Innovative Solutions within E-Health

Acreo National Testbed for Smart Homes and E-Health
RISE Acreo is responsible for the Central Baltic testbed and demonstration facility (CeBa Testbed), a cross-border collaboration project including partners in Latvia (Ventspils Digital Center, VDC) and Estonia (Institute of Baltic Studies, IBS). In the project, services and equipment for the Smart Home, eHealth, eGovernance, eLearning, and service distribution will be tested and demonstrated by real end users in the CeBa Testbed project.

For more than ten years Acreo National Testbed has delivered Internet services to real homes. The testbed is now the focal point of the CeBa Testbed project. Initially, Acreo’s Testbed was about inter-operability between different equipment vendors in order to demonstrate the feasibility of broadband networks delivering IPTV and high speed internet. The technology has steadily matured and with time interest has shifted towards the consumers and services. Now we focus upon the Smart Home and on eHealth applications. This includes technical solutions, business models, user behavior and service platforms.

An example of a technical activity is the construction of a remotely accessible probe – based on a Swedish SME product that can perform traffic measurements in the Ventspils municipal Wifi network. This will give Ventspils the means of understanding the traffic patterns and capacity demands in their network, it will give Acreo a tool to perform traffic measurements on a whole new scale, and it may open a new market window for our vendor partner.

The CeBa Testbed project is funded by EU’s structural funds through the program Interreg IV A, Central Baltic. The program focuses on environment, economic growth, and to act as an attractive and dynamic society through cross-border cooperation.
Care of COPD patients at home – an application of secure access

E-health will inevitable be an integrated and vital part of the future health system - ICT-solutions that create a better quality of life for patients and more cost-efficient healthcare. This project focuses on COPD, the fastest growing chronic disease in Sweden ("KOL" in Swedish) which costs the society more than 9 billion SEK annually.

RISE Acreo plays an important role in the project by being responsible for all the communication from the different sensors at home via the gateway to the care operator and the lung clinic. Video is an important tool for the communication between the patient and the caregiver and relatives, but also for activities like distance managed exercise. Acreo is also responsible for the video solutions within the project.

In the project we work closely with the lung clinic of the Karolinska University Hospital and a new role will be introduced, a care operator, who on a daily basis manage and monitor the patients. From a technical standpoint one of the biggest challenges is the security aspect of the communication. Inera, the organization which is responsible for Sjunet, the Swedish hospital network, is part of the project to find out how secure connections shall be extended to the home. The project has 15 participants and is led by RISE SICS. The expected results from the project can easily be generalized to other diseases.

Acreo contributes to the Swedish National E-Health-strategy

“National eHealth” is the future Swedish strategy for achieving an easily accessible and secure supply of information within the healthcare sector. RISE Acreo has signed a letter of intent with Inera, a non-profit-organization owned by Swedish County Councils, responsible for writing and introducing the National eHealth strategy in Sweden.

The collaboration between Acreo and Inera concerns the future strategy of data communications for healthcare. Acreo will mainly contribute to the parts concerning IT-infrastructure.

Acreo´s knowledge, gained from numerous research-projects within ICT, will improve Inera´s strategies and ultimately contribute to the implementation of effective and innovative IT solutions in healthcare.

Acreo is currently conducting several research projects with the goal of developing robust communication solutions that meet the requirements on security, integrity and availability within the healthcare sector.