



**European SeniorWatch Observatory and Inventory -**  
*A market study about the specific IST needs of older and disabled people  
to guide industry, RTD and policy*

**www.seniorwatch.de**

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***Supporting home care delivery  
through IST***  
*Experiences from a German pilot project.*

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## Short Title

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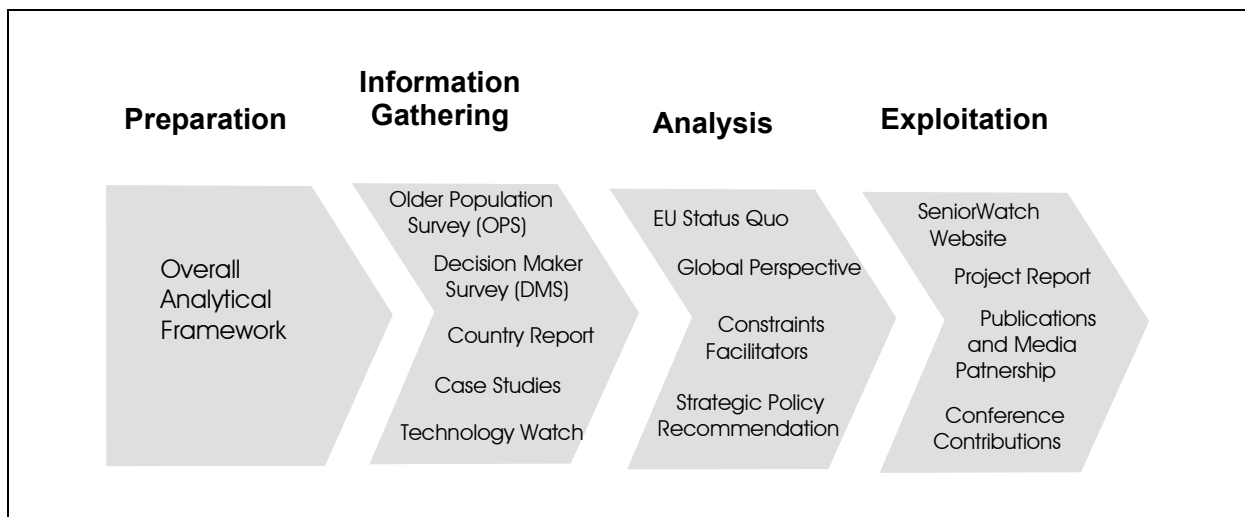
# 1 Introduction

The SeniorWatch project addresses the need to understand better and to monitor the market dynamics of Information Society Technologies (IST) applications and services targeted at older (and older disabled) citizens. Currently, there is insufficient empirical data about the needs of older citizens which could be met by IST-based applications and services, and a lack of awareness on the part of industry, users and politicians that hampers the rapid exploitation of new market opportunities arising from IST developments. In order to redress this state of affairs SeniorWatch will provide a European single source of empirical information on the market potential of IST-based products and services targeted at older people. The main objectives can be summarised as follows:

- to help and encourage European industry to address the market opportunities, and particularly challenge current competitive advantages of the US industries,
- to enable policy to really influence the current situation and to benchmark achievements between different European regions and countries and to make comparisons with competing world economies (Japan, US) most relevant to the field,
- to inform citizens about what is now possible with the support of IST and, thus, encourage them to demand IST products and services which meet their requirements.

As illustrated by Figure 1-1, these objectives require a comprehensive methodological approach to be applied. On the basis of an overall analytical framework, it integrates a set of complementary research methods such as European-wide surveys of older people and of decision makers in care services, best practice case studies, technology watch work shops and country reports. Synthesising the various types of empirical information gathered with help of these methods will finally enable the project to arrive at an holistic overview, to establish a technology and market observatory, and to derive policy recommendations to accelerate market development. Research results will be exploited by means of different measures.

**Figure 1-1: The Project Phases of SeniorWatch**



Source: © SeniorWatch, 2001

As part of the project's overall methodological approach the SeniorWatch case studies aim at providing a useful source of information on how the IST-related needs of the target groups in question can adequately be served. They are also intended to help to understand - in a qualitative manner - more deeply specific aspects of the market situation related to IST

products and services relevant for older citizens. To allow a comparative analysis of real-life examples, a common approach for selecting and describing suitable cases was developed. The main selection criteria applied in this context include:

- suitability of the case to provide input to the overall understanding and analysis of the market for IST among older people;
- suitability of the case to serve as an example of a success story (or failure) that can guide and motivate others to take actions that will support the diffusion and take-up of IST by or for older people.

