

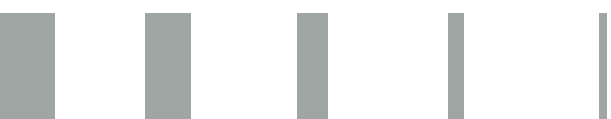
# CITIZENS ONLINE



INSTITUTE FOR  
PUBLIC AFFAIRS

**RESEARCH REPORT**

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# CITIZENS ONLINE

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## This study was carried out within the project

*Launching e-Governance in Slovakia: Empowering Citizens to Participate, Influence and Exercise Democratic Control*

with the support of

and in cooperation with



Trust for Civil Society  
in Central & Eastern Europe



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## Methodology

The project titled *Citizens Online* was carried out by a way of **empirical quantitative research on a representative sample size of 1035 respondents**. It allowed us to make generalizations of the population of the Slovak Republic based on basic social-demographic selection marks such as sex, age, education, size of agglomeration, region).

Standard statistical methods were employed in the analysis of the data, utilizing software developed by **SPSS Inc.**

**All the data** contained in the accompanying graphs and tables, **with the exception of Indices of Digital Literacy**, are in **percent form**.

**DLI – Digital Literacy Index** represents a range of digital literacy on a scale from 0 to 1, 0 representing total digital illiteracy and 1 representing total digital literacy.

In the analysis of the data, the following **typology of households** was employed: Young individuals (without offspring, 1-2 adults, aged 35 or below); young household (1-2 parents, offspring aged 7 or below); average household (1-2 parents, offspring aged predominantly between 7-18); adult household (1-2 parents with predominantly adult offspring); three- generational household (offspring, 1-2 parents, 1-2 grandparents); older household (1-2 adults aged 35-60, without offspring in the household); senior citizens (1-2 adults aged over 60, without any offspring in the household).

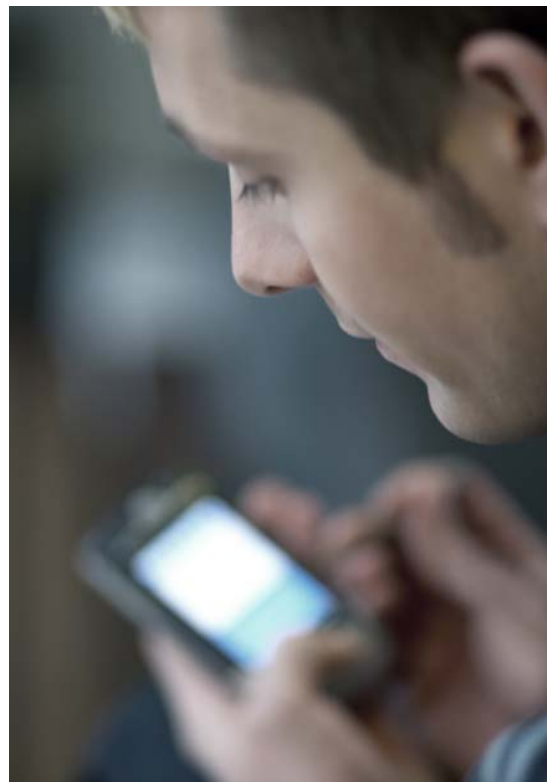
In some cases the remainder of the tabulations **to add to 100%** contained answers such as **"I don't know"** or **"did not answer"**.

<b>Type of research</b>	Quantitative representative research
<b>Sample size</b>	1 035 respondents aged 18 years and over
<b>Sample selection</b>	Selection based on quotas (determined based on the latest census carried out by the Statistical Bureau of the Slovak Republic in May 2001)
<b>Quota selection marks</b>	<ul style="list-style-type: none"> <li>▪ sex</li> <li>▪ age</li> <li>▪ education level attained</li> <li>▪ nationality</li> <li>▪ size of agglomeration</li> <li>▪ region</li> </ul>
<b>Method of interview</b>	Personal (face-to-face) interview recorded into a standardized questionnaire form
<b>Field data collection</b>	Interviewers trained by FOCUS agency; The interviews were conducted between July 8th – August 21st, 2007
<b>Data recording</b>	By a way of scanning
<b>Quality control of data collection</b>	20% random check of the data of each interviewer
<b>Output</b>	Database of primary data in SPSS
<b>Types of analysis used</b>	<ul style="list-style-type: none"> <li>▪ Descriptive statistics – sample size, averages, deviations, contingency tables</li> <li>▪ Correlation analysis – measure of mutual dependency between two variables</li> <li>▪ Factor analysis – analysis of the structure of mutual dependence between the variables</li> <li>▪ Regression analysis – analysis of the relation between dependent and independent variable</li> <li>▪ CHAID* analysis – set up of prediction models by a way of branch – out method</li> </ul>

**Note:** \* Chi-square Automatic Interaction Detection

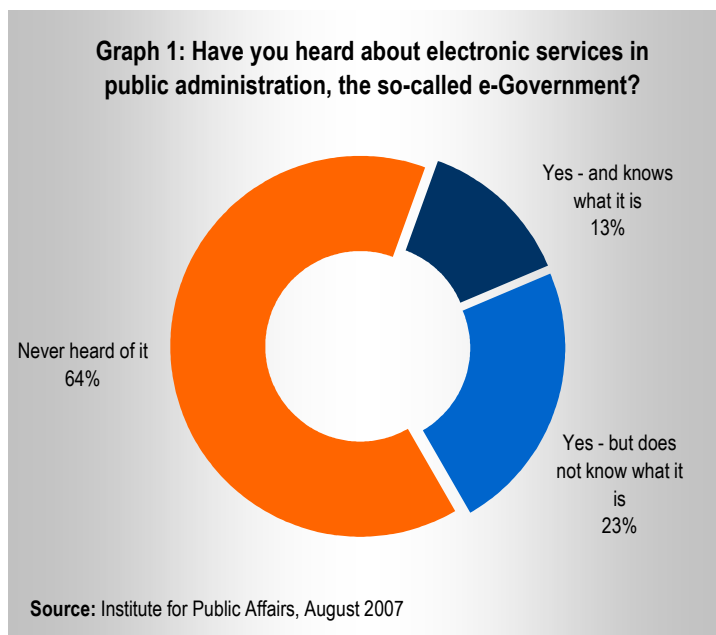
## Main Findings

- The lack of information on their availability of public online services remains one of the main barriers to everyday use of electronic services by the public. Upwards of 87% of the population lacks information about the nature of this type of service and how to use it. A conservative approach by the population was yet another barrier that was uncovered when it comes to the mode of communication with institutions of the public sector, including bureaus, local administration and others. The majority of the tasked respondents – almost two thirds – expressed a preference in going to the bureaus in person as opposed to communication online. Furthermore, only every 10th respondent prefers electronic form of communication over the traditional method. This preference is due to deeply rooted behavioral models from the period of the so-called real socialism, in conjunction with the low level of informedness about new technologies.
- The research also uncovered significant deficits when it comes to use of public online services. More than 75% of the population has not used public online services at all. Disinterest and preference for a face-to-face contact were among the most prevalent reasons cited. Other reasons include insufficient level of informedness about the services' availability, their complicated nature, or lack of internet access.
- The majority of those who have used at least one type of public online service within the last year have expressed content with its quality. In general, the rule is that the more complex the service, the higher the share of satisfied users. For instance, 75% of the respondents who have used full-fledged electronic communication with a bureau rated it favorably. Conversely, the greatest numbers of dissatisfied users were found among those who have used electronic communication at the basic level – searching for availability of information on the homepages. However, the overall perception of public online services was found to be positive – with 96% of respondents expressing a view that this kind of service can save money, time and reduce other indirect costs. Among the most positively evaluated attributes of online services, according to respondents are their easy accessibility, quick administration, and savings in administrative fees. On the contrary, the most often cited concerns included protection of personal information.
- The majority of the respondents clearly see the advantages of public online services and their viability into the future. The benefits that were cited the most frequently include reduction in time, cost savings, simplification of the administrative process, reduction in the bureaucracy and hassles. The areas where the use of public online services enjoys wide support include issuing personal documents, healthcare services, job searches or filing personal tax returns online.
- When it comes to using public online services, access via computer and internet directly from the households is the preferred means which was listed by half of the respondents.
- The level of digital literacy of the population was found to be one of potential barriers to implementation of public online services at a wider scale. Despite the fact that sizable share of the population has no problem with basic skills, which are a prerequisite to their successful use, such as basic PC usage, browsing the internet, printing documents or using E-mail communication, upwards of 50% of respondents expects that they will need assistance with public online services (combined "definitely" or "rather" responses). The research also revealed another potential barrier to wider use of online services – that is potential security risks associated with it.
- The level of practical experience with usage of different types of commercial and non-commercial types of public online services points to the fact that presently almost half of the population has the necessary skills to use every kind of public online service offered – at the level of information gathering. This means that half of the population readily searches for information on the internet with regard to the administrative steps and forms required to perform various administrative tasks. Moreover, more than one-third of the population is capable of one-way interaction with bureaus, i.e. readily downloads necessary documents required to initiate the administrative process. However, only every fifth person was found to have the skills and experience needed to use public online services on the so-called transaction level, i.e. at the level of full electronic case handling.



## The Level of Informedness about Public Online Services and Preferred Means of Communication

"Everything is on the Internet" – this famous slogan is hardly applicable when it comes to availability of public online services in Slovakia. On one hand, the monitoring reports on the state of e-Government point to a gap when it comes to the quality and availability of services offered to the citizens online, on the other hand, we can add to the slogan "many people do not know about it yet" to make it reflect the situation on the ground. It was this significant gap in the level of informedness that was confirmed by a nation-wide research conducted in May 2007. As is shown in Graph 1, 64% of the respondents stated that they never heard of public online services.<sup>1</sup> Only one third of respondents replied that they have heard of this kind of service and know "what it is about". Almost a quarter of respondents (23%) have declared that they have indeed heard of it, but "are unfamiliar with what they are about." Based on these results, we can sum up that upwards of 87% of the population has a deficit in informedness about public online services.



### Mentioned above-average number of times

- Higher education (College, High School w. exam.)
- White collar, entrepreneurs, freelancers
- Employees of state and public sector
- Inhabitants of Bratislava and Košice
- Inhabitants of Bratislava region

### Mentioned above-average number of times

- Men
- 18-24 years old
- Higher education (College, High School w. exam.)
- White-collar workers, students
- Employees of government sector

### Mentioned above-average number of times

- Women
- 60 years and over
- Lower education (Middle School, High School w/o exam.)
- Blue-collar workers
- Agricultural employees
- Agglomerations < 2 ths. inhabitants
- Inhabitants of Trnava and Trenčín region
- Inhabitants of Trnava and Trenčín region

Thus, the level of informedness is proving to be one of the key barriers to a more wide-spread use of public online services in Slovakia. From a socio-demographic viewpoint, the groups of population that are most lacking in information include women, individuals over 60 years of age, those with lower education levels, blue-collar workers. In terms of geographic distribution, it is the inhabitants of the smallest agglomerations (up to 2 thousand inhabitants) and inhabitants of Trenčín and Trnava regions

who are the least informed about public online services. However, as is shown by Graph 1, members of the younger generation, those with higher level of education and qualifications are also in the dark when it comes to the definition and possibilities of e-Government. What is alarming however is that the employees of the public sector are often missing important information as well. It is especially worrisome when one takes into account that it is these employees who should in the future be offering these services to the public. The research also uncovered deficiencies in the level of informedness among the so-called online population as a whole – i.e. those individuals who use the Internet on a regular basis for a multitude of tasks. Among this group, upward of 44% of the respondents have stated that they are lacking information and 33% had some information about e-Government services, but were not familiar with what it actually stands for.

