

Kainuu Information Society Strategy 2007-2012

Joint authority of Kainuu Region
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FOREWORD

The new EU programme period, the structures renewed along with Kainuu self-government experiment, the new national Information Society Strategy, Kainuu Broadband Strategy (approved 1 December 2004) and the new Regional Plan and Programme. Here are some arguments for why it was time to examine the separate regional Information Society Strategy and update the previous version, completed already in 1999.

As part of Kainuu Regional Programme 2006-2010, the demand and objectives for utilizing information and communication technology in Kainuu are briefly described in chapter "Utilization of the possibilities of information society". Kainuu Information Society Strategy 2007-2012 expands upon this description of the possibilities and objectives of the use of information technology.

The strategy has been prepared as an open process in such a way that all regional actors interested in the matter have been welcome to participate in the expert team's meetings. The team adjourned a total of 7 times in the year 2006 and as a result, a more extensive and detailed document (27 pages) than the strategy itself was produced, including a number of procedure entities, as well. By revising and summarising this document, the final Kainuu Information Society Strategy 2007-2012 has been completed.

The strategy draft has been widely circulated for comments and, based on the received feedback, the strategy has been further revised.

Kainuu Information Society Strategy 2007-2012 describes the objectives and goals until 2012 via target groups. These target groups include citizens, companies, rural areas, public administration, education and research. The intersecting principles and starting points are equality, attainability and user-friendliness. The implementation responsibilities of the strategy have been divided within Kainuu Region and between other actors.

Kainuu Information Society Strategy 2007-2012 has been approved by the Regional Council 19 March 2007.

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Kainuu Information Society Strategy 2007-2012

Equal, user-oriented and vital information society

1. Background

Since the previous regional Information Society Strategy - Kainuu Information Society Strategy 1999-2002 – was published, many great changes have taken place in Kainuu Region. Services produced by municipalities have been reorganized in the regional self-government experiment. This strategy deepens and expands upon the information society policy definitions of Kainuu Regional Programme 2006-2010 and Kainuu Regional Plan 2025. The new national Information Society Strategy was published in the autumn of 2006.

As a sparsely populated region, Kainuu faces great challenges regarding arranging services, improving the operational preconditions of companies and utilization of know-how. Utilization of the possibilities of information technology is the central basis for product and service innovations and a factor in competitiveness. Creativity and innovation are prerequisites for development. ICT know-how has grown stronger in Kainuu as the education in the field has expanded in Kajaani School of Applied Sciences and Kajaani University Consortium. The development of the digital cultural industry has started to grow significantly along numerous development projects.

Kainuu Region's (self-government experiment) preparation and launching stage was very rapid and due to the tight schedule, the preparation has focused on organizing the basic operations. In its second year of operation (2006), Joint authority of Kainuu Region has more actively sought for new solutions and methods of activity, however resources are mainly tied to stabilizing the basic structures and methods. Thus the utilization of the possibilities of information society will be emphasized more in future in order to develop service production.

The utilization of the possibilities of information society is a resource and a factor of competition to the whole of Kainuu. A small group of companies and organizations are pioneering in the development and research in the field, but there is a possibility for even better utilization in all business fields, public sector and citizen activity.

Extending fast data communication networks to be attained by all inhabitants of Kainuu during 2006 enhances the development of citizen democracy and transaction services, but the design and implementation of the necessary interactive electronic services is only in its early stages. Good data communication networks enable the location of new forms of business in rural areas as well as the regional networking of citizen activity.

2. Strategy basis and starting points

Kainuu Information Society Strategy 2007-2012 is based on the notion of a good everyday life of the citizens, an information society of the everyday life. The strategy does not start from transferring definitions of policies, dictated by some higher authority, to the everyday life but from the citizen point of view, aiming to achieve a good, smoothly running and functional society. In order to achieve this, tools provided by the information society are needed, an issue which this strategy aims to describe.

