic of the conceptual framework. After describing the company respondents' profiles, we focus on the use, satisfaction and perceived impacts of eGovernment in business environments.

### 1.12.1 Profiles of the business respondents

It is common in surveys of businesses for the information concerning a company or organization to be provided by only one representative of the company and who is not necessarily the owner and/or the chief executive officer.

The approach of this study was to select a representative sample of companies within each of the ten countries. The companies were stratified according to size and sector. We followed the EU definition of small- and medium-sized enterprises (SMEs) and large companies, and we also respected the NACE<sup>30</sup> sector separation, but aggregated it into larger groups. In the case of this survey, SMEs are considered to be companies under the size of 250 employees.

Targeting the appropriate "respondents" in these companies for the subject of this survey was less straightforward. It was decided, on the one hand, to approach the company owner and/or general manager for the small companies and, on the other, to select persons holding top and middle management functions in larger organizations. For these functions, we targeted Human Resource Management (HRM), Financial, and Public Affairs functions in order to reach and select decision makers who deal with public administration issues.

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<sup>30</sup> NACE or Statistical Classification of Economic Activities in the European Community commonly referred to as NACE, is a European industry standard classification system consisting of a 6 digit code.

### 1.12.1.1 Company profiles

The sample consists of a mix of 72% SMEs (according to the EU definition outlined above) and 28% large companies. The sample data have been weighted for country (N=400 per Member State), but not for other criteria. We aimed at obtaining a clear picture of eGovernment in different, but still sufficiently large, groups of companies in terms of company sizes and business sectors. We obtained responses from a wide variety of companies which have resulted in companies of a range of sizes in terms of number of employees and annual turnover.

Pilot survey sample of companies (N=4.000)		
<b>Economic activity</b>	Agriculture, forestry, hunting, fishing, mining	2,5%
	Industries (manufacturing)	16,9%
	Services (business activities)	61,5%
	Non-profit, education, health and social work	19,1%
<b>Company size</b>	Micro enterprises (< 10 employees)	38,3%
	Small enterprises (10 - 49 employees)	17,6%
	Medium enterprises (50 - 249 employees)	16,2%
	Large enterprises (> 250 employees)	28,0%
<b>Annual turnover</b>	Less than 1 million Euros	41,9%
	1 - 10 million Euros	18,8%
	10 - 100 million Euros	14,2%
	100 - 1000 million Euros	14,6%
	More than 1,000 million Euros	10,5%
<b>Cross-border activities</b>	Yes	47,5%
	No	52,5%

Table 19: Composition of the business sample; companies

The business service industry is well represented (60+%). We also covered explicitly a very wide range of “not for profit” organizations, for example, hospitals, schools, and service accommodations for elderly people. The rationale behind this choice is that the managers of these kinds of organizations have to deal as much or even more with “public services for business” such as VAT declarations, and various permits.

About half of the companies in the sample undertake cross-border activities, meaning that they are involved in import/export activities, foreign agencies, and investments.

### 1.12.1.2 Profile of the respondents (as company representatives)

The companies in the sample are represented by 37.7% business owners/CEOs. There is also a considerable number of “independent” contractors or consultants in the sample due to the fact that a lot of “public service”-related tasks in companies are outsourced to accountancy bureaus, law firms, etc. Approached because of their responsibilities in the companies, 40% of the sample respondents are responsible for general management. Other important responsibilities include financial management, HRM, ICT and communication.

Pilot survey sample of company representatives (N=4.000)		
<b>Position</b>	Business owner	33,4%
	Chief executive officer	4,3%
	Senior management	18,6%
	Middle management	35,6%
	Contractor/consultant	8,1%
<b>Responsibilities</b>	General management	39,8%
	Financial management	23,9%
	Human resources	20,2%
	Information technology	18,1%
	Legal or regulatory	7,7%
	Production, distribution, logistics	14,9%
	Research and development	8,4%
	Sales, marketing, communication	25,1%
	Consultancy	14,8%
	Other	14,7%

Table 20: Composition of the business sample: company representatives

(Note: Respondents could indicate one single position, but several responsibilities)

Micro companies (companies with fewer than ten employees) are represented by business owners/CEOs in three out of four cases. In medium and large companies, the questionnaire reached about 25% senior managers and 50% to 60% respondents in middle management functions.

Company size	Position of company representative				
	Business owner	CEO	Senior management	Middle management	Contractor/consultant
Micro (< 10 employees)	73,9%	3,5%	7,3%	10,0%	5,3%
Small (10 - 49 employees)	20,8%	5,8%	25,8%	39,7%	7,9%
Medium (50 - 249 employees)	5,6%	7,3%	28,8%	50,4%	8,0%
Large (> 250 employees)	2,1%	2,6%	23,5%	59,7%	12,0%

Table 21: Composition of the business sample: representatives by company size

### 1.12.1.3 ICT facilities

In order to describe the business's profile with regard to Internet facilities, access and use, respondents were asked whether their company uses an internal computer network, an Intranet, an Extranet, and/or a company website for communication towards customers and suppliers. They were also asked to give an estimation of the percentage of persons employed who have a computer with access to the Internet.

Most of the companies are well equipped when it comes to computer networks and Internet facilities. Nearly 80% has an internal computer network and a company website. Facilities are strongly dependent on company size. The rate of companies with a Intranet and/or Extranet, for example, strongly increases with size (number of employees). Still, over 60% of the smaller companies in the sample have their own website.

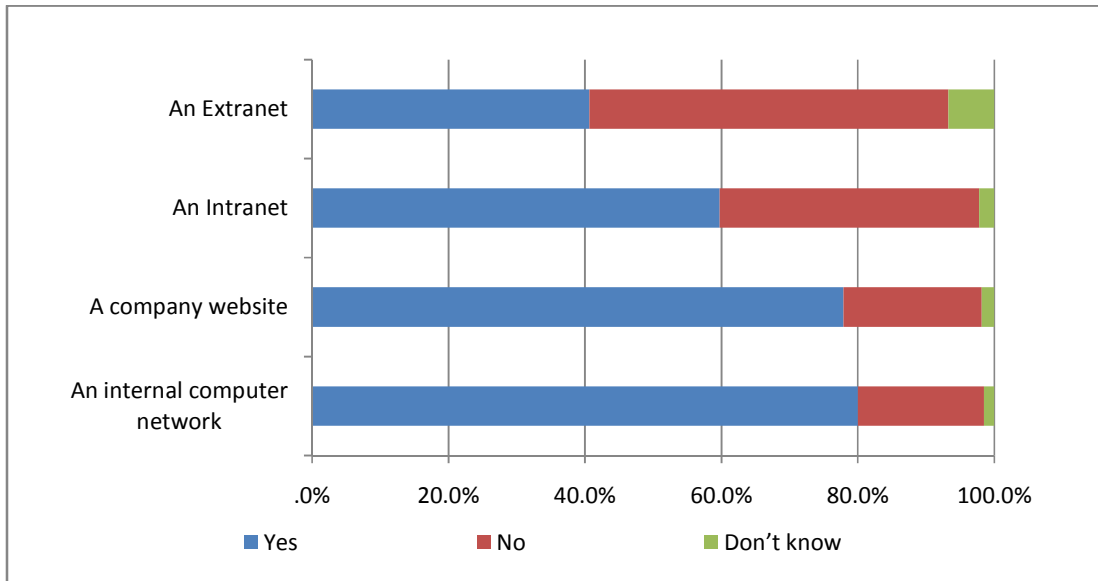


Figure 45: ICT/Internet facilities

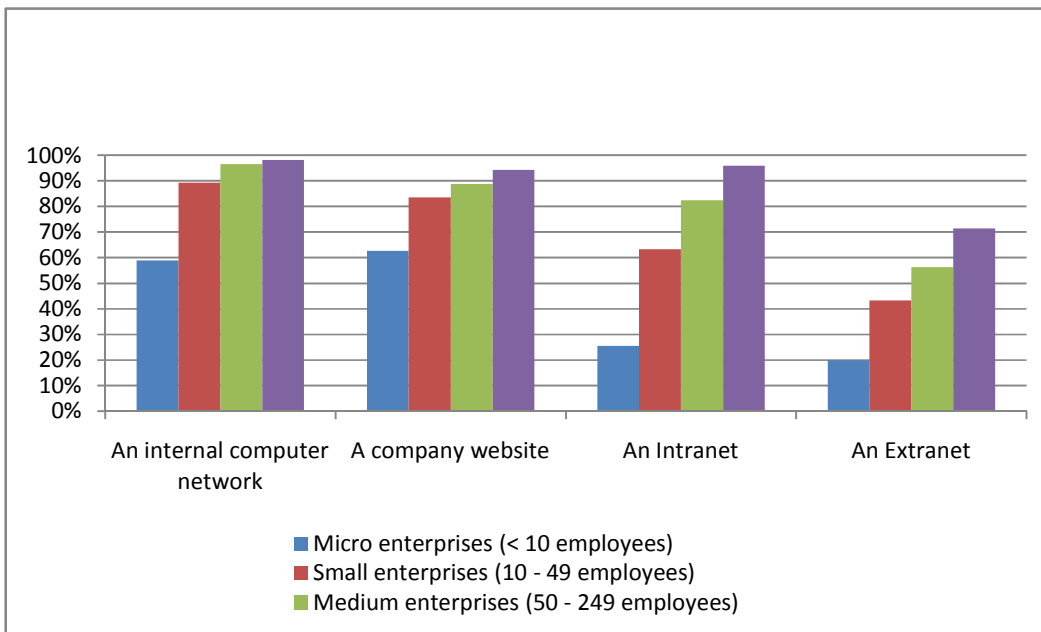


Figure 46: ICT/Internet facilities by company size

In about half of the companies in the sample, all employees have a computer with access to the Internet. In only 15% of the companies is Internet access limited to fewer than 50% of the personnel.

#### 1.12.1.4 Use of Internet services

Extending the findings on ICT and Internet facilities, a clear picture of the actual use of the Internet in business environments arises from data on the use or non-use of eight different Internet applications that are used in either demand or supply chain management, for communication, or for financial or administrative processes.

More than 80% of the companies use the Internet for financial services and transactions. Internet services like e-ordering and e-invoicing are also quite commonly used. This certainly is the case in supply chain management. Customers can order products or services in 50% of the companies.

In this respect, however, we observe significant differences between small, medium-sized and large enterprises (see figure 47 in particular). The use of “eBusiness” in customer relationships rises from 40% in very small companies (<10 employees) to 60% of the largest ones. Sending e-invoices follows the same pattern. Other obvious differences between SMEs and large companies include the opportunities for remote working that takes place away from the company’s premises (in up to 75% of large companies), and the use of videoconferencing techniques.

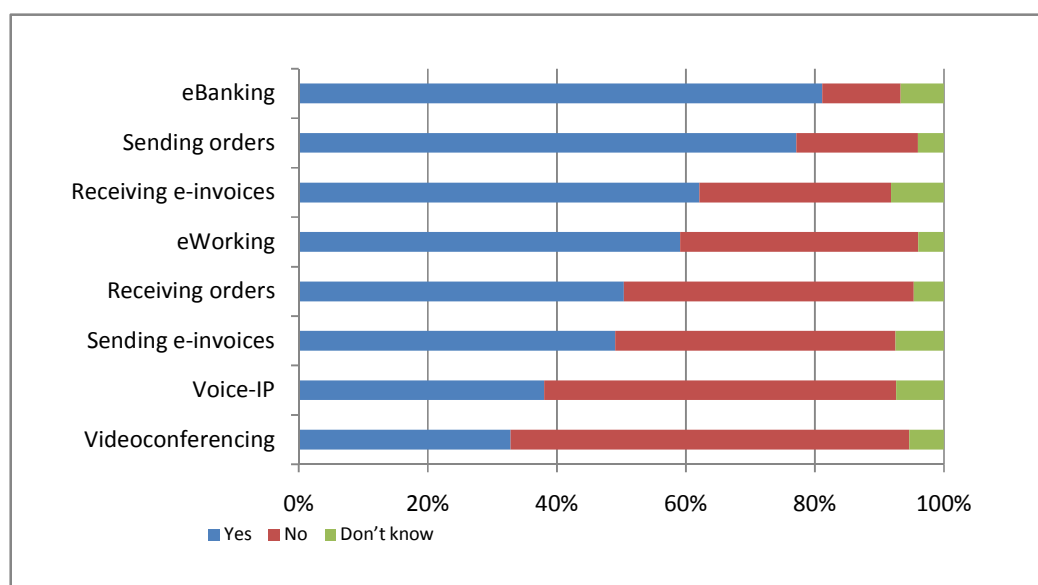


Figure 47: Use of Internet services

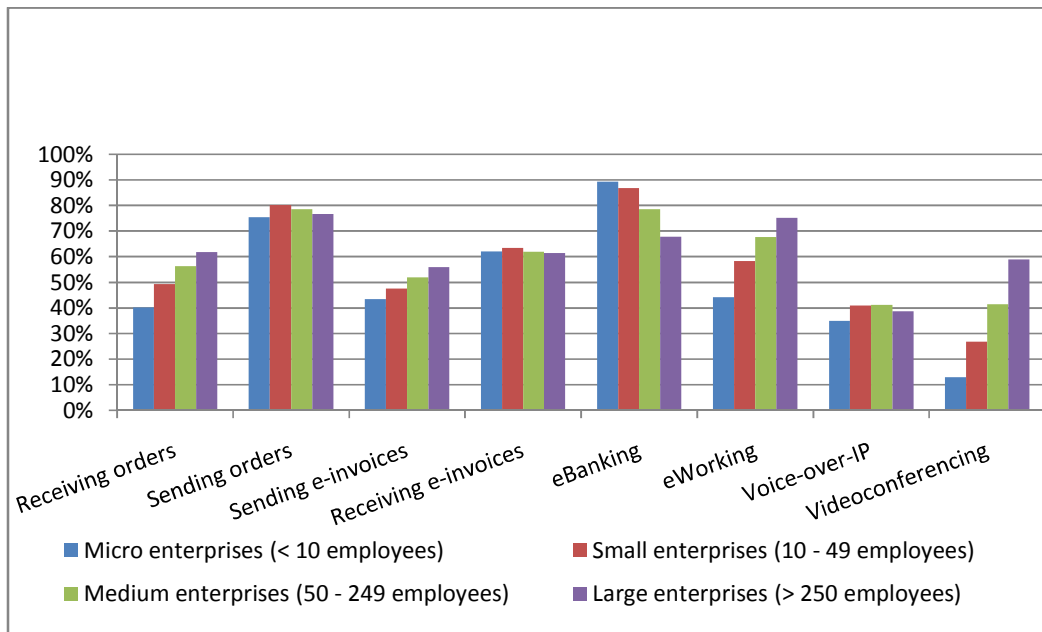


Figure 48: Use of Internet services by company size

#### 1.12.1.5 Satisfaction with Internet services

For each of the eight Internet applications, respondents expressed the extent to which their company is satisfied with them on a scale from 0 to 10, with 0 meaning that they are totally dissatisfied and 10 that they are totally satisfied.

Satisfaction with the Internet services used is high. At the top, we find banking and financial services *via* the Internet (9/10), followed by a range of applications with average scores between 8.4/10 and 8.6/10. Receiving orders for products or services from customers does not achieve the same level.

Figure 49: Satisfaction with Internet services

Correlations of satisfaction with company size are weak. The only pertinent observation we can make is that satisfaction with Internet services is systematically higher in “micro enterprises”.



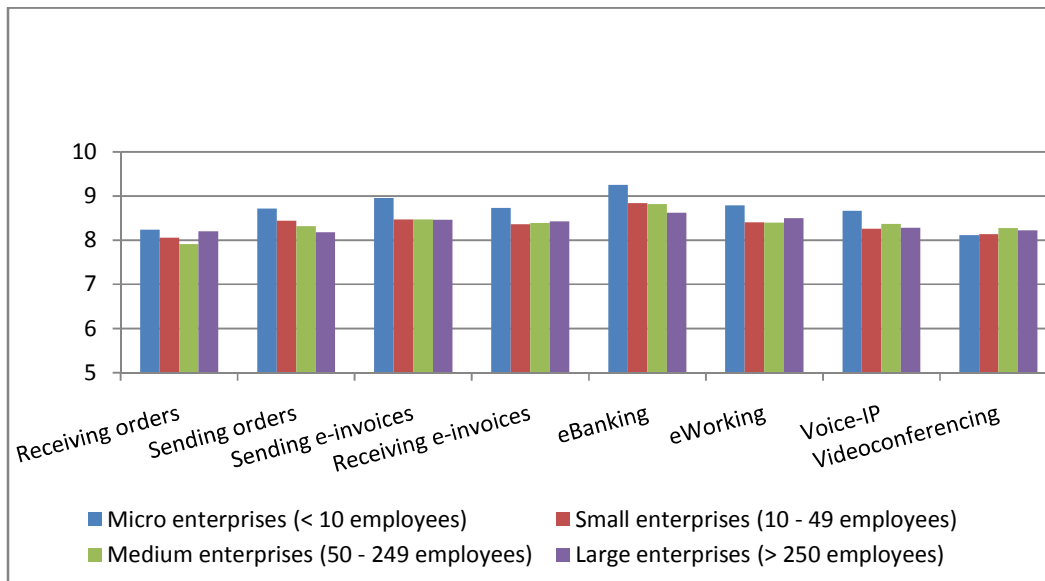


Figure 50: Satisfaction with Internet services by company size

#### 1.12.1.6 Towards a business Internet user typology

Analyzing the profile of the 4,000 companies and organizations in the sample of ten EU Member States, we can categorize these units into four differentiated groups. They consist of smaller and larger companies which each has either a high or a low eBusiness profile. This clustering is used in the following sections to analyze results on eGovernment use and satisfaction.

The classification is produced using a Latent Class Analysis technique. The analysis integrated the indicators concerning the ICT/Internet facilities of companies, the degree of access of employees to the Internet, and the use of Internet services presented in section 1.12.1.4. The resulting classification is determined by variances in these indicators, independently from the countries in which the companies are located.

Business typology of Internet use and facilities
<p><b>Larger companies with <i>high</i> eBusiness profile (37,7%)</b></p> <ul style="list-style-type: none"> <li>• 39% &gt;250 employees</li> <li>• Cross-border activities (62%)</li> <li>• Full infrastructure: computer network, Intranet, Extranet (75%), company website</li> <li>• Full integration and use of the Internet in business activities: eBusiness (75%), eInvoicing (&gt;80%), remote working (85%), telephoning/videoconferencing (&gt;60%), ...</li> </ul>
<p><b>Larger companies with <i>low</i> eBusiness profile (16,8%)</b></p> <ul style="list-style-type: none"> <li>• Often large soft sector organizations (30%), relatively low proportion of business services</li> <li>• Full infrastructure except Extranet (50%)</li> <li>• Limited online business activities: eBusiness (38%), eInvoicing &lt;10%, ...</li> <li>• PC-based telephoning (&lt;30%)</li> <li>• Lowest levels of satisfaction with business related Internet services</li> </ul>
<p><b>Smaller companies with <i>high</i> eBusiness profile (11,0%)</b></p> <ul style="list-style-type: none"> <li>• Small service sector companies: 81% &lt;10 employees, 83% delivers services</li> <li>• Employees for 100% equipped with computer and Internet access</li> <li>• Company website</li> <li>• Strong integration and use of Internet in business environment and commercial relations, especially for sending orders to suppliers, invoicing, financial matters (all &gt;80%)</li> <li>• eBusiness (57%)</li> <li>• Highest levels of satisfaction with business related Internet services</li> </ul>
<p><b>Smaller companies with <i>low</i> eBusiness profile (34,5%)</b></p> <ul style="list-style-type: none"> <li>• 71% &lt;10 employees</li> <li>• Mostly no cross-border activities (70%)</li> <li>• 50% has no company website</li> <li>• Use of Internet services limited to eBanking (90%) and interactions with suppliers</li> <li>• eBusiness (29%)</li> </ul>

Table 22: Business Internet user typology

### 1.12.2 Use of eGovernment

The following analysis of the take-up of eGovernment by businesses is structured in the same way as the citizens' report. First, we focus on the general use of government website information and public services as compared with the Internet services presented in chapter 4.2.1.4.

Second, we analyze the use that companies made of the Internet in the past 12 months to come into contact with public agencies as a result of a series of business life-events. This analysis includes the levels of online interaction, the degree to which companies prefer to use the Internet as a channel of communication, and the reasons for any non-use. The measurement of satisfaction is based on the event for which companies used the Internet most intensively in their contacts with public administrations in the past 12 months.

Such an approach enables the production of a more balanced picture of eGovernment take-up than that produced by surveys that simply ask respondents whether they have used eGovernment, as was done in the Eurostat survey<sup>31</sup>. Asking first whether respondents had contact with government in general and for what events and, only after that, for which of these events they used the Internet provides a more accurate and realistic view of the level of business take-up of eGovernment.

#### 1.12.2.1 General use of eGovernment

Company representatives were asked whether or not their company uses the Internet for two government-related purposes: (1) for obtaining information from public authorities' websites (*eInformation*), and (2) for using electronic forms to apply for public services (*eServices*: e.g., online tax forms, forms to obtain a licence or permit).

In general, at least 80% of the companies use eGovernment information. Seventy per cent makes use of eGovernment services. These figures are quite high, compared with the use of other eBusiness-related Internet applications. eGovernment use approaches the level of companies' commercial financial transactions and sending orders to suppliers.

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<sup>31</sup>[http://epp.Eurostat.ec.europa.eu/portal/page?\\_pageid=0,1136250,0\\_45572555&\\_dad=portal&\\_sc\\_hema=PORTAL](http://epp.Eurostat.ec.europa.eu/portal/page?_pageid=0,1136250,0_45572555&_dad=portal&_sc_hema=PORTAL)

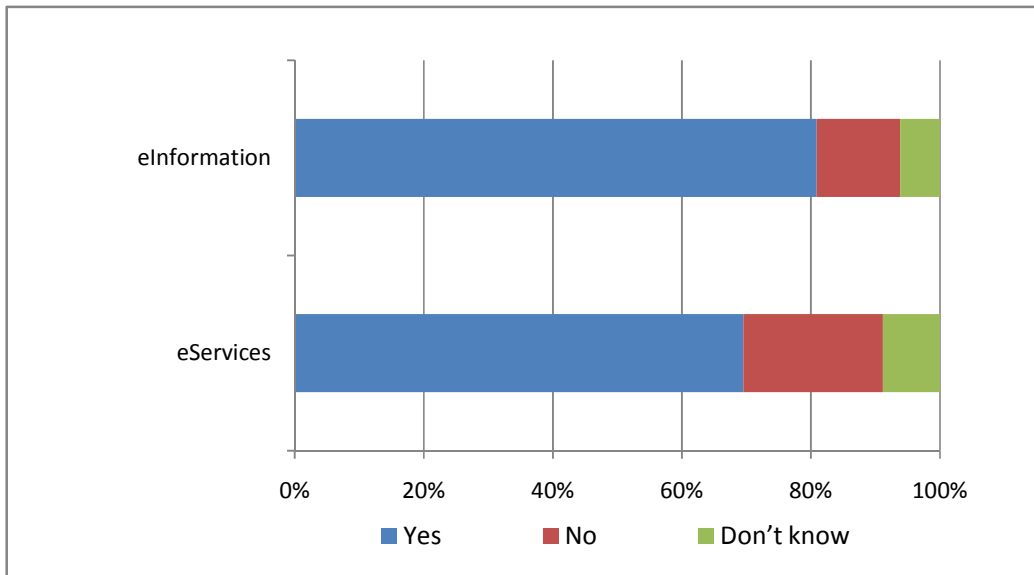


Figure 51: Use of eGovernment

	Yes	No	Don't know	Total (N=4.000)
eBusiness: customer orders	50,4%	44,9%	4,7%	100,00%
Sending orders to suppliers	77,1%	18,8%	4,1%	100,00%
Sending e-invoices	49,1%	43,4%	7,5%	100,00%
Receiving e-invoices	62,1%	29,7%	8,2%	100,00%
Banking and financial services	81,1%	12,2%	6,7%	100,00%
Remote working (e-work)	59,1%	36,8%	4,0%	100,00%
PC/Internet-based telephoning	38,0%	54,6%	7,4%	100,00%
Videoconferencing	32,8%	61,8%	5,3%	100,00%
<b>eGovernment information</b>	<b>80,9%</b>	<b>13,0%</b>	<b>6,1%</b>	<b>100,00%</b>
<b>eGovernment services</b>	<b>69,5%</b>	<b>21,6%</b>	<b>8,9%</b>	<b>100,00%</b>

Table 23: Use of eGovernment compared to use of other business-related Internet services

A breakdown of the figures by company size is not easy to interpret since the number of respondents who do not possess the appropriate information to respond to the question increases with the size of their companies. Overall, we observe no large differences in take-up between SMEs and large companies. Very small (“micro”) companies (with fewer than ten employees) lag somewhat behind in the use of electronic forms to apply for public services or to interact with public authorities.

Still, the use of both eInformation and eServices is significantly lower in companies with a “lower eBusiness profile” (see Business typology in paragraph 1.12.1.6). The use of

eGovernment is, in other words, related to the use of other business-related Internet services.

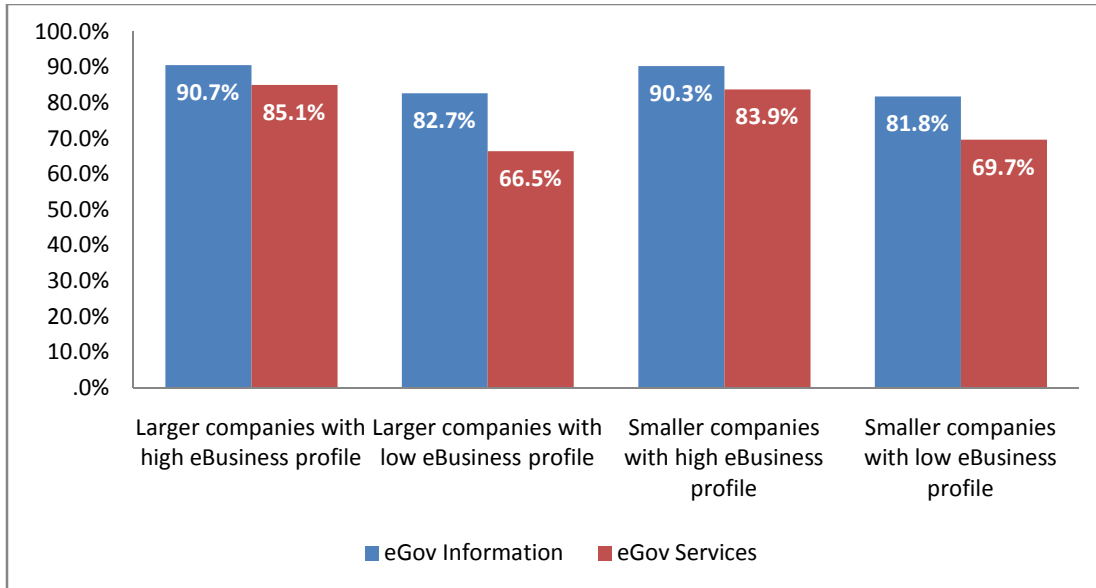


Figure 52: Use of eGovernment by business profile

#### 1.12.2.2 Use of eGovernment in business life-events

In order to determine the use of eGovernment in the context of specific business life-events, we used the same methodology as described in the citizens' report. To outline the methodology clearly, we briefly repeat our approach.

To identify the relevant "business life-events", respondents representing the companies were first asked for which kind of events, out of a key list of 15, their company came into contact with public administrations over the past 12 months. Second, for each business life-event that they indicated as applicable, they were asked whether the Internet was used in the process. If the Internet was used in the context of more than one life-event, respondents were asked for which specific life-event their company had used the Internet the most to interact with public authorities. In doing so, in each company either a single business life-event applied or, when several applied, one life-event was identified for which the Internet was used most intensively.

Respondents whose company did not come into contact with public agencies *via* the Internet in the past 12 months for any of the 15 life-events proposed in the questionnaire, were offered the possibility to describe another occasion for which e-mail or the Internet was used to interact with public administrations. Measurement of satisfaction is then based on this specific event. If none such life-event occurred, two possibilities remained. Either companies did not have any contact with administrations in the past 12 months, or they did not have any contact *via* the Internet (i.e., the group of actual “non-users”).

In the following descriptions we focus, first, on the actual contacts with public administrations for the 15 business life-events. Second, on the extent to which the Internet was used in the context of these life-event-related contacts. These are actual take-up figures that are compared with the preferences that are declared for not using the Internet channel. Third, we present the number of companies that used the Internet most intensively for each specific life-event. Fourth, we describe the levels at which companies interacted with public agencies in the context of these specific events. Finally, non-use is analyzed: what types of companies do not use the Internet for public services and what are the main barriers?

#### 1.12.2.2.1 Contact with public administrations for business life-events

First, respondents were asked whether their company came into contact with public administrations as a result of one or more out of a list of 15 business life-events in the past 12 months, either for the company’s own purposes, on behalf of clients or both.

**Three business life-events predominate. Tax declarations (65.7%), hiring new employees (52.7%) and submitting data to statistical offices (44.8%)** are the main events for which companies had come into contact with public administrations during the past 12 months. These are followed by matters of **public funding and procurement.**

	For my company's own purposes	On behalf of clients of my company	For my company and on behalf of clients	No	Total (N=4.000)
Declaring corporate taxes / VAT / social contributions	49,8%	7,3%	8,7%	34,3%	100,0%
Hiring new employees within your own country	38,2%	7,4%	7,0%	47,3%	100,0%
Submitting data to statistical offices	29,4%	7,7%	6,7%	56,2%	100,0%
Searching and applying for public funds	24,5%	7,7%	6,2%	61,6%	100,0%
Being involved in public procurement	20,4%	7,2%	5,9%	66,5%	100,0%
Starting a new company or setting up a branch within your own country	16,3%	9,1%	4,5%	70,0%	100,0%
Starting or preparing to sell products or deliver services in another European country	15,7%	7,9%	6,2%	70,2%	100,0%
Buying or building new offices or plants	16,5%	6,9%	5,0%	71,6%	100,0%
Obtaining environment-related permits	16,7%	6,6%	4,9%	71,8%	100,0%
Becoming or starting to be self-employed	14,9%	8,9%	4,3%	71,9%	100,0%
Declaring customs	15,4%	6,5%	5,0%	73,1%	100,0%
Hiring or preparing to hire employees living in another European country	13,7%	6,5%	4,5%	75,3%	100,0%
Setting up or preparing to set up a new legal entity in another European country	9,9%	6,9%	4,5%	78,7%	100,0%
Applying for patents	10,4%	6,3%	3,9%	79,4%	100,0%
Closing down (a company or branch)	7,6%	6,6%	3,1%	82,6%	100,0%

Table 24: Contact with public administrations for business life-events in the past 12 months

#### 1.12.2.2.2 E-mail/Internet contact with public administrations for life-events

For each business life-event that applies to their company, respondents were asked whether or not their company interacted with public agencies or officials by e-mail and/or *via* the Internet (websites). In doing so, for each life-event, we obtained, as a measure of take-up, the percentage of companies in the sample who used the Internet to interact with public administrations, compared to the total number of companies who, in the past 12 months, had contact with public administrations as a result of that particular event. These percentages are presented in Table 25, for the total sample and *per* country.

Take-up of eGovernment in business environments is high. The five top domains for which companies come into contact with public administrations are: **submitting statistical**

**data and tax declarations** (both 85%), searching and applying for **public funding, e-procurement and hiring new personnel** (in between 75% and 80%). Even for those items which are at the bottom of the list of 15 key events (starting up/closing down a company), eGovernment comes into play for more than 60% of the companies involved.

Depending on what services have been developed and are available on the supply side, differences between the ten Member States are obvious. In none of the Member States, however, can take-up of business-related eGovernment application be labelled as “problematic”. We note especially high performance of eGovernment take-up by businesses in Belgium and the UK.

We have compared the pilot study findings to the EU benchmark data with regard to the online availability and sophistication of eight basic public services for businesses (Capgemini, 2007). As a result, we see that the high rates of online availability and sophistication of online public services are matched by figures on actual take-up. This is illustrated best by online provisions for **declaring social contributions, corporate taxes and VAT**. Environment-related permits lag behind in sophistication on the supply side, while the use of available services in this field is considerably higher, at least in the pilot sample of ten EU Member States. In some countries there is a remarkable gap between use and supply, for example, in Austria and Germany. These are two countries which have a high level of sophisticated eGovernment services but whose citizens either did not yet find their way to use these services or else are not yet convinced of the advantages in using them.



	Total	Austria	Belgium	France	Germany	Italy	NL	Poland	Spain	Sweden	UK
Submitting data to statistical offices	84,7%	77,3%	96,7%	86,2%	76,4%	78,6%	93,3%	81,7%	87,0%	87,8%	85,1%
Declaring corporate taxes / VAT / social contributions	84,6%	85,9%	90,6%	86,6%	84,5%	78,8%	96,3%	77,7%	86,6%	77,2%	82,2%
Searching and applying for public funds	79,1%	76,1%	84,5%	74,8%	80,6%	74,5%	82,7%	79,4%	79,0%	81,9%	81,0%
Hiring new employees within your own country	77,1%	74,2%	81,8%	75,4%	75,8%	72,6%	80,5%	72,2%	78,7%	77,2%	84,6%
Being involved in public procurement	76,6%	73,7%	80,6%	82,3%	69,2%	68,7%	73,8%	79,2%	75,6%	85,5%	78,6%
Hiring or preparing to hire employees living in another European country	72,6%	71,6%	83,3%	67,8%	67,8%	72,2%	73,7%	61,6%	78,1%	35,0%	83,5%
Obtaining environment-related permits	71,8%	62,0%	87,2%	63,2%	71,9%	69,3%	75,0%	62,5%	78,5%	70,9%	78,5%
Applying for patents	71,5%	67,2%	88,2%	70,4%	74,5%	67,7%	92,0%	60,3%	77,9%	57,1%	73,6%
Starting or preparing to sell products or deliver services in another European country	69,4%	74,1%	85,1%	69,5%	72,0%	65,4%	64,3%	61,3%	62,1%	66,7%	75,5%
Becoming or starting to be self-employed	68,9%	67,2%	74,4%	70,2%	66,7%	75,2%	64,9%	57,6%	60,6%	69,8%	82,9%
Setting up or preparing to set up a new legal entity in another European country	68,7%	61,5%	86,8%	60,3%	73,2%	71,6%	61,9%	59,3%	61,3%	60,0%	79,0%
Declaring customs	68,3%	67,4%	76,7%	68,4%	62,5%	65,4%	81,0%	64,8%	75,3%	62,1%	73,9%
Buying or building new offices or plants	67,6%	56,2%	71,2%	71,4%	61,6%	67,8%	62,5%	68,6%	67,5%	56,2%	77,2%
Starting a new company or setting up a branch within your own country	65,3%	62,4%	82,1%	64,0%	66,9%	64,4%	57,4%	51,9%	54,1%	68,7%	80,8%
Closing down (a company or branch)	63,5%	66,0%	73,7%	50,0%	65,1%	76,9%	57,7%	48,0%	65,1%	51,6%	67,3%
<b>Average % for all 15 life-events</b>	<b>69,1%</b>	<b>66,0%</b>	<b>81,0%</b>	<b>66,8%</b>	<b>68,2%</b>	<b>69,1%</b>	<b>68,5%</b>	<b>60,6%</b>	<b>67,5%</b>	<b>62,7%</b>	<b>77,6%</b>

Table 25: Use of e-mail/Internet if contact with public administrations in the past 12 months

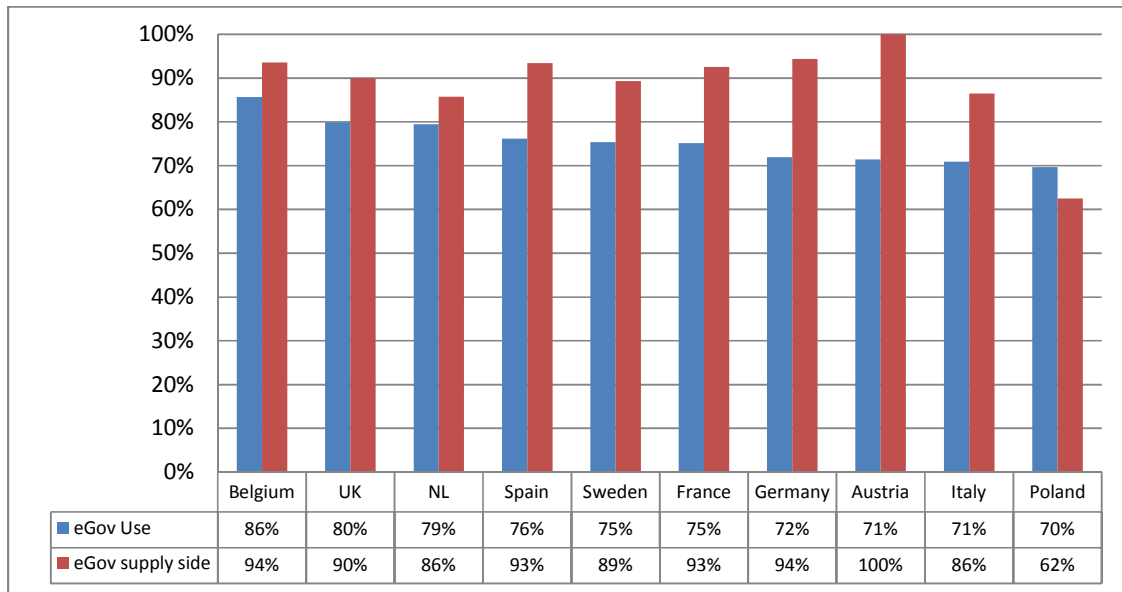
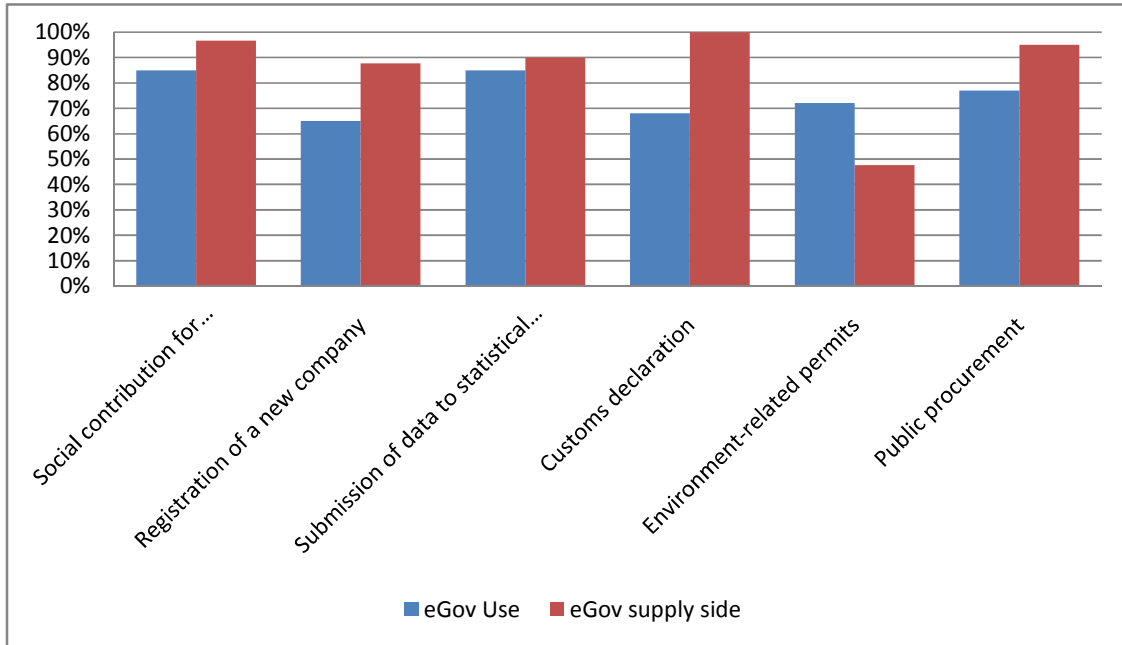


Figure 53:: Use of eGovernment services compared to front office availability of the 8 basic public services for businesses

#### 1.12.2.2.3 Most intensive e-mail/Internet contact with public administrations

In order to focus on the measurement of satisfaction on the eGovernment process related to one specific business life-event, the respondents were asked to indicate for which life-event, in the past 12 months, their company had come into contact with public agencies or officials the most by e-mail and/or via the Internet (websites). As indicated earlier, this could be one of the 15 life-events, another event if none of these 15 applied, or no business event/Internet contact whatsoever.

