Rethinking social innovations for active and healthy ageing within ICT research and innovation programs in Europe: beyond health, more older people-centric, and technology adoption

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Two key messages

- The central role of *health* in ICT Research & Innovation programs in Europe has reached a stage where a rethink of the linkage between them and the lives of older people is needed.
- How do we measure the *impact* of the results of the technologies developed under ICT Research & Innovation actions on the (perceived) well-being of older people? From technological intervention to technology adoption.
…grounded in 12 years of HCI research: 2004 - now

- **Basic research**
  - Ethnography of ICT use: 12 years of fieldwork
  - In adult educational centers and computer clubhouses in Barcelona and Madrid (Spain), Dundee (Scotland), and S. J. Campos (Brazil)

- **Applied research**
  - Life 2.0 EU project (CIP ICT PSP-2009-4-270965); 36 months
  - WorthPlay, CERO project (funded by Obra Social “la Caixa” and FGCSIC); 24 months
THE CENTRAL ROLE OF HEALTH IN ICT RESEARCH & INNOVATION PROGRAMS IN EUROPE
Ageing and two different views

- An ever-increasing ageing population
- On the one hand
  - Increase in the old-age dependency ration (working vs. non-working)
  - Increasing pressure on social and health care systems
- On the other hand
  - Community contribution (volunteering)
  - Providers of childcare, financial, practical and emotional assistance to family members
EU ICT Research & Innovation: H2020

Health, Demographic Change and Wellbeing

Responding to this challenge, research and innovation (R&I) under Horizon 2020 is an investment in better health for all. It aims to keep older people active and independent for longer and supports the development of new, safer and more effective interventions. R&I under Horizon 2020 also contributes to the sustainability of health and care systems.

During the first four years of Horizon 2020 (Work Programmes for 2014/15 and 2015/2017), the EU will invest more than €2 billion in this Challenge; in calls for proposals or actions.

Personalising health and care

Research & Innovation supported by this call will:

- improve our understanding of the causes and mechanisms underlying health, healthy ageing and disease;
- improve our ability to monitor health and to prevent, detect, treat and manage disease;
- support older persons to remain active and healthy;
- and test and demonstrate new models and tools for health and care delivery.

ec.europa.eu
EU ICT Research and Innovation: Ambient Assisted Living

WHAT IS THE FRAMEWORK?

- Time-to-market perspective of maximum 2 to 3 years after the end of the project;
- Project total budget: 1 – 7 M€;
- Maximum funding from the AAL Programme: 3 M€;
- Significant involvement of industry and other business partners, particularly SMEs, are encouraged;
- Realistic trial set-up at the end of the project;
- Proactive end-user involvement throughout the life of the project;
- Defined market segment(s) use cases and target group(s) and address the wishes and needs of these specific group(s).

THE CONCEPT OF AMBIENT ASSISTED LIVING IS UNDERSTOOD AS:

- extending the time people can live in their preferred environment by increasing their autonomy, self-confidence and mobility;
- supporting the preservation of health and functional capabilities of the elderly,
- promoting a better and healthier lifestyle for individuals at risk;
- enhancing security, preventing social isolation and supporting the preservation of the multifunctional network around the individual;
- supporting carers, families and care organisations;
- increasing the efficiency and productivity of used resources in the ageing societies.

www.aal-europe.eu
EU ICT Research & Innovation: EPSRC

Evaluating the new Dynamics of Ageing Programme

The Economic and Social Research Council (ESRC) is seeking to commission an evaluation of the New Dynamic of Ageing (NDA) Programme, to build on and complement earlier evaluation activities.

The NDA Programme was a ten-year £20 million multidisciplinary research initiative with the ultimate aim of improving quality of life of older people. It was a unique collaboration between five UK Research Councils: the ESRC, the Engineering and Physical Science Research Council, the Biotechnology and Biological Sciences Research Council, the Medical Research Council and the Arts and Humanities Research Council.

The main users of this evaluation will be ESRC and the other funders as listed above. The intention is to publish the resulting assessment of the NDA programme.
EU ICT Research & Innovation: health

- Health is very important
  - For all of us

- What type of view of older people (and old age) is promoted by EU ICT Research & Innovation programs?
  - Example: Assisted living or surviving?

- What R&D projects are they funding, or seeking to fund?
  - What side of ageing are they looking at?
Beyond health (in our research)

- Life 2.0: supporting independent living
- WorthPlay: games for a positive ageing
- Exchange of help might mean exchange of knowledge
- Nothing to do with exergames or brain-training games
More older people-centric

- Health is very important, but…

- The central role of health in ICT Research & Innovation programs in Europe has reached a stage where a rethink of the linkage between them and the lives of older people is needed

- We are not alone (e.g., Rogers 2013, Vines et al 2015)
MEASURING IMPACT: FROM TECHNOLOGICAL INTERVENTION TO TECHNOLOGY ADOPTION
Importance and types

- Impact is a keyword in ICT Research & Innovation programs (and more basic research too)
  - Social impact
  - Economic impact in the local area
  - …

- We are concerned with the impact of the technologies developed on the (perceived) wellbeing, which is a hot topic in the current (or third) HCI research wave
Impact needs evaluation

- If this project aimed to support independent living, to which extent does this technology, which you’ve developed in it, help older people lead a more independent lifestyle?

- However…

- A 2014 review of 150 papers addressing IT for Active Ageing indicates that “much IT is being developed but there is a minimal amount of research and testing on the efficacy of these technologies” (Parra et al., 2014, p. 421)
... and where there is evaluation

- It takes the form of intervention studies, “in which various well-being measures are taken before and after computers are introduced into people’s homes”, and “there is no evidence that computer use improves well-being among older adults” (Dickinson and Gregor, 2006)

- “there is controversy concerning the impact of computer use on psychosocial indicators” (A review of 151 articles published between 1990 and 2008 in several disciplines; Wagner, Hassanein & Head, 2010)
An alternative: technology adoption

- Evaluation of the impact of the technological intervention on a set of variables while the project progresses
  - ‘Usability’ tests, laboratory-based studies…
- Evaluation is seldom done when a project comes to an end – when the technology is (expected to be) ready for older people to use
- However, the impact is often seen in the long-term: adoption. ICT use by (older people) is a long-term, highly complex, and situated activity
...adoption from ethnography

- Ethnography can be used for evaluation purposes too.
- The ability to observe and take part in a number of everyday activities of older people over extended periods of time has enabled us to argue that:
  - It is using (rather than the use per se) computers and the Internet (when, where, with whom, what for...) what has an impact, both positive and negative, on the well-being older people.
Examples
Two key messages / reflections

- The central role of health in ICT Research & Innovation programs in Europe has reached a stage where a rethink of the linkage between them and the lives of older people is needed.

- How do we measure the impact of the results of the technologies developed under ICT Research & Innovation actions on the (perceived) well-being of older people? In a laboratory, or in real-life, over prolonged periods of time?
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References


