Deliverable D7.3
3 Case study Hand-outs

Josef Hilbert, Rolf G. Heinze, Gerhard Naegele, Jürgen Howe, Peter Enste, Sebastian Merkel, Claudia Ruddat, Fabian Hoose, Katja Linnenschmidt, Manuela Nitsch

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<td>Institute for Work and Technology</td>
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<th>Explanation</th>
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<tbody>
<tr>
<td>AAL</td>
<td>Ambient Assisted Living</td>
</tr>
<tr>
<td>AENEAS</td>
<td>Attaining Energy-Efficient Mobility in an Ageing Society</td>
</tr>
<tr>
<td>am</td>
<td>ante meridiem</td>
</tr>
<tr>
<td>ASSDA</td>
<td>Agency for Social Services and Dependency of Andalusia</td>
</tr>
<tr>
<td>BAGSO</td>
<td>Die Bundesarbeitsgemeinschaft der Senioren-Organisationen (The German National Association of Senior Citizens' Organisations)</td>
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<tr>
<td>BMBF</td>
<td>Bundesministerium für Bildung und Forschung (Federal Ministry of Education and Research)</td>
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<tr>
<td>CTSS</td>
<td>San Sebastián Public Transport Company</td>
</tr>
<tr>
<td>DRK</td>
<td>Deutsches Rotes Kreuz (German Red Cross)</td>
</tr>
<tr>
<td>DRT</td>
<td>Demand Responsive Transport</td>
</tr>
<tr>
<td>e.g.</td>
<td>for example</td>
</tr>
<tr>
<td>e.V.</td>
<td>Eingetragener Verein (registered society)</td>
</tr>
<tr>
<td>Etc.</td>
<td>et cetera</td>
</tr>
<tr>
<td>ff.</td>
<td>folio (and the following pages)</td>
</tr>
<tr>
<td>HLJ</td>
<td>Trafiksystemplanen (Transport system plan)</td>
</tr>
<tr>
<td>HSL</td>
<td>Helsingin seudun liikenne (Helsinki Regional Transport Authority)</td>
</tr>
<tr>
<td>hwg eG</td>
<td>Hattinger Wohnstättengenossenschaft</td>
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<tr>
<td>ICT</td>
<td>Information and Communication Technologies</td>
</tr>
<tr>
<td>Km</td>
<td>kilometre</td>
</tr>
<tr>
<td>Km²</td>
<td>square kilometre</td>
</tr>
<tr>
<td>LTP</td>
<td>Local Transport Plan</td>
</tr>
<tr>
<td>Mi</td>
<td>More Independent</td>
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<tr>
<td>NGO</td>
<td>Non-governmental organisation</td>
</tr>
<tr>
<td>NPO</td>
<td>Non-profit organisation</td>
</tr>
<tr>
<td>PC</td>
<td>Personal computer</td>
</tr>
<tr>
<td>PHR</td>
<td>Personal health record</td>
</tr>
<tr>
<td>pm</td>
<td>post meridiem</td>
</tr>
<tr>
<td>PSS</td>
<td>Person Shaped Support</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and development</td>
</tr>
<tr>
<td>RAY</td>
<td>Raha-automaattiyhdistys</td>
</tr>
<tr>
<td>SMS</td>
<td>short message service</td>
</tr>
<tr>
<td>SWOT</td>
<td>Strengths Weaknesses Opportunities Threats</td>
</tr>
<tr>
<td>TBS</td>
<td>Towarzystwo Budownictwa Społecznego</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>VDK</td>
<td>Sozialverband VdK Deutschland e. V.</td>
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<tr>
<td>WiWoZu</td>
<td>WirWohnenZusammen</td>
</tr>
<tr>
<td>WP</td>
<td>Work package</td>
</tr>
<tr>
<td>WSD</td>
<td>Whole System Demonstator</td>
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1. Introduction

This report is the third deliverable within work package seven (WP7) “Built and technological environment” of MOPACT\(^1\). The first task (“Innovation prospect report”)\(^2\) maps current developments, trends but also challenges within the areas of information and communication technologies (ICT), housing and mobility in the European Union and provides the basis for this hand-out. Following the overall aim of MOPACT – making longevity an asset for social and economic developments – WP7 focuses on identifying innovative approaches that will increase the health and living conditions of citizens, support the process of active and healthy ageing and have the potential to foster economic growth.

However, the implementation and diffusion of promising approaches falls behind expectations; this is especially true for publicly funded projects and initiatives. The previous task revealed several aspects that can have a positive or negative effect on the uptake of innovative solutions. The aim of the current task is to validate these results, extend the view from a practical perspective and find ways to solve prevailing challenges. We conducted case studies of good practice examples from the perspective of five European countries – Finland, Germany, Poland, Spain and the United Kingdom. Good practice cases show possibilities to overcome challenges and tackle barriers. Moreover, examples from other projects and initiatives can help to avoid mistakes, provide vivid inputs for the design of new projects and offer learning opportunities.

**What is good practice?**

Defining the criteria for good practice leads to several challenges. First of all, it is necessary to define the term “good practice”. Good practice solutions cover actions, projects, methods or approaches that have been or are successful. There are several aspects which can be considered to evaluate this success, e.g. sustainability or innovativeness. Focusing on projects that – not necessarily exclusively – target older persons and follow the idea of active and healthy ageing, it soon becomes clear that particular aspects have to be met. Older persons represent a heterogeneous group with different characteristics such as income, health status or education, but comparable needs (e.g. security and safety, community participation, see Mollenkopf 2013). Keeping this in mind, we understand good-practice-solutions as projects or initiatives which address those needs and seek to actively integrate older persons into the innovation process. Those needs may vary according to the area and to the specific country. Housing-solutions in one country have to meet certain characteristics which might not be applied to a project in another.

**Identifying good practices**

We developed a research protocol that was used to guide the identification and the analysis of the good practice cases. Based on a desk-research, promising project were selected and contacted. The selection criteria were drawn from the first phase of this project. Key criteria for the identification were:

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\(^1\) MOPACT is a four year project funded by the European Commission under the Seventh Framework Programme to provide the research and practical evidence upon which Europe can begin to make longevity an asset for social and economic development. For further information visit: http://mopact.group.shef.ac.uk.

\(^2\) The report can be downloaded on MOPACT’s website: http://mopact.group.shef.ac.uk/research-posts/findings-10/.
- Involvement of the end-users into the innovation process;
- The sustainability of the project/initiative;
- Addressed market barriers;
- Transferability of the project or certain parts.

There were no restrictions concerning the state of the project. E.g. if an initiative (or parts of it) has shown good results but was terminated – for whatever reason – this does not automatically lead to an exclusion. Furthermore, if a potential good-practice-example shows outstanding ways to deal with certain problems but fails in other aspects, it still can be considered as an example.

**Good practice case studies – overview**
The following table provides a short overview of all good practice cases included in this report:

**Table 1: Overview of the good practice case studies.**

<table>
<thead>
<tr>
<th>Project</th>
<th>Short description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AAL-Lotsen (“AAL-guides”)</strong></td>
<td>The project aims at training older persons to become AAL-guides. The guides inform (older) people about the opportunities of AAL-solutions and show which products and services already exist.</td>
</tr>
<tr>
<td><strong>Abbeyfield</strong></td>
<td>The Abbeyfield Society provides different forms of accommodation and services among elderly, predominantly in the UK but also worldwide.</td>
</tr>
<tr>
<td><strong>Andalusian telecare service</strong></td>
<td>The Agency for Social Services and Dependency of Andalusia (ASSADA) provides social services for older and/or disabled persons including a telecare service.</td>
</tr>
<tr>
<td><strong>Ayuntamiento de San Sebastián</strong></td>
<td>The city of Donostia-San Sebastián has responded to the demographic challenges with multiple activities targeting the (transportation) needs of older people. This includes the implementation of a minibus-service, vertical transport solutions and walking activities.</td>
</tr>
<tr>
<td><strong>KÄKÄTE – User Centered Technology for Elderly People and Care Givers</strong></td>
<td>The KÄKÄTE project seeks to find out more about using technology to support older persons in their daily routines and care givers in their assisting work. To reach these aims, the project combines research, networking and dissemination activities.</td>
</tr>
<tr>
<td><strong>Kutsuplus.fi Helsinki Regional Transport</strong></td>
<td>Kutsuplus.fi combines public buses and taxis. Passengers can book a mini bus on short notice and chose a pick-up and drop-off point. The ride is shared if other passengers are going in the same direction at the same time.</td>
</tr>
<tr>
<td><strong>“Kotisairaala” – Hospital at Home</strong></td>
<td>Kotisairaala provides intensive health care at the patients’ home instead of a treatment in a hospital.</td>
</tr>
<tr>
<td><strong>Leicestershire County Council Public and Passenger Transport</strong></td>
<td>Leicestershire County Council’s aim is to provide transport services to their inhabitants by combining different services: Community transport, demand responsive transport and social car schemes.</td>
</tr>
<tr>
<td><strong>Mi – More independent</strong></td>
<td>Mi seeks to to increase the scale of technology-enabled services operating in Liverpool.</td>
</tr>
<tr>
<td><strong>Nie Sami (“Not Alone”)</strong></td>
<td>Nie Sami is social housing project for elderly, offering assisted housing in rented flats.</td>
</tr>
</tbody>
</table>
| **SehrMobil Siegen (“VeryMobile)** | SehrMobil is a platform that offers a variety of age-friendly
Silver internet encourages older persons to get in touch with modern technologies. Under professional supervision, people can help each other and discuss problems related to the use of ICT-based devices.

WirWohnenZusammen ("WeLiveTogether")

The WiWoZu-house of the hwg eG is an example for cross-generational shared housing.

**SWOT-analysis of ICT, housing and mobility for older persons**

We conducted a SWOT-analysis for each of the three areas based on the insights from the analysed cases. A SWOT-analysis (Strengths, Weaknesses, Opportunities, and Threats) tool is an instrument which is used for the evaluation of projects and organisations. It is typically applied within the business-world to analyse and improve the strategic planning in a company. The method helps to see external and internal factors that have a potential impact on reaching a previously defined goal.

- **Strengths**: What are possibilities, approaches or solutions which help to achieve the initially defined goals?
- **Weaknesses**: Can be regarded as the opposite of strengths. Which attributes negatively affect or hinder the progress towards the defined goals?
- **Opportunities**: External factors, events or trends which can offer new possibilities and help to achieve the objectives.
- **Threats**: External factors, events or trends which can have a negative effect on the achievement of goals.
2. Good practice examples ICT

ICT-based products and services offer plenty of possibilities to increase the quality of life of (older) persons and to support the process of active and healthy ageing. However, even though the use of ICT-based devices like smartphones and the time spend online is continuously increasing among all age groups, this does not reflect the acceptance and the use of modern technologies by older persons. Due to the heterogeneity of age and the fact that older persons differ according to experiences, attitudes, abilities and resources, it is important to pay tribute to these various factors and follow approaches that target experienced users on the one hand, but also less experienced on the other (Mollenkopf 2013).

This is one of the reasons why the selected good practice cases also represent a broad variety of projects in terms of funding, range or regional scope. Still, comparable challenges are found – and different ways to tackle those.

ICT-based products and services for older persons can be found in various areas. As a consequence, this leads to the necessity to narrow down the focus for the identification of good practice examples. We concentrated on two different aspects: The general use of ICT and telecare/telehealth. Technology is capable of supporting the process of active and healthy ageing; ICT-based products and services can help to provide assistance in everyday task, help to gain new skill or support social contacts and help persons to be socially included (Mollenkopf 2013). To unlock these potentials, it is necessary that people are capable of using modern devices. This also covers telehealth and telecare, which reflect a more reactive approach. These areas have received a lot of attention lately; the European Commission but also national governments are supporting programmes to develop and implement new telehealth and telecare solutions. Still, the uptake of promising solutions is behind expectations. The chosen good practice cases offer different ways to tackle the prevailing challenges and provide the opportunity for transfer of certain aspects.
### 2.1. AAL-Lotsen (“AAL-Pilots”)

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>AAL-Lotsen (AAL-Guides)</th>
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<tbody>
<tr>
<td><strong>Summary</strong></td>
<td>The project aims at training older persons to become AAL-guides. These guides inform (older) people about the opportunities of AAL-solutions and show which products and services already exist.</td>
</tr>
<tr>
<td><strong>Target group</strong></td>
<td>Older persons familiar with ICT</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Ongoing</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>Training</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>Since 2013</td>
</tr>
</tbody>
</table>
| **Institution(s)**  | Sozialverband VdK Saarland e.V.  
                      Neugeländstraße 11  
                      66117 Saarbrücken, Germany |
| **Contact**         | Sozialverband VdK Saarland e.V.  
                      Tel.: (+0049) 0681 58 45 9 - 128  
                      vdk-akademie.saarland@vdk.de |
| **Funded by**       | Federal Ministry for Education and Research |

**“Senioren-Technik-Botschafter”**

AAL-Lotsen is one of 18 projects funded within the programme “Senioren-Technik-Botschafter” which has been launched by the German Federal Ministry for Education and Research in 2013 and lasts till the end of 2014. The programme has five thematic areas:

- Assistive technologies
- Information and communication
- Mobile technologies
- Internet and social media
- Topics and technology of the future

The aim of the programme is described as “supporting ideas of non-profit organizations which submit a coherent, innovative concept for the set-up and intermediation of knowledge about the use of new technologies” (BMBF 2013: 3). The programme focuses especially on low-threshold approaches so that older persons become aware of existing solutions and their potential benefits but also potential dangers accompanying the use of modern technologies. Moreover, the programme acknowledges the heterogeneity of age; tailored approaches of knowledge transfer are
seen as a central aspect to address the needs of the target group. This includes, for instance, meeting the people where they like to be – at home but also in their quarters. All initiatives focus on the integration of voluntary workers. Considering the sustainability of the projects, the “Bundesarbeitsgemeinschaft der Senioren-Organisationen” (German National Association of Senior Citizens’ Organisations, BAGSO) will support the projects after the funding period has ended.

Each of the five areas contains multiple projects; a recurring theme is that older persons teach other older persons about technical devices and how to handle them. This contains computer courses but also the use of mobile devices and everyday-technologies such as televisions or domestic appliances.

**AAL-Lotsen**

The highlighted project – AAL-Lotsen – aims at introducing Ambient Assisted Living (AAL) solutions such as stair lifts, vacuum cleaning robots, illuminated hand rails, etc. to older persons. The idea behind the project is that older persons inform and explain AAL-technologies to other persons, raise awareness and lower existing reservations. This is achieved by recruiting volunteers who ideally worked as technical professionals but are now retired. These volunteers are trained by professionals who are experienced with AAL-products and services. The training consists of multiple sessions in which the guides-to-be become familiar with different categories of products and services. This includes handling, prices, availability and, since advertising for certain brands is strictly excluded, alternative devices for the same purpose. After the first training sessions, the guides start their voluntary work and inform older persons based on their individual needs and (financial) conditions which solutions could be could be suitable for them. More than 20 guides have been trained so far which is considered as a success by the project’s initiators.

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3 An online-database of AAL products can be accessed under this URL: www.wegweiseralterundtechnik.de/index.php/Hauptseite.
The project is hosted by the “Sozialverband VdK Saarland”\(^4\), a non-profit organization. Prior to the project the VdK conducted a survey among its members about their interest in AAL-products and services. The survey showed great interest in such technologies but a low level of awareness and only little knowledge about such products. The sustainability of the project was perceived as a major challenge since the AAL-market is changing very fast and new solutions come up every year. To guarantee that the guides are up to date and that the project will be sustainable, networking is one of the central elements. This includes regional product developers to provide feedback about the expectations and wishes of the end users but also local craftsmen who are able to install the solutions. Furthermore, the networking activities also cover the integration of AAL-information centres and showrooms (Kommunale Beratungsstellen „Besser leben im Alter durch Technik”) where the products can be tested in place.

