PART 1

PARLIAMENTS, CITIZENS, AND THE INFORMATION SOCIETY

Chapter 1
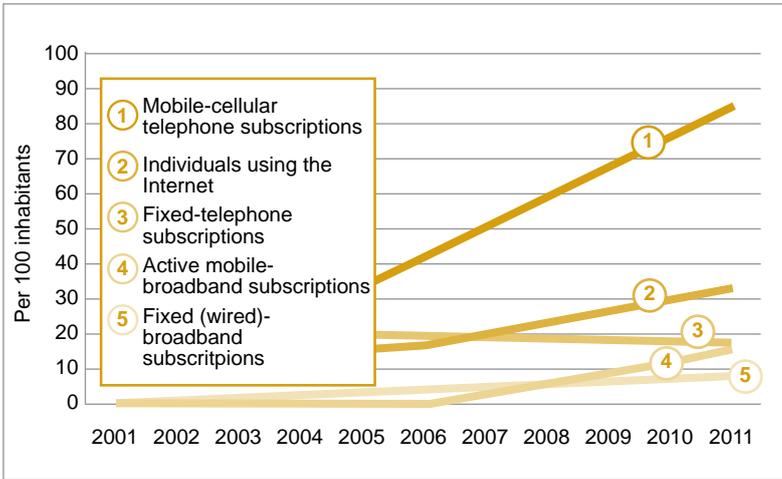# Major Global Trends since 2010 and Possible Developments beyond 2012

INTRODUCTION

Since the publication of the *Word e-Parliament Report in 2010* the evolution of the information society has continued unabated with impressive achievements in terms of ICT growth and penetration. Key statistical highlights[1] released in June 2012 by the International Telecommunication Union (ITU) show that total mobile-cellular subscriptions reached almost 6 billion by end of 2011, corresponding to a global penetration of 86 per cent. This growth was driven by developing countries, which accounted for more than 80 per cent of the 660 million new mobile-cellular subscriptions added in 2011. By the end of 2011, there were 105 countries with more mobile-cellular subscriptions than inhabitants, including African countries such as Botswana, Gabon, Namibia, Seychelles and South Africa.

Mobile broadband has become the single most dynamic ICT service reaching a 40 per cent annual subscription growth in 2011. By the end of the year, there were more than 1 billion mobile-broadband subscriptions worldwide and more mobile-broadband subscriptions than inhabitants in the Republic of Korea and Singapore. In Japan and Sweden, active mobile-broadband penetration surpassed 90 per cent. Although developing countries are catching up in terms of 3G coverage, huge disparities remain between mobile-broadband penetration in the developing (8 per cent) and the developed world (51 per cent). However, in 2011, 144 million mobile-broadband subscriptions were added in five countries - Brazil, the Russian Federation, India, China and South Africa -, accounting for 45 per cent of the world's total subscriptions added in 2011.

By the end of 2011, there were 590 million fixed (wired) broadband subscriptions worldwide. While fixed broadband growth in developed countries is slowing (a 5 per cent increase in 2011), developing countries continue to experience high growth (an 18 per cent increase in 2011). However, the penetration remains low in some regions, such as Africa and the Arab States, with 0.2 per cent and 2 per cent respectively by end 2011. Countries where fixed broadband penetration increased the most in 2011 include Bahrain, Costa Rica, Ecuador, Mauritius and Uruguay. However, among these, only Bahrain and Uruguay surpassed the 10 per cent fixed broadband penetration by the end of 2011. Countries with the highest percentages – such as France, Denmark, the Netherlands, Norway, the Republic of Korea and Switzerland – had fixed broadband penetrations above 35 per cent by the end of 2011.