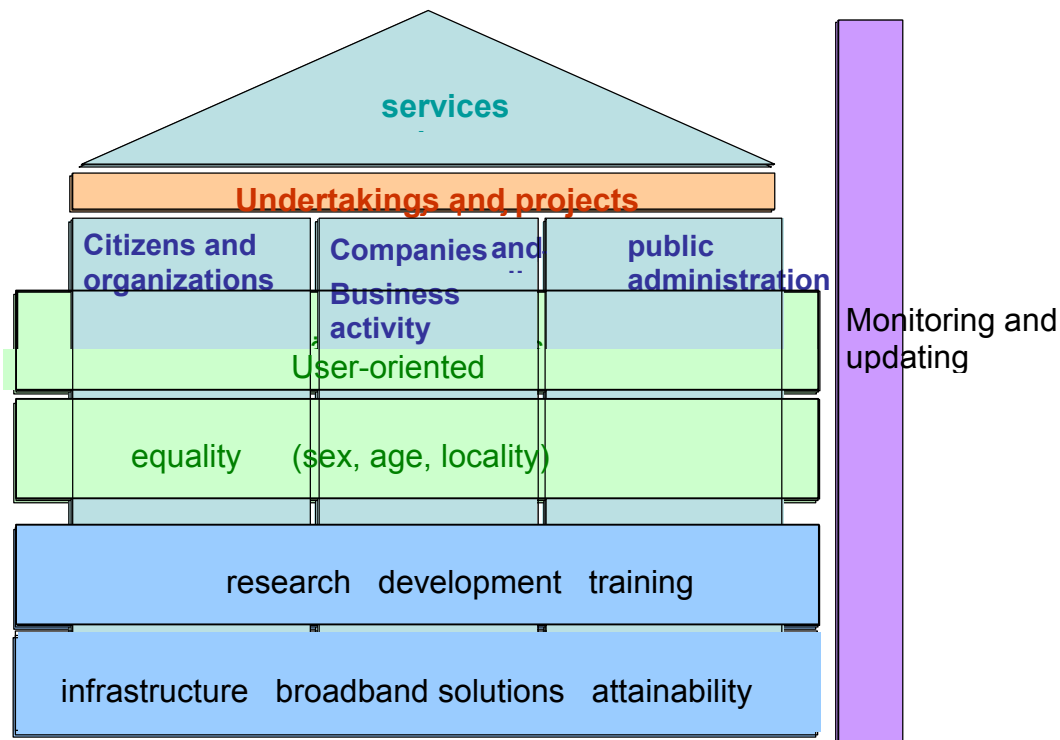


Image 1. Kainuu Information Society Strategy framework

3. Strategy objectives

3.1 Vision

Networked Kainuu

Kainuu is a pioneer in network-oriented activity, widely recognizing and accepting the possibilities offered by information society to overcome the obstacles caused by sparse population and long distances. Service production is also quickly transferred for utilization via information networks whenever possible. Access to these information networks is secured all around Kainuu Region and different technologies are utilized in a flexible and inter-complementing manner. In Kainuu, the possibilities of information and communication technology are actively applied to all population groups, as well as administration and corporate and association activity.

3.2 Objectives

Information and communication technology is a tool for utilizing more cost-efficient services and new service concepts. The equipment and technologies have only an indirect value in enabling a

better and more efficient service production. The objectives of the different sectors of the Information Society Strategy must also be examined against this starting point.

The objectives of the strategy are the following:

- special procedures focused on different sectors (public, private, citizens, organizations/associations), the aims of which are to strengthen the prerequisites for the growth of skills, training and entrepreneurship
- the possibilities of the use of information network services all around Kainuu Region (services utilizing broadband)
- integration of broadband connections and broadband technologies and development of service concepts in order to secure sufficient data transfer capacity meeting the rapidly increasing needs
- well-defined responsibilities of the actors in Kainuu Region in the development work of the information society and required agreements on the distribution of work
- more efficient utilization of information and communication technology in companies (particularly small, medium-sized and micro-companies) and supportive activity aiming at it
- high-quality and easily attainable social welfare and health care services, as well as locally and nationally appreciated pioneering also as a user of information and communication technology
- making the guidance and support services of information and communication technology available to all citizen groups in order to prevent exclusion
- development of new structures based on information and communication technology methods, for example distance/multi-service points
- arranging evaluation and monitoring of the development of information society
- Kainuu is a spearhead in information society development.

