



**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](http://www.seniorwatch.de)

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## ***Satakunta Macro Pilot***

*A Finish regional development project in social and  
health care.*

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## Short Title

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Project Co-ordinator: empirica

Communication and Technology Research  
Oxfordstrasse 2  
D-53111 Bonn  
Phone: +49 (228) 985300  
Fax: +49 (228) 98530-12  
e-mail: [seniorwatch@empirica.com](mailto:seniorwatch@empirica.com)  
URL: <http://www.empirica.com/>

Partners:

WRC - Work Research Centre  
1 Greenlea Drive  
Dublin 6W  
Ireland  
Phone: +353 1 4927 042  
Fax: +353 1 4927 046  
e-mail: [wrc@wrc-research.ie](mailto:wrc@wrc-research.ie)  
URL: <http://www.wrc-research.ie/>

STAKES - National Research and Development Centre  
for Welfare and Health  
Siltasaarekatu 18 A  
Fin-00531 Helsinki  
Phone: +358 9 39 671  
Fax: +358 9 761 307  
e-mail: [asiakaspalvelu@stakes.fi](mailto:asiakaspalvelu@stakes.fi)  
URL: <http://www.stakes.fi/>

EURAG - European Federation of the Elderly  
Wielandgasse 9  
A-8010 Graz  
Phone: +43 316 81 46 08  
Fax: +43 316 81 47 67  
e-mail: [eurag.europe@aon.at](mailto:eurag.europe@aon.at)  
URL: <http://www.eurag.ch/>

NPOE - The Netherlands Platform Older people and Europe  
Christiaan Krammlaan 2-10  
3500 AE Utrecht  
The Netherlands  
Phone: +31 (0)30 273 23 93  
Fax: +31 (0)30 271 36 49  
e-mail: [npoe@seniorweb.nl](mailto:npoe@seniorweb.nl)  
URL: <http://www.seniorweb.nl/>

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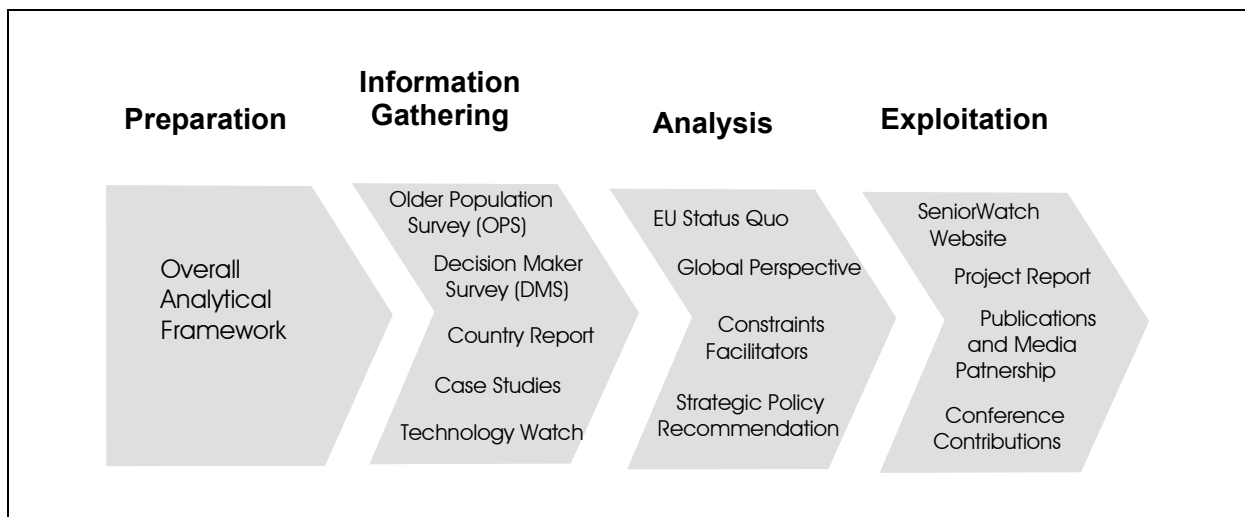
# 1 Introduction

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.10 is described.

## 2 Satakunta Macro Pilot . Regional development project in social and health care in Finland

### 2.1 Description

#### Development in social services and health care

Satakunta Macro Pilot is a wide development project in social services and health care sector in Satakunta region in Finland. The Macro Pilot challenges the problems social and health care system is facing. These challenges include for example ageing of the population, raising costs of social and health care and increasing demand for customer oriented solutions that support independent living. The development of a regional information system creates the technological basis for new operating models. By developing new technology the project aims to increase effectiveness and reduce costs of social and health care sector and to promote client centred ways of working. The main general goals are:

- to develop and test seamless care and services in social and health care
- to support independent living of the citizens
- to develop general information services on social services and health care.