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1   Source: *ITU World Telecommunication/ICT Indicators Database 2012*. See http://www.itu.int/ITU-D/ict/

Figure 1.1: Growth in cellular, mobile-broadband, fixed-telephone, fixed-broadband subscriptions and Internet users 2001 – 2011 per 100 inhabitants

Legend:
1. Mobile-cellular telephone subscriptions
2. Individuals using the Internet
3. Fixed-telephone subscriptions
4. Active mobile-broadband subscriptions
5. Fixed (wired)-broadband subscriptions

(Source: ITU World Telecommunication /ICT Indicators database)

The percentage of individuals using the Internet continues to grow worldwide and by the end of 2011 2.3 billion people were online. In developing countries, the number of Internet users doubled between 2007 and 2011, but only a quarter of inhabitants in the developing world were online by end 2011. The percentage of individuals using the Internet in the developed world reached the 70 per cent landmark by end 2011. In Iceland, the Netherlands, Norway and Sweden more than 90 per cent of the population is online. By the end of 2011, 70 per cent of the total households in developed countries had Internet, whereas only 20 per cent of households in developing countries had Internet access. Some exceptions include Lebanon and Malaysia with 62 per cent and 61 per cent of households with Internet respectively.

In this connected environment, the number of individuals, groups, businesses and public institutions using social media to interact with each other also grew exponentially in the past two years. The *World e-Parliament Report 2010* showed the growth of Facebook up to mid-2010 as approximately 400 million users[2]. As of June 2012, Facebook reported 955 million monthly active users with approximately 81 per cent of them outside the United States of America and Canada. On average, there were 552 million daily active users in June 2012 and 543 million daily active users who used Facebook mobile products.

Figure 1.2: Growth in Facebook users 2004 - 2012
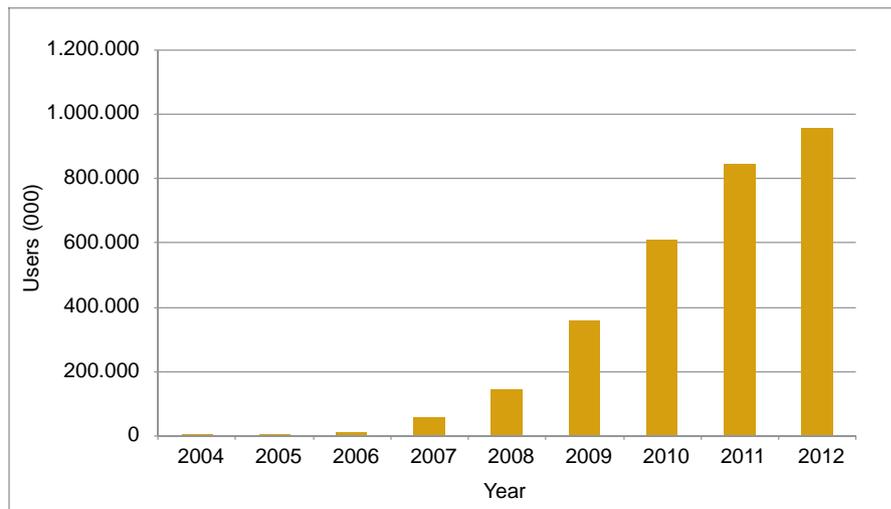
(Source: Facebook.com. Data for 2012 reflect June active users.)

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2   See *World e-Parliament Report 2010*, p. 9.

ADVANCES IN TECHNOLOGY AND PUBLIC POLICY AND THEIR IMPACT ON PARLIAMENTS

Besides the increasing penetration of Internet and communication opportunities around the world, in the past two years there have been a number of developments at the intersection of technology and public policy that have significant implications for parliaments.

The growing sophistication of cellular and smart phones, as well as the rapid advances in the tablet devices industry, have brought more citizens in contact with each other and, in many cases, with their representatives in the legislative body. These same technologies have also made it possible for some legislatures to conduct their work in a more efficient digital environment and to consume fewer of the resources required in the traditional paper-bound setting. However, the demands for information services that satisfy the mobility requirements of members, parliamentary staff and citizens were only partially met by a few parliaments, making this area a challenging domain for parliamentary administrations in the near future.