3.3 Goals

- Compatibility and seamless nature of data communication technologies, resulting in electronic services available all around Kainuu Region (~ ubiquitous information society).
- Organization and further development of information administration in the public sector (especially municipalities and Kainuu Region).
- Lowering the obstacles to using information and communication technologies in companies (especially small and micro-companies).
- Development of citizens' information society services as well as guidance and support.
- Making social welfare and health care service processes electronic and finding solutions for identification and data security.
- Measurement and monitoring of information society development.

3.4 Goal state 2012

Kainuu has renewed the information systems in the Joint authority of Kainuu Region and municipalities. A joint data administration is responsible for basic services regarding data communications and functionality of the basic systems. The centralized method of data administration services is also utilized by part of the state administration's offices and departments. Broadband-based data communication services are available to all inhabitants of Kainuu regardless of locality. Standards and solutions for mobile needs can be utilized all around Kainuu Region as public and private sector services and as services offered to citizens and tourists. The growing demand for data communication bandwidth has been met.

The supply of electronic services is extensive in all industries. The need of physical movement and costs caused by long distances have successfully gone through significant reduction. Social welfare and health care and education system utilize information and communication technology as national and international spearheads. Services can be easily found and attained in the information network.

Implementation and utilization of information and communication technology is part of everyday activities and working processes in all companies. The support for the use of information and communication technology by citizens has been arranged in such a way that the greatest obstacles and prejudices against network services have been removed. Kainuu is at the cutting edge of the networking of companies and citizens in Finland's municipalities.

The information society development in Kainuu is monitored via predetermined indicators and information thereof is published regularly. The readiness for information society and its services is under regular theme-based evaluation (electronic administration, learning, business activity, health, etc.).

4. Target groups / actors and procedures

4.1. Citizens

Information society and procedures related to it must be examined on a wide scale from the viewpoint of groups of different ages and in different life situations. People of different ages can nowadays carry out the same things regardless of their phases of life, such as to study. Target groups can be sorted according to their progress of life. Their needs and expectations for the utilization of information and communication technology differ from one another. For example, the needs of children and the youth differ greatly from the expectations of the senior population. Respectively, the needs and expectations of those residing outside population centres with weaker service equipment differ clearly from the needs of those residing in population centres. Special attention must also be paid to women's and girls' utilization of information and communication technology. On the other hand, jointly organized activities are also needed for supporting the communality of the region.

Citizens' views on information society and goals for its development are mostly focused on strengthening the transmission of information i.e. ensuring the essential information related to the everyday life and making information exchange easier. More and more requirements are placed especially on information transmission related to regional and municipal decision-making.

The means of information society should be used for promoting equality in obtaining both information and various services. Citizens wish to participate in the preparation work of matters concerning them and have their views and experiences considered. By means provided by information society, functional interaction is ensured, participation in discussions is made easier and giving quick feedback is enabled.

In addition to information transmission, actors in the public sector financially produce high-quality information contents and services, e.g. learning material. Guidance and support activities required in broadband services and information technology in general are continued and expanded in order to prevent exclusion.

Procedures: All citizens are secured equal possibilities to the utilization of information and communication technology regardless of age, sex, place of work and residence

4.2 Companies and business activity

In simple terms, information society stands for a community of creativity based on interaction. In information society and business activity, it is not the new technology that is the most essential, but the new method of activity. New technology enables new business activity methods and provides companies with new earnings possibilities in different roles of the value chain. The utilization of new technology in one's own business activity is necessary e.g. in the renewal of operational processes of companies, product development activity and marketing. Information and communication technology intersects all lines of business.

In European societies, innovativeness is related with two dimensions interconnecting in very different ways in different countries. On one hand, there is the ability to create new information and skills with the help of research and development work, on the other hand there is the ability to create new types of companies and business activity. Kainuu's strengths include the world's cutting edge know-how in automation systems of the process industry, in-vehicle computers and geographical information systems. Staying on top requires securing skilled human resources most of all in applications of embedded systems. This challenge should be faced by providing education programmes in Kajaani School of Applied Sciences and Oulu University.

