



INVEST IN FINLAND

ICT in Finland's Healthcare and Well-being sector

**SIGNIFICANT MARKET OPPORTUNITIES FOR PRACTICAL ICT SOLUTIONS
THAT ADD VALUE IN HEALTHCARE PROVISION**

EXECUTIVE SUMMARY

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Invest in Finland is a national organisation promoting foreign direct investment in Finland. It is funded by the Ministry of Trade and Industry. Working closely with Finnish business community, it provides a link for foreign investors who are looking to set up ventures in Finland.

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Significant market opportunities for practical ICT solutions that add value in healthcare provision

Global trends in ICT for Healthcare and Well-being

In recent years, high quality information on health has become increasingly valuable in healthcare systems all over the world. Information and Communication Technology (ICT) now affects almost every aspect of health care provision. At both national and international level, the need for better information and systems to provide improved services and improve patients' quality of life has been recognized as an issue of critical importance. On the other hand, problems related to the use, usability and usefulness of many healthcare systems continue to hinder and limit the potential that ICT offers. Other as yet unresolved issues include the need for standardisation and the integration of systems into safe and effective healthcare practice within organizations providing healthcare services.

Hospitals across the European Union have a basic infrastructure for simple transactions, but advanced technologies that allow the sharing of patient data and its integration are not yet in widespread use. The European Commission has developed an e-Health plan and set targets but levels of implementation vary.

Technology supplied by the largest global ICT companies (such as Hewlett Packard, Intel, Microsoft etc.) is already widely used in healthcare provision. All these companies are present in Finland and the other Nordic countries.

Specific market drivers

1. The need for increased efficiency

Reduced funding for public healthcare in many industrial countries means there is an increasing need for effective ICT infrastructure and ICT-based care models.

Finnish companies occupy leading positions in the development of innovative ICT solutions for hospital-based healthcare and tools are available to manage all stages of the care process. The move to electronic health records is expected to fuel a revolution in the development of new therapies and pharmaceuticals as well as in how healthcare is provided and paid for. Digital data transfer will enable more effective networking among Europe's clinical institutions and e-Health is emerging as a new 'industry' alongside pharmaceuticals and the medical devices sector. EU estimates indicate that by 2010, e-Health spending may account for as much as 5% of the total health budget of the EU's 25 Member States.

2. Ageing populations

Rapidly-ageing populations mean there is global demand for innovative care services supported by high technology. In the final stages of life, for example, ICT-based equipment can make a significant contribution to improving quality of life and maximizing people's independence and dignity. One very successful implementation is the Finnish Wellbeing Center in Sendai, Japan - more information is available at: <http://www.finpro.fi/enUS/Consulting/Ongoing+Programs/FWBC/>

Telecare - the reliable but unobtrusive supervision of vulnerable people who wish to sustain independent lives in their own homes - offers substantial benefits by allowing older people to remain independent in their own homes for longer and is bringing fundamental change to the health and social services. For local authorities, it delivers cost-effective solutions by reducing the need for residential care and can also alleviate the pressure on healthcare services.

3. Lifestyle-related diseases

Finland has developed an exceptional level of knowledge and tools in connection with the prevention and treatment of specific lifestyle-related diseases. In addition to the extensive research carried out in this field in Finland, organisations such as the National Public Health Institute and the Finnish Heart Association have carried out pioneering work in both prevention and health promotion. Use of the latest ICT-based technologies allows both patient monitoring and follow-up.

4. Health monitoring tools for sport and work-related activities

The management of physical activities is becoming more important for healthy individuals and for people in risk groups. While all age groups use ICT equipment to measure their heart rate, the fundamental motivation can differ: it can be risk minimization, improvement of a person's physical condition, for competitive purposes (sports) and/or for the assessment of fitness to work.

Several Finnish companies have developed ICT-based products for health monitoring. Both health management and the reorganization of work processes in healthcare need new ICT applications, offering a variety of business opportunities.

ICT in Finland's Healthcare and Well-being sector

Several Finnish companies are well known for their health monitoring products. Finland was among the first countries to adopt first-generation electronic patient records in healthcare, and telemedicine - the use of Information and Communication Technology (ICT) to deliver services at a distance - is a sector in which Finland has always been a pioneer. With long distances between population centres and many people living in rural areas, the country has been a real "testing laboratory" for developments in the sector.

