

eTampere Programme 2001-2005

Summary

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-  eBusiness Research Center
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-  Research and Evaluation Laboratory
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Mayor Jarmo Rantanen, City of Tampere, Chairman of the eTampere Steering Committee

“eTampere confirmed that new developments will continue through programme-based activity”

Tampere embarked on eTampere with great expectations. We thought that with an extensive and ambitious information society programme we could forward the adjustment of residents and communities to information society development and also create new Tampere-style content for it. In addition, there was a desire to strengthen the region's competitiveness with the programme through the promotion of activity in information society related business areas and the germination of business ideas.

Overall, eTampere was a highly successful programme entity and the results achieved were excellent. International awareness of the city increased, and within the European Union, for example, we gained recognition as an information society city and an active developer. Through the eTampere programme, a large number of residents received education in skills required in the information society. Due to the programme, substantial extra investment was channelled into universities and other educational establishments. The development of service systems based on new information and communication technologies got off to a good start within the city's administration.

Programme-based development policy is characteristic of Tampere and stems from the fact that developer networks are formed naturally here. eTampere was an excellent example of network cooperation. It reinforced the view that an ambitious programme is a good model of operation when setting forth to create something new. Our next large-scale programme, Creative Tampere, is a continuation of such thinking.

eTampere information soci

eTampere was an innovative co-operation programme that combined the expertise and developmental input of the region's educational and research establishments, business life, administrative bodies, organizations, communities and citizens. The activities were coordinated by the eTampere Office.

- transforming Tampere into the world's most notable city-scale information society piloting environment
- developing Tampere's public administration online services into a comprehensive and advanced entity which is in wide-spread use
- enabling online access for all citizens and strengthening their competence as users of public online services
- using data networks to forward citizens' opportunities to influence decisions concerning them and participate in the development of their hometown
- to secure balanced and equal information society development.

aim

- The objective was to make Tampere a spearhead city of information society development by strengthening the knowledge base, creating new business and developing new services for citizens.

The aims included

- forwarding the growth of the ICT and communication clusters so that they multiply 2.5- and 1.8-fold respectively
- making Tampere an internationally recognized and esteemed centre of research and study related to information society and eEconomy

activity

The eTampere programme targeted a simultaneous development of the information society's three dimensions – technological, economic and social – through wide-reaching cooperation. Due to this approach and the diversity of the parties involved, the nature of eTampere and the structure of its activities were unique in Finland and beyond.

Director of the eTampere programme Jarmo Viteli • Jarmo Viteli is Director of the University of Tam

“We strengthened the prereq

The key message of eTampere was to direct resources into cooperation and the development of expertise, with the aim that everyone in the region would have the ability, desire and opportunity to use information society services. It was also hoped that the business world would utilize these services as extensively as possible and create new applications, companies and jobs.

The programme's aims were undeniably ambitious, but it is important to set high targets. They must also be viewed in proportion to the way the world looked at the time of the programme's preparation in 2000: growth curves in the IT sector were pointing northeast and a lot was expected from information society development, the third generation of mobile phones and digital television.

The turning point came on the very same day that eTampere was published: Nasdaq, the New York technology stock exchange, began a downturn that lasted around three and a half years. There was a shift from strong growth to a fight for survival. The predicted 1.5-folding of business in Tampere was left as a pipedream and barely half of the anticipated number of growth companies set to work their way onto the international market emerged. Even so, comparatively the region has done well.

Most significant effects yet to come

The strengthening of the citizen sector has been among eTampere's most significant achievements. The Infocity sub-programme in particular created permanent structures

ety programme 1.1.2001-31.12.2005

The programme's focal area was need-oriented services based on technological innovation, whose objective was to achieve an active, participating and influential citizenship, develop companies' business and deepen international cooperation.

The programme's activity was arranged through six sub-programmes:

- Infocity
- Technology Engine programmes
- eBusiness Research Center, eBRC
- Information Society Institute, ISI
- Research and Evaluation Laboratory, RELab
- eAccelerator

- a total of 420 projects, 62 of which international

- total project volume 131 million euros, exceeding the target

- more than 400 researchers and developers and over 300 companies participated in the projects

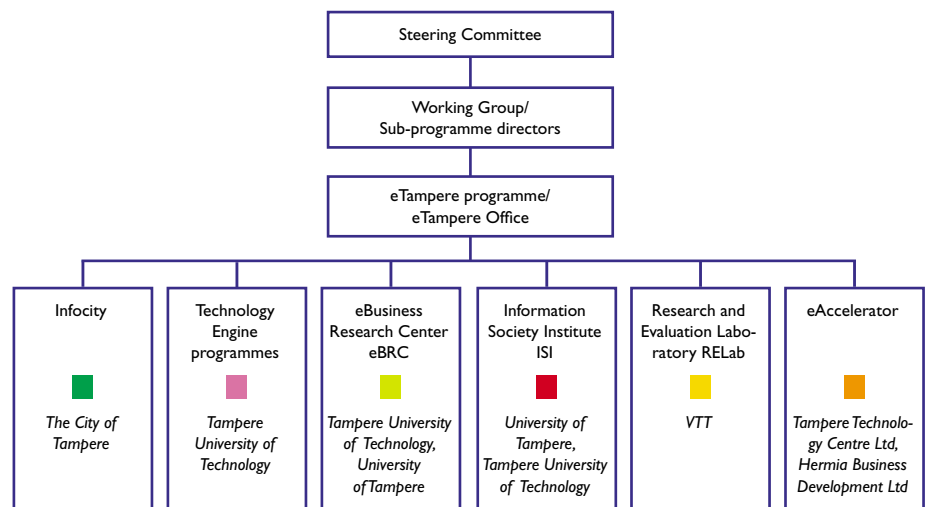
- 60% were research projects

- 80 national networks and seminars

- project funding: the City of Tampere, the University of Tampere and Tampere University of Technology 18%, other public domestic funding 28%, public international funding 13%, business life 39%, other 2%