Box 1.1

> Using smart phones to communicate with members for any communication is cutting down the use of paper. This contributes towards greener IT and economic benefits.
>
> *Comment by a respondent to the 2012 Survey*

Similarly, the developments in so called "cloud computing", made possible by faster and more reliable Internet connections, have the potential to free many parliaments – both rich and poor – from some of the burden of building and maintaining expensive technical infrastructures. Instead these powerful and flexible services can be "rented" at affordable prices and made available in a fraction of the time that it takes to establish traditional computer centers. Among other advantages, cloud computing offers institutions greater capabilities to meet mobility demands, and legislatures are evaluating how to benefit from this technology while still meeting requirements for data ownership and security. In addition, shared applications that are based on open source or commercial software may enable parliaments to acquire more easily many of the tools needed to support the work of their members and staff.

Box 1.2

> Traditionally ICT has been looked at as an afterthought to provide basic connectivity to software and databases. We realize that ICT today is the backbone of any organization to provide access to data and services whenever needed, wherever needed, however needed.
>
> *Comment by a respondent to the 2012 Survey*

Initiatives by governments on open data provision, as well as the examples of the Open Government Initiative[3] and the Open Government Partnership[4], have increasingly influenced the perception of governing institutions about the importance of releasing data and documents in structured and open formats as a means to achieve greater transparency and openness and to regain public trust. While parliaments have been slowly advancing on this front for some time, as highlighted in the *World e-Parliament Report 2008* and *2010*, the open data movement generated throughout the world have the potential to encourage legislatures to provide open data services and

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3   http://www.whitehouse.gov/open
4   http://www.opengovpartnership.org/

Figure 1.3: Web page of open data web services of the Federal Assembly of the Swiss Parliament

(Source: http://www.parlament.ch/e/dokumentation/webservices-opendata/pages/default.aspx)
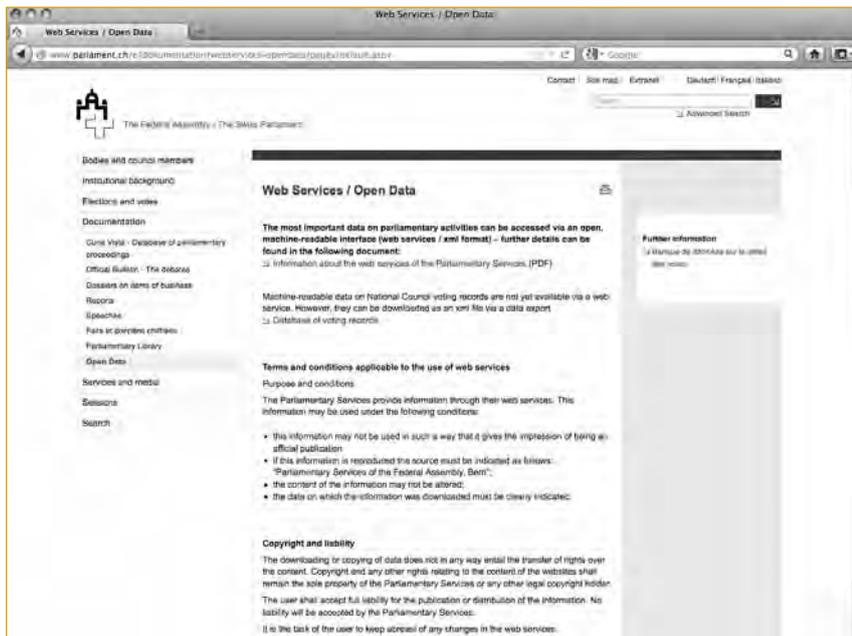
embrace open standards in their documentation and information processes (see Chapter 5).

The expanding number of Parliamentary Monitoring Organizations (PMOs) around the world and the emergence of an international network of these entities are increasingly focusing public attention upon parliamentary bodies. The majority of PMOs are using technologies in a sophisticated way to provide citizens with additional instruments to scrutinize the parliamentary environments. They are also attracting the public's interest by presenting and retrieving information on user-friendly platforms with social networking layers that support civic engagement. As underlined in the Global Parliamentary Report "such organizations have their strengths and weaknesses, but, crucially, they seem to be creating a new form of external validation of parliamentary representation. Furthermore, although parliamentarians might resist such assessments, it seems unlikely that they will disappear; indeed, they may even come to enhance the public position of parliaments"[5].