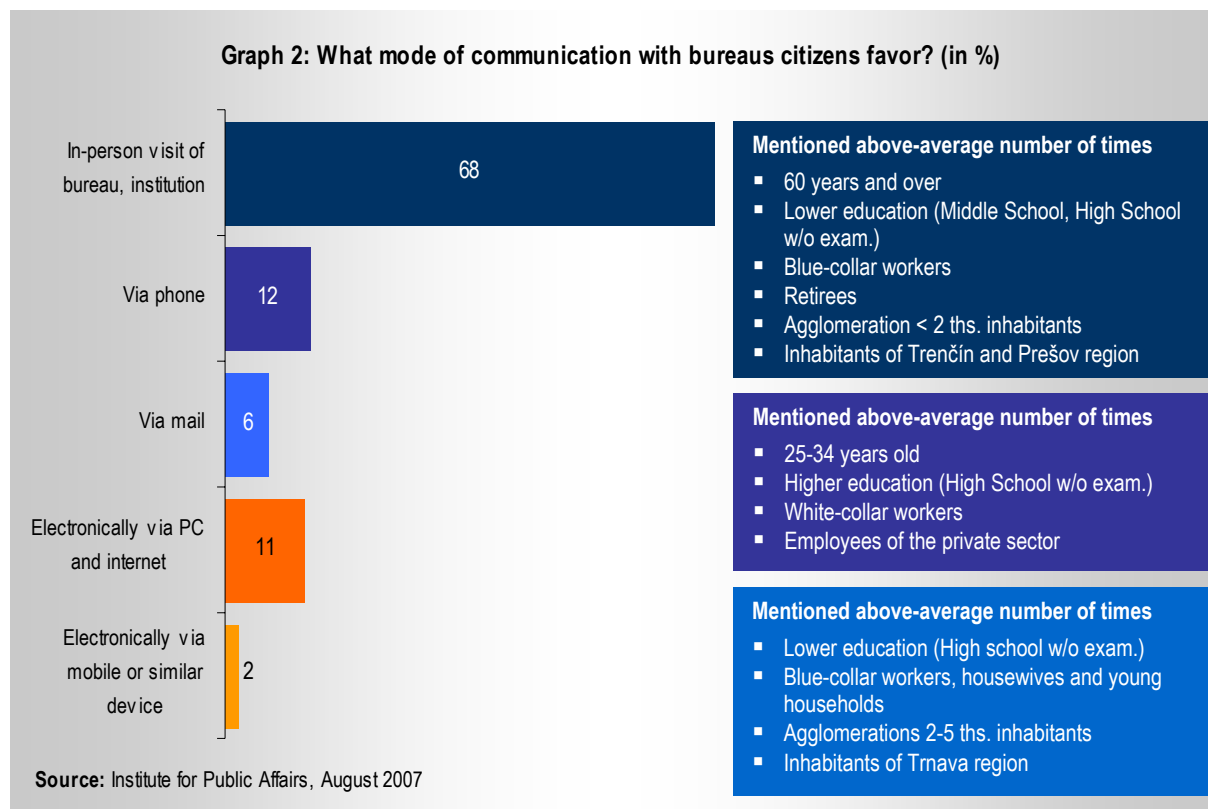
On the other hand, a small portion of the population was found to be relatively well informed about e-Government, and can describe it as well as its function, as can be seen from statements below:

- „...It denotes services via the Internet without the need to visit a particular bureau in person“;
- „...Taking care of various administrative tasks via electronic form“;
- „...The possibility to take care of administrative tasks by a use of computer and Internet“;

<sup>1</sup> For the purposes of this report, electronic online services are synonymous with e-services or online services.

- „...Use of the internet to gather information from state institutions and for communication with them“;
- „...Submission of tax returns and various personal data updates for social security and health insurance “;
- „...The possibility to communicate electronically with bodies of public administration. This way it is possible to file a personal income tax return or download the necessary forms “;
- „...homepages of the government, the ministries and bureaus“;
- „...Many documents can be filled out and sent electronically to the respective bureau, a tax return for instance“.

These statements were uttered by y individuals with predominantly higher level of education, white collar workers, entrepreneurs, and freelancers, some employees of the government and public sector, inhabitants of Bratislava, Košice and the Bratislava region.



**Mentioned above-average number of times**

- 60 years and over
- Lower education (Middle School, High School w/o exam.)
- Blue-collar workers
- Retirees
- Agglomeration < 2 ths. inhabitants
- Inhabitants of Trenčín and Prešov region

**Mentioned above-average number of times**

- 25-34 years old
- Higher education (High School w/o exam.)
- White-collar workers
- Employees of the private sector

**Mentioned above-average number of times**

- Lower education (High school w/o exam.)
- Blue-collar workers, housewives and young households
- Agglomerations 2-5 ths. inhabitants
- Inhabitants of Trnava region

**Mentioned above-average number of times**

- 18-34 years old
- Higher education (College, High School w. exam.)
- White-collar workers
- Entrepreneurs, freelancers
- Students
- Employees of state and public sector
- Agglomerations > 50 ths. inhabitants

**Mentioned above-average number of times**

- 18-24 years old
- Higher education (College, High School w. exam.)

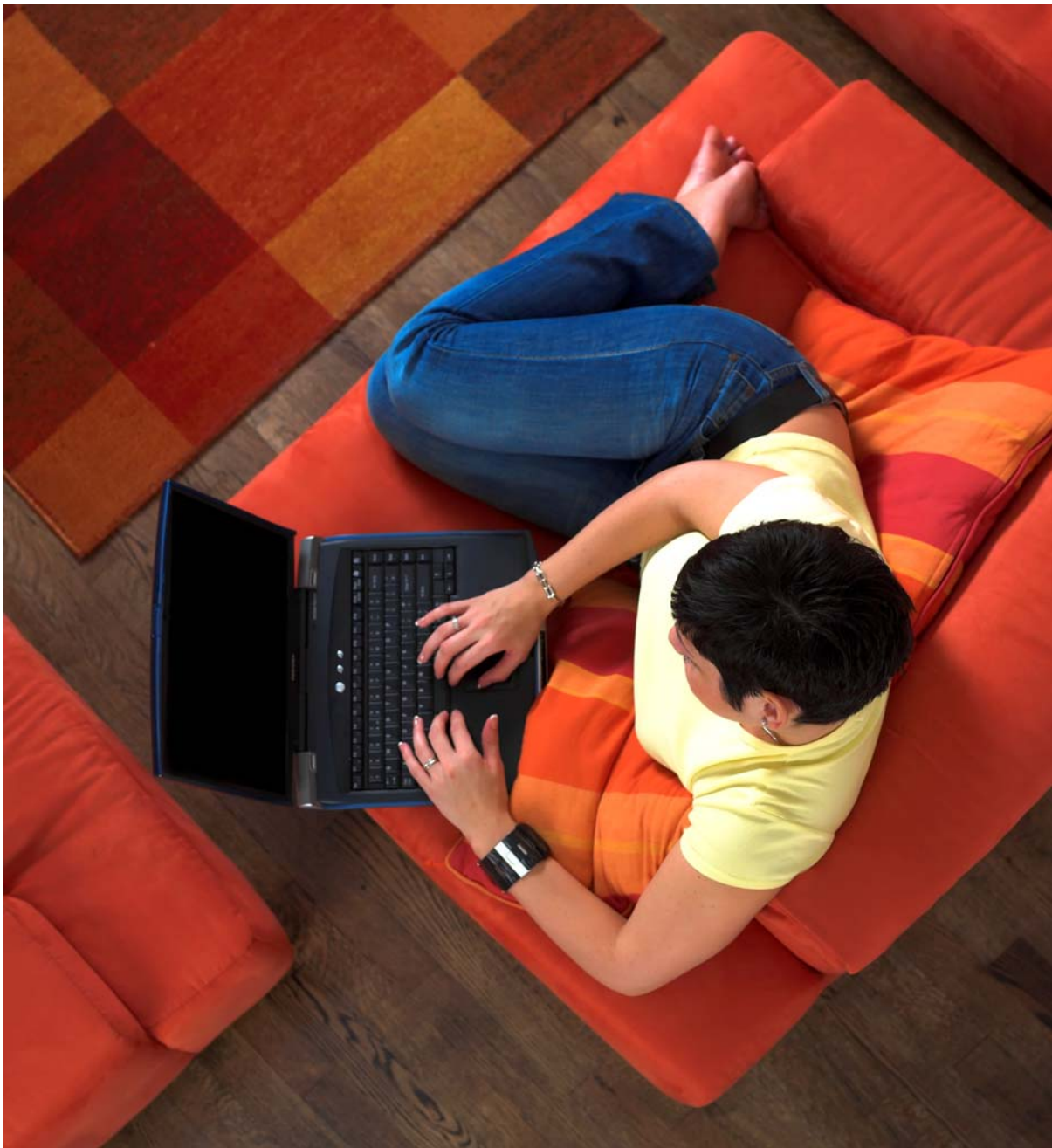
A conservative attitude toward communication with bodies of public administration on part of certain segments of the population was found to represent a significant barrier to a more widespread usage of presently available online services, as well as the future possibilities in this realm. As is illustrated by Graph 2, the established and preferred way of dealing with the bureaus is via face-to-face contact, expressed by 68% of respondents, followed by telephone contact and mail preferred by 12% and 6% of respondents respectively. Only every tenth respondent favors electronic form of communication with bureaus, either by a way of PC and internet or via mobile phone (11% and 2% respectively).

The socio-demographic analysis further revealed that the conservative attitude when it comes to dealing with public institutions is universally distributed across the population. In other words, the face-to-face contact dominates when it comes to the preferences of different social groups within the population, with higher than average representation among the older generation, individuals with lower education and qualification levels, as well as inhabitants of small agglomerations. From the point of view of regional distribution, the face-to-face preference registered the most frequent occurrence among the inhabitants of Trenčín and Prešov region.

The preference for a modern form of communication with bureaus, using electronic means was mostly preferred by the younger generation, those with higher education, white collar workers, freelancers, students, inhabitants of big cities and the Bratislava region. When it comes to implementation of e-services in the public administration, these groups should be con-

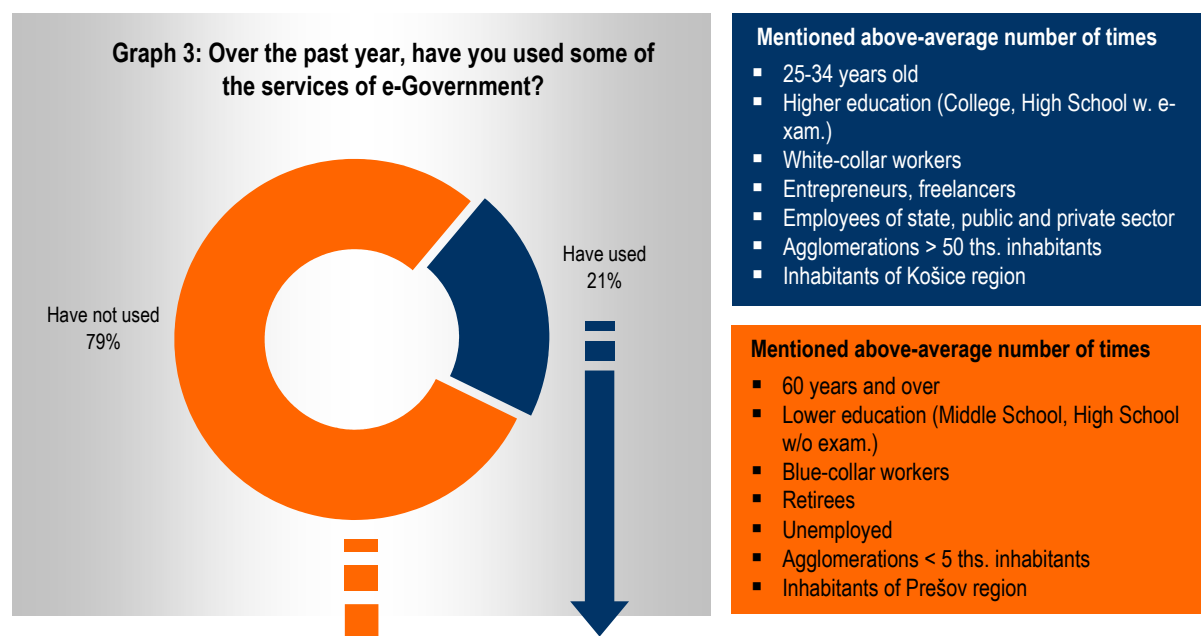
sidered as the most progressive in increasing the future user-base, much higher than is the case with the rest of the population.

