ICT Competitiveness Week, DG CONNECT, 17-20 September 2012

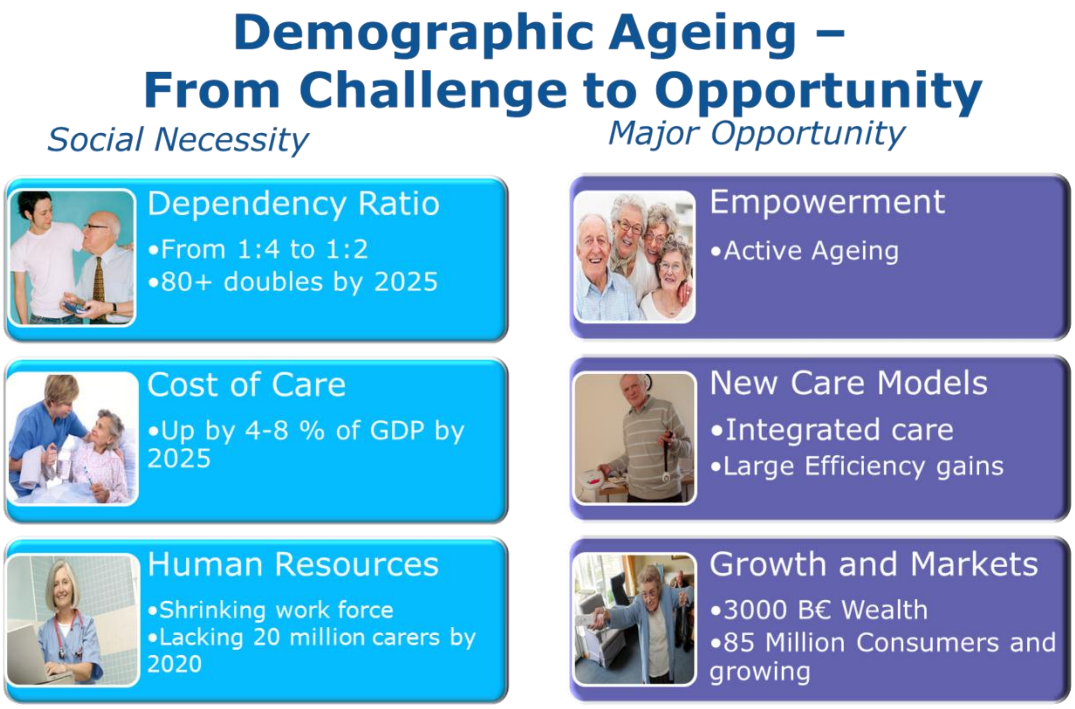
ICT for Active and Healthy Ageing

Introduction

This report summarises the discussions that took place as part of DG CONNECT's (Directorate-General for Communications Networks, Content and Technology) ICT for Competitiveness Week in relation to Active and Health Ageing. The overarching objective of the week was to bridge the gap between research and innovation to enhance European competitiveness. The workshop took place on 19th September 2012 and was attended by more than 30 invited participants.

Problem statement

The challenges and opportunities associated with an ageing population are well recognised and documented elsewhere. The opportunities for ICT to contribute positively are substantial. Key points are highlighted below.



The market ranges from:

- Support for vulnerable and chronically ill people, helping them to manage their conditions and improve quality of life through greater independence autonomy and dignity. This segment is of particular interest to public authorities wrestling with ever increasing pressures on health and social care services as it offers support for new integrated care models and efficiency gains.

- Exciting and engaging products and services targeted at the more active and vital elderly, particularly given the potential disposable income and time available in this segment of the population. However, products and services labelled for the 'Ageing' market already hit a barrier as the segment do not see themselves as old. Keeping active and productive for longer; better work life balance and quality of work, keeping up social networks (and developing new ones) are more relevant.

