



## Newsletter #2

October 2007

### Newsletter of the ELOST Project

#### Editorial

In recent years, we have witnessed the rapid growth of e-Government services. The index for e-readiness published by the Economist Intelligence Unit (2006)<sup>1</sup>, *The 2006 e-readiness ranking*, Economist Intelligence Unit, indicates that 'western Europe remains unchallenged as home to the world's most-e-ready countries'. Technological infrastructure, as well as the economic and social environment fosters ICT innovation and adaptation. e-Government offers citizens new communication channels, and enables them to be more involved in public life. However, the ability and willingness of citizens to make appropriate use of online government services remains a major challenge. In general, the level of e-Government use is still limited in most countries and depends on several factors including perceived usefulness of the internet, perceived ease of use, availability of technology infrastructure, education, age and income (Barriers to eGovernment, 2006)<sup>2</sup>. Persons of low-socio economic background, with low education, lack of adequate skills and low income are less likely to use e-Government. This situation requires the development of unique policy programmes and tools by both the European Commission and Member State governments (Lisbon Strategy, 2000) to reduce the digital divide. The ELOST project deals with this important issue and tries to analyze the needs, attitudes and barriers of LSGs concerning e-Government.

ELOST was launched in January 2006 under FP6 with the aim of increasing readiness to e-Government and civic engagement among low socio-economic groups (LSGs). The main objectives of the project are to provide a better understanding of LSGs' characteristics as related to e-Government and recommend policy guidelines on e-inclusion.

The first year of ELOST concentrated on analyzing the following issues:

- Current characteristics and needs of LSGs,
- Exploring current e-Government tools and policies in relation to LSGs;
- Analyzing the potential impact of emerging technologies on e-Gov services;
- Analyzing the barriers and incentives for increasing e-Government readiness among LSGs.

ELOST carried out various activities to accomplish these tasks. Several interviews were conducted with decision-makers from governments and municipalities, as well as with relevant experts and citizens in the participating countries. Two surveys were completed. Within the ELOST Foresight work package a worldwide expert survey was conducted, to look ahead towards the year 2020 and to assess if and how emerging technologies could foster the use of e-Government among LSGs. In addition, a field survey was carried out among persons with low income, low occupational skills and /or low educational background to determine their attitudes towards ICT in general, and e-Government, in particular. The results of these surveys will serve as a basis for policy guidelines and recommendations.

In addition, ELOST developed an online interactive tool – e4 – for policy makers and experts active in this field. This tool includes data, information and best practice cases concerning e-Government policy, as well as tools and usage in Europe and other developed countries. The advantage of this tool is that it is easy to use (Wiki-based), can be updated and is interactive.

ELOST has entered into its final phase. In this phase, the focus will be on analyzing the project results in order to identify incentives for motivating LSGs to make greater use of e-Government. The project final results will be presented at an international workshop in the beginning of 2008.

Tal Sofer

Coordinator of ELOST Project  
ICTAF, Tel-Aviv University

- 1 The Economist (2006), *The 2006 e-readiness ranking*, Economist Intelligence Unit.
- 2 Oxford Internet Institute (2006), *Breaking Barriers to eGovernment: Overcoming Obstacles to Improving European Public Services Online Survey of Barriers to eGovernment*. University of Oxford.

## The ELOST Survey – First Results and Insights

Lina van Aerschot and Jan Kunz, University of Tampere

The ELOST survey was carried out in Israel, Bulgaria, Austria, Germany, France and Finland at the end of 2006. Between 250 and 350 citizens of low socio-economic background were interviewed. They comprised mainly persons of low income and/or educational background and occupational qualifications. The samples were national in Austria, France and Israel and urban in Finland, Germany and Bulgaria. Older respondents are over-represented in the Austrian and French samples, poorer family households in Israel, and the unemployed in Finland, Germany and Bulgaria.

### *Familiarity with the internet*

Familiarity with the internet is a function of age, education and main activity status. It is therefore not surprising to find a majority of the respondents to the ELOST survey being unfamiliar with the use of the internet. The above-the-average familiarity rates observed in Germany and Bulgaria are linked to the sampling design that concentrated, at least in part, on labour offices as sampling units. Lack of technical skills and affordability problems explain low or no use of the internet. Older respondents are more likely to report instead that they do not need the internet.