The pre-eminence of the conservative approach on part of the population when it comes to communication with public administration is the result of deep-rooted habits and models of behavior. These were reinforced over decades by the existence of the centralistic and bureaucratic apparatus of the former communist regime. Long-established practical experiences with this bureaucracy only served to reinforce the conviction in the average person that without a personal visit (often accompanied by various forms of bribes) "it is impossible to get any results at the bureau". Moreover, it is hard for most people to accept that this "impersonal" form of communication carried out via modern information technologies decreases the room for unnecessary hassles and can eliminate administrative mistakes, the need for bribes for early resolution, as well as other positive outcomes. As was confirmed by the findings, there exists a correlation between the preference for a face-to-face approach when it comes to administrative tasks and the low levels of informedness about new communication means or technologies. As long as the population will suffer from an information deficit in the realm of this alternative and the benefits it brings, it will be very difficult to see an increase in demand and consequently use of this new approach.



## Hands-on Experience with and Attitudes toward Public Online Services

Despite the fact that when it comes to implementation of full-fledged electronic services in the public administration the Slovak Republic still lags behind other countries of the European Union, at the time of this writing, there is enough services available to the public allowing a basic transaction at the informative level, or the level of one-way information flow offering the possibility to download forms and other documents from public websites. As the research has shown, every fifth respondent (21%) has used some form of e-Government service over the past year.



### Forms of e-Government services used (responses of those who have used services in %)

▪ <b>Searching, finding information</b> on a web site of particular institution, bureau	92
▪ <b>Download</b> of various forms, applications from websites	86
▪ Electronic communication via <b>electronic mail, text messages, etc.</b>	51
▪ <b>Full electronic communication</b> , such as through electronic forms or other electronic applications	32
▪ Other means	2

### Reasons for not using e-Government services (respondents who have not used the services in %)

▪ <b>Not interested</b> in this type of communication with bureaus, institutions – I prefer the traditional way	28
▪ <b>Do not have sufficient information</b> about the possibility of use of this type of services	16
▪ <b>Do not have access to Internet</b> (at home, workplace, public place)	15
▪ <b>Do not understand this technology</b> , it is too complicated for me	12
▪ <b>Do not trust</b> services offered via internet or other electronic form	6
▪ Do not have sufficient <b>experience</b> with <b>computer</b> work	6
▪ Do not have <b>experience</b> with <b>internet work</b>	5
▪ The <b>cost</b> computer and internet are high for me	3
▪ Other reasons	9

Source: Institute for Public Affairs, August 2007

Furthermore, the analysis of the socio-demographic background of respondents has confirmed that the users of online services rank among those members of the population that are better informed about it and have a preference for modern means of communication with bureaus. Members of this group include the younger generation, those with higher level of education, white-collar workers, entrepreneurs, and freelancers, employees of the government, public and private sectors, as well as inhabitants of larger cities.

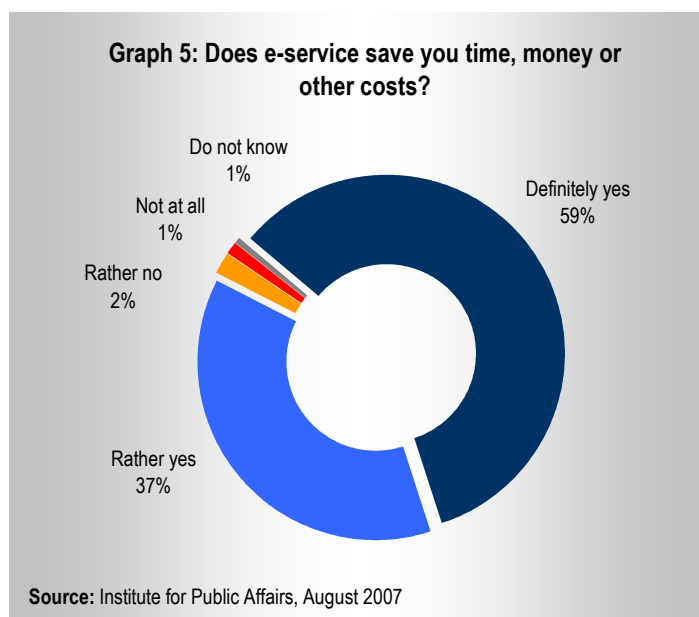
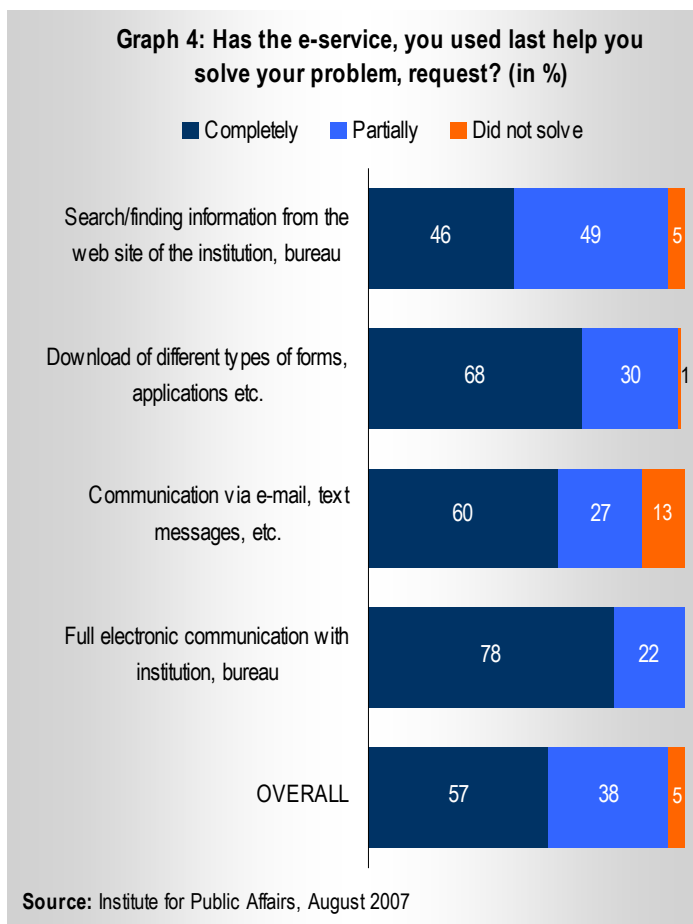


As can be seen in Graph 3, 79% of the population has not used electronic public services at all within the past year. Among the most frequently used arguments ranked disinterest in this means of communication with bureaus, institutions and preference for a traditional way of handling of official tasks, i.e. in person. Other mentioned reasons, included insufficient level of informedness about the opportunities to use this kind of services (16%), as well as its complicated nature and difficulty of use (12%). Another 15% of respondents have cited lack of access to internet (either at home, at workplace, or a public place) among the chief reasons of shunning this mode of communication. As can be seen from a table accompanying Graph 3, other reasons why not to use them included general distrust toward electronic services, low level of digital literacy or high cost of computers and internet access. However, it needs to be noted that these categories represented only marginal ones.

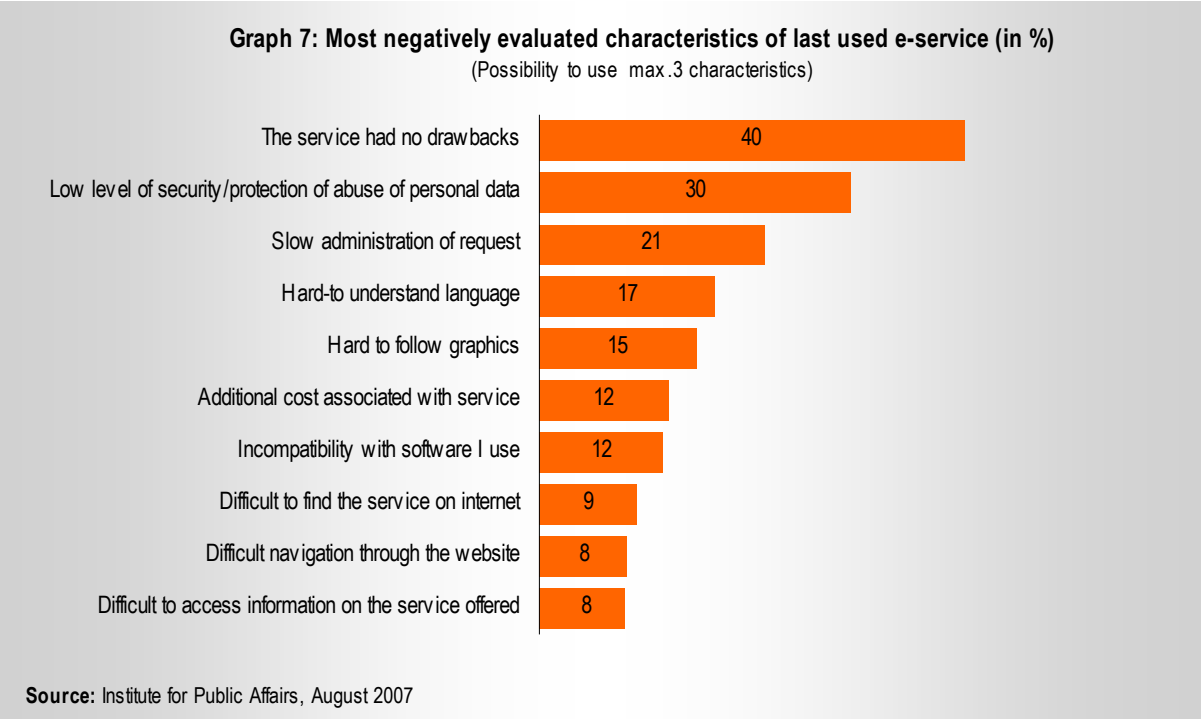
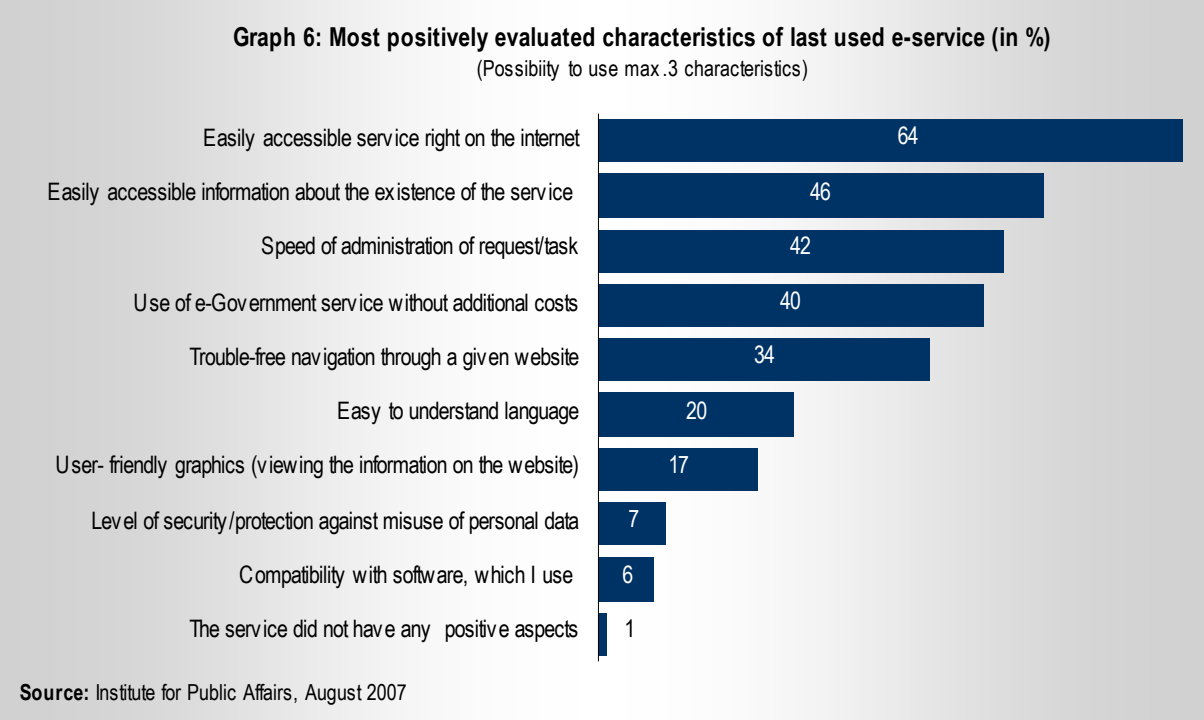
The prevailing inexperience with use of public online services is evenly distributed across the population. Despite this fact, it is more often declared by those over 60 years of age, those with lower level of education, blue-collar workers, the unemployed, retirees, inhabitants of small agglomerations below 5 thousand inhabitants. From a regional perspective, the least experience with these services was registered among the inhabitants of the Prešov region.

