Building Toward the Future (Zukunft Bau)

SHORT REPORT

Title

Technical assistance systems for older persons — a future-oriented strategy for the construction and housing industries (Ambient Assisted Living/AAL).

Motive/Starting Situation

How can technical assistance systems support autonomy among older persons and allow them to remain in their existing residence for a longer period?

The project was tasked with the following: evaluating the activities of residential property companies in the area of AAL; analysing the contribution of technical assistance systems and technology-supported services for the requirements of the coming demographic shift; and defining recommendations.

Object of the Research Project

In early 2013, the GdW member companies conducted a comprehensive survey on the results of the AAL activities. 59 projects were identified and the most interesting 17 of them were analysed through three steps:

- Relevant technical assistance system;
- Experience of renters with technical assistance systems: attractiveness, contribution to satisfaction and independent living;
- Experience on part of residential property management company: Economic viability, use of business models.

The focus was on projects in existing properties. Above all else, applications to increase safety and simplify daily life were determined.

The sociological analysis by the SIBIS Institute drew from 90 case studies in total from rental households. The data was collected through participatory observation of flats outfitted with AAL technology, semi-standard interviews and on-site usability tests. The strictly technical data was put into context through narrative interviews examining the renters' experience with technology, their daily life, their living situation, and their needs, wants and desires. The collected data is currently the most comprehensive of its kind and method in Germany.

The subjective benefits of the implemented applications are evaluated with different weightings among the different renter groups based on their living situations, the need for support, their attitude toward tech-

nology and, last but not least, the availability of non-technical resources (family, friends, neighbours).

Importance factors for acceptance also included a user-friendly interface, robustness and low susceptibility to technical errors, the availability of attractive supporting services and the ensuring of a variety of non-technical factors, including construction factors, data privacy and liability issues, ethical aspects and cultural and social factors.

From a technical standpoint, high-performance electronic communication within residential buildings requires a high-speed communication connection between the residential building and the outside world. The data connection must be suitable for entertainment offerings as well as data communication. Residential property management firms should pay attention that at least one broadband, bi-directional, cable-based infrastructure system can be used in the residential building.

The economic analysis of the project by the InWIS was based on existing project documents and supplementary targeted interviews with project stakeholders. The primary investigation involved whether any of the business models looking promising.

The conducted analyses showed that simply latching onto that respective partner's business model does not qualify as 'promising'. The development of new, cooperative business models involves incorporating the fundamental elements of customer segments, value propositions, communication, distribution and sales channels, revenue streams, key partnerships and cost structures. This involves a complex, iterative process requiring definition of how partners will be incorporated and who will be adding value where along the chain.

Residential property management companies can offer technical assistance systems within their own business model, but will encounter limiting boundaries where higher investment costs are required. Away from traditional market roles, this necessitates new, cooperative business models that can be used to reduce the load on the rental households to a minimum and for which the market partners will find a fair and appropriate balance of costs and benefits in their relation with one another.

The success of technical assistance systems and supplemental services will depend not least on whether they add demonstrable value and performance for the market partners and society at large. Sociological studies are required on this point to analyse the benefits for elderly, their relatives and caregiver teams on a broad basis, as well as an economic assessment showing the cost/benefit calculations. The results of these kinds of studies are crucial for ensuring the ongoing engagement of industry, the residential construction industry and health and retirement care insurers.

Summary

The benefits of the AAL concept with its pillars "Safety" and "Comfort" are well proven at the qualitative level. They are attractive for renters when the quality of service is transparent and the security of the data streams is secured. With central contact offices and showrooms, technical assistance systems can be made public.

The core of the AAL concept should be a basic setup with safety and convenience components that can be supplemented with additional functions as required. Provider-agnostic gateways for more applications should be preferred.

Markets will be tapped by testing out new, cooperative business models in which system and service providers, municipalities and health and retirement insurers will provide increased co-financing of technical assistance systems.

Technical Specification

Short title: Technical Assistance Systems for Older Persons

Researcher / Project Manager:

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- Prof. Dr. Rolf G. Heinze, Dipl.-Ökonom Michael Neitzel, Dipl. Geograph Manuel Sudau, InWIS GmbH, Bochum
- Dr. Claus Wedemeier, GdW Bundesverband deutscher Wohnungs- und Immobilienunternehmen e.V.