#### Seamless care

*Seamless care* is an operating model, in which an individual's social and health care services form an integrated whole, independent of the organisation, which is currently providing a service. In seamless services the client's social and health care services in various organisations are integrated with each other and produced in an economical and effective way. A care manager is a person, who co-ordinates client's service chain from client's perspective.

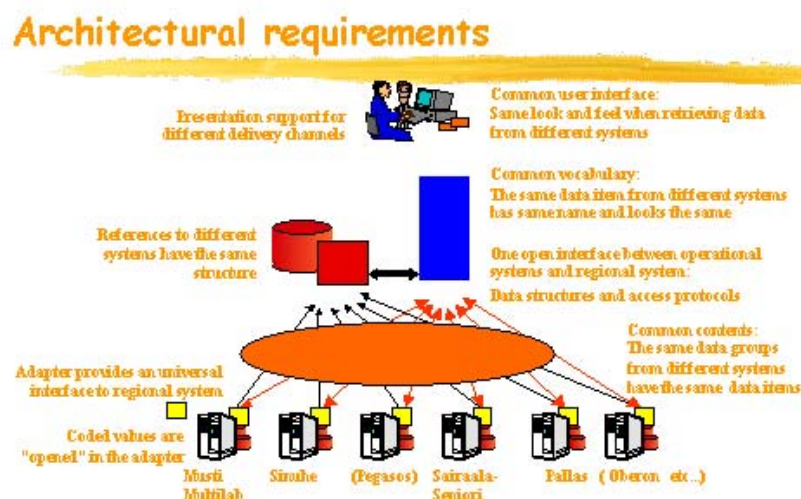


Figure. Architectural requirements of the regional information system.

Seamless services have many advantages. When planning, guidance and monitoring of services across the organisational boundaries is possible, duplication of information and care can be avoided. Resources can be managed more effectively and costs and time can be saved, but also the quality of the services can be increased. The aim is that client's information and data is moving instead of the client being forced to move from one service to another. The seamless service chain is based on information technology, in which the client's social and health care information contained in various data systems is available for the use of professional service providers in all service situations and organisations. For these arrangements the client's approval is required. The system developed for this purpose is known as the *regional information system*, which uses a "smart card" based social insurance card as a guarantee of data security. In the regional information system information from several databases from open health care, specialised health care (hospitals) and social care (including home care) are merged into a one system instead of being fragmented in various data stores of service providers.

The regional information system is an information technology basis for the activities of the Macro Pilot. In summary, it is a common system based on an open architecture. The coded values of the data stores are 'opened' in the adapter. The data stores from different systems have common contents, the same data items. The vocabulary used is common; the same data item from different system has the same name and the same outlook. Also the user interface is common. The regional information system can contain for example the following client information: summary of the patient, summary of visits and clinic periods, medical opinions (B1 and B2), laboratory results, medication, home and other services and social care decree decision.

Clients as well as the professionals need the social security card to be able to access the system. The social security card is the tool for recognising, authenticating and conforming, which makes electronic and visual identification of the user possible. Biometric identification can be added in future. The card is the key for using information and transaction services. The client's social security card is at the same time an identification card and a social insurance card. Personal data of the client can be loaded into the card. The goal is that person's own data, health data, data on latest appointments, tracking data and data for social insurance would all be possible to use with the social security card.

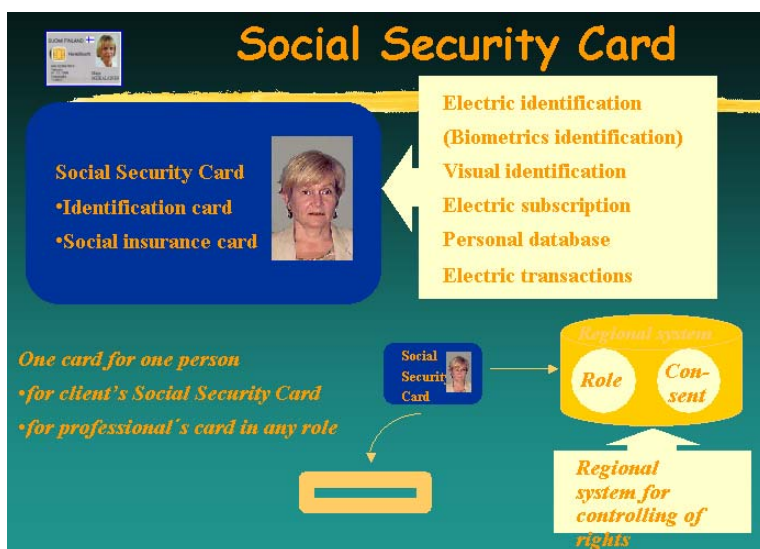


Figure. The social security card.

