

The information society in demographically changing Europe

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I. Placencia-Porrero. The information society in demographically changing Europe. Gerontechnology 2007; 6(3):125-128. The development of an inclusive Information Society where all citizens can realise their potential is at the heart of the European policies. The rapid evolution of Information and Communication Technologies (ICT) is directly impacting the lives of all Europeans. When building an information society for all, it is essential to consider not only the technological components, but also the European social objectives and the related financial and legal issues. ICT has the potential to improve the quality of life of all, but most significantly for older persons and persons with disabilities. For many years the European Commission has fostered ICT development through its support of research and technology development, and through its policy initiatives.

Keywords: information society, Europe, demography

A communication from the European Commission on demographic change shows that from now until 2030 the European Union (EU) will experience a deficit of 20.8 million (6.8%) people of working age. In 2030, roughly two able persons (aged 15-65) will be needed to take care of one inactive person aged 65 or older. Europe will then have 18 million fewer children and young people than today¹.

A recent European Commission Communication concluded that it is possible to take up the challenge of the ageing population if the right economic and technological conditions are created². The report recognises the importance of new technologies in the labour market, productivity and economic growth, and cites the positive impact that information and communication technologies (ICT) can have in promoting demographic renewal in Europe, for instance, by contributing to the improvement of the work-life balance through flexible forms of work.

Research has shown that ageing initiatives need to meet social as well as economic challenges both at macro-economic (for

instance, long-term sustainability of care systems), and micro-economic levels, such as new market opportunities.

POLICY DEVELOPMENT

This is a crucial moment for Europe to address the opportunities offered by the Information Society, while responding to the new challenges posed by demographic change. *"The Information Society is moving from a 'pilot phase' to a 'wide deployment' as the ICT world becomes more mature and global. Since 2000, the ICT context has changed substantially, not only from a technological point of view, but also for economic players"*³.

One of the three major objectives of the i2010 Information Society Initiative is an inclusive information society that provides high quality public services and promotes quality of life. In order to raise the visibility of these issues the Commission launched 'flagship' ICT initiatives on key social challenges.

The first of the initiatives is *"caring for people in an ageing society addressing technologies for well-being, independent living*

and health". The objectives were well supported in the Riga Ministerial declaration signed in June 2006 by all European Member States and other European countries⁴.

Design for All, also known as Universal Design⁵, plays a key role in the initiatives and is fully supported by the European Commission.

EUROPEAN RESEARCH AND TECHNOLOGY DEVELOPMENT

The European Commission has supported Research and Technology Development (RTD) addressing the needs of people with disabilities and older persons as early as 1991. Initially support was provided for mainly assistive devices addressing the multiple minor disabilities that come with age.

Later it addressed the development of mainstream technologies that would be usable and suitable for older people to facilitate their full and active participation in society⁶. In the 6th Framework programme of research, under the Information Society programme more than 100 million Euros have been devoted to projects in the inclusion area, to mainstream accessibility in consumer goods and services, including public services through applied research and development of advanced technologies. This will help ensure equal access, independent living and participation for all in the Information Society⁷.

Several calls addressed issues relevant to older persons and the Information Society. The most recent call had two main foci, one on integrating advanced ICTs into working prototypes for assisted living, and the second on ambient assisted living systems reference architectures that allow for seamless integration of devices, sub-systems and services, in short: good ICT infrastructures. Thirteen projects were selected that addressed care and remote services, daily living support, smart home environments and mobility related issues.

As more products and services are introduced the problems of control integration become acute and standardisation and personalisation of interfaces in terms of style and function becomes a significant issue. A no less important component is security and safety of these services, whether it is for a home security control, alarm telephone services, social alarms, or bio-monitoring, all contribute greatly to allowing older persons to continue living safely in home environments.

Great technological advancements have been made in applications development, and new possibilities are opening up for the integration and convergence of a wide range of components from biosensors and data gathering and handling systems that deal with alarms and emergency situations, to integrative sub-systems in domestic information settings using new digital television solutions.

THE 7TH FRAMEWORK

Current RTD opportunities have been announced in the 7th Research Framework programme (FP7) call for proposals. One of the six major objectives is enhancing the integration of the ICT technology pillars (including nano-electronics, communication networks, mixed realities, etc.) into home environments and robotic systems to name only a few. A second objective concentrates applications research on areas that have direct societal relevance, supports business and industry and builds the public trust and confidence in the new technology. Here attention is devoted to RTD for ICT meeting societal challenges, such as integrating new technologies and initiatives in ambient assisted living.

The first calls for proposals under '**Challenge 7: ICT for independent living and inclusion**' addresses the key areas of ICT and ageing and accessible and inclusive ICT. It contains two lines of action: (i) integration of advanced ICT prototype solutions for independence at home, in mobile

environments, or at work, and (ii) sharpening the focus on open systems reference architectures, standards and platforms for independent living and active ageing⁸.

In the FP7 programme launching of a new type of research initiative based on article 169 of the Treaty that addresses research in ambient assisted living was presented. This initiative will join existing national technology and research funding programmes into a single common programme with additional European Community funding. This action creates a new framework for European cooperation, with translational activities managed at the member state level with common research content and structures.

EXAMPLES OF PROJECTS

Many projects have been developed and are ongoing; three exemplary projects concerning infrastructures are presented below.

ACTION

This project developed a user friendly home-based system accessible through the internet for older persons who need timely information and support from remote professional caregivers. A system based on the results of this project is today operational in Sweden.

CASA

The CASA project developed and evaluated a platform to provide services for

older persons, based on home system technologies and links to service centres. The system is based on a TV interface and provides video communication between residents in their homes and a service supervisor via a PC. A mainstream product based on the results of the project is available in Spain.

AAL

The objective of the 'Ambient Assisted Living' specific support action is to prepare a framework of cooperation among European member states (art.169 initiative) in using small and smart technologies for ambient assisted living. Ambient assisted living seeks the "*prolongation of the time that people can live in a decent way in their own flat by increasing their autonomy and self-confidence, the discharge of monotonous everyday activities, to monitor and care for the elderly or ill person, to enhance the security and to save resources*".

CONCLUSION

The European Commission has supported the area of research of new technologies for older people and people with disabilities for many years and will continue to do so, especially as this area gains importance because of demographic changes. In this context it is relevant that the European ICT policy initiatives related to ageing are shifting from a technology research focus towards a socio-economic impact perspective.

Acknowledgement

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