Hands-on experiences with public online services of one-fifth of the population have shown that majority of them (57 percent) of them managed to achieve their goal. A significant number of respondents – 38% – stated that it allowed them to solve the issue in part, with only 5% stating that the service in question failed to solve their problem. Furthermore, as is shown in Graph 4, with the increase in complexity of the service, the share of those who have had a positive experience and achieve their goal also increases. Thus, 78% of these respondents were able to completely solve their request by using full-fledged electronic communication with a bureau. When it comes to downloading various forms and other documents, 68% of respondents were successful in this task, with 60% achieving their aim through e-mail or text-message communication. On the contrary, the number of satisfied users drops significantly- to 46% – when it comes to the simple task of retrieving information.

Vast majority of everyday users of information and communication technologies has a positive attitude when it comes to public online services. As can be seen in Graph 5, 96% of them have stated that its benefits are in saved money, time or other costs and hassles. Only a negligible share of this group (3%) had a negative experience. This overwhelmingly positive experience of majority of respondents could serve as a springboard for convincing the skeptical or hesitant portion of the population of the benefits of applying information technologies to improve communication between citizens and the public sector. As is shown by Graph 6, availability of the existing online services ranked among the most positively viewed characteristics, with 64% of respondents citing their easy availability directly on the internet and 46% availability of

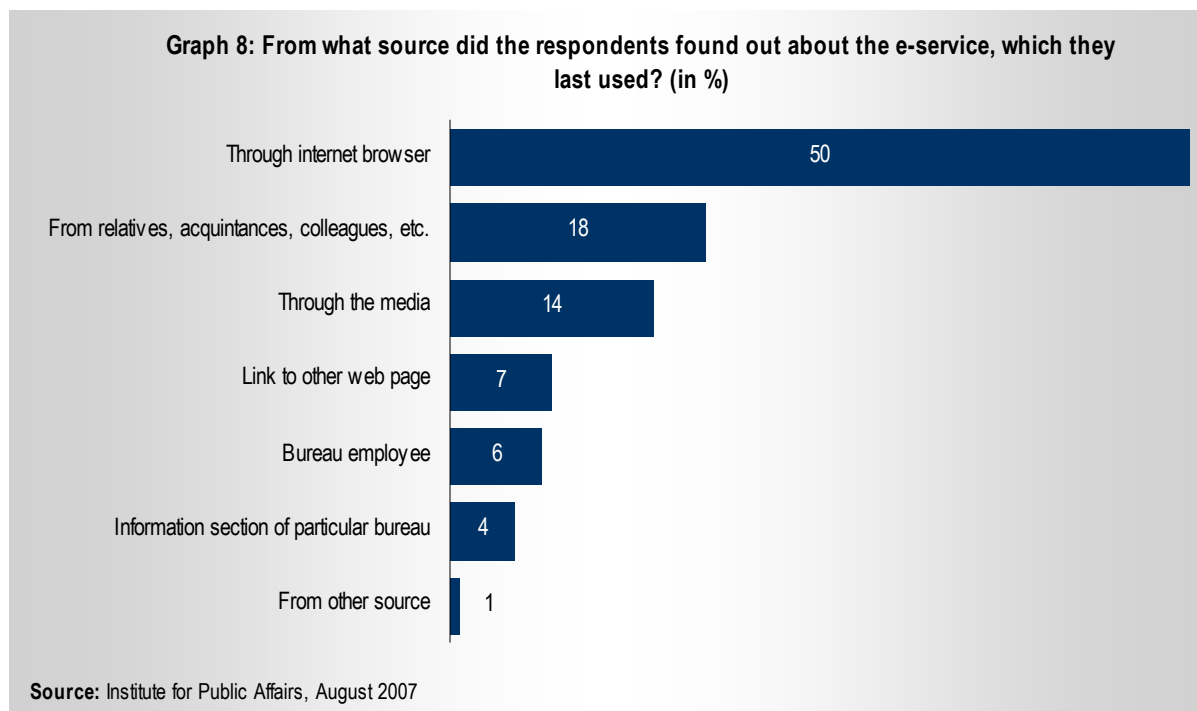


information about how to access online services. Among the most valued characteristics of public online services, large portion of respondents mentioned fast administration of their request and no additional costs associated with it (42% and 40% respectively). Moreover, one third of the respondents who have had an experience with some kind of public online service over the last year praised the easy navigation through a given website.



Even though 40% of these respondents stated that the public online service which they used had no drawbacks, one concern has echoed in the research findings – security. Nearly one-third (30%) of respondents have evaluated the low level of protection of personal information as worrisome (Graph 7). Other negatively perceived characteristics included lengthy administration process, difficulty understanding the language used on websites (excessively technical and bureaucratic), difficult layout, additional surcharges and software incompatibility. What is important, however, is that overall; the positive attributes exceeded the negatives when it comes to usage of public online services.

Other questions of the research attempted to shed light on the preferences of the users when it comes to finding and accessing online services. As can be seen in Graph 8, the search engine is the most often used information source on the internet with more than one half of respondents citing it. Nearly one-fifth of responses included other, namely informal sources, such as relatives, colleagues, and other sources. A surprising finding was that the media was cited as a source for public online services in only 14% of the cases.



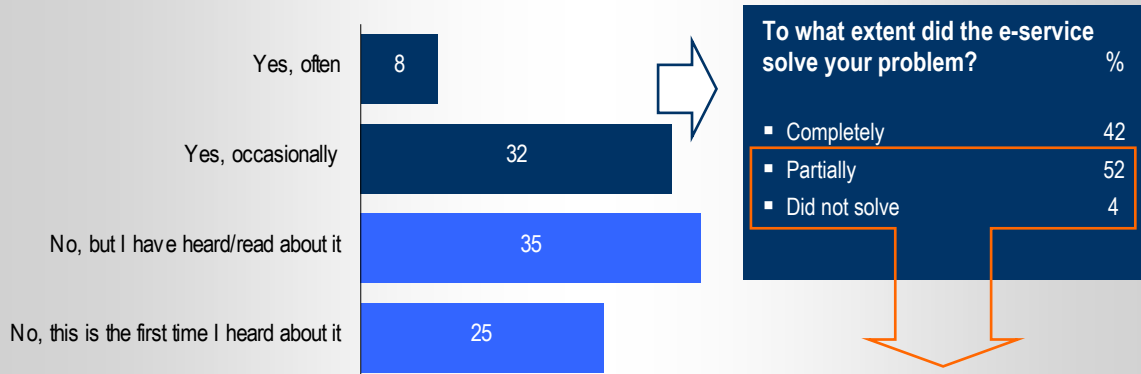
Surprisingly, those sources that should be readily consulted were scarcely used – only 7% of respondents cited links in the websites – of government bureaus, municipal administration, public institutions, to name a few – as a source of information. It is questionable, however, if we should blame low level of digital literacy for this negative finding or whether it is due to the lack of links on websites themselves. What is even more revealing is that even a smaller portion of users than this received the information from the employees in the respective bureau or institution, even though these lines of communication are the easiest to implement, with potential of reaching great numbers of potential users.

One of the ways to achieve easy and user-friendly access to a wealth of public online services was a project that attempted to overhaul an existing website on the Občan.sk [Citizen.sk] portal and make it into a Central Public Administration Portal [<http://portal.gov.sk>]. Of crucial importance for the success of such an ambitious project was creating a centralized access to online services and offer complex and holistic package of services. Graph 9 illustrates the attitudes of the respondents toward this portal. A positive sign is that 40% of the adult population has at some point used it, with 8% using it often and 32% using it occasionally. Furthermore, 35% of respondents stated that they have not used the portal at all, but have heard of it, or read about it. Only 25% of the respondents had no knowledge of such a portal.

Overall, the hands-on experience with the portal, but namely the level of informedness of the public about it was found to be good. On the other hand, there were also some drawbacks, which were mentioned by the respondents – namely the lack of certain types of services. As can be seen from the table in Graph 9, 42% of those who have had some experience with the portal have stated that it helped them solve their problem or request completely. However, the majority of the respondents (52%) held an opposite view, stating that they managed to solve only a part of the problem or a request, with 4% stating that it was not helpful at all.

So, let us examine in greater depth the root causes of the dissatisfaction with the above portal. Research shows that the most important to users is the portal's content – with 73% of the respondents citing lack of detailed information as problematic. The general view prevailed that the available information was too general in nature, with 39% of respondents stating that they did not find the information they were looking for and 27% could not find any kind of link to respective institutions. Furthermore, every fifth respondent listed difficulty of the language used in the website as a problem, along with absence of electronic downloadable forms. The least number of complaints concerned issues, such as difficult navigation through the site, or faulty or outdated information. An interesting finding is that only 6% of respondents within the group of the dissatisfied users mentioned the lack of interactive functions of the portal – i.e. full-fledged electronic service – as a drawback.