Finnish centres of expertise in the sector are briefly described below:

- **Culminatum**

- Culminatum Ltd Oy is a development company owned by the Uusimaa Regional Council, the cities of Helsinki, Espoo and Vantaa, and the universities, polytechnics, research institutes and businesses located in the Helsinki region. Culminatum's Centre of Expertise for Software Product Business operates out of the Otaniemi headquarters of Technopolis Ventures Ltd, the largest business incubator in the Nordic region, developing commercial operations and the business environment in the Finnish software sector. Work focuses on measures to enhance the globalization of enterprises and encourage collaboration between research organisations and industry, and seeks to promote the realization of software industry visions, ambitions and objectives through nationwide cooperation. www.culminatum.fi

- **The Oulu Region (northern Finland)**

- At international level, the Oulu Region is one of the most significant clusters in the ICT in Healthcare and Well-being sector. More information can be found at: <http://www.bioforumoulu.org/>

- **The Kuopio Region (central Finland)**

- The Kuopio Region's Centre of Expertise for Well-being is playing an important role in realization of the "HEALTHY KUOPIO" programme. Most of the companies participating in this programme operate in the ICT, healthcare technology and pharmaceutical development sectors. www.investinkuopio.fi

Trends, opportunities and specific features of the Finnish market

- Electronic patient records are revolutionizing the way that information is accessed, making efficient, secure and integrated records available to the right people at the right time. Vital information about an individual's health and care history is available to health professionals for diagnosis and in Accident & Emergency (A&E) departments.
- Both remote working and security are interesting and expanding ICT sectors that have close links to healthcare.
- In addition to the ICT used in hospitals, a number of Finnish companies are producing sports, fitness and exercise devices for active people who monitor their own fitness. The integration of ICT into sports equipment is allowing users to evaluate their physical condition, helping to monitor improvements and avoid negative effects associated with training.

Interesting opportunities exist in:

- document and data management solutions
- decision support systems
- departmental systems for secondary care
- primary and community care systems
- integrated care record applications
- system integrators
- security solutions
- smart devices
- wireless networking tools and systems
- hardware for healthcare

Companies operating in Finland's Healthcare and Well-being sector

International companies categorized as ICT companies in healthcare:

- **Spacelabs Medical**
 - A US company established in Finland in 2003 which operates in the integrated-healthcare information systems sector (ECG software for specific models of ECG products). www.spavelabs.com
- **Attendo Systems Oy**
 - Part of the UK-owned Tunstall group which currently operates in 13 countries. Attendo is the oldest provider of security phones designed for independent living and nurse-call systems. According to James Buckley, CEO of the Tunstall Group, "The compelling economics of telecare solutions are reflected in the growth in sales across Europe, and we are now in an ideal position to move to the next phase of growth as the telecare market leader." www.attendosystems.se
- **Picosystems**
 - Originally a Finnish company which specialized in designing ICT applications for schoolchildren with special needs, now owned by a Danish company. www.picosystems.com

Finnish companies:

- **ProWellness** (Oulu, London, Stockholm)
 - The world's leading developer of patient welfare-promoting information systems. ProWellness offers healthcare organizations regional information systems for the management of chronic diseases and for monitoring the patient's own self-care. Prowellness also offers solutions for preventive care and improved quality of life to companies, occupational healthcare providers and private individuals. <http://www.prowellness.com/indexEN.html>
- **Medixine Ltd.** (Espoo, London, USA)
 - specializes in multi- information and communication software for healthcare and wellness. Solutions are Internet-based and support both traditional and mobile terminals. Medixine supports the management of any and all chronic diseases and provides solutions for other monitoring and communication needs. Customers are healthcare providers, insurance companies and pharmaceutical companies. <http://www.medixine.com/>

- **AinoActive** (USA, Europe)
 - is an established world leader in the design, development and marketing of integrated product solutions for monitoring and analyzing human performance in free living, fitness and clinical environments. The core of the company's research and development work is to provide extremely accurate and efficient solutions that track, communicate and analyze daily activities. The monitoring solutions are designed to create a motivational and analytical environment. <http://www.ainoactive.com/eng/>
- **Mawell** (Oulu and other locations in Finland))
 - is one of Finland's most innovative providers of telecommunication, information, software and content services in the healthcare and wellness sector. Operations are based on a close-knit network of cooperation and solutions incorporate well-assimilated and tested technology. The company's healthcare client service center offers a nation-wide service by phone and the Internet to about 1.5 million Finns. <http://www.mawell.com/en/>

Finland-based global players such as Tietoenator and Nokia market both healthcare and well-being applications.

Invest in Finland

Invest in Finland offers consulting services and relevant information to international companies interested in establishing or expanding a presence in Finland. We provide assistance with questions relating to opening a sales office, mapping potential merger and acquisition targets, establishing research and development facilities and/or a manufacturing unit, or expanding existing operations.

For further information and advice, please contact Atso Vainio, telephone +358 10773 0306, e-mail atso.vainio@investinfinland.fi.



“Entities located in Finland are being run in a surprisingly cost-effective manner. For example, salaries for programmers and managers working here are significantly lower than in corresponding EU economies.” Atso Vainio, Invest in Finland.



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