**Challenges**

The first guides who have been active reported several challenges during their work. Most notably, their “clients” are very interested in easy to handle products and services such as safety features (e.g. emergency buttons) and equipment like automatically turning off cooking plates. Another often requested field are bathrooms. Technically advanced products were seen as “counterproductive” since the guides felt that they overburden the target group and only cause fear and denial. Though the costs were always a topic during the consultations, they were not seen as the major problem. The usability of the products was regarded as the most important factor. This also includes the labelling of the products; foreign-language terms and especially the term “AAL” were perceived as

\(^4\)http://www.vdk.de/saarland/
negative. A recurring theme addressed by the project leader as well as the guides was the lack of visibility of the potential benefits of modern technology.
2.2. Andalusian telecare service

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>Andalusian Tele-assistance Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>The Agency for Social Services and Dependency of Andalusia (ASSDA) provides social services for older and/or disabled persons including a telecare service.</td>
</tr>
<tr>
<td>Target group</td>
<td>Dependant persons</td>
</tr>
<tr>
<td>Status</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.juntadeandalucia.es">http://www.juntadeandalucia.es</a></td>
</tr>
<tr>
<td>Duration</td>
<td>2000 - present</td>
</tr>
<tr>
<td>Institution(s)</td>
<td>Andalusian Agency for Social Services and Dependency (ASSDA)</td>
</tr>
<tr>
<td>Contact</td>
<td>Andalusian Agency for Social Services and Dependency Tel.: (+0034) 902 56 65 65</td>
</tr>
<tr>
<td>Funded by</td>
<td>Ministry for Equality and Social Welfare of Andalusia Government</td>
</tr>
</tbody>
</table>

**Andalusian Agency for Social Services and Dependency**

The Andalusian Agency for Social Services and Dependency (ASSDA), formerly the Fundación Andaluza de Servicios Sociales (FASS), is a non-profit agency that works as instrumental entity of the Ministry for Equality and Social Welfare of the Andalusian Regional Government (Junta de Andalucía). ASSDA’s headquarters are based in Seville, the capitol of Andalusia\(^5\), and Malaga; delegations are located in all of Andalusia’s eight provinces. Launched in 2000, ASSDA offers the largest telecare/teleassistance service in Europe with more than 1,500 employees and more than 210,000 users at present.

Following the overall objective of improving “the quality of life of elderly and/or disabled people or any other people in a situation of dependency for as long as possible in the best possible conditions” (Vargas Casas 2010), ASSDA provides a range of social services for older and/or disabled persons. This includes:

- Services to promote personal autonomy e.g. provision of care for people in assisted living (sheltered housing) or psychological and social support for mental handicap people or people with mental illness;
- Home-care services like housekeeping, providing help for cooking and leisure activities inside and outside the home environment;
- Day and night care services;

\(^5\) Andalusia is the largest of Spain’s autonomous region with approximately 8.44 million inhabitants, 15% of those 65 years or older.
• Teleassistance/telecare services (Rodríguez and Martín 2013)
  ASSDA aims at the development, promotion and management of the above mentioned services. To achieve this, the organization follows multiple “actions lines”:
• Contributing to increase the autonomy and independence of older persons/disabled persons;
• Offering security and safety in the own home environment of older persons/disabled persons;
• Offering an immediate assistance in case of emergency;
• Supporting relatives, carers and informal carers;
• Providing information of interest to the users;
• Linking to other public services (Vargas Casas 2010)

Moreover this contains the application of new technologies for social services, including national and international research and development projects.

**Teleassistance**

The national law 39/2006 (Promotion of Personal Autonomy and Care for Dependent Persons or “LEPA”) and Act 51/2003 define the boundaries for the autonomous regions and cities in Spain that are responsible for the implementation and coordination of social services at the community level. In article 22 the law explicitly refers to teleassistance/telecare as a way to respond to emergency situations, social isolation and insecurity.

For the autonomous region of Andalusia these services are conducted by ASSDA with the aim to “improve senior citizens’ quality of life by giving more autonomy and independence, bringing fast attention in case of emergency, and by supporting families with elderly people.” (Rodríguez and Martín 2013). The telecare service is run from two centres. To connect to one of these centres, the client’s home environment is equipped with a fixed assistance button and the user receives a wireless unit (pendant). These devices allow establishing a connection from any location within the home setting with one of the call centres if the client is in an emergency situation or in need of assistance. This also includes the possibility for conversation, e.g. in situations of loneliness, and the option to receive information about services offered by ASSDA. Besides the core devices, additional equipment like smoke sensors can also be installed. Moreover, monitoring calls are offered, e.g. after a hospital stay. In case of an emergency situation, response is organised according to a previously defined protocol. The service centres operate 24 hours a day and seven days a week. The service fee is currently around 18 Euro per month but users can get a discount up to 100% based on personal circumstances like monthly income, age and living situation. In particular the discount is available for holders of the Andalucía Junta 65 Card.

However, implementing these teleservices was described as difficult in terms of technical, legal and social/economic issues. On the technical side, a challenge was seen in the fact that citizens living in

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6 ASSDA has been involved in several European projects. This includes: COMMONWELL (http://commonwell.eu) or FLORENCE (http://www.florence-project.eu/).
7 The Andalucía Junta 65 Card is offered by the Regional Ministry for Equality and Social Welfare of the Andalusian Regional Government. The card allows people aged 65 and older a discount on several services like telecare, bus services, etc.. The card itself is free of charge and comes in two versions according to the monthly income of the card holder. If the income is lower than 75% of the minimum wage a higher discount is offered.
rural areas do not always have access to broadband connections or internet connections with enough speed. This was perceived as a particular challenge in Andalusia because a large part of the population is scattered in rural areas.

**Prevailing challenges**

The economic situation was named as a barrier because the dependency law guarantees everyone the right to access social (tele)services. If this is, due to whatever reasons, not possible people will receive financial benefits. Since social services are provided regionally, a general budget is redistributed according to the population of each region. Every region can improve the minimum number of services offered but due to the economic crisis more people need to be supported financially which increases the overall costs. Teleassistance/telecare is usually carried out by private companies as a subcontractor; up to 40 different providers can be involved in a single region which leads to higher costs. While this has resulted in consolidation processes recently, some local/municipal services are not sustainable and out of service. As a consequence people migrate to other provider which, in turn, leads to an overflow.

Besides the implementation of the teleassistance/telecare, barriers were named with respect to R&D activities: Projects can have an excellent technical and/or scientific background but still fail during the implementation phase. An important step to reduce this risk was seen in the integration of the users into development and implementation of the services. The users need to be integrated; they do not like being forced to do something. To ensure a high acceptance of users, a protocol helping to guide the process of user integration was described as a key aspect. Another approach to ensure the acceptance of the end-users was seen in the definition of the targeted group – for both, pilot and large scale projects. The “basic” knowledge of the targeted population needs to be assessed; proper training modules/sessions are necessary so that user feel “in control”. The experiences made during several projects were basically the same as in the literature and from other projects: The devices need to be easy to use and affordable; “how much does it costs?” was reported as being among the first questions regardless if the solution is privately of publicly funded.
### 2.3. KÄKÄTE – User Centered Technology for Elderly People and Care Givers

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>KÄKÄTE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary</strong></td>
<td>The KÄKÄTE project seeks to find out more about using technology to support older persons in their daily routines and care givers in their assisting work. To reach these aims, the project combines research, networking and dissemination activities.</td>
</tr>
<tr>
<td><strong>Target group</strong></td>
<td>Older persons, care givers, caring institutions, product and service developers, research organizations, municipalities</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Ongoing</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>Research, network and dissemination</td>
</tr>
<tr>
<td><strong>Website</strong></td>
<td><a href="http://www.ikateknologia.fi/">http://www.ikateknologia.fi/</a></td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>January 2010 to December 2014</td>
</tr>
<tr>
<td><strong>Institution(s)</strong></td>
<td><strong>VALLI – The Union for Senior Services</strong>&lt;br&gt;Hämeentie 58–60 A 52, 00500 Helsinki, Finland&lt;br&gt;Tel.: (+358) 09 7745 900&lt;br&gt;<strong>The Central Union for the Welfare of the Aged</strong>&lt;br&gt;Malmin kauppatie 26, 00700 Helsinki, Finland&lt;br&gt;Tel.: (+358) 09 3508 600</td>
</tr>
<tr>
<td><strong>Contact</strong></td>
<td><a href="mailto:info@ikateknologia.fi">info@ikateknologia.fi</a></td>
</tr>
<tr>
<td><strong>Funded by</strong></td>
<td>RAY (Finland’s Slot Machine Association)</td>
</tr>
</tbody>
</table>

The KÄKÄTE project was initiated in 2010 by two Finnish non-profit organizations and is based on the hypothesis that the main reason behind the non-diffusion of assistive technologies for older persons is the lack of end-user involvement into the innovation process. Moreover, the different stakeholder – this includes “older people, their relatives and health care professionals, elderly care units (run by associations, municipalities, or private companies), developers of technological solutions and service concepts as well as research and development organizations”\(^8\) – act more or less on their own without communicating or networking with one another. This leads to a mismatch: While various promising technological solutions already exist, most of them are not implemented into daily routine.

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The main focus of the project is to improve the possibilities of living longer at home and to facilitate the assisting work of health care professionals and family caregivers by means of technology. This includes the challenge to tackle the problem of non-diffusion. Therefore, the project aims to:

- “promote the co-operation between various professionals in the field of gerontechnology,
- improve the awareness of the needs of elderly people and the possibilities of technology to meet these needs – and even the needs of persons with memory disorders,
- promote the use of technology as a resource in elderly care,
- improve the quality of life of elderly people and
- improve the possibilities of elderly people to influence the development work.”

To achieve these aims, the project is based on three different pillars: Research, networking and dissemination. Each of those pillars covers different initiatives and tasks that, all together, can help to facilitate the adoption, implementation and diffusion of assistive technologies.

Networks
A central aim of the project is bringing together different stakeholders and enabling a dialogue between them. As pointed out, an assumption of the project’s initiators is that companies do not only communicate insufficiently with their target group (older persons and caring institutions) but also with other players participating in the same market. This results in comparable products and solutions facing common challenges and barriers. To overcome those barriers, a nation-wide network has been initiated that covers different types of stakeholders:

- Research organizations;
- Associations;
- Municipalities / communal actors;
- Educational institutions / universities;
- Providers of elderly services;
- Companies.

Interested institutions and organizations can join the network by filling out a form on the project’s website (see above). Up to date, the network consists of more than 140 members. Those members are brought together in annual seminars with different themes. Besides the official networking purposes, the primary aim of these meetings consists of bringing together the providers of products and services and the end-users. This should help to include older persons into the innovation and development process of ICT-based products and services.

Research
During the project’s runtime, several surveys with different methodological approaches (telephone and online-surveys) have been conducted with older persons or caring institutions to find out more about the uptake and awareness of existing solutions as well as the needs and wishes of the users. These surveys included topics and questions like:

- The use of ICT-based products and services like personal or tablet computer, smartphones and mobiles, email and internet use by the elderly;

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9 http://www.ikateknologia.fi/en/
• The use of ATM, payment terminals and ticketing machines from the viewpoint of older persons;
• Housing preferences and wishes/needs of older persons related to housing;
• Digital games/serious games for the elderly.\[10\\]

One of the central studies analyses the use of information technology and reasons for non-use in the age group 75–89 (Nordlund; Stenberg; Lempola 2014). Official finish statistics do not cover persons above 75 but due to the heterogeneity of age it was seen necessary to close this knowledge-gap and to better understand the needs of persons aged 75 plus in Finland. The representative results, more than 600 persons were interviewed, show that:

• 90% of 75–89 years old Finns have a cell phone;
• 24% of the elderly have one or more e-mail address(es);
• A third use the internet;
• 4% use a smartphone with an internet connection;
• 3% use a tablet-PC (Nordlund; Stenberg; Lempola 2014).

Asking for the different reasons older persons use the internet, the most frequent answers were: “searching for information online”, “online-banking” an “email”. Another finding is that older persons who do not use a computer like to be guided by someone close like a family member or a peer instructor.

Another approach of the project focuses on a mapping of already existing solutions, products and services so that persons interested in assistive devices and services can compare those, but also to raise awareness among research and development organizations to see which fields have already been addressed. A first wave covers the projects from 2000 to 2010, a second wave from 2010 to 2014. All in all 87 different projects were identified.\[11\\]

In cooperation with the Finnish Terminology Centre the KÄKÄTE consortium tries to develop common phrases and terminologies for technologies for older persons. One result of the surveys was that some persons have difficulties with the language and words used to describe assistive technologies and the way they work. For instance, the same device is labelled with two or more synonyms. To overcome this hurdle different synonyms are gathered and tried to be replaced by easy-to-understand descriptions.

Dissemination
A central aspect of the project is to raise awareness among developers and potential end-users. Besides the previously mentioned workshops a central part of the project are guidebooks to different subjects. These guidebooks follow the vision to offer compromised information to a certain topic (e.g. home locking solutions or locating people and objects using technology). They provide an overview of existing technological solutions on the Finnish market and compare the different

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\[11\] For a list see: http://www.ikateknologia.fi/fi/teknologiatuotteet-ja-ratkaisut.html (not available in English).
products and services (see Figure 2). The books were distributed as a printed version and all guide books are available for free and can be downloaded on the project’s website.\(^\text{12}\)

<table>
<thead>
<tr>
<th>Demo saatavissa</th>
<th>Abilita</th>
<th>Domacare</th>
<th>HoivaWeb</th>
<th>Mediati</th>
<th>Medinhe eClink</th>
<th>Nappula</th>
<th>Pandora</th>
<th>PrimeCare</th>
<th>Solia CRM</th>
</tr>
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<tr>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Hilmo-tiedot</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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</tr>
<tr>
<td>RAI/RAV</td>
<td>RAI</td>
<td>RAVA(^4)</td>
<td>RAI</td>
<td>RAVA(^4)</td>
<td>RAI</td>
<td>RAVA(^4)</td>
<td>RAVA</td>
<td>RAI</td>
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<td>x</td>
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<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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</tr>
<tr>
<td>Laskutusohjelmarajapinta(^2)</td>
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<td>x(^4)</td>
<td>x(^4)</td>
<td>x(^4)</td>
<td>x</td>
<td>x(^4)</td>
<td>x(^4)</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Työvuorosuunnittelujärjestelmässä</td>
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<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Työvuorosuunnittelu-ohjelmarajapinta(^2)</td>
<td>x(^4)</td>
<td>x(^4)</td>
<td>x(^4)</td>
<td>x(^4)</td>
<td>x</td>
<td>x(^4)</td>
<td>x(^4)</td>
<td>x</td>
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<tr>
<td>Mittarieojen siirto toseen ohjelmaan mahdollista(^3)</td>
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<td>x</td>
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<tr>
<td>Mittareiden seuranta saatavissa</td>
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<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x(^4)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sähköposti</td>
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<td>x</td>
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<td>x</td>
</tr>
<tr>
<td>Varmuuskopiointi (knt/vrk)</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

\(^1\) Lisätietoja mobiiliratkaisusta järjestelmän kuvauksessa.
\(^2\) Rajapinta (liitäntäpinta) mahdollistaa tietojen siirron ohjelmistojen välillä.
\(^3\) Kaikissa järjestelmissä on erilaisia mittareita, joita voidaan hyödyntää toiminnan seurannassa ja suunnittelussa. Lisätietoja mittareista on järjestelmien kuvauksissa.
\(^4\) Lisätietoja järjestelmän kuvauksissa.

