

Chapter 2

Challenges to User Take-up

The paradigm shift towards user centricity has helped to focus governments' attention on ensuring user take-up of e-government services. To understand the reasons why users utilise e-government services, one must understand the different preconditions for using those services. These are: access to infrastructure and equipment, provision of e-government services, awareness of service provision, organisation of services, outcomes of implementation, and trust.

Access to, and provision of, e-government services are fundamental to the discussion of user take-up. Since the early 1990s, e-government has been largely driven by technology. The new opportunities technological development provided were used to improve government administrations and the quality and speed of service delivery. Improvements in the penetration of broadband and the development and the increased provision of sophisticated transaction-oriented and integrated services are factors that provide the prerequisites for increased user take-up.

A number of socio-economic and demographic factors need to be taken into account. Age, gender, education, income, location, employment and occupation are telling the story that the younger, richer, better educated and urban-bound a person is, the more likely this person will use e-government services over more traditional service channels. Users distinguish between the types of services or function they are comfortable with accessing on line and those they prefer to handle via traditional channels, or for which a mixture of the two is most appropriate.

Filling in and submitting tax return forms, registering companies, and submitting statistical data on line are examples of digitised public services which today are part of everyday life of both citizens and businesses in most OECD countries. The aim of providing e-government services in OECD countries is to improve public service delivery and to render public administrations more efficient and effective. But OECD countries have found that their investments in e-government development have not satisfactorily met expectations regarding the anticipated benefits and outcomes (e.g. efficiency and effectiveness gains; high user take-up and satisfaction).

The paradigm shift towards user centricity (see the discussion in Chapter 1) has helped to focus governments' attention on ensuring user take-up of e-government services. To understand the reasons why users utilise e-government services, one must understand the different preconditions for using those services. One way to get an overview of these preconditions is to look at the existing experiences in OECD countries whose e-government programmes have been peer reviewed by the OECD. The main challenges for increased user take-up among those countries¹ are:

- **Access** to electronic infrastructure, hardware, and software including “easy-to-use” considerations (e.g. user-friendliness and usability for special user groups such as physically or mentally disabled persons): services will not be used if users do not have access, or very limited possibilities for access to an electronic infrastructure.
- **Provision** of e-government services – “stand-alone” or “fully integrated”: no take-up can take place if services are not provided.
- **Awareness** of (the existence of) e-government services and how they are used: services will not be used if no one knows of their existence.
- **Organisation** of e-government services such as the degree of integration and personalisation of services, collaboration and co-operation between public authorities, standardisation, interoperability, etc.: making services easy to use by organising them in a simple and fully integrated way to increase the likelihood of users using them to solve their problems.
- **Outcomes** of e-government implementation, such as the actual use of e-government services and whether expectations regarding the quality of services, internal efficiencies, and external effectiveness are met: ensuring that users actually get their problems solved by using a service instead of

binding human resources to help them during, or after, the use of a service will increase the likelihood of striking the right balance between harvesting the internal and external benefits, and at the same time increase the sense among users of improved service delivery.

- **Trust** by users in governments and their management of often sensitive personal information, data and digital identities: ensuring that information, data and digital identities are stored and used in a trusted and secured way respecting their integrity, authenticity, and privacy is among the basic prerequisite for higher uptake.

Even though the challenges mentioned above are apparent and logical, they are by no means easy to address. Surprisingly, challenges such as *access*, *provision*, *awareness*, and *outcomes* (which are in their essence *digital divide-oriented*) show that the issue of digital divide is still an overarching and cross-cutting issue regardless of a country's specific e-government development stage: both mature and less mature e-government countries have digital divide challenges.

In addition, the issue of *trust* plays an increasingly important role for user take-up. A high level of trust ensures users that e-government services are safe to use; that information and data provided by the user to the public sector are handled with care by the authorities; and that the online environment is fully secure, and in accordance with basic and legitimate privacy considerations and expectations.²

A significant conclusion from OECD e-government country studies is that the digital divide issue is one which is an equally relevant and pressing challenge to address for mature e-government countries like Belgium, the Netherlands, and the Nordic countries, as well as for e-government latecomers like Hungary, Mexico and Turkey. This universality of the subject is recognised broadly in OECD countries and is closely linked to the possibility of harvesting the full value of possible benefits of e-government investments.

But what determines the provision of user-focused e-government services among OECD countries? Even though governments provide e-government services, not all governments provide coherent services aimed at addressing individual user needs. The provision of improved and more user-friendly e-government services is often dependant on the technological state of the country with regard to, for example, ICT penetration in society at large. This aspect of user-focused e-government development will be discussed below.

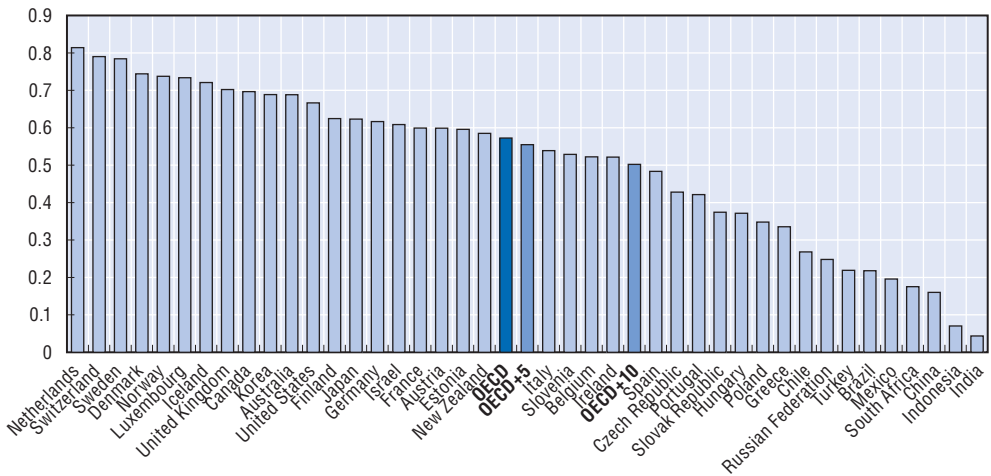
Access to e-government services

As access to e-government services is fundamental for the discussion of user take-up, it is necessary to get an overview of how the different access challenges impact user take-up. To gain access to e-government services,

users must have access to a basic ICT infrastructure such as electronic networks, computers, and relevant software.