### *Barriers and incentives for usage of e-Government services*

The awareness of e-Government services among the ELOST survey respondents differed across countries. In countries with advanced e-government services like Austria and Finland, awareness is high even among internet non-users. Respondents are more likely to be aware of the possibility of accessing official forms as compared to submitting them; and the knowledge about the possibility of using e-government to find out information about jobs is more widespread than knowledge about health services on the internet.

Usage lags considerably behind awareness. Even the most common services, such as obtaining information and official forms from public authorities, were only used by one third of those respondents who were familiar with the use of the internet. This is despite the prevalence of positive attitudes towards e-government: more than 70 per cent believed that e-Government services are faster as compared to traditional services, in addition to being more convenient.

The most common barrier to the use of e-Government, besides lack of awareness, is lack of knowledge about how to use them. This is aggravated by the lack of human or online support.

Consequently, information and guidance is needed for encouraging the use of e-Government. Subsidized internet access at home, more user-friendly web sites, more and better services and increased security and confidentiality would be the most effective measures for enhancing the use of e-government services.

### *Access*

The majority (78 percent) of the ELOST respondents who were familiar with the use of the internet had access at home. Those who could not go online at home accessed the internet at work or at school. Expensive access and equipment costs were the most common reasons for not having an internet connection at home. Among those who were not familiar with the internet, almost one fourth had access at home and thus – at least in theory – the possibility to learn how to use the internet. Those who chose not to familiarize themselves with the internet could be called 'voluntarily e-excluded'.

Public access points are rarely used: only one tenth of the ELOST respondents who were familiar with the internet used them frequently. The most common problems reported by the respondents were the small number of public access points and their restricted usage times.

### *Cross-cultural differences*

There were big differences in the rates of *usage and awareness of e-Government services* among the respondents in the six ELOST countries. The Finnish LSGs used e-Government services the most, and together with the Austrian LSGs they also displayed the highest awareness of services. The German, Israeli and Bulgarian respondents, on the other hand, had a very low awareness of e-services in general. The Israeli and Bulgarian LSGs used e-Government services very rarely. These results correspond to the general availability of e-government services in the ELOST countries. Hence it is no surprise that the Bulgarian LSGs use e-services least often as they also have the least services available.

*Attitudes towards e-Government services* were especially positive in Germany and Austria. In both countries more than 70 percent of the respondents who were familiar with the internet stated that that e-government enables interaction with authorities at more convenient times and places. In all countries a large share of internet users perceived e-Government as faster than traditional services.

The most common *barriers to the use of e-Government* were lack of awareness and lack of knowledge. The user-friendliness of e-government sites, including with respect to navigation and language, were especially a problem for Finnish respondents.

The Austrian and Israeli LSGs who were not familiar with the internet had still a rather positive *attitude towards the internet*. More than 70 percent of the Israeli respondents stated, for example, that the internet opens new prospects for communication, gathering information and learning. In contrast, Bulgarian LSGs were more likely to point to the high costs – both in terms of access and with respect to equipment.

When it comes to *e-skills*, the Austrian and German LSGs who use the internet were the most confident ones, followed by the Bulgarians. Particularly the confidence in skills related

to the use of e-Government services, such as handling search engines or understanding the content of websites, was high. The Austrians were also very confident about using sites of governmental organizations.

The Bulgarian internet users among the LSGs worried most about *security issues* (over 90 percent) and their ability to *keep up with technological developments* (almost 70 percent). The German respondents worried least about the latter point while the Austrians worried least about these issues altogether.

When it comes to *incentives for using online services and especially e-Government services*, at least half of the Bulgarian LSGs who use the internet welcomed the measures suggested in the survey (e.g. 'free training', 'subsidized access at home', 'more and better services' and 'online support'). 'Subsidised internet access at home' as well as demands for 'more and better services' were also frequently supported in the other ELOST countries. The Finnish respondents who use the internet were an exception. Only few of them thought that these measures would make a difference. Instead they called for more subsidized public access points and cheaper internet cafés.

Among the LSGs who were not familiar with the internet, the Bulgarians were the most interested in *learning how to use the internet in the future* (63 percent). In Israel (43 percent), Germany (30 percent) as well as Austria, France Finland (about 25 percent) the figures were considerably lower. However, the majority of those who are interested in learning about the internet would take courses only if these were free of charge.