Figure 2: Overview of ICT-based programs. Source: Nykänen 2011: 15.

Moreover, a mobile exhibition was initiated: A suitcase (see Figure 3) containing different technologies for home care was sent to elderly care units so they could see and use some available products. The suitcase also includes guidebooks to lower the level of acceptance and to ensure that the devices are used correctly.

![Suitcase containing different assistive devices.](image)

**Figure 3: Suitcase containing different assistive devices. Copyright: KÄKÄTE.**

**ICT for the elderly in Finland – challenges and barriers**

The interviewees described that much expectation is put in modern technologies helping to deal with the consequences of an ageing society from the political and societal perspective. There are already lots of technical solutions on the market; however, those still have not been accepted on a broad basis. A central reason for this was seen in the design of these products: End-users – older persons but also care providers – are not asked what they want and prefer. This was seen as necessary to overcome the existing deployment-gap. In addition, multidisciplinary approaches in designing technology were regarded as a good point helping to tackle the existing problems. But to integrate different professional and disciplinary views, public funding is an important factor. The respondents felt that without financial support it will become hard to integrate older persons and not only to focus on the technical aspects.
### 2.4. Mi – More independent

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>Mi – More independent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary</strong></td>
<td>Mi seeks to increase the scale of technology-enabled services operating in Liverpool.</td>
</tr>
<tr>
<td><strong>Target group</strong></td>
<td>All citizens with a central focus on people with long-term conditions</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Ongoing</td>
</tr>
<tr>
<td><strong>Website</strong></td>
<td><a href="http://www.moreindependent.co.uk/">http://www.moreindependent.co.uk/</a></td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>June 2012 – May 2015</td>
</tr>
<tr>
<td><strong>Institution(s)</strong></td>
<td>Mi is a brand name used by a collaboration of public, private and charitable organizations, led by Liverpool (NHS) Clinical Commissioning Group.</td>
</tr>
</tbody>
</table>

**Contact**

1 Arthouse Square  
61-69 Seel Street  
Liverpool, England  
L1 4AZ  
Tel.: 0808 100 1929

**Funded by**

Innovate UK, National Institute for Health Research, Scottish Government

The More independent (Mi, formerly the Feelgood Factory) initiative is part of the dallas-programme\(^\text{13}\) (delivering assistive lifestyle technologies at scale) which is initiated and funded by Innovate UK, the National Institute for Health Research and the Scottish Government and was launched in 2012. Based in the city of Liverpool\(^\text{14}\) with approximately 469,000 inhabitants, 140,000 (20,000 aged 75 and above) of those having long-term health conditions, Mi especially seeks to address people with chronic diseases and support them to living a healthier life (Mi annual report 2012-2013). The initiative receives 7.74 million pound from Innovate UK (formerly Technology Strategy Board). Additionally, Mi is supported by the Liverpool Clinical Commissioning Group with 4.9 million pound and 5 million pound by the delivery partners, adding up to approximately 17 million pound of total budget. Mi has multiple partner organizations as well as subcontractors\(^\text{15}\) from

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\(^{14}\) Liverpool is one of the reference sites recommended by the European Innovation Partnership on Active and Healthy Ageing.

\(^{15}\) The partner organizations are: Liverpool (NHS) CCG and Community Health, social housing provider, Riverside, Liverpool based charity, PSS, Hft, a national charity supporting people with learning disabilities, and technology partners Philips, Tunstall and Informatics Merseyside, the subcontractors: Liverpool City Council, Merseytravel, National Museums Liverpool, Local Solutions, Liverpool & Everton FCs, Shropshire CC.
the fields of healthcare, community, housing and social care, economic regeneration, technology
developers and information management.

A central theme of the dallas-programme is to unlock “new markets in social innovation, service
innovation and wellness, enabled by technology, and show that technologies and services can be
made available at a sufficient scale and cost to enable independent living.” (Technology Strategy
Board 2011). Following this approach, the specific objectives of Mi are to:

- “increase levels of self-care, well-being and independent living for people in Liverpool;
- develop a consumer and health and social care market for technology to support healthy
and independent living;
- increase individual and community demand for better health and well-being;
- stimulate innovation for self-care, well-being and independent living through new
technologies and services;
- raise awareness and improve knowledge, confidence and use of life enhancing technologies
amongst health and social care professionals and amongst the wider population;
- disseminate good practice and lessons learned locally, nationally and at European level.” (Mi
annual report 2012-2013).

To address these objectives the programme is structured around eleven deliverables with previously
defined targets for each year (see Table 2).

<table>
<thead>
<tr>
<th>Lifestyle deliverable</th>
<th>2014 Targets</th>
<th>2015 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>D3</td>
<td>Demand for self-funded care technology and support services will be driven by increasing awareness and confidence, plus competitive pricing.</td>
<td>1,000 care technology bundles and 1,000 self-installed products sold by Jun-2014.</td>
</tr>
<tr>
<td>D5</td>
<td>People in deprived areas will have access to internet-enabled information and services like everyone else.</td>
<td>30 Community internet hubs provided and 1,000 people trained by Jun-2014.</td>
</tr>
</tbody>
</table>

**Life enhancing technologies**

Amongst the priorities of Mi, the programme aims ad integrating and scaling up “Life enhancing
technologies” which help to support an independent and healthy living and promote population
health. The initiators believe that technology cannot work on its own and has to be integrated in
community settings. Therefore, Mi approaches “the challenge of achieving transformation within
health and social care not from a technological perspective but from a people perspective” (Mi
practitioner brief 2014). While technology is seen as a central tool that can help to promote the
concept of prevention and play a role in health services, the people need to be in control of the
technology (Mi practitioner brief 2014).

The technologies integrated to support this approach cover multiple indoor settings like kitchen,
bedroom or bathroom. On its website Mi advertises several assistive living technologies that can be
bought or rented directly by end users. The spectrum covers fall detectors, big picture phones, medication dispensers, etc. (see Figure 4).

**Insight research**

As expressed in the Annual Report, “improving the user experience and empowering users through co-creation is [...] at the heart of the Mi approach and vital to its scaling up ambitions.” (Mi Annual Report 2012-2013: 7). To achieve this aim several qualitative research activities were conducted to identify and understand the user’s needs, perceptions and attitudes. In particular, this includes information about factors effecting the development and implementation of Mi’s telecare and telehealth activities. Key findings include:

- “Users seek reassurance that interventions are simple - the word ‘technology’ can often generate fear.
- Where interaction with health and care professionals involves complex needs, delivery must be face-to-face and tailored.
- People desire an approach to adopting Telecare and Telehealth that involves the user, carer, family and professionals.” (Mi Annual Report 2012-2013: 8)

These findings were used to guide the aims and the process of the project; they were integrated into Mi’s marketing plan which aims at scaling up life enhancing technologies and services by raising awareness and increasing knowledge about (simple) technologies and changing attitudes and perceptions about technology (Mi Annual report 2012-2013). The research will be continued throughout the project’s duration.
**Raising awareness**

An insight from the Whole System Demonstrator (WSD) was that people are either not aware of existing solutions helping to support daily living or they do not have the confidence to use such technologies; technology is not perceived as an option that could provide help. Raising awareness also includes increasing knowledge about technologies. If technological solutions are introduced to older persons, a central problem was seen in the fact that technology is not desirable to end users because it is perceived as stigmatizing and labelling. The reasons behind this were partially found in the current market situation: Designers, developers and distributors of assistive living technologies are concentrating on states, municipalities and health economies instead of patients and citizens.

Considering healthcare, people do not see themselves as responsible for their health status and wellbeing because they stick to traditional views. In this respect, another point that was mentioned as a barrier are state and municipal procurement processes which rarely result in innovative and tailored solutions. Moreover, the healthcare system in the UK follows a reactive rather than a proactive approach and does not integrate technologies into the operating process. A central insight of the initiative is seen in the fact that people have to feel physically and financially secure before they start to get involved in a dialogue about their health status and/or technology; “people do not prioritise health, usually because they have more pressing things in life they need or want to care about” (Mi dallas briefing 2013). The self-responsibility considering health is secondary to other issues like debt or the housing situation. Professional end-users are afraid of technological solutions because they feel that those solutions take away employment opportunities and/or power.

To overcome this barrier, Mi has launched multiple different actions. This includes the previously mentioned web shop but also an advice line that provides advice and support for people purchasing or considering purchasing assisted living technologies and attached services. In addition, the Mi Smart House, which is located at the Museum of Liverpool, was set up. The Smart House offers the opportunity to see assistive technologies in place (see Figure 5), to use them and to experience how they work and which effect they can have on people’s daily life. All devices installed in the Smart House can be purchased on the project’s web shop. Furthermore, the website offers the possibility to make an online walkthrough of the Smart House.
Mi tries to empower people to play an active role in disease and condition management, health improvement and care. This also includes having control about what happens to them when they become ill or vulnerable. To change the perceptions of technology, Mi uses multiple channels. The website offers access to the online shop and the virtual tour of the Smart House but also shows case studies about persons who made use of technical devices and services (see Figure 6). In addition to the website, a telephone line was set up that provides advice and support for people purchasing or considering purchasing assisted living technologies and attached services.

Moreover, Mi integrates volunteers; the so called “champions” are a central aspect of Mi’s strategy to engage with persons who are harder to reach. The objectives of the champions are to raise the

---

**Mi SUCCESSES**

**Wondering how Mi can work for you?**

We have collected some of the true life stories of those who have been using similar technologies in their homes, and the ways that the gadgets they have used have improved their lives. They explain in simple terms how using technology has benefited them - and how it might benefit you, too.

**MI CHAMPIONS**

"Help people across Moreayside become More independent."

**DAVID’S STORY**

"It’s made a huge difference to us and I would recommend it to anyone."

**WIN’S STORY**

"It’s so easy to use - nothing complicated, just peace of mind."

**TONY’S STORY**

"I can’t say that life isn’t a challenge, but the technology has helped a lot."

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**Figure 6: Video case studies of persons using telecare and telehealth technologies. Source:**

http://www.moreindependent.co.uk/successes/

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Moreover, Mi integrates volunteers; the so called “champions” are a central aspect of Mi’s strategy to engage with persons who are harder to reach. The objectives of the champions are to raise the
profile of community activity, resources and assets and to provide information and advice about technology-based solutions and services. Furthermore, the champions support community activities like gardening, walking or museum trips. If someone is interested in becoming a champion, an initial workshop provides the knowledge about the champions’ activities and role. Afterwards, a personal profile is created that is used to identify what persons can do and what skills and experiences they have. This also covers finding out what the needs of older persons are and how technology could help in this context. To recruit the champions, one of the Mi partner organizations (PSS) established a network of organisations and communities.

The digital inclusion was described as a major barrier to the acceptance and awareness of assisted living technologies: It is believed that people who are not familiar with the internet cannot benefit from some of Mi’s offers and benefits. Therefore, digital hubs were installed all over Liverpool and especially in areas with low internet access. In these hubs people can go online and learn how to use the internet. In line with this initiative, the iHealth project was launched that targets an intergenerational approach: Young volunteers are equipped with tablet-PCs so that they can explain older persons about the technology and its benefits.

**Tackling interoperability**

Mi and its partner organisations build on existing solutions instead of developing new devices. Though it is not mandatory, data collected by some of the devices, applications and services can be reported and stored in a portable personal health record (PHR). Even though “people focused” barriers are seen as the prevailing challenges, technological barriers were reported as well. Most notably, this includes interoperability. Two aspects in this context have been identified as most striking: Referral standards and the Mi PHR that allows citizens to store their private data in a PHR database/portal they prefer and to migrate the data if their preference changes. However, the integration of the PHR results in “major interoperability challenges” (Mi practitioner brief 2014) which include:

- “interoperability between privately held data (by an individual) and statutory data (collected through authorised medical/social channels and held in secure data bases),
- sharing medical/services data across professional and community services,
- interoperability between back-end services for care and health technology,
- regulatory constraints on interoperability [...],
- interoperability of equipment from different suppliers.” (Mi practitioner brief 2014).

Two interoperability challenges have been identified as most critical: Developing a standard for referrals and the architecture for the personal health record that allows the user to choose from multiple user portals. To tackle these challenges, an “Interoperability Working Group” was established. One of the key points is the focus on basic and pragmatic solutions, e.g. text massaging to deliver health data.
2.5. Silver Internet

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>Silver Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>Silver internet encourages older persons to get in touch with modern technologies. Under professional supervision, people can help each other and discuss problems related to the use of ICT-based devices.</td>
</tr>
<tr>
<td>Target group</td>
<td>Older persons not used to ICT</td>
</tr>
<tr>
<td>Status</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Type</td>
<td>Training</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://gb.pl.ssw.org.pl/">http://gb.pl.ssw.org.pl/</a></td>
</tr>
<tr>
<td>Duration</td>
<td>Since 2006</td>
</tr>
</tbody>
</table>
| Institution(s)      | Knowledge Society Association  
                       Stowarzyszenie Społeczeństwa Wiedzy  
                       ul. Grażyny 13/15 lok. 221  
                       02-548 Warszawa, Poland  
                       Tel.: (+48) 512 363 254 |
| Contact             | biuro@ssw.org.pl |
| Funded by           | Ministry of Labour and Social Policy |

The Knowledge Society Association (SSW) is a non-profit organization (NPO) established in Warsaw in 2006. The aim of the organization is to fight the digital divide and to facilitate the use of modern technology, especially among older persons. To reach these aims, SSW is involved in several national and international projects.

In 2007 and 2008 SSW launched two projects called “Silver Internet 1” and “Silver Internet 2”. The aim of the projects was to facilitate the engagement of older persons aged 50 plus living in Poland with modern technologies, for instance the internet, personal computers mobile phones and smart phones but also entertainment systems like the Nintendo Wii or Microsoft Kinect. The initiative was funded nationally; since the funding by national agencies stopped, it is financed by member fees. Since then, the scope of the project has been expanded: In 2008 especially women were addressed and a ladies’ class (“Klasa Kobiet”) has been set up. Up to date, more than 900 persons participated in the courses.

The courses are structured as follows: An experienced trainer introduces a technical device and explains the functionality and benefits. Afterwards, the participants can use the products and experiment with them. If they own already a device, for instance a mobile phone, they can also help each other and discuss problems or experiences. A central aim of the project is to make people go out and socialize to engage in others problems and come to a solution together.
Participants of the courses have also the opportunity to get involved in the research and development of new Ambient Assisted Living (AAL) products and services. SSW is involved in several Ambient Assisted Living Joint Programme (AAL-JP) projects.\textsuperscript{16,17,18}

**ICT for the elderly in Poland – challenges and barriers**

As the data of ICT accessibility (both – at home and mobile) and the frequency of internet access of by persons aged 65 and older suggests, Poland is among the “laggard” countries in Europe. This was confirmed by the interviewees; they named multiple factors influencing the current situation. The digital divide in Poland was perceived as a major challenge that has to be overcome. Especially in old age and outside the cities, the use of ICT-based technologies is very low. While the interviewees felt that these problems could be overcome within the next five to ten years („We will get customers absolutely ready for the solutions in a few years.”) and that most people – except those who have never been in touch with modern technology – will recognise the potential benefits, they highlighted the importance of low-threshold projects and initiatives to facilitate this development.