This brief listing of the major trends and their effect on parliaments is based in part on findings from the Global Survey of ICT in Parliaments 2012 and in part on observations and reports of activities that have taken place in legislatures all over the world. Some illustrative examples of early parliamentary impact observed around the world are:

- Members of parliament in plenary session looking at the draft of a bill on their tablets which were provided by the parliamentary administration and paid for with savings accrued from the reduction of printing costs;

- A parliament with a limited technical infrastructure establishing its first ever institutional e-mail service via the cloud;

- A parliament lacking the resources to maintain a current website of parliamentary activities now using Facebook to publish the order paper for its upcoming plenary session and the minutes of the previous session;

- A parliamentary library assisting a committee to receive confidential information from constituents as it considers legislation on domestic violence by promoting participation on web and social media sites that engage the victims of these crimes;

- A member of parliament without an office communicating regularly with constituents via Facebook, Twitter, and email, as well as successfully rebutting inaccurate reports of votes

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5   Inter-Parliamentary Union, United Nations Development Programme, *Global Parliamentary Report. The changing nature of parliamentary representation,* [Geneva - New York]: Inter-Parliamentary Union and United Nations Development Programme, 2012, p.53. [http://www.ipu.org/dem-e/gpr.htm].

published by the local newspaper through these platforms;

- A parliament adopting an open document standard for bills by coordinating with a government ministry;
- A parliament enabling civil society organizations and other media groups to download its documents in bulk and formatted in an open standard for data reuse in creative and informative ways;
- A parliament experiencing attendance increases after a parliamentary monitoring organization published the attendance records of its members in plenary;
- A parliament offering members, the media and the public the possibility to create video clips from the recording of plenary and committee meetings for further posting on social media and websites.

In the following chapters these anecdotal examples are supplemented by statistical data from the Global Survey of ICT in Parliaments 2012 that show some of these trends among parliaments. However, the Survey also introduced for the first time a series of questions aimed at gaining a better understanding about the use of technology by parliaments in the transition time between surveys: what the institution sees as its most important accomplishments using ICT, what it wants to accomplish next, and what its biggest challenges were. The survey posed these four specific questions, but limiting respondents to their top three choices:

1. What are the three most important improvements in the work of the parliament that have been made possible by ICT in the past two years?
2. Which technologies have you introduced or begun using in new ways during the past two years that have been the most useful in helping to improve the work of the parliament?
3. What are the parliament's most important objectives for ICT in the next two years?
4. What are the parliament's three biggest challenges in using ICT effectively?[6]

These questions mainly relate to strategic planning for ICT, since they refer to the parliament's own assessment of its current state and its goals and objectives for the near term. The findings therefore provide some interesting context to the responses given to the more detailed questions of the survey presented in later chapters.

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MOST IMPORTANT IMPROVEMENTS IN THE LAST TWO YEARS MADE POSSIBLE BY ICT

Figure 1.4 shows the responses to the question regarding the three most important improvements in the work of the parliament made possible by ICT in the last two years. The results are presented for all respondents (last column) and for each of the four country income levels.

The top three enhancements, each of which was selected by almost 50 per cent of all parliaments, are about the basic work of the parliament in managing and disseminating documents. They deal with increasing the capacity of parliaments to manage their information and their documents and to make them more readily available. All other choices were selected by one third or fewer of the respondents. It is interesting to note that all four income groups rated *more information and documents on the website* as their first or second choice and that this was the only choice that was selected by 50 per cent or more in each group. While *increased capacity to disseminate information and*

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6   Survey 2012, Section 1, Questions 19-22.

documents was second overall, it was a bit higher for those in the two lower income groups.

It is to be noted that the top two improvements – *more information and documents on the website* and *increased capacity to disseminate information and documents* – serve both members and the public. These improvements have the effect of increasing the levels of transparency and accountability of the institution as well as serving members.