Despite a market clearly worth tens of billions of Euros in Europe alone, with much more globally, the market has yet to really take off in Europe. It is characterised by:

- Fragmented regulatory environments restricting scalability. Differing regulations and reimbursement mechanisms make it challenging and more costly for suppliers to deliver large scale economic services.
- Fragmented funding sources and instruments at EU, national and local levels that are often not easily accessible and have high barriers to entry. This is particularly unsustainable for small, agile innovative companies.
- Pilotitis. Despite an increasing body of evidence, organisational (and budgetary) silos and a lack of policy support for care innovation results in low commitment locally to scale up to sustainable transformed services

- Although great strides have been made in user-centered design and accessibility, technology in this space still has a high level of complexity which is a significant barrier to ‘consumer’ take-up
- A lack of adopted interoperability approaches and standards

Key Stakeholder Perspectives

Key points from a series of short stakeholder presentations are summarised below.

How to make things better for SMEs (Sami Oittinen, VIVAGO):

- Understand the big picture – calculate total savings (e.g.Tameside)
- Reduce red tape, empower the local levels.
- Share ideas on a European level, while understanding local challenges.
- Encourage investing in healthcare technology (seed investment, tax benefits, financing for technology investments…)
- Do not rely on things ‘done always like this’

In general, the technology is available. Focus on encouraging usage. Find user- and market-driven commercial applications.
Shift to a more agile development and feedback cycle to help SMEs bring things to market more quickly.

A view from the Demand side – Marielle Swinkels – Provincie Nord-Brabant

- Active and healthy ageing is all about creating new and smart connections.
- Development should be by co-creation, such as in living labs.
- Implementation and large scale deployment needs to build on:
  - User empowerment
  - Innovative procurement and reimbursement
  - Evidence of impact
  - Policy for interoperability and open systems
- Learning communities and venture capital for social innovation are also key.
- Governments need to work across the whole value chain. They have a particular role to play through procurement processes.

Delivering Growth - Henrik Kagenow, Welfare Tech

- Recognise the importance of balanced clusters which include companies, municipalities, hospitals, educational establishments and NGOs.
- Have a growth barometer to measure number of jobs created. Focus on real jobs created rather than just projects.
- Intelligent procurement is key. Selection criteria need to be innovative and measure things which are equally important in addition to price e.g. quality .
- Capital for companies is a big issue while markets are forming
- There is a need to make space for the consumer market – especially in relation to linking to institutional market.

Market says: accelerate innovation through the crowd – Jan de Boer, KPMG

- Europe has the infrastructure, knowledge and demographics to be top in eHealth (and mHealth). However Asia and the Americas are moving fast.
- Fragmentation is a risk. Solid investments and a strong coordination between parties are needed in Europe.
- EU needs to be careful to focus on the right market (vital versus vulnerable).
- Shift from provider focus to patient focus – consumerism will drive the market

To stimulate the market, an overarching and appealing goal could be used for EU and for each country. This removes borders and boundaries, stimulates small and large scale activities, drives standardization and leverages investments and PPP. Last of all it empowers the Crowd and Europe's ICT competitiveness and growth strategy (EU global leader).

Investor perspective – Brian O'Connor, ECH Alliance

- Leverage the total public spend in health and social care, not just the ICT. Link to the growth agenda – see the Northern Ireland Connected Health Memorandum of Understanding www.dhsspsni.gov.uk/connected_health_mou_dhssps_and_invest_ni_2.pdf
- Don't write off basic innovation of current services – we don't always need to be disruptive to improve.
- Work with procurement professions to move them from being 'blockers' to 'enablers'.
- EC should create and actively present the authoritative repository of evidence to create a peer pressure environment – 'Why are you not doing this when the evidence is so compelling?'

State-of-play (final SWOT)

The current state of play is characterized by the following strengths, weaknesses, opportunities and threats (detailed further in Appendix 1):

Strengths ▪ Large potential market ▪ Advanced deployment ▪ Large public R&D budget ▪ EU leader in systems technology ▪ Global reputation ▪ Increasing policy support ▪ Good cooperation frameworks	Weaknesses ▪ Market fragmented ▪ legislation and reimbursement schemes ▪ Fragmented funding schemes ▪ Lack of pace in funding schemes ▪ Complex value chains ▪ Lacking S/E evidence ▪ Disconnects demand/supply ▪ No common policies across Europe
Opportunities ▪ Strong role of public sector ▪ Growing potential market ▪ EU Social model ▪ Innovation leadership through addressing a heterogeneous market	Threats ▪ Pilots do not scale ▪ Market domination in early stages ▪ Lack of standards, emergence of non-European de facto standards ▪ Difficult to attract financing and venture capital for SMEs ▪ Rapid commoditisation of vitality market may favour non-EU suppliers