A recurring theme was the family structure. Many persons do not feel the need for technologies in old age. Instead, the social environment, relatives living nearby and neighbours, help to deal with everyday challenges that can accompany the process of ageing. However, the respondents reported that they were forced to engage with new technologies when their children and grandchildren move to a city or go abroad. In addition, the devices are not easy to afford – AAL solutions in particular. Not many solutions are available on the Polish market and have to be acquired from other European countries. An issue that was mentioned in this context is the housing situation. The dwellings were not considered as ready for AAL-solutions.

The development process of new devices and technologies was also described as challenging. According to our interviewees most products and services that are currently under development fail to target the needs of the older person („We are trying to make them happy with things they do not need.”).

From the developer’s point of view Poland was seen as a good and promising location with many opportunities within the near future. However, the funding periods on the national and international level were regarded as not efficient. The procedure to raise money was perceived as too slow. Technology develops very fast so that R&D efforts are outdated when they are ready to enter the market. In addition, many products and services will enter the market unfinished which negatively affects the perception of older persons who will see a barely working device instead of potential benefits.

User adoption was also described as a crucial factor that has been thematised recently but still is not present as it should be. End-user integration from the very beginning of the research and design process was seen as necessary but often unsufficient due to a lack of funding.

\textsuperscript{16} http://www.gomylife-project.eu/
\textsuperscript{17} http://nitics.eclexys.com/
\textsuperscript{18} http://www.microsoft.com/portugal/mldc/paelife/
2.6. SWOT-analysis ICT

Comparing the different case studies, several recurring themes can be identified. These themes can be classified according to technical, social, economic and legal aspects (Hilbert et al. 2013). The good practice projects address these barriers and provide ways to deal with them.

Table 3: SWOT-analysis ICT.

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weaknesses</th>
</tr>
</thead>
</table>
| **Opportunities** | - Acceptance and use of ICT-based products and services is growing.  
- Accessibility of broadband connections is increasing.  
- Participation of older persons in projects and initiatives. |
| **Threats** | - Low level of awareness and knowledge among end users. This includes older persons as well as professional users and product developers.  
- Many devices on the market do not meet the requirements/expectations of elderly users. |

The accessibility of ICT-based products and services increases continuously in all European countries; the same is true considering the acceptance and use. Still, there are differences among the countries, especially rural communities lack access of online-based services. Another recurring theme is the integration of users into the R&D-processes and their participation within the project itself. In every case study, older persons are directly involved, either during the development of a product or as a central actor – in all cases on a voluntary basis. The concept of older persons informing and teaching their peers, friends, neighbours and other elderly persons about products and how to use them demonstrates a promising approach that leads to a better acceptance of these technologies. The involvement into projects was also considered as a helpful way to get people in touch with technology so that they do not feel forced to use certain devices.

All projects have in common that they address a key issue: Raising awareness. Even though it was mentioned multiple times that the subsequent generations will be more technically advanced and that the adoption of ICT-based devices and services is steadily increasing among older persons, the most dominant barrier was seen in the lack of awareness and knowledge about existing solutions and their potential. This does not only include older persons as end users but also professional end users like caring staff and also, as the Finnish case study revealed, developers and distributors. Each project addresses this challenge from a different angle. The Polish and the German initiative mainly
try to increase the awareness of older persons and get those in touch with existing devices and services. The examples from the UK and Finland try to connect all kinds of stakeholders.

Though it is assumed that social networks (or household size) play a crucial role considering technology acceptance and the use of technologies, up to date only few studies have dealt with this topic. ICT-based products and services have to potential to enable participation in society and hence decrease the thread of social isolation. Nevertheless, it is presumed that older persons show more involvement in ICT if they can count on social support, e.g. by their families and relatives – or, as the good practice cases show, (voluntary) guides. This leads to the challenge that those who could benefit most from technology have limited access to promising products and services.

The cost of products respectively the funding of projects and the reimbursement of devices and services are a dominant barrier which also affects the sustainability of initiatives or measurements. In Spain mainstreaming has been achieved through legal standards and policy initiatives creating responsibilities; people have the right to use telecare and can receive a discount on the services. In other contexts this could result in social inequalities. Technology has emerged as an essential access point to societal goods – most notably healthcare. The digital divide can lead to a societal divide if the use of technology tends to be more and more presupposed.
3. Good practice examples housing

In the context of enabling older persons to participate in a healthy and active way of life, conditions of housing and neighbourhoods play a crucial role. The majority of the elderly wants to stay in their familiar home environment as long as possible; according to recent German surveys this covers 90% of people aged 65 years and older. The accommodations have to be prepared for this. Although types of collective cohabitations (e.g. shared apartments) will keep on spreading in the future, they will be restricted quantitatively.

The potentials of the elder generations are needed due to social but also to economic reasons. Because of this, the living situation for the elderly has to allow both individuality and community. Such conditions can be created with the help of adequate living facilities and housing-related services. Examples of good practice are able to illustrate ways of coping with these requirements.
### 3.1. WirWohnenZusammen ("WeLiveTogether")

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>WiWoZu hwg Hattingen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary</strong></td>
<td>The WiWoZu-house is an example for cross-generational shared housing, based in Hattingen in North Rhine-Westphalia.</td>
</tr>
<tr>
<td><strong>Target group</strong></td>
<td>Interested persons on shared housing (for rented homes)</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Ongoing</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>Cross-generational shared housing, commercial/cooperative</td>
</tr>
<tr>
<td><strong>Website</strong></td>
<td><a href="http://www.hwg.de/Mietobjekte-in-Hattingen/Mehrgenerationenwohnen/0_489.html">http://www.hwg.de/Mietobjekte-in-Hattingen/Mehrgenerationenwohnen/0_489.html</a></td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>Planed since 2007; move-in into the finished house in 2011</td>
</tr>
<tr>
<td><strong>Institution(s)</strong></td>
<td>Hwg eG</td>
</tr>
</tbody>
</table>
| **Contact**         | hwg eG  
|                     | David Wilde  
|                     | Im Bruchfeld 17  
|                     | 45525 Hattingen, Germany |
| **Funded by**       | WiWoZu e.V. (club of later inhabitants); hwg eG |

The cross-generational shared house of the hwg eG (Hattinger Wohnstättengenossenschaft) and the WiWoZu e.V. (Wir Wohnen Zusammen e.V.) is based in Hattingen in the south of the Ruhr Area. The main focus of this housing project is to enable people of diverse potentials and limitations to live in their own flats but also help each other by living in a community. The people living at the WiWoZu-house want to provide each other help and assistance in their everyday life. The cross generational project wants to address people of all ages. Young families with children will be given support in childcare whilst the elderly get help in their everyday life (e.g. aided shopping etc.).

**WiWoZu e.V.**

The WiWoZu e.V. is a community of people interested in shared housing. It was funded in 2008, after the founders first met in a course about forms of housing at the Volkshochschule\(^\text{19}\) in 2007. The topic of the course was “Gemeinsam statt einsam” (“you get on better together instead of being lonesome”). Job-related, one of the founding members of the association is active in several housing projects. He is managing director of a foundation named trias\(^\text{20}\), which aims at giving financial aid to housing projects. Hence the association WiWoZu had an expert for realizing such housing projects right from the start (nevertheless only four of the founders later became today’s residents of the house in Hattingen). After the first meeting the idea of an own housing project arouse. In search of an adequate estate for the project the club made contact with the housing company hwg eG.

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\(^\text{19}\) The “Volkshochschule” is an adult education organization in Germany.  
\(^\text{20}\) [www.stiftung-trias.de](http://www.stiftung-trias.de)
The hwg eG is a registered cooperative. The housing company has been in business since 1899. The objective of the cooperative is the supply of safe and social responsible housing in qualitative good conditions for their members. In 2013, the cooperative counted 5.393 members. The hwg eG owned 4.093 flats in 655 houses in 2013. All flats are based in Hattingen, a city in the south of the Ruhr Area with approximately 54.000 citizens. As well as other cities in the Ruhr Area the demographic change is already noticeable. Hattingen’s number of inhabitants is declining. A further decline is predicted for the next years: There will be 52.800 inhabitants in 2020. At the same time, the share of elderly will increase constantly. The average age in Hattingen was 45.4 years in 2009. It is predicted that in 2020 at least every second inhabitant will be older than 50 years. The ageing quotient (people older than 65 years per hundred people in the age between 20 and 64) was 40.1 in 2009 and will increase to 43.8 until 2020.

Parallel to the changes in the age structure of Hattingen the age structure within the membership of the cooperative hwg eG changes as well. In 2013, approx. 58% of the members were at the age beyond 50 years. The share of members older than 70 years was higher than 27%. In large part, the housing stock of the hwg was built in the 1950s and 1960s. The houses are placed mainly in bigger quarters. In the course of the modernisation of these buildings, the quarter “Hattinger Südstadt” was refurbished in several steps since 2007. Meanwhile the hwg and the club WiWoZu got in contact.

![Figure 7: The Quarter "Hattinger Südstadt", WiWoZu-house highlighted](image)

The “WiWoZu-house”
Due to the old average age of the people living in the “Hattinger Südstadt” the hwg thought about new and alternative concepts for using of the buildings. The plan was to design the flats in a way that would be adequate for the elderly. As the community of interest WiWoZu was in search of a developer for the multigenerational house at the same time both sides became partners for the housing project. From the beginning onwards a high degree of commitment between hwg and WiWoZu formed the cooperation. In 2009, both sides declared this in a cooperation treaty. This treaty includes the leasing of the building by WiWoZu (the building was under construction at this point in time).

In the cooperation between WiWoZu an hwg the housing company created a building which was completed in 2011. The WiWoZu-house has the following characteristics:

- 14 flats on 1.100m² of living space
- 1 common room
- 1 shared workshop
- Shared sleeping rooms for guests of the residents
- The building is barrier-free
- Ecological sustainability was realised during the construction. This includes thermal insulation and a solar system
- A garden area which is commonly used and maintained.

The hwg owns the building. The club WiWoZu has signed a commercial rental agreement with the hwg about the whole building; the club rents the particular flats to the residents. By that, WiWoZu bears the entrepreneurial risk (e.g. in case of temporarily vacant flats). On the other hand, the club WiWoZu has the right to choose new tenants. The rental agreement covers a period of ten years (optionally expendable for five years). WiWoZu is responsible for care and maintenance of the building. In case of an insolvency of the club the hwg takes over the lease agreements. Due to this the risk for the tenants is minimized.

![Figure 8: Cross generational housing project WiWoZu, hwg. Source: http://www.hwg.de/data-live-hwg-3/images/DSC_0648-Mehrgenerationenhaus.JPG](http://www.hwg.de/data-live-hwg-3/images/DSC_0648-Mehrgenerationenhaus.JPG)
The club WiWoZu is a registered association in Germany. All residents of the cross generational housing project are members in this organisation. One can only rent a flat if all existing tenants agree with the new member. Whoever wants to join WiWoZu has to make a one-time payment which is non-refundable. In search of new tenants the club WiWoZu has set itself the task that the candidates should not only be interested in shared housing but that the project should also address older as well as younger people. According to the residents the idea of WiWoZu is not suitable for all individuals since it especially addresses people who want to live in a community and are interested in becoming an active part of it.

Shared housing in the “WiWoZu-House”
Within the housing community regular meetings addressing problems in everyday life of the community are intended. All common tasks are planned during these meetings. A number of different joint leisure time activities have been developed in the house (e.g. bike riding trips etc.). Nevertheless each tenant has an individual flat and thus the opportunity of privacy whenever it is wanted. The common activities mainly take place in the garden, the workshop and the common room. This is the nucleus for helping each other. All tenants at the WiWoZu-house made the decision to live in a community in which each person offers help to others as good as possible. For example the elderly take care of the children of younger families in the house; tenants skilled in the usage of computers help other tenants in doing so etc.. According to this the goals of the club WiWoZu as defined by its founders are:

- Mutual assistance in everyday living
- Barrier-free housing for all generations
- Ecology and economy = common use of laundry room, workshop and garden, car sharing, energy efficiency
- Joint activities (e.g. bike riding trips, breakfast, events, festivities)
- Engagement for the quarter
- Collective responsibility to all belongings of the house
- Common decisions about new tenants
- A balanced mix between community and privacy.

At the moment 21 persons aged between 1 and 83 years are living in the 14 flats of the WiWoZu-House. Included in that are two families, five couples and seven persons living on their own. Their average age is approximately 51 years. Some of the residents are at the stage of life after employment. After their retirement they made the conscious decision to live in a shared housing project. For these persons it is particularly important that the WiWoZu-house offers barrier-free living (a fact that already was included in the planning of the building). Due to this an elevator was installed even though this is cost-intensive. The elevator allows physically disabled persons to get access to all flats in the building. The flats themselves offer e.g. wide doors, floor level showers etc..

Most of the tenants in the WiWoZu-house moved to the Hattinger Südstadt due to the shared housing project. They had not lived in this quarter before the project started. Nevertheless they try to engage themselves in the neighbourhood and want to spread their idea of helping each other in a community. Due to this the housing community takes part in neighbourhood parties, they invite neighbours to coffee and cake etc.. According to statements of the residents this engagement in the quarter could even be more extended and strengthened in the future.
**Conclusion**

As an example of a cross-generational shared housing project which is already in implementation the WiWoZu-house received some attention in Germany. Groups of interested persons in shared housing are visiting the WiWoZu-house quite often. The residents share their experiences in meetings and guided tours through the building. Compared with other shared housing projects the cooperation between the club WiWoZu and the housing company hwg has to be pointed out as something unique. The flats in the building are not owned by the residents but by the hwg. The possibility to live in a shared housing project as a tenant reduces the hurdles to live in such a project because the possibility to leave the housing community is easier to realise (although the residents have to pay a contribution to the club and to the hwg). Today there is no vacancy of flats in the house, but a waiting list for interested future tenants. Although the project does not only address elderly persons the club WiWoZu had to make the experience that younger families often are not comfortable with the idea of shared housing.
3.2. Abbeyfield

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>Abbeyfield</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary</strong></td>
<td>The Abbeyfield Society provides different forms of accommodation and services among elderly, predominantly in UK but also worldwide.</td>
</tr>
<tr>
<td><strong>Target group</strong></td>
<td>Elderly People</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Ongoing</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td>Charity Organisation and Regulator of Social Housing</td>
</tr>
<tr>
<td><strong>Website</strong></td>
<td><a href="http://www.abbeyfield.com/">http://www.abbeyfield.com/</a></td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>Since 1956</td>
</tr>
<tr>
<td><strong>Institution(s)</strong></td>
<td>The Abbeyfield Society</td>
</tr>
</tbody>
</table>
| **Contact**         | The Abbeyfield Society  
2 Bricket Road  
St Albans, England  
AL1 3JW |

The Abbeyfield Society

The Abbeyfield Society was founded by Richard Carr-Gomm (1922-2008) in 1956. Based on the impression of isolation and loneliness among elderly, the former UK military personnel developed a near-term and non-bureaucratic solution to his concern. He made use of his army gratuity for purchasing a local house in London where he could subsequently provide a covered home for at least a few elderly with him as the housekeeper. His vision to improve the life of older people in connection with prompt action inspired other people to commit themselves as volunteers to the needs of the elderly. Due to the effort of like-minded volunteers, the number of houses and elderly living therein continuously rose UK-wide during the next decades (Abbeyfield 2009: 2ff.). On the occasion of the societies’ 40th jubilee in 1996, Richard Carr-Gomm remarked with regard to the upcoming challenges of ageing societies “that the Abbeyfield idea offers a world-wide solution to the problem of loneliness in older age.” (Abbeyfield Annual Review 1996, cited in Abbeyfield 2009: 18).

Nowadays, the Society has about 8,000 residents according to the 2014 Annual Review (Abbeyfield 2014a: 2, as of 30 March 2014). Since this number can be seen as a quantitative indicator of the size of the Abbeyfield project, this report aims to outline the so called "Abbeyfield idea" and asks to what extent this approach can be taken as an exemplary way for elderly housing.