results

- employment in the ICT sector increased, unlike in other growth centres in Finland
- the most followed information society programme both nationally and internationally
- tools were created for programme-based development
- the first stimulus for cooperation between the city, business life and universities



per Hypermedia Laboratory.

uisites for the creation of new expertise”

that affect people and the region's development. Support has been given to library activities and training for the elderly, a trainer cooperation network has been assembled and a service named eTupa has been established to convey help to people's homes in matters related to the use of information society services and the technology employed.

eTampere has also created and strengthened a good number of research networks which generate new expertise. The sub-programme players currently participate in more than 50 local, national and international networks.

Cooperation between business life, the research world and the city has strengthened but still requires practice. Ways should be found to further strengthen local networking. The city should open more to develop-

ment work, and companies should be a little more open-minded and consider how cooperation would strengthen basic business even if immediate revenue wouldn't necessarily be achievable from single projects. Universities should understand their own role and determine their areas of focus. Tampere players also participate in international networks and large-scale EU projects. Thus I believe that the programme's most significant effects are yet to come.

The three central theme areas with strong growth and significance to the Tampere Central Region are the development of public services, the acceleration of business and change-enabling technologies. What are the related networks that we have and how should they be strengthened? Network players should clarify in their own minds what

they expect to gain from cooperation and to what extent they themselves are ready to invest in it. With eTampere we have learnt that the more you put into networks, the more you gain from them.

eTampere set off boldly to build the future. It has by no means been a key movement for change. But by proliferating networks, social capital and awareness we have provided Tampere with resources to cope with and adjust to future change.

(See also:

Infocity

The Infocity sub-programme focused on the development of public electronic services, particularly those of the City of Tampere. The sub-programme's direction was the responsibility of the City of Tampere Information Office.

aim

- To forward a comprehensive offering of the city's services online and secure an opportunity for all Tampere citizens to use them.

activity

Infocity's areas of activity were

- the development of the city's electronic services
- training for the city's residents
- the promotion of internet access

The responsibility for the implementation, maintenance and development of online services was carried by each operational unit, and the responsibility for the technical functionality by the ICT Services of Tampere and the City of Tampere Information Management. Online services as a whole were coordinated by the Information Office.

In accordance with the Infocity sub-programme's plan, the city's resources were reinforced by measures such as enhancing the service ability of the ICT Services of Tampere, increasing the

number of internet content producers, improving the internet skills of personnel and acquiring software necessary for online services.

Infocity was otherwise implemented through projects. In terms of euros, the largest projects involved services to strengthen citizens' information society skills and extend their prevalence, and to improve citizens' opportunities and prerequisites for participating in the information society. The projects included training for Tampere residents, the Netti-Nysse internet bus and public terminals for the use of citizens. An eTampere trainer network was created during the programme, which strengthened the training of citizens and enabled cooperation between trainers.

Other projects were related to issues such as the development of electronic identification, document management and online democracy, electronic appointment scheduling and advice related to social and health care services, the activities of the city residents' Mansetori website, and the organization of the MindTrek media week.

Sub-programme director Jari Seppälä • During the eTampere programme period, Jari Seppälä was Head of Information for the City of Tampere.

“The foundation is laid”

There have been three dimensions to the thinking behind Infocity: to develop the city's electronic services, to arrange an opportunity for everyone to use them, and to train citizens in their use.

Training has been significantly increased in volume and many residents have had an opportunity to learn basic information technology skills. The national target set to ensure access to electronic services is one free-of-charge public online terminal per thousand residents. With more than 200 terminals in Tampere the target has been reached. When also taking into account school equipment and the rise in the number of home connections, for example, all Tampere

residents in principal have an opportunity to use the net and, subsequently, the city's electronic services provided that they have the skill and desire to do so.

The development of the city's electronic services is the most difficult of Infocity's dimensions due to the wide spectrum the services cover, from street maintenance and nursing to culture and leisure. At the beginning of the programme, the net was mainly perceived as a means for communication and electronic services considered to imply information distribution and web forms, which at the time were also what was offered. As procedures developed, it came to light that it should be possible to handle

various matters from start to finish via the net. For example, applying for a building plot, city planning and appointment scheduling should work as a form of self-service so that it would be possible to log on to the basic systems directly through the net. This requires a great deal of work together with investment in basic systems, however, and such services couldn't be developed particularly far during the programme.

