Enhancing Longer Living in Smarter Places
Converging social, economic, environmental & ICT complexity.

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CONVERGENCE Kenneth Johnson

CONVERGENCE Jackson Pollock
The Challenge …

• The demographics
• Diversity of systems
• Fragmentation of structures
• Older person’s empowerment
• Innovation cultures
• Pathways from policy to practice
• Competing pressures

What can stakeholders in Active and Healthy Ageing do together to improve the situation for older persons in European Society?

Can we see it as a developmental opportunity rather than as a growing resource strain – and can we keep attention on it?
Enhancing Longer Living in Smarter Places

The Domain

- Demographics
- Healthy Ageing
- Longer Living
- Ageing Domains

Technology Platforms

- Challenges
- Healthy Ageing
- Longer Living
- Ageing Domains

Regulating Contexts

Implementing Change

Figure 1: Number and proportion of people aged 60-plus worldwide in 2012, 2030 and 2050

- 2012: Number 60+ 809m, 11% of total worldwide population
- 2030: Number 60+ 1,375m, 16% of total worldwide population
- 2050: Number 60+ 2,031m, 22% of total worldwide population

Where Population Ageing is happening

Fig. 3.2. Proportion of population aged 60 years or older, by country, 2050 projections
Healthy Ageing. (2015 WHO report)

The WHO report defines *Healthy Ageing* as:

the process of developing and maintaining the functional ability that enables well-being in older age.

**Functional ability** comprises the health-related attributes that enable people to be and to do what they have reason to value.

It is made up of the

- intrinsic capacity of the individual,
- relevant environmental characteristics and the
- interactions between the individual and these characteristics.
The WHO World Report on Ageing

![Diagram: A public-health framework for Healthy Ageing: opportunities for public-health action across the life course](image)
Why is it important … Longevity and changing life-course patterns

Learning  Productive  Leisure

0  10  20  30  40  50  60  70  80  90  100

Domain Dimensions

Public Sector
Private Sector
NGO Sector
Community
Family
Person

Market Stakeholders

Spatial Hierarchy

Quality of Life

Effective Services

Jobs & Growth

Ageing & Place Experiences

Housing,
Public Spaces,
Transport,
Social participation
Civic Engagement
Respect / Inclusion
Information
Health & Services

Positive Ageing

Participation | Security | Health & Wellbeing

Home,
Neighbourhood,
City, Region
URBAN | RURAL

2+ HL Y

URBAN | RURAL
Enhancing longer Living in Smarter Places

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Technology Platforms
- Sensors
- Platforms
- Technologies

Regulating Contexts

Implementing Change
Context awareness

Over 150 Sensors actuators / unit
Context awareness

From reaction to prevention

Data Entry (e.g., computers, health equipment, TV)
On Body (e.g., clothes, watches and shoes)
Environment (e.g., room sensors and furniture)
Objects (e.g., remote controls, mobile/land phones)

Sensing

Work with data acquisition companies

Data Parsing for Context Estimation

Work with data analysis companies

Characteristics of State

Context Aware Broker and Inference Engine (CABIE)
Evaluative Reports

Work with service delivery companies

Environmental Changes (e.g., lighting and sound)
Music, images, and video
Inward Communication

Outward Communication

Intervention Pathways

From reaction to prevention

Work with data acquisition companies

Work with data analysis companies

Work with service delivery companies
Advancing IoT Technologies

- Open Service Platforms
- Ambient and wearable sensors
- Standardised ontologies
- Open standardised APIs
- Service integration - Interoperability
- Data sources / acquisition
- Data analytics
- Data Visualisation and Presentation
- Actuation
- Trust & security

Assistive technologies
Home automation
Multi-sensor network connectivity
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Regulating Contexts

- User involvement
- Context awareness
- Values & Principles

Implementing Change

Releasing potential

User involvement

**Challenge:** To tackle the barriers

- 500 people replied to the online Public Consultation on the EIP on AHA launched by the Commission at the end of 2010/ beginning 2011
IoT for Confidence in context

A reference model

Context awareness

Predictive
Preventive
Re-active

Safety / security
Social connection
Civic/social participation

Strengthening social / in-formal connectivity
Strengthening connectivity with health system
Self-management
Remote consultation

From VITAL SIGNS to SIGNS OF VITALITY
Confidence in early detection – targeting early intervention

Time spent outside the home by a healthy socially active individual

Time outside home by an individual with a high depression score
Values & Principles

• Personal empowerment / agency and choice
• Universal design / inclusive design
• Person-centred and user led

• Ethical / consent / no-harm
• Data protection / storage / access
• Privacy

• Multi-disciplinary - mixed methods
• Technology acceptance – satisfaction / usefulness
• Technology assessment – efficacy / cost-benefit
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Implementing Change
- Pilots & Promise
- Partnerships
- A Silver Economy
Pilots – promise & problems

The sustainability / transfer cliff

Innovations funded by:
EU programmes
National programmes
Foundations
Other.
(Temporary)

Need to embed innovations in structural financing systems, to gain clear relation between investments and revenue/savings

Transformational culture
Scaling / replicability / growing
Internal pull as much as push
Implementation roadmap

Ref: Erwin Van Leussen – Achmea Health Innovations (Holland)
AAL Policy workshop Sept.. 2008
The European Innovation Partnership on Active & Healthy Ageing.

A) Prevention Promotion
   Personalisation
   Falls/Frailty

B) Integrated care
   Chronic diseases

C) Independent Living
   Social inclusion
   Cognitive decline

Impact on the citizen
Effective Systems & Services
Innovation, economy, jobs

D) Age-Friendly Building, Cities and Environments

Smart environments
Empowerment and self-management
Service integration
Autonomy – independent living

+2 Healthy Life Years

The European Innovation Partnership on Active & Healthy Ageing.
The Approach ….

Accelerate, replicate and scale the adoption of evidence-informed practices in regional and city development throughout EU

**WHO – AFEE**
Adapted guidelines

**AFE-INNOVNET**
Mobilisation Network Covenant on Demographic Change

**Active Ageing Index**
Measures / indicators

Broaden and intensify the applied research and development base to increase take-up of evidence-informed practices and service-oriented innovation,

- Strengthen the effectiveness of EU, national and regional stakeholders when aligning policies, programmes and funding to support AHA-EU2020

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Developing a Silver Economy

OUTCOMES FOR CITIZENS

SERVICE EFFECTIVENESS

INNOVATION / COMPET.

Regions / cities / providers Implementing AHA Practices

Core

Implementation mediation

Practices Repository

Network/sharing

Research & evidence for Innovative AHA practices

Networking to promote Integrated EU & national policies

Opportunity to avoid fragmentation and silos – and build integrated approaches

Opportunity to weave an approach where the whole is greater than the sum of the parts.

- Research coherence
- Collaboration
- Synergies
Thank you

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