The organisational goal of the registered charity and regulator of social housing is “to enhance the quality of life for older people.” The organisation consists of a central society, which is located in St. Albans, and a high number of UK-wide member societies, which are independently led under the Abbeyfield umbrella. Besides this, to coordinate the international activities and the global expansion, Abbeyfield International was set up in 1983 (Abbeyfield 2010: 5ff.). In 2014 the global number of houses amounts to 615 in 12 different countries, albeit the main part is localized in the UK where 521 Abbeyfield houses exist (Abbeyfield 2014a: 5, as of 30.03.2014). The Abbeyfield Society offers different types of housing. Basically, five types of housing offers can be distinguished: “Sheltered housing”, “care homes”, “dementia care homes”, “nursing homes” and “independent living” (Abbeyfield 2014b). At present, the vast majority of accommodation offers belongs to the field of
sheltered housing (around 500 houses) and care homes (around 80 homes) (Abbeyfield 2014c). In regard to sheltered houses in the UK, the share of centrally managed houses is about one third and two thirds are led by Abbeyfield member societies. However, the Abbeyfield Society assumes a decline in the number of member societies in the next years as well as a decline in the number of Abbeyfield sheltered houses for several reasons which will be discussed below (Abbeyfield 2010: 7).

**Sheltered Housing**

An in-depth view on the field of sheltered housing can illustrate the Abbeyfield philosophy, which is historically closely related to this accommodation type. To start with, the following citation of Richard Carr-Gomm expresses the underlying idea concisely:

“...if only we could have a house in every street to which everyone could come... then everyone could be treated the same and share equally the care and kindness of the community around them.” (cited in Abbeyfield 2009: 6)

Based on this vision, Abbeyfield sheltered houses normally are remodelled ordinary houses for elderly living. In these covered schemes usually about 10 residents are accommodated. A characteristic feature of Abbeyfield sheltered housing is the community-involvement due to the high number of local volunteers. In case of houses administered by member societies, volunteers are also the initiators of the sheltered housing schemes. Coexistent to the social and local embedment of the houses is a strong accentuation of the independence and privacy protection of the tenants. The accommodation units are bedsits (with or without ensuite varies between the houses), according to constructional circumstances as barrier-free as possible and appointed with alarm systems. Tenants are encouraged to decorate their rooms with personal furnishings. Abbeyfield sheltered houses offer shared living areas for their tenants to get in touch with housemates and volunteers. A familiar atmosphere is to be created due to the small setting and the low number of tenants living at the sheltered houses. The provision of two cooked meals is standard at the typical Abbeyfield sheltered house. Each Abbeyfield house is managed by a housekeeper, who monitors the well-being of the tenants. However, personal care is not provided by the Abbeyfield sheltered houses. Tenants who are in need of care have to use external services. The accessibility of facilities (e.g. medical services, postal services etc.) is secured through the central location of the houses. The accommodation units are exclusively for rent and cannot be purchased by residents (Abbeyfield 2014d).

The role of volunteers is not only fundamental for the self-perception of Abbeyfield as a “movement” but also for achieving their organisational goals in view of the enhancement of their residents’ life quality. According to the UK Government Charity Commission, the entire Abbeyfield Society engages about 10.000 volunteers and 940 employees in the UK (UK Government Charity Commission 2014, as of 30 March 2014). These numbers clearly demonstrate the quantitative dimension of voluntarism at Abbeyfield. The organisation officially highlights the crucial role of the volunteers and pictures them as the “bedrock of Abbeyfield as they are key to the Abbeyfield ethos and our value proposition.” (Abbeyfield 2013: 13; also e.g. Abbeyfield 2010: 4; Abbeyfield 2009: 6). The fact that Abbeyfield sheltered houses are mostly remodelled common houses in local neighbourhoods is arguably conducive for the participation and engagement of volunteers and leads to a community involvement of the houses. Residents profit from this community basement and the commitment of local volunteers, also regarding a more diversified life inside the houses.
In summary, the Abbeyfield sheltered housing philosophy consists of a local orientation, which integrates the houses into the structure of neighbourhoods, intends community involvement through the engagement of volunteers and allows for the coexistence of a familiar atmosphere as well as recognition of the residents’ independence and privacy protection. This approach follows a down-to-earth path and tries to deliver an alternative draft to anonymous housing forms, e.g. large care homes.

Challenges for the sheltered housing approach of Abbeyfield

In the past, the functioning of this housing model seems to have been ensured, as the current success of Abbeyfield sheltered houses suggests. At present, however, various processes of societal change challenge the Abbeyfield sheltered housing project. In this regard, the financial development of the Abbeyfield Society is enlightening. The business period 2013/14 is the first fiscal period within the last years with an asset for the entire society (Abbeyfield 2014a: 6). But the financial problems are still present for a significant number of the Abbeyfield member societies; a share of 42% registered losses for the 2013/14 period, further 25% remained under the command variable of a 5% plus at minimum and only 33% generated the necessary overrun for an entrepreneurial longevity (Abbeyfield 2014a: 28, as of 30 March 2014).

This financial pressure led to a review of the societies' activities. The results of this review were set out in the societies' 2010 strategy paper in which growth was mentioned as the main object for the organisation for the next 10 years. To achieve this goal, the organisation explored societal change and figured out which demands present and near-future residents may have for Abbeyfield accommodation (Abbeyfield 2010: 3 ff). To sum up, mainly four different developments are recognised by Abbeyfield and distinguished within the strategy paper:

1. Older people aim to live at their own homes as long as possible and “if at all” want to move only once. Parallel to this desire, in the course of the demographic development in UK, the number of people older than 85 is continuously rising. Whereas two decades ago the mean age of residents entering an Abbeyfield house was 65, at the present it is 87 (Abbeyfield 2010: 7). A fundamental consequence of this shift concerns the need for care among residents, which is thus significantly higher. To provide flexible and demand-orientated care services at houses becomes more important for this by nature frailer resident group (Abbeyfield 2010: 9).

2. In contrast to former generations, the present old-age generation raises a higher claim and demands services rather out of a customer understanding. The consequence is a higher requirement of co-determination in terms of housing and care as well as the claim of a higher quality of living conditions in general (Abbeyfield 2010: 7).

3. Based on own research results, the Abbeyfield Society assumes that the demand of bedsit accommodation will decline significantly in the future. At some sheltered houses problems to lease bedsit rooms already exist. Accommodation with a divided sleeping and living area are preferred (Abbeyfield 2010: 7f.).

4. The stock of houses in the field of sheltered housing was originally predominantly build up for family living. These already remodelled houses have constructional restrictions for further measures e.g. necessary adjustments for an extended care delivery (Abbeyfield 2010: 7).
Consequences and strategical reorientation

The 2010 growth strategy pursues different structural and operative measures to meet these challenges. It is fundamentally driven by the idea to increase flexibility and to widen options for care delivery among the housing offers (Abbeyfield 2010: 3).

Hence it follows; the strategical reorientation has far-reaching consequences first and foremost for the field of Abbeyfield sheltered housing. Indeed, the Society intends to hold a stock of centrally managed sheltered houses as well as those sheltered houses led by member societies that persist in the future. For the survival of these houses it will be essential to fulfill the needs and wishes of the seemingly more demanding elderly. However, one of the main structural objects is to downsize a considerable number of sheltered houses. The central society assumes that about half of their managed houses has to be closed during the next years and that consolidation among small member societies is necessary to strengthen their fiscal vitality, which will probably also lead to a decline in the number of those sheltered houses (Abbeyfield 2010: 13f.).

In contrast, the Societies’ priority is to strengthen the following three types of accommodation, for which the expected revenue from released stock of sheltered houses will inter alia deliver funds for investment (Abbeyfield 2010: 3):

“Independent living with personal care“: This type considers the altered demand of the new “customer generation“ and aims to deliver contained living units for independent living combined with common areas for spending time in companionship. Beside this, a crucial extension vis-à-vis sheltered housing is the option to purchase demand-orientated care, which will be offered by the provider. This renewal facilitates residents to stay at the houses even in times of a frailer physical condition. The residents will have different financing options to either rent or buy this type of accommodation (Abbeyfield 2010: 10).

“Abbeyfield Residential Care”: The demand of rooms at Abbeyfield Residential Care Homes seems to be high as, according to Abbeyfield, the organisation has occasionally to waitlist people interested in this housing scheme. Basically, it provides ensuite accommodation, 24-hour personal care as well as community involvement due to volunteers and common spaces like dining rooms, lounges or gardens (Abbeyfield 2010: 11ff.). The quality of the residential care homes is under permanent control by the Care Quality Commission21.

“Abbeyfield Integrated Living”: Additional to these types, Abbeyfield integrated living aims to combine the different Abbeyfield accommodation types in integrated houses built for this purpose, where residents have the opportunity to choose their preferred housing type (Abbeyfield 2010: 11).

Which societal challenges does Abbeyfield address?

Abbeyfield, as an exemplary case for elderly living in the UK illustrates interesting developments in this area. Whereas the Abbeyfield sheltered housing approach delivered a successful model for elderly living in the past, the organisation is presently confronted with, respectively perceives an alteration in the demand structure of residents. Although the original type of sheltered housing continues to be a part of the housing offers provided by the Abbeyfield Society, the number of

21 The residential care homes in UK are controlled by the Care Quality Commission. The testing results are public e.g. the evaluation of the Abbeyfield Society: http://www.cqc.org.uk/provider/1-102642859.
interested residents in this scheme seems to decline to a lower level due to the various reasons discussed. Following the Abbeyfield strategy paper of 2010, the critical point to fulfill the residents’ needs is to provide custom-fit housing offers with a high flexibility in terms of individual options, e.g. demand-orientated personal care. As this parameter cannot be realized easily in a high number of sheltered houses due to constructional conditions or for economic reasons, this scheme cannot be used to its full capacity. In this regard, the Abbeyfield Independent Living approach can be seen as a future trend as it delivers higher flexibility as well as a higher quality of living conditions (cf. Wright et al. 2009).

However, one question arises with regard to the important role of volunteers in this hybrid organisation. It remains to be seen how the volunteer commitment will be affected by the Societies’ shift to a stronger customer supplier relationship between the organisation and residents. As one fundamental characteristic of the Abbeyfield movement is familiarity and community involvement, it may be challenging to transfer this spirit from sheltered houses to newly build, occasionally contained accommodation schemes with professional personal care (cf. Paine et al. 2010).
3.3. “Kotisairaala” (“Hospital at Home”)

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>Kotisairaala</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>Kotisairaala provides intensive health care at the patients’ home instead of a treatment in a hospital</td>
</tr>
<tr>
<td>Target group</td>
<td>People in the need of inpatient hospital treatment</td>
</tr>
<tr>
<td>Status</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Type</td>
<td>Practical example for health care at home</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.tampere.fi/terveyspalvelut/sairaalat/hatanpaa/kotisairaala.html">www.tampere.fi/terveyspalvelut/sairaalat/hatanpaa/kotisairaala.html</a></td>
</tr>
<tr>
<td>Duration</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Institution(s)</td>
<td>Municipality of Tampere, local hospital</td>
</tr>
</tbody>
</table>
| Contact             | Tampereen kaupunki  
|                     | PL 487  
|                     | 33101 Tampere, Finland  
|                     | Tel: +358 (0)3 56572250 |
| Funded by           | Municipality of Tampere, Finnish health system |

The “kotisairaala” (Hospital at home)\(^{22}\) service offers people in the need of inpatient hospital treatment the possibility to stay at home. Instead of being sent to the hospital a specialised team of doctors and nurses comes to the patients which can remain in their usual environment. As a result people are recovering better and suffer less from stress as they do when being sent to hospital. Therefore ‘hospital at home’ induces some benefits especially for the elderly.

**Initial situation in Tampere**

In the Finnish health care system approximately 350 municipalities play an important role. Due to their mandate to guarantee health services they negotiate the terms of contracts with the hospitals for the healthcare services. The budgets and services provided are arranged within these contracts. The starting point for the development of hospital at home in Tampere, a city of 217,000 inhabitants in the south west of Finland, was the trend towards an overloading of hospital capacity as there do not exist enough beds for patients. A practicable solution to this problem was needed and so the “kotisairaala” was developed out of necessity at first.

**“Hospital at home”**

The “hospital at home” service in Tampere is a service in which health care professionals treat the patients in their own home for a limited period of time. The treatment offered by hospital at home includes treatment for patients that otherwise would require acute inpatient hospital care. The treated patients have the same status as hospital inpatients as there is no division between in- and outpatient treatment in the Finnish health care system.

After an initial consultation of a family doctor, who decides on a possible inpatient treatment at hospital, the patients can choose between going to a hospital or staying at home. The participation

in the “hospital at home”-service is voluntary. In case the state of health or the will of patients change, an accommodation in a regular hospital is guaranteed. A specialised team of two doctors, a head nurse, about 20 hospital nurses and a part-time physical therapist conduct the treatment of the “hospital at home”-patients. Whenever necessary, further experts are consulted. The “hospital at home”-team operates day and night and can treat patients within a radius of 30km. The capacity of the project “hospital at home” corresponds with a 25-bed unit in a hospital.

The health staff visits the patients as often as necessary. The costs per day are about 250 EUR (whereas a day of inpatient treatment in hospital is significantly higher). The costs for the patients are 9,30 EUR for a treatment visit of a nurse or the physical therapist, 14,70 for a treatment visit of a doctor. If more than one visit per day is needed the costs are 16,10 EUR. This means that the care at home is cheaper for the patients as the inpatient care at hospital would be.

**Conclusion**

As the cost for the patients for taking part in the “hospital at home”-service are not higher than for inpatient hospital care the project offers additional treatment options for them. For those who like to stay in their familiar environment it offers e.g. a saving of time because some of the consultation of doctors is possible at home. Therefore the idea of “hospital at home” was not to only address the elderly as target group.

Nevertheless it has been shown that it is especially the elderly who can benefit from a treatment at home. They can stay in their familiar environment and their familiar social networks. As elderly are a high-risk group in inpatient hospital treatment regarding typical hospital infections this type of care is particularly suitable for such patients. Moreover the risk of being helpless due to an unusual environment is minimized.

Not only elderly patients can benefit from the “hospital at home”-service but also the hospital itself and the municipality do. For the hospital the treatment in the patients’ home relieves their capacities. For the municipality the service is of interest because the costs they get from the patient are similar to the ones they get from people in inpatient hospital care. Due to the fact that the overall costs for participating in the “hospital at home”-service are lower than the ones for a hospital bed this concept is attractive for the municipalities.

As it seems to be a triple “win-win-win”-situation for the patients, the hospitals and the municipalities there have been “hospital at home” projects in other regions in Finland as well. Wherever the capacities of hospitals are exhausted the treatment at home can be a reasonable alternative. Moreover the treatment at home is of special interest for the elderly since it fits their specific needs.
3.4. Nie Sami (“Not alone”)

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>Nie Sami</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>Nie Sami is social housing project for elderly, offering assisted housing in rented flats</td>
</tr>
<tr>
<td>Target group</td>
<td>Elderly population of Stargard Szczeciński</td>
</tr>
<tr>
<td>Status</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Type</td>
<td>Assisted housing for elderly</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.tbs.stargard.pl">www.tbs.stargard.pl</a></td>
</tr>
<tr>
<td>Duration</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Institution(s)</td>
<td>Stargardzkie TBS (social housing company)</td>
</tr>
<tr>
<td>Contact</td>
<td>Stargardzkie TBS Sp. z o.o. ul. Struga 29 73-110 Stargard Szczeciński</td>
</tr>
<tr>
<td>Funded by</td>
<td>Stargardzkie TBS</td>
</tr>
</tbody>
</table>

**“Nie Sami” – introduction**

The project “Nie Sami” (“Not alone”) of the (social) housing company Stargardzkie TBS is addressing people 55 years and older with low and medium incomes. It offers assisted living in affordable dwellings and also wants to ensure the tenant’s participation in social life. Involved players in the project are, besides the Stargardzkie TBS, an association named “Potrzebny Dom” (“Needed Home”) and other supporters in the (local) government and NGOs.