Generally speaking, OECD countries have good ICT infrastructures, even though there is a significant variance between countries. The UN *Telecommunications Index* shows how “well-connected” a country is. Figure 2.1 shows the index for OECD, accession and enhanced engagement countries, and gives an indication of the countries’ ICT infrastructure development stages.³

Figure 2.1. **UN Infrastructure Index 2008 for OECD, accession and enhanced engagement countries**



Note: “OECD” shows the OECD average. “OECD + 5” shows the OECD and the five accession countries to the OECD (Chile, Estonia, Israel, the Russian Federation, and Slovenia) average. “OECD + 10” shows the “OECD + 5” and the five enhanced engagement countries to the OECD (Brazil, China, India, Indonesia, and South Africa) average.

Source: OECD compilation, 2008, based on the United Nations (2008), *UN E-Government Survey 2008 – From E-Government to Connected Governance*, UN, New York, Table 4, Infrastructure Index 2008, page 188 ff.

The infrastructure index provides a first indication of whether a country has the basic electronic infrastructure in place for a given population to go on line – and thus indicates the possibility for access to e-government services. This is a necessary prerequisite which needs to be complemented by other prerequisites. These are, for example, socio-economic prerequisites (*e.g.* affordability of access with regard to infrastructure and ICT); competencies and skills (does the user have the necessary knowledge competencies and skills to use electronic services?); and incentives/benefits (is there a driver for the use of those services?).

As the stage of e-government development in a country is not necessarily correlated to the index level shown in Figure 2.1, it is, however, relevant to consider the importance of having the infrastructure in place – not just for

users in urban areas with a high population density, but also in less populated areas of a country. The discussion of the importance of access is seen in all OECD countries – whether they are “well-connected” and thus listed high in the index (e.g. the Netherlands, Switzerland and Sweden), or whether they are in the process of developing their infrastructure (as seen in countries such as Greece, Turkey and Mexico).

Improving user take-up requires – besides basic access to infrastructure – that e-government services are provided. Even though a country might have many access points to an electronic network infrastructure, the provision of e-government services also needs to be in place. The dependencies between the development stage of an infrastructure and the provision of services are explored further below.

Provision of e-government services

Since the early 1990s, e-government has been largely driven by technology. The new opportunities technological development provided were used to improve government administrations and the quality and speed of service delivery. Improvements in the penetration of broadband has also made access more economically affordable, thus enabling countries to take advantage of technology and further improve their e-government services (e.g. making them more interactive and transaction-oriented).

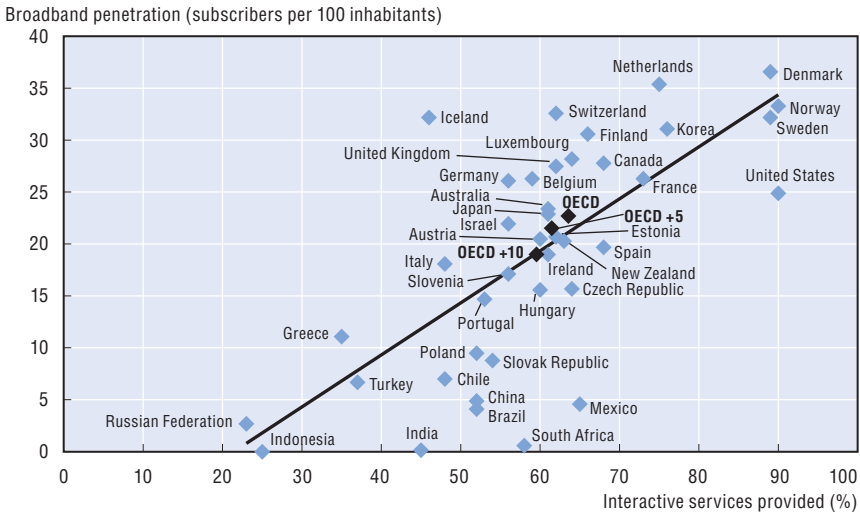
Figure 2.2 shows that the provision of interactive public services is high in countries with high broadband penetration, and low in countries with low broadband penetration. For example, e-government front-runner countries like Denmark, Norway and Sweden (which occupy the first three places in the *UN E-Government Readiness Index 2008* benchmark⁴) have high broadband penetration and a high level of interactive service provision. This trend is also confirmed in national surveys, e.g. Australia (Box 2.1) and Hungary.⁵

E-Government services follow different development stages with increasing sophistication: i) “push services” where information and data are made available to users; ii) “pull services” where information and data can be downloaded by users; iii) interactive services (e.g. electronic forms); iv) transactional services (e.g. full electronic case handling); and v) individualisation of services (e.g. automatic individualised information and data provision).⁶ Figure 2.3 shows the sophistication of service provision across OECD, accession, and enhanced engagement countries.

Another question worth addressing is: will users who are already used to communicating and engaging on line be the drivers for the provision of e-government services? It is clear that those users who regularly engage and communicate on line tend to have greater expectations (and demands) of e-government services. This implicit demand can be illustrated by taking a

Figure 2.2. Infrastructure-driven e-government development

Broadband subscribers per 100 inhabitants (2007) vs. % of interactive service provision (2008)



Note: "OECD" shows the OECD average. "OECD +5" shows the OECD and the five accession countries to the OECD (Chile, Estonia, Israel, the Russian Federation, and Slovenia) average. "OECD +10" shows the "OECD +5" and the five enhanced engagement countries to the OECD (Brazil, China, India, Indonesia, and South Africa) average.

Source: OECD compilation, 2008, based on United Nations (2008), *UN E-Government Survey 2008 – From E-Government to Connected Governance*, United Nations, New York; Table 7, Service Delivery by Stages 2008 (% Utilisation), page 207 ff; OECD Broadband Statistics: Broadband Subscribers per 100 Inhabitants, June 2007. For Brazil, Chile, China, Estonia, India, Indonesia, Israel, Russian Federation, and Slovenia the data are ITU (International Telecommunication Union) data on (total fixed) broadband penetration (subscribers per 100 inhabitants) and from 2007; for South Africa the broadband penetration data are from 2006.