The most prominent practical achievement is the Netti-Nysse internet bus which offers computer training. The idea wasn't actually novel, but cooperation through eTampere made a project a practical reality. Conversely, the eTampere smart card

Infocity's key cooperation partners and networks included various departments at the University of Tampere, the trainer network and other eTampere sub-programmes. On the national level, work to promote information society development has been conducted with the Government Information Society Programme, the Association of Finnish Local and Re-

gional Authorities, other large cities in Finland and, on the international level, particularly with twin cities and other city networks and in projects by the Baltic Institute of Finland, United Nations and European Union. The City of Tampere is represented in several national bodies that are developing electronic public services.

results

- from informative to interactive and cost-efficient electronic services
- the city's eService strategy: a progress model and organization for development have been established
- all of the city's operational units are presented on the internet
- the city's units have approximately 320 services online
- the VALMA preparation forum has become a channel of influence for citizens
- the eTampere card, a pilot with 5,500 users and the general development of a travel card
- Teuvo neuvo, a citizens' online advice service
- eTupa, a company offering technical support to households
- two Netti-Nysse internet buses, 20,000 visitors aboard, 2,000 people trained
- the OPIT eLearning entity, learning environments and online courses for comprehensive schools
- 80% of Tampere residents have an internet connection (12/2001 72%)
- 205 free-of-charge public online terminals

hasn't met its objectives, at least yet, due to a number of technical hindrances and other problems. So far the card has been developed solely as a means for using the city's own services and Tampere City Transport is responsible for the card's further development.

Research for the benefit of all

Infocity's projects were somewhat unconnected and a systematic development of electronic services has just now been set in motion. Nonetheless, eTampere's product may be the foundation created through the development of data systems, operational culture and ways of thinking on which the city's permanent organiza-

tion can build real electronic services.

Among eTampere's cornerstones was cooperation between the research and business worlds and the city. This was something new and the fruits have yet to fully ripen. Cooperation should also continue after the eTampere programme, with research focused on practical aspects of life so that the government and the business world can exploit the research results to answer people's needs. It is of course difficult to change procedures related to legislation or business, but it is possible to do something about differences concerning operational cultures or ways of thinking, provided the parties feel they are promoting the common good.

(See also: <http://www.etampere.fi/English>; Research, Analyses, Analyses by sub-programme directors.)

- **Approximately 70 projects**
- **Total project volume 1.6 million euros, exceeding the target**
- **The projects varied in size from a thousand to 400,000 euros, 40% of projects had a volume of less than 10,000 euros**
- **The most significant funders were the City of Tampere (84% percent of project funding), ministries, the Finnish National Fund for Research and Development (Sitra) and other public organizations, and the EU's structural funds.**



continuity

- The continuity of Infocity's responsibilities and projects within the city's permanent organization has been secured. Electronic services will be the responsibility of the Financials and City Strategy Group. Online participation will be developed by Administration and Personnel, Local Democracy. Information society work will be the responsibility of the Information Management. The Information Office will be responsible for online publishing.
- Of separate projects, Neighbourhood TV, Cibernarium, e St Petersburg and eCitizen will continue after the completion of the eTampere programme
- Tampere has committed itself to the continuation of citizen-oriented information society development by signing the European Charter of Rights of Citizens in the Knowledge Society

Technology Engine

The Technology Engine programmes were collectively a research programme focusing on technology development and company-oriented R&D. It was coordinated by Tampere University of Technology (TUT).

aim

The aim was to produce technology which promotes interaction and acts as a human interface to the information society.

activity

The sub-programme was implemented mainly through research projects. It comprised six engine programmes:

- **Neoreality.** The object of research was the culture of novel work practices, business and social life where electronic reality acts alongside physical reality, providing more possibilities and forming new threats.
- **User interfaces.** The task was to develop ways to use everyday appliances that are natural to a maximally wide group of users.
- **Adaptive software components.** The object of research was software components and methods, particularly those applicable to new media, which enable flexible communication between service providers' independent software components.

- **Perception of information.** The object of research was to understand how humans perceive their surroundings and adopt information.
- **Broadband data communications.** The objects of research were the components of wired and wireless data communication systems, hardware integration, the definition and management of systems design, signal processing methods, and protocol solutions for speeding up data communications.

Fixed-term programmes:

- **Consumer studies engine programme** (2002)
- **W3C Office,** preparation and launch (2002-2003)
- **The Special Groups and Information Technology** preparation project (2003-2004)

The activity of the Technology Engine programmes was based on multi-level network cooperation with internationalization strongly present.

The Management Group comprised representatives of companies, universities and public organizations.

Sub-programme director Hannu Eskola • Hannu Eskola is Director of the Digital Media Institute at Tampere University of Technology.

“The real legacy is a culture of pulling

The emphasis of the Technology Engine programmes is technological research, and the underlying idea is that research creates new expertise and new business. Some of the research projects directly create business seeds which companies start to refine through product development projects. However, the majority of projects will be manifest as new expertise and new experts to be tapped by local business life. In these cases, profitable business may emerge a long time after the research was first engaged.

The engine programmes have helped many companies get off the ground, such as FogScreen Inc., the Tampere internet exchange TREX and Kärkijoukkue Oy. We have also participated in the creation of the national games network Neogames and accomplished the establishment of a regional office of the global developer of www technologies, the W3C organization, in Tampere.

In research projects, companies have often acted as small funders alongside Tekes.

