Chapter 6
Expanding usage to realize the full benefits of e-government

Availability of online public services (‘supply-side’) has been the primary focus of e-government studies and policymaking, but over the past years, citizen usage of e-government services (‘demand-side’) has also become a priority issue. An increasing number of governments, mostly in developed countries, are making greater efforts to increase usage of services. They start by recognizing that the benefits of e-government services are very much determined by the number and type of users of these services, and the frequency of their use.

There is also mounting pressure for performance reporting on taxpayer-funded e-government investments in some countries (e.g., the United Kingdom and Canada). Measuring and reporting the usage level have become important for assessing and demonstrating the benefits of e-government initiatives and ensuring continued support.
However, the overall level of usage remains relatively low compared to traditional service delivery methods, even in countries that are making greater efforts to enhance take-up, and notwithstanding continued progress in the provision and sophistication of e-government services. Many potential benefits of e-government are thus concealed and have not been fully realized. This presents a major challenge for policymakers, who need to rethink how public services can be taken up more by citizens so as to help realize their full potential benefits, and therefore, to contribute to sustainable development for the people.

This chapter will provide an overview of the level and trends of e-service usage in countries around the world, identify key policy issues and challenges, describe recent efforts by governments as well as regional and international organizations to increase usage, identify recent efforts and emerging practices, and draw some policy conclusions.

With a view to the Rio +20 Conference in 2012, this chapter will also explore e-service usage in the particular context of sustainable development. The notion of sustainable development entails intragenerational and intergenerational equity and integration and a balanced consideration of social, economic and environmental objectives.1

- In connection with the environmental dimension of sustainable development, there is a rather straightforward way of connecting e-service usage and sustainable development, for example, through the environmental impact of e-service take-up. While ICT is considered to pose some risk for the environment,2 e-government service usage is found to have positive impacts on it.3
- In connection with the social dimension of sustainable development, e-government usage can also be analyzed through its connection with usage differences across countries and usage divide within countries.
- Furthermore, e-service usage can be analyzed through some other less immediately discernible connections with social media as well as open government data provision and service.

First, social media presents a new avenue of not only e-service delivery but also usage. With its active in consuming e-services delivered through other channels, it helps reduce e-service usage divide within countries, hence fostering socially inclusive development.

Second, open data is an increasingly important source of information service provided by governments and other entities and presents opportunities for everyone to freely use, reuse and integrate various data pertaining to socio-economic and environmental dimensions of sustainable development.

6.1 E-service usage: The current landscape

This section describes the level of usage and its development trends and highlight different growth rates between e-government availability and take-up. It will also outline current levels and trends of citizen take-up of e-government services, as well as types and stages of services used.

6.1.1 Low level of usage

There is no comprehensive data available to assess citizen usages at the global level. Data are not yet systematically collected and uniformly available across countries around the world. There are only a few studies of some developing countries (e.g., Bahrain, Pakistan, Nigeria, Saudi Arabia, gulf region countries, and Bangladesh).4 According to them, the level of e-government usage is generally low, even as it is in most advanced countries. In EU27 countries, the average usage rate is 32 per cent, and in OECD countries, the average usage rate in 2010 was only around 40 per cent, notwithstanding recent increases in citizen take-up of e-services.5

That said, in some countries, the Internet has become a frequently used channel of public service take-up. For example, in Australia it has even become the channel most often used. Two in five citizens are using Internet to contact government. Moreover, given a choice, four in five citizens would prefer to contact government by Internet
Expanding usage to realize the full benefits of e-government


Chapter Six

instead of by phone. Still, this is more the exception than the norm. For example, in Lithuania, a country with Internet penetration of almost 70 percent in e-service usage, e-government usage is not growing all that fast. Two thirds (66 per cent) of the country’s residents have never used e-government services.

The realities and challenges of measurement are that outcome and usage indicators are more difficult to develop than e-government access and readiness indicators. Nevertheless, the United Nations E-Government Survey 2012, with its global data, presents valuable indications on the level of usage. Though only from the perspective of potential – not actual – use by citizens, the Survey can help estimate the extent to which e-government service is used.

Since it is not always possible to measure actual usage, the Survey assesses how many non-government websites link to the government portal. According to the Survey data, 144 countries (75 per cent of 193 United Nations Member States) have more than 10 websites that link to the government portal. This is an indirect measurement of the usage of these countries’ government portal by non-government or private sector entities.

6.1.2 Gap between e-service availability and usage

E-government usage has thus far been limited and has not kept up with the fast growing provision and availability of e-services. According to recent research commissioned by the European Commission, the different speed and growth rate between e-service availability and e-service take-up is substantial (see figure 6.1).

Low usage limits the reach and impact of e-government services, and more needs to be done if governments are to successfully leverage e-government to improve efficiency and effectiveness and realize other benefits. The recent financial and economic crisis has also shown that e-government projects and realization of their benefits are important for effective crisis response.