Access to more information is fourth overall (33 per cent), but is clearly more important to parliaments in low income countries (50 per cent), which ranked it third among their choices. Other related improvements such as *exchange of information with other parliaments* and *better access to research* show the same relationship – they are more important to parliaments in low income countries than to others. It is reasonable to assume from these findings that parliaments in higher income countries are better able to meet their needs for more information, better research, and exchange of information with other parliaments, while this is still a significant need for those in low income countries.

The capacity to provide *more timely publication of plenary proceedings* shows a different pattern. While this is rated as an important improvement by only 25 per cent of all respondents, it was selected by 47 per cent of parliaments in the lower middle income group. One possible interpretation of these data is that those in the lower middle income group reached the point in the last two years where they had the resources and the desire to work on this problem. This interpretation would further assume that those in the low income group are not yet at this point, while those in upper middle and high income groups have solved it. There is some support for this interpretation in Figure 1.5, which lists parliament's most important objectives for ICT in the next two years. The data there indicate that *more timely delivery of information and documents to members* is also a major objective for the next two years for more parliaments in the lower middle income group (63 per cent versus an average of 45 per cent for all income groups combined). The objective of *more timely publication of reports of plenary proceedings* remains more important for parliaments in the lower middle income group than the average, but the difference between this group and the average for all groups is not as large (32 per cent versus 20 per cent). However, it does rise in importance for those in the low income group, suggesting that more of them have the desire to address this challenge in the near term.

Improvements achieved in the past two years that relate specifically to citizens – *more interaction with citizens* and *more information provided to citizens* – were noted by only one fourth or fewer of all parliaments. However, as noted above, the first two improvements – *more on information and documents on the website* and *better dissemination* – do serve citizens. It is worth noting that fewer parliaments in low income countries pick these two items. It appears that as income level goes up, more interaction with citizens and more information for them becomes important to more parliaments. This seems a reasonable finding. A parliament must first have the capacity to manage and disseminate its own documents and information effectively before it can focus on providing those documents to its citizens. In addition, the digital divide and the smaller percentage of Internet penetration, with which many lower income countries are still dealing with, have to be addressed before more citizens can receive information about the parliament in electronic format and engage in online interactions with it.

Figure 1.4: Most important improvements in the work of parliament that have been made possible by ICT in the past two years by income level

	Low	Lower middle	Upper middle	High	All
More information and documents on the website	50%	53%	58%	51%	54%
Increased capacity to disseminate information and documents	55%	69%	40%	43%	49%
More timely delivery of information and documents to members	40%	44%	48%	49%	47%
Access to more information	50%	36%	38%	19%	33%
Better management of documents	20%	25%	27%	34%	28%
More timely publication of reports of plenary proceedings	20%	47%	21%	15%	25%
More interaction with citizens	10%	28%	25%	23%	23%
More efficient preparation of legislation	15%	19%	25%	21%	22%
More information provided to citizens	5%	17%	17%	30%	19%
Access to older documents	10%	19%	6%	26%	16%
Exchange of information with other parliaments	25%	14%	13%	11%	14%
Better access to research	20%	14%	10%	11%	13%
More timely publication of reports of committee proceedings	15%	17%	10%	4%	11%
More communication with young people	5%	6%	2%	6%	5%
Other	5%	0%	2%	4%	3%

(Source: Survey 2012, Section 1, Question 19. Sorted by percentages for All Respondents)

When the findings from Figure 1.4 are considered collectively one conclusion is that the most important improvements in the last two years for most parliaments - *more information and documents on the website* and *increased capacity to disseminate information and documents* are enhancements that benefit *both* citizens *and* members *and also* focus on the fundamental work of the parliament. However, as it will be seen in further discussion of Figure 1.5 concerning the most important objectives for ICT in the next two years, many parliaments feel they still have more to do in this area.

MOST IMPORTANT OBJECTIVES FOR ICT IN THE NEXT TWO YEARS

Compared to the most important improvements of the previous two years, the top priorities for the next two years are spread over a larger number of objectives (none were selected by more than half or more of all parliaments; six were selected by 35 per cent-46 per cent). However, as with improvements cited in the previous years, all but one of these deals with the management and dissemination of documents.