The size of the companies has had no bearing on their interest. All in all, the lesson of the engine programmes has been that it isn't worth inventing good research subjects first and then convincing companies to take part. Good research objects and needs must first be defined jointly with companies, then the degree of commitment is sufficient to carry the entire project to conclusion. Research which is closest to companies – product development type research – has been problematic from the engine programmes'

Technology Engine programmes

results

- The Finnish W3C Office in Tampere. W3C is a global developer of web technologies, standards and rules. The office brings expertise, contacts, expert tasks and projects to Tampere. The office is hosted by the Tampere University of Technology Hypermedia Laboratory.
- The establishment of Laser Competence Centre Finland. LCC Finland focuses on basic research, development and the assessment of business prospects in the field. The centre's hosts are the TUT Optoelectronics Research Centre ORC and Technology Centre Hermia.
- The emergence of the Neogames network. The national cluster in the field of games develops and commercializes the field of interactive game content.
- The Special Groups and Information Technology series of research projects, e.g. the Tre@validia and Valid in the Information Society projects directed by the Finnish Association of People with Mobility Disabilities.
- The emergence of the Centre for Open Source Software. COSS promotes the utilization of open source in various fields and among various user groups in order to create new service business.
- Strong EU projects coordinated by the University of Tampere, e.g. COGAIN (Communication by Gaze Interaction) which creates new communication opportunities for people with motoric disorders. COGAIN is the first EU network of excellence coordinated by Finns within the EU's Information Society Technologies programme. The host is the TAUCHI unit at the University of Tampere.

- **The Technology Engine programmes were engaged in close cooperation with the Tampere Region centres of expertise for ICT and health technology as well as the BioneXt programme and other eTampere sub-programmes.**
- **approximately a hundred projects in total, 70% less than 70,000 euros and 11 more than 500,000 euros in volume**
- **total project volume 22.3 million euros, exceeding the target**
- **largest funders: Tekes and the EU's framework programmes. Other funders: companies, the Academy of Finland, the Ministry of Education, universities and the City of Tampere**
- **approximately 250 experts from companies, research institutes, other public organizations and associations took part in project preparations**



continuity

- The Technology Engine programmes will live on in, e.g., the activities of the W3C Office, LCC Finland, COSS and the Neogames network, the new companies that emerged, dozens of networks and approximately a hundred research projects.

together”

perspective because it is difficult to report on project funding and launches due to reasons of confidentiality.

Mechanisms should be created to bring players together

We have learned during the implementation of the programme that the realization of new ideas requires the creation of networks and a proper priming of cooperation between researchers, companies and other

players. We have supported the emergence of networks by paying the coordinator's salary in the early stages and by offering assistance in marketing. One of the largest of the 15 emerged network organizations is the international COGAIN (Communication by Gaze Interaction) network which develops gaze-controlled user interfaces. Research programmes have received funding decisions for periods of several years and some of them may continue even a decade after eTampere. The networks organized may

even continue much longer. However, the revival of the Tampere-style culture of pulling together in technology development could well be the engine programmes' most significant achievement.

(See also: <http://www.etampere.fi/> English; Research, Analyses, Analyses by sub-programme directors.)

eBusiness Research Cen

The eBusiness Research Center (eBRC) was a joint research centre and development programme established for a fixed period by Tampere University of Technology (TUT) and the University of Tampere (UTA) for the electrification of business.

aim

- To produce new knowledge on the phenomena of electronic business for utilization in education and practical business activity.
- To create a leading player in its own field of research in Europe by 2006.

activity

eBRC assembled the needs and aims of researchers, companies and other interest groups into added value research and development projects, found suitable cooperation partners, assisted in the application of funding and provided start-up funding for promising projects.

The focal areas of activity were:

- business development
 - knowledge management
 - strategy-making in the information society.
- Late in the programme period, part of

the eBRC project organization's activity was transferred to internal activity in either the University of Tampere or Tampere University of Technology.

Research Boards provided assistance in the direction of research. At the start there were three boards linked to the focal areas and one joint board towards the end.

eBRC's activity was steered and monitored by the Board, which comprised representatives of TUT and UTA as appointed by the universities' rectors.

The activities were characterized by multi-faceted regional, national and international network cooperation. Key local partners included the Tampere Chamber of Commerce & Industry, whose online business working group acted as eBRC's Business Board, the Baltic Institute of Finland, Professia Ltd, Technology Centre Hermia Ltd and numerous individual partner companies.

Sub-programme director Marko Seppä • Marko Seppä is a project manager at Tampere University of Technology.

“The matchmaker model between business, university

The development of business models in the digital economy has been a key theme throughout the programme. In practice, however, activity has been founded on the quite sizeable quantitative aim set by those funding it, a project portfolio of 16.8 million euros. Once it had been assured that the quantitative aim would be reached, it was possible to concentrate fully on qualitative aims; to raise the level of knowledge of electronic business in the scientific and practical worlds. The quantitative aim was reached and good results were also attained in terms of quality even though, at best, only the foundation was laid for a leading European research unit.

All achievements have been based on a successful distribution of responsibilities

and the matchmaker model combining the interests of business, university and government (BUG) launched by us – i.e. border-crossing partnership.

We developed a novel form of activity to promote networking between business researchers as well as networking with players beyond the science world. The development of eBRC set off as a joint supplementary business name for the University of Tampere and Tampere University of Technology. It was a display window opened to companies and funders of research, bringing together researchers in Tampere interested in business phenomena in the information society.

Slowly but surely, stakeholders began to warm towards the operating model:

some professors and particularly younger researchers gratefully came along and some two dozen company partners have strongly committed themselves to the activity. In the public sector, Tekes on the one hand and the European Commission on the other have been important interest groups.