The indicator of e-government availability shows the percentage of the 20 basic services, as identified by the EU (see series 1), which are fully available in EU27 countries. E-government usage is measured by the percentage of individuals aged 16 to 74 who have used the internet for interacting with public authorities (see series 2).

6.1.3 Limited types of e-services used

The most frequently provided (as well as used) types of services are information services, which are the first step of sophistication of e-government initiatives. Many countries remain at this initial stage of e-government provision and usage. Online transactional services, whether they involve payment or not, are being provided less often – and are much less used.

As far as provision of e-services is concerned, the United Nations E-Government Survey 2012 data show the limited extent of e-transactional service availability. All 193 United Nations Member States provide some information services – except for Libya, Central African Republic and Guinea. But a much smaller number of countries provide transactional services with regard to environment, labour, social welfare, finance, health, education, and other sectors (see figure 6.2). It was not
Chapter Six
Expanding usage to realize the full benefits of e-government


Unexpected to find that many transactional services are concentrated in finance and other sectors rather than the other five analyzed.

However, in some of these countries (e.g., Mexico), citizen take-up of e-transaction services is rapidly increasing. According to the United Nations E-Government Survey 2012 data, citizens in 77 countries (40 per cent of United Nations Member States) can now pay income taxes online.

Many countries around the world suffer from extremely long tax processing time (e.g., nearly ten weeks in Kenya). But the report, *Paying Taxes 2011: The Global Picture* found that those countries that are advanced in using e-payment do well on a number of tax payment indicators, improving their ease of paying taxes. Recently, developing countries have also benefited, with Tunisia, Cape Verde and Sao Tome and Principe having improved most in the ease of paying taxes through e-tax payment.10

The current situation is characterized by a substantial gap between e-government supply and demand, and generally low levels of e-service take-up.

That said, it is important to note that even in countries such as the United States, where e-transaction services are growing rapidly, citizens still use the government website much more for information than for transactions.11 Thus, the current situation is characterized by the generally low e-service usage level, a substantial gap between the e-government ‘supply’ side and ‘demand’ side, and the limited types of e-services used.

This presents a major challenge for policymakers in their efforts to improve citizens’ take-up of e-services and user satisfaction. They not only need to increase the overall level of e-service usage, but also to close existing gaps and significantly move usage beyond the realm of information to more complex transactions and services such as e-consultation. According to the United Nations e-Government Survey 2012, online e-consultation features provided most by countries are: discussion forums (78 countries), bulletin boards (76 countries), petition tools (42 countries) and voting tools (18 countries). But as far as the demand side is concerned, there are no comprehensive data.

### 6.2 Challenges, recent efforts and opportunities

This section builds on identification and analysis of these overall challenges and explore more specific sets of challenges and policy implications related to sustainable development by:

- Examining factors affecting usage and multifaceted challenges (section 6.2.1);
- Analyzing the current e-government usage differences and divides across and within countries for an inclusive approach (section 6.2.2);

---

**Box 6.1 Benefit of e-tax payment: Convenience and ease of paying taxes**

One good example of tangible and substantial benefits that may accrue from using e-services is online tax payment, which is convenient and easy to do. E-payment of taxes is growing in popularity. According to the United Nations E-Government Survey 2012 data, citizens in 77 countries (40 per cent of United Nations Member States) can now pay income taxes online.

Many countries around the world suffer from extremely long tax processing time (e.g., nearly ten weeks in Kenya). But the report, *Paying Taxes 2011: The Global Picture* found that those countries that are advanced in using e-payment do well on a number of tax payment indicators, improving their ease of paying taxes. Recently, developing countries have also benefited, with Tunisia, Cape Verde and Sao Tome and Principe having improved most in the ease of paying taxes through e-tax payment.10

---

**Figure 6.2 Transaction services: Countries providing online payment facilities in different sectors**

![Figure showing percentage of countries providing online payment facilities in different sectors](image-url)
Chapter Six

Expanding usage to realize the full benefits of e-government

Some textual content extracted for the document:

6.2.1 Multifaceted challenges of e-service usage

There are wide-ranging factors affecting usage and challenges that policymakers need to identify and address in their efforts to increase citizen take-up of e-government services. These factors affect user motivations and satisfactions underlying intentions to use e-government services, and hence affect the level of usage.

The important factors range from convenience to concerns over trust, security and privacy. And the same factors may have different impacts in different country situations. Based on this recognition, policymakers need to develop a concrete operational strategy in a manner that maximizes positive and minimizes negative usage factors.

Convenience is the dominant factor and generally understood as enjoying 24/7 access and saving travel. Convenience is often found as a stronger incentive than mere cost-saving, even in developing countries (e.g., Malaysia, India, and Albania). Privacy and security concerns are also important. They potentially work as barriers impeding e-service usage as they prevent users from trusting and therefore using e-government services. In fact, they are often mentioned as a major reason for non-usage of e-government services.