**Graph 9: Have you ever used Central Public Administration Portal, formerly portal Občan.sk? (in %)**

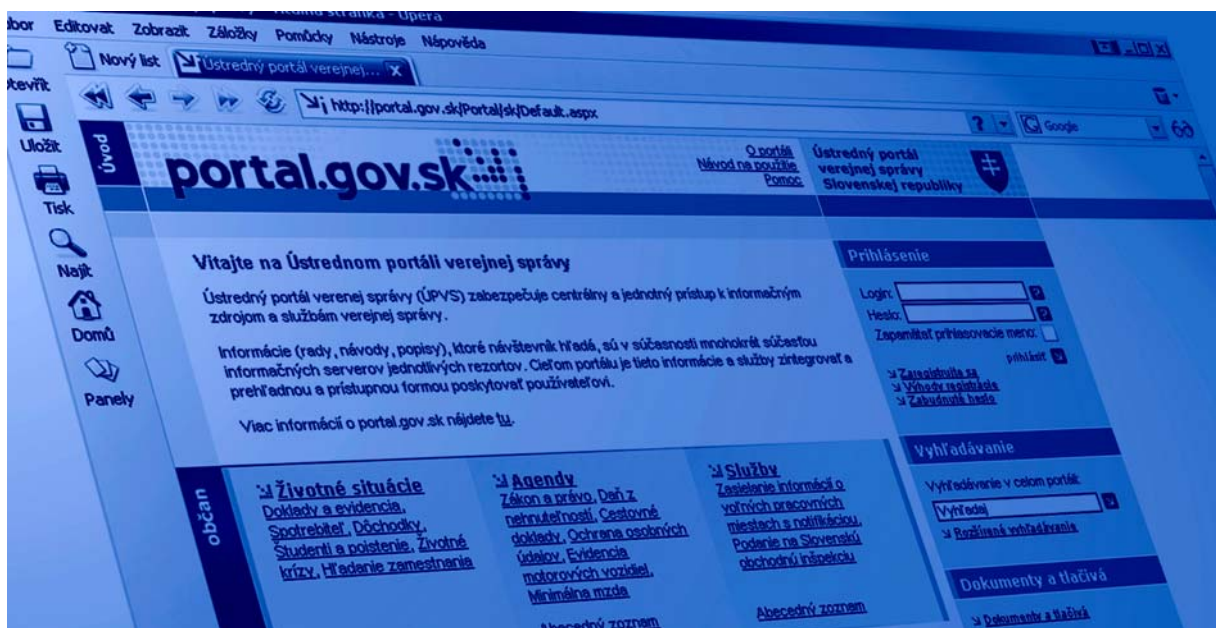


Source: Institute for Public Affairs, August

Generally speaking, the Central Public Administration Portal is mostly perceived by citizens as a purely informative source, as opposed to a tool for a full-fledged electronic communication with bureaus. The same findings were corroborated by a screening of public online services carried out in the summer of 2007. The overall quality of online services offered through websites, portals or other applications operated by individual state bureaus, institutions, self-administrative bodies, private or public sector was found to be higher than that offered by a centralized portal. Even though the central portal's role is to primarily direct the user to a specific public online service by a way of offering relevant and up-to-date information sources, at present there are many obstacles to achieving its effectiveness. The problem is that the portal at present operates only at the level of one-way interaction – i.e. offers the possibility to access basic information needed to commence the administrative process connected with a particular public service. The portal is often missing basic information, such as the opening hours, addresses and contact information of particular office, or links to other websites of public administration. Moreover, it lacks downloadable electronic forms, something that could move the portal to a level of one-way interaction.

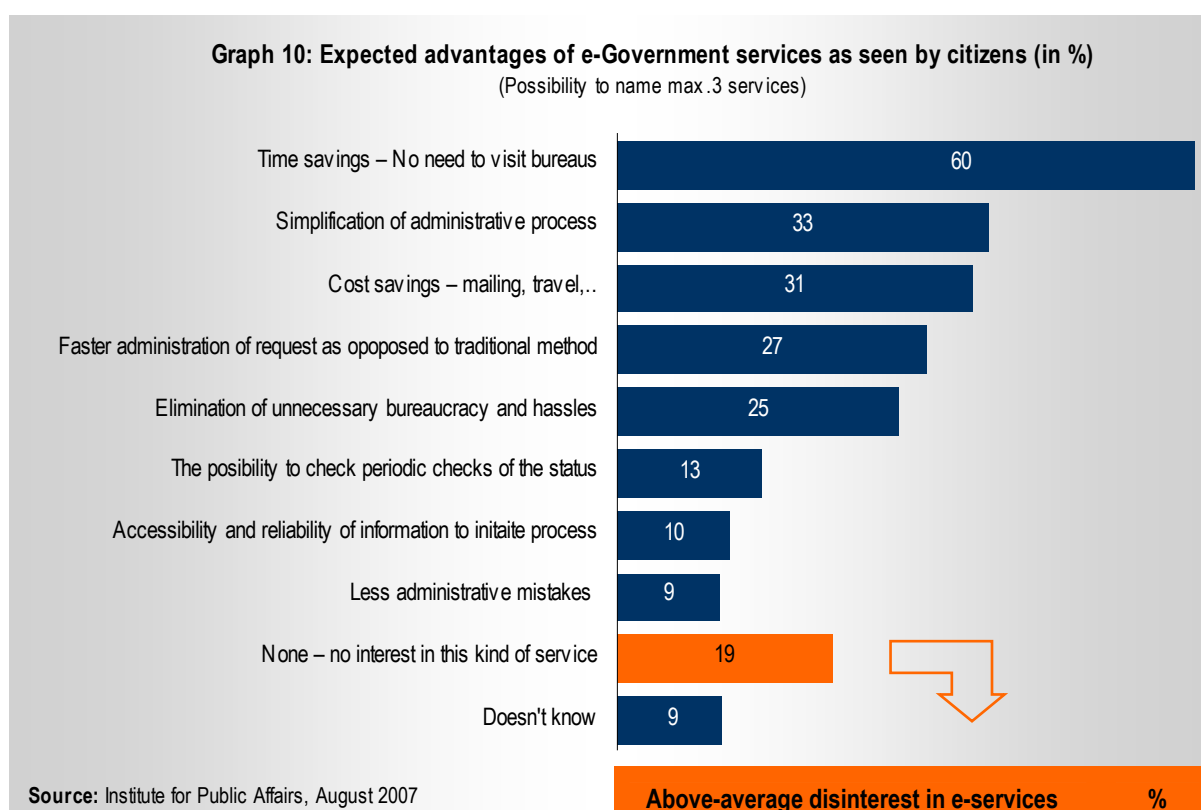
**What were the main reasons of your dissatisfaction? (Possibility to name max. 3 reasons)**

Reason	Percentage
Lack of detailed information – Too general information	73
I did not find what I was looking for	39
Web links for institutions / bureaus were missing	27
Difficult language used	22
Possibility of downloading various forms missing	18
Web site not user friendly – difficulty in finding information	14
The portal contained, incorrect information	11
Not enough interactivity – full electronic case handling absent	6
Do not know	2



## Future Expected Advantages, Interest in and Preferred Means of Online Communication

Despite the fact that only a small portion of the population has enough information and experience with public online services; the majority of respondents have a clear idea about the advantages this kind of service should bring in the future. As is shown in Graph 10, time savings and eliminating the hassles of having to visit bureaus in person is a clear benefit of e-Government, mentioned by 60% of respondents. This finding is significant, especially in light of the prevailing conservative attitude among certain segments of the population when it comes to dealing with public services. The expected advantages include simplification and speeding up of the administrative process, cost savings, elimination of unnecessary bureaucracy or hassling by the public servants. Other potential benefits of this form of communication, such as the possibility to track progress, elimination of administrative mistakes and availability of relevant information were also mentioned, but remain marginal for the respondents at the time of this writing.



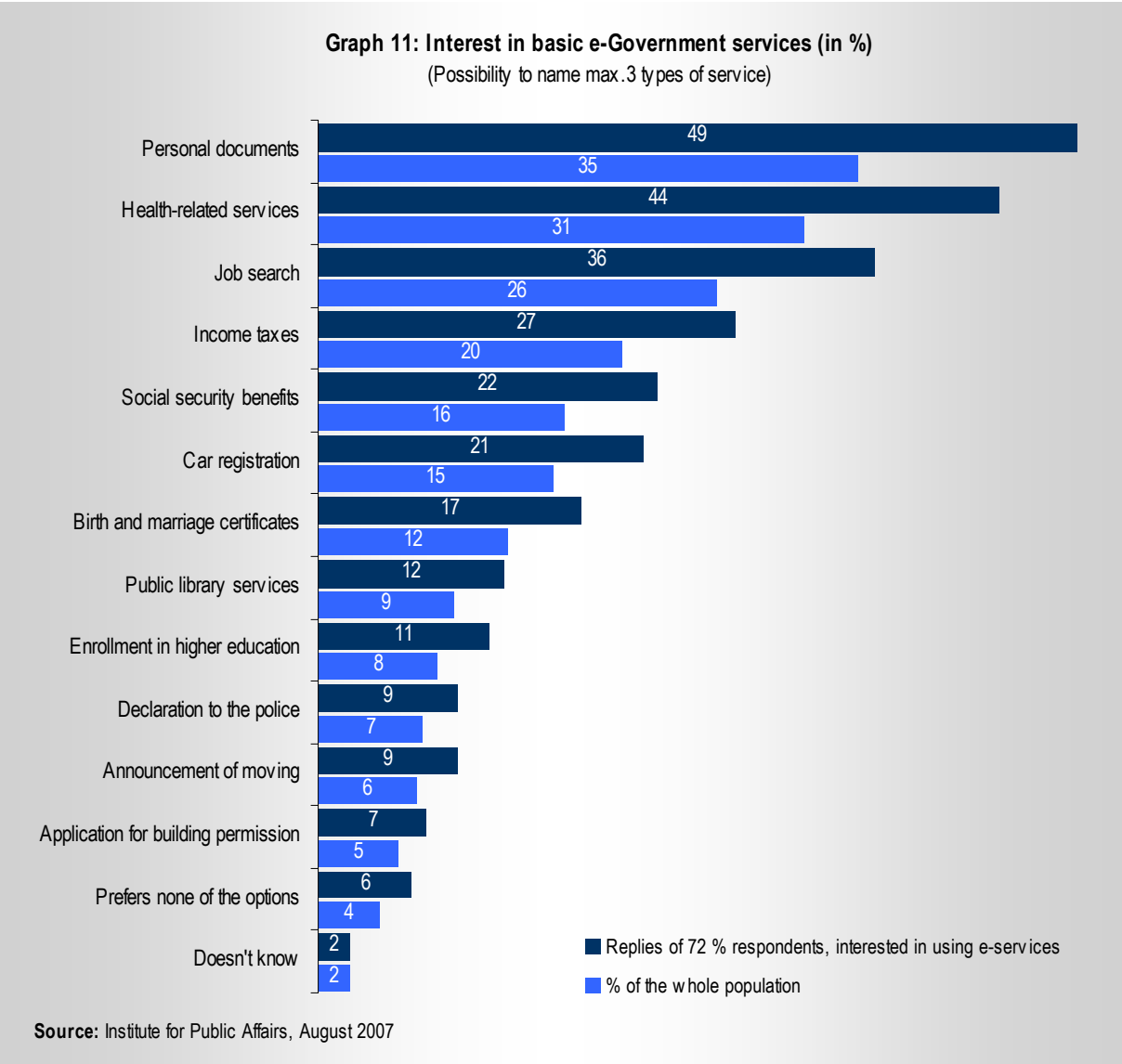
With the expected benefits offered by public online services, one would expect an immediate rise in interest in this kind of service, which was indeed confirmed when 72% of respondents have shown interest.