Total Costs: 146,000 euros

Share of federal subsidy 96,000 euros (65.8 %)

Project time frame: October 2012 to November 2014

IMAGES / ILLUSTRATIONS:

Image credits as:

Image 1: AAL-KurzE-01.png

Involved Projects Housing Society	Project Name	Number of flats involved
GEWOBAU Erlangen	Model Project "Kurt-Schumacher-Straße"	N=60
Kreiswohnbau Hildesheim	Intelligentes Wohnen – ARGENTUM am Ried	N=25
WBG Burgstädt e. G.	Die mitalternde Wohnung	N=11
Gemeinnützige Baugesellschaft Kaiserslautern AG	Ambient Assisted Living – Wohnen mit Zukunft	N=39
Gemeinnützige Baugenossenschaft Speyer	Technisch-soziales Assistenzsystem im innerstädtischen Quartier	N=10
DOGEWO21 Dortmunder Ges. für Wohnen mbH	WohnFortschritt	N=3
Joseph-Stiftung Bamberg	Wohnen mit Assistenz – Wohnen mit SOPHIA und SOPHITAL	N=110 N=60
degewo Berlin	Sicherheit und Service – SOPHIA Berlin	N=140
SWB Schönebeck	Selbstbestimmt und sicher in den eigenen vier Wänden	N=255
WEWOBAU eG Zwickau	Technische Assistenz zur Energieoptimierung	N=32
HWG Hennigsdorfer Wohnungsbaugesellschaft GmbH	Mittendrin: ServiceWohnen	N=60 N=12
Wohlfahrtswerk Baden-Württemberg	EasyCare	N=15
GEWOBA Potsdam mbH	SmartSenior	N=35
GWW Wiesbaden	WohnSelbst	N=15
Number of flats involved		**N=882**
Analysed Case Studies		**N=90**

Sociologically examined projects

Image 2:

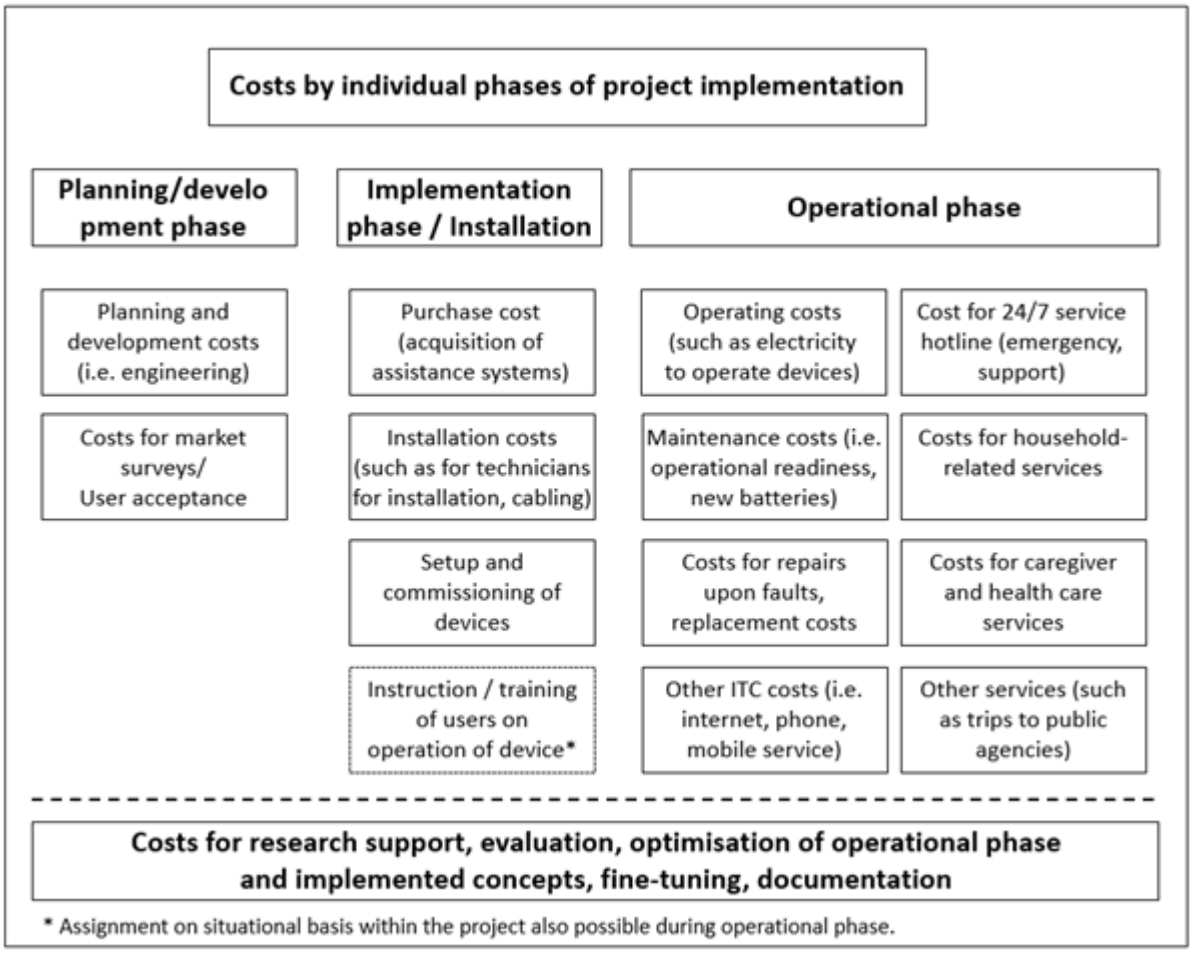
Kreiswohnungsbau Hildesheim – Intelligent Residential Spaces – ARGENTUM am Ried in Sarstedt