Lack of clear policy statements on privacy and security are likely to discourage citizens from using e-government services. The problem is that, according to United Nations E-Government Survey 2012 data, less than half of the United Nations Member States provide such statements. Government websites of 79 countries (41 per cent of 193 United Nations Member States) provide a privacy statement (including developing countries). Only 39 countries (20 per cent of United Nations Member States) have a visible security policy with a secure link feature clearly indicated on their government website (see figure 6.3).

Figure 6.3 Number of countries with privacy statement and security policy online

Online privacy and security concerns may be preventing users from trusting and therefore using e-government services.
Expanding usage to realize the full benefits of e-government


Chapter Six

Arabia (city of Medina), and United Republic of Tanzania). In Australia, security presents a critical issue for those using e-services. The majority (83 per cent) of Australian citizens contacting the government by Internet would even prefer to re-enter their personal information each time they use a website rather than have their details stored by the government agency.

Besides privacy and security, trust in using e-government services is also critical. And there is a positive and important cycle of interaction between trust and transparency. As online transparency leads to greater trust, citizens are likely to use e-government more often.

Furthermore, usability is a factor that has important bearings on e-service usage. Good usability and perceived ease of use increase e-service usage. Usability can be indicated by questions such as whether the site is easy to find and use, well maintained, up-to-date and robust. Government websites with poor technical design often present usability problems in terms of the initial search and the internal navigation. Having robust search engines is particularly important, as they are the most common entry point for government website interactions.

Organizing and updating government websites are also important and at the same time challenging, especially in developing countries, even though several basic changes to the layout of government websites could improve their organization. At present, the level of usability is generally low, at least as measured by some indicators such as availability of a glossary of words helping users understand the content of government websites, and tutorials guiding users to access e-services. The United Nations E-Government Survey 2012 data show, for example, that websites of only 28 countries (15 per cent of 193 United Nations Member States) contain a glossary of words. The situation is somewhat better with respect to the availability of a tutorial: 52 countries (27 per cent of United Nations Member States) provide a tutorial on their national portal guiding users to access e-services.

In addition, citizen-centricity and focus on user needs are highly relevant to e-service usage. The more citizen-centric personalized e-government services are, with strong user focus, the more their uptake is likely to increase. Citizens tend to prefer services focused on their personal needs. Interest among different citizens and citizen groups in using specific e-services depends on their personal situation. For example, e-services needed by unemployed people are very different from those services needed by retirees.

To make e-services more relevant to citizens, some governments have begun to identify and segment their base and group their services around citizens’ needs and situations based on a life-event or themed approach. For example, the Norwegian Agency for Public Management and e-Government integrates the personalized, one-stop self-service portal ‘Miside’ with the existing ‘Noreg.no’. The new Noreg.no (http://www.noreg.no) aims to present information and e-services based on the “life event approach.” The Singaporean Government uses a proactive “sense and respond” approach to anticipate citizens’ demands and provide integrated services geared towards users’ needs. OneStopGov, an important, high impact pilot project funded by the European Commission, aims to integrate disparate e-government services around life events for more personalized services.

These initiatives indicate a shift towards a user or citizen-centric approach to e-government service – from what services governments can provide to what citizens really need. The resulting important aspect of citizen centricity in e-government is usefulness and relevance to citizens’ needs. Another aspect is usability, again, whether the site is designed for easy use by citizens.

Citizen-centric service delivery with user focus is a complex issue with many perspectives that need to be analyzed. For example, its implementation requires back-office integration of various government agencies and a whole-of-government perspective (see chapter 3 on whole-of-government). It also requires a well-designed multichannel service delivery strategy that offers a choice of online or offline channels and the possibility of using the appropriate channel to access e-services (see chapter 4 on multichannel service delivery).

Closely related issues are citizen satisfaction and feedback incorporation. According to a comprehensive study and statistics on United States e-government satisfaction, citizen-centric and user
needs focussed services will improve citizen satisfaction. Satisfaction then increases the likelihood that the citizen will return to the website (by 51 per cent), use it as a primary resource as opposed to utilizing more costly channels (by 79 per cent), or recommend the site to others (by 81 per cent).24 Government agencies therefore need to make explicit efforts to increase citizen satisfaction and incorporate this as an important factor in policy design for usage increase.

The Dubai Government’s recent launch of an online customer satisfaction survey is a step in the right direction. This is particularly encouraging, as there is limited user satisfaction monitoring in many countries. Even in Europe, not even one third of government websites can be rated and commented upon by the user.25

At the global level, United Nations E-Government Survey 2012 data provide some further insights into the limited efforts made by governments to garner and report on feedback by citizens on e-service usage. The national websites of 25 countries (13 per cent of 193 United Nations Member States) provide outcome on feedback received from citizens concerning the improvement of their services, whereas the website provides information on citizen usage in the form of basic web statistics, like hits or views, in 47 countries (24 per cent of United Nations Member States). In 18 countries, citizens can tag, assess and rank content on the website, which feeds back to government or to other users. Governments report on citizen website usage in the form of online services in the same number of countries (see figure 6.4).