**Stargardzkie TBS**

The housing company Stargardzkie TBS is part of the TBS system in Poland. It is a non-profit company owned by the municipality Stargard Szczeciński. The city of Stargard Szczeciński is located about 30km east of Szczecin (Stettin) in the north-west of Poland not far from the western border. Today Stargard Szczeciński has about 70,000 inhabitants. According to the city’s website, the population can be characterised as young, well-educated and progressive as there are more people in productive age than in post-productive age.

The TBS-system (“Towarzystwo Budownictwa Społecznego”) offers forms of social housing and associated funding concepts. TBS is part of the attempt to face Poland’s housing shortage and lack of affordable and qualitatively acceptable rented dwellings for people with lower incomes. Hence the TBS-programme aims at initiating the construction and renovation of dwellings. Therefore the state bank Bank Gospodarstwa Krajowego offered loans of about 70% of the project value. The remaining part had to be funded by the TBS-organisations. “This down payment may be derived from the tenants, who as a result consider themselves as quasi-owners and are selected through this qualification” (Chiquier & Lea 2009: 391). In the case of “Nie Sami” the equity ratio of the Stargardzkie TBS was funded by the municipality of Stargard Szczeciński, tenants with appropriate incomes and NGOs.

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23 www.szczecin.eu/
**The programme “Potrzebny Dom”**

The project ‘Nie Sami’ is one out of four projects of the programme “Potrzebny Dom” (‘needed home’). Included in this programme are the following:

- “Bez Barier” (“without barriers”): Housing programme for physically and mentally handicapped persons.
- “Nie Sami” (“not alone”): Rented homes and assisted living for the elderly
- “Na Start” (At start): Programme for foster families and orphans. Living in own flats should prepare young people for independent living.
- “Nasz Dom” (“Our home”): Dwellings for children who grew up in social care institutions.

The programme “Potrzebny Dom” is not only an important part of the work of the Stargardzkie TBS but also part of the housing policy of the municipality Stargard Szczeciński. Contrary to other European countries, where social housing gains state support in form of financial assistance, the assistance for social housing projects in Poland varies in the different projects. In the case of Stargardzkie TBS, the municipality bears the costs for a contact person in the project “Nie Sami”. This person is the on-site contact for the tenants from Monday to Friday, 8.00 am till 16.00 pm. The contact person is responsible for the organisation of leisure activities as well as for the coordination of medical appointments. She also provides assistance in the necessary official administration procedures. The association “Potrzebny Dom” (correspondent to the programme of TBS Stargard Szczecinski) collects monetary and in-kind donations. For example the association organises concerts in order generate revenues which are later donated to the housing projects.

*Figure 9: The housing project “Nie Sami”. Source: http://www.wiadomosci.rii.pl/index.php?H=5&HH=7535*
The idea of the “needed home”-programme is based on an initiative launched by parents of mentally handicapped children about 15 years ago. These parents asked the Stargardzkie TBS if it was possible to create housing facilities which allow the handicapped persons to have an independent life in protected accommodations. Based on this suggestion the housing company reconstructed three buildings. The first of them was completed in 1999. On each floor of this housing complex there were furnished three single-room apartments with appropriate bathrooms, one common room and a kitchen with a dining room. In 2001 another project in which people in normal health live together with handicapped people was established by the Stargardzkie TBS. The objective in this project was to integrate handicapped people into existing buildings and quarters and not force them to live in special accommodations in suburban areas. Since 2004 Stargardzkie TBS offers the possibility of assisted housing for people who are severely mentally handicapped. In the housing blocks provided for this the residents get a permanent on-site assistance. During the day the residents participate in excursions, therapies or work in specially protected workshops. Due to the positive experiences with these housing projects the TBS company of Stargard Szczeciński started other projects for physically handicapped people and for young people who grew up in social care institutions.

The programme “Nie Sami”

In the programme “Nie Sami”, Stargardzkie TBS offers rented dwellings for people over 55 years. Although not all people at this age need assistance in their everyday life, target group of the project includes all people older than 55 years. At the beginning of “Nie Sami” Stargardzkie TBS collected external assessment on housing in old age. Employees of Stargardzkie TBS made contact with the pensioner’s association of Stargard and the university “Uniwersytet Trzeciego Wieku” in order to gain more knowledge about the probability for success of such a project. In particular the aim was to analyse the preconditions of such living forms and the reasons of elderly people to join such a project. The external assessment on these questions pointed out three main aspects: (1.) Older persons are afraid of not getting help in case of emergency; (2.) they feel lonely; (3.) they have the need for a better infrastructure and qualitatively better accommodation.

The assisted housing “Nie Sami” of Stargardzkie TBS is placed in buildings which are designed based on the needs of the elderly. For example the two storeyed buildings are equipped with one elevator, the different wings of the building are marked in colours etc.. Within their means the housing company tries to offer leisure activities such as healthy gymnastics, language courses and computer training. Due to book donations it was possible to assemble a small library. All in all, donations are an important part of the project “Nie Sami”. The dwellings are equipped with an emergency call system which helps the tenants to call a caring person in case of an emergency. On weekdays there is an on-site care person in charge from 8.00am till 4.00pm. During the other times and the weekend volunteers offer this service. E.g. J. Dąbrowska, the vice president of Stargardzkie TBS, is engaging for this. In this case the housing company has the possibility to get in touch with the tenants and get a better knowledge of the everyday problems of the elderly.

The project addresses people aged over 55 years. This is not because these people are considered as old and in need. Rather TBS Stargard has chosen this target group due to the fact that people in older age are not willing to have big changes in their life anymore. Instead they prefer to stay in a familiar environment so that moving to new dwellings would be a high stress factor for them. The idea of addressing “younger” people is that this creates a longer familiarisation phase before getting old and needy.
All the projects of the programme “Potrzebny Dom” are linked to each other. For example the younger tenants of “Na start” showed the elderly of “Nie Sami” how to use the computer and how to get access to the internet. Moreover they provide help in case of moving furniture or configuring electronic devices. On the other hand the elderly offer assistance in doing sewing work for example. Mutual assistance is one of the main aims of TBS Stargard; today the responsible employees of TBS Stargard think it is a big success that younger and elderly people get together in their everyday life. Here the inclusion of different (disadvantaged) target groups is a win-win situation: The elderly stay vital and healthy while the young adults learn about respectful treatment of the elderly.

Challenges for the approach of Nie Sami
As the conditions of the TBS system in Poland have changed the further extension of the project “Nie Sami” has been stopped at the moment. Although the project can be considered as successful and there is a need for adequate accommodation for the elderly TBS Stargard is not able to build or reconstruct further dwellings without the specific funding model of TBS. As another weakness it has to be pointed out that the success of the programme depends on how much effort the employees of the housing company, the municipality and the involved NGOs are able and willing to put into the project. All in all the “needed home”-programme is special because it links different problems of housing of disadvantaged groups in Poland and hereby tries to generate a benefit with respect to the mutual assistance between these groups.
3.5. SWOT-analysis housing

An overall analysis and discussion of drivers and barriers considering housing for older persons shows the following picture of strengths and threats in this field: If it is the aim to enable the elderly to live an active life in old age and to take part in the everyday social life, their conditions of housing play a very important role. As different conditions of housing are strongly associated with outcomes regarding active and healthy ageing, the examples presented can show ways of enabling the elderly to stay at home in old age. Moreover they draw attention to the restrictions some of the approaches have to face.

In old age people usually centre their lives on their houses and their neighbourhood. This goes along with higher requirements concerning living quality, especially in terms of security, comfort, usability and also affordability of technical equipment. This is one of the main results of the “I-Stay@home”-Project\(^2\): By analysing the users’ (in this case tenants) needs, the project has indicated that these people want technical support in terms of using the internet (e.g. online banking), mobility and in terms of barrier free and comfortable housing (e.g. cleaning, shopping, seeing, bathing). Although technical support regarding security (e.g. automatic emergency alarm systems), comfort (e.g. powered wheelchairs, powered doors, elevators etc.), usability (e.g. computers, mobile phones) is already available and older persons were aware of these technologies, the actual application does not cover the needs.

“Encouragingly, most tenants would be willing to adopt new technologies that would help improve and maintain their independence and certainly allow them to stay at home. However the most significant barriers to any adoption of new technologies or ICT solutions would be their affordability, popularity and usability. These barriers become less important if tenants think that solutions would be provided by housing organisations and/or they helped their families in some way” (I-stay@home 2013: 18).

All in all, empirical studies underline that currently used technical solutions are often experienced as “impersonal” by the adopters. Only those offers that are appropriate for the target group are promising. The use of the new technologies differs between young and old people, but a new “technology-friendly” generation of older people is to come. The demand of computer trainings in the “Nie Sami”-project underlines this. The highest acceptance of technological support is observed in case of interconnected technical solutions which provide more security and a better economic efficiency of living and housing. The healthy arrangement of homes also has economic potentials regarding social services and small trade as well as with respect to communication- and technical services. Here a lead market with positive labour market effects could develop in the future.

\(^2\) http://www.i-stay-home.eu/
### Table 4: SWOT-Analysis housing.

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opportunities</strong></td>
<td></td>
</tr>
<tr>
<td>In terms of security, comfort, usability and affordability technical equipment is able to support independent living in old age.</td>
<td>Opportunities for (new) coalitions to enable the elderly to stay in their (kn)own accommodation and neighbourhood.</td>
</tr>
<tr>
<td>Most of the older persons want to stay home as long as possible.</td>
<td>Lack of acceptance of technically assisted housing.</td>
</tr>
<tr>
<td><strong>Threats</strong></td>
<td></td>
</tr>
<tr>
<td>Many of the existing buildings are not appropriate to function as a health- and care point.</td>
<td>Refurbishment of accommodations is not affordable for all.</td>
</tr>
</tbody>
</table>

After a look at the presented good-practice-examples regarding housing one impression becomes clear: In terms of security, comfort as well as in terms of usability and affordability technical equipment is able to support independent living in old age. The spread and the development of information- and communication technologies have lessened the uno-actu-principle of traditional service delivery. More and more housing services can be delivered without an immediate contact to the person providing the service.

Although the technical possibilities exist a large part of today’s buildings is not appropriate to function as health- and care points for people in old age. To function as such the buildings often have to be reconstructed and several modernisations have to be done. As the living situation needs to allow both individuality and community such conditions could be created with the help of intelligent living facilities and housing-related services. Due to the fact that affordability is one of the main reasons for the rejection of age-friendly housing new ways of financing such conditions of housing have to be found.

The need for the modernisation and reconstruction of buildings and the related infrastructure offers opportunities for (new) coalitions to enable the elderly to stay in their (kn)own environment. The demographic change forces the elderly, the owners (e.g. landlords) and the technology providers (as well as actors of the construction industry, architects etc.) to develop successful operating ways of housing. The relevant stakeholders such as politicians, local administrations, private landlords or the housing industry and the civil society have to address action in order to improve the housing situation of the elderly in a way that fosters active and healthy ageing. As the good practice examples have shown the realised projects require the cooperation of these different stakeholders.

Establishing age-friendly housing highly depends on the acceptance of the elderly. If the lack of acceptance of technically assisted housing cannot be reduced, the willingness of older owners or tenants to pay for such forms of housing will be low. This also bears the threat that the refurbishment of accommodations is not affordable for all. Social inequalities, especially between people in old age, could be increased by this.
4. Good practice examples mobility

Mobility is a basic need for everybody; getting to work, buying groceries or pursuing other daily activities is essential to take part in society. For elderly people however, mobility can be quite a challenge and each step of the mobility chain could be a potential obstacle. Mobility in older age is a complex topic that involves several dimensions. Key determinants are cognitive, psychosocial, physical, environmental, and financial influences (Webber, Porter & Menec 2010: 446). Cognitive and/or physical impairments such as declined hearing and vision or limitations in the musculoskeletal system increase with age and might hinder mobility.

Taking a closer look at mobility and public transport for older people we need to ask why and how people travel as well as how the transport infrastructure is organised. Motives for (older) people to travel cover very different aspects: Shopping, healthcare, leisure time, holidays, social engagement, etc.. How people travel varies a lot depending on how healthy they are, on how much they can afford to spend for transportation and what attitude older people have on travelling.

The infrastructure and the spatial conditions have a strong influence on the mobility of older people. Sometimes even a few steps can hinder a comfortable travel. Long distances in peripheral areas or mountainous areas are difficult to reach. Barrier-free environments with a good information policy are needed. Operators of public transport can be public, private or a public private partnership.

The demographic change as well as local budgetary and geographic restrictions are the main challenges in the field of public transport. However, ageing is not only a pull but also a push factor: Older people being an active part of the society increase the demand for goods and help to maintain the infrastructure especially in rural areas. For the individual adequate mobility allows an active, independent life as long as possible and supports with enabling a social life not only inclusion but also the physical and psychological health. Being healthy in old age delays the need of care and thus relives the social system that will be highly challenged in the coming years.

To demonstrate how mobility for older people can be put into practice, four good practice examples were selected, following the requirements of availability (effort of time and distance to reach the destination), acceptability (of public transport as an substitution or addition to individual motor car traffic), accessibility (barrier-free mobility chain) and affordability (ticket fares).
4.1. Helsinki Regional Transport
Kutsuplus.fi

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>Kutsuplus.fi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>Kutsuplus.fi combines public buses and taxis. Passengers can book a mini bus on short notice and chose a pick-up and drop-off point. The ride is shared if other passengers are going in the same direction at the same time.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Target group</th>
<th>Motorists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Duration</td>
<td>Since 2011</td>
</tr>
<tr>
<td>Type</td>
<td>Public Transport</td>
</tr>
<tr>
<td>Website</td>
<td><a href="https://kutsuplus.fi">https://kutsuplus.fi</a></td>
</tr>
<tr>
<td>Institution</td>
<td>Helsinki Regional Transport Authority</td>
</tr>
<tr>
<td></td>
<td>PO BOX 100</td>
</tr>
<tr>
<td></td>
<td>00077 HSL, Finland</td>
</tr>
<tr>
<td>Contact</td>
<td>+358 9 4766 4444 (Switchboard)</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:hsl@hsl.fi">hsl@hsl.fi</a></td>
</tr>
<tr>
<td>Funded by</td>
<td>Helsinki Regional Transport Authority</td>
</tr>
</tbody>
</table>

Introduction

With its 603,968 inhabitants Helsinki is the capital of and the largest city in Finland, located in the south of the country. The metropolitan area of Helsinki has about 1.4 million inhabitants, thus about one quarter of the Finnish population lives in this region. The area includes the urban core of Helsinki, Espoo, Vantaa, Kauniainen and surrounding commuter towns. The population density with 2,872,86 inhabitants per km² in the city and 379,3 inhabitants per km² in the metropolitan area is high for Finnish standards. The population of Helsinki and especially the metropolitan area is growing which has an effect on the public transport planning. The public transport is operated with trams, metros, busses, trains and ferries, managed by the Helsinki Regional Transport Authority (HSL). The public transport system is radially aligned from the city centre to the suburban areas. Hence, the connections within the city centre and to the outer regions are good whereas the crosslinks are considered as suboptimal. Therefore, several surveys report that private cars are a favoured mode of transport.