#### *Conclusion: three types of barriers*

The obstacles for internet and e-Government usage can be divided into three categories: 1) financial barriers, 2) skill-related barriers and 3) barriers related to lacking information. All three of them have the potential to influence the usage of e-government services. In some cases the exclusion is voluntary while in other cases the respondents had no choice and were involuntarily excluded ('no public access points available' or 'expensive equipment and high access costs'). In order to overcome the exclusion of LSGs with regard to e-Government usage, a number of measures can be envisaged ranging from information campaigns to subsidised training and access. At the same time it is important to improve the design of e-Government services. Making all services accessible through a central Web-Site address is as important an undertaking as improvements with regard to navigation and language presentation. A standard and common request is to combine e-Government with online or real-time support (e.g. telephone hotline free of charge). This could help increase the number of e-Government users more generally and not merely among LSGs. Yet, it is unlikely that all citizens will merely use e-Government services in the future. There will always be people who prefer not to use the internet and e-Government services. This is not a problem at present, but might become

one if the quality and quantity of e-Government services overtakes the quality and quantity of traditional governmental services.

### **The ELOST Foresight – The Expert Survey**

Aharon Hauptmann, ICTAF, Tel-Aviv University

As part of the ELOST foresight study, an online expert survey was carried out, involving 154 experts from 34 countries (84 per cent of the participants were European). The survey's main objective was to provide a useful perspective on emerging technologies relevant to e-Government and likely to be widely used in the next 15 years, as well as an assessment of their potential impact on the use of e-Government services by low socio-economic status groups (LSGs). The findings reflect the opinions and estimations of a wide community of experts, with a reasonable mix of participants from various areas of expertise/experience such as technology, business, policy and research.

The online survey employed the Delphi method, which is widely used in foresight studies and which involves the completion of several rounds of questionnaires. In each subsequent round the experts are informed about the results of the previous one and have the opportunity to re-assess their views accordingly. In this way, iterative (anonymous) group interaction among the experts becomes possible. In many cases, the responses tend to converge into an overall consensus after two rounds of questionnaires (nevertheless, persistent disagreement on certain topics also provides important input for decision-makers). Expert opinion provide useful analyses and priority-setting, and stimulate further discussions on future-oriented issues. Internet provides an opportunity to involve numerous experts from all over the world in online Delphi surveys, including the possibility of real-time feedback.

The ELOST expert survey consisted of several future-oriented statements regarding e-Government, with special attention on the potential impact of emerging technologies on the use of e-Government services by LSGs. An inevitable compromise had to be made between the desire to cover as many diverse issues and technologies as possible, and the necessity to refrain from a too complex and time-consuming questionnaire. The questionnaire was tested in a pilot survey in fall 2006 resulting in some modifications being made. The first round of the full-scale survey was conducted in September-October 2006, and the second round was completed at the end of 2006.

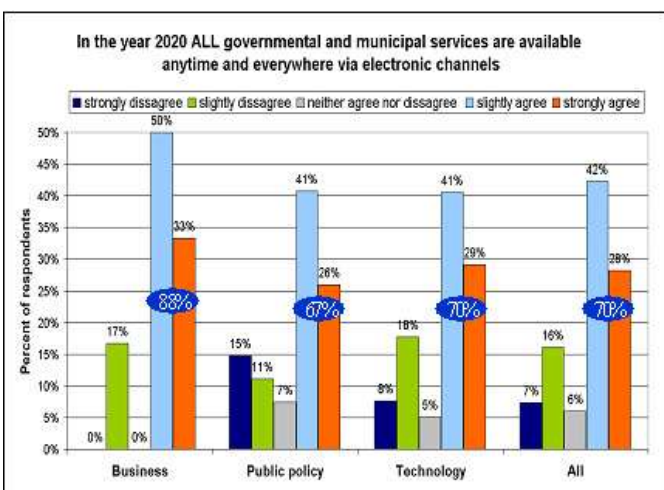
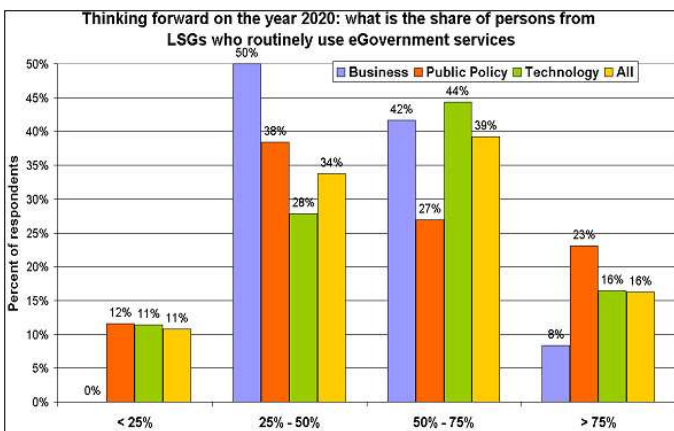
Here we present some highlights from the survey results:

- The highest technological barriers to the widespread use of e-Government services at present include unfriendly interfaces and limited access channels for communications. Lower (yet important) barriers are authentication problems, insufficient broadband coverage and insufficient security & privacy protection. Some

respondents mentioned additional barriers such as poor services interoperability, non-usability/complexity of services, insufficient standards, and poor infrastructure.

- The majority (70 per cent) of experts believe that in the year 2020 ALL governmental services will be electronically available anytime and anywhere. Business experts are somewhat more optimistic than public policy or technology experts (see Fig.1).
- The majority of experts predict that a high percentage (over 50 per cent) of persons from LSGs will routinely use e-Government services in 2020. Business experts are a little less optimistic than other experts about this estimation (Fig. 2).
- In 2020, most citizens will access e-Government services not through a single device but through a variety of available interfaces and channels. The main means of access will be desktop/laptop PCs, mobile phones and PDAs (or similar devices), followed by Interactive TV. New devices will probably also appear (e.g. convergence of computer/TV/mobile phone).

Fig.1: Respondents' assessment of e-Gov ubiquity in 2020



- The experts were asked to consider the following eleven emerging technologies or technological trends relevant to e-Government:
  - \* Advanced speech recognition (natural language, speaker-independent)
  - \* Ambient Intelligence
  - \* Virtual/Augmented Reality
  - \* Automatic translation (near real-time)
  - \* High-Speed Broadband Communications (~100 Mbps or more, e.g. FTTH- Fiber to the home)
  - \* Interactive TV
  - \* Smart Cards (used as identity cards, e-passports etc.)
  - \* Wearable Computing
  - \* Future Web Technologies (Web 2.0 and beyond, Semantic Web, etc.)
  - \* Advanced authentication/security technologies
  - \* Advanced Mobile/Wireless networks (3G/4G and above).

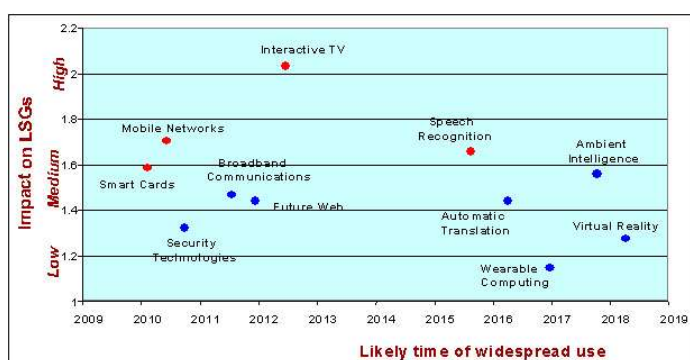
- For each technology the experts assessed (a) when it will be widely and commonly used; (b) its impact on the use of e-Government services by specific segments of LSGs. The results show that all the considered technologies will be widely used in the decade 2008-2018.
- In the near term (2008-2013), widespread use of smart cards, advanced mobile networks, advanced security technologies, high-speed broadband communications, future web and Interactive TV are anticipated. Other technologies such as advanced speech recognition, automatic translation and wearable computers will be common later (2013-2018), and finally, around 2018, Ambient Intelligence and Virtual Reality will be widespread.
- Relatively high impact on all LSG segments is predicted first and foremost for Interactive TV, followed by advanced speech recognition, advanced mobile/wireless networks, high-speed broadband communications and smart cards.
- Most technologies under consideration will be beneficial (in terms of fostering e-Government use) mainly for those LSGs who lack technology skills. The potential benefits for other LSG segments (persons with low income, limited access to the internet, or lack of motivation) are much lower. One noticeable exception is Interactive TV, which may have a high impact on all LSG segments. Advanced mobile/wireless networks may also be beneficial in particular for persons with (currently) limited access to the net.