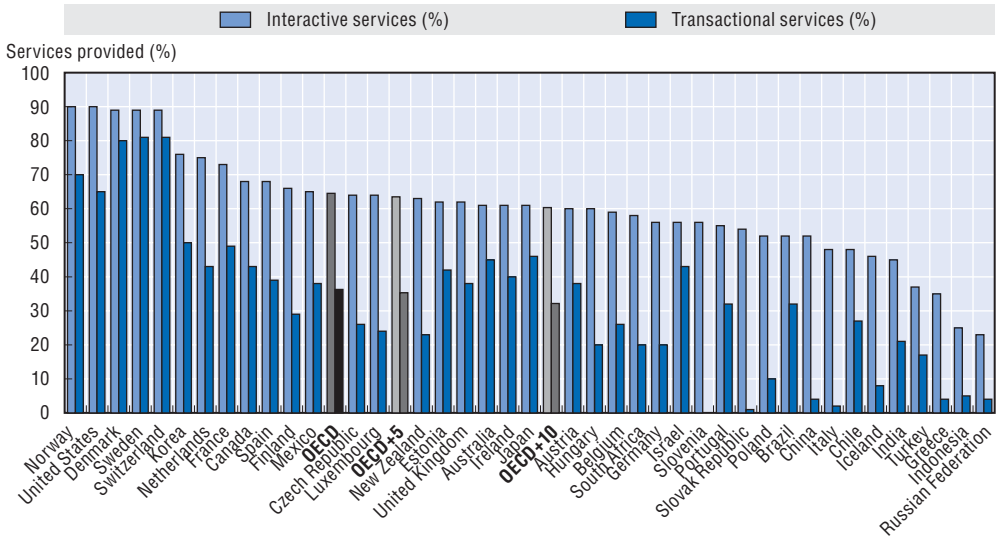
Box 2.1. Australia: The Internet – an integral way of delivering government services

The results of the 2006 Australian study of e-government use and satisfaction showed that those with broadband connections are more likely to use the Internet to access e-government services. The 2007 report showed a strong growth in broadband access and increasing use of the Internet for contact with government:

- broadband access has continued to grow, rising from 57% in 2006 to 68% in 2008;
- two-thirds (66%) of those who have contacted government in the past twelve months use the Internet and have a broadband connection.

Source: Australian Government Information Management Office (AGIMO) (December 2008), *Interacting with Government. Australians' Use of and Satisfaction with e-Government Services*, AGIMO, Department of Finance and Deregulation, Australia, www.finance.gov.au/publications/interacting-with-government/docs/interacting-with-government-report.pdf, accessed 3 January 2009.

Figure 2.3. Sophistication of service provision



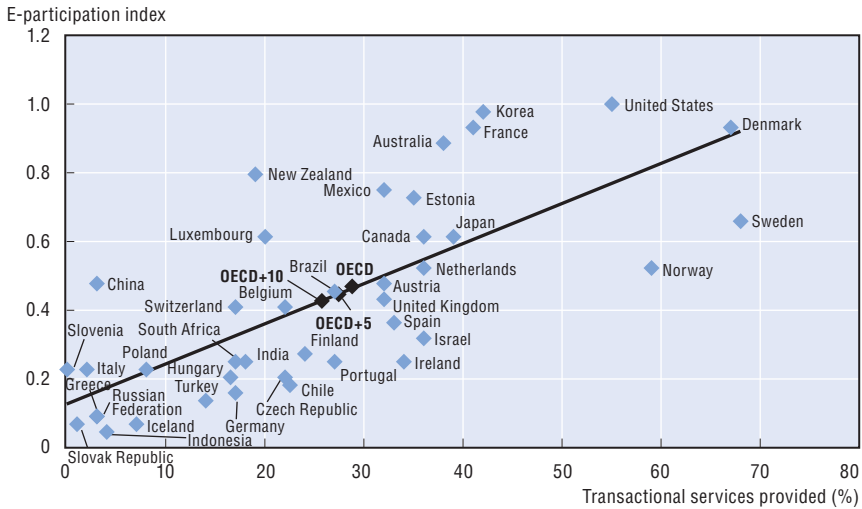
Note: "OECD" shows the OECD average. "OECD +5" shows the OECD and the five accession countries to the OECD (Chile, Estonia, Israel, the Russian Federation, and Slovenia) average. "OECD +10" shows the "OECD +5" and the five enhanced engagement countries to the OECD (Brazil, China, India, Indonesia, and South Africa) average.

Source: OECD compilation, 2008, based on the United Nations (2008), *UN E-Government Survey 2008 – From E-Government to Connected Governance*, UN, New York, Table 7, Service Delivery by Stages 2008 (% Utilisation), page 207 ff.

closer look at the relationship between electronic participation – *e-participation* – and the provision of transactional services. Looking at measures for online participation such as the *UN E-Participation Index*⁷ provides a good indication of citizen engagement. These users are more motivated to use electronic means to communicate with governments and their administrations. E-Government services in general are therefore more often accessible for this user segment. Indeed, the probability of having this segment of users increase its usage of e-government services – and of advanced transaction-oriented services – is higher. Figure 2.4 shows the relationship between the provision of transactional services and e-participation. It shows a high likelihood that countries with a high e-participation index are also those most likely to have a high provision of advanced transaction-oriented services.

Even though Figure 2.4 only gives a picture of one specific aspect of the question of lagging user take-up, it also indicates, for example, that open and inclusive policy making that engages citizens on line can also become a driver for improving user take-up of e-government services. Looking at the goals for open and inclusive policy making with respect to governments confirms that governments seek to improve effectiveness and efficiency (39% each) along with transparency/accountability (52%) – while the majority ranked “increasing

Figure 2.4. **E-Participation and the provision of transactional services**



Note: "OECD" shows the OECD average. "OECD +5" shows the OECD and the five accession countries to the OECD (Chile, Estonia, Israel, the Russian Federation, and Slovenia) average. "OECD +10" shows the "OECD +5" and the five enhanced engagement countries to the OECD (Brazil, China, India, Indonesia, and South Africa) average.

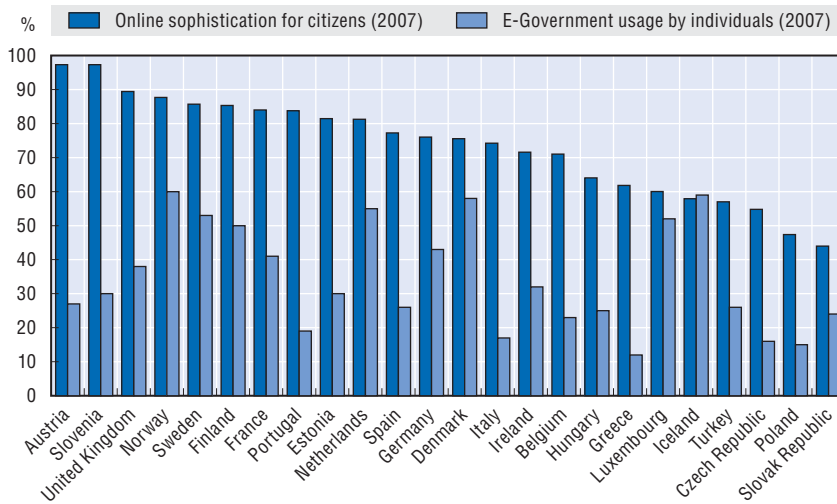
Source: OECD compilation, 2008, based on United Nations (2008), *UN E-Government Survey 2008 – From E-Government to Connected Governance*, United Nations, New York; Table 7, Service Delivery by Stages 2008 (% Utilisation), page 207 ff and Table 8 E-Participation Index 2008, page 212 ff.