Our most visible achievement is eBRF, which is possibly Finland's most significant conference in business research. In addition to Finnish and overseas researchers it gathers representatives from companies and the public sector to an open-doors research event. Regrettably, still only a relatively small proportion of professors and researchers in Tampere have actively utilized the conference delivered to their doorstep and enticed visits from their international research acquaintances.

results

- The establishment of the international e-Business Research Forum (eBRF) research conference and its annual arrangement starting from 2001. During the programme period, eBRF developed into the most significant research conference in the field of business in Finland.
- The establishment of the Venture-to-Capital (V2C) research group to study growth company activity in the information society, the annual arrangement from 2001 onwards of the V2C Forum which brings together key interest groups in growth company activity, the catalyzation of the establishment of the Finnish Co-Entrepreneurs Association in 2005 among others.
- An assessment of the current stage of electronic business, its future challenges and the need for a national strategy, by commission of the Ministry of Trade and Industry
- Research programme on Knowledge Intensive Business Services (KIBS) led by Professor Marjatta Maula
- Research programme on Business Intelligence, led by Professor Mika Hannula
- The creation of the eSME operating model and consultant network in cooperation with Professia Ltd. eSME helps SMEs get started with the electrification of business.
- The e St Petersburg partnership programme in cooperation with the Baltic Institute of Finland for the development of public services in the form of public-private-partnership between Tampere and St Petersburg
- The Digital Business Ecosystems (DBE) integrated project within the EU's Sixth Framework Programme for the development of companies' electronic business environments, in cooperation with Technology Centre Hermia Ltd
- 32 research reports in the eBRC Research Reports series and five edited eBRF congress publications with a total of 232 research papers under the title Frontiers of e-Business Research (FeBR)
- Networking with international expert groups in the field, and activity, for example, as an EU-invited expert in research project evaluation tasks and significant conferences
- Knowledge produced by the research centre was used in the teaching and research of the founder universities and in the business activity of companies.

- **73 projects in total, with volumes from a few thousand to a couple of million euros**
- **total project volume 17.7 million euros, exceeding the target**
- **biggest funders: Tekes and other national public organizations, the European Union, the City of Tampere, TUT and UTA, individual companies**
- **67 partner companies in total**



continuity

- The individual projects and programme entities in eBRC's project portfolio will continue independently under the wings of their responsible stakeholders.
- The eBRF conference will continue to be arranged. In 2006, eBRF will be held as a joint conference with the International Conference of Electronic Business (ICEB) in Tampere. ICEB has previously been arranged in Hong Kong, Singapore, Taipei and Beijing. The organizer responsible for the ICEB + eBRF 2006 conference is TUT's Institute of Business Information Management.
- Preparations are also underway to continue the best practices, activities and related cooperation between TUT and UTA in a consolidated manner. Further cooperation is being prepared at TUT's Institute of Business Information Management under the working title Emergent Business Research Coalition (EBRC).

and government paid off”

Greater understanding of new business phenomena

In the future, the legacy of the eBRC project will particularly support the activities of TUT's Institute of Business Information Management and UTA's School of Economics and Business Administration. As a matter of fact, both units emerged during the eBRC project and members of eBRC's Board were of key influence in their establishment. An independent future is also planned for eBRC. Preliminarily the emphasis would be, with increasing clarity, to understand new business phenomena, to model business activity and to understand the strategy and earnings logic of various players.

The eBRC project organization's

own research has been related to the development of growth company activities and the resourcing of new business and growth in the information society. Strengthening this tendency would build the new-era eBRC into an increasingly traditional research centre. I believe, however, that increasingly clear aims in terms of research combined with a border-breaking and networking model of operation would produce increasingly better results in the future.

(See also: <http://www.etampere.fi/English>; Research, Analyses, Analyses by sub-programme directors.)

Information Society

The Information Society Institute was a multidisciplinary research centre project established by the City of Tampere, the University of Tampere (UTA) and Tampere University of Technology (TUT) for a five year period to forward and support the development of the field of research. The Institute operated in connection with the University of Tampere Faculty of Information Sciences.

aim

- The promotion of an information society based on active citizenship by means of research and education.
- To conduct and forward research on information society within the scopes of the University of Tampere and Tampere University of Technology.
- To achieve a visible status as an authority on information society related issues in Finland and internationally.

activity

The institute operated as a multidisciplinary research centre in connection with the University of Tampere Faculty of Information Sciences. The majority of the research supported and initiated by the institute focused on core theme areas:

- social-scientific and economic research of new economy and information society
- changes in working life in the information society
- information technology and everyday life
- new media and audiovisual culture

- eLearning
- welfare services in the information society
- eGovernance
- information retrieval in networks
- data security
- user-oriented research of new information and communication technology
- research into the global information society, particularly that of developing countries
- the more long-term development prospects and alternative scenarios of information technology and information society

The institute played a central role in the organization and implementation of the national cooperation network, i.e. the tietoyhteiskunta.fi website.

The main responsibility for the research work was carried by research groups working in their own fields of specialty in institutes representing various disciplines. The researchers created contacts with Finnish and international information society researchers and key research groups and institutions. A significant proportion of the projects were im-

Director of the Information Society Institute Antti Kasvio and Chairman of the institute's Steering Group Sami Borg • Antti Kasvio is manager of

“Improved prerequisites for multidisciplinary

Borg: On the one hand there was a desire to raise local research onto a high international level through eTampere while, on the other, the expectations placed on the Information Society Institute concerned a multidisciplinary approach and support for education and active citizenship. The way aims were set was somewhat contradictory. Greater selectivity would have been appropriate to bring out top research but we wished to continue with our mission in its entirety. The institute's research projects have been diverse and individually wide-ranging in scope. The interaction between research and

education also worked well. As information society related issues have energetically spread to the university's degree programmes, students receive current and expedient training for tasks in the information society.