Fig. 3 summarizes the main results by mapping the eleven technologies in terms of their relative overall benefit for LSGs (all segments) and the years in which their widespread use is likely.

Beyond the eleven technologies considered in the survey, several experts mentioned additional technologies that could impact on e-Government use, e.g. intelligent agents, advanced knowledge-based / expert systems, interactive kiosks, and some kind of unified 'media master' (possibly a future generation of a smart mobile phone) combining video, voice, TV and the internet.

It is quite clear that technology alone cannot solve the digital divide problem, nor increase the participation of LSGs in e-Government. If social, cultural, educational and organizational issues are not adequately dealt with, new technologies could even aggravate the problem. As one of the ELOST expert survey participants remarked, instead of providing intelligent help, advanced technologies sometimes give governmental organizations a pretext to reduce the needed personal help human beings can provide. Opinions such as 'advances in e-Government are more dependent on the human-side rather than on the technological side of the equation', and that much can and ought to be done with present-day (not future) technologies, were reflected in several comments.

Fig. 3: Overall impact and times of widespread use of emerging technologies



Several policy implications can be derived from the insights gained from the ELOST expert survey. When planning for increased participation of LSGs in e-Government services, decision-makers should take the potential advantages of adequately used new technologies into account, in particular Interactive TV, new generations of mobile phones and advanced speech recognition. They should also keep an eye on new emerging technological trends (e.g. the merging of PC, TV and mobile phones or the concept of Ambient Intelligence) that might affect the use of e-services in the future (preliminary results of the ELOST field surveys among LSGs indicate that at least for a certain segment of the LSG population, technologies other than PC-based internet access could be very useful – in particular ITV and mobile phones, possibly with interaction assisted by speech recognition). More efforts in research and development should focus on more user-friendly interfaces – a major barrier for inclusion of LSGs in e-Government. Since Interactive TV will most likely be installed in nearly every household in the forthcoming years, decision-makers should allocate resources and focus on the use, advantages and limitations of ITV for e-Government. It is also very likely that most citizens will use a variety of means for communication (e.g., cell phone, ITV, desktop/laptop computer, interactive kiosk and the like). It is therefore important that future developments in e-Government applications are not confined to only one major means of interaction, but are customized to multiple means, emphasizing user friendliness and a unified interface for all devices. Such a multi-access, multi-

technological environment also requires research and development of technologies for coherence and the synchronization of the different information elements and flows. It is imperative to ensure that each citizen will have access to an electronic channel, regardless of his or her economic or physical status. Otherwise, a generation of citizens deprived of e-Government services will develop, thus increasing the digital divide rather than reducing it. Those that cannot afford having their own electronic access will have to be provided with public access.

## e4 - The ELOST e-Government Expert Exchange System

The ELOST consortium has created an Interactive Policy Toolbox for active exchange on issues related to e-Government which is now available at [www.egovernment-exchange.eu](http://www.egovernment-exchange.eu).

The screenshot shows the ELOST e-Government Expert Exchange System website. The page has a header with navigation links: 'article', 'discussion', 'new source', 'history'. Below the header, there is a search bar and a 'Log in / create account' link. The main content area is titled 'Access' and contains a list of languages for the abstract: 'Abstract in Your Language?'. Below this, there is a 'Contents' section with a list of items: '1 The Situation in Europe', '1.1 Austria', '1.2 Bulgaria', '1.3 Finland', '1.4 France', '1.5 Germany', '1.5.1 Age and Gender Aspects in Internet Statistics', '1.6 Europe', '2 Further Information', '2.1 Relevant Publications', '2.2 Relevant Links', '2.3 France', '2.3.1 Zusammenfassung auf Deutsch'. The page also features a 'The Situation in Europe' section and a 'Austria' section with a search bar and a 'Go' button. The footer contains a 'Printer' link.

