

How information and communication technologies can help Europe's ageing population: Frequently asked questions

Europe's population is ageing rapidly: between 2010 and 2030, the number of people aged from 65 to 80 will rise by nearly 40%, posing enormous challenges to Europe's society and economy. Information and communication technologies (ICT) can help. The new Joint research programme approved today as part of the EUs action plan on "Ageing Well in the Information Society" will develop new ICT solutions which can help improve the quality of life for elder people while creating strong opportunities for European industries working in the ICT sector.

Why is the Commission concerned about Europe's ageing population?

Healthcare expenditure in Europe is already significant (8.5% of the GDP on average) and rising faster than overall economic growth itself. And Europe's population is ageing fast. The number of people aged from 65 to 80 will significantly increase in the coming decades. By 2020, 25% of the EU will be over 65. This has tremendous implications for the health and social care sectors and creates new requirements for ensuring social inclusion and access to public services.

What are the main obstacles to the use of ICT among elderly people?

Lack of affordability, access, accessibility, skills, motivation and unwillingness to embrace new technologies are common barriers preventing Europeans from benefiting from the information society. In addition, people over 65 often suffer from physical impairments (vision, hearing or dexterity problems) thus increasing their sense of frustration and dependency. Yet, the market for ICT products and services specifically for the elderly is still in its infancy. Reasons include low awareness of the opportunities and user needs, insufficient sharing of experiences, fragmentation of reimbursement and certification schemes, lack of interoperability of ICT systems and high costs of development and validation.

What does "e-Inclusion" mean for the ageing society?

ICT is a key enabler of modern life. It is used at work and at home, as well as for leisure and entertainment. Europe's e-Inclusion policy for the elderly focuses on people's empowerment and participation in the knowledge society and economy, independently of age, gender, income, education and origin.

How can ICT help?

ICT can help the elderly to improve their quality of life, stay healthier, live independently for longer and remain active at work or in their community. A wide range of services could be offered to address daily needs such as:

- Social communication: easy and continuous access to phone and video conversations, overcoming social isolation;
- Daily shopping: easy ordering of goods online for home delivery;
- Safety: security systems to lock/unlock entrance doors and windows or to check for water and/or gas leaks, etc or installation of user friendly interfaces for domestic and other appliances;
- Health: telemedicine from home, wearable systems for monitoring and diagnosis of individuals with a chronic disease (such as heart disease and diabetes).

In many EU countries where over half of people aged 65+ live alone, such technologies can significantly extend the time that elderly people live independently in their own house, while at the same time avoid costs for hospitalisation and provide a basis for additional applications in the future (smart homes, telemonitoring, robotics, embedded systems, biosensors, etc...).

What are the economic benefits?

ICT may help prevent illness, improve the safety of care, facilitate active participation of patients and enable personalisation of care that open new opportunities in health and disease management. This will bring radical improvements to the quality and efficiency of our healthcare systems, reducing the pressures (and costs) for healthcare providers as well as employers.

For example, the UK's West Lothian Authority introduced intelligent home technologies for monitoring and assisting elderly people, and reduced hospitalisation from an average of 57 days to 9 days per patient, and on average lowered annual costs per patient from €32,218 to €10 505. In Germany it is estimated that by introducing mobile monitoring services hospitals could save up to €1.5 billion annually through early patient release.

ICT companies active in healthcare stand to increase their market size by catering for new opportunities in the internal market (and globally) for products and services that target ageing populations.

By solving technical and legal barriers, the market potential for intelligent home applications (related to reduced mobility or age-impairments that threaten the individual's independence) will almost double between 2005 and 2020 from 13 million people to 37 million, depending on the impairment and need.

What is the Commission doing?

In 2006 in Riga, EU Ministers agreed on a Ministerial Declaration on e-inclusion committing to an inclusive and barrier-free information society (see [IP/06/769](#)).

In 2007, an EU action plan for "Ageing well in the Information Society" was launched by the European Commission as a response to this Riga Declaration (see [IP/07/831](#)). It addresses a set of actions required to introduce ICT for Ageing Well on a large scale and aims to accelerate the delivery of benefits to elderly citizens, companies and health and social care authorities in Europe. The action plan aims to create a triple-win:

1. to enable a better quality of life for elderly people and their carers
2. to improve sustainability of Europe's health and social care in terms of cost and human resources
3. to help creating a strong industrial basis and new market opportunities in ICT for ageing well in Europe.

As part of the EU action plan, a new joint European research programme has been established where the Community will participate under article 169 of the Treaty, known as Ambient Assisted Living (AAL).

24 countries have already committed to set up this joint programme, which establishes a funding scheme for market-oriented ICT research and innovation projects focussed on new ICT products and services for ageing well.

The programme aims to:

- Provide the necessary **legal and organisational framework** for large-scale European research cooperation with Member States in this area;
- Create critical mass thanks to **shared European research strategies** that will also create a favourable environment for small and medium-sized enterprise participation.
- Foster the emergence of **new innovative ICT-based products and services** for ageing well.
- Enable **commercial exploitation and market development** by provide a coherent European approach for industry that also addresses the need for localisation and adaptation to varying social preferences and regulations nationally or regionally.

The EU contribution will be €25 million per year between 2008 and 2013 in response to similar minimum contributions from Member States. In addition the private sector will provide matching 50% of the overall funding. The total research investment is expected to reach more than €600m during that period.