I believe that due to the Information Society Institute, the prerequisites for multidisciplinary research have significantly improved. More than ten disciplines have been very well represented in the institute's activity. From the future perspective it is particularly relevant that the networking related to the projects has dissolved boundaries be-

tween disciplines.

Kasvio: A fine aspect has been the accumulated networking capital. All in all, eTampere has brought together representatives from different kinds of disciplines and units as well as practical players in a way that isn't commonplace in the university world. A model example of new networking is the Tampere eLearning Cluster established by the universities in Tampere together with various other players, which has from the start been a regular customer of ours. All establishments of research and education and education authorities in the region joined

ISI Institute

plemented in cooperation with local information society players.

results

- significant progress, increased diversity and an essential rise in the level of expertise of information society research
- strong research areas included the position of children in the information society, information society barometers, the use and cultural significance of everyday information technology applications, intelligent living, traffic telematics and the user-oriented research of information and communication technology
- the establishment of the Tampere Centre for Cultural Studies at the University of Tampere
- eLearning cluster for the promotion of cooperation
- establishment of a data security consortium

- 78 projects with volumes ranging from a few thousand to 1.6 million euros, some of the projects international
- total research project volume 17.4 million euros, exceeding the target
- dozens of researchers involved in projects
- 51 companies participating in projects at the end of 2005
- most significant project funders: the Academy of Finland, the Finnish National Fund for Research and Development Sitra, ministries and other public organizations and the City of Tampere



continuity

- The activity of the Information Society Institute will not continue in the same form because it is no longer practical to separate information society related research from other research focusing on contemporary society and various applications of advanced information technology. Cross-disciplinary research cooperation as well as cooperation that extends to other innovative players will continue in the networks that emerged.

the Work and Society Team at the Finnish Institute of Occupational Health. Sami Borg is the director of the Finnish Social Science Data Archive.

research”

the cluster. Even though the special funding through the eTampere programme ended, the cluster continues its activity using its own resources.

Borg: We have also been an influential factor in the increase in cooperation between university departments and key persons such as professors. The University of Tampere and Tampere University of Technology have also been in cooperation, even though there should have been more projects with active players from both universities. On the national level we have conducted cooperation with the Finland Fu-

tures Research Centre and drawn up assessments related to the Government Information Society Programme. International cooperation has been conducted particularly within the EU.

Diversity, extensive reach, opportunities

Kasvio: What has been frustrating is that we would have wanted an opportunity to compile a full portrait of the Finnish information society based on a proper and systematic accumulation of data, but external fund-

ing wasn't available for this. We also didn't achieve a level of national or European expert status in information society research in accordance with our initial aim.

Borg: That was partly due to our operating policy, which emphasized a far-reaching approach and diversity. Rather than focusing resources on research areas that were strong already, the institute strived to provide an opportunity for several players to realize their ideas. This isn't fashionable in terms of research policy, but it might ultimately be more important from the perspective of the region's business life.

(See also: <http://www.etampere.fi/English>; Research, Analyses, Analyses by sub-programme directors.)

Research & Evaluation Laboratory

The Research & Evaluation Laboratory (RELab) was a test environment and cooperation network for the development of electronic service solutions. The sub-programme was the responsibility of the VTT Technical Research Centre of Finland.

aim

- To become a top-class technical-scientific test and research laboratory in the world of the new information society.

activity

RELab formed an extensive cooperation network which aimed to gather the best experts to develop electronic service solutions and related risk management methods. The areas of activity were

- early phase product research, demonstration and piloting
- the research and development of service concepts and systems
- usability tests
- envisioning trends and new technologies, foresight on the effects of technology development

Most projects focused on technological solutions. Particularly later in the programme period, however, focus was also directed to the needs of industrial service business.

The technology projects included a pilot system for mobile positioning and a

WLAN pilot environment in the city centre, both of which were implemented to assist service developers. RELab was also responsible for the eTampere sub-programmes' joint Neighbourhood TV project and participated in several extensive EU projects.

The activities were steered by a group of four external experts with representatives from the University of Tampere, the City of Tampere and two companies.

The cooperation partners included all eTampere sub-programmes. Of the Tampere Region Centre of Expertise programmes, cooperation was conducted with the centres of expertise for ICT, media services, knowledge-intensive business services and mechanical engineering and automation. In the preparation of EU projects, RELab utilized the contacts of VTT and the Tampere Central Region's EU Office in Brussels. Other key networks were, among others, the Industrial Business Research Forum, the Technology Industries of Finland's TRIO programme, the Ministry of Trade and Industry's Foresight Forum and several EU research networks.

results

- a European automotive and tyre industry project in which a prototype tyre was developed for a car of the future. The project has served as a foundation for the emergence of other extensive EU projects.
- a virtual museum project in which visitors are offered mobile museum experiences
- user studies related to mobile applications, the results of which have been utilized in product development
- a project related to the EU's Article 169

in which an action plan was drawn up for the EU on the development of cooperation related to wireless technologies in Europe

- the promotion of electronic insurance business in projects that developed methods for easier insurance transactions
- the launch of a study related to industrial service business
- the establishment of a new service systems research team at VTT

- **64 projects in total, 8 of which international**

- **total project volume 16.7 million euros, exceeding the target**

- **6 funding parties, the most significant being the EU, the City of Tampere and companies**

- **approximately 35 companies from Finland and abroad participated in the projects**



continuity

- The development of business-oriented service systems launched during RELab will continue as part of VTT's normal activity, for example in the new service systems research team consisting of persons who worked on RELab's projects and in the networks that emerged. A strong EU focus will be maintained.