Companies use the Internet the most in their contacts with public agencies for **declaration of taxes/VAT/social contributions**. That is, they use the Internet to comply with the corporate obligations required of them by government.

The satisfaction scores presented in this report, therefore, most often relate to the online services the ten Member States provide for declaration of taxes (for example, the most intensive Internet contact was tax declaration in nearly half of the cases for respondents in the Netherlands).

On average, 4% of the companies claim that they did not have any contact with public administrations in the past 12 months. Of all the others which did have contact with public administrations during the past 12 months (96.1% in total), **12.6%** of the companies (12% of the total sample) can be considered as **non-users**.

	Total	Austria	Belgium	France	Germany	Italy	NL	Poland	Spain	Sweden	UK
Declaring corporate taxes / VAT / social contributions	27,0%	29,3%	23,2%	29,1%	24,6%	20,8%	47,9%	27,8%	25,9%	25,3%	16,4%
Hiring new employees within your own country	9,6%	12,4%	11,4%	4,0%	11,9%	6,7%	5,2%	11,3%	7,7%	9,8%	15,9%
Submitting data to statistical offices	7,5%	3,8%	11,8%	11,9%	2,2%	7,2%	6,4%	11,3%	7,0%	8,2%	4,7%
Searching and applying for public funds	5,6%	6,1%	4,1%	3,2%	8,9%	4,7%	4,7%	7,3%	9,0%	3,4%	4,2%
Being involved in public procurement	4,8%	3,2%	1,6%	9,7%	4,5%	3,2%	2,6%	7,5%	3,7%	9,4%	3,0%
Becoming or starting to be self-employed	4,6%	5,9%	2,3%	4,5%	5,5%	5,9%	3,3%	4,8%	4,0%	4,2%	6,0%
Starting or preparing to sell products or deliver services in another European country	3,4%	5,9%	1,4%	4,5%	3,7%	4,7%	1,2%	4,5%	3,7%	1,6%	3,2%
Starting a new company or setting up a branch within your own country	3,0%	2,3%	1,6%	4,2%	4,7%	3,5%	0,7%	2,0%	1,2%	1,8%	7,7%
Declaring customs	2,3%	1,8%	2,7%	3,0%	4,7%	2,5%	0,7%	2,0%	2,0%	1,6%	2,0%
Setting up or preparing to set up a new legal entity in another European country	1,6%	0,9%	0,7%	1,0%	3,7%	2,5%	0,0%	0,8%	0,2%	0,6%	5,2%
Obtaining environment-related permits	1,4%	1,6%	2,7%	0,7%	0,7%	1,2%	2,1%	0,5%	2,0%	2,0%	0,2%
Buying or building new offices or plants	1,0%	0,7%	0,5%	0,5%	1,2%	2,5%	0,5%	1,5%	0,7%	0,8%	1,5%
Hiring or preparing to hire employees living in another European country	0,9%	0,9%	0,9%	1,2%	1,2%	0,7%	0,2%	0,8%	1,5%	0,2%	1,7%
Applying for patents	0,5%	0,7%	0,0%	0,7%	0,0%	0,5%	0,2%	0,5%	0,5%	0,4%	1,0%
Closing down (a company or branch)	0,4%	0,5%	0,0%	0,2%	0,5%	1,0%	0,0%	0,0%	0,7%	0,4%	0,2%
Other	10,4%	9,9%	17,3%	9,7%	6,9%	15,3%	8,5%	3,3%	11,2%	11,4%	9,9%
None: No e-mail/Internet contact	12,1%	10,4%	11,6%	9,7%	11,4%	12,1%	9,5%	12,5%	13,7%	17,9%	12,7%
None: No contact whatsoever	3,9%	3,8%	6,2%	2,0%	3,5%	5,0%	6,2%	2,0%	5,2%	0,8%	4,5%
Total (N=4.000)	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Table 26: Business life-events for which e-mail/Internet was used most intensively in past 12 months

#### 1.12.2.2.4 Level of interaction

As the citizens' survey showed — reported in the sections on citizens', chapter 3 — the level of interaction with public agencies and services is of high importance.

What form did the most intensive Internet contact of companies with public agencies take? Again five levels were defined in the questionnaire: e-mail, information, downloading forms (one-way interaction), uploading forms (two-way interaction) and/or transactions. From the companies' answers to this question, we extracted both the extent to which contacts took place at these different levels as well as the highest level at which each company interacted with public administrations. Note that the highest interaction levels in this analysis are always related to life-events and the services that correspond to these and yet that are specific to each company's situation.

About 60% of the companies used e-mail communication, information and downloadable forms as a result of the business life-event for which they had contact with public administrations the most intensively. In nearly half of the cases, they uploaded forms for declarations, registrations or service applications. Comparable to citizens, 19% of the companies made their transactions fully electronically.

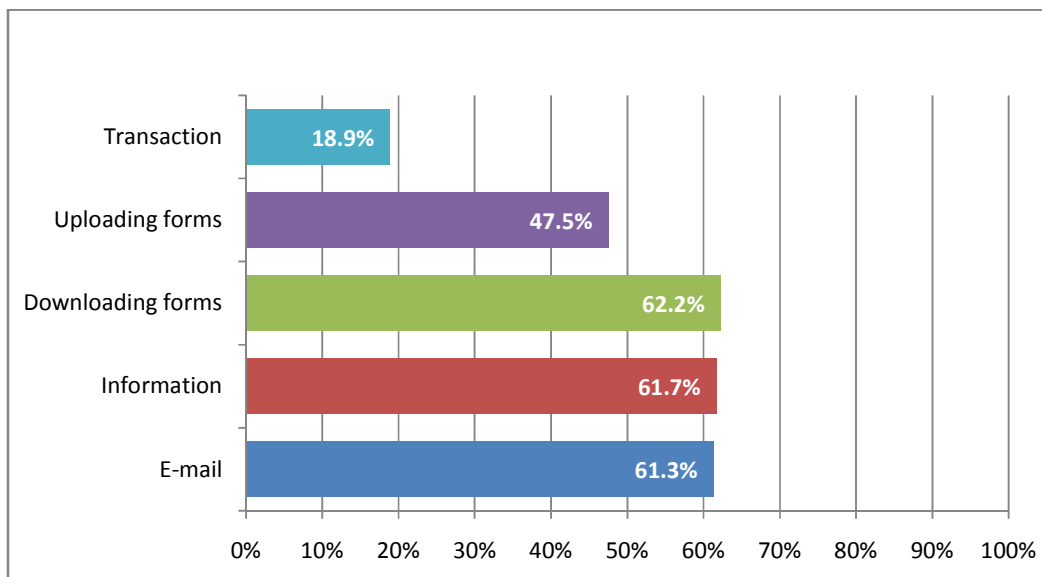


Figure 54: Interaction levels of eGovernment contact

Translated into figures about the highest level at which each company interacted with public administrations, we see that about 80% went further than mere e-mail communication or information gathering. As high as 57% of the companies interacted with a public administration through the means of sending electronically filled-in forms or of a transaction (20%, a figure which is just as high as the citizens' highest interaction level).

Transactions occur more frequently among larger companies and "high" Internet users. At the highest interaction level, it ranges from 15% of the smaller, low Internet-profiled companies to 26% of those larger companies with a high eBusiness profile.

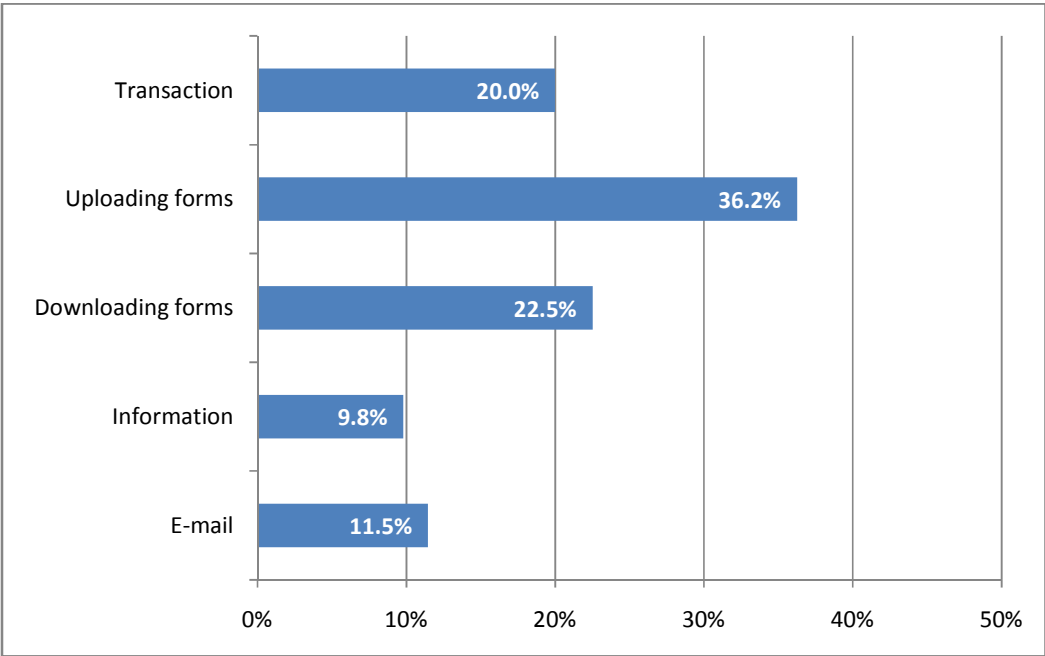


Figure 55: Highest interaction level of eGovernment contact

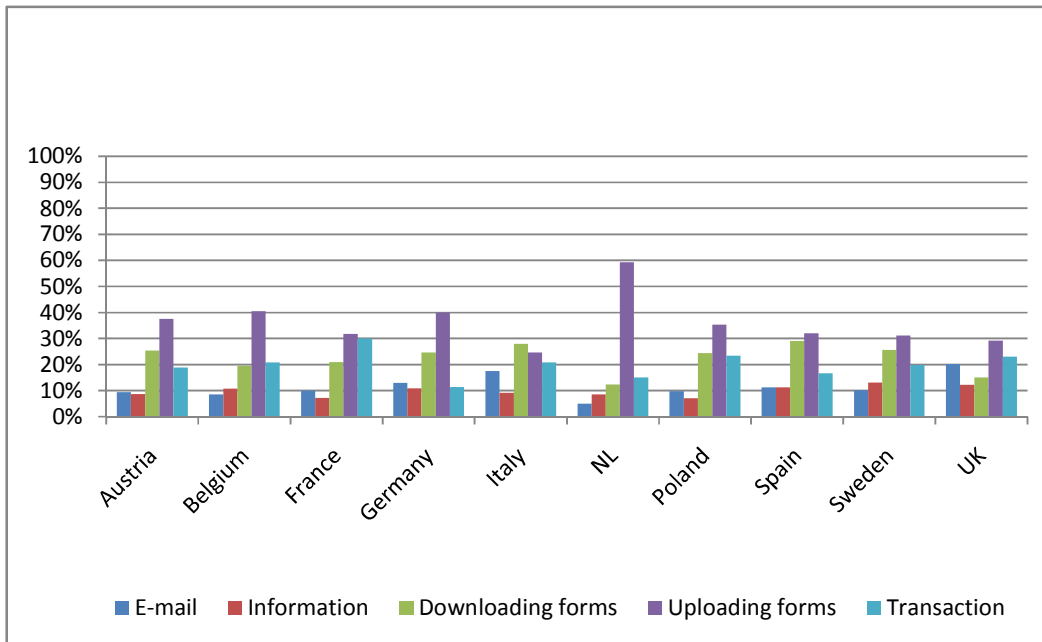


Figure 56: Highest interaction level of eGovernment contact per country (n=3.169)

At this stage, as was indicated with the results of the citizens' survey, a comparison between countries should be undertaken with cautiousness. In the ten different Member States, companies indicated different business life-events as the ones for which they have used the Internet most intensively in the past 12 months. In the Netherlands, for example, figures on the highest interaction level are based proportionally higher on services that are available for tax declarations.

#### 1.12.2.3 Channel preferences

For each business life-event for which they had had contact with public administrations in the past 12 months, the company representatives in the sample were asked whether they would prefer, yes or no, to interact by e-mail and/or via the Internet (websites) next time.

In the following table we present:

4. The percentage of companies (N=4,000) which had contact with public administrations for a given event in the past 12 months;
5. The percentage of companies which used the Internet when they had contact with public administrations for a given event in the past 12 months;
6. The percentage of companies which prefer to use the Internet if they were to have contact again with public administrations for a given event.

In a separate table, *per* country, the percentages of companies are presented which would prefer to use the Internet in the event that they would have contact again with public administrations for a given event.

The expressed preference to interact with government *via* the Internet (rather than using other channels) is systematically higher — for each business event — than the actual use. This general observation holds for the situation in every country. Belgium is a good example of the extent to which European businesses are eager to handle public administrative affairs online.

	<b>% of respondents who had contact with public administrations in the past 12 months</b>	<b>% of respondents who used the Internet for this contact with public administrations in the past 12 months</b>	<b>Preference to use the Internet (in % of companies which had contact with public administrations in the past 12 months)</b>
Declaring corporate taxes / VAT / social contributions	65,7%	84,6%	90,5%
Submitting data to statistical offices	43,8%	84,7%	88,7%
Searching and applying for public funds	38,4%	79,1%	86,5%
Being involved in public procurement	33,5%	76,6%	84,8%
Hiring new employees within your own country	52,7%	77,1%	84,3%
Becoming or starting to be self-employed	28,1%	68,9%	81,3%
Obtaining environment-related permits	28,2%	71,8%	81,1%
Starting or preparing to sell products or deliver services in another European country	29,8%	69,4%	80,4%
Declaring customs	26,9%	68,3%	79,6%
Hiring or preparing to hire employees living in another European country	24,7%	72,6%	79,0%
Starting a new company or setting up a branch within your own country	30,0%	65,3%	77,5%
Applying for patents	20,6%	71,5%	76,5%
Buying or building new offices or plants	28,4%	67,6%	76,3%
Setting up or preparing to set up a new legal entity in another European country	21,3%	68,7%	74,7%
Closing down (a company or branch)	17,4%	63,5%	71,4%

Table 27: Internet preference for contact with public administrations



	Preference to use the Internet for future contact with public administrations (in % of companies who had contact with public administrations in the past 12 months)										
	Austria	Belgium	France	Germany	Italy	NL	Poland	Spain	Sweden	UK	
Declaring corporate taxes / VAT / social contributions	94,9%	97,5%	91,6%	81,8%	82,5%	96,7%	89,1%	90,0%	93,7%	88,5%	
Submitting data to statistical offices	81,0%	99,4%	92,2%	79,3%	82,1%	97,5%	87,4%	90,1%	95,4%	85,8%	
Searching and applying for public funds	86,5%	98,4%	81,3%	80,1%	81,0%	93,3%	92,0%	85,3%	90,7%	82,3%	
Being involved in public procurement	86,7%	90,1%	93,0%	75,9%	76,4%	90,2%	86,1%	87,2%	94,0%	77,3%	
Hiring new employees within your own country	81,2%	92,8%	87,9%	78,5%	80,5%	88,4%	81,5%	84,2%	88,2%	85,5%	
Becoming or starting to be self-employed	75,4%	87,2%	83,3%	79,1%	81,6%	74,3%	81,6%	77,8%	83,7%	90,1%	
Obtaining environment-related permits	76,1%	92,8%	75,8%	75,2%	75,4%	92,5%	78,4%	83,5%	93,3%	79,5%	
Starting or preparing to sell products or deliver services in another European country	82,2%	93,1%	86,4%	73,0%	75,9%	84,8%	74,1%	84,8%	85,2%	82,4%	
Declaring customs	78,0%	94,2%	82,7%	72,2%	73,8%	92,9%	75,2%	81,0%	91,8%	81,2%	
Hiring or preparing to hire employees living in another European country	80,0%	92,8%	75,0%	74,6%	70,6%	90,5%	73,5%	85,7%	52,9%	83,9%	
Starting a new company or setting up a branch within your own country	75,4%	88,7%	78,3%	76,5%	70,7%	65,7%	74,5%	83,5%	85,7%	83,3%	
Applying for patents	78,1%	95,1%	82,3%	66,7%	76,6%	92,6%	70,1%	84,1%	74,2%	70,9%	
Buying or building new offices or plants	73,5%	84,1%	78,5%	65,5%	78,8%	88,9%	74,6%	72,5%	79,7%	78,7%	
Setting up or preparing to set up a new legal entity in another European country	72,1%	93,3%	78,9%	68,3%	72,8%	79,2%	66,7%	79,7%	84,0%	75,6%	
Closing down (a company or branch)	62,7%	95,7%	68,6%	65,9%	73,5%	80,0%	65,8%	62,5%	84,8%	76,4%	

Table 28: Internet preference for contact with public administrations per country

#### 1.12.2.4 Non-use of eGovernment in business life-events

Here, we focus on the profiles, barriers to use, channel preferences and likelihood of future eGovernment take-up of that group of companies which did not use the Internet to come into contact with public administrations in the past 12 months. In total 16% of the sample of companies claim that they did not have contact with public agencies *via* the Internet as a result of at least one business event last year. Four per cent indicated that they did not have any contact whatsoever with public administrations. As a result the following analysis relates to 12% of all companies in the sample (N=486).

##### 1.12.2.4.1 Non-use and non-users' profiles

More than 12 per cent (12.6%) of all companies who had contact with public administrations in the past 12 months (96.1% of the total sample) did not use e-mail/Internet to interact with government.

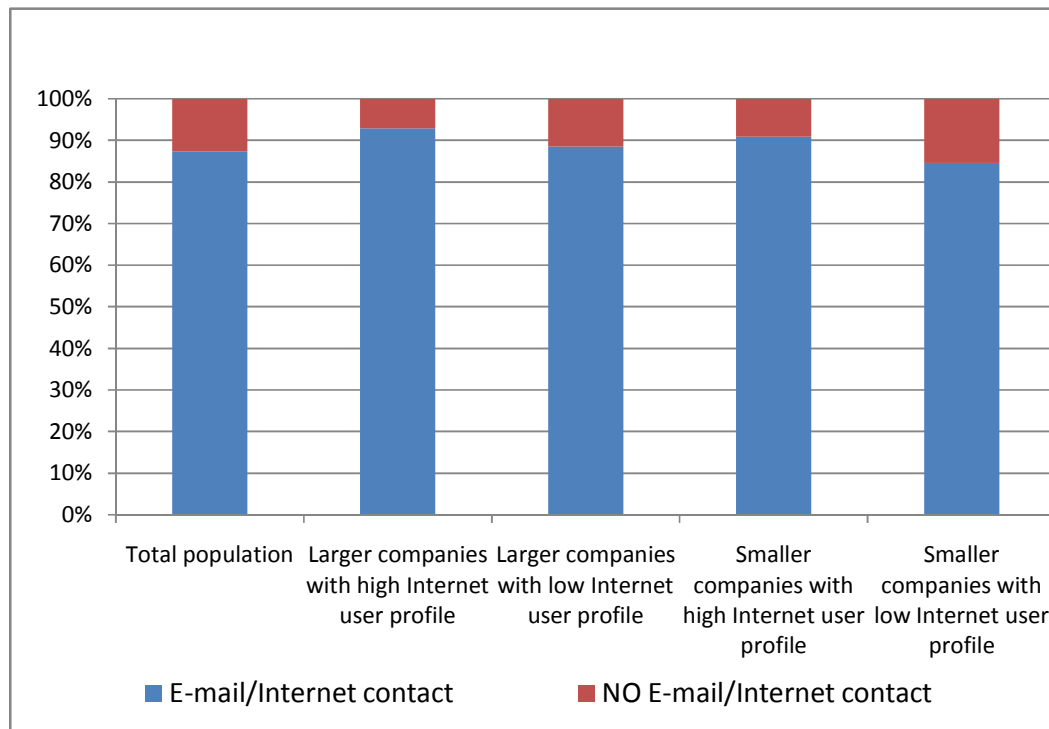


Figure 57: Use and non-use of the Internet for contact with public administrations (n=3.844)

No significant differences appear to exist that depend on the size of the companies, but the use of other business-related Internet services does play a role in differentiating between users and non-users. Use of eGovernment is above 90% in those companies that were identified as having a high eBusiness profile (i.e., eBusiness use). Fifteen per cent of smaller companies with a low eBusiness profile did not use the Internet to interact with public administrations in the last 12 months.

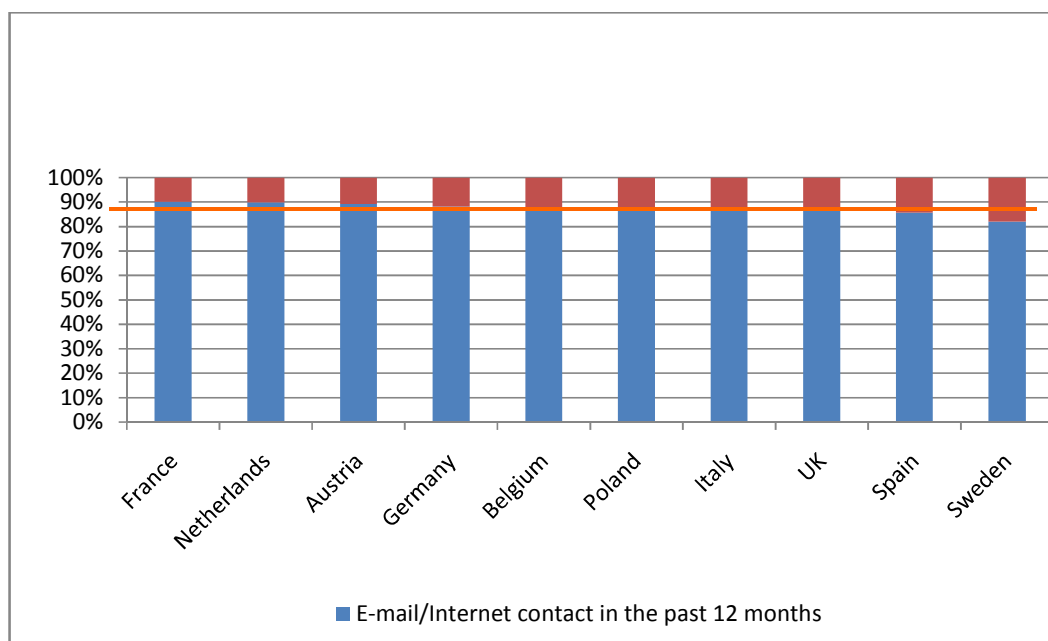


Figure 58: Use/non-use of the Internet to interact with public administrations (n=3.844)

#### 1.12.2.4.2 Reasons for non-use

In the past 12 months, when companies did not come into contact with public agencies or officials *via* the Internet, respondents were asked to indicate all the reasons that apply for not having used e-mail or the Internet (i.e., websites).

The main reasons why companies do not use the Internet to interact with public administrations mirror the citizens' barriers for use:

1. No need to use the Internet (39.7%)
2. Lack of awareness of existing information sources or services (18.8%)
3. No willingness to use the Internet for these purposes (10.9%).

Again, the issue of awareness of the existence of relevant eGovernment services and applications is striking.

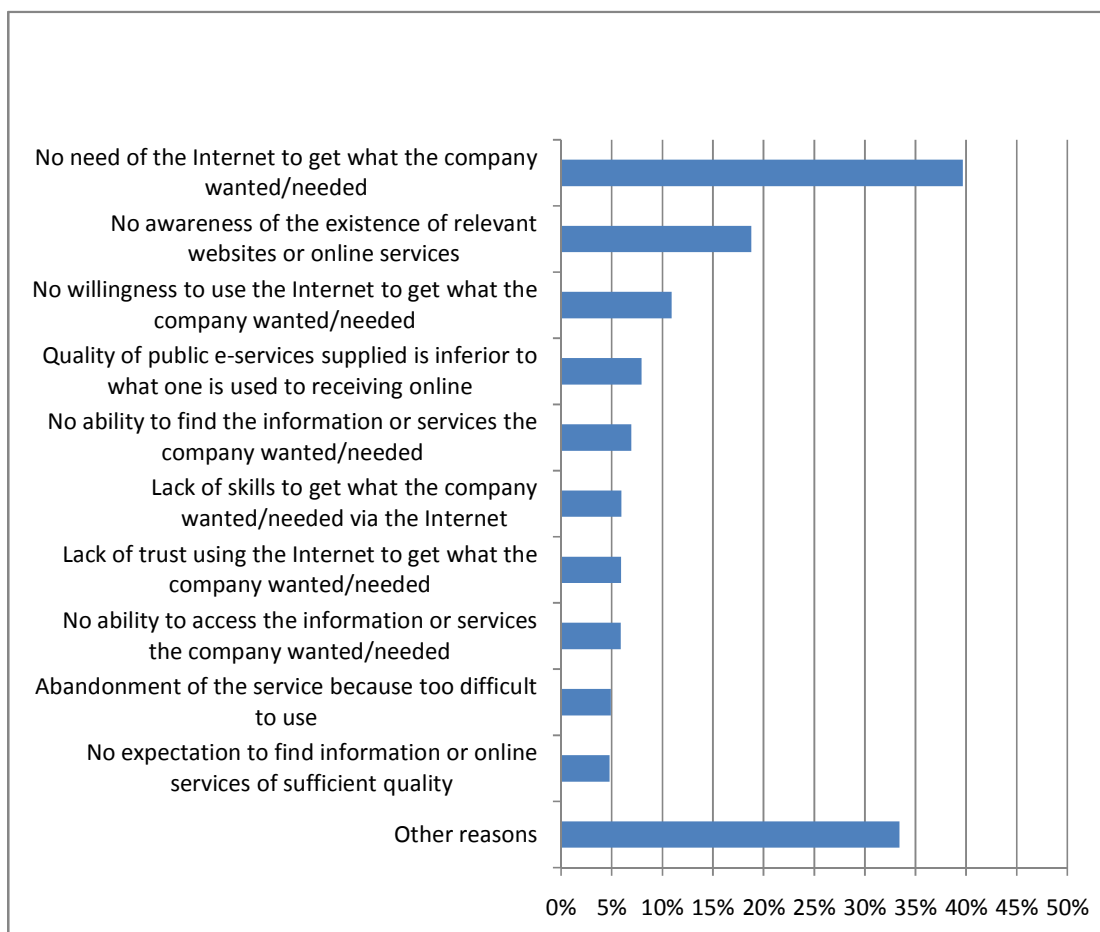


Figure 59: Reasons for non-use of the Internet to interact with public administrations (n=486)

#### 1.12.2.4.3 Channel preferences and likelihood of future use

Respondents in “non-user companies” were asked to respond to two points: (1) the means by which their company would prefer to interact (in person, mail, telephone or the Internet), and (2) how likely it is that their company would use the Internet (on a 5-point scale ranging from very likely to very unlikely), if they were to come into contact with public agencies in the future.

About 40% of the “non-user companies” see the Internet as the channel by which they would prefer to interact with public administrations, and 18% are almost certain to use eGovernment in the future. In an implicit way, this may again place a need on policy makers to stimulate awareness and communicate the benefits of existing online services.

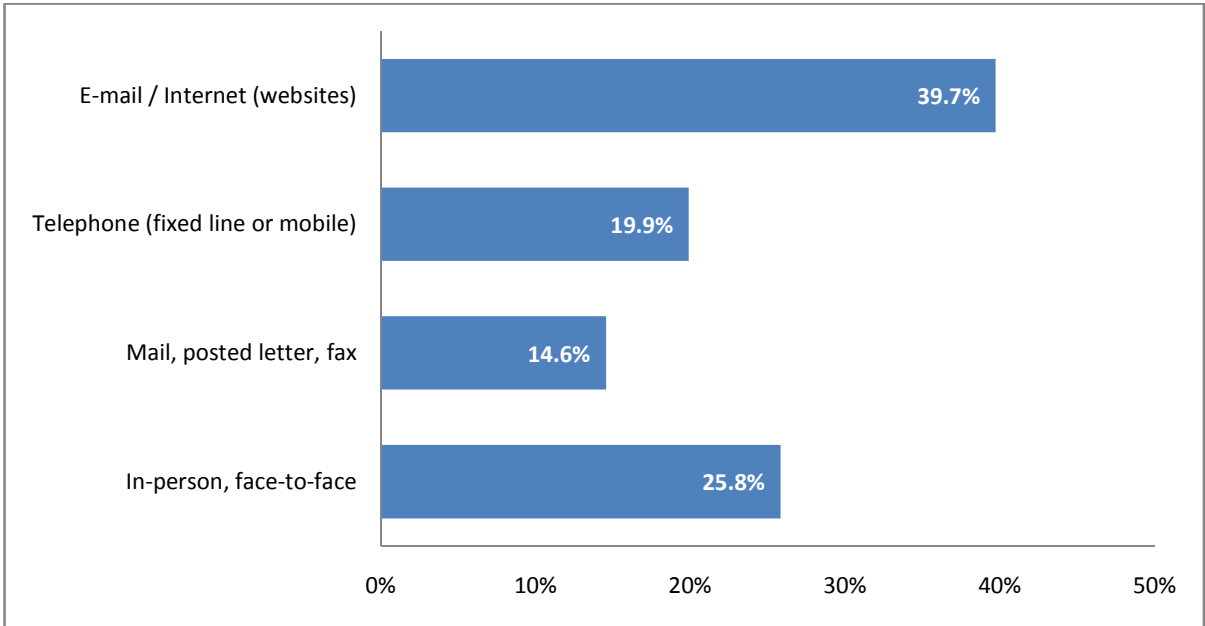


Figure 60: Channel preferences of current non-users (n=486)

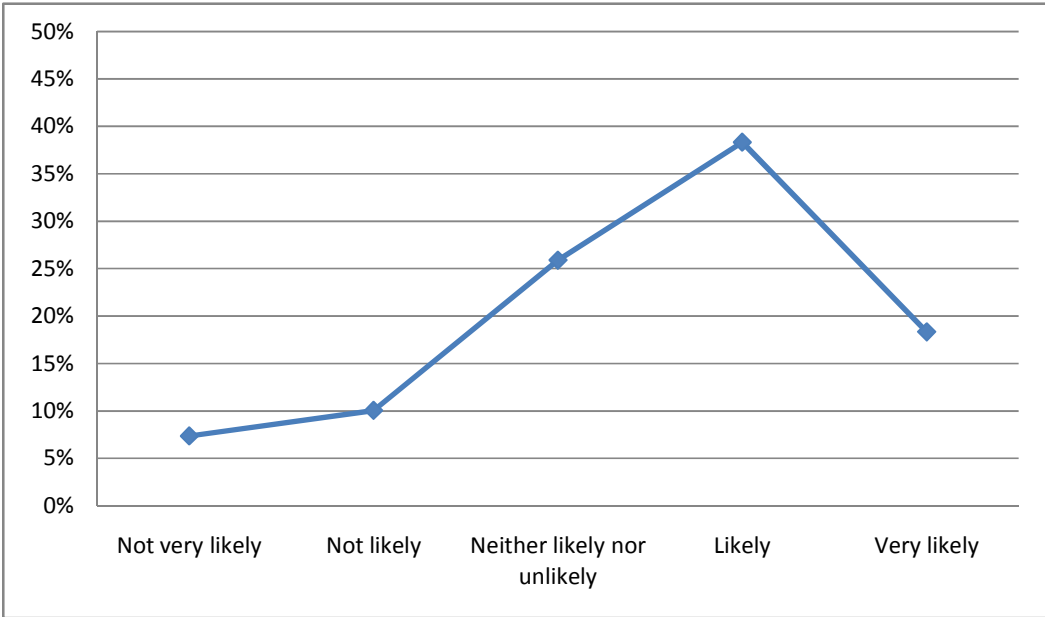


Figure 61: Likelihood of future use by current non-users (n=486)

### 1.12.3 Satisfaction with eGovernment

We describe the overall level of satisfaction of companies with the use of government website information and with applying for public services online. Next, we focus on the evaluation by companies of their interaction with public administrations as a result of the specific business life-events identified in chapter 1.12.2.2.

#### 1.12.3.1 General satisfaction with eGovernment

We described the use of eGovernment on a general level, in terms of looking for information on government websites and using electronic forms to apply for public services. Respondents expressed the extent to which their company is satisfied with both applications on a scale ranging from 0 to 10.

Overall satisfaction with eGovernment in the business environment is rather high, with scores of 8.4 (information) and 8.3 (public services) on a 10-point scale. eGovernment performance is rated nearly as high as most private business-related Internet services. Slightly fewer than 15% of respondents attributes a maximum score 10/10 to eGovernment. While nearly one-third of the citizens is not all satisfied with eGovernment (maximum score of 5/10), in contrast among companies the group of those which are dissatisfied remains more or less limited to 15% for eInformation and 18% for eServices respectively. The differences in satisfaction between government website information and using public services online are very small.

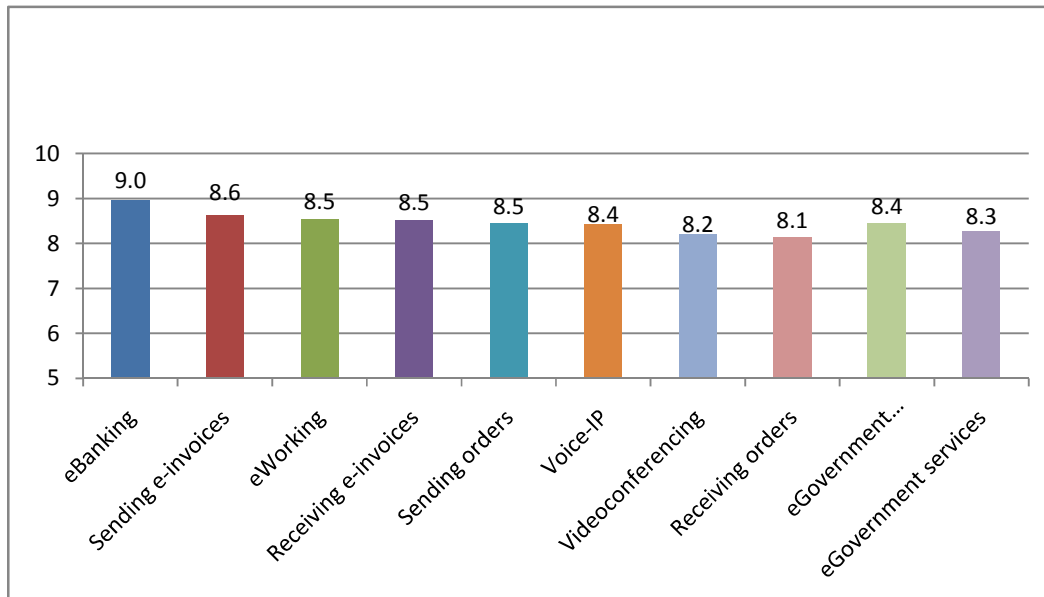


Figure 62: Satisfaction with private and public Internet services

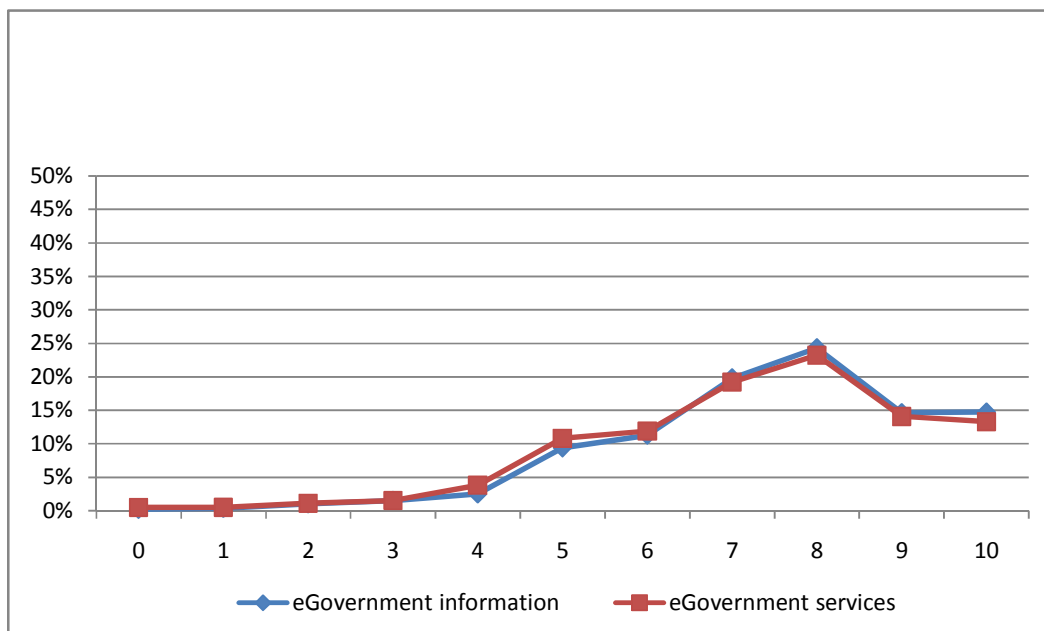


Figure 63: Satisfaction with eGovernment: overall scores

General take-up of and satisfaction with eGovernment is quite consistent regardless of company size. Companies with a higher eBusiness profile, make use to a larger extent of both “private” and “public” Internet applications related to their business activities. As far as online government information is concerned, the level of satisfaction generally is 8.4/10. Larger (8.4) and smaller (8.5) companies with a “high eBusiness profile” express a higher level of satisfaction with eServices than “low eBusiness profiles” (8.2).