(Source: http://kreiswohnbau-hi.de/wp-content/uploads/2012/09/ARGENTUM.pdf)

Image 3:

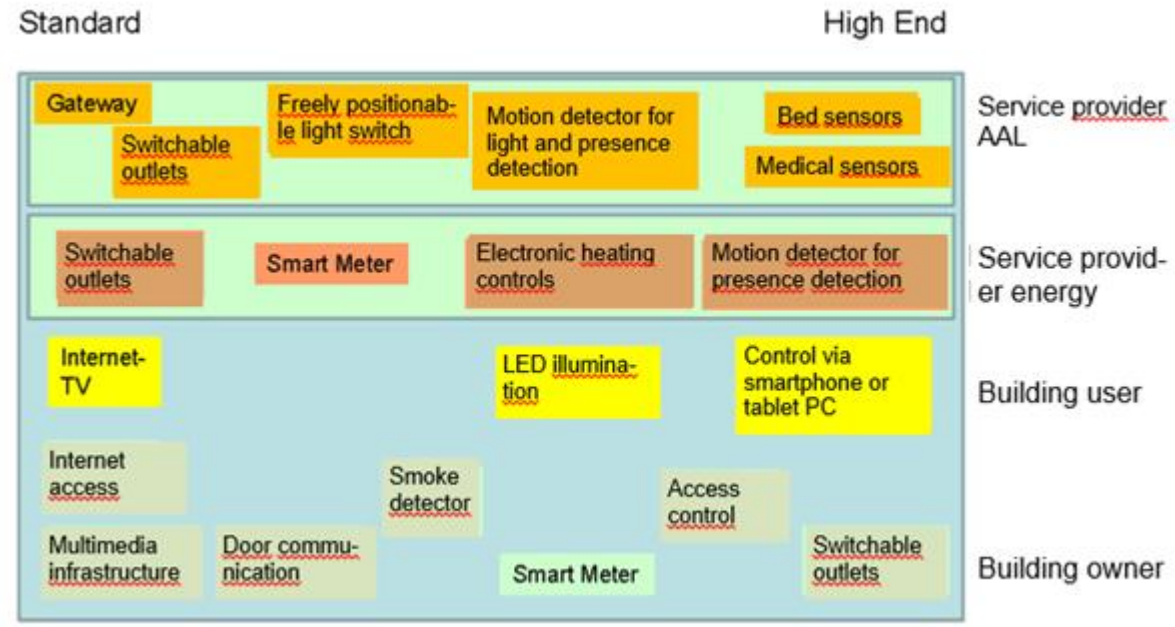
Tablet as control device (Source: CIBEK)

Image 4:



Costs broken down by individual phases of project implementation

Image 5:



Furnishing variants for the infrastructure of a residential flat

(Source: Prof. Dr. Viktor Grinewitschus, EBZ Business School, Bochum)