On the other hand, there remains a sizable portion of the population that is not interested in this kind of service (19%), as well as those who are not sure of the benefits of its future usage (9%). Those lacking interest in this kind of service are predominantly represented among the older generation, rural dwellers, as well as those with a lower education. As is shown in the table accompanying Graph 10, the level of disinterest in using online services is also prevalent among those individuals with low level of digital literacy or none at all, among the households with no internet access, those lacking information about e-services, as well as those preferring face-to-face approach in dealing with public administration. Altogether, this resistant or skeptical group represents approximately one-fifth of the adult population.

Above-average disinterest in e-services	%
60 years and over	36
Lower education (Middle School)	34
Senior citizens	37
The unemployed	39
Households of older people	37
Agglomerations < 2 ths. inhabitants	24
Inhabitants of Trnava region	30
Digitally illiterate persons	46
Persons with low digital literacy	30
Households w/o internet	26
Those uninformed about e-services	26
Those preferring face-to face approach	24

One way to assess the state of e-Government in the EU member countries is to look at the attained level of e-services offered to the general public, as well as the commercial sector. As basis for the evaluation of the advancement in this regard, the European Commission has defined 20 types of public online services, 12 of which are meant for citizens and 8 for entrepreneurs, i.e. legal entities. If we assess the present state of affairs in e-services in Slovakia, the public's interest concentrates primarily around crucial societal problems and common life situations. This could well indicate that the declared interest in these areas represents a desire for finding better tools for addressing these areas.

As is shown in Graph 11, the area of personal documents has sparked the greatest interest on part of the public when it comes to online application – declared by nearly half (49%) of those respondents who have expressed interest in e-services. When we take into account the population at large, this number represents in excess of third of the population (35%). Moreover, interest remains high when it comes to potential applications for health-related services (44%) and searching for employment (36%). More than one quarter of the population has shown interest in filing tax returns online (27%), and every fifth respondent would prefer using e-services when it comes to social security benefits admin and car registration. Furthermore, services such as application for building permission, announcement of moving, declaration to the police, enrollment in higher education are also high on the list when it comes to their online applications.



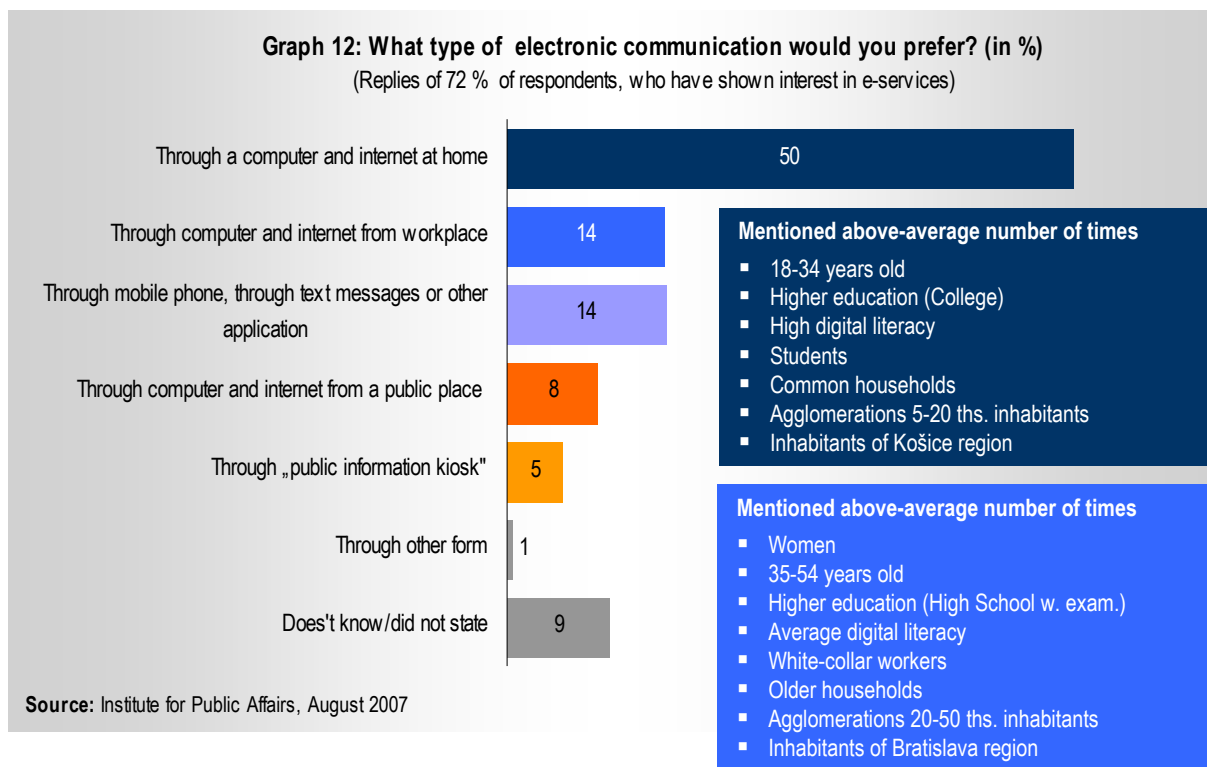
As is shown in Table 1, the declared interest in specific types of online services is differentiated across various social-demographic segments of the population copying their needs. On one hand, there are the types of e-services, such as personal documents, income tax, and others that concern majority of the population; on the other hand there are the specific life/cycle events, such as enrollment in higher education, car registration, job search, etc.

**Table 1: Increased interest in e-Government services across different social groups and environments**

<p><b>Personal documents</b></p> <ul style="list-style-type: none"> <li>▪ Higher education (College)</li> <li>▪ White collar workers</li> <li>▪ Young households, three-generational households</li> <li>▪ Agglomerations 2-5 ths.</li> <li>▪ Agglomerations 20-50 ths., Bratislava and Košice</li> <li>▪ Inhabitants of Nitra and Bratislava region</li> </ul>	<p><b>Announcement of moving</b></p> <ul style="list-style-type: none"> <li>▪ Women</li> <li>▪ Retirees</li> <li>▪ Young and older households</li> <li>▪ Inhabitants of Bratislava and Košice</li> <li>▪ Inhabitants of Bratislava region</li> </ul>
<p><b>Health-related services</b></p> <ul style="list-style-type: none"> <li>▪ Women</li> <li>▪ 60 years and over</li> <li>▪ White collar workers</li> <li>▪ Unemployed</li> <li>▪ Young households and older households</li> <li>▪ Inhabitants of Bratislava and Trenčín region</li> </ul>	<p><b>Public library services</b></p> <ul style="list-style-type: none"> <li>▪ 18-24 years old</li> <li>▪ Students</li> <li>▪ Adult households</li> <li>▪ Inhabitants of Banská Bystrica region</li> </ul>
<p><b>Job search</b></p> <ul style="list-style-type: none"> <li>▪ Women</li> <li>▪ 18-24 years old</li> <li>▪ Students</li> <li>▪ Blue-collar workers, unemployed</li> <li>▪ Women in households and maternity leave</li> <li>▪ Young households, adult households</li> <li>▪ Inhabitants of Trenčín region</li> </ul>	<p><b>Birth and marriage certificates</b></p> <ul style="list-style-type: none"> <li>▪ Three-generational households</li> <li>▪ Inhabitants of Trenčín region</li> <li>▪ Inhabitants of Nitra and Košice region</li> </ul>
<p><b>Income taxes</b></p> <ul style="list-style-type: none"> <li>▪ 24-34 and 45-54 years old</li> <li>▪ Higher education (College)</li> <li>▪ White collar workers, entrepreneurs, freelancers</li> <li>▪ Young households</li> <li>▪ Agglomerations &gt; 50 ths. inhabitants</li> <li>▪ Inhabitants of Nitra region</li> </ul>	<p><b>Application for building permission</b></p> <ul style="list-style-type: none"> <li>▪ Higher education (College, High School w. exam.)</li> <li>▪ Young households, adult households</li> <li>▪ Inhabitants of Bratislava and Košice</li> </ul>
<p><b>Social security benefits</b></p> <ul style="list-style-type: none"> <li>▪ Women in households and maternity leave</li> <li>▪ Unemployed</li> <li>▪ Young households, old households</li> <li>▪ Agglomerations of 2-5 ths. inhabitants</li> <li>▪ Inhabitants of Banská Bystrica region</li> </ul>	<p><b>Declaration to the police</b></p> <ul style="list-style-type: none"> <li>▪ 55-59 years old</li> <li>▪ Entrepreneurs, freelancers</li> <li>▪ Older households</li> </ul>
<p><b>Car registration</b></p> <ul style="list-style-type: none"> <li>▪ Men</li> <li>▪ Entrepreneurs, freelancers</li> <li>▪ Young households</li> <li>▪ Agglomerations 2-5 ths. inhabitants</li> <li>▪ Inhabitants of Banská Bystrica and Trnava region</li> </ul>	<p><b>Enrollment in higher education</b></p> <ul style="list-style-type: none"> <li>▪ 18-24 years old</li> <li>▪ Students</li> </ul>

Source: Institute for Public Affairs, August 2007

What remains absolutely crucial to the successful implementation of public online services is their accessibility. Graph 12 documents that access to computer and internet from a home are key pre-requisites to using any kind of online service. From among the group of those respondents who have shown interest in e-services, 50% have expressed preference in this kind of communication and another 14% stating that they have access to computer and internet at their workplace. Other technologies allowing online communication with the public sector include mobile phone applications (14% of respondents), access from a public space (8% of respondents) and via information kiosk (5%).



- Mentioned above-average number of times**
- 18-34 years old
  - Higher education (College)
  - High digital literacy
  - Students
  - Common households
  - Agglomerations 5-20 ths. inhabitants
  - Inhabitants of Košice region

- Mentioned above-average number of times**
- Women
  - 35-54 years old
  - Higher education (High School w. exam.)
  - Average digital literacy
  - White-collar workers
  - Older households
  - Agglomerations 20-50 ths. inhabitants
  - Inhabitants of Bratislava region

Even though the above data seem to support a introduction of internet to households, a social-demographic analysis suggests that some groups of the population would be also open to other, less preferred technologies. For instance, older persons, those with lower education, the unemployed, blue-collar workers, older households and inhabitants of smaller agglomerations – i.e. those groups lacking in information and communication technology skills, expressed a greater degree of preference for accessing online services through a public space or an information kiosk.

- Mentioned above-average number of times**
- 60 years and over
  - Lower education (Middle School, High School w/o exam.)
  - Low digital literacy
  - Blue-collar workers, senior citizens
  - Older households
  - Inhabitants of Prešov region

What is noteworthy is that a sizable portion of population has listed mobile phone and its applications as a preferred technology for public online communication. This is probably due to low level of digital literacy in this group of respondents as a mobile phone is for them the only information and communication tool. However, it is necessary to add that the scope of public online services available at the time of this writing via mobile phone is mostly limited to the level of simple information offering as opposed to applications using other platforms and representing full electronic transactions, such as filing personal income taxes.