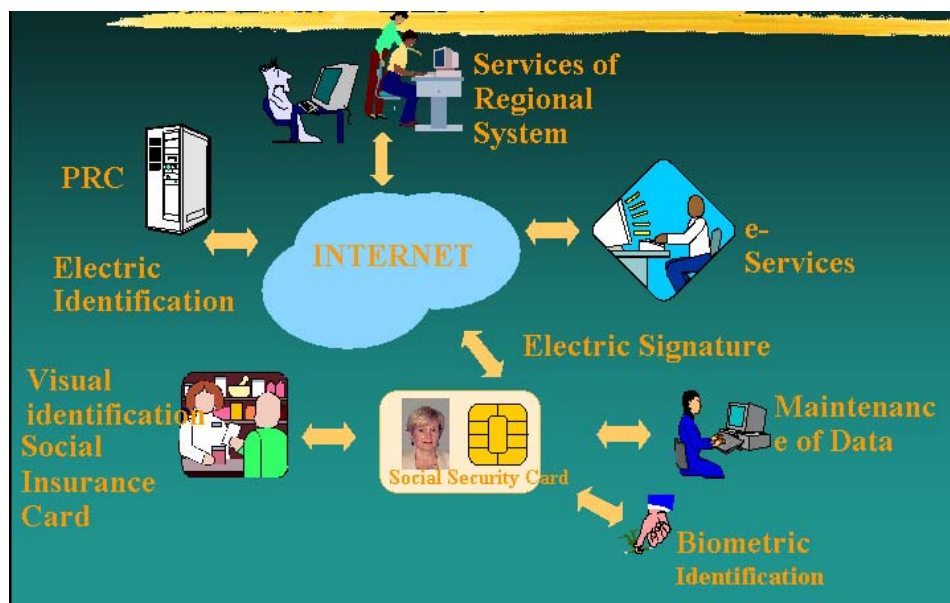


Figure. Services of the social security card.

### Home care services for the elderly

One goal of the Macro Pilot is to apply the new technological developments in supporting the independent living of the citizens. *Development of home care services for the elderly* concentrates on these aims. In the following the development of two operating models for home care services will be described:

*Home hospital.* Home hospital makes hospital treatment possible at the patient's home. The piloting of the home hospital model started in Pori in the autumn 1999 by the City Hospital of Pori. The home hospital represents a new service form in the Satakunta area. The treatment is tailored according to the individual needs of the patient. In addition, the employees of the home hospital can be reached around the clock in seven days a week and they will arrive in half an hour, if needed. Doctors, nurses, physiotherapists and home aid personal work in interdisciplinary teams. The service is targeted at adults in the need of temporary care, but the majority of the clients were seniors. The own wish of the client and the doctor's statement are the most important selection criteria of the patients. Furthermore, a supporting network at home – a family - is usually required, but home care services can complete the role of the family. The treatment is client oriented and co-operation with the families is close.

The aim was to produce a mobile information system in order to make real time connection to patient documents as well as to patient monitoring system possible, but this aim did not come true. The medical patient record was collected in electronic format. The employees of the home hospital worked with laptops and mobile telephones. The practise was to save the patient information at the laptops at patient's home and afterwards when being back to hospital put the data into the central patient data base. For a period of time, the connection to the patient information system was tried out with the ADSL-network.

An education period of four week's length was organised for the employees of the home hospital and representatives of partner organisations. Information on the home hospital model has been disseminated to health and social care professionals.

*Supporting self-care.* Protecting and promoting functional ability of the elderly living at home. The main aim is to pilot and apply common methods, how to measure, monitor and protect

functional ability of the elderly, support their self care and their family carers in the area of Satakunta.

The concrete measures were carried out in the City of Pori. 46 70-75 years old people living independently at home took part in measurements of functional ability, health examination, interviews and follow-ups. They received personal feedback from test results, advice for self-care and information on healthy life style. Lectures were given on ageing, exercise, nutrition, safe environment etc. Exercises like gym and Nordic walking were guided in practice. The information requirements of the centralised measurement and monitoring system were produced.

In addition, family carers were supported. The aim was to create a coverage system for them based on the centralised information system. A survey was made for family carers on their needs for deputise carers. The survey results have been exploited when planning education for deputise carers.

### Context

In the early 1990's, the Finnish Ministry of Social Affairs and Health began taking steps to utilise information and communication technology in social and health care sector. The so-called Wellbeing cluster entailed a closer co-operation between public and private sector to develop new innovations. A strategy for utilisation of ICT was published in 1996 to increase seamless approaches and responsiveness of social and health care services.