		Overall level of satisfaction (average score on 0-10 scale)	
		eInformation	eServices
<b>Business Internet user typology</b>	Larger companies with high eBusiness profile	8,5	8,4
	Larger companies with low eBusiness profile	8,4	8,2
	Smaller companies with high eBusiness profile	8,4	8,5
	Smaller companies with low eBusiness profile	8,4	8,2

Table 29: Satisfaction with eGovernment by business profile

General satisfaction with eGovernment is consistent across the ten EU Member States. The higher levels of satisfaction with online information provision in Poland and Spain are noteworthy findings.

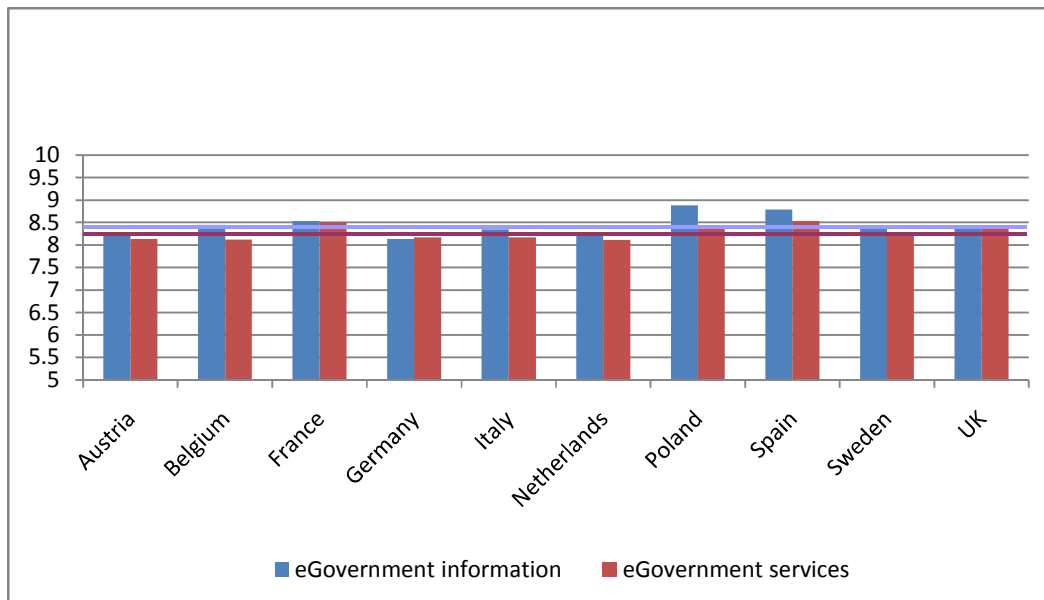


Figure 64: Satisfaction with eGovernment per country

### 1.12.3.2 Satisfaction with eGovernment in business life-events

Now we return to the business life-events for which companies used the Internet most intensively to interact with public administrations in the past 12 months (N=3,358). We focus on: the overall level of satisfaction with the eGovernment process involved; the comparison of companies' experiences with expectations; the achievement of objectives as intervening factor in their evaluations; the main factors of satisfaction or dissatisfaction with



the online information/service delivery process; and the likelihood of re-use of eGovernment within the context of the same business life-event in the future.

#### 1.12.3.2.1 Overall level of satisfaction

Based on the event or issue for which companies in the ten EU Member States had had e-mail/Internet contact with public administrations the most intensively in the last 12 months, the average level of satisfaction is a modest 7.6/10 score. This is quite a bit lower than respondents' general evaluation presented in chapter 1.12.3.2.1. One-third of the companies rates its eGovernment experience with a score of at least 8/10. One-quarter rates it with a 5/10 maximum (10% go below 5/10).

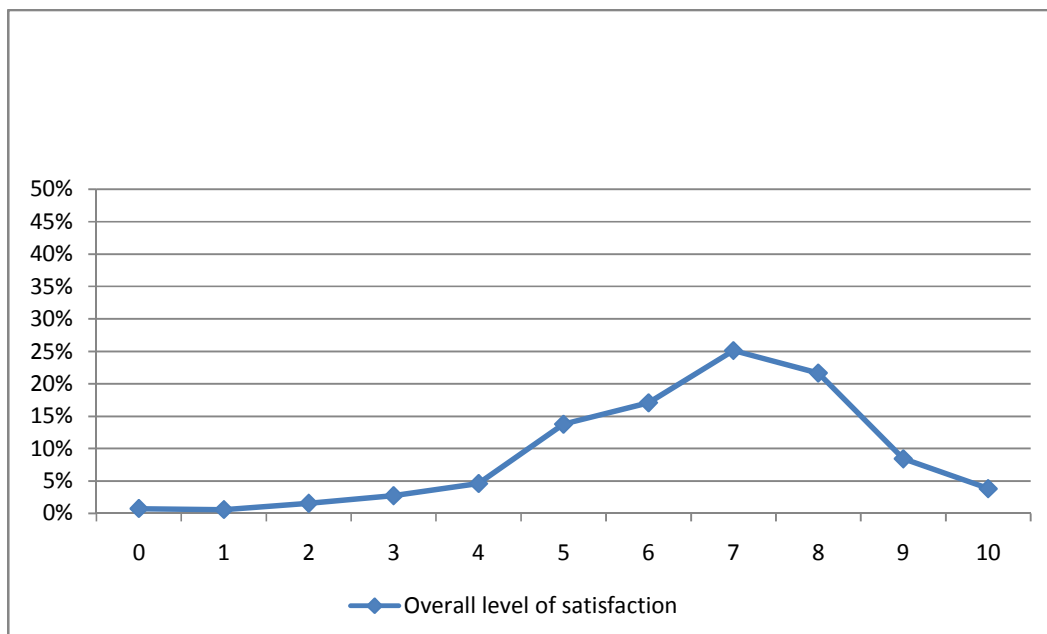


Figure 65: Satisfaction with the most intensive e-mail/Internet contact (n=3.358)

Congruent with general levels of satisfaction with both private and public Internet services, satisfaction with specific event-based eGovernment experiences is on average slightly higher in companies with a higher eBusiness profile. This contradicts the hypothesis that more and better experiences with private Internet services leads to more critical evaluations of eGovernment performance.

		Use of the Internet to interact with public administrations	Overall level of satisfaction (average score on 0-10 scale)
<b>Business Internet user typology</b>	Larger companies with high EBusiness profile	91,2%	7,8
	Larger companies with low EBusiness profile	85,4%	7,7
	Smaller companies with high EBusiness profile	88,4%	7,8
	Smaller companies with low EBusiness profile	80,3%	7,5

Table 30: Use of and satisfaction with most intensive Internet contact by business profile

Just like in the citizens' survey, it can be seen that the level of satisfaction increases with the level of eGovernment interaction at which business users operated. Uploading forms (7.8) and especially transactions (8.1) score a little higher than the three other, simpler, interactions.

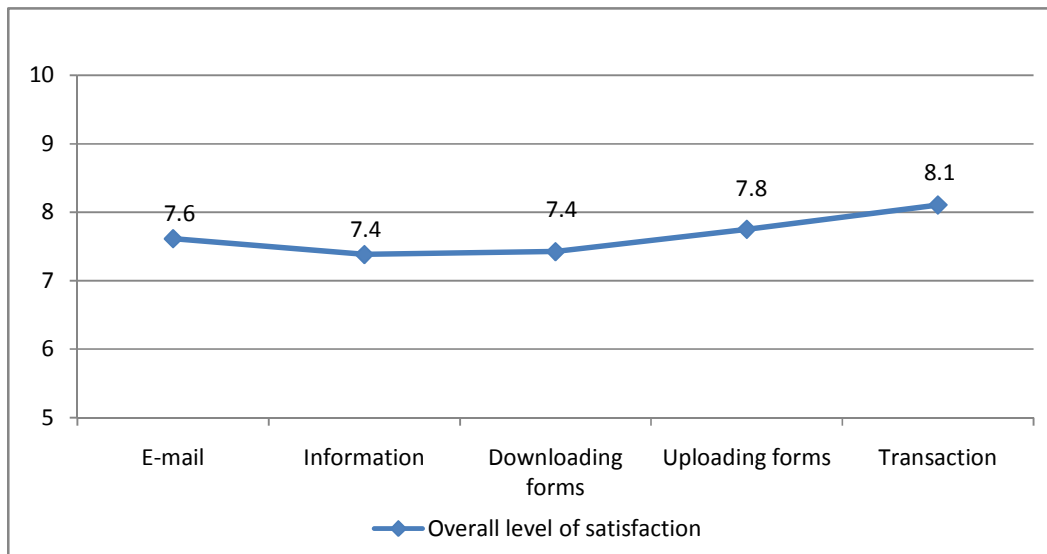


Figure 66: Satisfaction with the most intensive e-mail/Internet contact (n=3.358)

Again, we would like to highlight that these data on country-specific figures should be approached with care; since they reflect a variety of events and related services in the ten pilot Member States. We nevertheless take a tentative look at the cross-country results. Analysis of the data from a country perspective shows relatively higher performance rates in Italy and the UK (both are evaluated at 8.1/10). Most of the time, satisfaction increases with the level on which companies interact with their public administrations. Contrary to the citizens' responses, there are some exceptions. For businesses, e-mail communication in general scores higher compared with the citizens' judgements, but there is quite some

disparity between the countries on this point. In some countries, such as Belgium and the Netherlands, information scores slightly higher than services.

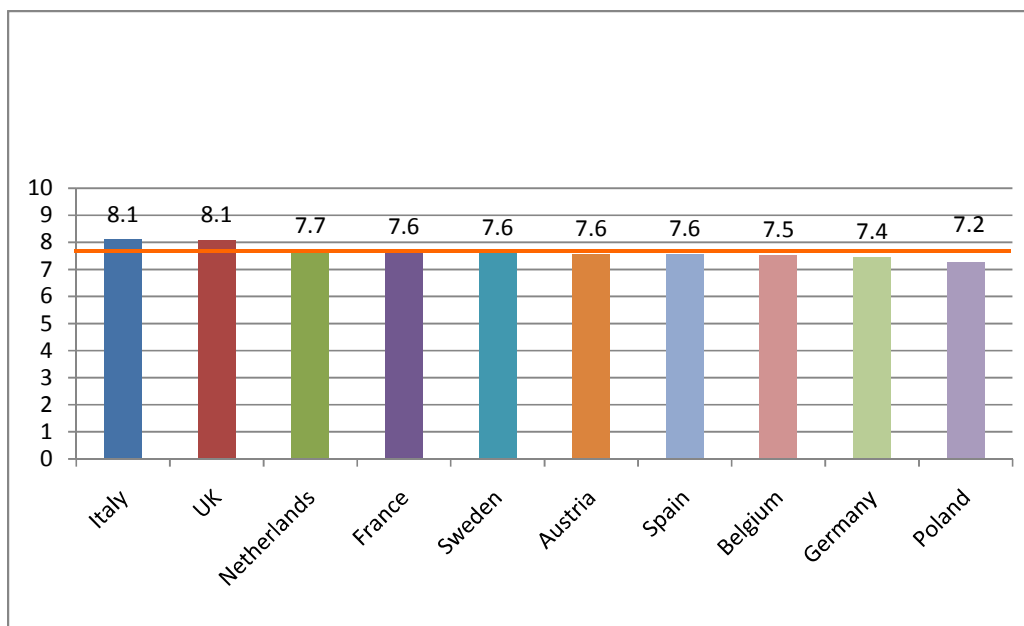


Figure 67: Satisfaction with the most intensive e-mail/Internet contact per country (n=3.358)

	Total	Austria	Belgium	France	Germany	Italy	NL	Poland	Spain	Sweden	UK
E-mail	7,6	7,8	8,0	7,3	7,1	8,1	7,4	6,9	7,3	7,4	8,2
Information	7,4	7,4	7,9	7,6	7,1	7,8	7,9	6,5	7,1	7,0	7,7
Downloading forms	7,4	7,0	7,2	7,6	7,2	7,9	7,6	7,0	7,4	7,5	8,2
Uploading forms	7,8	7,8	7,8	7,7	7,6	8,1	7,7	7,6	7,8	7,9	8,0
Transaction	8,1	8,1	7,6	7,9	8,7	8,7	7,8	7,8	8,2	8,0	8,6

Table 31: Satisfaction with most intensive Internet contact by interaction level per country

#### 1.12.3.2.2 Comparison with expectations

Company users' expectations were integrated in the survey questionnaire in an explicit manner through the question: "Looking back, how did the contact with public agencies or officials by e-mail and/or via the Internet (websites) compare with what you had expected?".

44.3% of the business users evaluates the eGovernment experience as better than they had expected, and only 5.9% as worse. The 50% of users who indicated that the result was 'neither better nor worse' can presumably be interpreted as receiving precisely the experience that they expected, which in fact means a very adequate meeting of expectations. The impact of expectations on the ultimate level of satisfaction speaks for itself.

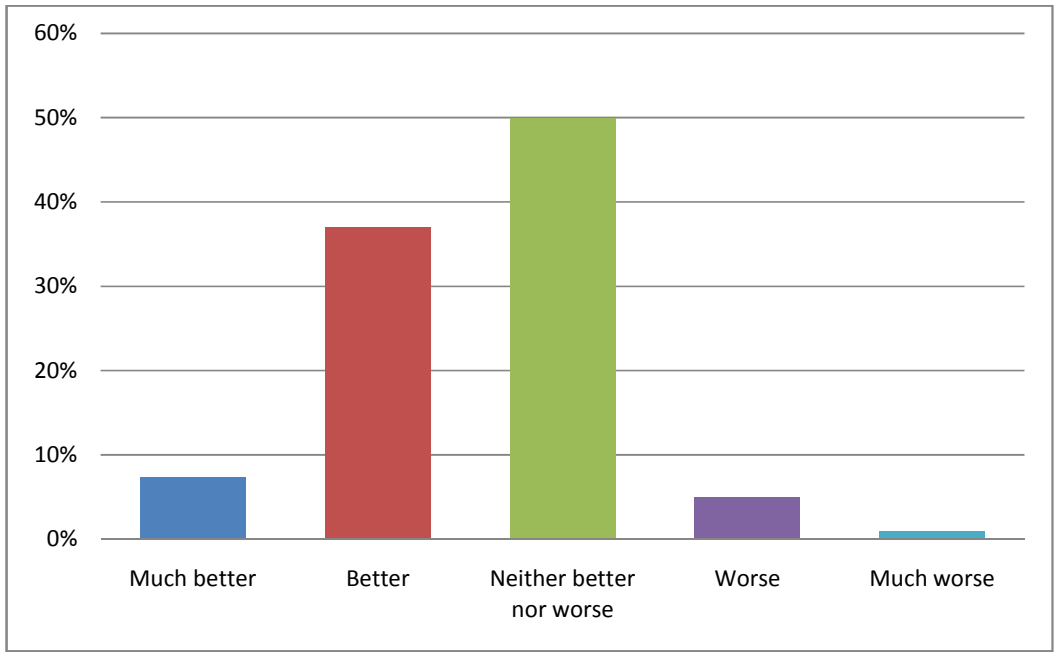


Figure 68: Most intensive e-mail/Internet contact compared with expectations (n=3.358)

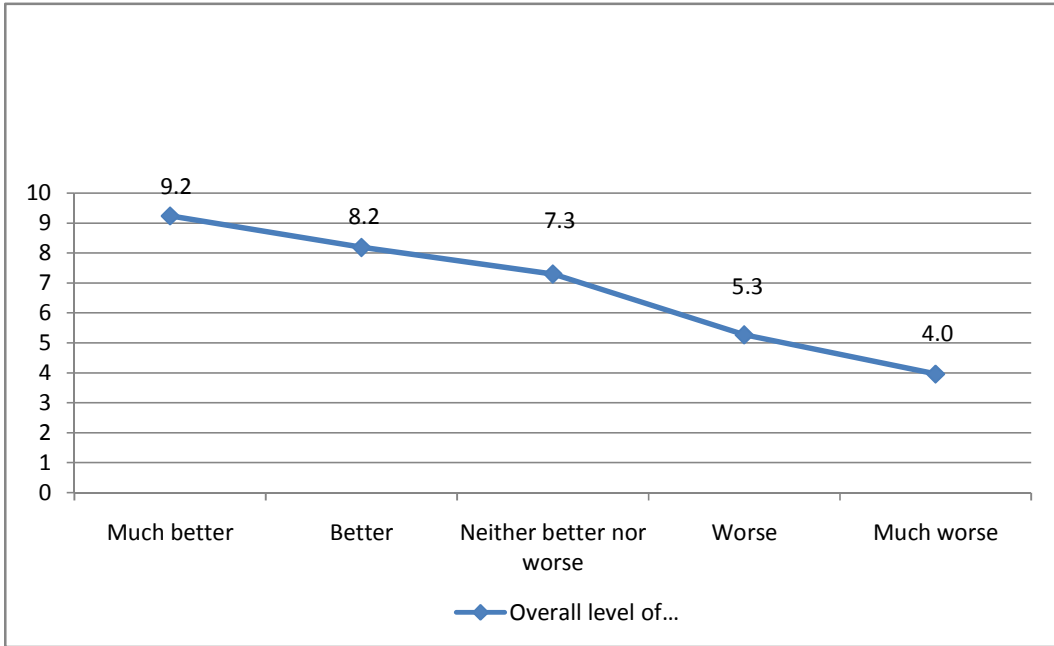


Figure 69: Satisfaction with most intensive Internet contact compared with expectations

It is interesting that the positive reactions are highest for e-mail communication (52% better or much better), on the one hand, and for actual transactions (57% better or much better than expected), on the other.

### 1.12.3.2.3 Achievement of objectives

Finally, when interacting with government online in the context of a specific business life-event, did the company in the end obtain what it wanted or needed, either totally, partially or not at all? Satisfaction is related to the extent to which companies feel that they achieved their objectives through their Internet interactions with public administrations. This was the case: totally for 44% and partially for another 44%. A very small minority of 2% of the companies did not achieve its objectives at all.

Satisfaction increases with the level of online interaction. This can be traced back to a certain extent to the achievement of objectives. With uploading forms (52.6%) and on the transactional level (49.8%) objectives are far more often fully achieved when compared to looking for information (33.3%) and downloading forms to apply for services (38.2%).

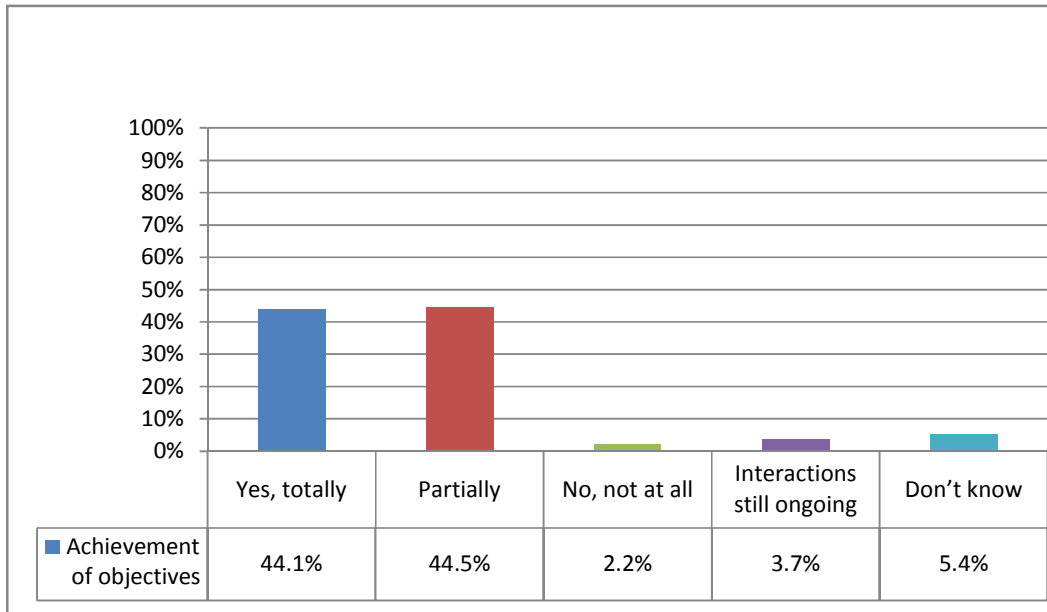


Figure 70: Achievement of objectives of most intensive e-mail/Internet contact

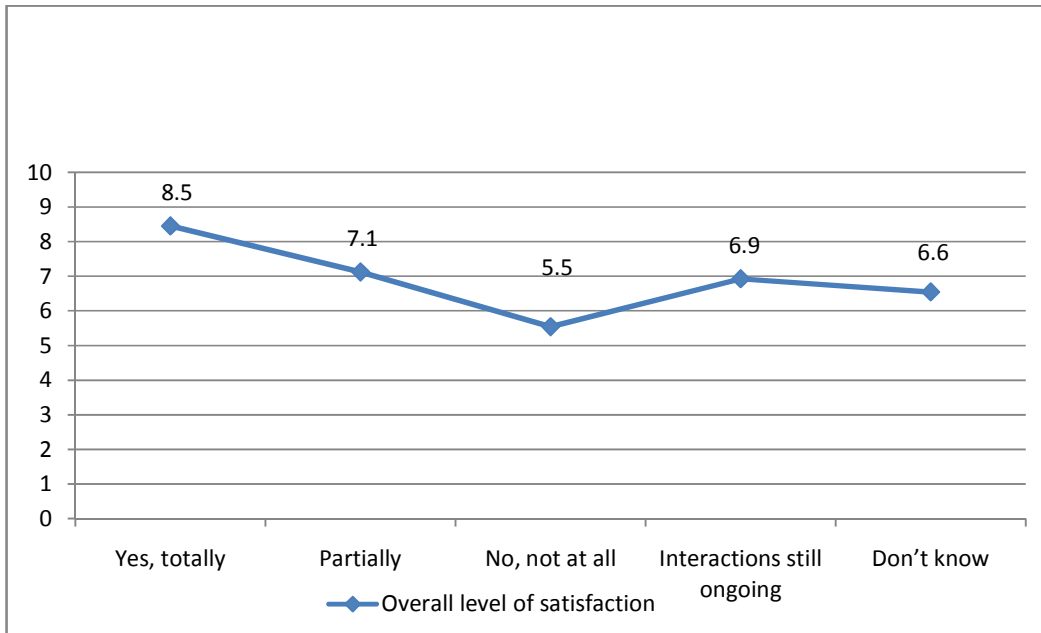


Figure 71: Satisfaction with most intensive Internet contact by achievement of objectives

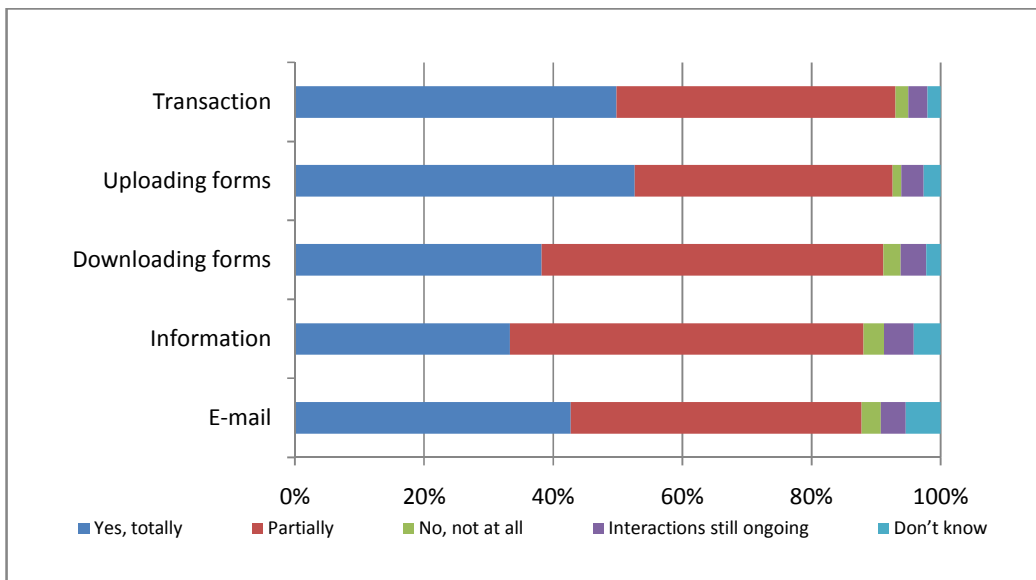


Figure 72: Achievement of objectives by level of interaction (N=3358)

#### 1.12.3.2.4 Factors of satisfaction and dissatisfaction

As with the citizens' survey, the same series of 12 information and service requirements were presented in the questionnaire as factors contributing to satisfaction (or dissatisfaction). Based on their personal experiences or those of their colleagues, business representatives were asked to what extent they agree or disagree with these 12 statements

about the Internet contact, using a 5–point Likert scale. All factors positively correlate with the overall level of satisfaction. They all, with only slight differences in importance (i.e., correlations), contribute to overall satisfaction. In general, however, correlations were less strong in terms of the results of the business survey when compared to the citizens’ data.

According to the companies in the sample, eInformation and eServices perform best on **trustworthiness and timely delivery**. Over 60% of the companies is satisfied with accessibility and ease-of-use, but they are more critical (when compared with citizens too) about the ease of finding information. 57% agrees that services were delivered at reasonable cost, whereas only 6.6% disagrees. In general, weaker points that emerged are issues that relate to customization/personalization. Services are insufficiently tailored to most companies’ needs. More than is the case for citizens, companies are frustrated by providing public administrations repeatedly with the same basic information that is already in the governments’ possession.

Factors of (dis)satisfaction	Agreement	Disagreement
The service was trustworthy: one was not worried about privacy or security issues	67,5%	7,5%
The service was delivered in a reasonable time	65,0%	9,2%
The service/information was easy to access	64,3%	10,7%
The service/information was easy to use	62,6%	11,2%
The service/information was easy to understand	61,1%	12,9%
One could depend on being given complete and accurate information	59,2%	10,1%
The service was delivered at a reasonable cost	57,0%	6,6%
One could rely on having sufficient information and online help to make use of the service	56,8%	11,4%
The service/information was easy to find	56,2%	15,5%
One was not asked to give the same basic information about oneself more than once	49,3%	17,0%
The service/information was tailor made for one's needs	47,7%	16,5%
One was kept informed about follow-up actions and the progress of service	43,9%	19,7%

Table 32: Factors of satisfaction and dissatisfaction

#### 1.12.4 Perceived benefits of eGovernment

The survey concluded with the benefits that company respondents perceive when using the Internet in the context of the event for which their company used it most intensively to interact with public administrations. Based on their personal experiences or those of their colleagues, respondents were asked to what extent they agree or disagree (on a 5–point Likert scale) with eight potential benefits of using the Internet compared with other means to come into contact with public agencies or officials (e.g., in–person, by phone or mail).

#### 1.12.4.1 Perceived benefits

For companies **time-saving** is the most important benefit of using eGovernment. It is followed by **more flexibility** and **more simplified procedures and processes**. 58.7% of the businesses believes that eGovernment has a cost-saving impact. eGovernment does not necessarily lead to better quality of service from the point of view of many companies (less than half – i.e., 48% thinks that it does based on its experiences). 41% perceives eGovernment as increasing trust in public administration. Companies require simplified procedures and time-efficient management of their interactions with public administrations. According to the majority of them, eGovernment is able to deliver this more effectively than are traditional channels of communication.

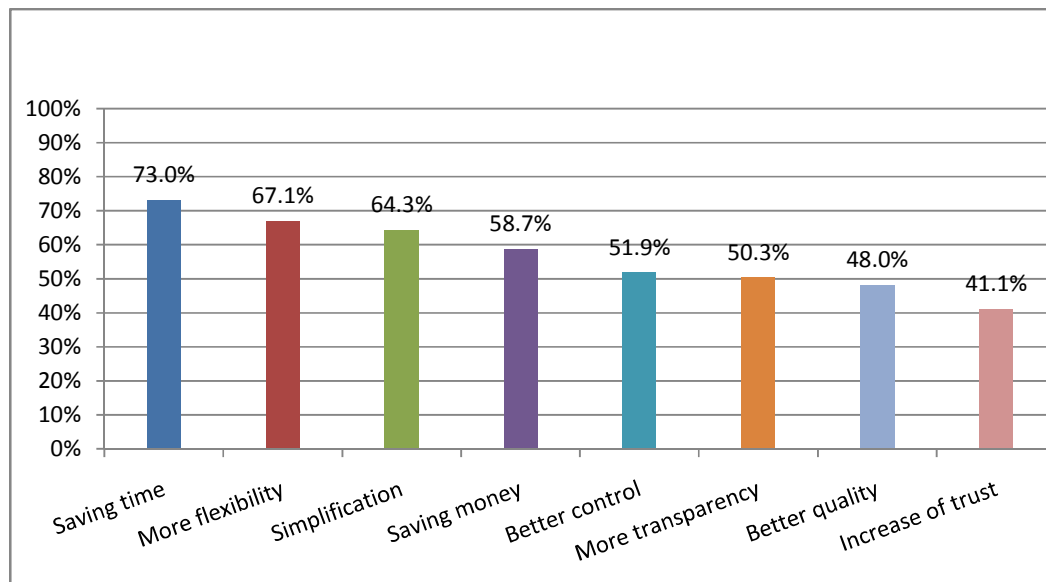


Figure 73: Perceived benefits of eGovernment

The extent to which the eight impact components are perceived as benefits is related with the highest level on which companies interacted. This means that especially time savings, increased flexibility and simplification of processes are felt to result most strongly from the use of the Internet at the level of undertaking transactions with government agencies. We see, however, that e-mail communication often scores better than other forms of communication. These other forms of communication can involve information, one-way and even two-way communication using electronic forms and, in particular, the components of better quality, transparency and control of the service delivery process, as far as increased



trust in government is concerned. The element of personal contact present in e-mail communication may offer some explanation for this.

Level of interaction	Perceived benefits (in % of users)							
	Saving time	Saving money	More flexibility	Better quality	Better control	Simplified process	Transparency	More trust
Total	73,0%	58,7%	67,1%	48,0%	51,9%	64,3%	50,3%	41,1%
E-mail	67,5%	60,4%	61,9%	54,5%	54,7%	59,7%	51,5%	46,6%
Information	69,4%	55,9%	60,1%	42,2%	46,7%	57,9%	46,7%	39,9%
Downloading forms	71,3%	55,8%	63,4%	43,3%	49,1%	60,4%	45,4%	38,7%
Uploading forms	75,5%	58,7%	71,0%	45,7%	49,2%	67,1%	49,9%	36,6%
Transaction	82,4%	69,4%	77,1%	61,4%	66,1%	77,4%	63,8%	53,4%

Table 33: Perceived benefits by level of interaction

#### 1.12.4.2 Likelihood of re-use

The final question posed to business respondents was: “If your company were to come into contact again with public agencies or officials as a result of this event, how likely is it that your company would use e-mail and/or the Internet (websites) again?”

Almost 90% of the companies are very likely or likely to use the Internet again to come into contact with public administrations as a result of the same business life-event in the future.

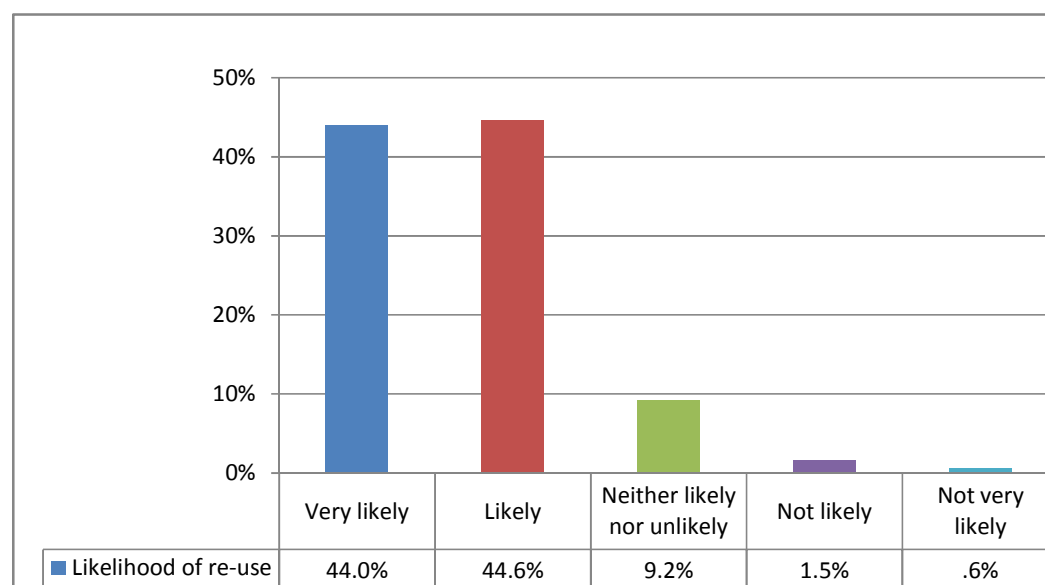


Figure 74: Likelihood of re-use of most intensive e-mail/Internet contact

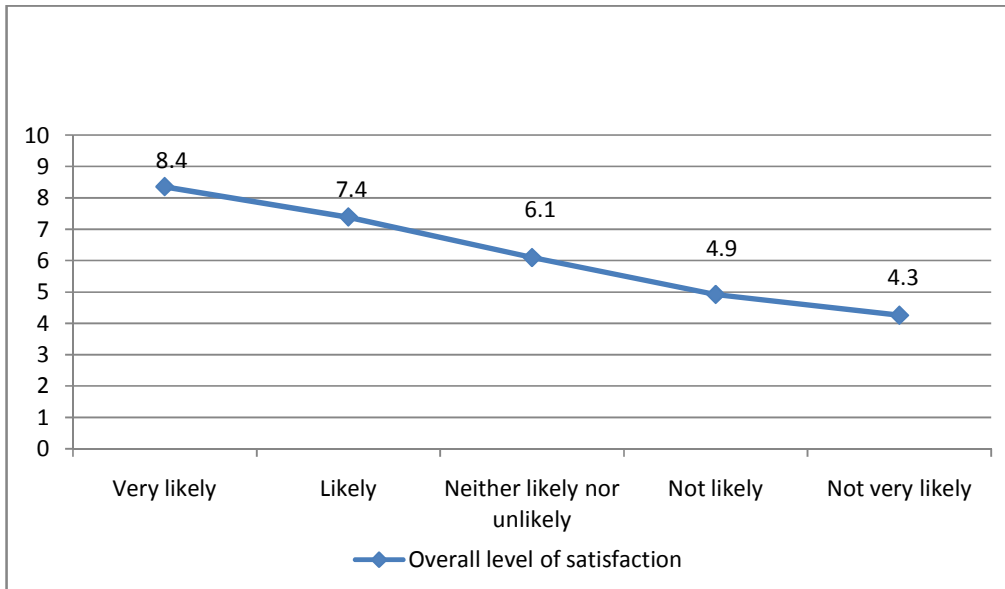


Figure 75: Satisfaction with most intensive e-mail/Internet contact by likelihood of re-use

The likelihood of re-use — and indeed the percentage of companies stating that re-use is almost certainly very likely — increases with the level of interaction. More than 90% of the users will re-use services at the level of either upload or a form of transaction again in the future; more than 50% even claim this with the highest degree of certainty. Given the positive relationship between the degree of satisfaction and the level of interaction, it is clear that positive experiences with eGovernment — and experiences in the majority of cases appear to be positive — will encourage companies along the track of continuing to use public services online. The higher the sophistication of these services, the higher the probability of satisfaction and re-use.

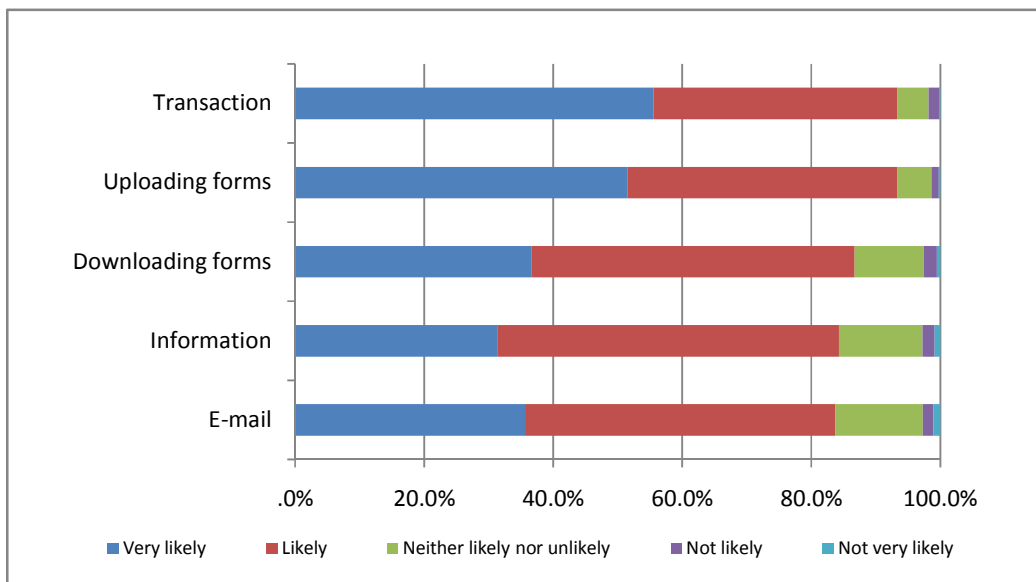


Figure 76: Likelihood of re-use by interaction level

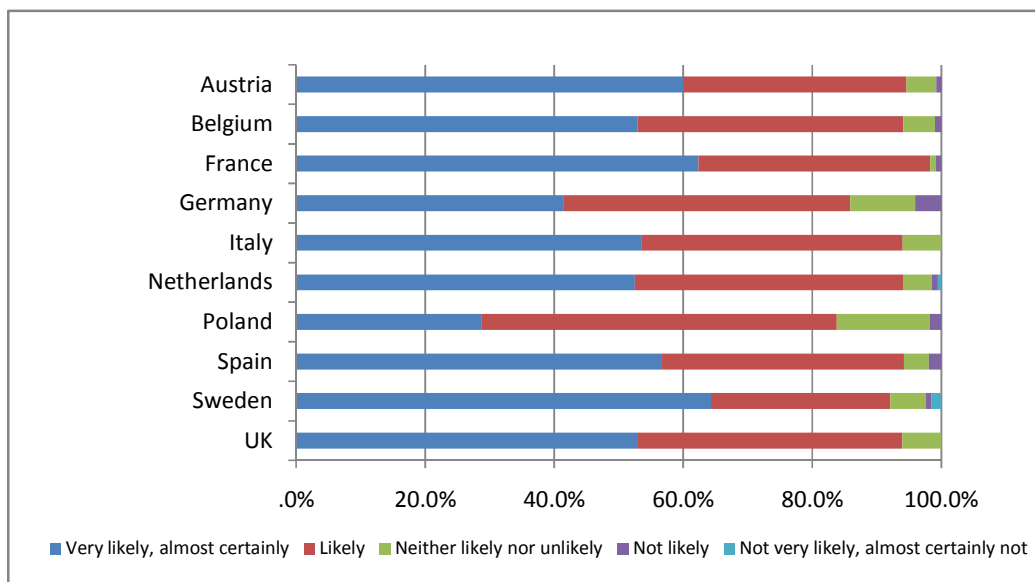


Figure 77: Likelihood of re-use per country

### 1.12.5 Conclusions: the components of impact

To a large extent, the conclusions implicit in the citizens' report can be replicated here. Overall take-up of and satisfaction with eGovernment is, however, slightly higher in the business environment. At the same time, the business community as a whole appears to be more homogeneous as an eGovernment target user group. Companies' needs and demands for specific kinds of government information and services differ, of course, but ultimately use of and satisfaction with eGovernment is not highly dependent on company size or background. All the companies need to come into contact with public administrations for comparable, not to say universal, needs or obligations such as tax declarations, the hiring of personnel, or public funding applications and procurement mechanisms.