Small and medium-sized and micro-companies in particular have utilized the possibilities provided by information society very little. Special measures must be taken to develop electronic business activity and remove obstacles to its utilization. This means the implementation of basic tools and development of electronic trade centre solutions. Modelling and development of inter-company processes by means of information and communication technology present a great challenge and an opportunity. For corporate competitiveness, it is a question of a vital renewal process that must be developed from the viewpoint of the vitality of Kainuu Region alone.

Procedures: The readiness of small and medium-sized companies and their human resources for implementing and utilizing new technology in business activity is supported and strengthened

4.3 Rural areas

Kainuu's rural areas are transferred to information society simultaneously with the rest of the surrounding society. The promotion of the utilization of information networks provides rural areas with a better possibility than currently to participate in different use and development activities of the information society applications as well as creating jobs. Along with the development of broadband connections, the network content production demand will also increase. The development of information networks and network services in rural areas establishes a possibility for equal development in the whole of Kainuu Region.

In rural areas and sparsely populated areas, electronic service supply is secured e.g. via multi-service centres. The attainability and service models in sparsely populated areas are still continuously developed.

Procedures: The attainability of information networks in the whole of Kainuu Region is ensured and the development of content production in the networks is strengthened and the change in the operational culture is supported towards the adoption of the tools of the information society

4.4 Public administration

The public service production (social welfare and health care services, education services etc.) utilizes the new methods in the second wave of the technological development. They are such great service processes in utilization volume that for cost efficiency and the economy of the municipal/regional sector, organizing their practices and utilizing their new technological solutions are in focus.

Electronic transactions play a significant role in the changes of the service structure of Joint authority of Kainuu Region and its municipalities. Although some individual advanced service methods have been tested and implemented in different administrative sectors, a lot of development work must still take place in the basic tasks, as well. E.g. drawing and utilization of electronic forms requires a lot of effort, choices and prioritisation. Furthermore, connecting the form processing with personal identification is an individual entity. Solutions and technologies for identification are not unambiguous issues concerning every service at once, but issues that must be decided service-specifically in part.

Social welfare and health care presents a focus, in the service chains organization of which digitisation plays a significant role. Kainuu self-government experiment makes for a good testing and research ground, as social welfare and health care service processes are developed by means of information and communication technology. Compatibility of patient information systems, digital radiographic records and equipment and the wide-scale utilization of video conference equipment are good examples of the development work carried out in Kainuu Region. As for transactions, Kainuu pilots in the national implementation of electronic social assistance.

Reforms more visible to customers (population/patients), such as the implementation of electronic forms, are undertaken as the administrative processes have been looked through and the readiness for the implementation of new service methods exists. The viewpoint in welfare, social and health care services must originate, as in other administrative sectors, from operation processes and their renewal, it should not be development work on the terms of technology.

State administration adheres to the national instructions given by ministries. Thus, transaction services mean, to a great extent, spreading the experiences in national pilot projects. Kainuu as a testing ground provides vast opportunities for piloting.

ValtIT unit (Government IT management) is about to start its operation as a joint state administrative development organisation of IT services similarly as KuntaIT (Municipal IT) has been launched in the municipal sector. Information system cooperation will be developed within state administration but the challenges for solid inter-ministry cooperation are as great as for inter-municipal cooperation in the municipal sector, at the very least.

Electronic transaction is developed both by municipalities and Kainuu Region and by cooperation forums. Activities and projects aiming at the promotion of electronic transactions of the state will be implemented in Kainuu in accordance with the area's resources and priorities. Changing the attitudes of human resources and supporting the implementation of electronic services as well as adopting a new kind of operational culture (unlearning the old) still present the greatest challenges standing in the way of development.

Video-transferred remote doctor consultation in Kainuu has gained good results and experiences. Experiences have been gained in different sectors of social welfare and health care, and currently a remote doctor's reception for diabetes patients operates in most municipalities in Kainuu. This kind of video-transferred service method could be tried out in the so called multi-service centres in more remote areas far away from municipal centres.