6.2.2 Usage divide across and within countries

A real risk of divide exists – not only in Internet usage but also in e-government service usage. Governments need to effectively address these divides and differences for an inclusive approach and socially sustainable development.

Usage divide across countries: The differences in e-service usage among countries seem very much driven by infrastructure and connectivity, as citizen uptake of e-government services heavily depends on broadband Internet connectivity. Research conducted by OECD indicates the importance of broadband access for e-government usage. Figure 6.5 shows broadband-dependent e-government usage in 2008.

When it comes to e-government, broadband connectivity is critical, even in the most highly developed countries such as those in Europe. Government service usage is found to be very much contingent on fast and reliable Internet connection.26

Developing countries (e.g., Malaysia, Viet Nam) have shown that a higher level of broadband penetration is a pre-requisite for any governmental effort to increase citizen usage of e-government service.27 This presents an important challenge for developing countries, where broadband penetration remains limited.

Figure 6.4 Governments’ efforts to garner and report on usage feedback

![Figure 6.4](http://www.oecd.org/sti/ict/broadband)

Expanding usage to realize the full benefits of e-government

At the same time, the power of widespread mobile technology offers a good opportunity to extend public services to citizens, especially in developing countries. It is also likely to increase usage of public services, as they can be accessed and used by citizens everywhere and at all times. Mobile technology is also becoming increasingly important in the multichannel mix available to citizens. But at the same time, it is important to note that there are technical constraints that can limit m-service usage, and that mobile broadband technology is still in its early stages.

Thus, the winning approach is getting the right mix and balance of mobile technology and broadband Internet connectivity – with a clear focus on the next major step, namely, putting a broadband vision in place and “repeating the ‘mobile miracle’ for broadband Internet,” as stated in the latest ITU report.28

Usage divide within countries: Unequal access is likely to limit and fragment e-government usage, which is the case in many countries around the world. In the face of this reality, an important challenge of e-service take-up for sustainable development is to ensure that e-service actually reaches and is used by as many citizens as possible and minimizes marginalization of certain groups. This requires effectively increasing usage of e-services by all, including the poor and disadvantaged groups. After all, sustainable development is as much about economic and social inclusion as about environment and natural resource conservation and preservation.

E-government services are often used to a different extent by different citizens. For example, average usage of online information services in European countries is 28 per cent. The divergence is most pronounced between citizens with high education (53 per cent) and those with no or low education (12 per cent), followed by age, occupation and finally, living area. The most active e-government users are those with high education, living in densely populated areas, self-employed and aged 24-30. It is interesting to observe that members of the youngest group (aged 16-24), which are usually the most active in Internet use, are not the most active users of e-services, perhaps because they have less need for public administrative procedures.30

The least active user groups also include people living in sparsely populated areas, retired and other inactive and/or elderly citizens, and disabled persons. The problem is further compounded by the fact that these disadvantaged groups are often the very ones that require much interaction with government (e.g., to obtain social welfare benefits), but are likely to miss out on what e-government has to offer.31 It is therefore all the more important to urgently address the usage gap.

(For a related theme, see chapter 5 on bridging the digital divide.)

### 6.2.3 Expanding usage through social media

There has been a drastic rise of social media (e.g., Facebook, Twitter, Micro Blog, VK), which continue to grow rapidly, including through the use of mobile technology. In the United States, social media usage has reached a milestone in 2011; two-thirds of adult Internet users (65 per cent) were using a social networking site, which means that half of all adults (50 per cent) do so.32 In this regard, the United States is the top-ranking country, followed by Poland, the United Kingdom and the Republic of Korea, where at least four in ten adult citizens use such sites.33

At the regional level, in Asia and the Pacific, social media have seen unprecedented growth, dominating the region’s Internet usage.34 In the European Union, more than one third of all citizens use a social networking site. This is true both for countries with high

---

**Box 6.3 United States: Fostering social inclusion and increasing e-service usage through social media**

Nearly one third of United States Internet users are using social media to access e-services. According to the latest United States study, “embrace” of social media by the United States government seems to have “particular appeal” to minority groups, low-income individuals, women and other groups that have historically lagged behind in their use of e-services. These groups all use social media at a rate similar to that of other citizens, leading to a smaller gap among different socio-economic groups than through other forms of online information and service delivery.29

---

Disadvantaged groups often require interaction with government but are among the most likely to miss out on what e-government has to offer.
(e.g., the Netherlands) and low (e.g., Latvia) internet take-up.35 However, social media usage in some other regions is still low. For example, the country average for Facebook user penetration in the Arab region was only 5.94 per cent at the end of 2010.36