Nevertheless, the Internet facilities and experiences of businesses with other non-government-related services (i.e., eBusiness) make them more open to the adoption of eGovernment applications. Compared with the mostly high levels of satisfaction that companies experience with eBusiness activities, eGovernment performs quite well.

Potentially, progress, however, can certainly be made on eGovernment for businesses, often along the same tracks as the trends apparent in the citizens' survey. If governments were to emphasize developing an awareness of/communication about eGovernment, it would certainly be a potential area of development. Developing more sophisticated applications is

another extremely important possibility. By sophistication, we do not mean that governments should add more complexity to the services on offer, but rather higher levels of interaction towards full electronic case-handling and beyond should be created. The business survey confirms the basic conclusions of the citizens' survey. Worded concisely: the higher the level of interaction, the higher the level of satisfaction.

This observation has a lot to do with the most important benefits that companies, just like citizens, perceive as resulting from eGovernment: time-savings/efficiency, flexibility and simplification. Also, perhaps more indirectly as a result of these: cost savings.

Last but not least, another conclusion that is similar to the citizens' survey can be emphasized: once business people have crossed the barrier(s) that inhibit them from making use of eGovernment applications, in the majority of cases their positive experiences encourage them to use eGovernment again in the future.

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## 4. Instrument evaluation and adjustment

Based on the pilot survey process and its outcomes, our survey instrument and methodology can now be critically evaluated and adjusted. In this chapter we propose a number of lessons learned and make proposals for the improvement and fine-tuning of the instrument that was tested in the pilot. This will result in an update of the conceptual framework that was originally proposed, and adjustments to the question modules and tools. These may then be used for future measurement of eGovernment use, satisfaction and impact in the EU27 Member States (henceforth referred to as the 'EU 27').

### 1.13 Objectives of the survey instrument

The aim of this EC-commissioned study was to develop a standardized yet customizable measurement tool that can be re-used by public agencies in all of the EU27. Its future purpose would be to **measure user satisfaction with specific eGovernment services**. The study was also intended to prepare the ground for a **demand-side eGovernment benchmarking exercise across the EU27**. The pilot served to test the quality and validity of the survey instrument in light of these two objectives.

To customize the measurement framework and questionnaires for the pilot in ten selected EU Member States, we had therefore to reconcile two different objectives that operate at two different levels:

1. Developing a cross-national benchmark instrument for a "general level" monitoring of user satisfaction and impact across countries;
2. Testing a service evaluation tool adequate to measure user satisfaction and impact in "specific cases" (notably satisfaction with particular eGovernment services and applications supplied in the context of (a) customer life-event(s) in a single country).

Reconciling these two objectives in the context of a feasible pilot questionnaire was not at all an easy or evident thing to do. Indeed, a particularly important lesson that we learned from the pilot is that **these components should not be integrated into a single survey instrument**.

In this chapter, therefore, we evaluate the survey instrument in terms of both the objectives. We present, in an Annex, for both the citizen and business target groups, **two separate**

**measurement tools:** (1) one for EU-wide user satisfaction benchmarking, and (2) one that can be re-used by public agencies to measure user satisfaction with their specific eServices.

#### 1.14 An innovation combined with a pragmatic approach

This section reviews a particular innovation of the survey, but also an element of practicality that had to be selected in order to achieve it.

The study team adopted a two-stage questionnaire process. We asked citizens, first, for which life-events the respondents came into contact with government in general in the last 12 months and, then, for which of these they used the electronic channel.

This is a crucial innovation with respect to other surveys. It provides a more realistic measure of take-up and also of satisfaction. Other surveys tend to produce findings that simply indicate general results in terms of, for example, “ ... 15% of regular Internet users interacted electronically with government in the last 12 months”. Yet, this kind of result means that some 85% of Internet users did not use eGovernment, not necessarily because they did not like the services or did not trust them but because, during that 12 month-period, they may have never needed to interact with government at all.

Our survey has produced a more reliable picture of take-up that is weighted towards actual use and need for use. For instance: of those who in the last 12 months had to notify local government authorities about changing their residence, how many did so online? Our baseline is, then, not the entire population of Internet users, but the sub-sample of those people who did need to contact government about this specific life-event. As a result, the percentage figure we produce is a much more valid measure of take-up. Additionally, when the questionnaire asks about satisfaction, we can single out respondents who actually did use the services, and whose answers are likely to be based on their actual experience rather than on generic, pre-formed judgements.

The practicalities of carrying out this survey were also a source of constraint. If a questionnaire is too long and too complex, it will jeopardize the rate of full responses obtained. In turn, this weakens the statistical robustness of the results.

In this study, respondents were presented with a series of citizens/business life-events. They were asked to indicate all those life-events as a result of which they had come into contact with public administrations via the Internet during the past 12 months. In the context of the pilot study, an application of the complete satisfaction measurement modules of the conceptual framework to each and every life-event that applied was not feasible. To have done so would have been to create an excessively long and complex questionnaire.

To test these modules, then, for each respondent, the most relevant life-event had to be singled out. A measurement of satisfaction could be focused on this single event. To ensure that all the framework components could be tested for a sufficiently large group (a subsample) of respondents, we started from the life-event for which a respondent in the past 12 months had used the Internet the most to interact with government. A number of the questions in the pilot survey were devoted to the identification of this particular life-event. It is evident that, in the “final” cross-national benchmarking and service evaluation instruments, when a choice is made to survey one particular service, e.g., a portal function service, these more detailed questions can be skipped.

Before we describe the overall structure of both the benchmarking and the service evaluation instruments, some general remarks are made concerning the survey instrument. These are relevant for both benchmarking as well as eService evaluation purposes.

#### 1.15 Concepts and question modules to be revised

Both the citizens’ and the business pilot surveys offered **proof of the general strength and validity of the conceptual standard** developed and presented in chapter 1.8 of this study report.

The development of the survey’s conceptual model was guided by a set of building blocks and guiding principles that were deduced from an extensive state-of-the-art analysis. We believe firmly that future measurement initiatives in the EU27 will benefit substantially from adopting this framework and its most central features. These are: **(1) a broad, holistic approach to eGovernment measurement; (2) a strong focus on user profiling and (3) the adoption of a life-event based approach.**

Nevertheless, the pilot also highlighted a number of **details that need refinement**, from both the overall benchmarking and the service specific evaluation perspective.

Here we examine various elements that require to be refined, such as user profiling vis-à-vis the use of private Internet services, the take-up of eGovernment services and the use of public Internet services, levels of interaction, and also other concepts and considerations.

#### 1.15.1 User profiling and the use of non-governmental Internet services

The pilot survey showed that the components of trust (in the Internet and in government) and experiences with other, non-governmental Internet applications play a decisive role in explaining differences in eGovernment use and satisfaction. It would seem that other issues are less pertinent in explaining eGovernment use/satisfaction. These less pertinent issues are, on the one hand, the more “classic” indicators of socio-demographic and socio-economic classification and, on the other, Internet use measured in “quantitative” terms (such as frequency or intensity of use). In the clustering and correlation exercises undertaken, there was less evidence of these traditional factors. This brings us to the consideration that, for this kind of survey, we probably need to apply more socio-psychological profiling techniques. These are more in vogue in commercial consumer market research.

This certainly does not mean that the socio-demographic indicators have no relevance or that their role as differentiators of eGovernment take-up among the population of Internet users should be downgraded.

First of all, however, it does mean that looking at the take-up of “private” Internet services is useful in itself. In fact, this form of private take-up/use appears to lower the barriers for eGovernment use rather than to heighten users’ expectations or requirements with regard to public eService quality. Secondly, it also means that **more “qualitative”, attitudinal or psychological criteria are of high and growing importance if there is a desire to identify distinct Internet user profiles**. In turn, these user profiles may constitute distinct user segments and target groups for eGovernment initiatives. Heading in this direction will require more fundamental research and experimentation, but this study already offers sufficient evidence to extend the battery of Internet and eGovernment use questions in order to gain a better overview of the profile of these users.



To get a grip on Internet user profiles, it is not sufficient to ask how much time people spend using the Internet. It is at least as important to ask exactly how people use this time, and what they do or do not do on/with the Internet. Looking at the use made of a range of Internet services and applications helps to clarify this kind of user profiling. We may know that a user is online on average for more than three hours a day. It may, however, be more relevant to know whether an individual uses the Internet, for example, actively as a platform for social networking and participation or uses the internet for watching television or listening to music. Both types of indicators are complementary and should be included in the measurement framework.

Therefore, we recommend that the battery of non-governmental Internet applications that was presented in the citizens' pilot questionnaire needs to be re-worked and extended with other, additional, aspects. This will enable a refined differentiation of Internet user profiles, which in turn can be related to differences in eGovernment use and satisfaction.

We can also refer to the business pilot survey, where the availability of a wide range of business-related Internet services made it possible to deduce from the data a relevant Internet user typology through use of the Latent Class Analysis technique.

In the citizens' pilot questionnaire three "non-governmental" applications were presented for which individuals may use the Internet:

- To buy private consumer goods or services (for example: books, CDs, household goods, concert tickets, travel arrangements);
- To administer a bank account (Internet banking);
- To participate in social networks (for example: Myspace, Facebook, Netlog).

A proposal for an extension of these questions with regard to use of the Internet is put forward in the table below. This list consists of various purposes for using the Internet that, together, cover a wide range of the most popular activities of individuals on the net. At the same time, this range of activities enables a differentiation among Internet users. It illustrates the extent to which the users have appropriated the Internet in their daily lives for uses that range from banking and shopping to social and leisure activities. For an increasing number of people in today's society, the frontier between work and private life is becoming rather blurred, and hence, we would propose to add also some questions on users' professional activities.

We propose to upgrade this particular question module as follows:

<b>Use of non-governmental Internet applications for private/professional purposes: “How often do you use the Internet for each of the following purposes?” (daily - once or + a week – once or + a month – once or + a year – no use)</b>
To buy personal consumer goods or services (e.g., books, CDs, household goods, clothes, foodstuffs)
To buy tickets or make reservations for cultural events (for example: films, concerts, theatre)
To make travel or holiday bookings (for example: accommodation, trips, train or airline tickets)
To make use of online auction sites to buy or sell goods or services (for example: eBay)
To administer a bank account (i.e., to undertake Internet banking)
To participate in social networks (for example: Myspace, Facebook, Netlog)
To contribute to web logs or blogs
To download, watch or listen to music, films, video files, web radio or web TV
To download computer or video games or for online gaming
To telephone (e.g., Skype) or to make video calls (via webcam)
To check professional e-mail via webmail or a virtual private network (VPN) connection
To download/upload documents for professional purposes
To search the web for information for professional purposes

#### 1.15.2 eGovernment take-up and the use of public Internet services

In order to measure use of eGovernment at a general level, three “public” applications or purposes were presented in the citizens’ pilot questionnaire for which individuals may use the Internet:

- To find information on government websites;
- To use an electronic form to apply for a public service (for example: to obtain a certificate, licence, subsidy);
- To participate in government policy-making processes (for example: through online petitions, discussion forums).

Measurement of the use of eGovernment at a general level forms a basic part of the survey instrument, in connection with items on the take-up of non-governmental Internet services. This measurement is necessary, both from a benchmarking perspective and from the point-of-view of user profiling in the context of a specific eService evaluation.

Data analysis of the pilot results, including a breakdown of the results per country, showed, however, that the three statements used in the questionnaire do not capture fully or

adequately the concepts they are supposed to measure, that is the frequency of **use of eGovernment (website) information, public services online and eParticipation**. This may be due to inadequate translation and/or an equivocal comprehension of the items described. The eParticipation item seems especially neither to have been defined clearly or understood well. The use of specific examples in the questions may have had an influence on response patterns. This particular question module should therefore be revised.

We propose to upgrade this question module with the following items:

Use of public Internet applications: "How often do you use the Internet for each of the following purposes?" (daily - once or + a week - once or + a month - once or + a year - no use)
To contact public administrations by e-mail (for example: to ask a question, formulate a complaint)
To obtain information from public administrations' websites (for example: via search engines such as Google, via government portals or via websites of public agencies)
To download official forms that are necessary to obtain a public service (for example: to obtain a certificate, permit or subsidy)
To send (upload) completed web forms that are necessary to obtain a public service (for example: to obtain a certificate, permit or subsidy)
To contact political representatives of local, regional, national or European government by e-mail
To consult policy documents or decisions on local, regional, national or European government websites
To participate in online consultations on policy issues organized by local, regional, national or European government (for example: via polls or panels)
To participate in interactive discussions about local, regional, national or European policy issues (for example: via online discussion forums)

By using these statements differentiation is built in. It is done by (1) integrating more strongly the different levels at which individuals may interact with public administrations, and by (2) incorporating relevant gradations of eParticipation (from e-mail contact and information up to political consultation (one-way) and participation (two-way)).

The first items that address the different levels of contact with public administrations (e-mail, information, downloading, uploading) should also be transferred to the corresponding question module in the business survey instrument.

Furthermore, we believe that the **use and evaluation of national/regional portals and municipal websites** can and should be integrated into this part of the instrument. Its

inclusion would contribute strongly to cross-national benchmarking of eGovernment take-up and user satisfaction, and it has an important value in contextualizing the take-up of and satisfaction with specific public agencies' websites and services.

Therefore, we propose to include the following module:

Use of government websites: "How often do you use the Internet for each of the following purposes?" (daily - once or + a week - once or + a month - once or + a year - no use)
To consult the national government portal
To consult the regional government portal
To consult the website of the city or municipality where I live
To consult the website ... [website of particular public agency or service]

### 1.15.3 Levels of interaction with public administrations

The citizens' and business pilot study showed that the levels of interaction with public administration are highly relevant in measuring and interpreting user satisfaction with public services online. They are characterized by increasing sophistication:

- contact via e-mail;
- seeking and/or obtaining information;
- downloading forms (a one-way interaction);
- uploading or sending filled-in forms (a two-way interaction);
- transaction (full electronic case handling).

At the same time, these different levels of interaction provide quite a direct link with the analysis of the front-office, supply side of eGovernment, i.e. they represent the different stages of development or sophistication of online public service delivery (Capgemini, 2007).

The survey instrument should, however, include appropriate descriptions of the level(s) of delivery that exist beyond transaction, from pro-active to fully automatic service delivery. The "**pro-activity level**" item included in the questionnaire ("I was pro-actively informed about my rights and obligations"), unfortunately, did not measure the concept of pro-active public service delivery in a valid way. Rather, it provoked some confusion with regard to the sense of the "information level".

Therefore, we propose rephrasing the item so that it reads:

Levels of interaction
E-mail : Sending or receiving e-mail
Information : Searching for information on (a) government website(s)
Downloading: Applying for a service by downloading an official form
Uploading: Applying for a service by returning (uploading) a completed form electronically
Transaction: Getting an official document or service delivered electronically
Pro-activity: Being attended to electronically or proposed a public service to which one is entitled without specifically asking for it

This re-defining of the concept of pro-activity is relevant in a benchmarking context. When the survey instrument is applied to a service that is provided by a public agency in a particular Member State, it may be necessary to adapt the definition of the concept to the context of the specific public service delivery process.

#### 1.15.4 Other conceptual aspects and considerations

In undertaking the pilot survey and examining its findings, we have realized that five further aspects need to be borne in mind in future adaptations of the instrument(s). These are that additional socio-demographic or socio-economic categories could be added; an attentiveness is needed to the meaning of trust in government and in public administrations in different Member States; Internet users interact with government differently depending on the role they are playing at the time (e.g., private person, professional person, or intermediary); an overall appreciation of eGovernment services is indicated by the likelihood of their re-use, or alternatively, by users' likelihood to recommend the service to others; and, last but not least, that Internet surveys may in the future also focus on other digital channels that can be used for public service delivery.

1. For **socio-demographic or socio-economic categorization**, other criteria can be included, depending on the objectives and the user groups (or target groups) of specific eService evaluations:

- Household income;  
This may offer additional data as a proxy indicator of social class, but one has to acknowledge that questions of this sensitive character mostly suffer from relatively high non-response;
- Region (urban/rural);

- Cross-border mobility of citizens and businesses.

2. In the pilot we differentiated between **trust in government and trust in public administrations**. These terms have different meanings and connotations in different countries. Future benchmarking exercises have to take this into account.

3. The **frequency of contact/interaction with government** by citizens in their different roles (as a private person, a professional person, or as an intermediary) is relevant as a context for the frequency of their use of eGovernment. Frequency of contact with government was included in the pilot only in terms of contacts that socio-economically active people (with the exception of government officials or civil servants) might have with public administrations for professional reasons. To put data on the frequency of use of eGovernment in perspective, in itself and in comparison with “private” Internet applications, it may be a useful indicator to include more fully when take-up and satisfaction is measured with the eServices provided by public agencies.

<b>Frequency of interaction with public administrations: “How often, in the past 12 months, did you have contact or interacted with public administrations?”</b>				
	Not once or not applicable	At least once, but not every month	At least once a month, but not every week	At least once a week
For professional purposes				
For my own personal purposes				
On behalf of relatives or friends				
By someone else on my behalf				

4. **Likelihood of re-use** can be seen as an indicator that complements the measurement of the overall level of satisfaction (on a 0-10 point scale) with a kind of final appreciation of a service. A useful and frequently used alternative to measure this overall appreciation would be to ask whether respondents are **likely to recommend** use of the public service online to other people.

5. The pilot focused on the use of the Internet – broadly defined, including e-mail – as an eGovernment channel by opposing it to traditional channels of communication (such as face-to-face, mail, and telephone). The survey instrument, however, can be easily extended to other channels of communication (for example, mobile technologies, interactive digital TV).

## 1.16 Structure of the survey instrument

We recommend to differentiate between two measurement tools that would depend on the purposes for which the user satisfaction instrument is used. Hence, it is necessary to describe briefly the overall structure of two new instruments that we now propose. One is the **User Satisfaction Benchmark instrument**. The other is the **eService Evaluation tool**. Both tools are presented in Annex. Each has a separate design geared to the citizens' and business surveys respectively.

### 1.16.1 User Satisfaction Benchmark (USB)

We describe here the structure of the User Satisfaction Benchmark (USB).

#### 1. User profiling

The following elements of the conceptual framework that address the profiling of Internet/eGovernment users are retained in the User Satisfaction Benchmark (USB):

- Socio-demographic/economic citizen/business profiles;
- ICT/Internet adoption and use;
- Use of and satisfaction with private/non-governmental Internet applications;
- Trust in the Internet (citizens);
- Trust in government (citizens);
- Contacts with government.

#### 2. Use of eGovernment

The use of eGovernment at the general level is based on the re-adapted module described in chapter 1.15.1, including the use of government websites/portals.

The pilot confirmed the value of a life-events approach. A structural approach to measure take-up of **eGovernment in the context of the list of citizen and business life-events** we propose would include the following sequence of elements:

1. Contacts with public administrations in the past 12 months as a result of customer life-events, for citizens' or companies' own purposes or as an intermediary for friends, relatives or professional clients;
2. Channels used/Internet used for interaction with public administrations in the context of life-events that apply;

3. Channels preferred/Internet preferred for interaction with public administrations in the context of life-events that apply;
4. Levels of interaction with public administrations in the context of life-events that apply and for which the Internet is used;
5. Level of overall satisfaction with use of the Internet for interaction with public administrations in the context of life-events that apply;
6. Likelihood of re-use of the Internet for interaction with public administrations in the context of life-events that apply.

We believe firmly that this approach enables the production of a more realistic and balanced view of eGovernment take-up than when respondents are simply asked whether they used eGovernment. It may also lead to a more accurate and realistic view of the level of satisfaction.

In the business pilot survey we observed a marked difference between the levels of satisfaction for eGovernment information and services in general and the extent to which companies, on average, were satisfied with eGovernment in the context of the specific business events for which they used the Internet the most during the past 12 months. As the latter satisfaction scores are more directly related to particular “experiences”, there are reasons to believe that they offer more reliable indicators of actual satisfaction with eGovernment.

### 3.Satisfaction with eGovernment

A 10-point scale (0-10) is used to measure the overall level of satisfaction of both the general use of public Internet applications and for each of the 20 citizens’/15 business life-events that apply. The average score for the total set of life-events can be produced.

### 4.Perceived benefits of eGovernment

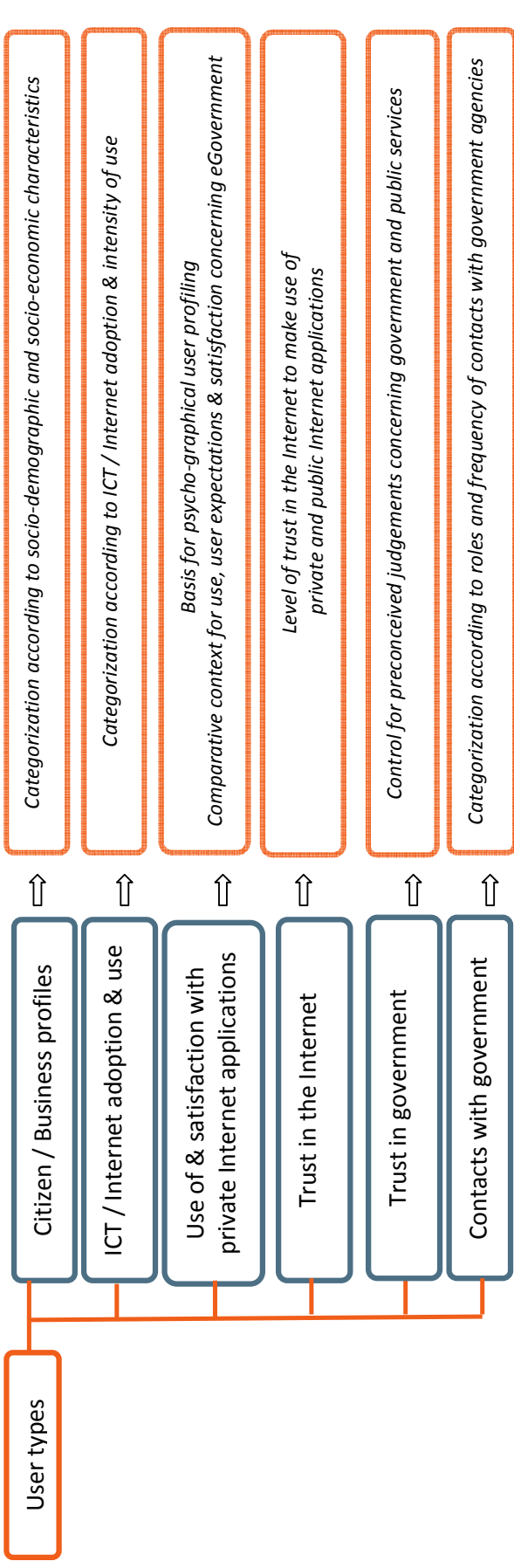
Within the benchmark, we propose to analyze the perceived benefits of eGovernment (cf. the eight aspects of the module that were tested in the pilot), but they should be measured for eGovernment in general, and not *per* life-event.

The following graphic illustrates the general structure of the USB instrument.

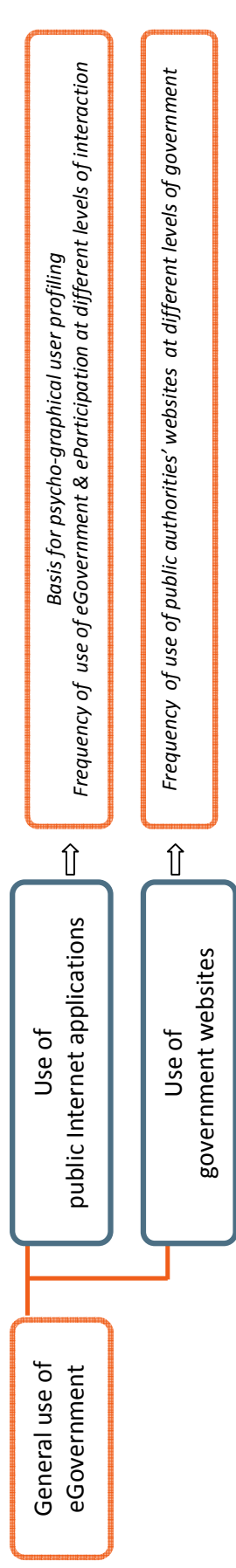


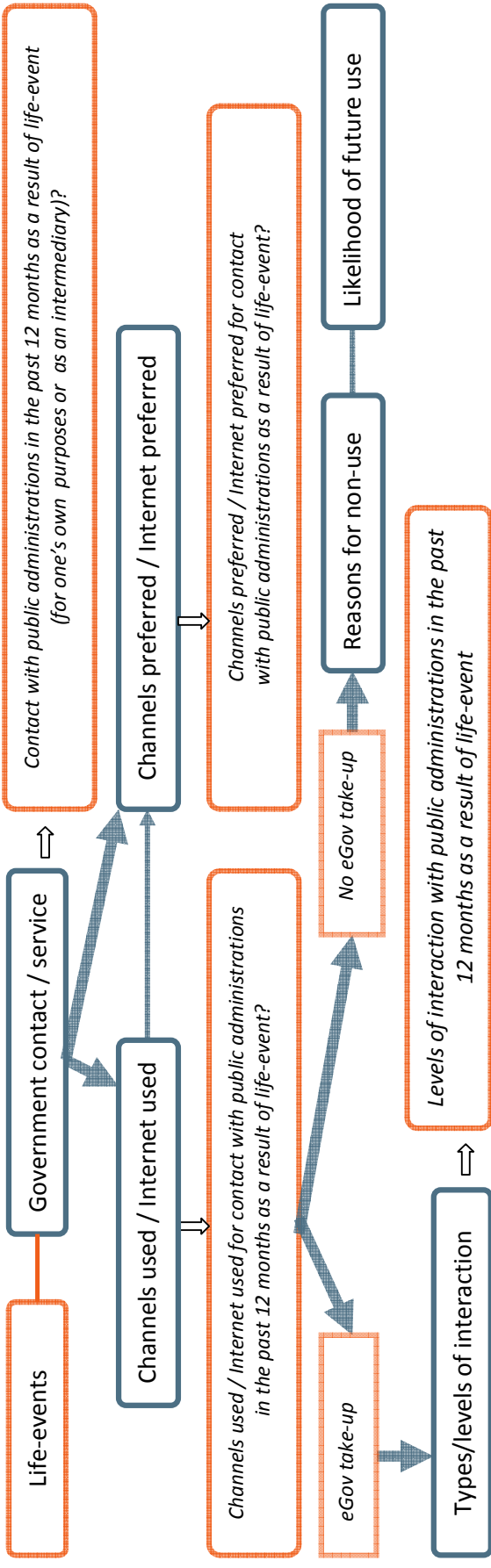
# User Satisfaction Benchmark (USB)

## I. User profiling

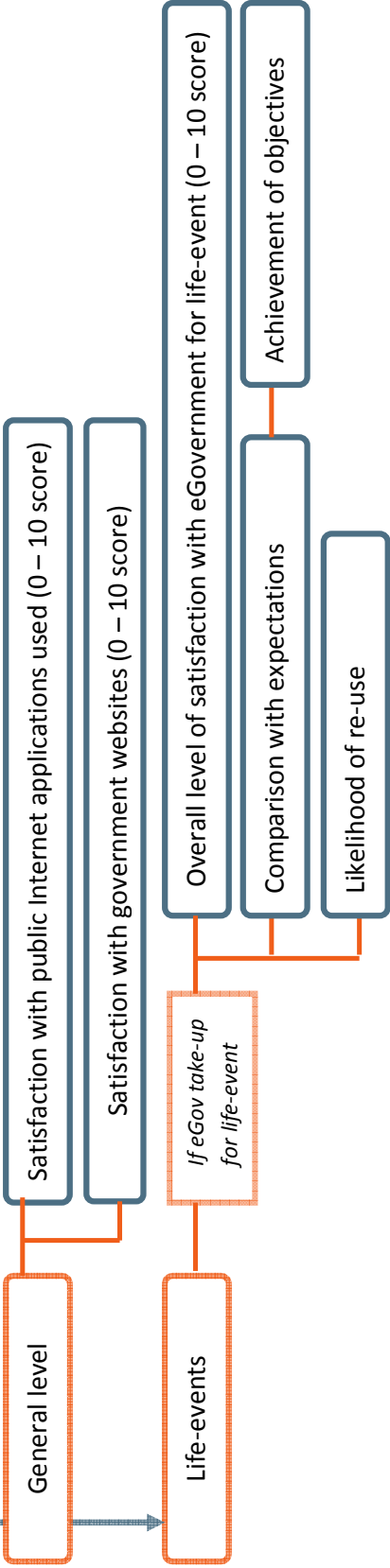


## II. Take-up of eGovernment





### III. Satisfaction with eGovernment



### IV. Perceived benefits of eGovernment



### 1.16.2 eService Evaluation Tool (eSET)

The eService Evaluation Tool (eSET) is a measurement framework that can be used by public agencies to measure user take-up and satisfaction with specific services they deliver online.

#### 1. User profiling

The same elements as are used in the user satisfaction benchmark instrument are retained for the profiling of (non-)users of specific eGovernment processes, services and applications. The frequency of contact with public administrations is added as an optional module. The question module concerning trust in government and satisfaction with the quality of public service provision has to incorporate the specific public agency that is involved.

We wish to emphasize that, based on this part of the survey instrument, user profiling and the identification of user segments that are or are not reached can provide a public agency with vital information about the composition of its actual and/or potential eService customers.

#### 2. Use of eGovernment

The use of eGovernment at the general level is based on the re-adapted module described in chapter 1.15.2, including the use of government websites/portals.

A structural approach to measure take-up of a **specific life-event / e-service / public agency's website** is used that consists of the following elements:

1. Contacts with public administrations in the past 12 months as a result of customer life-events, for citizens' or companies' own purposes or as an intermediary for friends, relatives or professional clients;
2. Channels used / Internet used to make use of the public service;
3. Channels preferred / Internet preferred to make use of the public service;
4. Highest level(s) of interaction, including suitable, service specific description of the pro-activity stage;
5. Level of overall satisfaction with use of the public eService;
6. Likelihood of re-use of the public eService.

It is important to juxtapose channels used and channels preferred. Such a juxtaposition offers, for example, the possibility of differentiating between types/reasons of non-use (for example, why do individuals not make use of the Internet for eGovernment purposes, although they may say that they prefer to interact that way).

Specific attention can be devoted to non-users of the public eService:

- Profiles = who did not use eService;
- Reasons for non-use (“other reasons” should be crafted as an open ended question);
- Channel preferences;
- Likelihood of future use.

### 3.Satisfaction with eGovernment

Measurement is based on:

- Overall level of satisfaction on a 10–point scale (0–10).
- Extended with:
  - Comparison with expectations;
  - Achievement of objectives;
  - Likelihood of re–use.
- In–depth analysis based on factors of (dis)satisfaction. This in–depth analysis may form the basis for the construction of a strategic priority matrix for improvement of the public service online. This matrix crosses the scores for a series of 12 service performance parameters with the levels of importance of these factors. Correlations of the parameter scores with the overall level of satisfaction give an indication of the extent to which each parameter contributes to the overall level of satisfaction of the respondents with the service, and, hence, of the importance of the parameter.

### 4.Perceived benefits of eGovernment

Perceived benefits (cf. the eight aspects of the module that were tested in the pilot), can be measured for a specific eService.

The following graphic illustrates the general structure of the eSET instrument.

# eService Evaluation Tool (eSET)

## I. User profiling

User types

Citizen / Business profiles

ICT / Internet adoption & use

Use of & satisfaction with private Internet applications

Trust in the Internet

Trust in government

Contacts with government

*Categorization according to socio-demographic and socio-economic characteristics*

*Categorization according to ICT / Internet adoption & intensity of use*

*Basis for psycho-graphical user profiling  
Comparative context for use, user expectations & satisfaction concerning eGovernment*

*Level of trust in the Internet to make use of private and public internet applications*

*Control for preconceived judgements concerning government and public services*

*Categorization according to roles and frequency of contacts with government agencies*

## II. Take-up of eGovernment

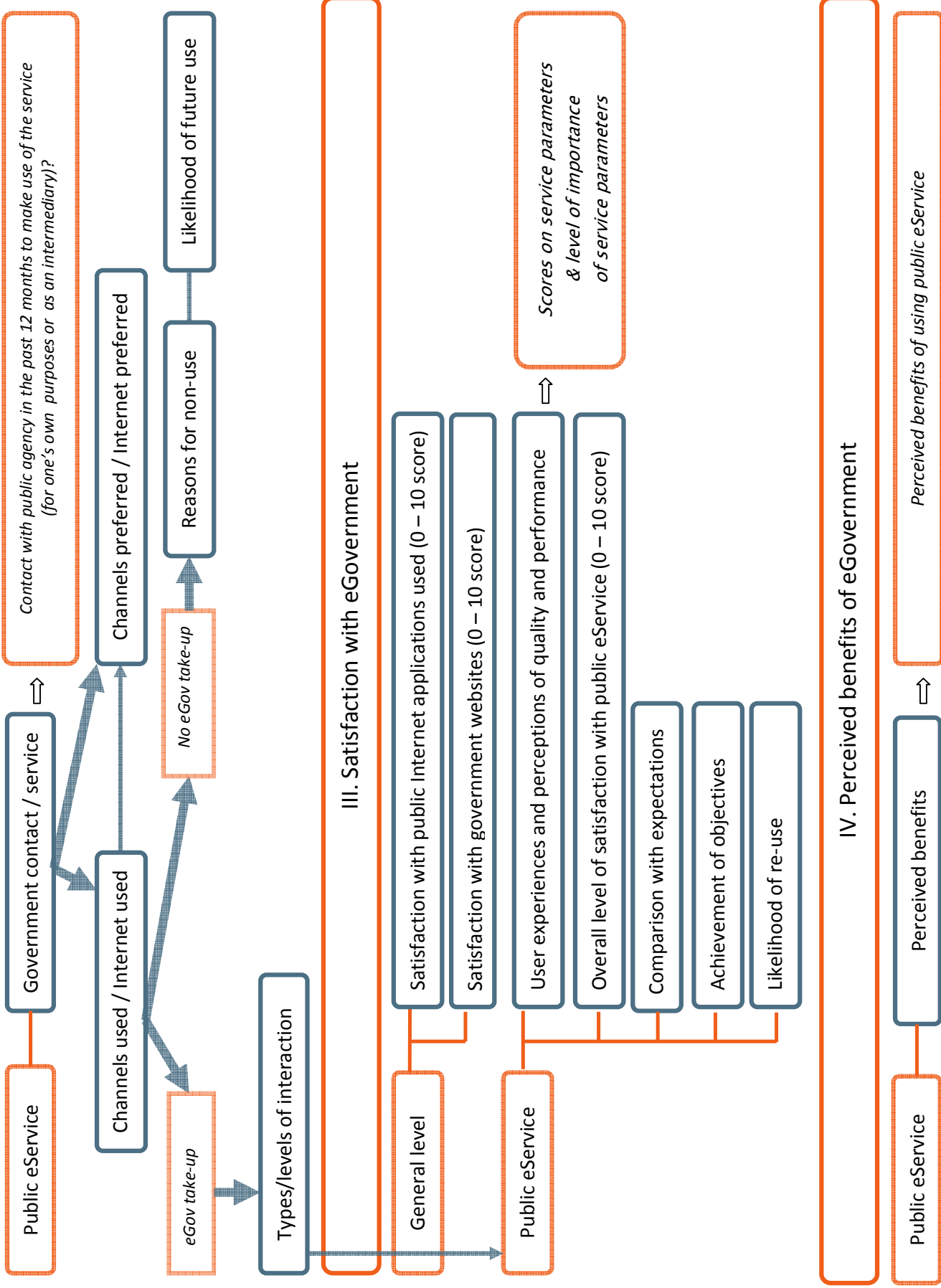
General use of eGovernment

Use of public Internet applications

Use of government websites

*Basis for psycho-graphical user profiling  
Frequency of use of eGovernment & eParticipation at different levels of interaction*

*Frequency of use of public authorities' websites at different levels of government*



### 1.17 Methodological considerations

The scope of the survey instrument was “user satisfaction with and impact of eGovernment”. As a prime target group, then, the focus of the instrument is quite clearly on “eReady” citizens and businesses. By “eReady” is meant citizens and companies that have access to the Internet and, as a result, can be considered as actual or potential users of eGovernment. The instrument pays attention to non-use of eGovernment among the Internet population, but its main object is measuring to what extent actual users are satisfied with eGovernment.

Given this scope, application of the instrument implies that the survey is conducted on a representative sample of the Internet population. The Computer Assisted Web Interviewing (CAWI) and online panel survey technique used in this pilot study has several advantages that were presented earlier in this report (chapter 1.10.1). Other techniques can, of course, be used as well (most notably Computer Assisted Telephone Interviewing (CATI)).

The use of the eService Evaluation tool does not always require a representative sample of the Internet population. Public agencies can decide to use their own databases and information they possess on actual users of their services. In that case, however, they should be aware of some limitations and drawbacks of the technique. For example, no information can be gathered about actual service take-up and about non-user profiles and barriers. Such information may be vital for service improvement and it may prove a serious oversight to ignore it.

A final consideration concerns the measurement of the impact of eGovernment. Through surveys as the one tested in the pilot, only “subjective” perceptions of the extent to which eGovernment makes a difference, in terms of costs and benefits, can be measured. Impact, however, in the first place has to do with (relative) changes in attitudes, behaviors and their outcomes. We do emphasize, therefore, the value created by integration of the eService Evaluation tool within a longitudinal research design. Periodical monitoring of the take-up and users’ satisfaction with online public service delivery is recommended in order to evaluate policies for eGovernment development and improvement.

