PILOT STUDIES AS ENABLER FOR THE MARKET INTRODUCTION OF AAL SOLUTIONS
Experiences from the Austrian pilot regions

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WORKSHOP GOALS

• Exchange of experiences related to …
  • planning,
  • conducting and
  • analyzing pilot studies.

• Discussion on strategies …
  • to define better pilots and
  • to foster the market introduction of AAL solutions based on pilot studies.
AAL PILOT REGIONS

• Deployment and evaluation of assistive technologies …
  • over a longer period of time and
  • involving a high number of users.

• Investigation of the impact of AAL solutions on …
  • individual,
  • societal and
  • institutional level.

• Development of go-to-market strategies involving all relevant stakeholders.

• Different research focusses and evaluation methodologies
AUSTRIAN AAL PILOT REGIONS
AGENDA

• Part 1: Key note presentations
  • Boundaries for planning pilot studies, J. Oberzaucher
  • Which technologies to use?, K. Majcen
  • Indicators for evaluating the impact of AAL solutions, M. Garschall
  • Study results as basis for follow-up activities, N. Ates

• Part 2: Fishbowl discussion (Moderation: F. Piazolo)
  • Planning pilot studies
  • Selection of technologies
  • Follow-up activities
Boundaries for Planning Pilot Studies

AAL Forum 2017
Coimbra, 05.10.2017
Johannes Oberzaucher
EXAMPLE: Pilot Region Facts

Duration: 01.01.2017-31.12.2019

Project Partner:

- Research Institution
  - Fachhochschule Kärnten gemeinnützige Privatstiftung (Projekt Manager: Johannes Oberzaucher)
  - Joanneum Research Forschungsgesellschaft mbH
- SME
  - ilogs mobile software GmbH
  - MedCubes GmbH
- Social & Health Care Service Provider
  - Hilfswerk Kärnten

Supporter:

- Netzwerk Geriatrie Kärnten (geriatrician)
- City government (Villach, Klagenfurt, Ferlach)
- Verein Lebenswertes Altern in Ferlach (community activities with elderlies)

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Carinthian Pilot Region for AAL and Smart Living Technologies

Long-term-testing of an integrated AAL system with focus on:

„Health, Inclusion and Assisted Living“

- Health Management: Vital Parameter and Lifestyle Monitoring
- Social Inclusion and Community Services

Pilot Study

- 16 months (pre-tests included)
- 100 + 100 households (test group and control group)
- People aged 60-85 years, living alone or in a small family setting, level of care 0-4

Evaluation:

- Usage frequency of Smart VitAALity applications
- User experience and acceptance
- Effects on specific dimensions of empirically measurable quality of life: health and social inclusion
- Socio-economic potential analysis
Elements of a pilot study

Challenges:

- **Time and time constraints**
  - 3 years overall, about 1 year pilot study
  - Parallel lifecycles → iterations

- **Team**
  - Interests

- **Aims: Science vs. Practical Realization vs. Business Goals**
  - Study design vs. recruiting goals
  - Impact analysis (Power) vs. Multifunctionality

- Further more: budget,....
Lessons Learned

Team

- Needs of project partners
  - Different institutional rhythms (decision delegation pathways and time)
  - Mutual understanding for institutional interests, methods and lifecycles
  - Gaining Knowledge

- Need for innovation promoter
  - Project member and political interests
    - city government vs. institutions

- Stakeholders perspective
  - Geriatricians: medical necessity for intervention
  - Community services provider: support in community and networking issues
Lessons Learned

Parallel Lifecycles

- Requirement analysis (with stakeholders)
- Technical development
- Study / Evaluation
  - Theory-driven (measurable) vs. multifunctionality
  - Sample size (homogeneous) vs. function extent and function usage
- Business models
  - Economical and socio-economic aspects
Lessons Learned and Recommendations

Time Constrains and Aims

- User requirements vs. technical development vs. business model vs. science (theory-driven)
  - What do the users want? – What’s the business model behind a function?
  - What’s the market potential of the function set? – Can we measure an impact according to that function set?
  - What do the users expect according to technology innovation? – What is technically feasible? (time)
- ....

Recommendations

- Awareness
- Reduction of the function set
- Less is more – impact analysis
- Combination of already existing architecture / infrastructure and user needs
- Communication and open mind
Thank you.

www.smart-vitaality.at

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Which (AAL) technologies to choose / to use?