Macro pilot project is an example of a concrete measure related to this strategy. It is also connected to wider aims of the Ministry of Social Affairs and Health of promoting electronic business in public sector. Following competitive bidding, the Ministry of Social Affairs and Health selected a consortium consisting of seven municipalities, three community health care centres and the hospital district of Satakunta to carry out Macro Pilot project. The project was launched in November 1998 and the first phase went on until August 2001. The second phase of the project started in September 2001 and will continue until the end of the year 2003. In the second phase the Macro Pilot has clearly developed into a regional project, with all the municipalities of the Satakunta region taking part in the project.

## 2.2 Analysis

### Home hospital

The piloting of the home hospital model succeeded very well. Feedback was collected from clients and other stakeholders involved in the project. The results pointed up a need for expanding the home hospital services into other municipalities. The home hospital brings a new alternative to existing services and complements the services of the home care and the home nursing. It supports independent living of the patients and is an example of a new client oriented care culture. The treatment teams were considered professional and reliable. For municipalities the home hospital treatment was cheaper than the ordinary hospital treatment. The uptake of technology was not successful due to the problems in the development of the regional information system. The home hospital will continue as a part of the home service centre in Pori.

### Supporting self-care

Protecting and promoting functional ability of the elderly living at home. The operating model was created, which makes it possible to collect and monitor information on health, functional ability and the service needs of the elderly. Planning rural as well as individual services for the elderly can be based on this information. Furthermore, the information can be exploited in rehabilitative working practices of the home care. Anyhow, the full implementation of these plans is dependent on the development of the regional information system.

### Lessons to learn

During the first phase of the project new operating models were developed, like the seamless care and services, and piloted in practice, like for example the home hospital. All these models have in common that they require cross-organisational co-operation. Macro Pilot has created new forms of co-operation in the social and health care sector beyond organisational and geographical borders. New forms of rural co-operation has been established and in the second phase of the project more advantages can be expected from this when all the municipalities of Satakunta are participating in the project. Rural co-operation can help municipalities to save resources and co-ordinate their services more effectively. Not every municipality has to organise for example hospital services themselves, but these services can be offered for example through the home hospital. The rural cross-organisational co-operation means a new way of thinking in operational terms as well as regarding technological solutions.

An operational challenge was how to motivate social and health care professionals into development work. In this regard, the support of top executives is very important. Enough time and resources should be reserved for the development work; many municipalities have very limited financial resources. The assumption that the development work is something that can be done 'by side' is problematic. Some professional groups objected the new developments, because they felt their own position threaten.

The technical implementation was the main problem in the first phase of the project. The aim was very ambitious and the schedule was too tight. The consolidation of different databases and infrastructures of different organisations was a more demanding task than expected. The building of the regional information system has been delayed, which has considerably effected the implementation of the operational projects. The common information system could not be exploited in the operational projects during the first phase of the Macro Pilot.

The technical problems were partly due to the fact, that various enterprises were providing the technical applications and services. The delay of one provider effected also the work of the others. In addition, the co-operation with the enterprises was problematic in so far that the enterprises were not very interested in improving the system. Probably, there was a collision between two different working cultures. Fulfilling the requirements of this kind of a wide development project in the social and health care sector with many different stakeholders can be a very challenging task for an IT enterprise. The already available products of enterprises did not match the aims of the Macro Pilot to find solutions, which could be used across the organisational boundaries. Developing new products for the purposes of the Macro Pilot was risky for enterprises, because the market outlooks after the project were uncertain.

From administrative point of view, in the complex project the decision making was decentralised, which made it sometimes more complicated to solve the problems. The timing of the several subprojects was not optimal. The piloting of operational solutions started, before the technological basis was existing and functioning.

Anyhow, new development processes and co-operation in the social and health care sector have been initiated during the first phase of the project. In future, the operating models and the regional information system must be developed side by side. Good operating models have been created, but developing an open client oriented information system, which could support these models in practise, is still the future challenge .

### Perspectives

The lacking resources of the third sector organisations and missing funding have prohibited the implementation of the coverage system for family carers so far. The project will continue financed by the Slot Machinery Association of Finland and led by regional third sector organisations.

In future the Macro Pilot will continue its work as a sort of development centre with various independent subprojects. Also funding will be applied for the separate projects.

## 2.3 Acknowledgements and links

### Person to contact

Pirkko Levola, Macro Pilot. [pirkko.levola@makropilotti.fi](mailto:pirkko.levola@makropilotti.fi) telephone +358 2 620 4460  
+358 50 322 3114

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- (Wellbeing through Information Technology. Adoption and Embedding of Good Practices and Technological Solutions. Publications of the Ministry of Social Affairs and Health 2001:11. Helsinki)

### Links

<http://www.makropilotti.fi/>

Homepage of the Macro Pilot in Finnish

<http://www.makropilotti.fi/english/>

## Short Title

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A concise version of the Macro Pilot homepage in English.

<http://www.oskenet.fi/>

The Network of Excellence Centres constitutes a nationally important multiprofessional and multilateral accumulation of information technology know-how