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## 5. Workshop and feedback procedure

### 1.18 Introduction

In this chapter the review procedure used to validate the study methodology and results is presented. The findings of this study were intensively confronted during the month of December 2008 with a number of experts in the sector of eGovernment and involved public agents in the Member States.

First of all there was the “Benchmarking Pilots Workshop” in Brussels on 9 December 2008 where the study was presented and compared with the learning’s of the eGovernment Pilots of this programme. For the pilot of “Digital Cadastre” there was an extended interest to use the eService Evaluation Tool for testing the results of the project as well an interest was outspoken to use the tool for in the context of the pilot 3 “Benefits of citizens–centric service delivery”.

On 10 December 2008 a workshop specially organised to present and validate the findings of this study was attended by around 20 persons who represented the study team, Member States’ representatives, members of the Dutch Burgerlink initiative, the eGovernment Benchmarking pilot studies, and a number of independent researchers/consultants. An extended report of this workshop is presented together with the transcript of the Q&A sessions in the next paragraphs of this chapter.

Furthermore the project managers presented a short report to the eGovernment Subgroup of the European Commission on 18 December 2008. The transcript of the Q&A session of this meeting is also presented in this chapter.

This report and the survey instrument (Instrument manual and questionnaires) will be published on the ePractice website ([www.epractice.eu](http://www.epractice.eu)) and during 2009 the authors of this study together with DG Information Society and Media will start a dissemination process to inform different interest groups about the findings of the study and promote the survey instrument.

The CIP thematic network “eGovMoNet” will be one of the most important channels and drivers of these dissemination actions.



## 1.19 Report of the “Expert workshop” (December 10th, 2008 Berlaymont Building, Brussels)

### 1.19.1 Overview

The meeting’s main aim was to present the results of this study. The focus was on the study’s background, methodology, and outcomes. The session was generally interactive and encouraged some interesting question-and-answer sessions.

The outcomes of this workshop have links with other eGovernment-related workshops that are currently being organised by the Commission in the December 2008 time-period, including on eGovernment Benchmarking, the 20 eGovernment basic services, and the future directions of eGovernment-related studies. Another policy domain which emerged was that of the Service Directive and the impact that it is having on eGovernment services.

Each presentation is reported briefly; the subject of the questions posed to the study team are also reported succinctly.

### 1.19.2 Morning session

A web-based survey instrument on user satisfaction and the impact of eGovernment services has been piloted in ten Member States. There were 10,000 citizen respondents and 4,000 from the business domain. Two levels of measurement have been the result, a benchmark of user satisfaction and an eService evaluation tool.

Presentations were made by various members of the study team. A general introduction was made by Patrick Wauters, and Hugo Kerschot followed; a methodological presentation was made by Roland Van Gompel, and the morning session was wrapped up by Jo Steyaert.

#### ***Introduction: Patrick Wauters***

The study, of which the survey instrument was the result, was undertaken within a particular policy context, i.e., a shift from a more supply-based approach to a user centricity approach. For example, in February 2008, Commissioner Siim Kallas at an “Alliance with users” event in Slovenia expressed the desire to move towards a more user-centric set of eGovernment

services. It is evident that tools and instruments need to be developed that will help to measure this shift. Questions that would need to be asked might include: does the level of quality of eServices have an effect on the take-up of the services; how does trust in government and trust in the Internet have an impact of use of eGovernment services; can a tool measure the expectations of citizens and businesses over time; can an instrument say something about the perceived gap between the supply-side of services and take up?

***Supply and use of services compared: Hugo Kerschot***

At least two possible areas for further research were highlighted by this comparison of the supply and the use of services. These relate to those services in which there are particular gaps between supply and demand, whether on the citizens' or on businesses' side; and also to the differences in provision between countries (and especially where there are supply/demand side gaps in countries that provide a lot of eGovernment services).

Life events have long been used in the supply side area of research. An assessment is needed of the balance between supply and use for services relating to e.g., tax and labour market, particularly for citizens.

With regard to the supply side, income tax and job search services are those eGovernment services which are offered which are used most by citizens. Citizens say that it is around these issues that they are most frequently in contact with government. Why do any differences exist? Why is there a gap between supply side and use?

There is a better balance between supply and use for eBusiness services. Based on supply and use of eServices in ten Member States, demand from business seems to be higher than supply **only** in the field of environment-related permit services.

Among the countries providing the most sophisticated eGovernment services (e.g., Austria and the United Kingdom), there are considerable gaps between demand and supply. What are the reasons for these differences?

Additionally, one overall finding from the study was immediately obvious in its importance. There are **other** areas of influence that influence the use of eGovernment, e.g., how much contact does the client have with the government? The range of tools that a client uses is

also important: why do certain people, who are high users of other eServices, not use eGovernment services?

***Methodology and approach: Hugo Kerschot***

Through the use of testing and piloting, the aim of the survey was to produce a toolkit of questionnaires that Member States can use to measure user satisfaction and the impact of eServices. A user manual is now available, and there are two sets of questionnaires that include two for citizens and two for businesses. These USB and eSET instruments provide a multi-layered research tool that has a customisable modular structure (it relates to user types, use, satisfaction, and impact). A comparative cross-national framework was used in the pilot. The study methodology was then described briefly.

First, a period of desk search identified a set of useful existing and emerging materials that were already available in the field: some 87 project initiatives, reports, and websites were found. The most frequently mentioned survey was the Eurostat ICT usage by households survey. At the Member State level, help was received from the members of the i2010 subgroup on eGovernment.

Second, five good practices of user-related surveys in the eGovernment field were identified through the desk research:

- Belgium: the Fed-e-View survey which focused on both use and non-use.
- Italy: the revenue agency case which focused on 'satisfaction'.
- Netherlands: the citizens' services code.
- Slovenia: provides a strong methodology with a large toolset.
- United Kingdom: has a multi-channel approach that uses a large toolset.

Third, ten lessons were learned from the comparison of existing and emerging measurement initiatives. Among these were that the following are needed: a standardised framework; a shift towards iGovernment e.g., in post-i2010 projects; a holistic approach; common dimensions of user satisfaction; trust factors (e.g., with the Internet, administrations, government); attention to citizens' profiles and types; the precise focus of the measurement (e.g., a specific service); recognition of different take-up and development in the EU27; a longitudinal, systematic, monitoring; and Canadian and US instruments can be re-used but they must be adapted as far as possible to the European setting.

No umbrella example existed of a single survey that could be used for the purposes of a pilot survey in Europe (even with the former eUser and eGEP project results available), so the team adapted Canadian and US examples. The question remains, however, how to find a balance between the installed base (of particular survey) and a more standardised installation?

***The survey instrument: Roland Van Gompel***

The main objective of the study was to develop an instrument and to test it in the context of a pilot survey. In this presentation, the tool was introduced by using some examples of the key findings of the survey.

Among the citizens surveyed, were hypothetically those who were the most eReady in their respective countries i.e., the Internet-using population. On the business side, the companies surveyed covered a range of small, medium, and large companies.

A lot of preparatory work was undertaken to look at the different user groups to be surveyed; they needed to cover a wide range in terms of socio-demographics, with different backgrounds on ICT equipment, skills, use of other services, and attitudes. The survey also controlled for respondents' pre-conceptions: i.e., the degree to which respondents might be influenced by an underpinning attitude (trust or distrust) of authorities, government, or the Internet.

People who use a social networking service are often heavy users of Internet; hence, they may also use eCommerce and eBanking. Young people especially place a lot of importance on what their peer group judges to be importance.

In business, a similar effect is seen. Business users may use a combination of eFinancial services, eWorking, Voice over IP and videoconferencing. Employees in bigger companies use a wider range of electronic services. For business, it was possible to distil an Internet user typology. But, as far as the citizens were concerned, this was not feasible even when using statistical latent sample class methods.

With citizens, it is culture that modifies trust. Spain and Sweden have higher levels of trust in public institutions rather than private institutions. In Poland and the United Kingdom, there are very high levels of distrust in government.

The higher the levels of trust in Internet services, and in public administration too, the more the respondents are going to use eGovernment services. Variants between countries and cultural values mostly, however, explain the differences between people and people's use of Internet and eGovernment services.

It has been possible to categorise four types of businesses with four profiles (large *versus* small businesses; high eBusiness profile *versus* low eBusiness profile) and their degrees of satisfaction.

Overall, however, user profiling of eGovernment services needs to be upgraded: it is not enough to look at users' Internet use, it is important to look at socio-psychological profiling, the level of eGovernment take-up and use, and levels of interaction with public authorities.

User satisfaction increases with the degree of interaction with eGovernment services. People want to make use of eGovernment services in an efficient and smooth way. eGovernment services need to be more sophisticated, but not more complex. The findings with regard to satisfaction and impact highlight well the possible areas in which service improvement could occur.

91,5% of the respondents said that would use eGovernment services next time. The more people interacted with eGovernment, the more they are likely to re-use the service. Even one-third of those people who did not use the Internet for eGovernment services still said that it would be their potential preferred way of interacting. However, there is still a huge lack of awareness of the services that are in fact supplied by public authorities.

A firm conclusion appears to be that, through the encouragement of eGovernment to develop its levels of transactional services, the more users will perceive the aspects of time-saving and greater flexibility that can result.

### ***Wrap-up: Jo Steyaert***

Some further observations were made to conclude the morning's set of presentations. The questionnaire instrument can be adapted so as to be applied to a single service. Benchmarking countries for comparative purposes was, however, an issue on which the survey concentrated. It provides not just one instrument but two (applied to two sets of users). Almost 95 per cent of the questions which were introduced into the questionnaire proved valuable. The toolkit has certainly enlarged the user typologies for citizens. As far as timing is concerned, the survey is highly usable: it can be filled in in 15 minutes only for both citizens and businesses. It can be used by both Member States' authorities or by the Commission. Repetition of the use of the instruments over time should be encouraged.

### ***Morning's question-and-answer session***

The main questions or comments on the presentations at the end of the morning session came from four of the Member States. In addition, there were several questions from members of the eGovernment Bench learning study and specifically from experts.

Two of the Member States (Italy and Malta) expressed their interest in using the survey instrument either within the eGovernment Bench learning study (Italy) or for their own purposes (Malta). A third Member State (Germany) expressed the usefulness of the study for the purposes of general discussion about possible future study directions (and future indicators' measurement). A fourth (Hungary, in conjunction with Malta), asked questions about the precise eGovernment domains covered by the survey (e.g., mandatory versus non-mandatory service provision). Clarification about the actual concept of user impact was also requested.

While several of the questions were about the survey's results, others were more generally related to the transformation of government services and systems and services re-engineering.

An example of a question related to the survey and its methods was: Can new types of applications be included in the survey instrument?

Examples of the transformation of government services are: Why are 'good' eGovernment services available but no-one (or only a few persons) use them? Why do certain eGovernment services have such a steep take-up curve? Why have even the most experienced Internet

users not yet moved towards transaction-based services? Should there be, or is there a need for, a greater concentration on eGovernment services that are of interest to mobile citizens? Should a more pro-active offering of services to their clients/customers be triggered by local/national authorities and, if so, for what set of services? With regard to a specific example of a service: how can governments begin to handle environmental/ecological applications (where it is evident that businesses especially need increasingly to interact with governments)?

An additional set of questions were related to government re-organisation in general. For example, how to deal with the fact that many governmental interactions are handled on behalf of individuals by third parties (accountants; notaries)? By promoting eGovernment services would this simply raise expectations on the part of citizens that would then be hard to fulfil and/or would have to be managed?

A certain number of questions related to the concept of life events, and the way in which life events can be used in relation to both individuals and businesses, and the extent to which they can be associated (or not) with the 20 basic eGovernment services.

### 1.19.3 Afternoon session

The afternoon session consisted of three presentations: Matt Poelmans presented the Dutch Burgerlink exercise; Cristiano Codagnone presented the eGovernment Bench learning exercise; and Patrick Wauters and Hugo Kerschot presented the user satisfaction and impact study.

#### ***The Dutch Burgerlink initiative: Matt Poelmans***

Burgerlink aims to link up government with the citizen and citizen to government: the citizen will be put at centre. The approach takes place through promoting service quality *via* an eCitizen charter; measuring customer satisfaction which is based on life events; and stimulating citizen involvement which is done through developing various eParticipation instruments. Underpinning the exercise is an attempt to incorporate citizens in improving those services that they need for general living, going to school, working, and so on.

The eCitizen charter has ten elements. The message to citizens is to “forget about the e”; make your own choice of channel (multiple channels should be available); do not wander in

the “bureaucratic wilderness” which is available today; instead, get personalised information which is exactly the kind of information that you need from your own point of view; and track and trace how your problem is being solved. Burgerlink is a means of involving people both in the service delivery but also in the political process which underpins the whole initiative. A quality code concentrates on the life events–services supply side, and aims to rectify any delivery chain deficiencies.

Citizens often do not seek to be in contact with government, but in reality they sometimes have to be. So, government services ought to try to work together. The Dutch authorities are looking to encourage performance incentives on the part of local authorities; so that each city council adopts a charter and a quality code; they measure citizens’ satisfaction with their various departments; they involve their customers (citizens); and, lastly, the mayor accounts annually for the improvements needed.

A survey was undertaken by Burgerlink: its main point was to discover whether the Dutch services can delivery service improvements through the government’s “customer journey mapping”. The survey was designed around 55 life events that were reduced into 28 clusters of seven categories. A total of 1,400 respondents replied. The focus was on life events: the human lifecycle involves being born, married, having children, perhaps being divorced, and dying.

The survey aimed to examine three forms of assessment: government as a whole; services that are provided in association with life events; services that are supplied by a single organisation. It will eventually become a national survey that is conducted annually.

The survey concluded that: people experience on average 4.5 life events a year in which three organisations are generally involved; the higher the number of organisations involved; the lower the client’s level of satisfaction; there were complaints about the lack of cooperation among services; the lead time for the entire process is important; so too is the choice of channel and the client’s involvement; and, finally, providing an explanation of why a particular process may take a long time.

When authorities are able to work together, citizens are much more satisfied. Hence, the conclusion of the survey was that “cooperation is the name of the game”. There should be



joined-up, seamless government that is customer-centred, is based on knowing what clients want and need and knows how their problems are being solved.

The Dutch authorities want to compare the local and the national levels together by using the same methods. They want to measure “customer journey mapping” and see whether there are different customer journeys. They are training local authority personnel called the “Kafka Brigade” to “walk” with their customers through the current bureaucracy to try to find appropriate solutions. When confronted with customer problems, the aim – which is very important as far as the government is concerned – is to promise “quick wins”. The idea is to introduce portals that will be structured according to life events. It is the municipality which will be the point of contact to improve satisfaction with service for the citizen.

The questions posed to the Burgerlink initiative concentrated on two set of issues: public private partnerships and the nature of life events. Attendees asked about the extent to which the services provided were public or private sector and the services with which citizens interacted most frequently. They also asked for a clarification of the background to the concept of the life event; what is the differentiation among experiences of life events; and the potential for tagging of life events. Lastly, it was suggested that the notion of connected services was not only suitable for national or local services but could also be considered as a model for the Commission services.

### ***eGovernment Benchlearning: Cristiano Codagnone***

As an overview to the eGovernment Benchlearning exercise, Cristiano Codagnone described the complexity of the policy background. In general, there are trade-offs between the interests of policy-makers who are also under time pressures to make the relevant decisions. There are also many intervening variables for which a social science researcher cannot control. The situation is one of “apples and pears”, i.e., of balancing the need for policy-making *versus* empirical purity. The current project can be seen as an open shutter (“*volee*”) in the middle of an ongoing process.

Indeed, the eGEP project only started in 2005. At its end, a conclusion was reached that the Member States of the European Union were not yet fully ready to benchmark. Rather, there was a desire to explore the notion of bench learning.

In its first year, the eGovernment bench learning exercise was involved in essential measurements (including creating a zero measurement), and in mainstreaming the concepts. In the project's second year, it will again be involved in measurement, but there will be more exchanges of activities and sustainability actions will be developed. Three pilot exercises currently focus on: the efficiency and value of information, the reduction of administrative burden, and the achievement of citizen centricity. Through these mechanisms, it is hoped to achieve an internal public sector information (PSI) indicator.

The questions posed to the eGovernment bench learning exercise covered: the opportunities for learning among European Member States despite the differences in their eGovernment services, and whether eGovernment should look outside Europe so as to bench learn. Other insights related to the urgent perceived need for eGovernment transformation.

***The user satisfaction and impact pilot survey instrument: policy implications***

The Deloitte team presented the main findings of the survey. These are: eGovernment applications are lagging behind non-government (ie., commercial) applications; there is a gap between supply and actual use; clients want mostly to achieve time-saving, flexibility, and simplification by use eGovernment services; and there is a distinct likelihood of clients re-using eGovernment applications if they have first used them and provided they have had a positive experience.

Trust shapes both client's use of and satisfaction with eGovernment services. Accessibility is helped by the building of an eGovernment one-stop shop. Awareness of eGovernment services needs to be built both for citizens and for businesses; the perceived benefits of eGovernment use should be easy to communicate to citizens and businesses, and should be communicated far more than they are today. User profiling needs to be more sophisticated than at present. Finally, it is considered that the pilot survey instrument can be used again and can become a foundation for future benchmarking.

As a result, the Commission stimulated a general roundtable discussion on the eGovernment policy conclusions arising from the study.

***Policy and roundtable discussion***

The discussion which followed the user satisfaction and impact in the EU27 pilot survey presentation are classified in two groups. The first group relates to the survey instrument

and its findings directly. The second group relates to the process of eGovernment transformation. The second grouping was in reality far more extensive – and, indeed, intensive – than the first.

Firstly, on the survey itself: it was queried whether a survey should actually distinguish between citizens and businesses or rather whether the questions should be posed simply to individuals; whether the initial benchmark should be to measure services that are paper-based rather than partially or totally electronic; to what extent the survey instrument could be used in relation to different government services; and whether the focus should be on impact measurement rather than service provision measurement.

Long discussions then covered the following possible future trends, without reaching a firm conclusion or consensus. These were such issues as increased user profiling; users' desire (or not) for predictive, pro-active, and personalised service provision (ie., technology push or technology pull); concerns with regard to privacy protection and over-powerful government(s); and the extent to which citizens are prepared to make trade-offs to guarantee certain services.

In terms of change management and process re-engineering, attendees were interested to know with what eGovernment services it would be most effective to start so as to achieve the greatest positive impact for users; what would be an appropriate set of questions for governments wishing to start to re-design their services (who, what, why, when, with whom, and so on); an acknowledgement that back-office re-organisation in particular will require a great deal of investment; and, finally, an encouragement for a social shaping of this new eGovernment services on the part of citizens

### ***Wrap-up and groundbreaking news***

The attendees were all thanked for their presence; everyone present was encouraged to send their comments on the survey deliverables to the EC project officer.

Four news items emerged during the day. 1. Other focused presentations on the findings and policy implications of the study will take place in the time-period December 17–18, 2008. 2. The study findings are already public on the Commissions website, and when revised – after feedback – the final version will also be presented there. 3. The Commission will launch a press initiative in conjunction with the finalisation of the pilot survey results through which it will encourage the Member States to use this new survey instrument. 4. In

2009, the Commission is planning to organise a study which focuses on the concept of life events.

#### 1.19.4 Extended Q&A

**1. Question (Commission):** You explained user profiling and satisfaction as being related to life events. How do you define user impact in the context of this study?

**Response (project team):** Using this survey technique, you cannot measure objective elements of user impact e.g., in terms of the reduction of red tape, but you can measure subjectively what it is that people believe that they experience in terms of both their business life and their personal life e.g., in terms of time saving.

**Response (project team):** To get a clear overview in terms of user impact, you should always develop a longitudinal framework, and repeat a series of surveys over time. Making improvements should lead to a wider sense of user satisfaction, and thereby create an element of impact.

**Response (project team):** To get certain results, you need a longitudinal data set, associated with a specific panel that is followed year-on-year.

**2. Question (Commission):** A question for the Member States, therefore. How do the findings of this survey compare with what you currently measure in your own Member States? Did the findings surprise you in any way? Did something new crop up?

**Response (Germany):** The use of the services is not quite as surprising as the sophistication of the services on offer. There are good services available, but not everyone “buys” them. This survey can really help to create transparency about services. I thank the Commission for having provided this survey report to the Member States – it will prove fruitful for this afternoon’s discussion.

**Response (Italy):** Can we see an example of the survey questionnaire? My region in Italy would be keen to use such a questionnaire (e.g., in the cadastre sector).

**Response (Hungary):** Are the types of services offered by the public agencies that we see with this survey obligatory or non-mandatory? Let us take a very simple example like a change of address.

**Response (expert):** I think the survey results are great, but there is also a lot more than can be done. This survey seems to reverse the current measurement trends which now asks what

the need is. A pilot survey can help people to understand how to move forward. I would like to start a discussion about life events, e.g., I would like to see what kind of life event paying an annual tax bill is. If you start from a life event, this means that a series of services is provided. How does the government/authority manage the experience throughout the duration of the life event? E.g., when there is a death in the family, the United Kingdom has installed a “Tell us once” system, i.e., a single signal which is then used multiple times. The concept of life events can be used across numerous services. What comes first in terms of “culture”, the horse or the cart? The subtlety of measurement should eventually enhance the experience of particular events. Some of the take-up curves are very steep. What is about a specific service that makes the curve very steep, and what would make the take-up easier?

***Further information (project team):*** We are now in the delivery phase of the study, which is its pre-final phase. The survey can already be accessed on the Information Society and Media eGovernment studies webpage. A final evaluation of the deliverables is underway and, in January 2009, the finalised deliverables will be available.

***Further information (project team):*** There are several types of eServices on offer. They were included when comparing the results. There are definitely different types of delivery model. However, it is not clear from the survey results whether services are being provided by the public sector or the private sector. A life events-based approach was used. We did not ask ***who*** delivered the service.

***Further information (project team):*** The focus was more on the degree of satisfaction, and not on the provider of the service. A mix of questions was proposed for both citizens and businesses.

***Further information (project team):*** Presumably you mean what the choice of services is, such as utilities and transportation. The range of life events on which we focused was influenced by the “20 services”.

***Response (project team):*** The survey can help you see in a general way what a user’s experience is. The total experience is not yet measured in this general toolkit. The types of applications mentioned should probably therefore be incorporated in the toolkit in the future. Like the United Kingdom example, the Canadians operate a “There is no wrong door” application.

***Response (project team):*** The survey is very important for seeing what services have a higher adoption rate than others.

**3. Question (Public administration):** It is not only about the 20 services.

**Response (project team):** Take the service concerning environment for businesses. You can see that there is more demand than there is supply. This is an area where businesses have more need to interact with government than currently exists in terms of a service at present. Of course, this could form the basis for another study.

**Response (project team):** We treated these differences at a high level. We came up with various differences in take-up and on the supply and demand sides. It showed us that the most used services were e.g., taxation schemes and job search.

**4. Question (expert):** If the service is not available and is not provided, and you raise potential users' expectations, will people just become more frustrated?

**Response (project team):** The selection of particular life events can be changed in the future. With regard to take-up in relation to satisfaction: we asked respondents about the most important event that they had experienced this year. If you were to do a service-oriented survey, however, you would select a single service on which to concentrate. You would put on some "country-specific spectacles", and therefore focus on a single country and a single service type of service. If the service was not available, you could treat it under the umbrella of the non-users.

**Response (project team):** Even among the very experienced users who had used the Internet before 1995, only 19% of them were doing transactions. How come they do not use an eGovernment service? There is something wrong – even "rotten", therefore.

**5. Question (expert):** If you would like to improve the impact of a service, would you want to see which eGovernment processes should or should not be used?

**Response (project team):** In our introduction to this afternoon's debate, we will present our preliminary policy recommendations. In the survey findings, we saw that there is a lot of subcontracting with regard to completing eGovernment transactions. In Belgium, only 40 per cent of the population do their tax returns themselves i.e., they get their family, friends, or a company to do it for them. A lot of companies submit their public forms by using a subcontractor (such as an accountant or notary). For these new environmental applications: you need a way of tracking who are the individuals who fill in the forms (the "gatekeepers").

**6. Question (Malta):** Four issues/questions. 1. I have been very positively impressed by the survey even if I have not followed the study from the start. It would be very interesting for Malta to adapt the survey instrument for our own purposes. How does the Commission plan to get involved or to start making use of the survey instrument (e.g., the user satisfaction

part)? 2. On life events, it could be that it is not a good idea to associate the notion of life events with the 20 different services. It is now the right time to do a separate key life events study. What are the usual milestones over the life of a typical individual? Or a typical business? 3. Government should be *for* the citizen and not simply a set of purposes for itself. Users *do* move across borders, but they keep telling us that they did not know what to do. For example, they want to get married (in a different country), but they do not know how it is going to be done. 4. In Malta, there is no link between having a driving licence and buying a car or *vice versa*. If there was a link created through a life events model, users could get there in different ways.

***Response (Commission):*** We want to issue a study around life events, and are planning its budget for 2009. We want to take into account the lessons learned from this study. With regard to this survey, we want to encourage the Member States to use the survey instrument; it is – please note – a public instrument.

***Response (Commission):*** We want to spend some time taking into account mobile EU citizens. We believe that they appreciate eGovernment services. On the other hand, there may be no major differences between mobile citizens and other citizens. This is the first time that this study's preliminary results have been put forward; the same results will be presented shortly to the eGovernment subgroup. We would very much like to receive your feedback on the survey (including your written comments). We will launch a press release and other news items so as to encourage Member States to use the survey instrument in their own countries or for their own services.

***Response (project team):*** The terminology is all relative. This is more a concept than a definitive list of services. For the user, the only service that counts is *my* problem; myself with my problem. For the citizen, there is only one service "solve my problem". In this survey, we have used the concept to catch as many flies as possible. Whether the citizen's problem is complex or simple, "all the rest is back office". Local authorities are the place where people come. What are the products provided by a local authority? In Belgium, there is a catalogue of 800 products at a local level. Whereas in the United Kingdom, it can be 2,000 or 3,000 services. You need to think about the 20/80 rule, and its relationship with some really basic services. It is a completely different discussion to talk about public sector business re-engineering.

**7. Question (Commission):** There is a large amount of information available. But where do you start? If you provide sufficient information, can you simply shift over to transactions? It

would probably be best to start with the obligatory or mandatory services. Use ICT to help people, and particularly those with multiple social disadvantages.

**Response (project team):** Exercises like the user satisfaction pilot survey can help you understand what is happening with specific services; also, what is good/wrong with the take-up in the various countries. It gives you a means to look at where you should move on. Bench learning then provides you with the *how* to move on.

**8. Question (Hungary):** With regard to the lack of awareness about eGovernment services, how can you make sure that the user can get the information for which s/he is looking. We need to put the information online, and on the national portals at least. There are some very vital questions that we need to ask. Who should do it? To what extent? Should it be a public effort, or a private initiative? At what cost? This is the importance at a European level of the Service Directive, and also the review of the 20 basic eGovernment services.

**Response (project team):** We found two problems: there was the lack of awareness of the services that are actually available, but there was also a findability problem (the client is aware that the information is somewhere, but may not be able to find it). Lack of awareness was cited as an important barrier to use. Awareness-raising campaigns could be good. But people do not find easily, e.g., the national portals. You also need to tag the existing solutions.

**9. Question (Commission):** Would it be a good idea to look at user profiling to help on the potential pro-activity of governments in improving transactions in agencies for users. One way of being pro-active is if a user is identified once and for all. Then, the government services should be able to draw up a profile of what services that person would need, and present a form of access to those services first.

**Response (project team):** Pro-active automatic service provision exists in Belgium. The Crossroads Bank for Social Security proposes users with the possible benefits to them of a particular social service automatically. This means profiling users and their needs, and linking them to the service supply. It means integrating both the idea and the model.

**10. Comment (Croatia):** In Croatia, we are working to reach that stage [pro-activity] in 3-4 years' time. It is essential to enable government agencies that can give that kind of support. This is an organisational not a technical matter. We need to propose something to the authorities that can help them make it work.



**Response (project team):** You can find the study's policy conclusions somewhat boring because they are all about communications (which are also about budget consumption). Back offices need lots of investment to help them re-organise. Belgium, for example, is behind on IT investment. Investment is only the first thing to do.

**11. Comment (expert):** You can go from reactive to responsive to predictive. You can share information across companies and industries. You can give "information ownership" to the individual clients so they can be part of the services basket. A predictive approach would acknowledge e.g., that a person has lost a job, and therefore they need assistance to move to the next stage. Marketing and communication is also needed. You need the intelligence of government, but you also need shaping by government and shaping by the citizens too. It is time to start to firm these ideas up and make them tangible.

**Response (project team):** I am a consultant, but I am also a researcher. It is hard to know what users want. They are giving ambiguous signals about pro-activity in particular. While they may favour pro-activity, it has disadvantages as well as benefits. There is a large percentage of the population who are very afraid of Orwell's *1984*.

**Comment (Burgerlink):** It is not a question of either/or. There are choices that can be made with regard to data provision. Someone buys a drill – it is because they want to make a hole in the wall, but eventually it is because they want to hang a painting on the wall. ICT is a very sophisticated drill to drill holes, maybe a client would rather choose another person to hang the painting for them (i.e., to provide a service for them). There are some Web 2.0 possibilities. There can be dedicated personalised solutions that are e.g., laptop-based. Governments need to be prepared to provide all sorts of services and provide them in different ways. You need a seamless link between autonomy, privacy, and the legal framework. Give people choice and be more adaptable about it. Do as a government **should** do, which is to be there when you are asked a question. Start to measure the outcome (i.e., the impact), i.e., how many people are happy with the nice painting. Do not measure the tools and services.

**Comment (expert):** People do not trust government, because of government's incompetence. They fear that the government will share its information. Big Brother is a step too far. The information is there, but people do not use it. Until recently at least, in the financial sector, people saw their money as being held safely and securely. Measuring outcomes is hard; measuring inputs is easy. Benchmarking helps you move away from a hard and fast, precise measurement to something that may ultimately be more accurate. We need to change how measurements are handled.

**12. Question (Hungary):** There are obligatory and non-obligatory services. What is the minimum information with which the client has to deal? Despite the European data protection legislation, data protection is very different in different Member States. There are plenty of data protection solutions. We need to know what kind of services are the minimum services; citizens need to get the relevant services.

**Answer (Burgerlink):** The answer could be a citizens' charter with a service level agreement that agrees to provide e.g., a minimum service.

**13. Question (unknown):** *What is the agency with which you liaise most frequently?*

**Answer (Burgerlink):** It is the speed limits agency.

**14. Question (Hungary):** To what extent are the services provided run by public agencies or by the private sector? A one-stop shop model can involve the provision of either public services, public and private services, or purely private services. Local authorities have to provide: health, care, disability services, care for elderly persons, and so on. It can all be done over a counter. But commercial organisations could also run the counter: this would be a real transformation of government.

**Answer (Burgerlink):** You can see the public as a guardian angel, but who guards the data? For example, who protects the electronic patient file? Many hospitals are privatised. And those hospitals also need the patient data. It is trust that is the most important issue. Some people say that "privacy is out". But, in fact, privacy is on top. Privacy is on top. You especially need to guard the data when it is going in the direction of an insurance agency.

**Answer (project team):** It is worthwhile looking at the Bank of Social Security solution in Belgium, and Belgium's health solution. Both are embedded services.

**15. Comment (Malta):** Life events can be applied to a particular individual. You can treat a life event as a 'semantic' model and tag it for a number of public services without needing too much 'intelligence' about the way in which you need to guide the end-user.

**Answer (Burgerlink):** Some issues might be specific to local circumstances, other to education, and others to gender. There could be some form of checklist. Or an individual would give the authorisation to someone else to organise the search for him/her. It is important to tailor the provision of the service to the client's situation and to give people choice about the way in which they want to receive the data.

**Answer (project team):** Take a look at [www.Amazon.com](http://www.Amazon.com). You can see how you could offer on a voluntary basis other services simply by knowing about a client's interests.

**16. Question (consultant):** One comment and two questions: It is interesting to hear about these joined-up services; this kind of joining-up also has implications for the European Commission itself as the civil service for the whole of the European Union. You mentioned that a client experiences 4.5 life events, over what time-period is this? Also, what is the empirical background to the life-event concept?

**Answer (Burgerlink):** The Burgerlink work took place over 12 months; so, it was during the last 12-month period that a client experienced 4.5 life events. The notion of a life event comes from the demand side; it does not come from scientific investigation.

**17. Question (Croatia):** Firstly, how do you distinguish between general expenditure on IT as opposed to the amount used on eGovernment services? Secondly, what precisely is Bench learning? Should Bench learning not be done at the government level but without IT? Then, measure the changes. The services that are provided today are vertical services (i.e., they are today's services simply put on the Internet; they are not yet interconnected). Thus, the savings are marginal. If you have to travel to go to an office, it is evidently much more burdensome than getting the information you need online or doing the transaction online. I am a client who is developing a governmental portal. I may be one person but I am at the centre of the complexity of the problem - I have many roles and there are many things happening in my life. When we try to put citizens in boxes, we say "citizens and businesses". But we immediately miss out on public servants, for example. I have found my business soul-mate in the Netherlands (i.e., the Burgerlink initiative). There are also some very good examples from the United Kingdom. We have to provide tools ourselves that help the government to transform. We should follow simple rules to transform the government along the lines that we are thinking. Will I be able to use the particular tool? I need background information on what has happened in the past. Every week of our life is like one year of technology development. We need to build a system that serves the citizen, and that connects the many services that are available today. We need to mention the other aspects that exist. The political level likes to take a simple view. There is a huge demand for information, but no government service can provide this. Gartner shows that there will be a point of failure by 2011. The future of eGovernment is that there will be no government.

**Answer (eGovernment Bench learning):** The pilot and its studies had certain parameters and limits. You have to measure ICT-supported services. eGovernment absorbs the cost of one-third of ICT in government. The United Kingdom might indeed be a good model for Croatia.

**18. Question (Commission):** With regard to the Bench learning exercise, you have mentioned apples and pears among the various services. In the Bench learning pilots, what are the opportunities for learning among Member States despite the discrepancies among their services?

**Answer (eGovernment Bench learning):** The open method coordination is based on benchmarking. When you operate at macro-level systems, you lose the richness of what is behind. Pilots 1 and 3 have taken quite similar approaches, they have some differences and some communalities. Developments can be comparable even if the services are dissimilar. Pilot 2 focused on the administrative burden. Online registration (in Belgium, Greece, and Slovenia) are all at very different levels of sophistication stages (one started in 2006, another in 2008, and another has not started yet). What can be learned? 1. Simple lessons can be learned; the experience can take the blindfold off the agencies. They can see that data are available, that they might be able to use the existing indicators. 2. The services are often disconnected from the end-users, and they do not know how users use the services. They are neither public nor servants. "Top performers" can in fact learn from the less performant; the more mature can learn from less mature and *vice versa*. It teaches you not to make assumptions.

**19. Comment (expert):** How to show that the customers are satisfied? Offer them the services in half the time for half the cost. Where is the best physical example of this? The best in the world is outside Europe. Bench learning means shining the spotlight. We do not know where the best example of the one-stop shop is in Europe (we cannot find it). We would probably find it at a more at a local level.

## 1.20 Presentation for the eGovernment subgroup of the European Commission (December 17-18 December 2008)

On 18 December 2008 the project managers of the contractors (Patrick Wauters for Deloitte and Hugo Kerschot for Indigov) presented briefly the study findings to member state representatives in the eGovernment sub-group (assisting the i2010 High Level Group).

The presentation of about 20 minutes focused on the study approach and objectives, the results of the pilot study and a pro-active presentation of what member states can do with the deliverables of the study, meaning the possible implementation of a user satisfaction measurement in their country.

After the presentation there was time for a question and answer session.

**1. In your presentation “TRUST” seems to have a very important place, is this that relevant for the study?**

Answer: In the survey TRUST is an element of the first module of our modular structure of questionnaire: it is part of the in-depth “USER profiling” necessarily for better contextualise the next modules “USE”, “SATISFACTION” and “IMPACT”. Meaning trust in (1) the Internet and also trust in (2) the public administration of the respondent and trust in (3) the government of the respondent. It is in our knowledge the first time that in a eGovernment user satisfaction study the TRUST-factor is so extensively questioned.

**2. How do you define USE of eGovernment services for this survey instrument?**

Compare to many other eGovernment surveys we think we trace the use of government on a more accurate way. For this purpose we use a 2 stage model in the survey process.

First of all we ask the respondent what kind of contact they had with public services during the last twelve months: the use is defined throughout the formulation of 20 life events for citizens and 15 life events for businesses. These life events were more or less based on the 20 basic services of the supply site benchmark and cover the most important public service contacts. To cover all possible contacts, we have in the questionnaire, a supplementary open question to reduce fall out.

For each of the life events that occur, we asked if the respondent used the internet or e-mail for contacting the public services for this event.

Result of this procedure was that for citizens for all contacts concerning the defined life events, 41% occurred via the internet, totally or particular via e-mail or internet actions. For the business the result of this exercise was 69%.

**3. What is the determination influence factor of “Satisfaction” in the survey, why satisfaction is higher for business then for Citizens? What do you mean with “quality” in eGovernment services in comparison towards sophistication and satisfaction?**

The score of satisfaction is in fact a “subjective appreciation” of the respondents on a 0 to 10 score. Via different angles we try to position this score to a more objective level:

- Commercial eServices are appreciated via the same satisfaction scale and have a score significantly higher than the eGovernment services
- More frequent users are more satisfied with eGovernment services
- The more the eService is “sophisticated” (from e-mail, over information up to transactional services) the more satisfied the users are
- Our “figure of satisfaction” is also compared towards “the fulfilment of expectations”: we see that the satisfaction score is higher for services citizens received better service than expected.

We also mentioned that achievement of objectives is higher when the e-services are more sophisticated.

Based on the result of the survey we can conclude that lack of follow-up actions, lack of traceability, i.e. information on the progress of the service, non tailor made services and no online help or support are the major factors of dissatisfaction.

Also the information about likelihood of re-use objectified satisfaction: the more intention for re-use is expressed the higher the satisfaction score.

All this elements puts the concept of “qualitative” services in perspective and in a mode of “reverse engineering”. We asked for perceived benefits of eGovernment services in question. Out of this we can conclude that time saving; flexible and process-simplification are key elements for qualitative eGovernment services.

All this elements are even stronger reflected in the Business survey.

This separated objective elements makes that the “satisfaction” score for Business is consistently higher than in the Citizens survey.