Increased capacity to disseminate information and documents shows the highest number of respondents (46 per cent), but as with previous accomplishments it is still more important to those in the two lower income groups. *Better management of documents* is third on the list (43 per cent) and it rises in importance among parliaments at the higher income levels. It is possible that more of these parliaments are satisfied with their ability to provide information and documents to members and the public and that they are now focusing on managing those documents better, perhaps using XML, adopting mobile applications, etc. As noted with past improvements, these objectives serve the needs of both members and citizens and they increase transparency and accountability.

As mentioned previously, *more interaction with citizens* was rated an important accomplishment in the last two years by less than one fourth of parliaments (see Figure 1.4). However, many

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acknowledge that there is more to be done in this area, as evidenced by the fact that almost two fifths of parliaments rated it as an important objective for the next two years (see Figure 1.5). It is somewhat surprising in light of this finding that *more communication with young people* was identified as an objective by only 12 per cent of parliaments. Perhaps many parliaments feel they have met this need or that it does not matter as much as other challenges. Although more of them selected it as an objective for the next two years than as an accomplishment of the past two years, the percentages are quite small.

Nevertheless, when taken together, the responses to these two questions (most important accomplishments and most important objectives for ICT) suggest that parliaments will continue to work on improving access to documents and information about their work, and that this will have positive results for members and citizens and for the goal of becoming a more open institution.

Figure 1.5: Parliament's most important objectives for ICT in the next two years

	Low	Lower middle	Upper middle	High	All
Increased capacity to disseminate information and documents	60%	61%	35%	40%	46%
More timely delivery of information and documents to members	35%	63%	41%	36%	45%
Better management of documents	25%	39%	47%	47%	43%
More information and documents on the website	45%	47%	43%	34%	41%
More interaction with citizens	30%	34%	43%	43%	39%
More efficient preparation of legislation	30%	45%	39%	26%	35%
More information provided to citizens	15%	37%	20%	30%	26%
More timely publication of reports of plenary proceedings	30%	32%	16%	11%	20%
Access to more information	20%	24%	16%	19%	19%
Exchange of information with other parliaments	30%	21%	10%	17%	17%
Access to better research	20%	18%	14%	11%	15%
More timely publication of reports of committee proceedings	20%	26%	8%	9%	14%
Access to older documents	10%	26%	12%	6%	14%
More communication with young people	0%	16%	12%	13%	12%
Other	0%	3%	4%	13%	6%

(Source: Survey 2012, Section 1, Question 21)

MOST USEFUL TECHNOLOGIES INTRODUCED TO IMPROVE THE WORK OF PARLIAMENT

Figure 1.6 shows the technologies that parliaments identified as being the most useful in helping to improve the work of the parliament. Only two were selected by more than one third of all parliaments: *audio and/or video capture of proceedings* and *systems for putting information and documents onto websites.*

Many parliaments experience difficulty in capturing and publishing records of plenary proceedings on a timely basis. The introduction or continued used of traditional transcription technologies faces challenges because there are fewer people with the skills required by these systems. Audio and/or video records of proceedings that can then be transcribed directly onto PCs provide some parliaments with alternative means for preparing and publishing records on a more timely basis. Audio and/or video capture combined with improvements in webcasting technology also offers the possibility of making these records available to members and to the public on the parliament's website.

Figure 1.6: Most useful technologies introduced in the past two years to improve the work of parliament

	Low	Lower middle	Upper middle	High	All
Audio and/or video capture of proceedings	60%	70%	40%	43%	51%
Systems for putting information and documents onto websites	55%	49%	52%	35%	46%
Systems for ensuring the preservation of documents in digital formats	10%	30%	42%	22%	28%
TV broadcasting of plenary sessions	15%	16%	35%	24%	24%
Mobile communication devices	5%	8%	17%	46%	22%
Mobile communication applications for members	15%	14%	17%	35%	21%
Webcasting	0%	19%	27%	22%	20%
Social media like Facebook or Twitter	5%	24%	21%	20%	19%
Document repositories	5%	27%	15%	20%	18%
Open source software	20%	30%	19%	7%	18%
Systems for creating and editing documents	15%	19%	17%	13%	16%
Open standards such as XML	10%	0%	8%	24%	11%
Radio broadcasting of plenary sessions	15%	14%	8%	4%	9%
Speech-to-text dictation software	5%	3%	8%	7%	6%
Systems for managing e-mail from citizens	5%	5%	10%	0%	5%
Mobile communication applications for citizens	0%	0%	2%	11%	5%