Sub-programme director Pasi Viitanen • Pasi Viitanen is a senior research scientist at VTT.

“eTampere was a good starting shot for a lot of cooperation”

The principle idea of the Research & Evaluation Laboratory, the creation of easy to implement and use IT-based solutions, has remained even though the emphasis of research has shifted from consumer services to business services. VTT has researched the automation of services since the mid-1990s when a specific research basket for service automation was gathered. The accumulated knowledge is now

used in the development of industrial service business.

eTampere has significantly increased local networking and cooperation. On the other hand there are surprisingly many players in the same field here which are not engaged in any mutual cooperation. eTampere is a good starting shot for the development of cooperation. Initiatives of the same kind would also be

needed in the future.

There are many companies in the Tampere Central Region which in principle could move their production abroad. There is a need to form combinations that would render moving production elsewhere infeasible or impossible. Competitiveness should be built on the fact that there is a suitable group of people from a variety of fields doing things right here.”

(See also: <http://www.etampere.fi/English>; Research, Analyses, Analyses by sub-programme directors.)

Sub-programme directors Pekka Jussila and Heidi Huhtamella • Pekka Jussila is CEO and Heidi Huhtamella Vice CEO of Hermia Business Development Ltd.

“We created a lasting model of operation”

Jussila: The idea of the accelerator was, and still is, to build paths for the growth stage and seek partnerships in the various funding rounds. The basic target has been reached with the creation of a lasting model of operation and network. The targets set for development funding will be reached, as most likely will the turnover and job targets even if not quite on schedule.

Operational methods were modified several times during the course of the programme. In 2002, Hermia Business Development Ltd assumed overall responsibility for eAccelerator's activity. The company's staff committed themselves to the company and its activity as owners. Now the idea is that both the service and the Hermia Ventures regional seed fund we established will continue after the programme period. The basic mantra in the funding business is that private investors won't commit to funding seed-stage activity, but we nevertheless succeeded in acquiring completely private funds and successful entrepreneurs.

The accelerator aims to find professional management and sales people for researchers' promising company seeds, whose business expertise complements the technological expertise of the researchers.

Huhtamella: A researcher must understand that with his or her expertise alone, a company won't be turned into a growth business. Growth entrepreneurship entails that new expertise is sought for the company, and in this situation you have to be ready to share ownership. Business expertise in particular is required.

Jussila: Networks on many levels have emerged through eTampere. Cooperation was conducted within sub-programmes, though the contact between the business and research worlds could have been closer. On the national level we have participated in developing business development activity, building new funding systems and renewing the business development activities of science parks. International cooperation has been kindled with the Nordic countries, the EU and the United States.

Huhtamella: Our customers require us to be active and to find cooperation partners and funders for them. It is therefore essential for us to maintain the networks that we have entered and that we ourselves have been building.
(See also: <http://www.etampere.fi/English>; *Research, Analyses, Analyses by sub-programme directors.*)

eAccelerator

eAccelerator was a new operating model for the acceleration of technology companies along the path of growth and success. eAccelerator was initially coordinated by Technology Centre Hermia Ltd, and from 2002 onwards by Hermia Business Development Ltd.

aim

- to build a permanent, efficient operating model in the Tampere Central Region for the development of growth company seeds and to spur them into growth
- to create 20 to 25 top companies eventually capable of listing on the stock exchange, which employ 1,500 people and have a total turnover of 250 million euros
- to channel 50 million euros of external capital into these companies

activity

eAccelerator has forwarded the activities of growth companies and growth company seeds through the provision of business development services and capital investment. The operating model is based on cooperation between technology experts and specialists of business development and capital funding.

The weak economic trend during the programme period significantly hampered the accumulation of venture capital for start-up companies and activities were refocused several times during the programme. Policies were defined by the Management Group, which included several representatives of companies from ICT as well as funding and business development experts.

In order to find cooperation and funding partners for growth companies, eAccelerator gathered companies into 'miniclusters' around key companies or key technologies. The selected three miniclusters were games and multimedia; embedded electronics and communications electronics; and software busi-

ness, internet technologies, network technologies and the ASP model.

Significant cooperation partners and interest groups have been, among others, regional capital investors, regional and national business developers and the European innovation centre EBN.

- the identification and establishment of a financially sustainable, market-oriented operating model that accelerates company growth
- capital investment 48.7 million euros, almost as targeted
- 20 accelerator companies with employment totalling 600
- services utilized by more than 60 companies
- the establishment of Hermia Ventures Ltd in 2005. The company is a national fund for start-up and growth-stage funding regardless of the field of industry



continuity

- Hermia Business Development Ltd will continue offering business development services to companies
- The Hermia Ventures fund will be developed

Tampere develops thr

In Tampere, programme-based development policy based on cooperation between various parties has proven a cost-efficient and effective way of forwarding business growth and renewal in addition to developing education, research and their respective operating environments.