The ELOST e-Government Expert Exchange System has a number of objectives. It aims to be:

- an interactive information system offering the core results of the ELOST project;
- an open space for the international community of e-Government experts;
- an assessment mechanism for e-Government tools (Qualitative Process Monitoring)

It targets experts in the fields of e-Government (Administration and IT development), as well as NGOs promoting the needs of Low Socio-Economic Status Groups.

e4 informs experts across Europe on relevant barriers to e-Government use and respective solutions, good practice and success stories. The toolbox will provide information on reasons why Low Socio-Economic Status Groups (LSGs) refrain from using e-Government services, but also on their specific requirements or what could enable or motivate them to use it (more frequently).

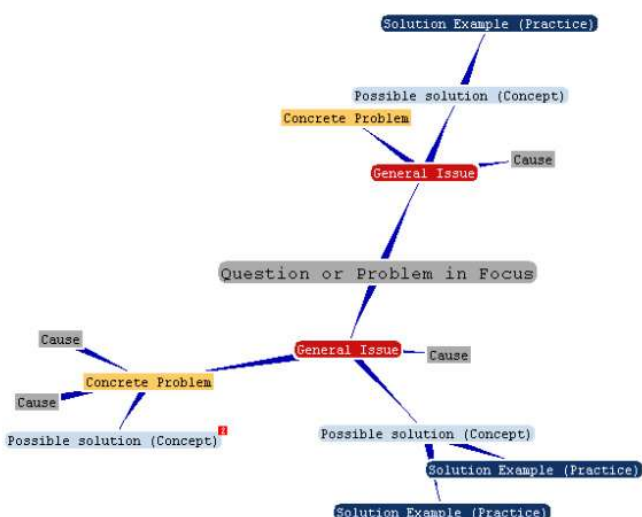
The idea of the ELOST e-Government Expert Exchange System e4 is to enable and encourage exchange of information and experience concerning practical solutions

in e-Government across Europe and beyond. How do other countries try to overcome the barriers that prevent LSGs from using e-Government services? Were these examples successful or what were the reactions of targeted users? Which personal aspects have the stronger impact on (non-) usage of e-Services or internet on the whole – income, education, age, gender? Which new and emerging technologies can help overcome digital divide issues, especially with relation to administrative services? The information on these issues has been collected from research publications, through specific interviews with e-Government experts, as well as with members of the respective population groups themselves.

The e4 system is based on the technology of the Wikipedia and participating is just as easy: register, log in and start creating or editing articles at [www.egovernment-exchange.eu](http://www.egovernment-exchange.eu) or [www.e4-info.eu](http://www.e4-info.eu).

### Searching e4

To facilitate the search and browsing beyond standard search features of the Media Wiki, problem-oriented Knowledge Maps were integrated to guide the user through the spectrum of issues regarding LSGs and e-Government. Innovative visualizations provide an overview of the main issues, their relations and known solutions, as well as recommendations from research institutions. Each graph shows the main questions and possible answers in the form of concise headlines. These function as hyperlinks that lead directly to the related Wiki articles where interested users will find further information. Problem-oriented Knowledge Maps bear the unique possibility of sketching an issue and presenting the major aspects at a glance, while at the same time offering further information on any topic or aspect that lies behind such aspect links.



- There is a Problem or Question (grey) at the centre of each map;
- Each problem is determined by one or more General Issues (dark red);

- For each general problem there may be one or more Concrete Problems (orange);
- General Issues and Concrete Problems may be defined or explained by Specific Causes;
- To each General Issue and Concrete Problem there is one or more Possible Solutions;
- There is one or more Practice Examples to each Possible Solution at the periphery of the map.

Various features (Zoom, Rotate, Locality) enable a maximum adaptation to users' needs.

### Featured Categories

The system is ordered in accordance with various categories which facilitate the search and contribution. The e4 Wiki can be browsed by:

- Population Groups: this category features articles related to the statistical and societal aspects in particular of Low Socio-Economic Status Groups (LSG);
- Issues and Barriers, such as internet and e-Government use and respective attitudes of certain population groups. This category especially features Interactive Knowledge Maps (see above);
- Content by Category: to facilitate browsing the e4 ELOST e-Government Expert Exchange System all categories are listed here. A click on one of the categories provides an overview list of the articles in the respective category;
- Content by Country: this category lists all countries on which e4 articles offer detailed information. A click on any of the country names will provide another list with all articles related to this country;
- E-Government Services: this category lists all e-Service types featured in the e4 system. A click on any of the service types will lead to a list of the services described in the system.