Government use of social media – though not a prerequisite for open government – is often highlighted as a good example of open government, which builds on principles of citizen centricity and information transparency.37

Government agencies are now using social media to improve public services, reduce costs and increase transparency. Through these media, they can inform citizens, promote their services, seek public views and feedback, and monitor satisfaction with the services they offer so as to improve their quality. As social media enable two-way communication in real time, government agencies can quickly engage citizens as co-producers of services, not just passive recipients. The latest study found that 66 per cent of all United States Government agencies currently use some form of social networking.38

At the global level, assessing the presence of social media in government portals of 193 United Nations Member States, the United Nations E-Government Survey 2012 finds that government websites of 78 Member States (40 per cent) provide a statement “follow us on Facebook or Twitter.” The survey data also show that 14 country government websites (7 per cent) provide tools to obtain raw (non-deliberative) public opinion through chat rooms or an IM feature (see figure 6.6).

More than half of 78 countries providing a statement ‘follow us on Facebook or Twitter’ are from the developing world and from different regions, even in most underdeveloped region like Africa. Table 6.1 shows the list of these countries.

Table 6.1 List of countries with government websites providing a statement ‘follow us on Facebook or Twitter’

<table>
<thead>
<tr>
<th>Africa</th>
<th>Americas</th>
<th>Asia</th>
<th>Europe</th>
<th>Oceania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Côte d’Ivoire</td>
<td>Antigua and Barbuda</td>
<td>Afghanistan</td>
<td>Andorra</td>
<td>Kiribati</td>
</tr>
<tr>
<td>Democratic Republic of the Congo</td>
<td>Argentina</td>
<td>Azerbaijan</td>
<td>Austria</td>
<td>Vanuatu</td>
</tr>
<tr>
<td>Equatorial Guinea</td>
<td>Belize</td>
<td>Bahrain</td>
<td>Belgium</td>
<td></td>
</tr>
<tr>
<td>Ethiopia</td>
<td>Brazil</td>
<td>Brunei Darussalam</td>
<td>Croatia</td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>Canada</td>
<td>Georgia</td>
<td>Finland</td>
<td></td>
</tr>
<tr>
<td>Guinea-Bissau</td>
<td>Chile</td>
<td>Iraq</td>
<td>France</td>
<td></td>
</tr>
<tr>
<td>Morocco</td>
<td>Colombia</td>
<td>Israel</td>
<td>Germany</td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>Cuba</td>
<td>Japan</td>
<td>Greece</td>
<td></td>
</tr>
<tr>
<td>Somalia</td>
<td>Dominican Republic</td>
<td>Malaysia</td>
<td>Hungary</td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>Ecuador</td>
<td>Mongolia</td>
<td>Italy</td>
<td></td>
</tr>
<tr>
<td>Sudan</td>
<td>El Salvador</td>
<td>Oman</td>
<td>Latvia</td>
<td></td>
</tr>
<tr>
<td>Tunisia</td>
<td>Grenada</td>
<td>Pakistan</td>
<td>Liechtenstein</td>
<td></td>
</tr>
<tr>
<td>Guatemala</td>
<td>Philippines</td>
<td>Lithuania</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honduras</td>
<td>Qatar</td>
<td>Luxembourg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>Republic of Korea</td>
<td>Netherlands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panama</td>
<td>Saudi Arabia</td>
<td>Norway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paraguay</td>
<td>Singapore</td>
<td>Portugal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>Thailand</td>
<td>Russian Federation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>United Arab Emirates</td>
<td>Spain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uruguay</td>
<td>Uzbekistan</td>
<td>Sweden</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Venezuela</td>
<td></td>
<td>Switzerland</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>United Kingdom</td>
<td></td>
</tr>
</tbody>
</table>

Figure 6.6 Government websites and social media

Table 6.2 shows which 14 countries provide the tools in order to obtain raw public opinion through chat rooms or an IM feature.

Social media hold much potential for generally increasing citizen usage of e-services. In some countries, social media has actively been used by citizens to keep themselves informed about government. Moreover, these media help to foster social inclusiveness by reducing the e-service usage divide among different socio-economic groups.

How to effectively leverage these opportunities that social media provide is now becoming an important public service issue. This is all the more important, as social media provide new, additional avenues for the delivery of governments’ information and other public services and can also amplify their impact.

Table 6.2 List of countries providing chat rooms or an IM feature

<table>
<thead>
<tr>
<th>North Korea (Pluri-national State of)</th>
<th>Qatar</th>
<th>Republic of Korea</th>
<th>Saudi Arabia</th>
<th>United Arab Emirates</th>
<th>United Kingdom</th>
<th>United States</th>
<th>Uruguay</th>
</tr>
</thead>
</table>
Even in developing countries (e.g., Nepal) embrace of and active engagement by government agencies in social media, and citizens’ positive response, can help increase citizen take-up of e-services, which helps to create the critical mass required to generate momentum. Furthermore, it is interesting to note the indirect effect of social media on e-service usage. It seems that greater social media usage (through increased transparency) may increase trust, and thus also increase e-service take-up.