In the following the SeniorWatch case study no.11 is described.

## 2 Supporting home care delivery through IST. Experiences from a German pilot project.

### 2.1 Description

The main objective of the Johanniter Unfallhilfe (JUH) was to improve the quality of community care services provided to older people in the region of South-Westphalia. Moreover, cost saving potentials of advanced IST were to be explored under day-to-day conditions. A major obstacle was initially seen in the resistances of personnel against the usage of IST. Based on mobile technologies traditional service delivery processes were to be redesigned. This included technology-based support of mobile field staff as well as of staff employed in the local service centre, of management staff and last but not least of the clients at home. An improved flow of information was intended to:

- to enhance the capabilities of field staff and, thus, to improve quality of service,
- to provide comprehensive and up-to-date information to the clients concerning the services provided,
- to reduce error rates within care service delivery,
- to reduce duplications of efforts.

The JUH pilot-site was set up in a rural area of South-Westphalia. In this region, several communities are served by JUH including Iserlohn, Lüdenscheid, Werdohl and Altena. The headquarter is located in Lüdenscheid. The main service centre is located in Iserlohn. Overall, 35 employees were involved in home care delivery when the pilot project was launched including nurses, emergency medical technicians and people doing their civilian service. About half of them were trained professionals. The following services were provided

- community care
- meals on wheels
- transport services
- emergency call services

Overall, three care teams were equipped with mobile phones, handheld computers and digital cameras. Online communication was possible from everywhere in the field. The idea was to enable the field staff to contact the care centre as well as professional experts whenever necessary. Mobile e-mail communication enabled asynchronous communication when communication partners could not be reached by using a mobile voice telephone. Transmission of digital photographs enabled field staff to augment verbal and/or written communications e.g. in order to document the health status of a client. This was regarded as particularly important as wound treatment tended to be a problematic task for the mobile care staff so that specialists located at the care centre were to be enabled to better advise field staff while working at the client's home.

Moreover, it was intended that field staff should be able to access up-to-date information remotely when advising clients on further services offered by JUH such as meals on wheels or transport services. Apart from this, field staff should be able to access latest information on tour planning, emergency situations, etc. and to assist clients to place any orders directly from home.

In order to support management processes, a new work flow management system was implemented including electronic duty rosters and tour planning features. Electronic order

lists were developed and integrated into the overall system. Also, a selection of cars used by mobile staff was equipped with electronic navigation-systems.

Staff received comprehensive training and advice on how to use the new equipment. Here, it turned out as particularly useful to offer the opportunity to take the equipment home during spare time and to try the new devices out.

### Results and policy context

Johanniter, as the organisation often calls itself, is divided into divisions and sub-divisions. The Johanniter-Unfall-Hilfe (JUH) at national level has a central office in Berlin, and on provincial level the organisational set up presently comprises nine divisions (so-called "Landesverbände") and approx. 200 local subdivisions (so-called "Kreis/Ortsverbände"). By the end of 1998 there were more than 1.200.000 members:

- 1.194.097 registered donors
- 8.592 registered permanent staff
- 17.981 registered volunteers
- 3.166 conscientious objectors working with JUH instead of doing their National Military Service.

Services provided include:

- ambulance and rescue service
- mobile transport of handicapped people
- meals on wheels
- elderly persons alarm and communications service
- home care service
- Training of first aid, of emergency procedures to save human lives and of auxiliary nurses
- national disaster preparedness (mainly volunteers)

Apart from this, JUH is active on international level. This includes for instance:

- medical aid to Russia, Ukraine and Belo-Russia
- humanitarian aid to the Baltic States and other Eastern European Countries
- demining and rehabilitation aid in Bosnia-Herzegovina
- development assistance in Somalia and Djibouti
- orthopaedic assistance in Eritrea
- hospital rehabilitation in Rwanda
- health services in Angola, Namibia and RSA
- social stations in Poland.