### Expert Exchange

Interactive participation of international experts is one special aspect of the ELOST e-Government Expert Exchange System: all visitors are welcome and invited to become active users and sharing their expertise by adding, updating and/or commenting on articles in the system.

The Interactive Toolbox should allow international exchange between experts from as many European countries as possible. It must be the mutual desire of experts to give the best possible information to as many relevant actors across Europe as possible. However, as the information assembled in ELOST is not only relevant for high level managers and politicians, but also and especially to medium level decision-makers and civil servants, English should not be the exclusive language of the system, as it can be assumed that many representatives of this target group throughout Europe may

have difficulties with reading such information in English and making proper use of it. In the scope of the ELOST project it is not financially viable to translate all contributions into the languages of the participating countries, let alone those of all European countries (EU-27).

On the other hand, the advantage of an international forum for exchange of experience, opinions and good practice methods would be lost if all relevant discussions were to be restricted by language barriers. Furthermore, it can be assumed that separate versions for different languages would not inspire exchange and transfer, but rather lead to isolated local linguistic communities. Therefore, the system provides a special feature to make e4 a multilingual knowledge base on e-Government and LSGs: in case some of the target users (mainly administrative staff and technology e-Government service developers) do not feel their English is adequate to fully understand the contents, the e4 system offers a special feature for non English-speaking users. Every article starts with a European language block where contributors can create and edit brief summaries in their own languages. Unfortunately, it was not possible for the ELOST consortium to provide abstracts in all European languages, but with a single click English-speaking experts can support their fellow countrymen (and –women) by writing a brief summary of the main information of an article. This will enable the community to participate in the knowledge of others. Such a local language abstract will also enable users to search the e4 in their own languages. As abstracts are always part of the article they summarize, searching for a term that appears in an abstract will directly lead to the related article. Here, interested users can read the abstract and intuitively decide whether the article is relevant enough to translate it or have it translated.

#### *User Rights Policy*

In order to enable and encourage international expert exchange the system is open to anyone interested in e-Government and the needs of Low Socio-Economic Status Groups. Registered users are allowed to edit, i.e. create new and/or add to existing articles. All authors are asked to 'sign' their contributions to enable fair evaluation and discussion. To ensure high quality of the e4 articles the Wiki is peer-reviewed under the supervision of the Centre for Technology and Society at the Technical University Berlin which runs and maintains the system on behalf of the ELOST consortium.

For further questions please contact Nico de Abreu at Technical University Berlin: [deabreu@nexus.tu-berlin.de](mailto:deabreu@nexus.tu-berlin.de).

### **ELOST events**

In 2007, the ELOST project organized:

- A half day seminar on "E-government and Low Socio-Economic Status Groups" in Sofia on February 20, 2007. The seminar was organized by the NGO 'Association for the Development of the Information Society' (ADIS) and the Institute of Mathematics and Informatics - Bulgarian Academy of Sciences (IMI-BAS) – a partner in the ELOST project. Following the seminar, a two page report about the event appeared in the No. 88 of the ADIS Bulletin.
- A full-day workshop on e-government services and emerging technologies in Berlin on August 22, 2007. The meeting was organized by NEXUS and the Technical University of Berlin. The preliminary results of the ELOST project were presented at the meeting which also hosted participants from German and Italian research institutions working in the field.

### **Forthcoming...**

The final ELOST workshop will take place in Brussels during the first week of March 2008. The workshop will bear the title 'E-Government and Social Inclusion: Barriers, Opportunities and Future Directions' and will last two days. It aims to bring together scholars working in the area of e-government and e-inclusion to discuss among themselves and with policy-makers and technology providers research findings and policy recommendations. A call for papers is being distributed together with this newsletter and will be available on the ELOST Web Site [www.elost.org/events](http://www.elost.org/events). The deadline for submission of paper proposals is the 15th November. The definite programme will become available at the end of January 2008. Financial assistance towards the covering of accommodation and/or travel expenses will be provided in select cases of paper givers.

### **Reactions, comments, feedback?**

We would be very happy to hear from you. Contact Liana Giorgi at [l.giorgi@iccr-international.org](mailto:l.giorgi@iccr-international.org). We also welcome briefings on other projects, events, networking activities.