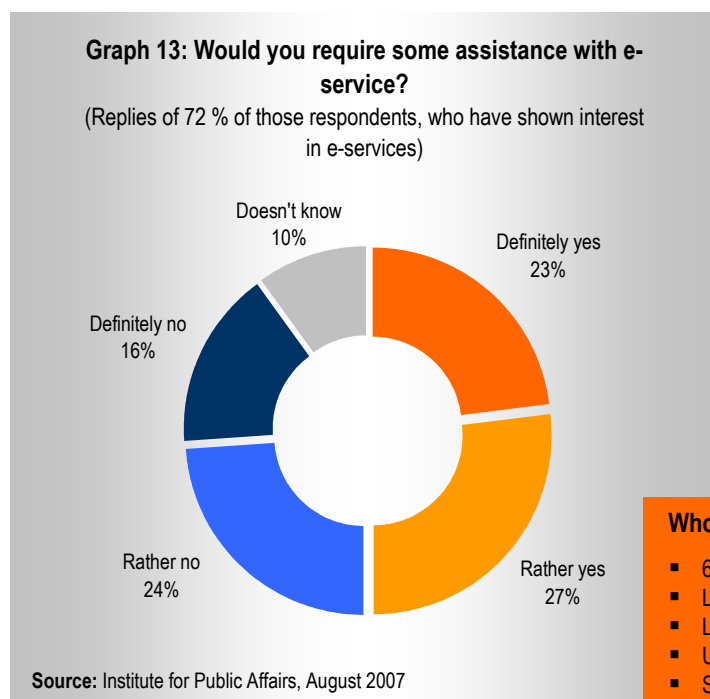
- Mentioned above-average number of times**
- Lower education (High School w/o exam.)
  - Average digital literacy
  - Unemployed
  - Agglomerations 2-5 ths. inhabitants
  - Inhabitants of Trenčín region

Of immense importance to successful implementation of public online services is the digital literacy of the potential users, i.e. the skills they have in using modern technologies. Even though many groups within the population have already acquired basic skills, such as working with a PC, internet, printing of documents, or sending and receiving E-mail, upwards of 50% of respondents expects that they will need to seek assistance at some point with using public online services.

- Mentioned above-average number of times**
- 60 years and over
  - Digitally illiterate or with low digital literacy
  - Blue-collar workers, senior citizens
  - Older households
  - Inhabitants of Prešov and Nitra region



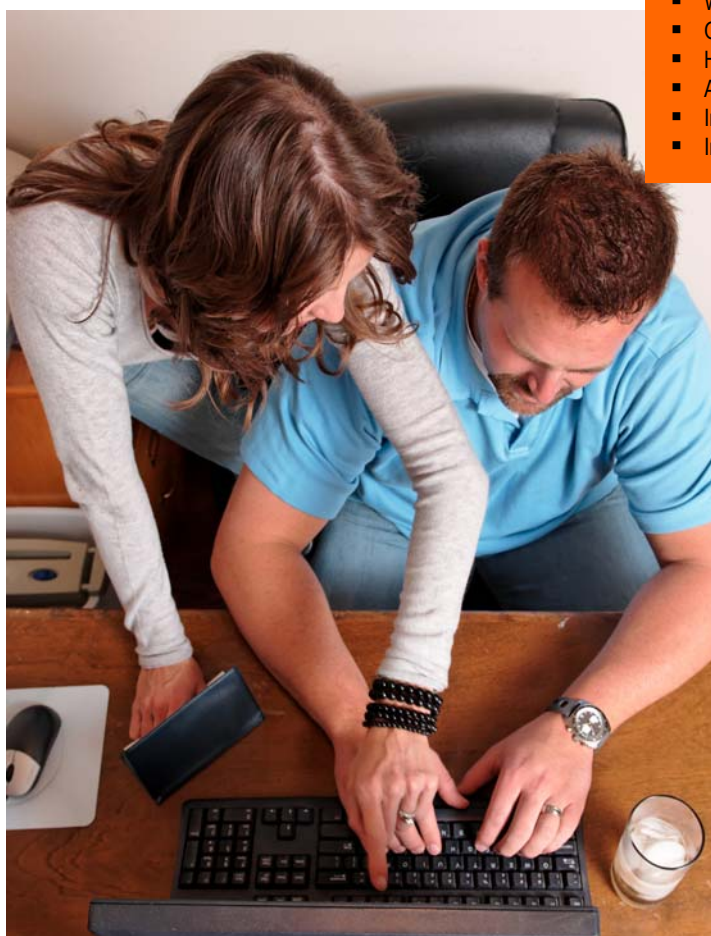
Furthermore, as is shown in Graph 13, nearly a quarter of respondents expects that they will probably not need any assistance in using online services, with 16% stating that they will not need any assistance at all. Graph 13 clearly depicts the groups most likely to need assistance, such as individuals over 60 years of age, those with lower education levels, blue collar workers, women in households, and older households leading the way.



Other potentially disadvantaged groups when it comes to online applications include those with low level of digital literacy, those lacking information about e-services and those from households without internet access. From the point of view of geographical distribution, the high-risk categories include inhabitants of smallest agglomerations (2000 inhabitants or less), as well as inhabitants of Prešov region.

It seems to be the case that the burden of providing information on the accessibility of public online services, as well as the support of its usage rests with the providers of these services. A research study of digital literacy conducted in

Who will need assistance the most?	%
60 years and over	67
Lower education (High School w/o exam.)	67
Low digital literacy	77
Uninformed about e-services	61
Senior citizens	67
Blue-collar workers	63
Women in households and maternity leave	70
Older households	66
Households w/o internet	60
Agglomerations < 2 ths. inhabitants	57
Inhabitants of Trenčín region	60
Inhabitants of Prešov region	61

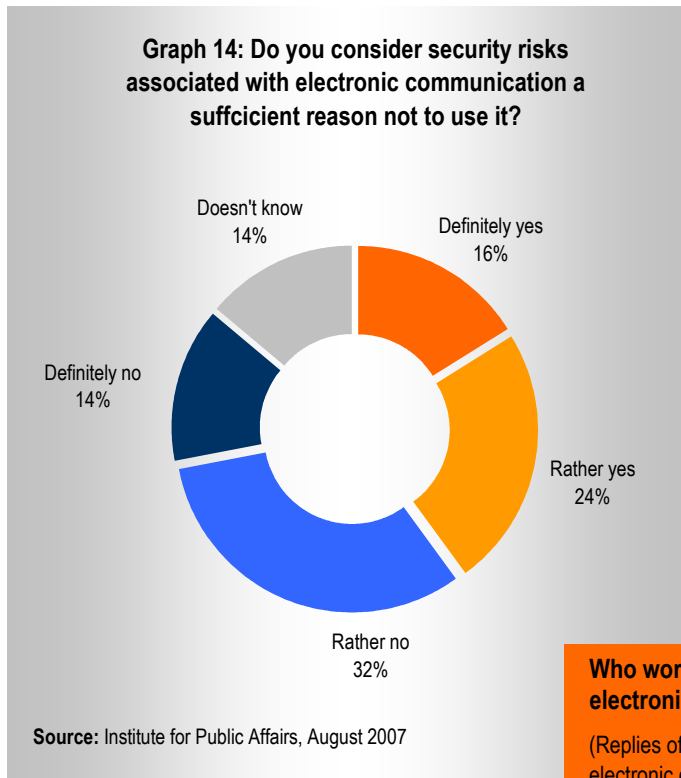


2005 has confirmed that adaptability of individuals is a key factor, i.e. the way people receive and learn to work with modern information and communication technologies. Every fifth respondent (21%) has stated that adapting was "hard" or "very hard." The largest share of respondents – 37% – included those who are not adjusting to or learning to use new technologies at all. One of the possible causes of the insufficient adaptability to modern information technologies is the external pressure of the society. It is hard to expect that the majority of the population will adjust spontaneously, without this external pressure to do so. The good news is that the research has confirmed the existence of this type of pressure; however, the bad news is that it is rather weak.

As was further shown, only 4% of the population has been in a situation when they were forced to learn new information and communication technologies in the course of their daily life, such as in communicating with bureaus, bank, friends, relatives, and in other situations. Therefore, the

premise that all that is needed for successful implementation of e-services is to provide information and content will probably not suffice.

The positive news is that the influence of informal environment, such as the family can have an important role in helping individual to adapt to using these technologies. For instance, almost in a quarter of cases (23%) in which the individual's skills have actually improved, it was due to the positive role of family members, the other 18% were influenced by friends, neighbors, etc. Only 8% of the cases of improvement were due to self-learning.



When the discussion turns to electronic communication via the internet, mobile phones, and other means, the possible security risks are often lurking in people's minds. These include potential ways to abuse ID numbers, passwords, theft and misuse of personal data, hacking into client's computers, or bureaus, fake websites, etc. All of these potential threats can provide a good reason why citizens should be worried when it comes to this kind of communication. Low level of security ranked first on the list of concerns mentioned by everyday net users, along with protection of personal data. The data in Graph 14 confirms that security is not only a topic that can be discussed at length by a small group of experts, but that it is a real concern shared by 40% of respondents. For this sizable portion of the population, security risks associated with online communication represent a sufficient barrier, i.e. a reason why they should not use them. Approximately the same

**Who worries the most when it comes to using electronic communication?**

(Replies of respondents, who will definitely not use electronic communication due to security concerns)

	%
Lower education (High school w/o exam.)	44
Low digital literacy	47
Older households (w/o children)	48
Households w/o internet	42



portion of respondents (36%) does not see the risks as a barrier to their use of these technologies, and 14% did not take a position on this issue.

When it comes to concerns over online security, the social-demographic analysis has revealed that it is the marginal groups when it comes to use of ICT, who are the most concerned with security risks, including those with lower level of education

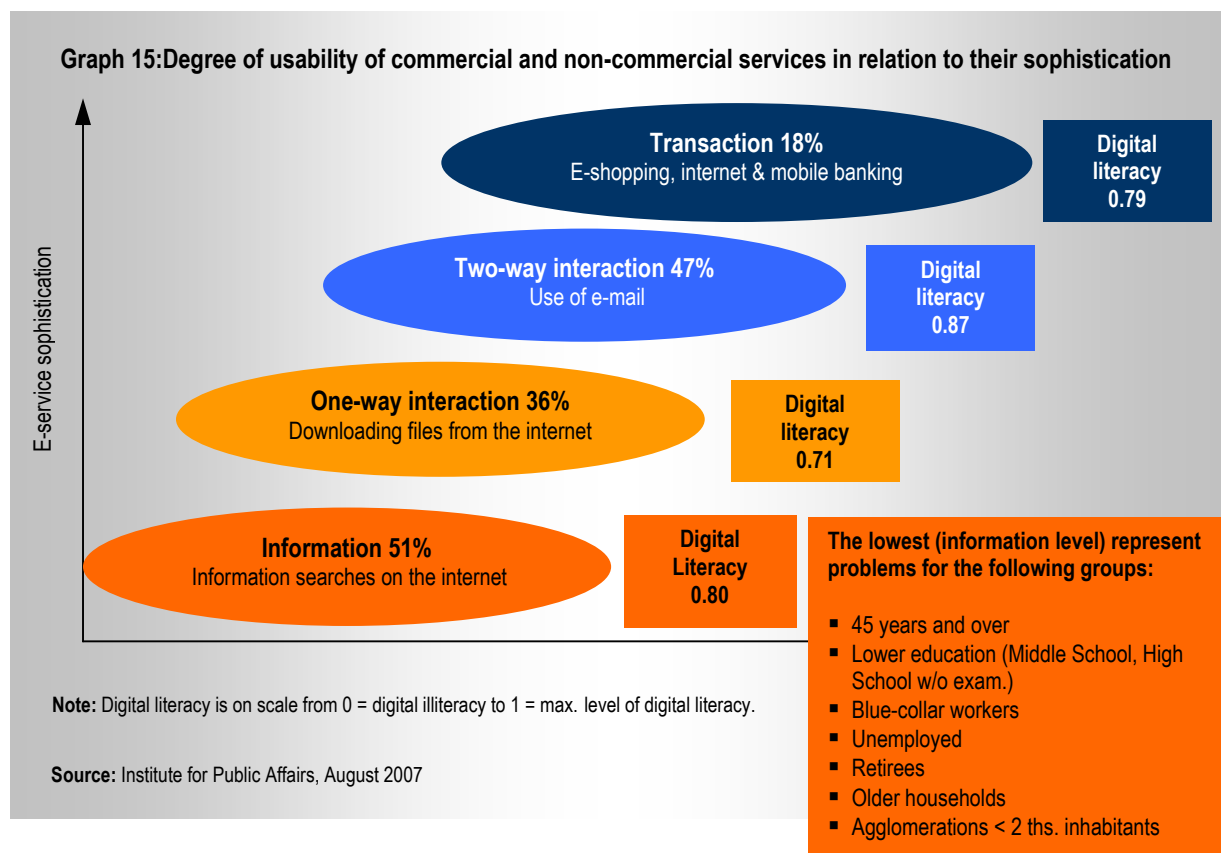
(44%), older households (48%), those with low level of digital literacy (47%) and finally households without internet (42% of respondents).