The TEN Care project was successfully finalised. The high potential of IST to improve both the quality of service as well as the efficiency of service delivery processes was clearly demonstrated. Cost saving potentials were clearly identified. Overall it can be stated that

- better informed staff felt more confident in dealing with the clients,

- work satisfaction and motivation was improved.
- services delivery processes became more transparent and efficient,
- failure rates were reduced (particularly in emergency situations),
- quicker reaction to emergency situations became possible,
- general information flows were improved,
- co-operation with external partners was improved,
- logistics were improved.

As a result of the pilot project, IST is now being implemented on a broader basis. Further divisions of the JUH follow the example of South-Westphalia and begin to use the systems and devices which were tested in the pilot project. The field staff regards the utilised technologies as being very helpful, particularly the digital cameras. Also, the overwhelming majority of the clients were very open minded regarding the IST devices used.

## 2.2 Analysis

### Perspectives

As already mentioned, the pilot project was very successful. Neither the staff nor the older clients showed any resistance to the application of IST. Staff was very motivated to experiment with the devices after having received comprehensive training. The clients showed particular interest in the use of the digital camera. It enabled some of them for the first time to look at their own wounds.

During the pilot phase a number of changes regarding the technical setting became necessary. For instance, it was originally planned that every care team was equipped with a specially tailored suitcase containing the mobile phone, the laptop and the camera. However, it turned out that such a suit case is too bulky to be used in day-to-day practice. Also, wireless connections could not be initiated at the beginning of the project since cables and plugs were unsuitable for being used in a mobile setting. Moreover, the staff found out that the digital camera was not required to be at hand in every care situation.

In reaction to these experiences, the technical equipment was modified. The carers are now equipped with small handheld computers enabling them to store and transmit relevant data at a sufficient speed. Only the head of a care team uses a laptop further on. The digital camera is taken to the field only when necessary. Other than initially assumed, digital pictures do not have to be regularly transmitted from the patients' homes to the service centre. Rather, it is common practice to take pictures of the patients' wounds once a week in order to document the healing process. In most cases it is sufficient to store the pictures taken in the clients' records off-line so that the leader of the care group - who is not regularly on site - is able to assess the status quo on a regular basis. Apart from this, the pictures taken turned out to be very useful when negotiating with insurers, reimburses, etc. - for instance when determining what care measures are required in a particular case.

The demand for receiving online advice while staying at the client's home was much lower than originally expected. However, having the possibility to ask for remote support if required yielded a higher level of self-assurance at the side of the field staff, and this ultimately led to a higher level of job satisfaction.

The improvement of organisational processes internal to the JUH is seen as a major benefit of implementing IST. Organisational tasks such as tour-planning, managing duty rosters, dealing with emergency situations etc. can now be managed much more efficient than before. Planning can be easily adopted to unexpected situations and demands. Staff can be

informed promptly on any changes of current planning. For instance, the rate of not adequately dealing with client's requests was reduced from about 30% to nearly zero. To achieve this result, organisational processes had to be redesigned in order to enable efficient use of IST. Electronic forms had to be designed, customer information as well as service data had to be made available in electronic formats, etc.

Cost savings were realised already at an early stage of the pilot phase. However, a representative of JUH stated that his organisation would never have taken the risk to invest in IST without receiving public co-funding since no one at JUH was really aware of the economic potentials provided by IST. In the beginning, there were considerable doubts about the overall outcome of the project, and it was seen as a technological "playing ground" rather than as a "business case" for real world applications. Ultimately, one was surprised about the relatively low investment costs and running costs compared with the qualitative and economic benefits that were gained.

Some technology-related problems could, however, not be solved during the course of the pilot project. For instance, the ordering system of the company delivering meals to the clients is still incompatible with the system used by the JUH.

### Lessons to learn

The case clearly demonstrates the potential IST generally holds for the care sector. Moreover, it illuminates the importance of publicly funded pilot implementation in this field. Currently, there are not many standard applications available on the market which are particularly tailored to the needs of home care providers. Thus, there is a high risk of misinvestments even if a care service provider was prepared to spend the required capital.

### Trends and Vision

Home care providers need to be sure about what they can gain through the use of IST before they take the risk to invest in this area. Show cases including a carefully conducted cost-benefit-analyses could be a useful tool to stimulate demand for IST in the care sector.

## 2.3 Acknowledgements and links

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### WWW links

[www.juh.de](http://www.juh.de)

<http://www.juh-swf.de/>