Key factors of success

- **Leverage** the total public spend in health & social services to help stimulate the market. The public sector spends huge sums of money on healthcare delivery. This spend should be seen as an investment, not sunk cost.
- Look to create effective **partnerships** that can communicate success beyond 'local' boundaries, whether municipality, region or country.
- Exploit the power of the **crowd**.
- **Engage** users, social entrepreneurs, professionals. Effective engagement will be crucial to delivering well designed, sustainable and profitable products and services.
- Define **metrics** carefully. You get what you measure! Focus more on companies (and market formation) rather than projects.
- Create an innovation friendly **environment** that eases access to market. Ensure clarity on relevant areas of regulations and standards, and where necessary, introduce regulatory change.

Key Recommendations

The following key recommendations summarise the discussions of the group.

1. *Growth from H2020 needs more agile processes; lower entry barriers and approaches to entice unusual suspects.*

Supporting growth within H2020 will mean doing things differently. The processes need to be more agile to support organisations that demand faster turnaround times. The current high barriers of entry need lowering to engage smaller organisations that cannot manage the current overheads. The process also needs varying to mix up usual and unusual suspects, e.g.

- Using a **sandpit-type** approach that brings players together competitively before trying to select good ideas to fund. An example is the Delivering Assisted Living Lifestyles At Scale (DALLAS) programme run by the Technology Strategy Board in the UK .
- **Low value competitions** can be hugely beneficial for SMEs and Social Entrepreneurs. These organisations can do a lot with €5-10k and the recognition/endorsement of the EC

2. *Ensure legal and regulatory clarity*

Governments should recognise that legal and regulatory barriers need to be addressed in parallel to other interventions to ensure investments can be exploited. Alignment of regulatory environments improves scalability and avoids need for unnecessary country specific investments, e.g.

- **portability of data*:*** If you can't take information beyond national borders, this restricts opportunities to exploit and scale services. Although European legislation allows for free flow of data, the reality is often different with (perceived) restrictions on moving health data beyond national boundaries preventing at-scale developments using cloud for a single data/service location in Europe.
- **Innovative procurement**: Pre-commercial procurement (PCP) and innovative procurement approaches are crucial to leveraging public sector spend in market demand. Yet at too often, procurement processes are seen as a barrier rather than an enabler to innovation. Clear presentation of PCP approaches, supported by success stories will help both service purchasers and procurement professionals adopt these mechanisms.

The European Commission (EC) should work with stakeholders and governments to create clear positions in areas that are identified as critical barriers.

3. *European Commission as an Innovation partner as well as research buyer*

The EC can play an extended, more mature role in addressing market, policy and implementation fragmentation and accelerating R,D&I. In particular, it should act as a thought leader and trusted broker, helping to create credibility and stimulate demand in a market area, thus helping reduce investment risk for VC and private investment. Other examples of possible EC action included:

- Establish and actively promote a repository of evidence to be used to support more convincing local arguments for change.

- Support local networks and local innovation infrastructures. Here the group felt EC staff needed to 'go local' more often and speak at local sessions. Don't underestimate the credibility locally of 'the Commission says……'
- Work with procurement profession to improve understanding and opportunities in innovative procurement approaches
- Continue to have a substantial role in promoting interoperability and standards in this area.

4. Utilise the power of the crowd

The group felt that the power of the crowd could be more effectively exploited in driving forward this sector. Many ideas were discussed, with three highlighted as potential benefit:

- **End user engagement -** Create an overarching and appealing goal that can be signed up to locally – e.g. extend the UK 3million lives but keep it at a country level, with EU facilitating and aggregating (i.e., not a 30 million lives in Europe campaign but local campaigns that collectively save 30 million lives). The AHA EIP goal of two life years was felt to be 'too remote' for most people to grasp quickly.
- **Evidence and policy influence on a new scale.** Crowd mobilization can play a significant role in changing policy positions and bringing evidence to bear in shaping local services.
- **Crowd accelerated innovation –** the more we use the power of large scale communities of interested people to consider problems and issues in the AHA sphere, more innovation we are likely to see emerge.