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## 6. Policy report

This chapter resumes the preliminary findings and provides first high level recommendations based on the pilot of the eGovernment user satisfaction survey instrument. It would be interesting to further analyze these findings based on more detailed data, providing the possibility to translate them in concrete

Europe faces a challenging set of dilemmas as we move towards the end of the first decade of the twenty-first century. Important topics for European governments include: the way in which – in a period of economic and social crisis – the access, quality, costs and sustainability of government/public administration – have to be thought through equally by policy makers, public administrations, and citizens; the social shaping of European society, government, and democracy; stakeholder engagement and involvement; Europe's orientation towards service provision and how it is taken up by citizens/stakeholders within the context of the Service Directive; the role of the public sector in relation to mandatory versus non-mandatory services and their provision; the organizational re-structuring of service provision throughout Europe (and more widely); what services are due to 'take off' or must Europe focus on most; a re-thinking of 'responsibility' and the extent to which this is incumbent on 'the customer' (the citizen) and/or 'the provider' (whether public or private (or a combination of both)).

e-Government, the use of internet technology as a platform for exchanging information, providing services and transacting with citizens, businesses, and other arms of government, plays an important role in enabling the solution provision to these challenges.

A new eGovernment survey instrument can help Europe and its public sector service provision to move towards a more effective understanding of its users' needs and how to respond to them. The details of this toolkit, and its first pilot, have been thoroughly laid out in this report. Here we discuss the policy context, challenges, and trends which surround the toolkit's use and findings. Many methodological issues were faced in designing and testing this toolkit.

### 1.21 Policy Context

eGovernment is firmly on the policy agenda on both the European and the international levels. Coverage of the issue has been especially strong over the past three-year period.

The Commission's eGovernment Action Plan which was launched in 2006 is an integral part of the i2010 initiative. It elaborates on the Manchester eGovernment Ministerial Declaration and includes, among others, a number of targets such as 'no citizen left behind', 'reduction of administrative burden', 'high impact services for citizens and businesses'. These are all closely related to user satisfaction and impact.

Furthermore, the i2010 eGovernment Action Plan: "Accelerating eGovernment in Europe for the Benefit of All" states five clear targets that are to be achieved by 2010 which show a remarkable affinity with the eGovernment action plan: 'no citizen left behind', 'making efficiency and effectiveness a reality', 'implementing high-impact key services for citizens and businesses', 'putting key enablers in place', 'strengthening participation and economic decision-making'.<sup>32</sup>

Similarly, the Ministerial Declaration, adopted in September 2007 at the 4th eGovernment Ministerial Conference in Lisbon, Portugal, focused on several top priorities that highlighted inclusive eGovernment, reduction of administrative burden, and an increase in transparency and democratic engagement.

Where eGovernment is concerned, among both scholars and policy makers a clear shift is occurring from a supply-side focus to a demand-side one. On an international level, the UN eGovernment Survey 2008, From Government to Connected Governance, puts forward the concept of a 'second generation eGovernment paradigm'. This is a holistic (e-)government-as-a-whole framework.

The framework focuses on use of Information and communication technologies (ICT) to increase the value of services to citizens or businesses. As EU Commissioner Siim Kallas stated so forcefully on the occasion of the "Alliance with Users" Conference in Brdo, Slovenia (11 - 12 February 2008):

*"most public administrations in Europe have made substantial progress in developing and providing electronic public services (...) however if the European Union is ready to face the upcoming global challenges and help citizens and*

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<sup>32</sup> European Commission, "i2010 eGovernment Action Plan: Accelerating eGovernment in Europe for the Benefit of All", Brussels, 25.04.2006 COM(2006) 173 final, p. 4.



*businesses make the most out of them, governments should ensure that all European eGovernment services turn into 'iGovernment' ones, which means into interoperable and user-centric services. Such a move is much more driven by users' needs — by the need for flexibility and transparency coming from citizens and businesses across the EU".*

This concentration on user-centricity and ICT-enabled public value creation begs the question: What is the value of eGovernment to its users and what are their precise needs? The iGovernment Working Paper (Heeks, 2006) argued that this shift in the direction of the user, and the public value of eGovernment, should be reflected in the development of appropriate research frameworks and measurement tools. Heeks' work is an example of the kind of multiple influences operating on the European Commission, the actual study on user satisfaction being, among others, a result of it.

Hence, the determination is present to supplement the examination and benchmarking of the supply-side of eGovernment (with its focus on e-readiness and availability and maturity of public e-services) by the measurement of demand-side aspects of ICT use in government services. This demand-side focus includes measurement of take-up/usage, satisfaction, perceived and actual individual user costs and benefits, trust in (e-)government, and political-democratic and economic impacts. Measuring eGovernment user satisfaction and impact is therefore a key instrument in assessing progress towards the eGovernment targets set by the European Union.

Finally, this policy context is surrounded by a number of developments that are explained in more detail in section [*name section-last section of this chapter*].

The implications of this policy background for the meaning and measurement of user satisfaction and user impact are considerable. This overview of the current policy context implies systematically the need to:

- make progress beyond the eGovernment action plan, 2010–2015 (and, even ideally 2015)
- move beyond the i2010 action plan, 2010–2020 (and, from preference, in context with the directions to be taken in the notion of iGovernment)

- act within a joined-up <sup>33</sup>world (in which Europe collaborates on a wider, global stage with other actors of choice)
- develop awareness of Europe's challenges and world challenges together
- overall, be conscious of changing economic and marketing models of service provision.

## 1.22 Policy challenges

ICT increasingly permeate citizens' and businesses' work and activities. However, persistent low access to and use of eGovernment services may pose a number of societal challenges. Among these may be the creation of new forms of exclusion, lost opportunities for more cohesion, growth or industry competitiveness, and – especially because of the large sums of public funds invested to bring government services online – the development of negative opinions among the public about public authorities' cost-effectiveness, legitimacy and trustworthiness.

Today, as a result of an increasing consumerist culture based on rising social and commercial expectations, citizens tend to expect the same level of quality and responsiveness from government services that they experience generally when dealing with the private sector. Moreover, citizens who need government services the most risk being left behind or excluded as a result of the uptake by other elements of the population of the innovative potential of eGovernment services. If eGovernment services do not optimize user impact and increase user satisfaction, further socio-economic challenges may result. For instance, greater social apathy, decreased trust in government institutions, and increased social costs due to social exclusion could develop. Meanwhile, opportunities for citizens and businesses to benefit from the tangible gains that arise potentially from an increased take-up of eGovernment services may be missed. Given the current financial crisis that faces Europe, this is scarcely the moment to hold back on increasing the effectiveness, efficiency, and trust-ability of the Union's public services.

Public sector organizations across all government layers that are involved in eGovernment related services are faced with challenges and demands related to back-office organization,

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<sup>33</sup> Some might say 'mashed up'.

front-office supply, and actual use and impact of services. Today's particular dilemmas include low levels of eGovernment take-up; pressing demands from citizens and businesses to improve transparency, service quality and reduce time-consuming administrative burdens; internal organizational requirements to save costs and increase efficiency; and the need to develop inclusive multi-channel service platforms.

Not only do public sector organizations need to think more strategically and coherently about their mutual and shared challenges. They also need to seek ways and means of involving their citizens in policy decision-making and also implementation, deployment, and performance of the very civic and social services that they most need. It is therefore increasingly essential to develop and implement strategic action plans that are accompanied by specific measures which have a user-driven and citizen-centric orientation.

In order to provide both policy makers and public agencies with the necessary information and tools for the analysis of public sector service provision, this study has developed a User Satisfaction Survey Instrument. This standardized survey template provides a hands-on approach to a set of customizable survey tools. Its methodology offers a rich and solid foundation for analysis based on state-of-the-art experiences accumulated both on the EU and international levels.

### 1.23 Trends from the survey data and their policy importance

Data were gathered in the ten Member States where the two survey instruments that constitute the standardized framework were piloted. The data offer a rich basis for analysis and important key conclusions for eGovernment services in terms of use, satisfaction and impact. The pilot study has a specific focus on several aspects of use of eGovernment services that provide important use and policy insights. The standardized framework includes information gathering on critical elements such as non-use of eGovernment, perceived benefits and trust in the Internet and government.

The survey results indicate clearly a number of crucial issues that have been brought to light through the study. Among these are a number of notions that relate to trust-building. Some relate to the kinds of benefits that governments aim to achieve through eGovernment and, indeed, do appear to be achieving. Others relate to what government service providers need

to know better about their clients and customers while consciously needing to enhance the privacy of those citizens. Finally, a wealth of information is beginning to be unearthed in terms of supply-side services – a field that is as yet little explored by European public administrations.

**Trust:** The first important element shaping the use of and satisfaction with eGovernment services is trust. This notion includes both the trust that people have in using the Internet as a tool to interact and exchange personal information and their trust in government and public sector agencies. Variations in these levels of trust correspond to the differing levels of use and satisfaction with public services provided online. Scores on satisfaction of eGovernment services increase significantly with the level of trust in the Internet and with the level of trust in government. Concrete European initiatives aimed to support the enhancement of trust in the internet by the means of privacy and security and identity management development must be continued and reinforced.

**Ease of access:** On the supply side of eGovernment services, the availability and findability (ease-of-finding) of public information and services, its level of quality, and its level of sophistication all play a highly important role. Analysis of the channel preferences of eGovernment non-users shows clearly that various reasons for non-use (expressed as ‘no ability to find the information or services’) were reported by 44% of the respondents. Public administration should ensure that their e-services are tagged appropriately on the different Internet search platforms.

**Awareness:** Yet another notable reason for non-use (described as ‘lack of awareness’) was reported by 49.10% of the non-users of eGovernment. In contrast, the likelihood of future use of eGovernment is relatively high. Clearly, an important barrier to the use of eGovernment is therefore the lack of awareness, and thus the lack of adequate communication about service availability on the part of eGovernment itself. As a result, it is essential to create awareness of, and communicate the existence of, the electronic services on offer. From the pilot survey results, this element appeared as critical in the take-up and use of eGovernment services. Targeted communication e-services campaigns should be stimulated.

**Perceived benefits:** From the eGovernment services pilot survey results, it is clear that users care most about saving time and getting things done as fast, smooth and efficiently as possible. There is high demand by users to handle their administrative issues through a completely electronic mechanism (or ‘transaction’), especially once they have had the opportunity to do so. Positive experiences certainly stimulate respondents’ preference to use Internet/eGovernment and the likelihood of their future use. Once eGovernment services are supplied (providing that users are aware of their existence and availability), citizens and businesses are keen to use them. Therefore, it is critical for public administrations to address those eGovernment services that provide the most valuable perceived benefit for users. The availability, however, of time saving, and efficient and simple services are paramount. (Which these are can perhaps be suggested and/or debated, and – indeed, a treatment of this argument is covered in section 7.4)

**User profiling:** Particularly interesting and rich analyses, and subsequent results, can be achieved by fine-tuning the survey instrument further. It can be accommodated to the specific needs surrounding the evaluation of specific eGovernment or public services and their use. It is important to consider carefully the steps in setting up the instrument. The ensuing data analysis also requires in-depth knowledge of statistical methods and methodology. These next steps should be given due consideration.

The tools for user profiling provided by the survey instrument focus on user characteristics that go beyond traditional socio-demographic and socio-economic data (e.g. age, gender, household and professional situation, company size, etc.). These are now considered insufficient in an eGovernment context. It is essential to differentiate respondents according to their levels of ICT use, e-skills and experiences with Internet-based services. Customers’ experience and user satisfaction with private sector e-services such as eBanking and eBusiness are highly relevant reference points. Users’ expectations of eGovernment services are shaped by their experiences with these private online services. Factual sociological data therefore needs to be complemented with psychological, attitudinal components, and data about the frequency of respondents’ contacts with and general attitudes to government and public services.

**Supply side availability / Level of interaction (i.e., level of sophistication):** The level of interaction, which is also referred to as the level of sophistication, is an important element of use and satisfaction of eGovernment services. One of the most important findings of the

pilot survey is that the level of users' satisfaction increases with the level of interaction at which those users are able to relate to public administrations online. The more fully electronically – and completely online – those users' cases (situations, problems, or contexts) can be handled, the higher the respondents' level of satisfaction.

#### 1.24 Creating public value through ICT-enabled public services

When analyzing the pilot survey results, the dialectical relation between the 'need' to interact with the government, the 'supply side' of e-services seems to be evident. The availability and the level of transactional sophistication, and the use or take-up of these services, is clear for services like tax services and labour search. It is these services that are, in general, the most frequent interaction domains between citizens and public administrations, that have been developed as the most sophisticated e-services throughout Europe, and that – as the study points out – are the most used by European citizens. For businesses, the same analysis applies to services relating to taxation and social contributions.

However, among other services, there is an important gap between the level of online sophistication and the use. This is certainly the case for social security services and administrative services for citizens. For businesses, the balance between supply sophistication and demand is much better developed.

From this analysis, we can conclude that Europe has adopted the appropriate eGovernment strategy by stimulating the supply of highly interactive transactional public e-services in domains of high demand and high interest. There seems to be clear evidence that eGovernment take-up follows supply. Nevertheless as evidenced by the general shift towards ICT-enabled public services and user-centricity, the demand-side is an equally important element in reaching the targets of the i2010 eGovernment Action Plan.

When analyzing the correlation between supply, use and satisfaction on a country level, for the ten countries included in the pilot, the differences between the countries are remarkable: some countries have a high correlation between well developed sophisticated public e-service delivery and the use and satisfaction of their citizens and business with their eGovernment, while in other countries there is an important gap between both. Member States can learn from each other and share experiences on which services to concentrate, on

good ways of providing services and on methods of analyzing the success of the services. For the purposes of equity, democracy, and even social cohesion throughout Europe, it is imperative to ensure that the standards in the various Member States are brought increasingly into balance.

It is clear from the results of this study that balanced efforts concerning the development of more highly sophisticated public e-services, as well as trust- and awareness-creating actions, are necessary. The road towards actual user-centric public services requires a more extensive form of user profiling that provides measurements of the essential dimensions of use, satisfaction and impact. Using the standardized framework developed under this study makes available the tools and methodology to do so. It enables policy makers and public agencies to develop and monitor trusted, innovative eGovernment services in an inclusive and continuous manner.

Close monitoring of the essential elements that guide the use of and satisfaction with eGovernment services provides policy makers and public agencies with the appropriate information to address their target user groups. As the online services evolve, the perceived benefits and other elements of user satisfaction are expected to develop as well. It is essential to monitor these elements regularly in order to continue to create public value through ICT-enabled services.

*Here are perhaps the main findings of this section:*

- *Transactional services are of high importance*
- *Demand follows supply*
- *User-centricity is key*
- *European nations need to share experiences and good practices in a way that shifts from collation to collaboration*
- *Benchlearning is at least as important as benchmarking*
- *Mutual trust, whether as individuals, societies, or as a Union is core to the future of Europe.*

## 1.25 Doing surveys and their policy implications

The major observations that are derived from this pilot study are an intrinsic part of the result of using the User Satisfaction Survey Instrument. They reinforce the importance of using this standardized framework for the measurement of user satisfaction and impact. On the road to iGovernment, the element of user satisfaction requires these important factors to form an integral part of service provision. Regular, continuous, and longitudinal, measurement of User Satisfaction and Impact, through the use of a standardized framework, is an unmistakable part of keeping in touch with the quickly evolving world of online public services. It is an intrinsic element of creating public value through ICT-enabled government services.

The standardized framework developed in this study was tested through a pilot survey of both citizens and businesses undertaken in ten Member States. Based on the results of the pilot survey, the survey instrument was evaluated, re-adapted and further developed into a set of re-usable tools.

For the two target groups of citizens and businesses, two survey tools are the result. They are:

- a **“User Satisfaction Benchmark”** designed for a general level demand-side monitoring of user satisfaction and impact across European countries
- an **“eService Evaluation tool”** that public agencies may use to measure user satisfaction and impact of the specific services they provide electronically.

These two tools can be used at all levels of government from the overall EU level to the level of particular public agencies that offer specific eGovernment services in each of the 27 Member States.



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# Annex 1 Survey instrument manual

## Introduction

This manual provides a how-to guide to use the standardized instrument for measuring eGovernment user satisfaction and impact. The manual is directed at eGovernment officials and representatives of public sector agencies in all the EU Member States. It presents the survey framework, tools and questionnaires, and offers practical guidelines on how-to-proceed in a step-by-step approach.

The overall aim of this EC-commissioned study was to develop a standardized yet customizable measurement tool to be used by public agencies in all of the European Member States. The purpose of the tool would be to measure user satisfaction with specific eGovernment services. The study was also intended to prepare the ground for a demand-side eGovernment benchmarking exercise across the EU27.

As a result, the instrument was developed with these two perspectives or objectives in mind:

- (1) the demand-side benchmarking of eGovernment user satisfaction across the EU27;
- (2) the development of a standardized yet customizable instrument that can be re-used by public agencies throughout the EU27 to measure user satisfaction with the specific public eServices they provide.

Two separate tools were designed:

- (1) User Satisfaction Benchmark (USB) tool;
- (2) eService Evaluation Tool (eSET).

Both tools have been adapted for surveying citizens and business respectively. The tools will help evaluate customers' use of, and customer satisfaction with, eGovernment applications.

Based on the evaluation undertaken of the tools, policies and strategies can be developed for increasing take-up and improving the quality of electronic public service delivery. Applying the tools to measure user satisfaction should not be an end in itself, but a means to explore

the ways in which customer relationships within the public sector can be optimized through eGovernment.

In relation to the tools, the following three elements are to be emphasized:

- The instrument is designed to measure use of and satisfaction with eGovernment within a representative sample of the Internet population, i.e., that part of the total population that has access to the Internet. The instrument can be used to measure the level of satisfaction of actual users of specific eGovernment services. It may also offer insight in the profiles and opinions of individuals and companies who do not use these services, despite the fact that they have Internet access to them. If public agencies decide to conduct a survey using their own customer database, they should acknowledge that no relevant information can be gathered about the non-use(rs) of their eServices. Therefore, the instrument focuses on Internet use but is not limited to it.
- The instrument is standardized yet customizable. The instrument proposes different question modules within a logically structured sequence, but public agencies can adapt specific modules and tailor questions to the specific aims, objects and scope of their measurement projects. The instrument has been set up with a broad “holistic” focus on user types and different aspects of eGovernment use and satisfaction, but public agencies may integrate only those aspects that fall within the scope of their measurement designs. Hence, the instrument is very flexible.
- A standardized approach is necessary for the continuous measurement or monitoring of user satisfaction. In the longer term, this enables the observation of trends, the evaluation of the effects of policy initiatives and service improvements, and the measurement of eGovernment impact.

We believe firmly that future measurement initiatives in the EU27 will benefit substantially from adopting this survey framework, its most central features, and its tools. The main elements of the survey framework are that it constitutes: (1) a broad, holistic approach to eGovernment measurement; (2) a strong focus on user profiling; and it adopts (3) a life-event based approach. We outline here, however, the full list of ten principles that have guided the design of this standardized framework:



## Guiding principles for a standardized framework

11. Standardized measurement framework
12. Customizable modular structure
13. Holistic approach
14. A life event based model
15. User types and target groups
16. Multi-channel perspective
17. Non-use of eGovernment
18. Dimensions of user satisfaction
19. Measurement of user impact
20. Control for preconceptions

### Question modules and tools

In this chapter we present the user satisfaction benchmark instrument and the tools that provide public agencies with the necessary building blocks to conduct surveys on user satisfaction with their eGovernment services:

- The concepts and indicators measured;
- The general modular structure of the survey tools created around this model.

The standardized question modules adaptable in citizen- and business-specific questionnaires are presented in annex to this manual.

The standardized framework consists of four, different, consecutive parts or layers:

- User profiling;
- Use of eGovernment;
- Satisfaction with eGovernment;
- Perceived benefits of eGovernment.

As there are substantial differences in scope and structure between the User Satisfaction Benchmark (USB) instrument and the eService Evaluation Tool (eSET), these tools are presented separately.

## User Satisfaction Benchmark (USB)

The USB is an instrument to measure eGovernment user satisfaction within a comparative, cross-national framework. The following graphic illustrates the general structure of the USB instrument.

### User profiling

The first part of the survey instrument consists of six question modules which address the profiling and categorization of Internet/eGovernment users:

- Socio-demographic and –economic citizen/business profiles;
- ICT/Internet adoption and intensity of use;
- Use of and satisfaction with non-governmental Internet applications;
- Trust in the Internet (citizens);
- Trust in government (citizens);
- Contacts with government (citizens).

The basic logic that underlies these modules is the intention to do the following six tasks:

- Identify user types and profiles along different relevant axes (socio-demographic, psycho-graphical, relationships with Internet and with government);
- Categorize citizens and businesses into customer target groups, for example: students, retired persons, self-employed persons, and SMEs;
- Differentiate users according to levels of use and experience with Internet in general and with Internet-based services in particular;
- Compare use of and satisfaction with eGovernment to user experiences with other non-governmental Internet-based services;
- Control for preconceived judgements concerning government and public services by taking into account general attitudes, perceptions of the quality of public service provision, and levels of trust;
- Take into account the frequency of contacts and dealings with government in general in different roles (such as private person versus professional; acting for one's own purposes or as an intermediary on behalf of others; acting personally or through an intermediary).

# User Satisfaction Benchmark (USB)

## I. User profiling

User types

Citizen / Business profiles

ICT / Internet adoption & use

Use of & satisfaction with private Internet applications

Trust in the Internet

Trust in government

Contacts with government

*Categorization according to socio-demographic and socio-economic characteristics*

*Categorization according to ICT / Internet adoption & intensity of use*

*Basis for psycho-graphical user profiling  
Comparative context for use, user expectations & satisfaction concerning eGovernment*

*Level of trust in the Internet to make use of private and public internet applications*

*Control for preconceived judgements concerning government and public services*

*Categorization according to roles and frequency of contacts with government agencies*

## II. Take-up of eGovernment

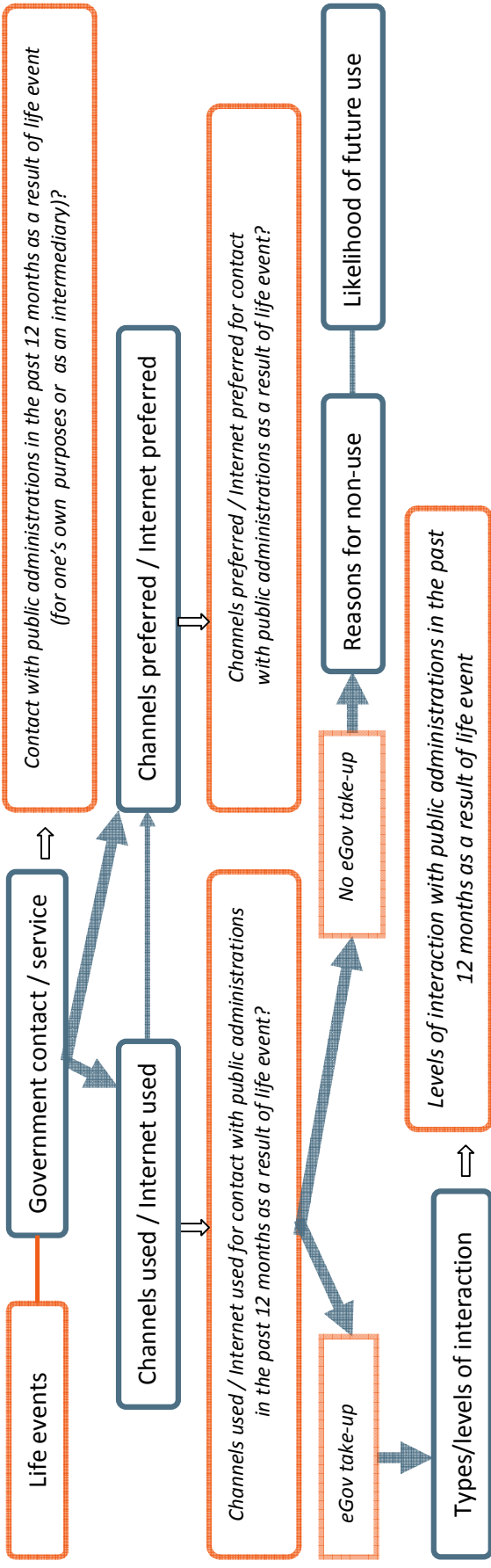
General use of eGovernment

Use of public Internet applications

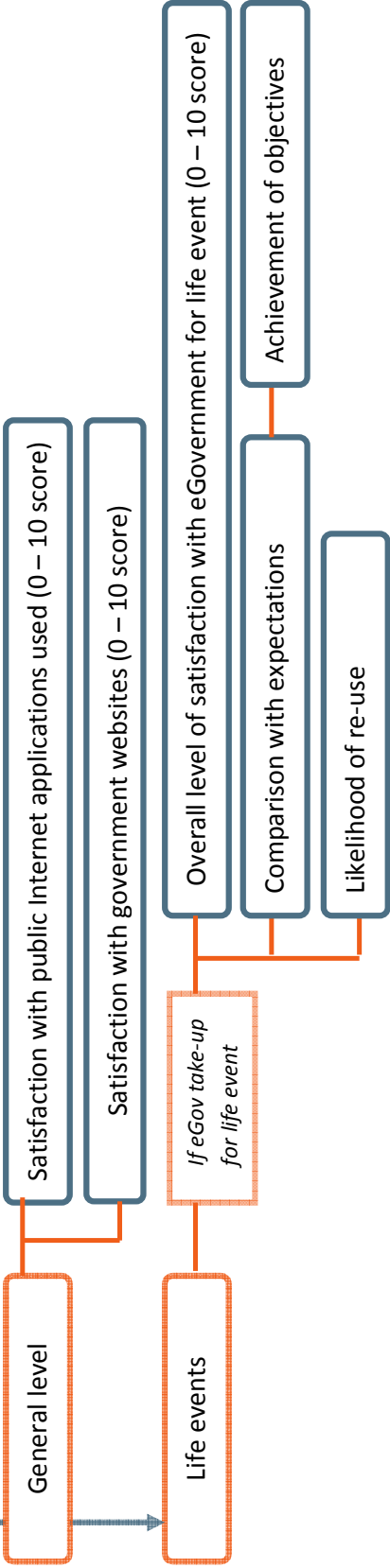
Use of government websites

*Basis for psycho-graphical user profiling  
Frequency of use of eGovernment & eParticipation at different levels of interaction*

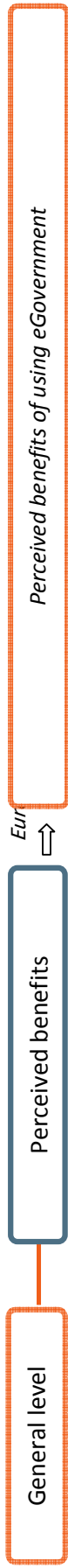
*Frequency of use of public authorities' websites at different levels of government*



### III. Satisfaction with eGovernment



### IV. Perceived benefits of eGovernment

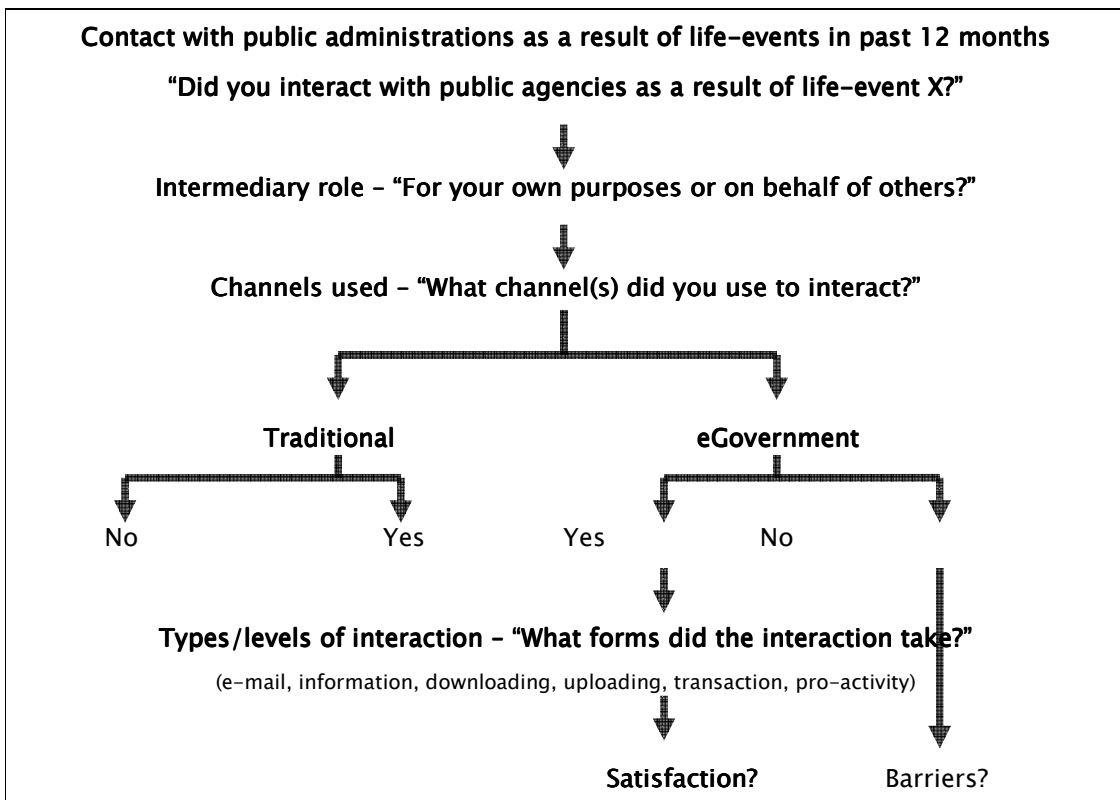


### 1.25.1.1 Use of eGovernment

This part of the instrument measures the take-up of eGovernment prior to the measurement of customer satisfaction with the eGovernment applications that are actually used.

The use of eGovernment at the general level is measured by presenting a basic list of eGovernment and eParticipation applications, differentiated by the type or level of interaction (from e-mail communication to online service application and participation in policy-making processes), and of government portal websites at the local, regional and national levels.

The USB instrument further adopts a life-event based approach. It presents to both citizen or business respondents a series of customer life-event processes. Here, “eGovernment” channels may be used for certain types or levels of interaction (such as seeking information, communicating with public servants, or applying for a particular service). The set of citizen and business life-events proposed includes the issue of citizen and business mobility within the EU, represents different types of public services (from “obligations” to “opportunities”), and captures a very broad range of target groups.



In order to produce a realistic and accurate view of eGovernment take-up and satisfaction, the instrument also adopts a two-stage questionnaire process. Respondents are asked, first, for which life events they came into contact with government in general in the last 12 months and, then, for which of these they used the Internet (or other electronic channels).

Such an approach produces a more reliable picture of take-up that is weighted towards actual use and need for use. For instance: of those who in the last 12 months had to notify local government authorities about changing their residence, how many did so online? The baseline is, then, not the entire population of Internet users, but the sub-sample of those people who did need to contact government about this specific life event. As a result, the percentage figure produced is a much more valid measure of uptake. Additionally, when the questionnaire asks about satisfaction, respondents can be singled out who actually did use the services, and whose answers are likely to be based on their actual experience rather than on generic, pre-formed judgements.

As a result, the approach to measure take-up of eGovernment in the context of a list of 20 citizen and 15 business life-events includes the following sequence of elements:

- Contacts with public administrations in the past 12 months as a result of customer life-events, for citizens' or companies' own purposes or as an intermediary for friends, relatives or professional clients;
- Channels used/Internet used for interaction with public administrations in the context of life-events that apply;
- Channels preferred/Internet preferred for interaction with public administrations in the context of life-events that apply;
- Levels of interaction with public administrations in the context of life-events that apply and for which the Internet is used.

The level of overall satisfaction with the use of the Internet for interaction with public administrations will be measured in the context of those life-events that apply. As these satisfaction scores are more directly related to particular "experiences", there are reasons to believe that they offer more reliable indicators of actual satisfaction with eGovernment.

Note that the following elements are included in the measurement of take-up:

- A respondent's potential role as an intermediary: probing e.g., whether the contact was made for one's own purposes or on behalf of friends/relatives or clients;
- Different ways of interaction including traditional and "eGovernment" channels:
  - In-person, face-to-face
  - Mail, posted letter, fax
  - Telephone (fixed line or mobile)
  - E-mail/Internet (websites).
- Different levels of interaction that are characterized by increasing sophistication:
  - E-mail communication
  - Searching/obtaining information
  - Downloading official forms
  - Uploading filled-in forms
  - Transaction (full electronic case handling)
  - Pro-active service delivery.

Note that the survey focuses on the use of the Internet – broadly defined, including e-mail – as an eGovernment channel. This channels is contrasted with traditional channels of communication (such as face-to-face, mail, and telephone). The survey instrument, however, can be easily extended to other "eGovernment" channels of communication (for example: mobile technologies, interactive digital TV).

Furthermore, it is important to juxtapose channels used and channels preferred. Such a juxtaposition offers, for example, the possibility of differentiating between types/reasons of non-use (for example, why do individuals not make use of the Internet for eGovernment purposes, although they may say that they prefer to interact that way).

Specific attention is devoted to non-users of eGovernment, focusing on:

- Non-user profiles;
- Reasons for non-use;
- Non-users' channel preferences;
- Non-users' likelihood of future use of electronic channels.

### 1.25.1.2 Satisfaction with eGovernment

This area of questioning is central to the whole instrument design. It provides the basic conceptual standard for measuring user satisfaction.

First, satisfaction with eGovernment at the general level is measured by asking respondents to evaluate their experiences with the general eGovernment and eParticipation applications and the government portal websites presented earlier (see: use of eGovernment).

Satisfaction with the eGovernment processes in the context of specific citizen and business life-events is measured by the following components:

- Overall level of satisfaction;
- Comparison with expectations;
- Achievement of objectives;
- Likelihood of re-use.

A 10-point scale (0-10) is used to measure the overall level of satisfaction of both the general use of “public” Internet applications, and each of the 20 citizens’/15 business life-events that apply. The average score for the total set of life-events can be produced.

Overall satisfaction should be related or compared with prior user expectations. At the same time, it is clear that the extent to which citizens or companies achieved their actual objectives through eGovernment processes will affect their final opinion of eGovernment. Questions about the likelihood of re-use completes this evaluation of using the Internet/electronic channels for interaction with public administrations.

### 1.25.1.3 Perceived benefits of eGovernment

Within this survey concept, the perceived benefits of eGovernment are measured for eGovernment in general, and not for each life-event. Citizen and business respondents are asked whether they agree or disagree with eight statements about the potential benefits of using eGovernment.



## eService Evaluation Tool (eSET)

The eService Evaluation Tool (eSET) is a framework that can be used by public agencies to measure user take-up and satisfaction with specific services which they deliver electronically. On the next page a graphic illustrates the general structure of the eSET instrument.

### User profiling

The same elements that are used in the user satisfaction benchmark instrument are also used to profile users and non-users of specific eGovernment processes, services and applications.

The first part of the survey instrument consists of the following six question modules which address the profiling and categorization of Internet/eGovernment users:

- Socio-demographic and -economic citizen/business profiles;
- ICT/Internet adoption and intensity of use;
- Use of and satisfaction with non-governmental Internet applications;
- Trust in the Internet (citizens);
- Trust in government (citizens);
- Contacts with government (citizens).

The basic logic that underlies these modules is the intention to undertake the following six tasks:

- Identify user types and profiles along different relevant axes (socio-demographic, psycho-graphical, relationships with Internet and with government);
- Categorize citizens and businesses into customer target groups, for example: students, retired persons, self-employed persons, and SMEs;
- Differentiate users according to levels of use and experience with Internet in general and with Internet-based services in particular;
- Compare use of and satisfaction with eGovernment to user experiences with other non-governmental Internet-based services;
- Control for preconceived judgements concerning government and public services by taking into account general attitudes, perceptions of the quality of public service provision and levels of trust;

# eService Evaluation Tool (eSET)

## I. User profiling

User types

Citizen / Business profiles

ICT / Internet adoption & use

Use of & satisfaction with private Internet applications

Trust in the Internet

Trust in government

Contacts with government

*Categorization according to socio-demographic and socio-economic characteristics*

*Categorization according to ICT / Internet adoption & intensity of use*

*Basis for psycho-graphical user profiling  
Comparative context for use, user expectations & satisfaction concerning eGovernment*

*Level of trust in the Internet to make use of private and public internet applications*

*Control for preconceived judgements concerning government and public services*

*Categorization according to roles and frequency of contacts with government agencies*

## II. Take-up of eGovernment

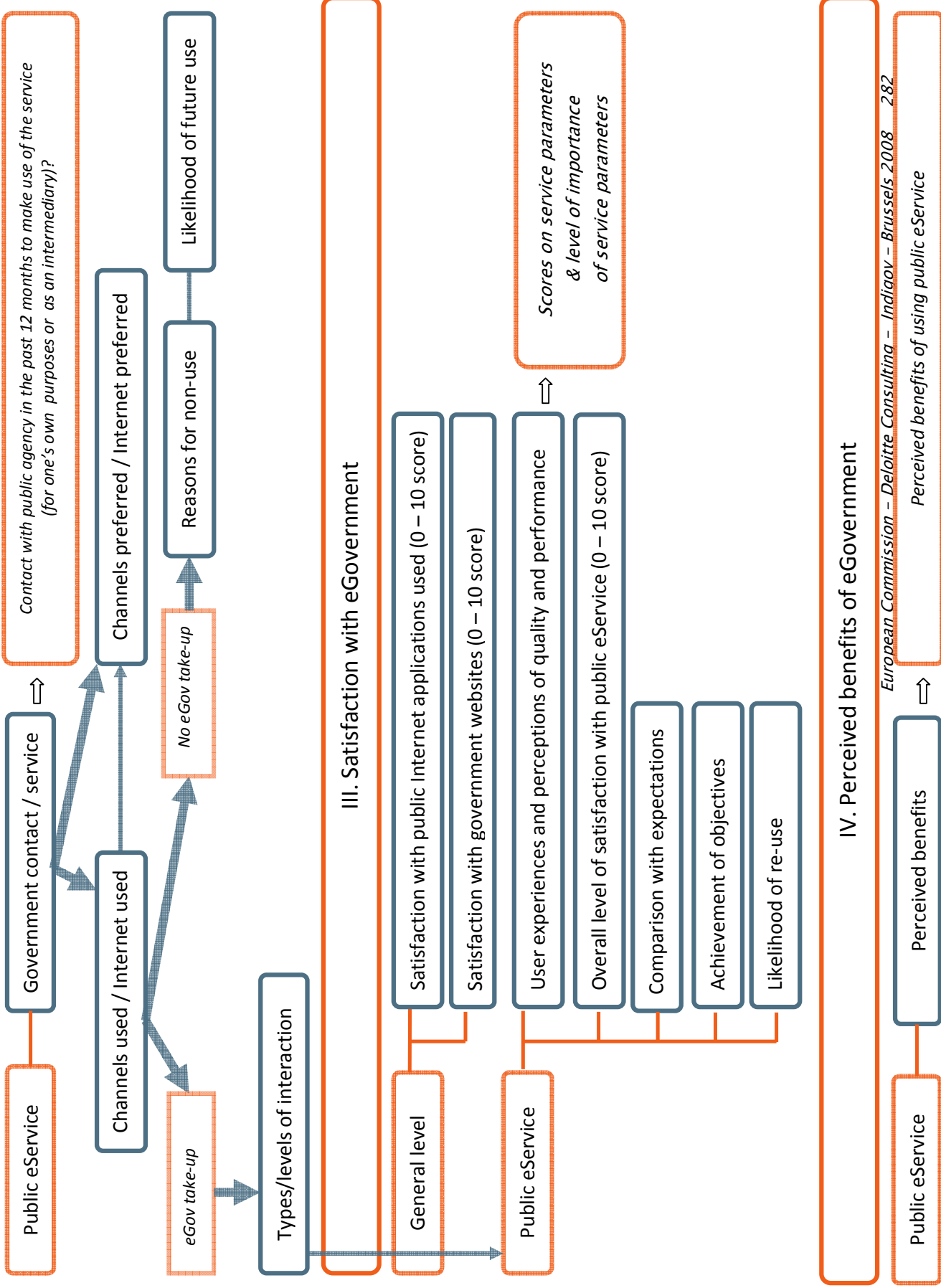
General use of eGovernment

Use of public Internet applications

Use of government websites

*Basis for psycho-graphical user profiling  
Frequency of use of eGovernment & eParticipation at different levels of interaction*

*Frequency of use of public authorities' websites at different levels of government*



- Take into account the frequency of contacts and dealings with government in general in different roles (such as private person versus professional; acting for one's own purposes or as an intermediary on behalf of others; acting personally or through an intermediary).