citizens' trust in government" as "very important" or "important" (61%) as a goal with respect to citizens – one of the key challenges for addressing the lagging user take-up of e-government services (see Chapter 1).⁸

Use of e-government services

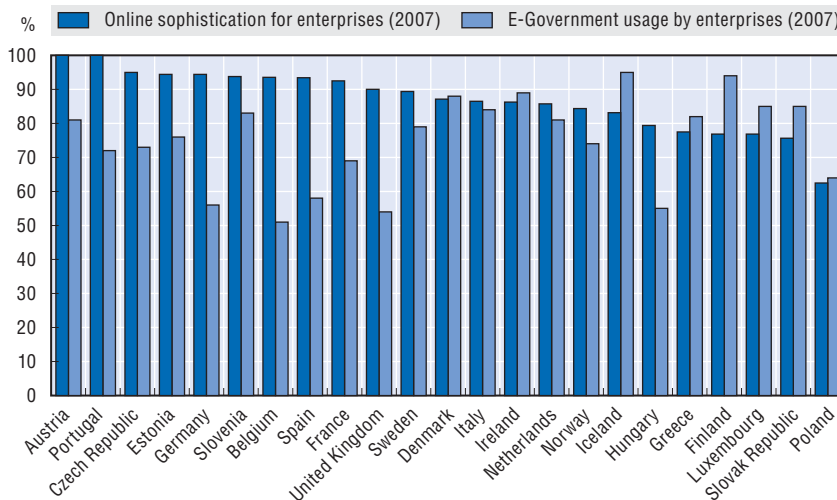
Differences in uptake of e-government services across countries are not fully linked to the quality and quantity of the supply of e-government services: the explanation is broader and more diversified. The European Union has tracked e-government take-up since 2001. Figures 2.5 and 2.6 show Eurostat data on the use⁹ and European Commission data on online sophistication¹⁰ of selected e-government services for citizens and businesses¹¹ in 2007. The gap between the supply and use of e-government services is in general a significant trend in the figures, suggesting that there is limited correlation between the provision of e-government services and their sophistication on the one hand, and the take-up of e-government services on the other. Even though the two sets of data (the supply of a selected set of core e-government services and the uptake of e-government services in general) are not directly comparable, the trend highlights the need to look beyond the indicators at hand to find explanations to this dilemma.

Figure 2.5. **Comparisons between use and online sophistication of public services for citizens, 2007**



Source: OECD 2008 compilation, based on Eurostat, October 2007 data on e-government usage by individuals; European Commission (2007), *The User Challenge Benchmarking The Supply Of Online Public Services. 7th Measurement, September 2007*, prepared by Capgemini; data on online sophistication for citizens. The data for Turkey on e-government usage is from the Turkish Statistical Institute's ICT usage survey on households and individuals 2007 (see www.turkstat.gov.tr/PreHaberBultenleri.do?id=605&tb_id=15, accessed 28 August 2008). The data set selection for this figure contains only OECD countries and accession countries to the OECD (Estonia and Slovenia) covered by European Union data collections and surveys.

Figure 2.6. **Comparisons between use and online sophistication of public services for businesses, 2007**



Source: OECD 2008 compilation, based on Eurostat, October 2007 data on e-government usage by enterprises; European Commission (2007), *The User Challenge Benchmarking The Supply Of Online Public Services. 7th Measurement, September 2007*, prepared by Capgemini; data on online sophistication for businesses.

For businesses (Figure 2.6), the situation is different. There is a significantly higher take-up trend due to many countries' prioritisation of an efficient and effective interaction between businesses and public authorities. In many countries, it is often easier to require the private sector to follow specific procedures, including the use of ICT, through requirements in the regulation of businesses than it is for citizens, where other considerations such as universality and equal treatment are more dominant. Some countries (e.g. Denmark, Hungary, and Spain) have made selected reporting mandatory to public authorities by using electronic means.¹²

Both figures show that there is a high level of provision and sophistication of e-government services for citizens and businesses across European Union member states. But is the trend the same in non-European Union OECD countries with regard to political awareness and action?

OECD e-government country studies¹³ and studies of national user take-up in other OECD countries such as Australia (Box 2.2), Canada,¹⁴ Korea (Box 2.3), New Zealand (Box 2.4), and the United States (Box 2.5) confirm that improving

Box 2.2. **Australia: Use of e-government services has increased since 2004-05**

The results of the 2008 Australian Survey of E-government Use and Satisfaction showed that e-government services use has increased since 2004-05:

- E-government (Internet and telephone) use has seen sustained growth since 2004-05, with a corresponding decline in in-person contact over the same period. This growth in e-government has been driven by the Internet to the point where Internet use has doubled in the four years to 2008 (rising from 19% in 2004-05 to 38% in 2008). Use of the Internet to contact government, is for the first time, now slightly higher than contact in person (34%).
- Use of e-government (Internet and telephone) channels for government contact has continued to grow. Growth is being driven by increased use of the Internet rather than the telephone.
- The Internet is now the most common way people last made contact with government:
 - in 2008 nearly two-thirds of people had contacted government by Internet at least once in the previous 12 months;
 - more than 30% now use the Internet for the majority (all or most) of their contact with government, doubling the rate reported in 2004-05;
 - in 2008 the Internet replaced in-person contact as the most common way people had last made contact with government;
 - Since 2007, the Internet has been the most *preferred* way to contact government.

Source: Australian Government Information Management Office (AGIMO) (December 2008), *Interacting with Government. Australians' Use of and Satisfaction with e-Government Services*, AGIMO, Department of Finance and Deregulation, Australia, www.finance.gov.au/publications/interacting-with-government/docs/interacting-with-government-report.pdf, accessed 3 January 2009.

Box 2.3. **Korea: Targeting low user take-up through new national plan (2008-11)**

The Korean government has long recognised the challenges of lagging user take-up of e-government services. A survey made by the former Korean Ministry of Government Administration and Home Affairs (MOGAHA) back in 2006-07 showed that the general user take-up of e-government services increased from 23% in 2003 to 46.6% in 2006.

Despite the improvements in user take-up, there were still significant challenges to handle, including the fact that 50.7% of citizens did not know how to access the provided e-government services and that traditional offline services were still the preferred method of access to public services. Regarding businesses, 74% of companies used e-government services and 93% of them experienced less red tape. On the other hand, 32.9% of companies did not know which services were provided on line.

A newly established four-year national plan running from 2008 to 2011 aims at increasing user take-up significantly. The target for 2011 is 90% (public awareness), 60% (user take-up), and 80% (service satisfaction). (See also Box 3.23.)