6.2.4 Use of open data and public service co-production

A number of governments around the world (e.g., United Kingdom, United States and increasingly developing countries) have been opening previously ‘locked-up’ government-held data sets, providing raw data to their citizens. And citizens have actively taken up and made use of these data.

Open data is becoming an important government-provided raw information service that citizens can freely use, repurpose, create value out of and even co-produce.

Open data offers new opportunities for integration of economic, social and environmental data – often in an easily accessible, localized and visualized format. In the end, sustainable development is all about integration, with balanced consideration of these three pillars, and open data can facilitate this integration.

The likely integration effect comes from breaking down proprietary silos, freely available data users examine, combine and overlay maps. The recently launched Kenyan Government’s open data website (http://www.opendata.go.ke), which is one of the most comprehensive portals in sub-Saharan Africa, holds the potential to generate this integration. Its data are drawn from several sources (e.g., Ministries of Finance, Planning, Health and Education and the Kenya National Bureau of Statistics). The website is organized by six sectors – education, energy, health, water and sanitation, population and poverty.

The new, consolidated and combined database, based on data from these sectors and layered over a map, can yield useful insights into understanding complex issues, often requiring the integration of different sustainable development data sets. A good example is the examination of the effect of access to drinking water on children’s school attendance, which requires the integration of data pertaining to social and environmental pillars of sustainable development, at the least.

Open data furthermore offers opportunities for citizen input, feedback and transparency, which will increase the chances for success of improved public services and service uptakes under the right circumstances. There are cases of the transparency of data driving productivity and service improvements.

For example, open data and transparency were instrumental in reducing costs of employment services in Germany and restoring public confidence in the relevant agencies, where lack of comprehensive data on customer histories and the labour market had hitherto prevented understanding of the impact of services and their value. The challenge was to integrate 11 datasets of different structure, format and data quality into one. Openly Local in the United Kingdom is another good example of how open data can motivate citizens to engage with their local public services and government, enabling more efficient, better quality services with more choices (as described in the British Open Public Services White Paper).

In this connection, preliminary, ongoing research by the United Nations Department of Economic and Social Affairs provides a quick, initial picture of open government initiatives in countries...
Expanding usage to realize the full benefits of e-government


Chapter Six

around the world. According to the research, Europe is the leader well above the world average. Africa, and then Oceania are well below the world average.

Beyond transparency and service improvement, open data affords the possibility to users to co-produce e-government information and services. Users of the service are here considered not just mere consumers and passive recipients of services but valuable assets and resources that can collaborate with government providers to produce services that are in their interest.43

From the usage point of view, this has an important implication. Co-production has the effect of ultimately blurring the distinction between service providers and user communities. In fact, it is even argued that co-production can transform mainstream public services into more effective ones as it offers a radically new approach by sharing the design and delivery of services with users.44

Figure 6.8  FOI laws in countries around the world: Global view

Clear examples of co-produced services come from emergency situations with crisis mapping (e.g., OpenStreetMaps, Sinsai.Info). Here, a mash-up map with aggregated data enables users to view and add data. The rise of open data has created e/m-services for assisting with public emergencies, accelerating the ability of communities of volunteers to co-produce public services, which tend to be faster and more responsive in emergency situations than those provided by government agencies alone.

In this context, freedom of Information (FOI) legislation warrants attention. FOI is an important cornerstone of open data use because the latter can only take place when there is a right to access government information. FOI laws provide for the disclosure of government-held information. They define the ways in which the public may access information – namely that citizens may gain access in principle, but with some specific exemptions set forth in the statute.

According to initial and ongoing UNDESA research, over the past 10 years, an increasing number of countries, including developing countries, have recognized the right to information through the adoption of a wave of FOI laws.

In 1990, only 13 countries had adopted national FOI laws, whereas there are currently 90 countries out of 193 United Nations Member States (48 per cent) that have adopted such laws around the world. At the same time, 55 countries (28 per cent) have no FOI legislation. There are 22 countries (11 per cent) with only an FOI article in the constitution, and 26 countries (13 per cent) with relevant draft legislation.

FOI laws vary in scope from country to country. Most of them do not contain specific legislation for providing open government data catalogues. Europe is the leader in terms of open data legislation as seen in figure 6.9, depicting the regional breakdown.