Other Recommendations

- Financial Instruments should be reviewed for their suitability to support Social Entrepreneurs. In many cases, much smaller investments are needed quickly – €5-10k really works in this area. EC should find much leaner ways of supporting these ventures,

- Use existing ecosystems to facilitate and work closer with grass roots.

- While governments must continue to focus on the more chronic/vulnerable market segment, it also has a role to play in stimulating the consumer market. Here there could be a key EC role to ensure the data flows between the 'vital' and 'vulnerable' segments are addressed, as citizens will demand a mixed economy.

- Many companies struggle with how to partner with public services. Practical and open dialogue outside of a procurement process is often difficult with parties fearing legal challenges. Regions/authorities could create an environment where companies and local authorities can discuss issues together without fear of challenge

Report prepared by Nick Batey, 25/9/2012

Appendix 1

State of Play SWOT input for the ICT for Active and Healthy Ageing meeting

The following Strengths, weakness, opportunities and threats were provided as input for the meeting. Although this was not directly discussed during the session, all of the points came up at some time during the debate, confirming the validity of SWOT analysis.

INTERNAL FACTORS	**STRENGTHS**	**WEAKNESSES**
	• S1 - Market: EU is a large potential market with low ICT penetration (<15%) and real growth opportunities (~10% of GDP). • S2 Deployment in EU is the furthest comparing to other continents, ie a 'Lead Market' in eHealth and Assisted living solutions • S3 - Public research funding: high availability of EU and MS funding for eHealth and assisted living research • S4 - Technology leadership: EU leading in technologies like open systems, smart sensors, human interaction and clouds and applied robotics • S5 - Excellence / Competences: worldwide reputation in assisted living and eHealth research, (eg. Intel, CISCO global activities located in Europe) • S6 – Integrated Policy: Major EU policies in support of innovation and active and healthy ageing (e.g. EIP on Active and Healthy Ageing, AAL JP, DAE, Innovation Union, 2012 year of active ageing, long-term care strategy, ECFIN ageing report) • S7 – Strong cooperation frameworks exist with Member States through the EIP AHA, eHealth Action Plan, AAL JP, Joint Programming Initiatives	• W1 – Public market: no clear definition of market despite the potential, fragmentation down to regional/local level • W2 - Regulation: legislation and reimbursement schemes not fully developed and harmonised across MS/Regions/Municipalities. • W3 - Public funding: Fragmented funding across many funding instruments at EU and National level • W4 Network failure: Complex value chains, lack of synergy across public and private stakeholders; competing interests; lacking evidence at scale of socio-economic effects • W5 – Disconnects between demand and supply side actors: lacking common understanding of real user needs and potential of ICT solutions • W6 – EU wide Policy: Tension between Member States and EU on health and social care policies as sensitive and major (~10% GDP) policy areas with strong subsidiarity • W7 – the lack of pace of current (R&I) instruments is at odds with the need of many stakeholders
EXTERNAL FACTORS	**OPPORTUNITIES**	**THREATS**
	• O1 - Public investments: strong role of public sectors in financing innovative solutions for active and healthy ageing • O2 - Market: markets are growing (even worldwide). Increasing awareness and consciousness of need for innovation in active and healthy ageing due to accelerating demographic changes happening now. • O3 - Policy: EU commitment to maintaining the European Social model and equitable access to care for the whole population is a major issue in the public debate and innovation can help to make care systems more sustainable • O4 -Innovation leadership: Systems solutions addressing differing needs across EU are making their proof in a multinational environment thus can be easily exported to other regions in the world.	• T1 – 'Pilotitis'- EU regions and local government do not scale and stay on the level of local pilots while other world regions are increasing their investments in active and healthy ageing innovation and European lead is decreasing. • T2 – Market domination: Fragmentation favours (many of them non EU based) l (eg. Intel, Cisco, Microsoft) and few international standards exist. Difficult to leverage SMEs in the value chains. • T3 - Policy: Risk that de facto standards and guidelines setting is done outside Europe and therefore products and services not compatible with needs by European regions. • T4 – Finance: It will be a challenge to ensure access to venture and financing for European SMEs in the absence of a scalable European market. • T5 - rapid commoditisation of the 'vitality' market may play into hands of large scale non-EU device manufactures