The first call for research proposals under the new Joint Programme has already been launched on 25th April 2008 with a focus on telemonitoring solutions for elderly people.

The Ambient Assisted Living programme will complement longer term research aimed at helping the ageing population that is part of the EU's current ICT research programme (see [IP/06/1590](#)).

Between now and 2013, the EU and Member States, and the private sector will invest more than €1 billion in research and innovation for ageing well: some €600m in the ambient assisted living programme, an expected €400m in the EU's latest research framework programme (see [IP/06/1590](#)) and €50m so far for large scale pilot projects in the EU's ICT Policy Support Programme (see [IP/06/716](#)).

The action plan and research programme will enable a better quality of life for elderly people, make significant efficiency gains in health and social care possible and create a strong industrial basis for ICT and ageing in Europe. Europe itself could also become a lead market in ICT for "ageing well"; and as ageing is a global phenomenon, a strong industry in Europe would have opportunities worldwide. Furthermore, research aimed at developing more practical and simpler appliances that are easier to understand and use has a much broader scope of application.

Are there any examples of this already in action today?

Smart homes for elderly people in Scotland

In West Lothian county in Scotland, more than 2100 elderly people have been using home safety services which support tele-monitoring of health data and safety and security over a three year period. An in-depth assessment has reported the positive impact of the smart technology on a large group of elderly people and their carers, prolonging their independence and quality of life. In addition, the associated

costs analysis suggested that significant savings of up to 25% could be achieved from the new services, when compared to the cost of an institutional care place.

<http://www.ageconcernscotland.org.uk/publications/books.asp?p=102>

Viedome project in North Brabant region in the Netherlands

The North Brabant region funded an experiment to help elderly or disabled people live independently for longer, with distance care provided using new technology. The Viedome apartments now house 150 people in three locations in the region at a lower cost than apartments in traditional institutions. The services include video phone, domotic tools for remote control of the home, cameras for surveillance and safety and alarm systems. The elderly people living in the Viedome apartments are very satisfied and welcome the security offered. The project has demonstrated that the provision of such care can be affordable and, indeed, cheaper than traditional institutional care.

<http://www.viedome.nl>

Mobil Alarm project

Within the *MobilAlarm* project which was supported by the European Commission from March 2004 until August 2005, a location-independent emergency service for older, chronically ill and disabled people was tested and evaluated. The consortium included six organisations from Germany, the United Kingdom and Spain. The involvement of end users and the opportunity to use their feedback for improving the service was a unique characteristic of the project. The core feature of the *MobilAlarm* service is an emergency call from a mobile device to a professional response centre, using the GSM network for voice communication and GPS technology for determining the location of the user. The tests revealed that the device and service are suitable for market introduction and that there is a large potential market for such an easy to handle emergency unit. Commercial exploitation is now ongoing.

<http://www.mobilalarm-eu.org/>

I2HOME project

Most often, the design and the implementation of appliances, mobile phones and remote controls are driven by the ambition to satisfy users that are already engaged in modern technologies. Thus many people with disabilities, in particular persons with cognitive disabilities and older persons, are excluded from using modern technologies, at home and in the public.

I2HOME is addressing this problem with an approach based on existing and evolving industry standards. It focuses on the use of home appliances (including consumer electronics) by persons with cognitive disabilities and older persons. At the same time I2HOME will take care that the developed and standardized access strategies will be applicable to domains beyond the home.

I2HOME will be build upon a new series of industry standards (ANSI/INCITS 389ff) for interfacing networked appliances by means of a Universal Remote Console (URC). This device will allow to access and control (off-the-shelf) home appliances and consumer electronics devices through the users preferred interface, e.g. television, mobile phone, PDA and by preferred modality, e.g. keyboard, voice, gesture. In this way everybody and in particular elderly and disabled persons can benefit from a simplified and accessible access to devices and services within the home environment.

<http://www.i2home.org/>

What is the link between the AAL Joint Programme and the e-Inclusion Initiative in 2008?

The AAL Joint Programme as a key element of the action plan for Ageing Well is closely linked to the e-Inclusion Initiative launched by the Commission in 2007 (see [IP/07/1804](#)) and will strongly contribute to its objectives. This will also form a key part of the eInclusion Ministerial conference to be held in Vienna on 30/11 to 2/12 2008.

These activities together constitute a flagship initiative within the i2010 strategy, the digital economy component of the EU's revised Lisbon agenda for jobs and growth (see [IP/05/643](#)). It serves to underline how ICT can improve the quality of life of Europe's citizens.

How will this help to raise awareness of ICT solutions for Ageing Well amongst European stakeholders?

The action plan will involve national, regional and local stakeholders in promoting ICT in EU policy (such as older persons and their representatives, ministries and public authorities, industries and providers, employers, public and private health insurers, researchers and academia, telecommunications and construction companies and standardisation bodies). This follows the Commission call in 2005 for coordinated action to make information and communication technologies more accessible for citizens (see [IP/05/1144](#)).

ICT for Ageing Well will be one of the priorities on the Ministers' agenda during the French presidency of the EU in the second half of 2008. Stakeholder cooperation to produce a common research and innovation agenda will also be supported as well as dissemination of best practice cases (see <http://www.epractice.eu>) to national, regional and local authorities. Several studies on use of ICT by elderly people, ethical issues and on barriers for market development in Europe are ongoing to provide further insight for European stakeholders and benchmarking at European level.

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