Figure 6.9  Freedom of Information in different regions of the world


6.3 Increasing e-service usage: Policy conclusions

In their efforts to increase e-government usage and citizen satisfaction, policy makers are faced with multifaceted policy challenges, issues and opportunities underlying e-government usage. Without a doubt, there is increasing policy emphasis on take-up of e-services. Notwithstanding the many efforts made in this direction, there is still a general lack of a clear strategy to facilitate e-government service usage as well as evaluation frameworks to assess citizens’ needs and expectations. To effectively increase usage of e-services, particularly in the context of sustainable development, more effective policies and strategies need to be put in place to help overcome usage differences and divides, increase awareness and promotional activities, focus on user needs, further explore and exploit the potentials of social media and open data, and provide additional incentives for e-service usage.

Designing and providing citizen-centric services with user focus

Users and their needs must be placed at the centre of e-service design and delivery to improve usage. E-services can be better tailored to meet the specific needs and priorities of different users. To this end, governments should enhance their capacity to garner, monitor and incorporate users’ feedback, satisfaction and needs.

In particular, in order to foster personalized e-services and identify needs and gaps in e-service delivery, it is important to collect disaggregated data on different citizen groups, analyze and monitor their specific usage patterns, and share the data with citizens. This analysis should form the basis for resource allocation and the development of more personalized e-services for greater usage opportunities. A study on ICT access centres in Armenia found that lack of such data collection and monitoring, indeed, impedes additional interventions that could have addressed gender, income and other barriers to access and usage.45

Narrowing usage divide across and within countries

E-service usage difference across countries: Even the strong broadband dependency of e-service usage, governments should pay much more attention to broadband infrastructure development. This would help overcome usage divide across countries. They should also fully utilize mobile technology prevalent in developing countries, recognizing that mobile networks also help expand broadband Internet access in the developing world.

In this connection, it is important to highlight ongoing work of the United Nations Broadband Commission for Digital Development, which has set a target of connecting half the world’s poor citizens to broadband Internet by 2015.

Many relevant organizations are involved in this work. In particular, UNDESA contributes to the Commission’s work on broadband and e-government as a member of its Working Group on E-government and Public-Private Partnerships. The objective of the group is to highlight the opportunities associated with e-government and PPPs in the future development of broadband. UNDESA supports broadband deployment, diffusion and promotion as a medium that will usher in greater efficiency and effectiveness in e-government, which will then ultimately make possible the faster diffusion and utilization of broadband by all citizens in the world.

E-service usage divide within countries: Similarly, governments also need to actively explore ways to make broadband Internet more widely available to their citizens so as to increase their e-service usage within countries. However, according to the United Nations E-Government Survey 2012 data, only a limited number of countries (24) promote free access to government services via the Internet through means such as kiosks or free Wi-Fi. Some countries, such as Brazil, make a concerted effort to address this problem. The Treasury of the State of Bahia successfully provides public access points (pontos de autoatendimento) to enable some citizens without private Internet access to use the whole range of its online tax services.46 This shows that there are effective ways to make broadband Internet more widely available to citizens, so as to increase their e-service usage.

At the operational level, prioritization and promotion of some services (which are potentially more conducive to sustainable development than others) will help to narrow the divide within
countries. For example, broad based services are likely to have greater sustainable development impact (through greater socio-economic inclusion) than those catering to needs of a few privileged citizens or driven primarily by short-term economic efficiency considerations. These services include fields such as agriculture (e.g., Online Delivery of Land Titles to Rural Farmers in Karnataka, India) and health (e.g., Electronic Birth Registration in Rajshahi, Bangladesh).

In particular, effective provision and promotion of citizen uptake of e-government services related to agriculture will have a more direct and substantial impact on inclusion for a vast majority of citizens in poor countries. For example, in sub-Saharan Africa, 65 per cent of the population relies on subsistence farming but has little access to vital, agricultural information.

Seen from the social inclusiveness perspective, it is also vital for governments not to disenfranchise a large number of citizens; various channels for a multitude of access possibilities for different groups, such as senior citizens, need to be provided. There is also a need to strike the right balance between online and offline service delivery, and to ensure that there are parallel service channels – at least until the access and usage gap is narrowed. The idea is to provide multiple access possibilities (see chapter 4 on multichannel service delivery). Some governments, such as that of Slovenia, have successfully explored multichannels for accessing e-services. Employment Service of Slovenia is a multichannel e-counselling service that helps individuals make decisions about career paths and job search activities.

User segmentation as a related practice: To address existing usage divides among different groups, it is useful to separate citizens and potential e-service users into groups and sub-groups according to their specific usage gaps, needs and concerns. Such segmentation is needed for implementation of a socially inclusive strategy aimed at increasing uptake of e-services by as many citizens as possible.