(Source: Survey 2012, Section 1, Question 20)

The *World e-Parliament Report 2010* found that 43 per cent of parliaments were already webcasting plenary proceedings and 29 per cent were planning or considering doing it. Based on those results, the report concluded that audio and video would become predominant methods of communicating with citizens in the next few years. The findings shown in Figure 1.6 are consistent with these observations.

In addition, Figure 1.4 showed that the most important accomplishment of the past two years selected by the highest number of parliaments (54 per cent) was *more information and documents on the website*. Consistent with this finding is the fact that *systems for putting information and documents onto websites* were rated most useful by 46 per cent of parliaments.

As more parliaments move to digital formats for all documents, it becomes increasingly important that they have a digital archive that can ensure permanent access. In this context, it is not clear how to interpret the finding that only 28 per cent of parliaments selected *systems for ensuring the preservation of documents in digital formats* as one of the most important technologies. It may be that many have not yet found satisfactory systems, or it may mean that they are not yet concerned about the issue of preservation. It is likely that both are true, which suggests the need for more analysis and sharing of best practices in this vital area.

Mobile devices and mobile communication applications for members were ranked fifth and sixth respectively on the list (22 per cent and 21 per cent). Mobile communication applications for citizens were last on the list (5 per cent of parliaments). What is striking about these technologies is how their perceived value goes up for those in the high income group. Mobile communication devices were actually the technology ranked important by the highest percentage of parliaments in the high income group (46 per cent) compared to the percentage of all respondents (22 per cent). Mobile communication applications for members were rated by the third highest percentage of these same parliaments. Because of the low cost of these devices and many of their applications, it is probable that this is an indication of the future importance of mobile technologies for all parliaments rather than just for those at the high income end. As will be seen in Chapter 3, the number of parliaments offering access to their websites for both members and the public through mobile services increased from 2009 to 2012.

Nearly one fifth of parliaments identified *social media* such as *Facebook or Twitter* as being important. As will be seen in Chapter 2, this is consistent with the finding of increases between 2009 and 2012 in the percentages of those that use or are planning to use these technologies. As with other technologies the small number of parliaments in the low income group rating this technology as important may be a reflection of higher priorities and the size of the digital divide within the country.

Open source software and open standards for documents have an inverse relationship to the income levels of the parliaments. As might be expected, more parliaments in the lower income groups rank open source software important compared to those in the higher groups. Conversely, open standards such as XML are rated important by just over 10 per cent of all respondents, but by almost one quarter of those in the high income group. If the adoption of XML follows the pattern predicted for mobile technologies suggested above, it would mean that high income parliaments will be the earliest adopters and those in the other income groups would follow. However, open document standards are arguably more complex to implement than mobile technologies, which require less customization. It is therefore equally possible that the adoption of open document standards will not follow the same pattern.

Finally, it is interesting to note that while parliaments in the low and lower middle income groups may already have technology for *radio broadcasting of plenary sessions*, two to three times as many in these two groups still rank this technology important compared to those in the upper middle and high income groups.

BIGGEST CHALLENGES IN USING ICT EFFECTIVELY

The biggest challenges in using ICT effectively have been the same for many years - budget and human resources - even for parliaments in the high income group. Figure 1.7 presents the responses to this question for all respondents and for each income level. Perhaps equally surprising is that, even among parliaments in the high income group, *inadequate staff capacity* is not only among the top two challenges, it is listed first by the largest number in this income group. One interpretation of these results is that for those in the lower income groups, not having a large enough ICT staff is understandable; the challenge faced by those in higher income groups may be in not having an ICT staff with the right skills in the rapidly changing world of technology.

