ICT perception of elderly people and the role of infomobility services in their everyday mobility

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Increasing attention has been paid to the impact of ICT on:
- Actual everyday mobility
- How people decide about travelling and the choices they make

Information is a key end-product in this process:
- from being able to book long-distant flights through the push of a button in a smart-phone;
- plan door-to-door trips combining various modes of transport;
- while taking into account individual time schedules;
- to receiving personalized assistance and
- en-route or pre-trip advice on route choices given prevailing traffic conditions.
• Elderly people were traditionally not actively involved in the evolution of the Internet and technology
• They have merely observed advances come by as they never extensively used computers or similar devices for work or leisure
• Thus, the fact that these people have in principle limited access to such services and are often left overwhelmed in light of constant and interminable developments in the field, gains additional importance
• Various reasons account for that:
  ▫ relating to their socio-economic position
  ▫ the level of education
  ▫ the place of residence or the frequent exposure to younger people
  ▫ as it is more likely for an elder to get excluded from information flows and networks, when income is low and/or residence is away from the centre of activities
• Identify the penetration of ICT in the societal group of elderly people within the area of Thessaloniki:
  ▫ a Greek city with established, long-running and sustainable infrastructure infomobility services in private and public transport
  ▫ highlight the reasons behind their acceptability and conclude on their proclaimed assistive nature come to everyday mobility decisions
33 respondents (age range: 55-80 years old) completed the questionnaire:

- The majority hold university degrees (N=20), live with their spouse (N=26), meet their other family members very often during the week (N=29), are retired (N=22) and prefer to drive wherever they want to go (N=19)
- One third of respondents (N=12) choose to use the bus to move
- Choice of transport mode is not affected by gender as it would be expected for these age groups (i.e. in Greece, older drivers are in majority male)
- More than two thirds of respondents use a computer and have internet connection

Participants are active retired older citizens who live independently and are still active with adequate ICT literacy and knowledge.
A 15-item questionnaire was constructed covering the following areas:

- Basic background information (Identification of infomobility users within the older citizens in the area of Thessaloniki) including:
  - Working status (in employment/retired);
  - Living status (independence/co-dependence/other);
  - Family ties (frequency of contact with family members).

- Preferred transport mode (e.g. private passenger car, public transport)

- Use of ICTs and frequency of use (e.g. use of navigation systems at least once per month);

- Investigation of attitudes towards ICTs (statement proposition)

- Familiarity with ICTs;

- Identification of relevant problems (open-ended);

- Crucial issues/problems related to implementation and efficient penetration of relevant systems and services;

- The questionnaire was available in both electronic and paper-and-pencil versions for accommodating the user preferences.
• The second section of the questionnaire captures the user’s mobility profile and then users are categorised in four infomobility clusters:

  - **Early adopters, personal transport gain**: Younger elderly users (55-65 years old) with high ICT familiarity and personal infomobility services (e.g. in-vehicle navigation system);
  - **Average adopters, personal and public transport gain**: Elderly users (65-75 years old) with medium use of ICT technologies (e.g. personal pc/internet use) but no familiarity of infomobility services;
  - **Late adopters, public transport gain**: (>65 years old) limited ICT familiarity, keen to obtain knowledge but might not apply any, use mainly public transport;
  - **Limited adopters, public transport gain**: (>75 years old) very limited ICT familiarity, keen but difficult to retain new, complex knowledge and uses mainly public transport (sometimes alone).
• The questionnaire was completed in face-to-face sessions lasting approximately an hour:
  ▫ Participants were introduced to the main scope of the study and information was provided in both written and oral form;
  ▫ Written consent was obtained prior the completion of the infomobility questionnaire
  ▫ When users seemed they were trying too hard to give only “good” answers (i.e. experimenter bias), they were reassured and reminded that their true preferences were required
  ▫ In case respondents had any questions or needed clarifications, they were advised to ask the facilitator who was present at all times
  ▫ Any personal information was eliminated from the electronic data file
  ▫ Data were anonymised prior to the conduction of any analysis
  ▫ Participants were volunteers and did not receive reimbursement for their participation
• Mobile phones are the most commonly used devices (>90%); PCs and internet connection are also highly used (>70%)
• Modern technologies are less frequently used, e.g. tablets/smartphones (<40%) and navigation devices (<20%)
  ▫ 36% of the elderly claim inability to use them
Opinions are split among participants about privacy and complexity of the technology/devices.

The cost of the internet is not considered high by the majority (18 users).
• Most users have >5 years experience in using the PC; they use it for more than 2 hours daily
• The main use of a PC within the elderly group is Internet (incl. access to specific information and to receive/send mails)
• The main problems are basically related to the complexity of using a PC and the size of the screen
• The common profile is a non-tactical user with <2 years experience that basically uses it for Internet purposes (e.g. e-mails)
• The main problems using a smart phone are, as in the PC, the size of the screen and the complexity of using a touch screen
• 3 out of 4 users are able to use the Internet, but only 1 out of 3 is able to plan trips through the Internet
• Only the half is able to use a GPS, but they are always able to find the route, which is expected since the GPS navigators are dedicated to this purpose
• Combining both values - the ability to find the route and the ability to use the related technologies - only 1 out of 4 is able to plan a route using the PC, while 1 out of 2 is able to do it using a navigator
• Car is the transportation mean where the GPS is mostly used
• There is consensus on the difficulty of using other ICT related devices and services, and that there is a lack of services dedicated to elderly people.
• The main needs of such services highlighted during the interviews are personalization (each elderly has different needs and impairments), security, accuracy and a better ICT infrastructures support, while the main impairments are the poor digital literacy, the difficulty of following the technological advances and the expensive cost.
The questionnaire survey has shown that elderly people are in fact quite familiar with ICTs.

- Yet, there seems to be a substantial gap from being able to comprehend the modernization of everyday life to being able to catch up with it.

- The analysis revealed a series of problems and hindrances when it comes to the actual use of ICTs for everyday purposes, focusing on infomobility services; from the design of such devices themselves, to the need of personalizing solutions at a reasonable cost.
• Following the international paradigm of the United Nations, it is crucial to establish at both national and regional/local levels organizations that will aim at the promotion of ICTs in the elderly people, assist them in their acquaintance with the latest advances and offer them a variety of options for managing their everyday decisions, including all mobility-related aspects.