What is also necessary to realize is that the issue of secure communication is highly dependent on the approach of the users themselves. Therefore, along side the implementation of technologies with the highest security standard, the providers will have to also invest considerable time and effort into educating the users on how to enhance their security when logging on.

## Potential Applications of Public Online Services

Even though the scope of public online services presently on offer is limited, the citizens have the opportunity to use at least some of them. Often times, it is the independent actors, such as various non-governmental organizations, civic initiatives, professional bodies, private companies which are leading the way in offering these kinds of services. A project involving the screening of 20 key electronic services of public administration available in Slovakia, which was carried out in 2007 and published by Institute for Public Affairs (IVO), has shown that out of 12 rated services intended for the citizens, only 2 of them met the criterion of a full electronic transaction<sup>2</sup> – namely income taxes and job search.

Today, practically all of these 12 services meet the criteria for an information-level service, i.e. allowing the client to access basic information online, such as contact, office hours, and documents to initiate the administrative process of a respective public service. Moreover, half of these 12 services can be ranked at the level of one-way interaction, allowing the client to download forms and other necessary materials.

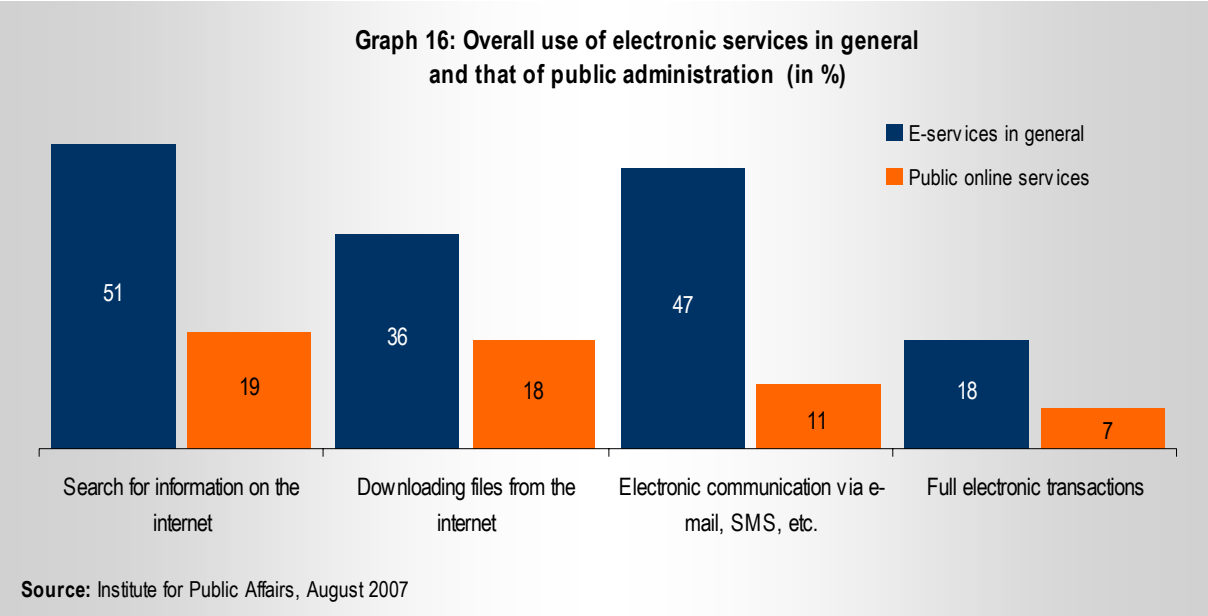


The following data contained in Graph 15 reveals what portion of the population would be able to use this kind of public service. The findings are based predominantly on responses to questions aiming to uncover what types of transactions are usually performed most often via the internet and other information and communication technologies. In other words, what types of services are used by the citizens most readily, regardless of their commercial or non-commercial nature. We are basing these findings on a premise that if a citizen is capable of using a service, such as internet banking for instance (at the level of full electronic transaction), he/she should have no difficulty in using a similar service online in the public sector, such as filing personal taxes electronically.

As was revealed by the analysis of frequency of usage of different forms of e-services, ranging from simple search for information to internet banking, 51% of respondents have used the internet within the last year for the purposes of searching for information. Additional 36% have used services at the level of one-way interaction, such as downloading files from the internet, etc. Nearly half (47%) have used electronic mail, with nearly every fifth respondent (18%) using services at a transaction

<sup>2</sup> In some cases, it is not possible to reach the level of full-fledged electronic transaction (birth and marriage certificates, public library services, declaration to the police, etc.), and thus the European Commission has set the level of "two-way interaction" as a satisfactory level that should be attained. This means the level of service where a client is able to download the necessary forms, but also submit these online. The client can then access information on the progress of the request, and upon completion of the process pick up the document in person or have it sent by mail.

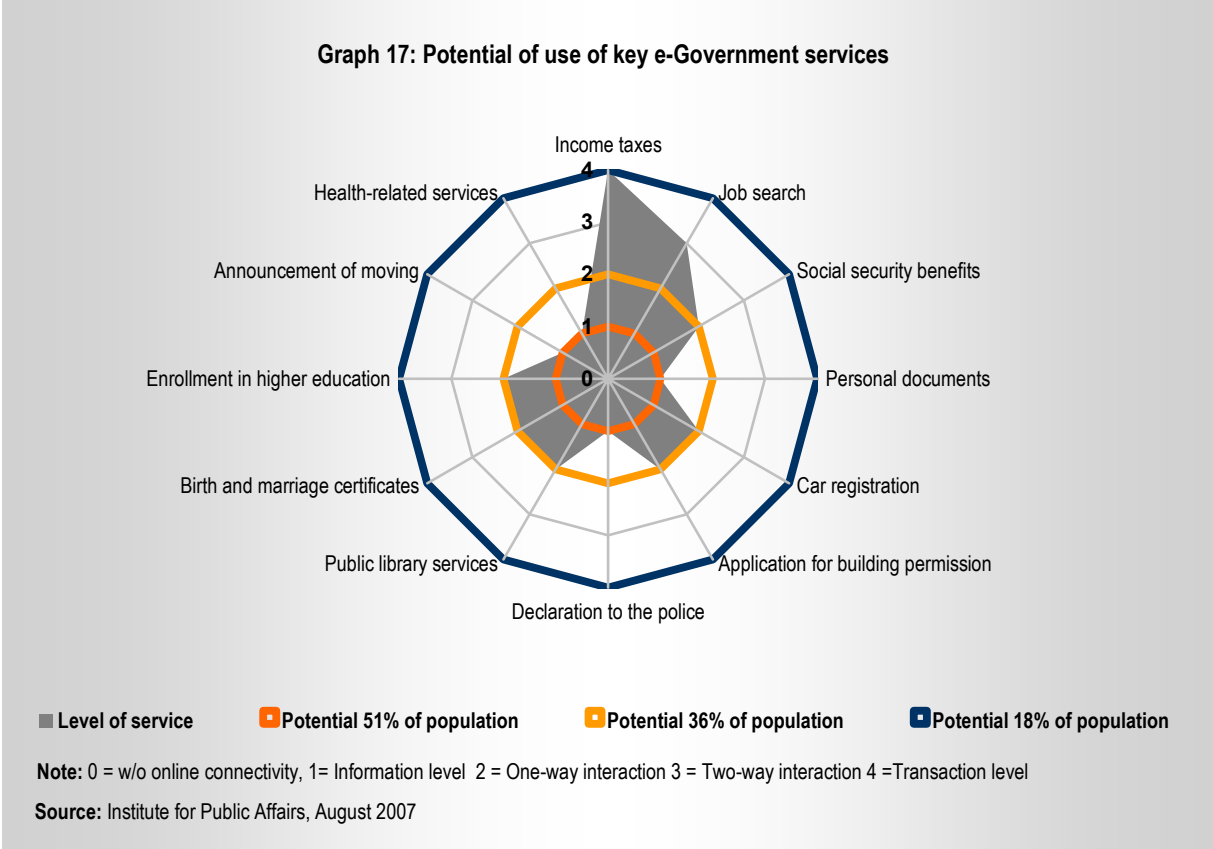
level, such as internet banking, mobile banking, e-shopping, etc. The relatively high level of digital literacy of each of the above-mentioned groups of users is a testament to the user-friendly design of these services. On the other hand, there are also groups of population that are experiencing difficulties with even the simplest level of online communication – at the information level, such as searching for information on the internet or a specific website. The table accompanying Graph 15 reminds us that this is the group within the population that is on the margins of ICT usage.



A comparison of the actual frequency of usage of commercial and non-commercial online services and those used in the public sphere would be useful in determining whether the public sector has chosen the right online path to the citizen. According to Graph 16, the results point clearly in favor of commercial applications, with 51% of the population readily searching for information on the internet versus 19% using it for public online service communication. Similar findings are in the area of downloading files, communication via e-mail, or full electronic transaction. Of course, when making these comparisons, we have to take into consideration the fact that in comparison with public administration, other commercial and non-commercial applications and services offered are much greater in number and diversity.



Despite this difference, the findings could mean that more than half of the population (51%) would be capable of using public online services at an information level. Moreover, as is shown in Graph 17, more than one third (36%) of the population is presently capable of using one of six online services at the level of one-way interaction, i.e., can download forms, requests, as well as other documents necessary to initiate an administrative task. What is more, every fifth person in Slovakia has the capacity to use the two above-mentioned electronic services at a transaction level (income taxes and job search).



The abilities and skills are no doubt an important pre-requisite for using public online services, however, the research has shown that equally as important is having simple and fast access to relevant information, having awareness of the advantages of their use, overcoming the conservative attitudes and stereotypes and being mindful of potential security risks. What remains a challenge when it comes to implementing public online services is to motivate the remainder of the population which does not have the relevant information and/or for various reasons is hesitant or unwilling to use these modes of transaction.

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The research report titled *Citizens Online* on the representative research encompassing the attitudes and positions of the citizens is one of key contributions of the Institute for Public Affairs to the discussion on the implementation of e-Government in Slovakia.

The research focused on identifying the needs and expectations of the citizens in the area of public online services, namely: → informedness about public online services and preferred means of communication with bureaus → who is and who is not online → hands-on experiences with and evaluation of presently available public online services → the perception of main advantages and barriers of their use → interest of citizens in key types of e-services and potential of their use into the future.

The research is a part of a project titled *Launching e-Governance in Slovakia: Empowering Citizens to Participate, Influence and Exercise Democratic Control*, supported by Trust for Civil Society in Central & Eastern Europe.



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