Kurt Majcen
AAL Forum, Coimbra, 4 October 2017
Agenda

- some information about RegionAAL
- questions to think about
- approaches in Austrian test regions
- lessons learned so far
- **main Goal**
  - support older adults in being able to reside for longer in their own surroundings
- **achieved through**
  - implementation of ICT that are likely to be actually accepted and used by end users
  - existing technologies will be adapted, extended and integrated
  - 100 households were equipped for evaluation
- **analysis of evidence**
Core points

- affordable and usable package
  - ready to fit existing homes
  - easy to use and maintain
  - ongoing functionality after project ends
- scientific evaluation of measures in test homes (100 test + 100 control households)
- dissemination through open demo-home
When selecting technologies for…

...you have several choices

- ...a pilot
- ...the homes you are responsible for
- ...your parents’ residence
- ...or maybe for your own apartment or house
- run a research project
- ask some experts
- have endless sleepless nights
- or ask your children
The Austrian AAL test regions...

- ...have selected technologies
- ...have equipped their test households with those technologies for use in their pilots
- ...are evaluating efficacy and acceptance of the chosen technologies in larger trials with longer periods
But…

- they have chosen technologies in different ways
  - definition at project proposal setup
  - selection during first project phase
    - creation of a product catalogue
    - evidence analysis on efficacy and acceptance
  - and different kinds of technologies
    - smart home components
    - assisting technologies
  - and they have distributed them in different ways
    - product catalogue allowing care organizations and participants to chose
      - more flexible
      - different settings in households
    - definition by project team
      - fixed setting for all households
      - better comparable within evaluation purposes
In the end…

- they are facing similar problems
  - purchasing enough components
  - installing hardware and software

- and have huge efforts for
  - rollout of technologies
  - maintenance of defect devices (even with products)
  - keeping track of stock and installations

- further lessons learned
  - less is more
  - expect the unexpected
  - working with existing products leads to limitations

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Thank you for your interest!
looking forward to discuss “Selection of technologies”
SELECTING INDICATORS
Pilot studies as enabler for the market introduction of AAL solutions

Markus Garschall
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AIT Austrian Institute of Technology
**Motivation**: Proof of effectiveness and added value to the individual as well as on the institutional or social level, comparability of pilot studies

**Research principles**: transdisciplinary approach, involvement of all stakeholder groups, iterative approach, data and methodological triangulation, practicability and consideration of pragmatic and ethical aspects
RESEARCH DESIGN

State of the art

Initital indicator derivation

Qualitative evaluation

Extension of the set

Quantitative evaluation

Final model

- 5 spheres of outcomes
- 16 potential outcome areas of AAL projects
- 76 indicators (and 307 specifications)
1. Vitality and Quality of Life goals
2. Social goals
3. Social system related goals
4. Economic and innovation goals
5. Design and technology goals
SPHERES OF OUTCOMES

1. Vitality and Quality of Life goals
2. Social goals
3. Social system related goals
4. Economic and innovation goals
5. Design and technology goals
VITALITY AND QUALITY OF LIFE GOALS

Preservation and improvement of well-being
  i.e. Satisfactory and dignified standard of living, autonomy and self-determination, physical, psychological, social and spiritual well-being, personal security, self-image

→ e.g. autonomy (availability of resources, degree of perceived autonomy), self-perception (emotional, social, body-related self-esteem assessment)

Preservation, expansion and improvement of capabilities and independent activities
  i.e. (instrumental) activities of daily living, cognitive and physical abilities, education, mobility, employment, work-life balance, occupational health

→ e.g. cognitive abilities, physical abilities, range of mobility

Maintaining or improving health
  i.e. self-management of health, health monitoring, prevention, reduction of mortality, medication support

→ e.g. subjective health, objective health (vital signs, risk factors)
SOCIAL GOALS

Promoting inclusion and participation
  i.e. digital inclusion, loneliness prevention and participation, strengthening social networks, promotion of diversity, positive and valued social role in old age, exchange of experience, location-independent communication, cross-generational communication

→ e. g. Social interaction (number and quality of social contacts, social role in old age), digital inclusion (access to digital networks, information, training)

Consideration of ethical criteria in the development and implementation
  i.e. avoiding stigmatization, support that does not replace human contact, justice

→ e. g. Consideration of ethical guidelines during development, freedom of choice for access to services, freedom from stigma)
SUMMARY AND OUTLOOK

• (german) Manual as a practical tool for project consortia

• Next steps
  • Translation of the set of indicators and the manual
  • Operationalization of the indicators

• Further information: http://evaaluation.tech-experience.at
THANK YOU!
Markus Garschall, 04 October 2017