Helsinki Region Transport System Plan

The target of Helsinki Region Transport System Plans\(^\text{25}\) is a well-functioning transport system that ensures seamless and diverse mobility options as well as good transport links for business and industry. It is supposed to improve the competitiveness and well-being of the growing metropolitan area and covers the entire mobility chain including all modes of transport from walking, cycling, public transport, private motoring to freight traffic. Other than in the rest of the country where the regional councils are responsible for the transport system planning, the planning for the whole

The Helsinki area is assigned to HSL. The current plan from spring 2011 (HLJ 2011) is the first one that includes all 14 municipalities of the Helsinki region. The subsequent plan (HLJ 2015) is already in progress and will be published in 2015. It will include the monitoring results of HLJ 2011 and define further steps considering the future evolution of the transport system. The HLJ 2015 is being developed in a participative process with different stakeholders and citizens. The draft of the HLJ 2015 aims at improving the service level of public transport, walking and cycling and helps to deal with the increased amount of public transport users resulting from population growth. The key is to make the region more effective and competitive by utilising the existing structure and investing in the public transport trunk network and its service level. Walking environments will be improved especially in the nodes of the trunk network and other central areas. Measures are primarily targeted to support a more coherent urban structure. The use of the transport system is targeting a more responsible approach by making efficient use of vehicular traffic pricing and traffic management tools.

About Kutsuplus.fi

Kutsuplus.fi is an automated demand responsive public transport service based on real-time bookings. It was developed by the Helsinki Regional Transport Authority (contracting authority) and Ajelo Ltd. (technical development). It is currently available as an online platform\(^{26}\); a smartphone application is planned to be launched in 2015. This service is a reaction to survey results where a high occurrence and increase of private car trips were detected. Within a research project an alternative to car trips was developed that provides flexible door-to-door guided journeys and is competitive to a car in terms of time usage, ecology and economy.

The service started with three vehicles in October 2012 and was gradually increased to 15 vehicles until December 2013. Fares were very low initially (1.50 Euro plus 0.15 Euro/km) and were more than doubled at the public launch in April 2013 (3.50 Euro plus 0.45 Euro/km). However, the increase in price did not affect the steadily growing number of trips and registered users (by October 2014 16,000 users were registered). Service hours are currently from 6am to 11pm on Mondays to Fridays. Pick-up-points and drop-off-points are general bus stops but there also virtual bus stops can be defined; e.g. with a lower density of bus stops. The service can be booked maximal 45 Minutes in advance via the website Kutsuplus.fi or by SMS. The confirmation of the booked trip contains a code to identify oneself, the number of the vehicle and information about the route to the bus stop and arrival times (see Figure 10). The trips are shared with other passengers that are travelling approximately the same route at the same time. The pick-up-times and drop-off-times of all passengers are displayed with a code inside the vehicle (see Figure 11). If booked online, the trips are paid through a prepaid credit; if booked via SMS, the trips are charged on the phone bill. Prams, walking frames or luggage can be transported safely and free Wi-Fi is provided.

\(^{26}\) https://kutsuplus.fi/home
11:11 Board the vehicle K1 (Kutsuplus). Show your trip code 7C to driver.

Figure 10: Screenshot of real-time travel information (© HSL and Ajelo).

Figure 11: Information system inside the buses.
Advantages of Kutsuplus.fi for older people

Kutsuplus.fi is not explicitly developed for older people: The main target group are car drivers. However, following the Finnish transportation philosophy of accessibility for all, Kutsuplus.fi is also developed for older passengers. In fact, elderly persons are frequent users and the platform directly supports independence because it offers more personal service, high comfort inside the vehicles and high timely reliability (according to Ajelo statistics 35% of the vehicles arrive within 30 seconds of the announced arrival time; money back guarantee when driver is 15 minutes or more delayed). Especially the elimination of transfers and the possibility of being helped with luggage are regarded as assets for older passengers.

As stated in the interviews, affordability is not a big issue for older people as Kutsuplus.fi is not compared with the lower public transport fares but with the high taxi fares. This is especially true for people with impairments because the support for taxi rides from social care is nowadays slashed; in these cases Kutsuplus.fi is an affordable alternative to taxi.

Older passengers reported that even though Helsinki offers so called service lines that are explicitly conceptualised for older people, elderly prefer to travel with Kutsuplus.fi because it better fulfils their need of independency. Concerns of older people with regard to traditional public transport are often fear of fast driving, falling or aggressive passengers which can be avoided when travelling with Kutsuplus.fi.

The fact that Kutsuplus.fi is a platform-based service seems to be no problem to older users because on the one hand the internet usage of elderly people increases and on the other hand the low-level booking option via SMS is possible. Several comments from users to the customer relationship manager show that older people might need some extra support that gives them confidence to use this service, but in general all Finnish people were described as being familiar with the use of mobile phones. What underlines the interest of this target group to learn about a technical system like this is that several individuals and associations of older people put the enquiry to the customer relationship manager to explain Kutsuplus.fi to them.

Involvement of the (older) population in Kutsuplus.fi

Several studies were carried out to receive customer feedback. The results gave insight about favoured payment methods, service usage and demands. Besides, the platform is constantly being developed based on customer feedback. Feedback can be given via email or a questionnaire that is displayed in the vehicles. A typical request is a new bus stop e.g.; this can be solved by virtual bus stops. Opinions about Kutsuplus.fi with regard to older people are moreover retrieved from lobby organisations such as the handicapped association and the older people council.

The possibility of feedback is used frequently and is considered as very valuable. Requested functionalities will be implemented in the future step by step. Also, the number of vehicles and size of service area will be gradually expanded.

Conclusions

Kutsuplus.fi is a technology-based, customer-oriented service with the aim to decrease the number of private car trips in the Helsinki metropolitan area. It offers an alternative to the car with high comfort and comparably low fares. Even though Kutsuplus.fi is not directly targeted to older people it offers them a higher level of service than traditional public transport does. This helps that older
people can stay mobile and independent. The planned expansion of the number of vehicles and service area will probably lead to an even higher coverage of areas with older inhabitants.
### 4.2. Leicestershire County Council Public and Passenger Transport

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>Community Transport, Demand Responsive Transport and Social Car Scheme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary</strong></td>
<td>Leicestershire County Council’s aim is to provide transport services to their inhabitants by combining different services: Community transport, demand responsive transport and social car schemes.</td>
</tr>
<tr>
<td><strong>Target group</strong></td>
<td>Older persons, disabled persons, persons that live in rural areas, persons that have no transportation alternatives</td>
</tr>
<tr>
<td><strong>Status</strong></td>
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</tr>
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<td><strong>Duration</strong></td>
<td>Since 2000</td>
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<tr>
<td><strong>Type</strong></td>
<td>Public and Passenger Transport</td>
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<tr>
<td><strong>Website</strong></td>
<td><a href="http://www.leics.gov.uk/index/highways/passenger_transport.htm">http://www.leics.gov.uk/index/highways/passenger_transport.htm</a></td>
</tr>
</tbody>
</table>
| **Institution**     | Leicestershire County Council  
The Transport Policy Team  
County Hall, Glenfield  
Leicester LE3 8RA, England |
| **Contact**         | Tel. +44 (0) 116 305 0001  
ltp3@leics.gov.uk |
| **Funded by**       | Leicestershire County Council |

### Introduction

Leicestershire is a County in the East Midlands with 651,200 inhabitants in England. It has eight districts (Charnwood; Melton; Harborough; Oadby and Wigston; Blaby; Hinckley and Bosworth; North West Leicestershire, and Leicester (Unitary)). Leicestershire County is administered separately from the City of Leicester but certain fields of responsibility overlap which in some cases results in a different priority setting. Its population is growing but ageing faster than national average. With an area of 2,156 km² and a population density of 455/km² Leicestershire represents a quite highly populated region. Nevertheless, some of its districts are very rural and frequent public transport is difficult to provide. This challenge is reinforced by major budget cuts that confront the transportation department with having to find solutions to save money and at the same time maintain the service level.

### Local Bus Policy

Following the “Transport Act 2000” Leicestershire County was required to produce a “Local Transport Plan” (LTP). Since this announcement, three LTP’s have been produced (LTP1 from 2000 to 2006, LTP2 from 2006 to 2011 and LTP3 from 2011 to 2026). One target of the current LTP is improving the connectivity and accessibility of the transport system. This is, among other things, realised through the bus policy that includes the following targets:
The County Council will seek to meet the essential transport needs of Leicestershire residents through the provision of transport solutions;

- The delivery of these transport solutions will be subject to periodic tests on levels of use and affordability and value for money;
- Passenger transport will be provided by a mix of conventional bus services for higher demand areas, supplemented by provision of less frequent services by minibuses and taxi type vehicles (in areas of low usage);
- Fares on all services will be broadly comparable with the fares charged on commercial bus services.

The LTP3 identifies six overall priorities; three of those are relevant for public transport: Supporting the local economy, encouraging active and sustainable travel, and improving connectivity and accessibility. The long-term vision for Leicestershire’s transport system over the course of LTP3 is described as follows: “Leicestershire to be recognised as a place that has, with the help of its residents and businesses, a first class transport system that enables economic and social travel in ways that improve people’s health, safety and prosperity, as well as their environment and their quality of life.” (Leicestershire Local Transport Plan 3: 5). This includes providing socially necessary travel services for older and disabled people.

The following services of community transport, demand responsive transport and social car scheme show how the bus policy is implemented.

**Community Bus**

“Community Bus” is a mode of transport for older, disabled and rurally isolated residents who are not able to use a public bus or do not have transport options of their own. It is run by a voluntary organisation in each district with volunteer drivers as well as paid drivers. The service is offered with wheelchair accessible minibuses on an approximate timetable. The service needs to be pre-booked at least two working days in advance by phone. In Leicestershire 101,800 single passenger journeys were carried out between 01 April 2013 and 31 March 2014.

An example of Community Bus is the Community Transport in Hinckley & Bosworth. Hinckley and Bosworth is a Borough in south-western Leicestershire with 105,300 inhabitants in an area of 279.35 km² (density 350/km²). This operator has been running for more than 25 years. One of their frequent services is a journey to a shopping centre where the residents of an old people’s home are being picked up from home, driven to the supermarket and in the end are being dropped off at the pick-up point. The driver is trained to the needs of the elderly and disabled persons and helps them to get on and off the bus as well as to stow their shopping and trolley.

As this is a charity organisation the service is dependent on funding. The funding by the County Council only covers about half of the yearly expenses due to the mentioned cuts. For five years the service has been supported by the Big Lottery Fund. Since this support ran out the service relies on charitable contributions and ticket fares doubled. However, according to the operator this did so far not lead to complaints or have a negative impact on the passenger numbers.
Demand Responsive Transport

A similar mode of transport is the “Demand Responsive Transport” (DRT). Currently there are more than 30 off-peak DRT services running in Leicestershire County. In the period 01 April 2013 to 31 March 2014 19,800 single passenger journeys were made on these services. The DRT services also need to be pre-booked by phone between one week until one day before the journey takes place and fares are the same as in buses. Passengers will be collected and dropped-off at agreed points. Timetables and destinations are determined (e.g. to a health or shopping centre) and based on the demand of the area in question. Only people living in the indicated areas are eligible to use the service.
Social Car Scheme

A more flexible mode of transport is the “Social Car Scheme”. It is more tailored towards the needs of individuals in comparison to the Community Bus as the journeys don’t follow a specific timetable but times and destinations are personally agreed. However, the local reach of the journey is limited to district and borough council’s boundaries. The service is provided by volunteers who use their own cars.

One example of the Social Car Scheme can be found in Market Harborough. Market Harborough is a market town within the Harborough district of Leicestershire with 20,785 inhabitants. The voluntary drivers that are taking part in the Social Car Scheme need to fulfil several requirements such as provide their own roadworthy car with a letter of the insurance company, references and a certificate of good conduct. At the end of each month the drivers fill out an expense sheet and they will be reimbursed for every mile that they have been driven. However, the interviewee emphasised that the main intention of the drivers is not the financial incentive but helping people. They offer their service in their free time and are very dedicated to their role.

The clients need to register and state that they are eligible for this service. Eligibility is given when the passenger has either physical or mental difficulties that prevent them from using public transport or doesn’t have access to public transport. Journeys need to be arranged at least one week in advance. Charges are based on the mileages that cover the costs of fuel expenses. Affordability is an issue to the clients but they depend on this door-to-door service and it is cheaper than a cab. First
and foremost the social aspect of this service is very important, for some clients it is the only personal contact.

The Social Car Scheme is funded by the Leicestershire County Council. It is mainly used by older people but not limited to this target group.

![Volunteer drivers](image)

**Figure 15: The volunteer drivers.**

![Map of Leicestershire District Council Partnership](image)

**Figure 16: Map of Leicestershire District Council Partnership showing district and borough council’s boundaries.**

**Involvement of the (older) population in the planning of transport services**

Even though Leicestershire County Council is putting big effort into providing services the current and future cuts lead to a continuous reduction of transport options. In 2013 a survey was carried out in Leicestershire County to ask about the priorities on where to spend the money on. It showed that transport is considered as very important by the respondents even if they do not use the services (yet). However, due to the necessary savings the planning might in many cases no longer be able to
orientate on what people want but on what people need. Essential transport needs of residents are in the new bus policy defined as follows (all subject to a test around value for money):

- Shopping and Personal Business;
- Healthcare;
- Social Activity and Wellbeing;
- Work.

Other needs such as providing access to training and education, tackling congestion and reducing carbon emissions, will be met wherever possible, but would not be classified as priorities when determining the commissioning and design of transport provision. The type of transport solution provided would be on the basis of value for money and affordability in proportion to identified demand.

During 2012 and 2013 surveys were carried out with passengers using local bus services paid for by the county council. Passengers were asked about their opinion on different travel options (people who do not use the service and future customers were thus not included). It turned out that some travel options (current or planned) are perceived as restrictive. A vast majority of the respondents asked for a regular service that did not require pre-booking and provided an opportunity to travel six days a week to a variety of destinations. A large part of the respondents declared that they have a long-standing illness or disability.

**Conclusions**
Due to budget cuts Leicestershire County needs re-structure the transport planning. The main challenge is to find out which services and routes are actually needed to provide a reasonable service level and at the same time not make older people dependent. The ageing of the population and isolation in rural areas interrelate and compound this challenge. The respondents felt that due to budget restriction aspects of wellbeing and the “social added value” are getting less important.
# 3 Case study Hand-outs

## 4.3. Ayuntamiento de San Sebastián

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>AENEAS project/Local Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>The city of Donostia-San Sebastián has responded to the demographic challenges with multiple activities targeting the (transportation) needs of older people. This includes the implementation of a minibus-service, vertical transport solutions and walking activities.</td>
</tr>
<tr>
<td>Target group</td>
<td>Older persons, older residents that live in hilly areas</td>
</tr>
<tr>
<td>Status</td>
<td>Ongoing (community)</td>
</tr>
<tr>
<td>Duration</td>
<td>2008-2011 (AENEAS project)</td>
</tr>
<tr>
<td>Type</td>
<td>Public Transport</td>
</tr>
</tbody>
</table>
| Institution         | **Ayuntamiento de San Sebastián**  
|                     | Sección Técnica de Movilidad  
|                     | Urdaneta, 13  
|                     | 20006 Donostia-San Sebastián, Spain |
| Contact             | +34 (0) 943 481000 |
| Funded by           | Intelligent Energy Europe/  
|                     | Ayuntamiento de Donostia-San Sebastián |

**Introduction**

Donostia-San Sebastián is with 186.500 inhabitants (3.062,9 inhabitants per km²) the capital of the Province Gipuzkoa in the autonomous community of the Basque Country, located on the coast of the Bay of Biscay in the north of Spain. The 21 districts of the city feature a big topographical variety – from flat areas close to the coast to hilly areas inland. The access to public transport in the flat areas with a dense population and strong infrastructure is better than in the low populated and hilly areas. Even though also the Basque Country and San Sebastián suffered from the financial crisis the area is economically in a better position than many other parts of Spain and the unemployment rate is relatively low.