Source: Korean Ministry of Public Administration and Security (2008).

Box 2.4. **New Zealand: High user take-up – still a long way to go**

State Services Commission (2004), *Channel-Surfing: How New Zealanders Access Government*, September 2004, and the latest survey from 2008, *Public Satisfaction with Service Quality 2007: The Kiwis Count Survey*, April 2008, show that there are significant challenges to address regarding user take-up and satisfaction of public services. The most common method of contact is to visit an office or location (47%); the second most common method of contact is calling on the telephone (24%); using websites or e-mails is relatively uncommon, with only 4% of New Zealanders using a website to contact a public service and only 3% using e-mail. However, it may be that when answering the survey, New Zealanders did not consider using a website as “contacting” a service. For example, the World Internet Project (*The Internet in New Zealand 2007*) found that 47% of New Zealanders use the Internet to access government, mainly for information about government’s services.

Source: AUT University (2007), *The Internet in New Zealand 2007. Final Report*, World Internet Project New Zealand, Institute of Culture, Discourse and Communication, AUT University, Auckland, New Zealand, www.wipnz.aut.ac.nz. The World Internet Project report on New Zealand can be downloaded from www.aut.ac.nz/resources/research/research_institutes/ccr/wipnz_2007_final_report.pdf, accessed 4 October 2008.

Box 2.5. United States: Targeting higher user take-up and satisfaction

The US Federal Government has since 2006 measured the performance of 18 out of 26 federal e-government initiatives identified jointly by the Office of Management and Budget of the Executive Office of the President, and federal agencies (see www.whitehouse.gov/omb/egov/c-7-index.html, accessed 29 May 2008).

The metrics used cover adoption/participation by, e.g. agencies and bureaus, usage by the targeted end-user, and customer satisfaction with the initiative's products and/or services. For example, the number of inquiries handled by visits to the portal FirstGov.gov and other portals for the measurement period as of 31 December 2007 were 35 143 320 with the target number of users for the fiscal year 2008 of 153 795 000; customer satisfaction with government websites was 74 (on a scale of 0-100 using the American Customer Satisfaction Index [ACSI] aggregated of all federal websites) with the target for the fiscal year 2008 of 75.

In the report *Expanding E-Government – Achieving Results for the American People* released on 19 May 2008 (www.whitehouse.gov/omb/egov/documents/2008_Expanding_E-Gov_Report.pdf, accessed 29 May 2008) it is noted in a status statement for the fiscal year 2007 that “we successfully completed major implementation milestones, showing greater adoption and use of these services from citizens, businesses and government agencies, and shutting down legacy systems” (from page 7, first paragraph). The Federal Chief Information Officer Council's new strategic plan released on 22 May 2008 (www.cio.gov/documents/CIO_Council_Strategic_Plan_2008-9.pdf, accessed 29 May 2008) shows in Goal 4 “a commitment to implement new and emerging collaborative technologies to enable more streamlined information exchange with key external and internal stakeholders and in particular the American public.”

user take-up as an integrated part of improving public sector service delivery – and specifically user take-up among citizens – is a high political priority.

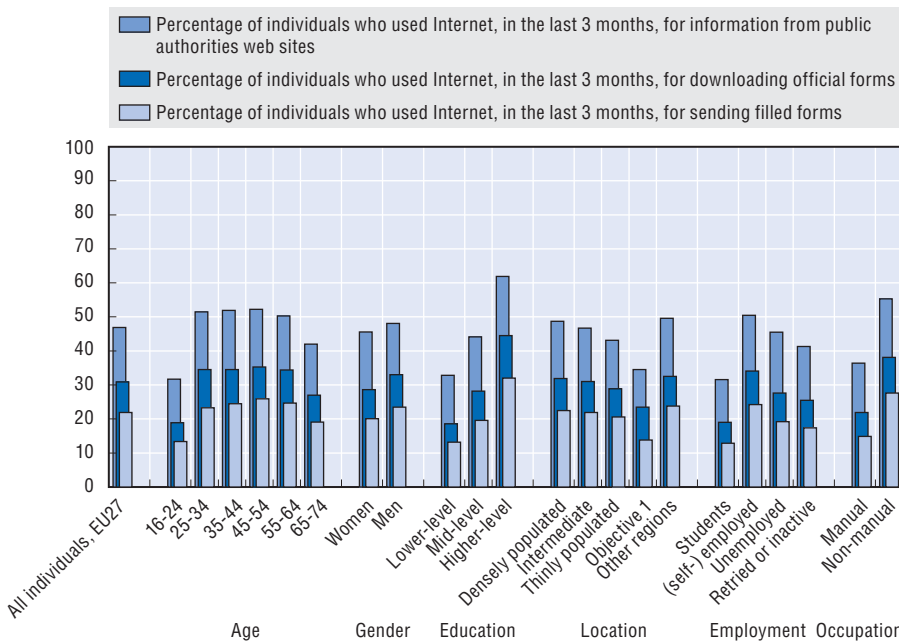
Given low user take-up, high availability of e-government services does not always mean that governments have successfully transformed into better governments. The success measure for governments in the next phase of e-government will be high usage and high satisfaction with e-government services. Hence, new indicators are currently being developed that include:

- the Information Society Index;
- user-friendliness of e-government services;
- accessibility of e-government services, and benefits realisation of e-government services;
- trust in government.

Types of users

Many studies have shown that the extent to which e-government services are used varies by type of user. Figure 2.7 shows that employed citizens use e-government services more than other groups, as do those who are younger (with the exception of those under 25) and who are better educated. The digital divide issue arises in this context as it is the poorer, less educated, less skilled and more vulnerable citizens who make greater direct and greater indirect demands on government, but who face much greater access barriers via both electronic and traditional channels.

Figure 2.7. **E-Government use by socio-demographic group**



Source: OECD 2008 compilation, based on Eurostat, 2008 data. See: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/isoc/isoc_pi/isoc_pi_d&language=en&product=EU_MASTER_information_society&root=EU_MASTER_information_society&scrollto=0, accessed 16 September 2008.

The Australian 2008 survey on *Australians' Use of and Satisfaction with e-Government Services* (see Box 2.6) shows in general the same trend of socio-demographic profiles for e-government users as seen for Europe in Figure 2.7, for example: the population segment in the age group 25-54 is the segment which most actively uses e-government services; the higher educated segment tends to have more active users than the lower educated segment; the segment in densely populated areas has more active users than the

segment in thinly populated areas; the employed segment has more active users than the unemployed segment; and the segment with non-manual (or office-based) occupation tends to have more active e-government users than the segment with manual occupation.