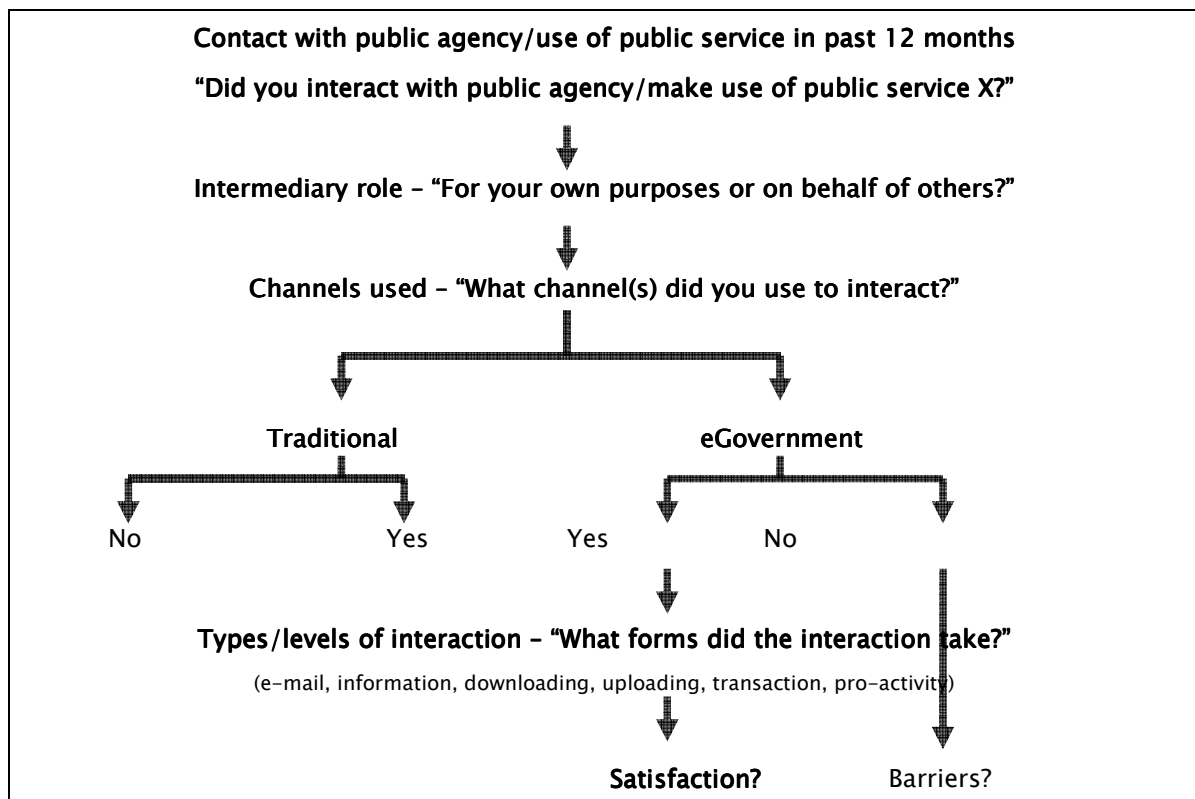
We wish to emphasize that, based on this part of the survey instrument, user profiling and the identification of user segments that are or are not reached can provide a public agency with vital information about the composition of its actual and/or potential eService customers.

#### Use of eGovernment

This part of the instrument measures the take-up of a specific public eService prior to the measurement of customer satisfaction.

The use of eGovernment at the general level is measured by presenting a basic list of eGovernment and eParticipation applications. These are differentiated by the type or level of interaction (from e-mail communication to online service application and participation in policy-making processes). Use of government portal websites at the local, regional and national levels are also assessed. The question module concerning the use of government websites incorporates the specific public agency that is involved.

The eSET instrument then focuses on the specific public eService that forms the object of measuring customer satisfaction. To produce a realistic and accurate view of eGovernment take-up and satisfaction, a two-stage questionnaire process is again adopted. Respondents are asked, first, whether they came into contact with the public agency/service under consideration in the last 12 months and, then, whether they used the Internet (or other electronic channels) in this respect or not.



The approach to measure use of the service includes the following sequence of four elements:

- Contacts with the public agency/use of the public service in the past 12 months, for citizens’ or companies’ own purposes or as an intermediary for friends, relatives or professional clients;
- Channels used / Internet used to make use of the public service;
- Channels preferred / Internet preferred to make use of the public service;
- Levels of interaction with the public agency in the context of the eService used.

Note that the following three elements are included in the measurement of take-up:

- Respondent’s potential role as an intermediary: probing e.g., whether the contact was made for one’s own purposes or on behalf of friends/relatives or clients;
- Different ways of interaction including traditional and “eGovernment” channels:
  - In-person, face-to-face
  - Mail, posted letter, fax
  - Telephone (fixed line or mobile)
  - E-mail/Internet (websites).
- Different levels of interaction, characterized by increasing sophistication:

- E-mail communication
- Searching/obtaining information
- Downloading official forms
- Uploading filled-in forms
- Transaction (full electronic case handling)
- Pro-active service delivery.

The focus is on the use of the Internet – broadly defined, including e-mail – as an eGovernment channel. It is contrasted to traditional channels of communication (such as face-to-face, mail, and telephone). The survey instrument, however, can be easily extended to other “eGovernment” channels of communication (for example: mobile technologies, interactive digital TV).

The channels used and the channels preferred are juxtaposed in order to, for example, differentiate between types/reasons of non-use (for example, why do individuals not make use of the service online, although they may say that they prefer to interact that way).

Specific attention is devoted to non-users of the service supplied, focusing on:

- Non-user profiles;
- Reasons for non-use;
- Non-users’ channel preferences;
- Non-users’ likelihood of future use of electronic channels.

#### Satisfaction with eGovernment

This is the central part of the whole instrument design. It provides the basic conceptual standard for measuring user satisfaction, applicable to any public agency in the EU Member States which wishes to use it to measure customer satisfaction with a particular service/product supplied to citizens/businesses in an electronic way.

First, satisfaction with eGovernment at the general level is measured by asking respondents to evaluate their experiences with the general eGovernment and eParticipation applications and the government portal websites presented earlier (see: use of eGovernment).

The overall level of satisfaction with the specific public eService is measured on a 10-point scale (0–10).

In-depth analysis is based on user experiences and perceptions of quality and performance. This concerns evaluations of a standard set of service parameters (factors or drivers of either dissatisfaction or satisfaction), including accessibility, usability, the quality of the actual information available and its content, and a range of more specific criteria that include more esoteric elements, to aspects of privacy/security, and the critical elements of time and cost.

This in-depth analysis may form the basis for the construction of a *strategic priority matrix for improvement of the public service online*. This matrix crosses the scores for a series of 12 service performance parameters with the levels of importance of these factors. Correlations of the parameter scores with the overall level of satisfaction give an indication of the extent to which each parameter contributes to the overall level of satisfaction of the respondents with the service, and, hence, of the importance of the parameter. These indications of the importance of each service parameter are needed in order to cross-analyze satisfaction and importance. They provide a key to identify priorities for service improvement (i.e., what needs mainly to be done to improve service delivery?).

Measurement of satisfaction further includes:

- Comparison with expectations;
- Achievement of objectives;
- Likelihood of re-use.

Overall satisfaction should be related or compared with prior user expectations. At the same time, it is clear that the extent to which citizens or companies achieved their objectives through using a particular service online will affect their final judgment. The likelihood of re-use completes this evaluation of the use of the Internet/electronic channels.

#### Perceived benefits of eGovernment

Finally, the perceived benefits of using the Internet/eGovernment channels to make use of the service are measured by asking citizen and business respondents whether they agree or disagree with eight statements about the potential benefits they actually experienced.

## Step-by-step approach

To apply in an effective way the tools presented in the previous chapter, we suggest that eGovernment officials and public agencies follow the step-by-step approach to the survey process which is introduced here.

The step-by-step approach consists of five parts. These parts are to do with: rationale and scope; methods; good survey design; data gathering and analysis; and communication of the results.

First of all, there needs to be a clear definition of the objectives, subject or focus, and scope of any initiative that is undertaken to measure eGovernment user satisfaction and impact (whether that would be the level of government, the kind of service/application supplied, or the types of user groups targeted/involved).

Second, decisions need to be made concerning sampling and data gathering techniques to be used, the data analysis and interpretation, and the reporting of the results. Obviously these decisions are influenced by practical considerations, most notably with relation to:

- Cost (budget);
- Time (scheduling);
- Available “in-house” human resources and expertise vs. external support (through outsourcing or contractual arrangements).

Third, a step-by-step approach also means integrating into the research design an involvement of the community and stakeholders in the particular Member State: ways of using the results for improving public (e)Service delivery and wider eGovernment strategies, and communicating clearly both the study findings and their policy implications.

In the following sections, we explain the different steps in the set-up and execution of citizens’ and business surveys on eGovernment user satisfaction and impact, using the tools presented earlier.



### 1. Define clearly the scope of the survey

Before taking the initiative to measure user satisfaction and impact of eService applications, public agencies should first answer the central question: "Why should we conduct a user satisfaction survey, and what do we want to learn from it?"

Different objectives may apply in each case. The underlying reasons could include that a public agency would want to: detect deficiencies in public service delivery, analyze reasons and causes of dissatisfaction, benchmark data and monitor progress, look for ways to improve the quality or user-centricity of services provided online, or try to understand why people do not make use of its services.

Clear formulation of these objectives is required to delineate, from the start, the precise object/focus, target groups and scope of the measurement project undertaken.

### 2. Designing the survey questionnaire

Customization of the survey instrument is needed according to the aim, focus and scope of the measurement initiative.

A user-friendly questionnaire design is required. This is related to the data gathering method used, for example: an Internet-specific questionnaire design when using Computer Assisted Web Interviewing (CAWI) techniques.

If a questionnaire is too long and too complex, it will jeopardize the rate of full responses obtained. In turn, this weakens the statistical robustness of the results.

In many cases, questionnaires need to be translated. Make sure to test translations, wordings, and question formulations through small qualitative and/or quantitative end-user tests.

### 3. Gathering data

The data gathering process implies deciding on the method used, defining the research sample, and organizing the fieldwork.

#### 4. Data gathering techniques

The scope of this survey instrument is “user satisfaction with and impact of eGovernment”. As a prime target group, the focus of the instrument is quite clearly on “eReady” citizens and businesses. By “eReady” is meant citizens and companies that have access to the Internet and, as a result, can be considered as actual or potential users of eGovernment. The instrument pays attention to non-use of eGovernment among the Internet population, but its main objective is to measure the extent to which actual users are satisfied with eGovernment.

Given this scope, application of the instrument implies that the survey is conducted on a representative sample of the Internet population. Different methods can be used for data gathering, most notably Computer Assisted Web Interviewing (CAWI) and Computer Assisted Telephone Interviewing (CATI).

Since the survey is aimed at users of eGovernment services within the Internet population, it is recommended to use an online panel survey approach. Panels of online Internet users show a large advantage when compared to respondents of offline surveys, even when the latter panels or samples include large numbers of individuals who use the Internet. This advantage lies in the validity of the approach, that is, the degree to which the answers and indicators extracted from them really reflect the phenomenon under study. It is clearly different to ask a) a question by telephone of a respondent who might have used the Internet three months ago about his/her experience with several services and b) a question of a respondent who is part of an online panel and who, thus, uses the medium of the Internet much more frequently. In the latter case, the respondent's answer is more likely to reflect real experience and not prejudice or expectation.

On the other hand, public administrations should take into account that the reliability of the results of a survey based on an online panel is limited to similar surveys that also use an online panel. (Reliability means the likelihood that similar results are produced at a different time and by other researchers using the same instrument.) Furthermore, we wish to emphasize that online panels tend to include fewer sporadic users of the Internet.

Despite these considerations, the benefits of an online panel survey method are several; they are spelled out in detail here.

## The online panel data gathering method in general:

- monitors actively a representative subset of online respondents, citizens and (people working in) businesses:
  - This method facilitates a number of respondents to be re-contacted easily for research purposes.
  - The method makes it easy to set up a standard that can be re-used afterwards.
- can be undertaken at low cost:
  - Online panel research is one of the cheapest forms of interaction to take place with a representative subset of Internet users. Follow-up can be organised easily (for example, through reminder e-mails), there are no paper- or postal or interviewer-related costs. Scale advantages are achieved for large populations.
  - Every survey has field costs which are spent in order to contact respondents. By using existing permission-based online panels for a survey of respondents, recruited in various offline and online ways, the field cost of finding and contacting respondents can be set very low. The relatively high cost of recruiting respondents can be spread over several, different surveys.
- emphasises validity and reliability:
  - Panel members are recruited based on intake questionnaires. These intake questionnaires contain a set of socio-demographic, attitudinal and behavioural variables. To become a member of online research panels, respondents have to fill in intake questionnaires. Based on this information the representativeness of a sample can be monitored.
  - Online panel research offers the possibility of setting up rich sets of complex interlaced questions. Building on previous answers within the same questionnaire, very complex but to-the-point routings can be set-up. In this way, questions can be very precisely targeted towards certain user profiles.
  - Online research requires a limited field time. Thus, it stimulates the accuracy of the data gathered.
- respects the time pressures on respondents:
  - Respondents can fill in questionnaires at convenient moments. The panels are permission-based. Respondents are not disturbed at inappropriate times by being asked to participate, and their privacy is respected.
  - The usability of online questionnaires can be tested by means of route path analysis and the analysis of response rates.
- emphasises representativeness and scientific approved methods:
  - Based on data gathered in intake questionnaires it is possible to:
    - Guarantee the representativeness of the survey. After the field work has ended, very precise statistical control of the response achieved can take place. The sample obtained can be compared with the population figures, and interlaced weight factors can be calculated.
    - Target very precisely certain groups and populations because this information is gathered in intake questionnaires.

- Achieve a very broad reach which is controlled and monitored through a single online back-office.
- Furthermore it is possible to:
  - Randomize response categories. This is methodologically important, since respondents have a tendency to make more use of the first answer categories that are presented to them. By randomizing the response categories, this effect is neutralized.
  - Enable real-time monitoring of the data gathered. This makes it possible to correct the data collection even during the fieldwork rather than waiting till the very end of the process.
  - Offer a very large range of possibilities for choice in terms of question types, look-and-feel, intelligent routing flexibilities, and other kinds of usability-increasing features.

For all these reasons, the online panel survey method is highly suited to the USB application. It can be aimed at cross-national benchmarking through representative samples of the online population within the EU Member States. It is the most cost-efficient way to undertake such an exercise regularly, make use of direct access to online research panels throughout the EU countries, and coordinate a research survey from one central online back-office.

The use of the eService Evaluation Tool does not always require a representative sample of the Internet population. Public agencies can decide to use their own databases and information they possess on actual users of their services. In that case, however, they should be aware of some limitations and drawbacks of the technique. For example, no information can be gathered about actual service take-up and about non-user profiles and barriers. Such information may be vital for service improvement and it may prove a serious oversight to ignore it. The online panel approach can provide data on the reasons for non-use of eGovernment by people who, nevertheless, do have access to the Internet and Internet-based services. Furthermore, with an online panel survey approach, the Internet user population as a whole is addressed and not solely visitors to specific websites or users of particular services within a given period of time.

Nevertheless, depending on the specific requirements for measurement objectives, eServices under consideration, or user target groups, other data gathering techniques may seem appropriate, either in their own right or as a complement to the survey instrument proposed. Alternative options may include qualitative approaches, focus groups, website visitor evaluations, mystery shopping (testing of the service delivery process by a trained but anonymous person), and

analysis of service processes and/or customer complaints. In any case, integration of these approaches is needed to obtain effective results in an efficient way.

A final data gathering consideration concerns the measurement of the impact of eGovernment. When using surveys of the kind that we present, only “subjective” perceptions can be measured of the extent to which eGovernment makes a difference to the respondent in terms of costs and benefits. Impact, however, primarily has to do with relative changes in attitudes, behaviours, and their outcomes. We do emphasize, therefore, the value that can be created by integrating the eService Evaluation Tool in a longitudinal research design. Periodical Systematic, periodically repeated monitoring of the take-up by users, and users’ satisfaction with online public service delivery, is recommended. This will facilitate evaluation of policies for eGovernment development and improvement within a longer time horizon. Furthermore, it is far more cost-efficient than setting up sample surveys that stand alone or are repeated only twice.

#### 5. Defining the research sample

A good survey stands or falls by a good sample. To create a good sample, one should consider three questions:

1. What size should the sample be to ensure appropriate reliability?
2. Are the costs of the sample in an acceptable relation with the potential profits?
3. Are the respondents selected in a methodologically acceptable way?

The first two questions relate to the size of the sample, the last to the selection of the respondents.

Within the general step-by-step approach prescribed here, we indicate six very concrete steps for deciding on sample size.

##### **Step 1. Deciding on the sample size**

The first question is: **What size should the sample be to ensure appropriate reliability?**

To answer this question appropriately, we have to make use of the concept of “confidence interval<sup>34</sup>”.

Here two questions should be answered:

1. How wide or narrow must our confidence interval be? In other words, what is the maximum difference in percentage terms that the result of a particular survey may differ from the actual population value? Confidence intervals are the most prevalent form of interval estimation.
2. What risk will we allow ourselves of a less than optimal confidence interval? In other words: how certain do we want to be that the given confidence interval is correct?

We recommend applying severe scientific criteria, to these questions: use of a confidence interval of +3,10%/-3,10% with a reliability of 95% is recommended. This means that a maximum difference of +3,10%/-3,10% is allowed between the results obtained and the population results. On a statistical level, the survey organizer is, thus, 95% certain that the score (frequency) of a population parameter lies between a maximum range of +3,10% / -3,10% of the observed result. Based on these severe criteria, a minimum realized sample of 1,000 respondents (per country), i.e., for the citizen target group, is needed. This sample permits reliable conclusions to be obtained based on a reliability of 95% that the obtained results differ a maximum of  $\pm 3,10\%$  from the (mostly immeasurable) population figures.

The second question is: **Are the costs of the sample in an acceptable relation with the potential profits?**

The sample size is also influenced by the cost of obtaining the sample. This can be understood very easily. The best possible sample is that of a total population (i.e., interviews of a total target population). This would, of course, require a huge budget and, moreover, the impact on the confidence interval and the reliability percentage would most often be limited

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<sup>34</sup> A confidence interval is a statistical range with a specified probability that a given parameter lies within the range. More precisely, a confidence interval for a population parameter is an interval with an associated probability  $p$  that is generated from a random sample of an underlying population. Thus, if the sampling were to be repeated numerous times and the confidence interval recalculated from each sample according to the same method, a proportion  $p$  of the confidence intervals would contain the population parameter in question.

An example can clarify this case. For instance, given a reliability of 95%, the impact of an increase in sample size (given an endless population) is the following:

N = 1,000 => confidence interval (CI) =  $\pm 3.10$

N = 2,000 => confidence interval =  $\pm 2.19$  (increase of CI 0.9%)

N = 10,000 => confidence interval =  $\pm 0.98\%$  (increase of CI 1.2%)

N = 100,000 => confidence interval =  $\pm 0.31\%$  (increase of CI 0.7%)

While the estimated impact on the budget for a sample of online citizens would be:

N = 1,000 => budget = 100%

N = 2,000 => budget increase estimated between 160% and 180%

N = 10,000 => budget increase estimated between 500% and 750%

N = 100,000 => budget increase estimated between 3000% and 4000%

We can easily conclude that a bigger sample of a particular target group will take a larger budget for fieldwork than a smaller sample for the same target group.

Not only is the size of the sample important, so too is the type of target group. Some target groups respond more easily to a survey questionnaire than others (e.g., citizens are more easy to approach than businesses). From a demographic point of view within the same target population, some respondents respond more easily (e.g., women aged between 25 and 45 participate respond easier when compared with older women (aged over 65 years) or compared with the higher or top management members of a firm. Thus, if it is more difficult to obtain a certain number of validated, filled-in questionnaires from a given category of respondents within a specific target group, this will have an impact on the survey price (i.e., it will cost more to obtain these completed questionnaires).

A distinction must certainly therefore be drawn between the target group citizens and the target group businesses. It is easier to obtain a representative sample of citizens than a representative sample of companies. Based on current market prices for online panel surveys, for example, to obtain responses from businesses costs more than double the price per completed questionnaire when compared with citizens. Due to the widely-differing costs of the data gathering for the two target groups, a distinction can be made in sample sizes between the target group citizens and the target group companies. These kind of cost distinctions can be considered as being particularly important for public administrations/authorities.

In the pilot survey that was intended to test this survey instrument, decisions of this sort were made based on both methodological and budget considerations. For example, with regard to the citizens' questionnaire, a sample size was defined of 1,000 respondents/citizens per country (N= 1,000; 95% reliability, maximal theoretical confidence interval =  $\pm 3.10$ ). For business customers, a sample size was defined of 400 respondents/companies per country (N= 400; 95% reliability, maximal theoretical confidence interval =  $\pm 4.90$ ).

Therefore, both methodological and budget considerations play a role in survey and sample design, and must be taken into account. Note also that sample size is important because it may or may not allow the survey organizers to undertake more detailed analysis of certain subgroups (e.g., males versus females, different age categories or different types of users).

## **Step 2. Selecting the individual respondents**

The third question is: **Are the respondents selected in a methodologically acceptable way?**

This question concerns the representativeness of survey research based on the recruitment of the respondents.

To guarantee a good representativeness and reliability, two elements are of importance: the size of the sample (in other words the number of respondents), and the way in which the number of respondents is recruited and reached. It is important to select a sample from a population database that has both an appropriate size and a good distribution of population parameters.

Based on such a database, a proportionally interlaced, stratified sample can be drawn that is representative for the population of Internet users in a country. A proportional interlaced stratified sample implies that the sampling is based on a quota for socio-demographic variables (for example, gender: 50% men, 50% women) that reflects the actual proportion of men and women in the total population of a given country, and – in this case – represents the Internet-using population. Uncrossed quota sampling based on several socio-demographic variables, however, would be not exact or would be less exact, because there would be no composition control (for example, it might mean that men are over-represented in a certain age category). To avoid this kind of distortion, the quota are crossed, i.e., interlaced. In a crossed scenario, the sample is made



up of a balanced stratified proportion of each combination of relevant variables. If, for example, 5% of the total Internet-using population consists of women older than 55 years, a representative sample of 1,000 citizens should include 50 women over the age of 55.

For citizen samples, proportional interlaced stratification should be based on gender, age, and education. For business samples, professional category/function, economic activity/sector and company size (that includes both SMEs and large companies) are the most relevant parameters. In this way, correct samples are drawn that are a reflection of the composition of the Internet population and of the universe of companies in a given country.

## 6. Executing the survey - organizing the fieldwork

When using the online panel survey method, the fieldwork process consists of the following six steps. They relate to the questionnaire programming, selection of panel members, contact, reminder, follow-up, and formal wrap-up of the questionnaire.

### **Step 1. Programming the questionnaires**

The survey instrument is input using a chosen template (lay-out, colour, logos etc.). After programming, the questionnaires are “published” i.e., they go “live”.

### **Step 2. Selecting the panel members**

The selection of members of the online research panels that are invited to participate is based on the principle of a proportional interlaced stratified sample as described above. A sufficient number of respondents should be selected/invited in order to ensure the final target response.

### **Step 3. Contacting the panel respondents by e-mail invitation**

The respondents are invited by a personal introduction sent by e-mail to participate in the survey. This e-mail invitation contains a personal link to the questionnaire. To ensure the best response possible, a research design should be adopted that is based on Dillman’s Tailored Design Method (Dillman, 2000). When working with an online questionnaire, it is very important to design the

methodology, timing, content, and layout in such a way that the respondent is invited in a friendly, approachable way to participate.

#### **Step 4. E-mail reminder**

After a week an e-mail reminder can be sent. In this e-mail, the respondents who did not yet fill in the questionnaire are reminded to participate. In practice, this leads to a higher response rate.

#### **Step 5. Following-up and controlling the fieldwork**

The progress of the online fieldwork and the response can and should be monitored in real-time. Monitoring can or should include: the number of e-mails sent, received, opened/read, number of questionnaires completed, identification of problematic drop-out points, etc. Whenever necessary, it is possible to react to difficulties in the following ways: e-mail reminders; recruitment of extra respondents; follow-up of feedback given by respondents; and use of real-time statistical reporting tools (for example to control who filled in the survey, whether particular quota for different socio-demographic subgroups are being met, etc.).

#### **Step 6. Ending the “live” fieldwork/data-gathering**

When the quota set for completed interviews are met, the data-gathering process ends.

### **7. Analysing and reporting data**

Before data analysis can take place, a statistical validation of the results is required. To control the representativeness of the samples obtained, the distributions indicated in the survey should be statistically controlled by comparing them with the corresponding population figures. This can be based on the figures of EUROSTAT (the agency possesses statistics on the use of the Internet for each European Member State). Based on this validation, interlaced weight factors can be calculated to correct for the possible skewness of the realised sample in terms of distributions according to gender, age, and education.

Depending on the study objectives and the information public agencies want to extract from the research for policy objectives, a range of statistics can be considered advantageous. Data analysis,

which would use SPSS or some other well-known and sound form of statistical software, can range from the basic descriptive level to more advanced statistical analysis. The basic descriptive level uses frequency tables and cross-tabulations. More advanced statistical analysis would use, for example, latent class cluster analysis to look for similar groups or types of users. If continuous monitoring is planned, setting-up a dashboard may help to report results in a meaningful, visually appealing, and interactive manner.

#### 8. Making and communicating policy recommendations

The final step of the survey concerns the translation of the measurement findings into strategic policies and scenarios for service improvement. As already indicated, measuring eGovernment use and satisfaction should not be an end in itself, but a means to explore the ways in which customer relationships within the public sector can be optimized.

Communication of research-based information and of strategies built upon this kind of information should be considered as an integral part of the research design. Efficient communication is necessary for successful implementation of these eGovernment strategies.

# 1 User Satisfaction Benchmark (USB)

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## 1.1 Citizens

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### I. User profiling

I.I. Citizen socio-demographic profiles  
(preferably to include at the end of the questionnaire)

#### I0. Are you ...

- Male
- Female

#### I1. Please indicate the year in which you were born.

#### I2. What formal education do you have?

Please indicate the highest level of formal education that you completed.

- Primary or lower secondary school, or no formal education
- Upper secondary school
- Higher education (e.g., university, college, polytechnic)

#### I3. How would you describe your current situation?

- Student
- Housewife/husband
- Employed or self-employed
- Unemployed
- Retired
- Other (not in the labour force for whatever reason)

**If Employed or Self-employed:**

**14. How would you describe your occupation?**

- Skilled or unskilled labourer
- Office worker
- Manager, executive, senior staff member
- Self-employed, business owner (with less than 5 employees)
- Self-employed, business owner (with at least 5 employees)
- Liberal professional (e.g., architect, doctor, lawyer)
- Government official, civil servant
- Other

**If Employed or Self-employed, but not Government official, civil servant:**

**15. On average how often do you for professional reasons come into contact with public agencies or officials?**

- Every day or almost every day
- At least once a week (but not every day)
- At least once a month (but not every week)
- Less than once a month
- Never

**16. What is your net monthly household income in euros?**

Your household includes all members of your family who are currently living with you.

€

- Don't know

**17. Do you live in a country other than the country in which you were born?**

- Yes
- No

**IF Yes:**

### 18. For how long?

- Less than 1 year
- 1 – 2 years
- 3 – 5 years
- More than 5 years

## I.2. Internet adoption and use

### 19. On average how often did you use the Internet in the last three months?

- Every day or almost every day
- At least once a week (but not every day)
- At least once a month (but not every week)
- Less than once a month

### 20. How much time on average a day do you spend using the Internet?

- More than 3 hours a day
- 2 - 3 hours a day
- 1 - 2 hours a day
- 30 - 60 minutes a day
- 15 - 30 minutes a day
- Less than 15 minutes a day
- I only use the Internet occasionally

### 21. Since what year do you make use of the Internet?

I use the Internet since



### I.3. Use of and satisfaction with non-governmental Internet applications

## 22. How often, during the past 12 months, did you use the Internet for each of the following purposes?

Randomize items

	Not once	At least once, but not every month	At least once a month, but not every week	At least once a week, but not every day	Every day or almost every day
To buy personal consumer goods or services (e.g., books, CDs, household goods, clothes, foodstuffs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To buy tickets or make reservations for cultural events (for example: films, concerts, theatre)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To make travel or holiday bookings (for example: accommodation, trips, train or airline tickets)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To make use of online auction sites to buy or sell goods or services (for example: eBay)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To administer a bank account (i.e., to undertake Internet banking)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To participate in social networks (for example: Myspace, Facebook, Netlog)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To contribute to web logs or blogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download, watch or listen to music, films, video files, web radio or web TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download computer or video games or for online gaming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To telephone (e.g., Skype) or to make video calls (via webcam)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To check professional e-mail via webmail or a virtual private network (VPN) connection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download/upload documents for professional purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To search the web for information for professional purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



For each purpose for which respondents used the Internet during the past 12 months:

### 23. Overall, how satisfied are you with these Internet applications?

Please express the extent to which you are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	Totally dissatisfied										Totally satisfied	
	0	1	2	3	4	5	6	7	8	9	10	
To buy personal consumer goods or services (e.g., books, CDs, household goods, clothes, foodstuffs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To buy tickets or make reservations for cultural events (for example: films, concerts, theatre)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To make travel or holiday bookings (for example: accommodation, trips, train or airline tickets)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To make use of online auction sites to buy or sell goods or services (for example: eBay)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To administer a bank account (i.e., to undertake Internet banking)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To participate in social networks (for example: Myspace, Facebook, Netlog)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To contribute to web logs or blogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download, watch or listen to music, films, video files, web radio or web TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download computer or video games or for online gaming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To telephone (e.g., Skype) or to make video calls (via webcam)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To check professional e-mail via webmail or a virtual private network (VPN) connection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download/upload documents for professional purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To search the web for information for professional purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### I.4. Trust in the Internet

24. To what extent do you trust using the Internet ...

	Very little					Very much
	1	2	3	4	5	
To pay online for private consumer goods or services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
To submit personal data via government websites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

#### I.5. Trust in government

25. To what extent do you trust the following institutions in your country?

	Very little				Very much
	1	2	3	4	5
Government (national or federal level)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public administrations in general	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. Overall, how satisfied are you with the quality of service provided by public administrations in general in your country?

Please express the extent to which you are satisfied with the quality of service provided by public administrations on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	0	1	2	3	4	5	6	7	8	9	10
Quality of service provided by public administrations in general	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## I.6. Contact with government

27. How often, in the past 12 months, did you have contact or interacted with public agencies or officials?

	Not once	At least once, but not every month	At least once a month, but not every week	At least once a week, but not every day	Every day or almost every day
For professional purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For my own personal purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On behalf of relatives or friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
By someone else on my behalf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## II. Use of eGovernment

### II.I. General use of eGovernment

#### II.I.a. Use of public Internet applications

### 28. How often, during the past 12 months, did you use the Internet for each of the following purposes?

Randomize items

	Not once	At least once, but not every month	At least once a month, but not every week	At least once a week, but not every day	Every day or almost every day
To contact public administrations by e-mail (for example: to ask a question, formulate a complaint)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To obtain information from public administrations' websites (for example: via search engines such as Google, via government portals or via websites of public agencies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download official forms that are necessary to obtain a public service (for example: to obtain a certificate, permit or subsidy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To send (upload) completed web forms that are necessary to obtain a public service (for example: to obtain a certificate, permit or subsidy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To contact political representatives of local, regional, national or European government by e-mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult policy documents or decisions on local, regional, national or European government websites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To participate in online consultations on policy issues organized by local, regional, national or European government (for example: via polls or panels)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To participate in interactive discussions about local, regional, national or European policy issues (for example: via online discussion forums)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**II.I.b. Use of government websites**

29. How often, during the past 12 months, did you use the Internet for each of the following purposes?

	Not once	At least once, but not every month	At least once a month, but not every week	At least once a week, but not every day	Every day or almost every day
To consult the national government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult the regional government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult the website of the city or municipality where I live	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## II.2. Use of eGovernment in citizen life events

### II.2.a. Government contact/service

30. Below we present a series of events that may occur in your personal life. Did you, in the past 12 months, come into contact with public agencies or officials (e.g., in-person, by phone, mail, e-mail or websites) as a result of the following events, either for your own personal purposes or on behalf of someone else?

*No randomization*

	Yes, for my own personal purposes	Yes, on behalf of someone else	Yes, for my own personal purposes AND on behalf of someone else	No
Enrolling in higher education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for a study grant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Looking for a job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming unemployed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retiring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for a driver's licence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying a car	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying, building or renovating a house	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moving and changing address within one country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moving or preparing to move to another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Needing a passport or visa to travel to another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting or preparing to study or work in another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring the birth of a child	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marrying or changing marital status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Death of a close relative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coming into an inheritance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being taken into hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reporting a crime	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring income taxes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making use of the public library	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## II.2.b. Channels used/Internet used

For each event for which respondents came into contact with public agencies:

### 31. When you, in the past 12 months, came into contact with public agencies or officials as a result of these events, by what means did you interact?

For each event indicate **all channels** that apply, possibly for various reasons (e.g., to obtain information, send or receive a question, request an official document or apply for a service).

	In-person, face-to-face	Mail, posted letter, fax	Telephone (fixed line or mobile)	E-mail / Internet (websites)
Enrolling in higher education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for a study grant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Looking for a job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming unemployed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retiring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for a driver's licence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying a car	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying, building or renovating a house	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moving and changing address within one country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moving or preparing to move to another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Needing a passport or visa to travel to another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting or preparing to study or work in another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring the birth of a child	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marrying or changing marital status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Death of a close relative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coming into an inheritance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being taken into hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reporting a crime	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring income taxes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making use of the public library	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## II.2.c. Channels preferred /Internet preferred

For each event for which respondents came into contact with public agencies:

If you were to come into contact again with public agencies or officials as a result of these events, by which of the following means would you prefer to interact?

For each event please indicate the **one channel** that you would prefer as your main way of interacting.

*No randomization*

	In-person, face-to-face	Mail, posted letter, fax	Telephone (fixed line or mobile)	E-mail / Internet (websites)
Enrolling in higher education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for a study grant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Looking for a job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming unemployed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retiring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for a driver's licence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying a car	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying, building or renovating a house	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moving and changing address within one country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moving or preparing to move to another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Needing a passport or visa to travel to another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting or preparing to study or work in another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring the birth of a child	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marrying or changing marital status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Death of a close relative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coming into an inheritance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being taken into hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reporting a crime	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring income taxes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making use of the public library	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## II.2.d. Types/levels of interaction

For each event for which respondents came into contact with public agencies by e-mail and/or via the Internet (websites):

**32. When you came into contact with public agencies or officials by e-mail and/or via the Internet (websites) as a result of these events, what exactly did you do?**

Please indicate all the activities that apply.

- I sent or received e-mail
- I searched for information on (a) government website(s)
- I applied for a service by downloading an official form
- I applied for a service by returning (uploading) a completed form electronically
- I got an official document or service delivered electronically
- I was attended to or proposed a public service to which I am entitled without asking for it

## II.2.e. Non-use of eGovernment

If respondents indicated that in the past 12 months they did not come into contact with public agencies or officials by e-mail or via the Internet (websites):

**33. What are the reasons for not having used e-mail or the Internet (websites) to come into contact with public agencies or officials?**

Please indicate all your reasons for not having used e-mail or the Internet (websites) that apply.

*Randomize items*

- I was not aware of the existence of relevant websites or online services
- I did not need the Internet to get what I wanted/needed
- I did not want to use the Internet to get what I wanted/needed
- I did not trust using the Internet to get what I wanted/needed
- I did not have the skills to get what I wanted/needed via the Internet
- I could not find the information or services I wanted/needed
- I could not access the information or services I wanted/needed
- I tried but I abandoned the service, because the service was too difficult to use
- I did not expect to find information or online services of sufficient quality
- Public agencies don't offer the quality of services that I'm used to receiving online
- I did not come into contact with public agencies or officials at all
- Other reasons

34. If you were to come into contact with public agencies or officials in the future, how likely is it that you would use e-mail or the Internet (websites)?

- Very likely, almost certainly
- Likely
- Neither likely nor unlikely
- Not likely
- Not very likely, almost certainly not

35. If you were to come into contact with public agencies or officials in the future, by which of the following means would you prefer to interact?

Please indicate the **one channel** that you would prefer as your main way of interacting.

- In-person, face-to-face
- Mail, posted letter, fax
- Telephone (fixed line or mobile)
- E-mail / Internet (websites)

### III. Satisfaction with eGovernment

#### III.I. Satisfaction with eGovernment at general level

##### III.I.a. Satisfaction with public Internet applications

(to ask immediately after II.I.a. Use of public Internet applications)

For each public Internet application used by respondents during the past 12 months:

#### 36. Overall, how satisfied are you with the following Internet applications?

Please express the extent to which you are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	Totally dissatisfied										Totally satisfied	
	0	1	2	3	4	5	6	7	8	9	10	
To contact public administrations by e-mail (for example: to ask a question, formulate a complaint)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To obtain information from public administrations' websites (for example: via search engines such as Google, via government portals or via websites of public agencies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download official forms that are necessary to obtain a public service (for example: to obtain a certificate, permit or subsidy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To send (upload) completed web forms that are necessary to obtain a public service (for example: to obtain a certificate, permit or subsidy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To contact political representatives of local, regional, national or European government by e-mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult policy documents or decisions on local, regional, national or European government websites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To participate in online consultations on policy issues organized by local, regional, national or European government (for example: via polls or panels)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To participate in interactive discussions about local, regional, national or European policy issues (for example: via online discussion forums)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

##### III.I.b. Satisfaction with government websites

(to ask immediately after II.I.b. Use of government websites)

For each type of government website used by respondents during the past 12 months:

### 37. Overall, how satisfied are you with the following Internet applications?

Please express the extent to which you are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

To consult the national government portal  
 To consult the regional government portal  
 To consult the website of the city or municipality where I live

Totally dissatisfied										Totally satisfied	
0	1	2	3	4	5	6	7	8	9	10	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

### III.2. Satisfaction with eGovernment in citizen life events

The following questions apply to the events respondents indicated as events for which they came into contact with public agencies or officials by e-mail and/or via the Internet (websites).

