Past activities of ICT in Health and Ageing

DG CONNECT/H Sustainable & Secure Society
DG Communication Networks, Content and Technology
European Commission
ICT RDI in Health & Ageing

Digital Agenda

Health policy

Ageing policy

eHealth 2020

EIP

AAL

Integrated care

Cross-border care

Sustainable care

Health & wellbeing

Active Ageing

Legal & market conditions

3000 B€ Opportunity

Chronic diseases

Empowerment

Ageing
1. **Breakthroughs**
   - Behavioural & cognitive data for 10 years earlier risk detection
   - Virtual physiological human, in-silico medicine
   - Robotics in smart spaces for empowerment of citizens and professionals

2. **ICT Interoperability & standards**
   - Integrated health and wellbeing information
   - Open Source, Open service platforms, Reference Architectures, ISO standards

3. **Unlocking emerging market potential & growth**
   - Personalised health & wellbeing, "apps" + information systems
   - AAL: 300+ SMEs → 20%+ projects going to market

4. **Economies of scale and re-use**
   - Chronic disease mgt & care systems & independent living → 35% efficiency gain
   - Co-investment: 50+ regions, 20.000+ users
   - EIP as very large scale multiplier
   - End-to-end ICT security and privacy
FP7 ICT & Ageing Research
> 35 projects, >125 M€ funding

- Advanced Prototypes for independent living/active ageing:
  - ADL, Cognitive support
  - Service and social robotics
  - Smart environments for early risk detection & intervention
  - Open Systems, Reference Architectures, Platforms

- Support: roadmaps, ethics, standards, Int’l cooperation
Ambient Assisted Living
Art.185 Joint Programme

Market-oriented ICT research in assisted living technologies & services

- 2-3 years to market
- 120+ projects 40%+ SMEs
- 23 European countries
- $\Sigma$ Budget 600 M€+ EU funding 150 M€
ICT Policy Support Programme / CIP

- Large scale pilots
- Assisted living using existing technology
- Focus on evidence, organisation change, business models
- Building on regional activities

**16 pilots**

> 50 Regions  
> 20,000 users  
> 70M€ funding

- Multiple Chronic diseases  
- Cognitive impairment  
- Integrated Care  
- Fall prevention and detection  
- Skills & carers  
- EIP support
EIP on Active and Healthy Ageing

TARGET: +2 HLY, Triple win

APPROACH:
- Combining demand and supply sides of innovation
- Building on existing instruments and new ones
- Ownership of key stakeholders
- High-level political commitment
- Very large-scale deployment & innovation
- Awareness and best-practice sharing across Europe
Building up the EIP scale and critical mass

1,000 regions & municipalities

1 billion euro committed by partners

30 mio citizens, >2 mio patients

Marketplace
>45,400 visits >880 registered users

> 500 commitments in six Action Groups

3,000 partners & 300 leading organisations

32 regions as Reference sites of Innovative Health Practices

>45,400 visits >880 registered users
Ageing well – the EU picture

Active and Healthy Ageing EIP

New Knowledge

Proven Ideas

New solutions

Evidence and innovation guidelines

Deployment support

Horizon 2020

Health

eHealth

ICT & Ageing

AAL JP V2

Research

Innovation

Public Health Programme

Structural Funds
EIB
ESF

EIT-KIC

Deployment

More Years Better Lives

Alzheimer’s

New

Years

Lives

More

Better

Years

Lives

Better

More

Ageing

Active and Healthy Ageing
Further Information

Digital Agenda for Europe
http://ec.europa.eu/digital-agenda

ICT Policy Support Programme
http://ec.europa.eu/ict_psp/

Ambient Assisted Living Joint Programme
http://www.aal-europe.eu/

JPI - More Years – Better Lives
http://www.jp-demographic.eu

Active and Healthy Ageing Partnership
http://ec.europa.eu/active-healthy-ageing

Contact:
CNECT-ICT4ageing (at) ec.europa.eu
Patient centric healthcare

Secure Networks

Mobile, Wireless & Broadband

Region 1

Home

Hospital

Emergency

Pharmacy

Health Centre

Region 2

Region 3

Mobility

eHealth
Personalised Health Systems and Guidance Services for lifestyle and disease management:
~358 M€ (FP7) + ~39 M€ (CIP)

**FP7**
Mainly disease management (less on prevention)
- Cardiovascular diseases
- Diabetes
- Respiratory diseases
- Renal failure
- Mental disorders (depression, ...)
- Neurodegenerative diseases (dementia, Parkinson's, ...)
- Rehabilitation of cerebrovascular/neurological conditions
- ICT enabled Artificial organs
- Intelligent Systems for analysis of multi-parametric data
- Point-of-Care diagnostic

Patient guidance services for personalised management of health
- Provide patient tailored therapeutic and medical information
- Engagement of citizens in care and disease prevention

Roadmaps (PHS, mHealth, ICT for disease prevention)

**CIP**
Large scale pilots on telemedicine, PHR, wellness and rehabilitation, disease management, patients' empowerment
FP7 – Virtual Physiological Human - ~240M€

• **Clinical focus – Patient specific computer based models and simulation:**
  - Early diagnosis
  - Prediction of treatments outcome
  - Surgery planning
  - Prediction of disease relapsing
  - Advanced environment for assessing the effects of drugs
  - Integration of environmental factors in predictive models
  - Early demonstrator of the concept of the "Digital patient" (complex integration of models and data for the clinical applications)

• **Technical focus – ICT tools, services and infrastructures to**
  - Share data
  - Share and jointly develop multi-scale models and simulators
  - Create collaborative environments
  - Obtain more reusable and robust models
  - Obtain sustainable VPH models and data repositories (VPH-infostructure)

Virtual Physiological Human: predictive computer modelling

- Biosensors
- Environmental Data
- Phenomic data
- ICT Systems
- Biochips
- Genomic data
eHealth Interoperability

- **Technical and Semantic interoperability projects:**
  - Terminologies, technical specifications, tools, decision support systems, clinical data extraction, reuse of health data for research, roadmap, certification of eHR, quality management system for interoperability testing

- **Pilots**
  - Large scale pilot epSOS on cross-border interoperability

- **Studies**
  - ISA study on the eHealth interoperability framework
  - SemanticHealthNet study proposing a roadmap on semantic interoperability