Governments, unlike businesses, do not choose their clients and are obliged to serve everyone – regardless of whom they are or where they are located. The eUSER survey¹⁵ shows, however, that although socio-demographic factors are quite important, Internet and e-government supply side issues, as well as individual technical skills and orientation, are even more important. The persons therefore responsible for implementing e-government strategies have to consider that a significant part of society lacks ICT access and will therefore continue to depend on alternative and more traditional service channels.

A Eurostat household survey found that, in the EU25, 35% of Internet users (i.e. individuals who used the Internet within the last three months) used the Internet to replace personal contacts or visits to public administrations and a further 37% would be interested in doing so. Only 28% of Internet users stated they were not interested.¹⁶

Box 2.6. **Australia: Socio-demographic profiles of e-government services users**

The results of the 2008 Australian Survey of E-government Use and Satisfaction showed socio-demographic profiles regarding digital divides e-government services equivalent to those seen in the studies made in Europe commissioned by the European Commission (see also Figure 2.7). A number of factors affect the likelihood of people having used the Internet to contact government at least once in the previous 12 months:

- **Age:** Younger people are more likely to use the Internet to contact government. Seventy-seven per cent of 44 year-olds or younger use the Internet to do so, compared with 27% of those 65 or older. Those aged 25 to 34 have the highest rates of use (81%). Rates are increasing across all ages, but growth in the use of the Internet to contact government has been strongest in the older age groups. Rates have doubled for those aged 55 to 64 (from 28% in 2004–05 to 57% in 2008) and nearly tripled for those aged 65 or more (from 10% in 2004–05 to 27% in 2008).
- **Personal income:** Those with lower incomes are less likely to have contacted government by Internet. At least four in five of those with a personal income above AUD 70 000 have used the Internet to contact government compared with three in four among those earning between AUD 50 000 and AUD 70 000; two-thirds of those earning between AUD 30 000 and AUD 50 000 and half of those with a lower income.

Box 2.6. Australia: Socio-demographic profiles of e-government services users (cont.)

- **Employment:** Those in the workforce¹ (73%) are more likely to have contacted government using the Internet than people not in the workforce (59%) and those who are retired (35%).
- **Nature of employment:** People employed in office-based occupations² (78%) are more likely to have used the Internet to contact government than those engaged in non-office occupation⁴ (65%).
- **Education:** 76% of those who have completed, attempted or are currently completing some form of post-secondary studies used the Internet to contact government. This compares with 59% who had completed high school, but no other studies, and 35% who had not completed year 12 of high school (or its equivalent).
- **Household type:** Households with dependent children³ (72%) are more likely to have used the Internet to contact government than other families⁵ without dependent children (60%) and single adults without dependent children (53%).
- **Location:** Those living in regional areas (54%) are less likely to have used the Internet to contact government than those in metropolitan (66%) or rural/remote (62%) areas. The proportion of those living in rural or remote areas that have used the Internet to contact government in the previous 12 months has increased notably: from 45% in 2007 to 62% in 2008.

1. The “workforce” includes those working full or part time or looking for work. “People not in the workforce” includes students, non-workers and people undertaking home duties.
2. Managers or administrators, professionals, community and personal service workers and clerical and administrative workers.
3. Includes couples and single parents with dependent children.
4. Technicians or trade workers, machinery operators or drivers, labourers.
5. Couple without dependent children or extended families.

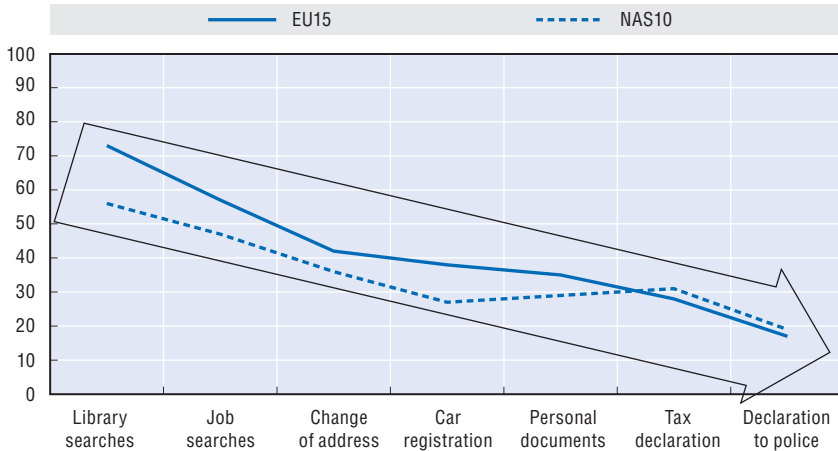
Source: Australian Government Information Management Office (AGIMO) (December 2008), “Interacting with Government. Australians’ Use of and Satisfaction with e-Government Services”, AGIMO, Department of Finance and Deregulation, Australia, www.finance.gov.au/publications/interacting-with-government/docs/interacting-with-government-report.pdf, accessed 3 January 2009.

User demand for e-government services across OECD countries

In relation to what e-government service users would like to be offered, SIBIS (Statistical Indicators Benchmarking the Information Society) undertook a few detailed surveys in 2002.¹⁷ User preferences clearly distinguished between the types of services or functions which they are comfortable with accessing on line and those they prefer to handle via traditional channels, or for which a mixture of the two is most appropriate.

Figure 2.8 shows that the online search for books available in public libraries requires minimal information about the users and rates high among them. The use of job search services can also be carried out by revealing

Figure 2.8. Preferred ways of interacting with government



NAS: New Accession Countries as surveyed in 2003. The countries were: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia.

Source: SIBIS Pocket Book 2002-2003. See also www.sibis-eu.org/publications/pocketbook.htm, accessed 14 September 2008.

minimal information about the users. The announcement of a change of address gives relatively little information about an individual. A similar interpretation can be assigned to other services. Least preferred is a declaration to the police, which requires that a great deal of private information be divulged. This is summarised in Figure 2.8, where the various government services are ranked so that those requiring the least amount of personal information are on the left and those requiring the most amount of personal information are on the right. Generally speaking, e-government services which do not require users to reveal a great deal of personal information are more popular than those that do.