The starting point for policy makers is to conduct a deeper analysis and identify actual needs of different groups and sub-groups, and then move on to devise measures taking into account specific needs. This means that such differentiation measures need to be in place in addition to general measures (e.g., Internet literacy promotion) for the general, low-usage groups. For example, according to an empirical study conducted in Germany, service complexity and concerns about data security are most critical for e-service usage by the elderly and this necessitates the design of less complex e-government services along with general measures.47

**Leveraging social media for greater e-service take-up**

Governments need to make concerted efforts to exploit the full potential of social media to deliver messages and information services, promote awareness for greater citizen e-service take-up, and garner valuable user feedback and suggestions for service improvements.

This implies that governments need to leverage social media for greater e-government service usage by citizens, including in particular, the poor, the elderly and other disadvantaged groups. As social media become widespread and mainstream, the strategic engagement of all groups in this new e-service usage channel becomes even more important.

Governments should therefore strengthen their presence on existing social media sites and promote e-services, particularly those particularly conducive to sustainable development, while also trying out new channels and sources of feedback, and new platforms and networks to bring together citizens and stakeholders. Thereby, governments can also share information about successful e-service take-up and utilization to further encourage citizens’ usage of e-services.

**Using open data for better public service and greater usage**

Open data and integration of three pillars: Exploiting open data for sustainable development (particularly as applied to the environment) is challenging. Sustainable development is about the integration of economic, social and environmental dimensions, but the problem is that e-government applications are still not used in an integrated fashion. Governments need to actively make available to
the public, more data that are related to all three pillars of sustainable development, encourage an integrated analysis and creative use and reuse of government information.

**Getting the co-production right:** Getting the co-production right will help develop better public services. Governments thus need to make space for co-production in government services and focus on creating a framework within which all citizens can become both users and producers of e-services. It would also be useful to find examples of co-production to see how open data is used in practice.

**Issues to address:** Among the realities of open data availability is the fact that some governments are slow to provide essential information. Important issues that warrant a lot of attention from policy makers striving to get the most out of open data and facilitate e-service usage include: copyright protection, privacy law, existence of quality data standardization, digitization of data, basic collection and standardization of data practices across a country, and FOI legislation.

**Increasing public awareness and promoting e-services**

Governments should pro-actively engage themselves in activities to increase awareness of, promote and popularize e-service usage. Otherwise, despite the high number of e-services available, their usage levels may remain below expectations.

How many and to what extent do governments around the world make efforts to increase e-service usage through such activities? Implementation of such public awareness is increasing and promotional activities are relatively easy. Nevertheless, according to United Nations E-Government Survey 2012 data, only a limited number of governments have portals with a self-promotional section (e.g., one that asks users to link to the site or provides information on events related to promoting the portal (43 countries or 22 per cent of United Nations Member States).

Against this background, practices are emerging among e-government policy makers in some countries to increase public awareness and promote e-services. These include the Dubai Government’s various channels and mechanisms for e-service awareness, the Republic of Korea’s effort to use and promote the “Pororo” figure as an ‘e-government publicity ambassador,’ and the United States Department of the Interior’s e-government strategy. However, as far as current promotional activities are concerned, the situation is generally not very good. In fact, even developed countries lack marketing and promotion strategies and only about half of government institutions communicate their e-government goals and benefits to citizens and businesses.50

Some countries go beyond promotion of their e-services and offer additional, sometimes substantial, incentives. Several countries (e.g., France, Ireland and Singapore) offer an extended filing period for users of online tax filing services. In the United States, the **Free File** website allows most taxpayers to prepare and file their taxes online for free and get their refunds in half the time it would take to process their paper returns.51

**Dealing with measurement difficulties**

In general, measuring usage is hard and obtaining pertinent data is much more difficult than measuring the supply side of e-government. Collecting comparable usage data across countries is very difficult. The Task Group on e-Government of Partnership on Measuring ICT for Development, launched in 2004, coordinates international efforts in this area, sets standards and harmonizes ICT statistics at the global level.

In order to capture, at least in part, the extent to which citizens actually use e-services and achieve internationally comparable statistics, the Task Group is currently working on e-government usage indicators. The Economic Commission for Africa, Economic Commission for Latin America and the Caribbean, and International Telecommunication Union have prepared a framework for developing e-government indicators along with a set of globally comparative e-government core indicators and statistical standards.

Measurements need to reflect more accurately citizens’ experience and satisfaction. Some governments use web analytics, customer views and customer experience replication, but there is not yet any international consensus on how these measures could be applied.52 In view of this difficulty, governments need to urgently improve on
usage-related data and measurement (including user satisfaction measurement in particular), and build capacity by providing training on how to assess and measure user take-up of e-services and develop assessment frameworks. They can benefit from cross-learning opportunities and good practices for more accurate measurement.

Measuring e-government take-up is no doubt challenging, but also very important. Why? After all, without a clear understanding of how to measure e-government usage, it is difficult to measure the impact of e-government. Increasing efforts to measure usage therefore constitutes a good step forward towards gauging the extent of e-government success and failure, and evaluating progress towards development for the people.