The significance of data privacy and security is emphasized in social welfare and health care solutions. Experiences in sufficiently strong data security procedures are sought, and these problems prevent and slow down the implementation of new service forms to some extent.

An extensive process of information system integration and acquisition and implementation of new systems was carried out in the launching stage of Kainuu self-government experiment. This work will be continued and the information systems and processes of the basic municipalities will be included as part of the municipal sector's joint systems even more widely. There are numerous sectors not yet under development due to lack of resources, and internal prioritisation. An entity related to electronic identification and authentication is one of the essential solutions to be connected as part of the internal processes of the public administration. However, these basic solutions must be performed on a national level. Indeed, the development of services starts, in many cases, with defining the methods of identification both for the citizens and public sector employees.

Procedures: The internal and external processes of organisations are developed by feeding contents to networks and by renewing service processes and promoting electronic transaction

4.5 Teaching and training

The significance of teaching and skills, from early childhood education to research and guidance of the citizens' information and communication technological literacy, becomes greater and greater the deeper into the information society one enters. The essential part of the utilization of information technological possibilities lies in the adoption and altering of the whole electronic transaction and operational culture of services.

Kainuu Vocational College adult education services Edukai has piloted in a labour market training aiming at professional examinations as well as vocational additional training as virtual studies with good results.

The mutual development target of vocational upper secondary and adult education is further development of network services related to vocational skills demonstration of the practical training and professional skills, and continuing the development work of distance education. General upper secondary education will implement a national electronic application system in 2008.

As part of general upper secondary education in Kainuu, a new filial method has been launched, enabling smaller local education groups and units than before and utilizing e.g. the possibilities of distance education and new techniques. Education field shares a cooperation agreement regarding general upper secondary education with a learning network in Eastern Finland.

Within the Kainuu self-government experiment, financial savings have been sought by centralizing organizations of different fields. Actors have wanted to use the released resources into development of the core activity. In the fields of education and different skills, the information society and especially real-time virtual education open new opportunities for creating more equal education services. Information technology emphasizes communality, in which by encouraging participation and promoting common awareness the operational ability of a collective is improved. Thus, Kainuu Region makes an effort to develop new activity methods enabled by virtual communication.

The development challenge of adult education will be the organization of adult education information and student counselling services by utilizing virtual services. Kainuu Provincial College is an example of a joint course plate between several organizations, found in the information networks.

In college education, regional units cooperate e.g. with VTT Technical Research Centre of Finland and Measurepolis programme. University of Oulu, Kajaani Department of Information Processing Science (TOL) has launched several research projects supporting the transfer of technology to ICT companies in Kainuu. CreaTOL laboratory as an entity also widely provides services to the basic education of the university. In Kajaani University Consortium and Kajaani School of Applied Sciences, distance education units and electronic student application are widely used and under further development.

Procedures: Procedures of the education field in adopting the tools of information society are supported and development of the basic skills of information and communication technology are attended

4.6 Research and development

In research and development, the opportunities of information society are, to a great extent, related to networking within Kainuu Region and with the best actors in national and international research. Interaction channels and developing them into more flexible and everyday-like will increase the development potential in Kainuu.

The strengths and spearheads of Kainuu are based on measurement technology, sports technology, renewal of operational processes via information and communication technology and virtual music education. The application fields reside especially in the wood processing industry, electronics in several industries, regional administration and distance education utilizing virtual communication.

The CreaTOL concept of the University Consortium supports the 'Innovation Kainuu' vision in the Kainuu Regional Plan. Research is aimed according to the needs of the region's companies and public services. The research on software business and usability created in CreaTol project between 2005-2007 will be continued, as well as the operation in the existing research areas (CreaProc, CreaUse, CreaGame).

In information society, special attention is paid to the promotion of research and development activity. Kainuu Region places emphasis on building research and development environments seeking international cutting-edge level in order to support the main industries and services in Kainuu. Regional administration operating on information society basis consults specialist communities in the preparation and implementation of decisions promoting local administration.

Procedures: Research units in Kainuu provide research and development environments that support the development of Kainuu Region's central industries and services.