These findings show that different channels for contacting government are often perceived quite differently in terms of privacy and/or security protection. This was noted in a study from 2003 where Germany experienced that 72% of those surveyed were satisfied or very satisfied with the general information offered by their city or town, 61% with information updates, and 48% with the local news value. By contrast, only 27% awarded this rating to available e-government services, and only 24% were satisfied with interactive services (e-mail, online forums, chat), which allow citizens to participate in political processes.¹⁸

In Australia, the key motivating factor for users to use the e-government service delivery channel is convenience (see Box 2.7): Internet scores highest on convenience with 83% of users reporting this, compared to 44% for the telephone and 39% for in-person contact. The satisfaction rate for achieving an outcome

Box 2.7. Australia: “Convenience” as the main reason for choosing the Internet delivery channel

The results of the 2008 Australian Survey of E-government Use and Satisfaction showed that convenience was the main deciding factor in users' choice of service delivery channel:

- **Internet:** The prime motivator for contacting government by Internet continues to be convenience (83% in 2008 compared with 80% in 2007). Features of the Internet are important for 20%, a slight decrease from 2007 (26%).
- **Telephone:** Convenience also remains an important motivator for selecting the telephone. Forty-four per cent of telephone users mentioned aspects of convenience as reasons for selecting this means of contacting government, a slight decrease from 2007 (50%). Equally, the specific features of telephone contact are a motivator for 44% in 2008 (40% in 2007), particularly the speed and convenience of using an automated telephone system (21%). There is also a small group (12%) who prefer to speak to a “real person”.
- **In-person:** All three themes have relatively similar levels of influence in the decision to contact government in person. Convenience, as a factor influencing the choice to make contact in person, has however increased in relative importance from 2007 (29%) to 2008 (39%). This is now equal with availability (39% in 2008, 35% in 2007) as the leading motivator for using this channel. Features of in-person contact were also mentioned in 2008 by 30% as a reason to select this means of contacting government. This is similar to the level recorded in 2007 (34%).
- **Mail:** Availability of other channels continues to be the dominant motivator for selecting mail as the means of contacting government. Fifty-five per cent of those who did use mail in 2008 did so because it was the only possible form of contact (44% in 2007). One in four, 27% (25% in 2007) nominated convenience and features of the channel (23% in 2008; 23% in 2007) as a factor in their choice.

Source: Australian Government Information Management Office (AGIMO) (December 2008), “Interacting with Government. Australians' Use of and Satisfaction with e-Government Services”, AGIMO, Department of Finance and Deregulation, Australia, www.finance.gov.au/publications/interacting-with-government/docs/interacting-with-government-report.pdf, accessed 3 January 2009.

also shows the same tendency of having the Internet delivery channel scoring 91% followed by in-person (89%), telephone (83%), and mail (78%).

The 2005 European eUSER survey clearly showed that e-government services users seem to make a more conscious choice about channel characteristics, compared to others, by using a much greater range of channels – and not just the Internet.¹⁹ The Australian survey²⁰ also shows that

for satisfaction with ease of use, ratings between channels are close, although the Internet is seen as marginally better with 72% of users stating they are extremely or very satisfied when using it compared to 71% for in-person and 67% for the telephone. Similarly, differences between government levels using all available channels in terms of ease of use of services are not large: at local level, 65% are extremely or very satisfied compared to 72% at state and territorial level, and 73% at national level. Focus groups participants raised a range of concerns, particular with ease of use for specific groups and individuals.

Needs analysis of users across OECD countries

The 2003 European Commission-supported Top-of-the-Web survey on the quality and usage of public e-government services included a pan-European sample of users (24 788 users and 3 326 companies) and 3 767 webmasters of public websites.²¹ The survey found that usability is the most important factor in users' overall evaluation of e-government services, and that the overall quality of those services is quite high. Almost 80% of the users approved of the quality of e-government services and more than half were very satisfied with the service. Moreover, almost 80% of users indicated that they would recommend the service to other people they knew. These users were perhaps more advanced ICT users than the average European citizen, but the result is a clear indication that these early users are e-government service ambassadors in Europe and play an active role in disseminating knowledge about those services.

The 2004 Top-of-the-Web survey covered 48 228 users (19 896 responses from citizens and 28 332 responses from business users) and confirmed the tendency recorded in the 2003 survey. The survey also provided firm indications of the benefits of e-government services: both citizens and businesses responded that saving time (83% for citizens and 84% for businesses) and flexibility (65% for citizens and 58% for businesses) were the significant advantages they experienced using those services.²²

Saving time and gaining flexibility, users find electronic services to be an improvement as they can access services on line, 24 hours a day, instead of only during office hours. However, service improvements on top of these channel improvements are only experienced by 30-40% of users. This indicates that e-government services are basically traditional offline services which are now offered on line without much additional refinement or development. Fundamental process integration (back-office) and improved service delivery (front-office) are needed to create integrated services and achieve the combined benefits of both strategies. Hence, webmasters and e-government service providers can significantly improve the quality of their

services, today a major challenge. A 2008 survey on eAccessibility of public websites across the European Union showed that relatively few (only 3%) followed the W3C Web Content Accessibility Guidelines and that 70% revealed relatively pervasive failures.²³ There is a clear need in terms of effectiveness (as well as inclusion of disadvantaged groups) to improve this situation.

The Top-of-the-Web survey identifies usability as very important for overall user satisfaction. The overall picture is that the majority of the users are satisfied, but 28% experience usability problems in one way or another. The single most important factor for citizen satisfaction is reported as *ease of use* of websites, whereas the most important factor for business satisfaction is the *speed* of websites. The most frequently experienced problem among users is difficulty in actually finding what they are looking for. Thus, *usability* remains a very important issue in the provision of e-government services and webmasters need to tackle this challenge urgently, for example through improved channel integration, and by focusing on making the services easier to find and use.

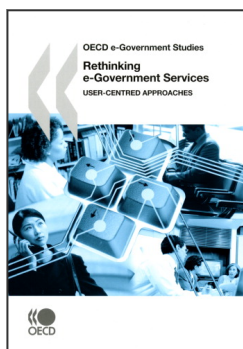
Notes

1. The following countries have been reviewed by the OECD since 2003: Belgium, Denmark, Finland, Hungary, Ireland (public service delivery), Mexico, Netherlands, Norway, Portugal (administrative simplification and e-government), and Turkey. See also Chapter 1, Note 2, for a complete list of country study references.
2. No OECD data have been collected regarding reasons such as security, privacy, and trust concerns for not using e-government services. However, official data do exist for not buying/ordering goods or services on line. These data support that security, privacy and trust concerns are reasons for not buying on line and thus can support a parallel conclusion that those concerns might also cover the use of e-government services. See Figure 32 (Security, privacy or trust concerns as reasons for not buying/ordering any goods or services on line, 2005) in OECD (2008), *Measuring Security and Trust in the Online Environment: A View Using Official Data*, OECD Working Party on Indicators for the Information Society, DSTI/ICCP/IIS(2007)4/FINAL, 29 January 2008.
3. The UN *Telecommunication Infrastructure Index 2008* is a composite index of five primary indices relating to a country's infrastructure capacity: Internet users per 100 persons; computers per 100 persons; main telephone lines per 100 persons; mobile phones per 100 persons; and broadband per 100 persons. See United Nations (2008), *UN E-Government Survey 2008 – From E-Government to Connected Governance*, United Nations, New York.
4. United Nations (2008), *UN E-Government Survey 2008 – From E-Government to Connected Governance*, United Nations, New York, Table 1, E-Government Readiness Index 2008.
5. The OECD e-government country study of Hungary shows that the Hungarian government recognises the correlation between the penetration of an affordable broadband infrastructure and the provision of advanced online services. The Hungarian National Broadband Strategy had the aim of providing broadband services to over 80% of the population and to over 90% of small and medium-sized enterprises by the end of 2006. See Page 68 of OECD (2007), *OECD e-Government Studies: Hungary*, OECD, Paris.