Figure 1.7: Parliament's biggest challenges in using ICT effectively

	Low	Lower middle	Upper middle	High	All
Inadequate financial resources	68%	76%	61%	41%	59%
Inadequate staff capacity	42%	47%	47%	48%	47%
Members' lack of knowledge of ICT	32%	42%	29%	30%	33%
Lack of a strategic plan for ICT	47%	26%	29%	20%	27%
Lack of engagement by the leaders of the parliament	11%	21%	22%	4%	15%
Lack of access to best practices	26%	21%	12%	7%	14%
None of the above	0%	5%	6%	35%	14%
Lack of support from international donor community	21%	11%	6%	2%	8%
Other	0%	3%	6%	15%	7%
Lack of control of financial resources	0%	11%	8%	2%	6%
Insufficient ICT market and vendors in the country	5%	8%	6%	2%	5%
Access to PCs and the Internet for citizens	5%	5%	6%	0%	4%
Inadequate Internet access in the parliament	5%	8%	2%	0%	3%
Unreliable electrical power	11%	3%	0%	0%	2%

(Source: Survey 2012, Section 1, Question 22)

These challenges speak to the critical importance of an ongoing training program for ICT staff, as discussed further in Chapter 7. They also speak to the importance of sharing knowledge and possibly to collaborating on solutions to common needs when the natural barriers to such undertakings can be overcome. This applies to parliaments in all income groups. There are examples of this type of collaboration, such as those described in Chapter 5 on open document standards and in Chapter 10 on international cooperation. Resource constraints may in fact make it necessary in the future to find ways to manage the difficulties inherent in developing shared solutions. Parliaments may have to move from sharing ideas to sharing the work.

Strategic planning is also a means of addressing the challenges of financial resources and staff capacity. Chapter 8 suggests how strategic planning can help find ways for dealing with some of these issues.

Finally, it is important to note that advances in technology such as cloud computing increasingly offer lower cost solutions to many requirements. Chapter 7 on infrastructure and human resources

discusses this in more detail. However, it is important to note that while these advances may lower the cost of building an adequate technical infrastructure, they do not eliminate the need for a skilled staff that can evaluate and integrate some of these lower cost shared services with the elements of the infrastructure that the parliament has to maintain for itself.

Box 1.3

> The Parliament is entering a phase of progress toward better organization of ICT; for the first time ICT is practiced with a clear vision. The awareness is created, which will help us to implement the necessary changes.
>
> *Comment by a respondent to the 2012 Survey*

Figure 1.7 shows that there are other important challenges, but they are cited by only a third or fewer parliaments. While members' lack of knowledge of ICT does remain a challenge for at least one third, it is also true that two thirds do <u>not</u> put members' understanding of technology in the top three. Nevertheless this is a concern in parliaments at every income level and it is likely to be so for quite some time. Chapter 7 discusses findings related to training and orientation programs for members.

Box 1.4

> Usually members are people from the rural areas where ICT is not seen to be important, as a result, such people need intensive training.
>
> *Comment by a respondent to the 2012 Survey*

Figure 1.7 shows one interesting finding that might increasingly be regarded as a relative "non-concern": *lack of engagement by the leaders of the parliament* (in the ICT domain) is a major problem for only 15 per cent of all respondents. While this varies by income level, the percentages are still comparatively low. Chapter 8 on strategic planning presents further evidence that this is the case. This is not to suggest that leadership at the top is not critical; it is simply to suggest that it is not as major a problem for many parliaments as are other concerns.

Among other challenges, lack of access to best practices and lack of support from the international donor community remain a problem, as expected, for 20 per cent and 25 per cent of parliaments in the low income group.

The conclusion from these findings is that human and financial resources continue to be the most important challenges for using ICT effectively in legislatures. The possible solutions include better training for the ICT staff, more effective strategic planning, enhanced international cooperation, and the intelligent adaptation of advances in technology that offer lower cost options.