#### III.2.a. Overall level of satisfaction

### 38. Overall, how satisfied were you with the e-mail/Internet contact with public agencies or officials as a result of the following events?

Please express the extent to which you were satisfied with the contact by e-mail and/or via the Internet (websites) on a scale from 0 to 10, with 0 meaning that you were totally dissatisfied and 10 that you were totally satisfied.

*No randomization*

	0	1	2	3	4	5	6	7	8	9	10
Enrolling in higher education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for a study grant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Looking for a job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming unemployed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retiring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for a driver's licence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying a car	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying, building or renovating a house	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moving and changing address within one country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moving or preparing to move to another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Needing a passport or visa to travel to another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting or preparing to study or work in another country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring the birth of a child	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marrying or changing marital status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Death of a close relative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coming into an inheritance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being taken into hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reporting a crime	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring income taxes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making use of the public library	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### III.2.b. Comparison with expectations

39. Looking back, how did the contact with public agencies or officials by e-mail and/or via the Internet (websites) compare with what you had expected?

- Much better
- Better
- Neither better nor worse
- Worse
- Much worse

### III.2.c. Achievement of objectives

40. In the end, did you get what you wanted or needed?

- Yes, totally
- Partially
- No, not at all
- I can't say, my interactions with public agencies for this event are still ongoing

### III.2.d. Likelihood of re-use

41. If you were to come into contact again with public agencies or officials, how likely is it that you would use e-mail and/or the Internet (websites) again?

- Very likely, almost certainly
- Likely
- Neither likely nor unlikely
- Not likely
- Not very likely, almost certainly not

**IV. Perceived benefits of eGovernment**

42. To what extent do you agree or disagree with the following statements? When compared with other means to come into contact with public agencies or officials (e.g., in-person, by phone or mail), through use of e-mail and/or the Internet (websites) ...

Randomize items

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know	Not applicable
I saved time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I saved money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I gained flexibility (in time and place)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got better quality of service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The process of service delivery was simplified	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got better control over the process of service delivery							
The process of service delivery became more transparent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My trust in public administration increased	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# 1.2 Business

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Please fill in this questionnaire **as a representative of the company** (or legal entity) you work for. Even if you are not personally involved in some of the business processes referred to in the questionnaire, we kindly ask you to answer the questions on behalf of your colleagues or collaborators who are more directly involved, and **adopt the broad perspective of your company as a whole**.

## I. User profiling

### I.1. Business profiles (preferably to include at the end of the questionnaire)

#### 1. What is your position within the company you are working for?

- Business owner
- Chief executive officer
- Senior management
- Middle management
- Contractor/consultant
- Other

#### 2. What are your responsibilities within the company you are working for?

- General management
- Financial management
- Human resources
- Information technology
- Legal or regulatory
- Production, distribution, logistics
- Research and development
- Sales, marketing, communication
- Consultancy
- Other



### 3. What is the main economic activity of your company?

- Agriculture, forestry, hunting, fishing, mining
- Industries (manufacturing)
- Services (business activities)
- Not-for-profit organizations, education, health and social work

### 4. What is the number of persons employed within your company?

- 1 – 4 persons employed
- 5 – 9 persons employed
- 10 – 49 persons employed
- 50 – 249 persons employed
- 250 – 1,000 persons employed
- 1,000 or more persons employed

### 5. What was the total annual turnover (in value terms, excluding VAT) of your company, for 2007, in Euros?

- Less than 1 million Euros
- 1 – 10 million Euros
- 10 – 100 million Euros
- 100 – 250 million Euros
- 250 – 1,000 million Euros
- More than 1,000 million Euros

### 6. Does your company undertake cross-border activities?

- Yes
- No

## I.2. ICT/Internet facilities and use

### 7. Does your company use ...?

No randomization

	Yes	No	Don't know
An internal computer network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An Intranet, for sharing information internally (e.g., company news, working or meeting documents, training material, open job positions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An Extranet, i.e., a website or an extension of the Intranet with access restricted to business partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A company website that provides information on products or services to customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 8. In your company, what percentage of persons employed has a computer with access to the Internet?

I estimate the percentage of persons employed who have a computer with access to the Internet is ... %

Don't know

### I.3. Use of and satisfaction with non-governmental Internet applications

#### 9. Does your company use the Internet for the following purposes?

Randomize items

	Yes	No	Don't know
For eBusiness: our customers can order our products or services electronically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending orders for products or services to suppliers electronically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending e-invoices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For receiving e-invoices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For banking and financial services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For remote working, away from the company's premises (e-work)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For telephoning: Skype, other PC-based software, or full integrated telephone switchboard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For videoconferencing: via a PC or conference room system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For each purpose for which companies use the Internet:

#### 10. Overall, how satisfied are you with these Internet applications?

Please express the extent to which you, **as a representative of your company**, are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	Totally dissatisfied										Totally satisfied	
	0	1	2	3	4	5	6	7	8	9	10	
For eBusiness: our customers can order our products or services electronically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending orders for products or services to suppliers electronically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending e-invoices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For receiving e-invoices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For banking and financial services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For remote working, away from the company's premises (e-work)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For telephoning: Skype, other PC-based software, or full integrated telephone switchboard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For videoconferencing: via a PC or conference room system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## II. Use of eGovernment

### II.I. General use of eGovernment

#### II.I.a. Use of public Internet applications

### I I. Does your company use the Internet for the following purposes?

Randomize items

	Yes	No	Don't know
For contacting public administrations by e-mail (for example: to ask a question, formulate a complaint)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For obtaining information from public administrations' websites (for example: via search engines such as Google, via government portals or via websites of public agencies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For downloading official forms that are necessary to obtain a public service (for example: to obtain a licence)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending (uploading) completed web forms that are necessary to obtain a public service (for example: to obtain a licence)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### II.I.b. Use of government websites

### I2. Does your company use the Internet for the following purposes?

	Yes	No	Don't know
For consulting the national government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For consulting the regional government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For consulting the website of the city or municipality where your company is established	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## II.2. Use of eGovernment in business life events

### II.2.a. Government contact/service

13. Below we present a series of events with which your company may have to deal at certain moments in time. Did your company, in the past 12 months, come into contact with public agencies or officials (e.g., in-person, by phone, mail, e-mail or websites) as a result of the following events, either for your company's own purposes or on behalf of clients of your company (for whom your company acted as an intermediary)?

*No randomization*

	Yes, for my company's own purposes	Yes, on behalf of clients of my company	Yes, for my company's own purposes AND on behalf of clients of my company	No
Becoming or starting to be self-employed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting a new company or setting up a branch within your own country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting up or preparing to set up a new legal entity in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting or preparing to sell products or deliver services in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring customs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring corporate taxes / VAT / social contributions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Searching and applying for public funds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being involved in public procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring new employees within your own country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring or preparing to hire employees living in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying or building new offices or plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtaining environment-related permits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for patents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Submitting data to statistical offices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Closing down (a company or branch)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### II.2.b. Channels used/Internet used

For each event for which companies came into contact with public agencies:

14. When your company, in the past 12 months, came into contact with public agencies or officials as a result of these events, did your company interact by e-mail and/or via the Internet (websites)?

No randomization

	Yes	No	Don't know
Becoming or starting to be self-employed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting a new company or setting up a branch within your own country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting up or preparing to set up a new legal entity in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting or preparing to sell products or deliver services in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring customs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring corporate taxes / VAT / social contributions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Searching and applying for public funds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being involved in public procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring new employees within your own country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring or preparing to hire employees living in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying or building new offices or plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtaining environment-related permits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for patents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Submitting data to statistical offices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Closing down (a company or branch)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## II.2.c. Channels preferred /Internet preferred

For each event for which companies came into contact with public agencies:

15. If your company were to come into contact again with public agencies or officials as a result of these events, would your company prefer, yes or no, to interact by e-mail and/or via the Internet (websites)?

No randomization

	Yes	No	Don't know
Becoming or starting to be self-employed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting a new company or setting up a branch within your own country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting up or preparing to set up a new legal entity in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting or preparing to sell products or deliver services in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring customs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring corporate taxes / VAT / social contributions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Searching and applying for public funds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being involved in public procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring new employees within your own country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring or preparing to hire employees living in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying or building new offices or plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtaining environment-related permits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for patents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Submitting data to statistical offices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Closing down (a company or branch)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## II.2.d. Types/levels of interaction

For each event for which companies came into contact with public agencies by e-mail and/or via the Internet (websites):

### 16. When your company came into contact with public agencies or officials by e-mail and/or via the Internet (websites) as a result of these events, what form did these contacts take?

Please indicate all the activities that apply.

- We communicated by e-mail
- We searched for information on (a) government website(s)
- We downloaded official forms
- We returned (uploaded) completed forms electronically
- We got services delivered electronically (through full electronic case handling)
- We were attended to or proposed public services to which we are entitled without asking for it

## II.2.e. Non-use of eGovernment

If companies indicated that in the past 12 months they did not come into contact with public agencies or officials by e-mail or via the Internet (websites):

### 17. What are the reasons for not having used e-mail or the Internet (websites) to come into contact with public agencies or officials?

Please indicate all the reasons for not using e-mail or the Internet (websites) that apply.

*Randomize items*

- We were not aware of the existence of relevant websites or online services
- We did not need the Internet to get what we wanted/needed
- We did not want to use the Internet to get what we wanted/needed
- We did not trust using the Internet to get what we wanted/needed
- We did not have the skills to get what we wanted/needed via the Internet
- We could not access the information or services we wanted/needed
- We could not find the information or services we wanted/needed
- We tried but we abandoned the service, because it was too difficult to use
- We did not expect to find information or online services of sufficient quality
- Public agencies don't offer the quality of services we're used to receiving online
- We did not come into contact with public agencies or officials at all
- Other reasons

18. If your company were to come into contact with public agencies or officials in the future, how likely is it that your company would use e-mail or the Internet (websites)?

- Very likely, almost certainly
- Likely
- Neither likely nor unlikely
- Not likely
- Not very likely, almost certainly not

19. If your company were to come into contact with public agencies or officials in the future, by which of the following means would your company prefer to interact?

Please indicate the **one channel** that your company would prefer as its main way of interacting.

- In-person, face-to-face
- Mail, posted letter, fax
- Telephone (fixed line or mobile)
- E-mail / Internet (websites)

### III. Satisfaction with eGovernment

#### III.I. Satisfaction with eGovernment at general level

##### III.I.a. Satisfaction with public Internet applications (to ask immediately after II.I.a. Use of public Internet applications)

For each public Internet application used by companies:

#### 20. Overall, how satisfied are you with the following Internet applications?

Please express the extent to which you, **as a representative of your company**, are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	Totally dissatisfied										Totally satisfied	
	0	1	2	3	4	5	6	7	8	9	10	
For contacting public administrations by e-mail (for example: to ask a question, formulate a complaint)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For obtaining information from public administrations' websites (for example: via search engines such as Google, via government portals or via websites of public agencies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For downloading official forms that are necessary to obtain a public service (for example: to obtain a licence)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending (uploading) completed web forms that are necessary to obtain a public service (for example: to obtain a licence)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**III.I.b. Satisfaction with government websites  
(to ask immediately after II.I.b. Use of government websites)**

**For each type of government website used by companies:**

**21. Overall, how satisfied are you with the following Internet applications?**

Please express the extent to which you, **as a representative of your company**, are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

For consulting the national government portal  
 For consulting the regional government portal  
 For consulting the website of the city or municipality where your company is established

Totally dissatisfied										Totally satisfied
0	1	2	3	4	5	6	7	8	9	10
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### III.2. Satisfaction with eGovernment in business life events

The following questions apply to the events companies indicated as events for which they came into contact with public agencies or officials by e-mail and/or via the Internet (websites).

#### III.2.a. Overall level of satisfaction

### 22. Overall, how satisfied were you with the e-mail/Internet contact with public agencies or officials as a result of the following events?

Please express the extent to which you, **as a representative of your company**, were satisfied with the contact by e-mail and/or via the Internet (websites) on a scale from 0 to 10, with 0 meaning that you were totally dissatisfied and 10 that you were totally satisfied.

*No randomization*

	0	1	2	3	4	5	6	7	8	9	10
Becoming or starting to be self-employed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting a new company or setting up a branch within your own country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting up or preparing to set up a new legal entity in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starting or preparing to sell products or deliver services in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring customs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Declaring corporate taxes / VAT / social contributions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Searching and applying for public funds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being involved in public procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring new employees within your own country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hiring or preparing to hire employees living in another European country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Buying or building new offices or plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtaining environment-related permits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Applying for patents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Submitting data to statistical offices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Closing down (a company or branch)

○	○	○	○	○	○	○	○	○	○	○
---	---	---	---	---	---	---	---	---	---	---

### III.2.b. Comparison with expectations

23. Looking back, how did the contact with public agencies or officials by e-mail and/or via the Internet (websites) compare with what your company had expected?

- Much better
- Better
- Neither better nor worse
- Worse
- Much worse

### III.2.c. Achievement of objectives

24. In the end, did your company get what it wanted or needed?

- Yes, totally
- Partially
- No, not at all
- I can't say, my interactions with public agencies for this event are still ongoing
- Don't know

### III.2.d. Likelihood of re-use

25. If your company were to come into contact again with public agencies or officials, how likely is it that your company would use e-mail and/or the Internet (websites) again?

- Very likely, almost certainly
- Likely
- Neither likely nor unlikely
- Not likely
- Not very likely, almost certainly not

**IV. Perceived benefits of eGovernment**

26. Based on your personal experiences or those of your colleagues, to what extent do you agree or disagree with the following statements? When compared with other means to come into contact with public agencies or officials (e.g., in-person, by phone or mail), through use of e-mail and/or the Internet (websites) ...

Randomize items

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know	Not applicable
Our company saved time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our company saved money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our company gained flexibility (in time and place)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our company got better quality of service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The process of service delivery was simplified	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our company got better control over the process of service delivery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The process of service delivery became more transparent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our trust in public administration increased	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## 2 eService Evaluation Tool (eSET)

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### 2.1 Citizens

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#### I. User profiling

##### I.I. Citizen socio-demographic profiles (preferably to include at the end of the questionnaire)

#### 1. Are you ...

- Male
- Female

#### 2. Please indicate the year in which you were born.

#### 3. What formal education do you have?

Please indicate the highest level of formal education that you completed.

- Primary or lower secondary school, or no formal education
- Upper secondary school
- Higher education (e.g., university, college, polytechnic)

#### 4. How would you describe your current situation?

- Student
- Housewife/husband
- Employed or self-employed
- Unemployed
- Retired
- Other (not in the labour force for whatever reason)



**If Employed or Self-employed:**

**5. How would you describe your occupation?**

- Skilled or unskilled labourer
- Office worker
- Manager, executive, senior staff member
- Self-employed, business owner (with less than 5 employees)
- Self-employed, business owner (with at least 5 employees)
- Liberal professional (e.g., architect, doctor, lawyer)
- Government official, civil servant
- Other

**If Employed or Self-employed, but not Government official, civil servant:**

**6. On average how often do you for professional reasons come into contact with public agencies or officials?**

- Every day or almost every day
- At least once a week (but not every day)
- At least once a month (but not every week)
- Less than once a month
- Never

**7. What is your net monthly household income in euros?**

Your household includes all members of your family who are currently living with you.

€

- Don't know

**8. Do you live in a country other than the country in which you were born?**

- Yes
- No

**IF Yes:**

**9. For how long?**

- Less than 1 year
- 1 – 2 years
- 3 – 5 years
- More than 5 years

## I.2. Internet adoption and use

### 10. On average how often did you use the Internet in the last three months?

- Every day or almost every day
- At least once a week (but not every day)
- At least once a month (but not every week)
- Less than once a month

### 11. How much time on average a day do you spend using the Internet?

- More than 3 hours a day
- 2 - 3 hours a day
- 1 - 2 hours a day
- 30 - 60 minutes a day
- 15 - 30 minutes a day
- Less than 15 minutes a day
- I only use the Internet occasionally

### 12. Since what year do you make use of the Internet?

I use the Internet since

### I.3. Use of and satisfaction with non-governmental Internet applications

## I3. How often, during the past 12 months, did you use the Internet for each of the following purposes?

Randomize items

	Not once	At least once, but not every month	At least once a month, but not every week	At least once a week, but not every day	Every day or almost every day
To buy personal consumer goods or services (e.g., books, CDs, household goods, clothes, foodstuffs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To buy tickets or make reservations for cultural events (for example: films, concerts, theatre)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To make travel or holiday bookings (for example: accommodation, trips, train or airline tickets)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To make use of online auction sites to buy or sell goods or services (for example: eBay)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To administer a bank account (i.e., to undertake Internet banking)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To participate in social networks (for example: Myspace, Facebook, Netlog)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To contribute to web logs or blogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download, watch or listen to music, films, video files, web radio or web TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download computer or video games or for online gaming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To telephone (e.g., Skype) or to make video calls (via webcam)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To check professional e-mail via webmail or a virtual private network (VPN) connection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download/upload documents for professional purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To search the web for information for professional purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For each purpose for which respondents used the Internet during the past 12 months:

### 14. Overall, how satisfied are you with these Internet applications?

Please express the extent to which you are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	Totally dissatisfied										Totally satisfied	
	0	1	2	3	4	5	6	7	8	9	10	
To buy personal consumer goods or services (e.g., books, CDs, household goods, clothes, foodstuffs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To buy tickets or make reservations for cultural events (for example: films, concerts, theatre)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To make travel or holiday bookings (for example: accommodation, trips, train or airline tickets)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To make use of online auction sites to buy or sell goods or services (for example: eBay)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To administer a bank account (i.e., to undertake Internet banking)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To participate in social networks (for example: Myspace, Facebook, Netlog)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To contribute to web logs or blogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download, watch or listen to music, films, video files, web radio or web TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download computer or video games or for online gaming	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To telephone (e.g., Skype) or to make video calls (via webcam)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To check professional e-mail via webmail or a virtual private network (VPN) connection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download/upload documents for professional purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To search the web for information for professional purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### I.4. Trust in the Internet

### 15. To what extent do you trust using the Internet ...

	Very little					Very much
	1	2	3	4	5	
To pay online for private consumer goods or services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
To submit personal data via government websites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

#### I.5. Trust in government

### 16. To what extent do you trust the following institutions in your country?

	Very little				Very much
	1	2	3	4	5
Government (national or federal level)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public administrations in general	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 17. Overall, how satisfied are you with the quality of service provided by public administrations in general in your country?

Please express the extent to which you are satisfied with the quality of service provided by public administrations on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	0	1	2	3	4	5	6	7	8	9	10
Quality of service provided by public administrations in general	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## I.6. Contact with government

18. How often, in the past 12 months, did you have contact or interacted with public agencies or officials?

	Not once	At least once, but not every month	At least once a month, but not every week	At least once a week, but not every day	Every day or almost every day
For professional purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For my own personal purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On behalf of relatives or friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
By someone else on my behalf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## II. Use of eGovernment

### II.I. General use of eGovernment

#### II.I.a. Use of public Internet applications

### 19. How often, during the past 12 months, did you use the Internet for each of the following purposes?

Randomize items

	Not once	At least once, but not every month	At least once a month, but not every week	At least once a week, but not every day	Every day or almost every day
To contact public administrations by e-mail (for example: to ask a question, formulate a complaint)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To obtain information from public administrations' websites (for example: via search engines such as Google, via government portals or via websites of public agencies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download official forms that are necessary to obtain a public service (for example: to obtain a certificate, permit or subsidy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To send (upload) completed web forms that are necessary to obtain a public service (for example: to obtain a certificate, permit or subsidy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To contact political representatives of local, regional, national or European government by e-mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult policy documents or decisions on local, regional, national or European government websites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To participate in online consultations on policy issues organized by local, regional, national or European government (for example: via polls or panels)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To participate in interactive discussions about local, regional, national or European policy issues (for example: via online discussion forums)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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**II.I.b. Use of government websites**

20. How often, during the past 12 months, did you use the Internet for each of the following purposes?

	Not once	At least once, but not every month	At least once a month, but not every week	At least once a week, but not every day	Every day or almost every day
To consult the national government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult the regional government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult the website of the city or municipality where I live	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult the website ... [INSERT website of particular public agency or eService]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## II.2. Use of public eService

### II.2.a. Contact with [public agency] / use of [public service]

21. Did you, in the past 12 months, come into contact with [public agency] / make use of [public service] (e.g., in-person, by phone, mail, e-mail or websites), either for your own personal purposes or on behalf of someone else?

- Yes, for my own personal purposes
- Yes, on behalf of someone else
- Yes, for my own personal purposes AND on behalf of someone else
- No

### II.2.b. Channels used/Internet used

If respondents made use of [public service]:

22. When you, in the past 12 months, came into contact with [public agency] / made use of [public service], by what means did you interact?

Please indicate **all channels** that apply, possibly for various reasons (e.g., to obtain information, send or receive a question, request an official document or apply for a service).

- In-person, face-to-face
- Mail, posted letter, fax
- Telephone (fixed line or mobile)
- E-mail / Internet (websites)

### II.2.c. Channels preferred /Internet preferred

If respondents made use of [public service]:

23. If you were to come into contact again with [public agency] / make use again of [public service], by which of the following means would you prefer to interact?

Please indicate the **one channel** that you would prefer as your main way of interacting.

- In-person, face-to-face
- Mail, posted letter, fax
- Telephone (fixed line or mobile)
- E-mail / Internet (websites)

## II.2.d. Types/levels of interaction

If respondents made use of [public service] by e-mail and/or via the Internet:

24. When you came into contact with [public agency] / made use of [public service] by e-mail and/or via the Internet, what exactly did you do?

Please indicate all the activities that apply.

- I sent or received e-mail
- I searched for information on (a) government website(s)
- I applied for a service by downloading an official form
- I applied for a service by returning (uploading) a completed form electronically
- I got an official document or service delivered electronically
- I was attended to or proposed a public service to which I am entitled without asking for it

## II.2.e. Non-use of public eService

If respondents indicated that in the past 12 months they did not come into contact with [public agency] / make use of [public service] by e-mail or via the Internet:

25. What are the reasons for not having used e-mail or the Internet to come into contact with [public agency] / make use of [public service]?

Please indicate all your reasons for not having used e-mail or the Internet that apply.

Randomize items

- I was not aware of the existence of relevant websites or online services
- I did not need the Internet to get what I wanted/needed
- I did not want to use the Internet to get what I wanted/needed
- I did not trust using the Internet to get what I wanted/needed
- I did not have the skills to get what I wanted/needed via the Internet
- I could not find the information or services I wanted/needed
- I could not access the information or services I wanted/needed
- I tried but I abandoned the service, because the service was too difficult to use
- I did not expect to find information or online services of sufficient quality
- Public agencies don't offer the quality of services that I'm used to receiving online
- I did not come into contact with [agency] / make use of [service] at all
- Other reasons

26. If you were to come into contact with [public agency] / make use of [public service] in the future, how likely is it that you would use e-mail or the Internet?

- Very likely, almost certainly
- Likely
- Neither likely nor unlikely
- Not likely
- Not very likely, almost certainly not

27. If you were to come into contact with [public agency] / make use of [public service] in the future, by which of the following means would you prefer to interact?

Please indicate the **one channel** that you would prefer as your main way of interacting.

- In-person, face-to-face
- Mail, posted letter, fax
- Telephone (fixed line or mobile)
- E-mail / Internet (websites)

### III. Satisfaction with eGovernment

#### III.I. Satisfaction with eGovernment at general level

##### III.I.a. Satisfaction with public Internet applications

(to ask immediately after II.I.a. Use of public Internet applications)

For each public Internet application used by respondents during the past 12 months:

#### 28. Overall, how satisfied are you with the following Internet applications?

Please express the extent to which you are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	Totally dissatisfied										Totally satisfied	
	0	1	2	3	4	5	6	7	8	9	10	
To contact public administrations by e-mail (for example: to ask a question, formulate a complaint)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To obtain information from public administrations' websites (for example: via search engines such as Google, via government portals or via websites of public agencies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To download official forms that are necessary to obtain a public service (for example: to obtain a certificate, permit or subsidy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To send (upload) completed web forms that are necessary to obtain a public service (for example: to obtain a certificate, permit or subsidy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To contact political representatives of local, regional, national or European government by e-mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult policy documents or decisions on local, regional, national or European government websites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To participate in online consultations on policy issues organized by local, regional, national or European government (for example: via polls or panels)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To participate in interactive discussions about local, regional, national or European policy issues (for example: via online discussion forums)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

##### III.I.b. Satisfaction with government websites

(to ask immediately after II.I.b. Use of government websites)

For each type of government website used by respondents during the past 12 months:

**29. Overall, how satisfied are you with the following Internet applications?**

Please express the extent to which you are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	Totally dissatisfied										Totally satisfied	
	0	1	2	3	4	5	6	7	8	9	10	
To consult the national government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult the regional government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult the website of the city or municipality where I live	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To consult the website ... [INSERT website of particular public agency or eService]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### III.2. Satisfaction with public eService

The following questions apply to respondents who indicated that they came into contact with [public agency] / made use of [public service] by e-mail and/or via the Internet.

#### III.2.a. User experiences and perceptions of quality and performance

30. To what extent do you agree or disagree with the following statements about your contact with [public agency] / use of [public service] by e-mail and/or via the Internet?

Randomize items

	Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree	Don't know	Not applicable
The service/information was easy to find	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service/information was easy to access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service/information was easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service/information was easy to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service/information was tailor made for my needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service was trustworthy: I was not worried about privacy or security issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could depend on being given complete and accurate information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could rely on having sufficient information and online help to make use of the service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was not asked to give the same basic information about myself more than once	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was kept informed about follow-up actions and the progress of service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service was delivered in a reasonable time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service was delivered at a reasonable cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### III.2.b. Overall level of satisfaction

#### 31. Overall, how satisfied were you with the contact with [public agency] / use of [public service] by e-mail and/or via the Internet?

Please express the extent to which you were satisfied with the interaction by e-mail and/or via the Internet on a scale from 0 to 10, with 0 meaning that you were totally dissatisfied and 10 that you were totally satisfied.

	0	1	2	3	4	5	6	7	8	9	10
Public eService	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### III.2.c. Comparison with expectations

#### 32. Looking back, how did the contact with [public agency] / use of [public service] by e-mail and/or via the Internet compare with what you had expected?

- Much better
- Better
- Neither better nor worse
- Worse
- Much worse

### III.2.d. Achievement of objectives

#### 33. In the end, did you get what you wanted or needed?

- Yes, totally
- Partially
- No, not at all
- I can't say, my interactions with [agency / service] are still ongoing

### III.2.e. Likelihood of re-use

34. If you were to come into contact again with [public agency] / make use again of [public service], how likely is it that you would use e-mail and/or the Internet again?

- Very likely, almost certainly
- Likely
- Neither likely nor unlikely
- Not likely
- Not very likely, almost certainly not

<b>IV. Perceived benefits of eGovernment</b>
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35. To what extent do you agree or disagree with the following statements? When compared with other means to come into contact with [public agency] / make use of [public service] (e.g., in-person, by phone or mail), through use of e-mail and/or the Internet ...

*Randomize items*

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know	Not applicable
I saved time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I saved money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I gained flexibility (in time and place)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got better quality of service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The process of service delivery was simplified	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got better control over the process of service delivery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The process of service delivery became more transparent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My trust in public administration increased	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## 2.2 Business

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Please fill in this questionnaire **as a representative of the company** (or legal entity) you work for. Even if you are not personally involved in some of the business processes referred to in the questionnaire, we kindly ask you to answer the questions on behalf of your colleagues or collaborators who are more directly involved, and **adopt the broad perspective of your company as a whole**.

### I. User profiling

#### I.1. Business profiles (preferably to include at the end of the questionnaire)

##### 1. What is your position within the company you are working for?

- Business owner
- Chief executive officer
- Senior management
- Middle management
- Contractor/consultant
- Other

##### 2. What are your responsibilities within the company you are working for?

- General management
- Financial management
- Human resources
- Information technology
- Legal or regulatory
- Production, distribution, logistics
- Research and development
- Sales, marketing, communication
- Consultancy
- Other

### 3. What is the main economic activity of your company?

- Agriculture, forestry, hunting, fishing, mining
- Industries (manufacturing)
- Services (business activities)
- Not-for-profit organizations, education, health and social work

### 4. What is the number of persons employed within your company?

- 1 – 4 persons employed
- 5 – 9 persons employed
- 10 – 49 persons employed
- 50 – 249 persons employed
- 250 – 1,000 persons employed
- 1,000 or more persons employed

### 5. What was the total annual turnover (in value terms, excluding VAT) of your company, for 2007, in Euros?

- Less than 1 million Euros
- 1 – 10 million Euros
- 10 – 100 million Euros
- 100 – 250 million Euros
- 250 – 1,000 million Euros
- More than 1,000 million Euros

### 6. Does your company undertake cross-border activities?

- Yes
- No

## I.2. ICT/Internet facilities and use

### 7. Does your company use ...?

No randomization

	Yes	No	Don't know
An internal computer network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An Intranet, for sharing information internally (e.g., company news, working or meeting documents, training material, open job positions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An Extranet, i.e., a website or an extension of the Intranet with access restricted to business partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A company website that provides information on products or services to customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 8. In your company, what percentage of persons employed has a computer with access to the Internet?

I estimate the percentage of persons employed who have a computer with access to the Internet is ... %

Don't know

### I.3. Use of and satisfaction with non-governmental Internet applications

#### 9. Does your company use the Internet for the following purposes?

Randomize items

	Yes	No	Don't know
For eBusiness: our customers can order our products or services electronically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending orders for products or services to suppliers electronically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending e-invoices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For receiving e-invoices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For banking and financial services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For remote working, away from the company's premises (e-work)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For telephoning: Skype, other PC-based software, or full integrated telephone switchboard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For videoconferencing: via a PC or conference room system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For each purpose for which companies use the Internet:

#### 10. Overall, how satisfied are you with these Internet applications?

Please express the extent to which you, **as a representative of your company**, are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	Totally dissatisfied										Totally satisfied	
	0	1	2	3	4	5	6	7	8	9	10	
For eBusiness: our customers can order our products or services electronically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending orders for products or services to suppliers electronically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending e-invoices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For receiving e-invoices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For banking and financial services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For remote working, away from the company's premises (e-work)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For telephoning: Skype, other PC-based software, or full integrated telephone switchboard	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For videoconferencing: via a PC or conference room system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## II. Use of eGovernment

### II.I. General use of eGovernment

#### II.I.a. Use of public Internet applications

#### 11. Does your company use the Internet for the following purposes?

Randomize items

	Yes	No	Don't know
For contacting public administrations by e-mail (for example: to ask a question, formulate a complaint)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For obtaining information from public administrations' websites (for example: via search engines such as Google, via government portals or via websites of public agencies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For downloading official forms that are necessary to obtain a public service (for example: to obtain a licence)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending (uploading) completed web forms that are necessary to obtain a public service (for example: to obtain a licence)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### II.I.b. Use of government websites

#### 12. Does your company use the Internet for the following purposes?

	Yes	No	Don't know
For consulting the national government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For consulting the regional government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For consulting the website of the city or municipality where your company is established	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For consulting the website ... [INSERT website of particular public agency or eService]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## II.2. Use of public eService

### II.2.a. Contact with [public agency] / use of [public service]

13. Did your company, in the past 12 months, come into contact with [public agency] / make use of [public service] (e.g., in-person, by phone, mail, e-mail or websites), either for your company's own purposes or on behalf of clients of your company (for whom your company acted as an intermediary)?

- Yes, for my company's own purposes
- Yes, on behalf of clients of my company
- Yes, for my company's own purposes AND on behalf of clients of my company
- No

### II.2.b. Channels used/Internet used

If companies made use of [public service]:

14. When your company, in the past 12 months, came into contact with [public agency] / made use of [public service], did your company interact by e-mail and/or via the Internet (websites)?

- Yes
- No
- Don't know

### II.2.c. Channels preferred /Internet preferred

If companies made use of [public service]:

15. If your company were to come into contact again with [public agency] / make use again of [public service], would your company prefer, yes or no, to interact by e-mail and/or via the Internet (websites)?

- Yes
- No
- Don't know

## II.2.d. Types/levels of interaction

If companies made use of [public service] by e-mail and/or via the Internet:

**16. When your company came into contact with [public agency] / made use of [public service] by e-mail and/or via the Internet, what form did these contacts take?**

Please indicate all the activities that apply.

- We communicated by e-mail
- We searched for information on (a) government website(s)
- We downloaded official forms
- We returned (uploaded) completed forms electronically
- We got services delivered electronically (through full electronic case handling)
- We were attended to or proposed public services to which we are entitled without asking for it

## II.2.e. Non-use of public eService

If companies indicated that in the past 12 months they did not come into contact with [public agency] / make use of [public service] by e-mail or via the Internet:

**17. What are the reasons for not having used e-mail or the Internet to come into contact with [public agency] / make use of [public service]?**

Please indicate all the reasons for not using e-mail or the Internet that apply.

Randomize items

- We were not aware of the existence of relevant websites or online services
- We did not need the Internet to get what we wanted/needed
- We did not want to use the Internet to get what we wanted/needed
- We did not trust using the Internet to get what we wanted/needed
- We did not have the skills to get what we wanted/needed via the Internet
- We could not access the information or services we wanted/needed
- We could not find the information or services we wanted/needed
- We tried but we abandoned the service, because it was too difficult to use
- We did not expect to find information or online services of sufficient quality
- Public agencies don't offer the quality of services we're used to receiving online
- We did not come into contact with [agency] / make use of [service] at all
- Other reasons

18. If your company were to come into contact with [public agency] / make use of [public service] in the future, how likely is it that your company would use e-mail or the Internet?

- Very likely, almost certainly
- Likely
- Neither likely nor unlikely
- Not likely
- Not very likely, almost certainly not

19. If your company were to come into contact with [public agency] / make use of [public service] in the future, by which of the following means would your company prefer to interact?

Please indicate the **one channel** that your company would prefer as its main way of interacting.

- In-person, face-to-face
- Mail, posted letter, fax
- Telephone (fixed line or mobile)
- E-mail / Internet (websites)



### III. Satisfaction with eGovernment

#### III.I. Satisfaction with eGovernment at general level

##### III.I.a. Satisfaction with public Internet applications (to ask immediately after II.I.a. Use of public Internet applications)

For each public Internet application used by companies:

#### 20. Overall, how satisfied are you with the following Internet applications?

Please express the extent to which you, **as a representative of your company**, are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	Totally dissatisfied										Totally satisfied	
	0	1	2	3	4	5	6	7	8	9	10	
For contacting public administrations by e-mail (for example: to ask a question, formulate a complaint)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For obtaining information from public administrations' websites (for example: via search engines such as Google, via government portals or via websites of public agencies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For downloading official forms that are necessary to obtain a public service (for example: to obtain a licence)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For sending (uploading) completed web forms that are necessary to obtain a public service (for example: to obtain a licence)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**III.I.b. Satisfaction with government websites**  
 (to ask immediately after II.I.b. Use of government websites)

For each type of government website used by companies:

**21. Overall, how satisfied are you with the following Internet applications?**

Please express the extent to which you, **as a representative of your company**, are satisfied with each of the following Internet applications on a scale from 0 to 10, with 0 meaning that you are totally dissatisfied and 10 that you are totally satisfied.

	Totally dissatisfied										Totally satisfied	
	0	1	2	3	4	5	6	7	8	9	10	
For consulting the national government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For consulting the regional government portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For consulting the website of the city or municipality where your company is established	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For consulting the website ... [INSERT website of particular public agency or eService]												

### III.2. Satisfaction with public eService

The following questions apply to companies which indicated that they came into contact with [public agency] / made use of [public service] by e-mail and/or via the Internet.

#### III.2.a. User experiences and perceptions of quality and performance

22. Based on your personal experiences or those of your colleagues, to what extent do you agree or disagree with the following statements about the contact with [public agency] / use of [public service] by e-mail and/or via the Internet?

Randomize items

	Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree	Don't know	Not applicable
The service/information was easy to find	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service/information was easy to access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service/information was easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service/information was easy to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service/information was tailor made for our needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service was trustworthy: we were not worried about privacy or security issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We could depend on being given complete and accurate information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We could rely on having sufficient information and online help to make use of the service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We were not asked to give the same basic information about our company more than once	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We were kept informed about follow-up actions and the progress of service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service was delivered in a reasonable time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The service was delivered at a reasonable cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### III.2.b. Overall level of satisfaction

23. Overall, how satisfied were you with the contact with [public agency] / use of [public service] by e-mail and/or via the Internet?

Please express the extent to which you, **as a representative of your company**, were satisfied with the contact by e-mail and/or via the Internet (websites) on a scale from 0 to 10, with 0 meaning that you were totally dissatisfied and 10 that you were totally satisfied.

	0	1	2	3	4	5	6	7	8	9	10
Public eService	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### III.2.c. Comparison with expectations

24. Looking back, how did the contact with [public agency] / use of [public service] by e-mail and/or via the Internet compare with what your company had expected?

- Much better
- Better
- Neither better nor worse
- Worse
- Much worse

### III.2.d. Achievement of objectives

25. In the end, did your company get what it wanted or needed?

- Yes, totally
- Partially
- No, not at all
- I can't say, my interactions with public agencies for this event are still ongoing
- Don't know

### III.2.e. Likelihood of re-use

26. If your company were to come into contact again with [public agency] / make use again of [public service], how likely is it that your company would use e-mail and/or the Internet again?

- Very likely, almost certainly
- Likely
- Neither likely nor unlikely
- Not likely
- Not very likely, almost certainly not

### IV. Perceived benefits of eGovernment

27. Based on your personal experiences or those of your colleagues, to what extent do you agree or disagree with the following statements? When compared with other means to come into contact with [public agency] / make use of [public service] (e.g., in-person, by phone or mail), through use of e-mail and/or the Internet ...

Randomize items

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know	Not applicable
Our company saved time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our company saved money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our company gained flexibility (in time and place)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our company got better quality of service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The process of service delivery was simplified	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our company got better control over the process of service delivery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The process of service delivery became more transparent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our trust in public administration increased	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