6. Both the United Nations and the European Union use a stage model as described here. The United Nations describes “stages of e-government evolution” (Stage I: emerging; Stage II: enhanced; Stage III: interactive; Stage IV: transactional; and Stage V: connected) in its Web Measure Index while the European Union focus on “sophistication of online services” (Level 1: information; Level 2: one-way interaction; Level 3: two-way interaction; Level 4: transaction; Level 5: personalisation). The OECD uses the Nolan+ model to describe information flow complexity in the different development stages of public organisations (Stage 1: control; Stage 2: organisational maturity; Stage 3: sectoral networking; Stage 4: national information infrastructure; Stage 5: Information Society). See also: OECD (2005), *OECD e-Government Studies: e-Government for Better Government*, OECD, Paris, Figure 5.1, p. 136.
7. The E-Participation Index assesses the governmental implementation of products and services concerning e-information, e-consultation, and e-decision making. See further in: United Nations (2008), *UN E-Government Survey 2008 – From E-Government to Connected Governance*, United Nations, New York, p. 58, Table 8, E-Government Readiness Index 2008.
8. According to OECD (2009), *Focus on Citizens: Public Engagement for Better Policy and Services*, OECD, Paris, the goals stated by governments for open and inclusive policy making are in essence equivalent to the challenges to improving user take-up (see Figures 1.2 and 1.3 on page 28).
9. The data tracking of the use of e-government services is not based on the same e-government services tracked for online sophistication (see also this chapter’s Note 6). The purpose of showing the figures with the data together is to emphasise the significant difference between the provision of (selected major) e-government services and the take-up of e-government services in general. The data on use by citizens should be understood as the percentage of individuals (aged 16-74) using the Internet to interact with public authorities (i.e. having used the Internet for one or more of the following activities: “obtaining information from public authorities’ websites”, “downloading official forms”, “sending filled in forms”). The data on use by enterprises should be understood as the percentage of enterprises using the Internet to interact with public authorities (i.e. obtaining information, downloading forms, filling-in web forms, full electronic case handling).
10. One widely used indicator of e-government services sophistication is a four-stage model that examines the extent to which government organisations have moved beyond simple provision of information via their websites (Stage 1) towards enabling online interaction (Stage 2), then conducting electronic transactions around public services (Stage 3), and finally implementing significant ICT-enabled transformation of how their services are organised and delivered both on and off line (Stage 4).
11. The twelve public services for citizens tracked by the European Union are: income taxes, job search services, social security benefits, personal documents (passports, driver’s licences), car registration, application for building permission, declaration to police, public libraries, certificates, enrolment in higher education, announcement of moving, and health-related services. The eight public services for businesses tracked by the European Union are: social contributions for employees, corporate tax, value-added tax (VAT), registration of a new company, submission of data to statistical offices, customs declaration, environment-related permits, and public procurement.

12. Denmark has required electronic reporting to public authorities in a number of areas. An example is the mandatory reporting of pollution data according to the Government Order No. 132 of 07/02/2007 (see <https://www.retsinformation.dk/Forms/R0710.aspx?id=13088>, accessed 19 August 2008). Hungary has obligated an increasing number of larger enterprises to submit their tax return declarations on line according to OECD (2007), *OECD e-Government Studies: Hungary*, OECD, Paris, Box 6.5, p. 151. For Spain, the main services provided for large and medium-sized enterprises (with more than ten employees) are fully digitised and are mandatory to use. The following e-government services has been progressively decreed as mandatory to use for those enterprises: social contribution for employees (2003), declaration and notification of corporate taxes, value-added tax (VAT), and customs declarations (2006-2008). The legal framework related to the service on social contributions for employees can be found on the website of the Spanish Ministry of Labour and Immigration: www.seg-social.es/Internet_1/Normativa/NormasdelSistemaRed/index.htm, accessed 25 March 2009. (The decision was taken on 20 April 2002 with effect from 1 July 2003, www.seg-social.es/Internet_1/Normativa/NormasdelSistemaRed/index.htm?ssUserText=119785&dDocName=095283, accessed 25 March 2009.) Further information on the legislative framework on the tax related services can be found on the Spanish Tax Agency's website: www.aeat.es/wps/portal/Navegacion2IyD?channel=2eb821a53a335010VgnVCM10000d7005a80_&ver=L&site=56d8237c0bc1ff00VgnVCM10000d7005a80_&idioma=es_ES&menu=1&img=8, accessed 2 April 2009.
13. The OECD e-government reviews conducted to date have shown that the OECD countries which have undergone peer reviews see a number of challenges. Their focus until now has been to put services on line and make the back office more efficient and effective to allow for the development of seamless e-government services, allowing users the possibility of "one-stop-shopping". See *Chapter 1, Note 2* for a list of all e-government country study reports.
14. The 2007 Canada Country Report to the International Council for IT in Government Administration (ICA) gives an overview description of the early focus of Canada on a citizen-centric approach to service transformation by adopting tools like Citizens First (a bi-annual survey on citizens expectations and satisfaction with public services; see www.iccs-isac.org/eng/cf-about.htm, accessed 29 May 2008) and the use of the Common Measurements Tool (a client satisfaction survey instrument; see www.iccs-isac.org/eng/cmt-about.htm, accessed 29 May 2008) to track performance of service delivery across the public sector.
15. The eUser study is funded by the European Commission's IST (Information Society Technology) programme. eUSER is a major research and support project which has set out to provide solid evidence as to users' real needs regarding e-government, e-health and e-learning offers, as well as providing data about their attitudes and the uptake levels of current public online services. The project supports the IST programme to achieve its key objectives of putting users and their needs at the centre of IST developments. It provides empirical information on key domains of e-government services – e-government, e-health, e-learning – identified as priorities by the European Council, and assesses the demand/supply match in these fields. See www.euser-eu.org, accessed 5 October 2008.
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