**Policy for an age-friendly Donostia-San Sebastián**

The development of an action plan for an (age-)friendly Donostia-San Sebastián includes the topics environment, transport, housing, active ageing, participation and social inclusion. It contains concrete targets and actions for each topic. Regarding transport accessibility and connectivity between the different modes of transport (especially for walking and cycling) are the main fields for measures.
In this context, Donostia-San Sebastián is part of the network “Age-friendly Cities” – a project of the World Health Organisation that aims at supporting older people by addressing their needs. To capture the needs and to find out about drivers and barriers considering the aim of becoming an age-friendly city, focus groups with older people were carried out.

**Public Transport in Donostia-San Sebastián**

As the Basque Country is strongly affected by the ageing of the society the city of San Sebastián decided to take explicitly older people’s needs into account and improve, among other things, the mobility options for older people. Not only public transport but also the popular modes of transport – walking and cycling – were supposed to be promoted. The AENEAS project was one way to put this strategy into practice and several measures were implemented together with the San Sebastián Public Transport Company (CTSS) dBus (100% owned by the municipality).

One measure of the AENEAS project was to adapt public transport for older people in the city of Donostia-San Sebastián; three activities were carried out: As a first step, the transport company helped persons understanding the information in bus stations like bus routes, frequency of bus lines etc. As a second step, older people were shown how to get on a bus and how to manage inside it (e.g. how to avoid falling or how to ask for a seat that is reserved for people with impairments). Part of this step was also to demonstrate the options for blind people such as acoustic information that can be switched on with a remote control by the passenger. The third step was an exercise to apply the received information and try it out in guided bus trips of ten minutes along the neighbourhood. 149 older passengers took part. Even though many of them were already frequent users the measure was still received as very useful and the citizens were encouraged to use public transport more often. For this measure 350 bus drivers of the dBus bus company were trained on older people’s requirements and needs; these trainings are still ongoing.

Some parts of San Sebastián are hilly with steep and narrow streets that are not accessible with normal busses. Because these areas were populated in the 1940s and -50s, many older people are living there today. To get into the city centre can be very difficult and it was feared that especially older people with mobility impairments were at the risk of social exclusion. In the course of the AENEAS project and due to an enquiry of a neighbourhood association three new minibus lines were introduced to improve the accessibility of the residential districts located on hillsides close to the city centre. The door-to-door concept of the new lines took the needs of the elderly people into account: Frequent stops are provided and the vehicles are wheelchair accessible. With this initiative, parts of the city that were not connected to public transport before were integrated into the transport routes. With about 3.000 passengers per day and over 800.000 passengers per year the service is very frequently used and considered as a great success. The quality of life for these residents, in particular for elderly residents, who were making only few trips outside their neighbourhood, has been improved and their dependency has been reduced.
Especially in the past 20 years reconstructions were realised to make San Sebastián barrier free and more pedestrian and cyclist friendly – taking into account the needs of older people like low sideways and benches.

Figure 17: Newly introduced bus line served with a mini bus.

Figure 18: Street closed to car traffic and with benches to rest.

Figure 19: Pedestrian-friendly street with anti-slip pavement.
The public services dBus, police, municipality etc. work close together and help for example when a person is disoriented. When a person is reported missing, bus drivers receive a description of the missing and they lookout for that person.

**Vertical Transport**

Another contribution to the quality of life of (older) people is the vertical transport. Vertical transport is used to link high and low districts of the city with an elevator, escalator or ramp. This makes walking and cycling trips to and from the city centre easier for citizens who live in the hilly parts of the city (about half of the population) and encourages people to shift towards non-motorized transport modes. Vertical transport is suited according to older people and persons with reduced mobility but all residents benefit from it. To plan and implement the vertical transport partners and relevant stakeholders such as associations of neighbours, elderly and physically handicapped people were involved. Vertical transport\(^\text{27}\) is used about two million times per year with a high share of older people.

Elevators are the preferred mode of vertical transport because in comparison with the escalators it goes both ways and things can better be transported (such as prams, wheelchairs and groceries). Furthermore, elevators are cheaper and easier to maintain. However, elevators are more expensive when they are installed in the first place.

![Figure 20: Two examples of vertical transport in the Benta Berri district of San Sebastián.](image)

**Involvement of the (older) population**

\(^{27}\) A demonstration of vertical transport can be seen in this video: [http://youtu.be/bc8EkO3v0bM](http://youtu.be/bc8EkO3v0bM).
Participation of the (older) residents is seen as fundamental to improve the infrastructure of the city as a whole and is represented by an own department within the municipality (servicio de participación ciudadana). Donostia-San Sebastián has a long tradition in involving older people to get to know about their high heterogeneity and different needs. Senior citizens are well organised in old people’s clubs and are generally very active which facilitates to reach out to them. Joint walking tours in the mountains are organised with these clubs which promotes the health and social interaction. The less active elderly people are reached through health centres.

Conclusions
Donostia-San Sebastián is a good example of improving the mobility infrastructure in a city with a high share of older people and a challenging topography. The city has shown that the needs of the older residents are taken into account and are put into practical approaches.
4.4. SehrMobil Siegen
(“VeryMobile Siegen”)

<table>
<thead>
<tr>
<th>Name of the project</th>
<th>SehrMobil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>SehrMobil is a platform that not only offers a variety of age-friendly mobility options but also provides information about events and connects people.</td>
</tr>
<tr>
<td>Target group</td>
<td>Older persons, disabled persons, persons that live in rural areas, persons that have no transportation alternatives</td>
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<td>Duration</td>
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<td>Type</td>
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<td>Website</td>
<td><a href="http://www.sehr-mobil.de">http://www.sehr-mobil.de</a></td>
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<tr>
<td>Institution</td>
<td>Universitätssstadt Siegen GB1 (Demografie, Personalentwicklung) Rathaus Siegen / Markt 2 57072 Siegen, Germany</td>
</tr>
<tr>
<td>Contact</td>
<td>Tel.: +49 (0) 271 / 33716-0 <a href="mailto:info@sehr-mobil.de">info@sehr-mobil.de</a></td>
</tr>
<tr>
<td>Funded by</td>
<td>German Federal Ministry of Education and Research (BMBF)</td>
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</table>

Introduction
Siegen is a city with 102,234 inhabitants and is located in the county of Siegen-Wittgenstein in the Siegerland region. It is divided into six districts with in total 23 communities. The population of the city is decreasing and has a share of 20.2% of people over 65 years. The area of 114.67 km² with a population density of 870/km² is characterised by a topography of big differences in altitude in the city centre as well as in the suburban regions. There has been a budget closure enacted for the city which means that new projects may not be financed by the municipality. This affects also mobility projects such as SehrMobil.

Inter-municipal cooperation
Siegen is part of the “Zweckverband Personennahverkehr Westfalen-Süd” (“Association of local passenger traffic of South Westphalia”). In the bye-law of this inter-municipal association is arranged that the partners coordinate the traffic planning for the region according to the dynamic local requirements. The project SehrMobil is one measure to fulfil this arrangement.

The platform SehrMobil
The basic approach of the project SehrMobil is the preservation of mobility also in old age because mobility is seen as one of the key requirements for a high quality of life. Physical impairments like decreasing motivity or vision/hearing can limit mobility. The aim of this project is to make use of the technological, organisational and multimedia structures and develop measures and instruments to
continuously improve the mobility options in old age. It is emphasised that self-determined living and social inclusion are the main goals of the platform.

To tackle these targets an age-friendly and intergenerational platform was developed. Several organisations such as research institutions and associations for older people were involved in this process. In doing so the active participation of older people in the development was crucial (see next chapter).

SehrMobil was developed with eight institutions that were equally involved: The German National Association of Senior Citizens’ Organisations (BAGSO), German Red Cross, Institute of Gerontology of Heidelberg University, International Institute for Socio-Informatics, infoware GmbH, University of Siegen, City of Siegen and County Siegen-Wittgenstein.

The platform unites three services: Travel information of different providers (public transport, patient transport ambulance and taxi) including walking, private carpooling and an event calendar with regional events. When using the function of travel information the passenger will be navigated from the current position to the pick-up-point and from the drop-off-point to the destination. Within the platform it is possible to set up a profile with personal information like residence or interests. The profiles help to know more about the person who offers a ride or that travels with the driver. By this means the social relationships of (older) people and the support of each other is promoted.

The TV application is another feature of the project that provides an alternative to display the services and works as a reminder for a booked journey. However, this plays just an underpart as the users prefer the website based service.
The rollout of the platform was end of August 2014 and took place in the county of Siegen-Wittgenstein. The platform works for public transport also outside of the county because it uses data of the German Railways. The applicability of the full functions (including taxi and the additional services such as event calendar and private carpooling) in a bigger area is successively planned for the near future. The rollout on a national basis is supported by the German National Association of Senior Citizens’ Organisations (BAGSO, DRK). So far, 250 users are registered. A smart phone capable application will be developed until March 2015.

The costs for maintenance are relatively low. However, as the local budget is limited the project has to rely on sponsors and volunteers. The project is funded by German Federal Ministry of Education and Research. When the project ends the platform will be assumed by the German Red Cross. The Red Cross is the local provider of patient transport ambulance and is thus a locally known and trustworthy partner. Business models are currently developed to find further sponsors (e.g. the local bank).

**Involvement of the older people in the development of the platform**

Qualitative and quantitative studies were carried out in the first place to understand the readiness of using technology and the mobility behaviour of older people. The results gave information about the requirements for the platform such as data entry, possibilities to contact other users, options for people with impairments and how to display the different functions. Furthermore criteria were developed considering public transport connectivity, average age and geographical position to identify the test regions. Siegen and the adjacent city Netphen were chosen as test regions. Netphen is also located in the county of Siegen-Wittgenstein. It has 23.051 inhabitants and is situated about 7 km northeast of Siegen. It has a similar topography as Siegen and consists of 21 communities.
The platform was closely developed with 20 older future users. These users were not experienced with modern computer technologies or smart phones and live in the respective test regions. One half each was from rural or urban areas. Men and women took equally part, the average age was 70 years. The 20 test persons were equipped with an age-friendly smart phone (big enough to handle it well, small enough to carry it). The advantage of the device smart phone was that it is not stigmatising older people. On the contrary, many older users said, that they are very proud to use a smart phone. In several sessions in small groups the older people were taught how to use the smart phone, and information on how to develop the platform age-friendly was retrieved. With this continuous exchange it was assured that the requirements of the older users were captured and implemented accordingly.

Conclusions

The platform SehrMobil shows how different transport options and social aspects can be combined within one offer of service. Even though Siegen has to cope with budget restrictions the city managed to implement the platform and find a provider who funds and coordinates the service also after the project ends. This allows a long-term perspective that is needed to fully implement the service for the whole region and beyond. The project demonstrates that combining training of users, age-friendly design and comprehensive information is a good way to overcome barriers related to the acceptance and use of technologies.
4.5. SWOT-analysis mobility

The good practice examples show that even though all examples are from very different locations and backgrounds (all examples are located in an urban or suburban area, in one example also rural areas are served) the challenges and goals pursued are quite similar: Providing user-oriented transportation services.

Table 5: SWOT-analysis mobility.

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Strength</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Mobility is key to supporting active and healthy, independent living and social inclusion.</td>
<td>• The integration of ICT asks for measures to increase acceptance and use of the devices and services (e.g. by comprehensive trainings).</td>
</tr>
<tr>
<td></td>
<td>• Combining different modes of transport and mobility chains reflects the needs of the passengers.</td>
<td></td>
</tr>
</tbody>
</table>

| Threats | • Population ageing and the heterogeneity of age ask for approaches addressing multiple aspects of the mobility chain. | • The financing of services is a threat to provide integrated and seamless mobility chains as well as to social inclusion and independent living. |

Participation is seen in all projects as a valuable commodity to capture the actual needs and requirements of older people. In San Sebastián and especially in Siegen the projects were carried out with a high involvement of seniors, playing an active role to develop the measures. Helsinki did not include older people in the development of the platform but the feedback that is given frequently by older users is highly valued and effectively influencing the further development of the service. For all projects independent living in old age was a main driver to offer a service. That reconfirms the importance of mobility solutions supporting participation in society and social inclusion. This is particularly true for the rural and remote areas that were only insufficiently connected to the public transport system and that are, in most cases, more affected by demographic challenges than urban areas.

Although the criteria to select good practice examples were focused on projects in public transport, it is important to provide different modes of transport like walking, cycling and carpooling. The different aspects of mobility solutions are based on different needs; holistic approaches target not only transportation issues but also the out of home environment. E.g. it is not only important to be able to get to a shopping center by bus but also by foot or car.

In two of the examples mobility platforms were developed integrating ICT. The development of the platform in Siegen was directly based on the statements and needs of the older test users. The advantage of technology based services is that they are customised and more flexible. By this means they immediately respond to the needs of the user. However, training of the older people in using a smart phone, internet and apps/platforms is an indispensable requirement. It turned out that in all projects training facilitated the usage of public transport. This is especially true for the technology
projects but also for traditional public transport and frequent users training was seen as very helpful and was an additional driver for older people to make use of the full offer of services.

The major barrier to implement measures for an age-friendly mobility and transport is the financing. This was an issue in all case studies; in some this was more threatening than in others. Of course the community has to set priorities but it has to be kept in mind that a weak mobility can lead to subsequent problems. If mobility is not sufficient (older) people might not have enough access to infrastructure such as supermarkets and health centres, have less physical exercise and last but not least are at risk of social isolation. In the long term a good mobility offer promotes health and the quality of life. The ageing and the growing heterogeneity of (older) people poses a challenge to many communities in times of low local budgets to provide high quality transport services. Nevertheless, all communities were aware of the necessity to adapt the local conditions to the needs of older people in order to keep them mobile and independent. Not only older people benefit from this approach but the community as a whole.
5. Conclusions

All in all it becomes clear that the three areas (ICT, housing and mobility) share common barriers but also approaches and solutions to tackle these challenges. Though the given examples cannot be transferred to and implemented in every country and each setting, they provide fruitful approaches that can be integrated into different contexts, projects and initiatives. However, the question concerning the sustainability of many initiatives is still prevailing. Certain aspects have the chance to become sustainable and, in case public funding was provided, will still be in place after the funding has ended.

The analysis underlines that the different aspects of built and technological environments are closely linked to each other. ICT-based devices and services are found in the context of housing and mobility; this trend will continue in the near future. The case studies have shown that this asks for user-friendly approaches combining information policies and trainings. The integration of volunteers – ideally peers – is identified as a concept or element that increases the awareness and acceptance of new products and services but also the chance of sustainability. Moreover, following the concept of active and healthy ageing, it supports the active participation in society. User-integration is not only thought at the beginning of the innovation process but also as a constant theme.

Furthermore, the cooperation of multiple stakeholders is essential to develop and implement (advanced) approaches. In turn, this asks for measures to increase awareness of the user’s needs but also of solutions that already exist. Considering ICT, the acceptance and use of technologies is not only an issue of older people but also for other end users such as case managers or caring staff. The same is true for housing and mobility; coalitions of actors are needed to start innovative approaches.
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