The eTampere information society programme completed its term at the end of 2005, the BioneXt Tampere biotechnology programme will continue until 2010, and an economic development policy programme set to run until 2011, Creative Tampere, is about to begin.

eTampere 2001-2005

Even when evaluated on the international scale, the eTampere information society programme was an exceptionally multidimensional development programme whose impact will reflect long into the future. The official final evaluation of the programme assessed the applicability of a programme-based operating model as a method for business policy development and evaluated the effectiveness of the programme's results regionally in the Tampere Central Region, nationally and internationally.

Findings of the evaluation:

- Additional resources for information society development were produced through project activity and a more long-term permanency was achieved. However, due to the dispersion of the project activity the effects remained slighter than expected.
- Social capital strengthened. New expertise, new cooperation partnerships and player networks were created for the region. Awareness, attitudes and operating models related to information society development were developed.
- The economic effects were slighter than expected. Approximately 60 percent of the projects represented research, and the usual timeframe from research investment to business utilization is 10 to 15 years.
- The programme extensively pursued different target groups. There were many stakeholders and participants, but the region's strategic clusters received less attention.
- The vision pointed the way to the future.

In more informal evaluations, criticism towards the programme included that companies didn't have an opportunity to sufficiently influence the projects that emerged on their own terms. From the administrative perspective, decentralizing the responsibility for the programme's implementation to various directions was seen as a weakness which took away the means to steer the programme during its implementation. Even though the programme's targeted – and achieved – project volume was large on the Finnish scale, in terms of content the activity was dispersed so widely that not all of the immediate effects are easy to identify.

The research implemented within the eTampere programme was criticized for producing too few visible results and for its confinement to universities while failing to touch citizens, various parties developing citizens' services and the region's companies. From the perspective of conducting research, it was estimated that such criticism was the result of unrealistic expectations for a fast impact from scientific research. However, it was considered that the eTampere programme verified that business development policy can act as a director of research activity and bring about change in a region's activity, even though the business development policy cycle is too short to achieve large-scale social change by means of research.

Links to evaluations of the eTampere programme can be found at <http://www.etampere.fi/English>; Research, Analyses.

Strategic clusters

In addition to development programmes, the growth and renewal of business activity in the Tampere Central Region is accelerated by strengthening the region's strong concentrations of expertise, namely

- mechanical engineering and automation
- information and communication technology

ough programmes

BioneXt Tampere 2003-2010

BioneXt Tampere is a development and investment programme that focuses on top research, product development, clinical application and the international commercialization of biotechnology for the promotion of health and well-being. The programme combines strong technological expertise with new biological research. BioneXt's quantitative target is to accumulate investment totalling 100 million euros by 2010.

The programme is developing the Tampere Central Region into a significant and specialized concentration of life sciences. BioneXt Tampere strengthens existing expertise in research and application, creates service structures that forward the transfer of research into business, strengthens cooperation with parties involved in clinical application, improves the availability of funding and trains specialists in the field.

Key areas of activity:

- biomaterials and tissue engineering
- immunology and vaccine research
- bio ICT

The spearhead project in biomaterials and tissue engineering is the establishment of the Regea, Institute for Regenerative Medicine and a national tissue bank. In immunology the spearhead project is the international research and development centre of immunology, infectious disease and vaccines to be established in Tampere. The centre will strengthen and further develop the concentration of vaccine expertise in Tampere.

In bio ICT, the spearhead project involves the focusing and strengthening of biosensor expertise and the development of extensive structured tissue and data banks. The aim is to create a globally significant concentration of expertise in biosensor technology and the processing of biological research information in Tampere, the 'Biological Information Centre'.

In addition to the City of Tampere and the programme's coordinator, Finn-Medi Research Ltd, the participants of the BioneXt Tampere programme are the Pirkanmaa Hospital District, the University of Tampere, Tampere University of Technology, the VTT Technical Research Centre of Finland, the Finnish National Fund for Research and Development Sitra, the Employment and Economic Development Centre, and the region's business life.

www.bionext.org

Creative Tampere 2006-2011

Creative Tampere is an economic development policy programme which aims to generate prerequisites for Tampere to continue as a multi-field concentration of expertise that is attractive to businesses and skilled people and full of vitality.

In recent years, surveys have shown that Tampere is the most desirable place to live in and take studies in Finland. Compared to the residents of Finland's other largest cities, people in Tampere are most satisfied with their lives in their municipality of residence. Tampere is also Finland's most significant cultural centre after the capital.

Set for implementation between 2006 and 2011, Creative Tampere will accelerate the emergence of new creative economy and strengthen traditional creative fields.

The programme's themes are

- the cultural industry
- service innovations
- creative structures and the enabling of creativity

The programme aims to

- raise the cultural industry as one of the strategic areas of expertise in Tampere by promoting expertise, product realization and business activity in the field, by developing entrepreneurship and company networks and by promoting exports and internationalization
- continue the work started by the eTampere programme in the creation of service innovations enabled by new technology
- generate prerequisites to bring creativity to the fore. In the generation of prerequisites, important issues include content renewal for early education and training, the development of social environments and the creation of a built urban environment that enables creativity.

The implementation of the Creative Tampere programme is supported by, among others, Tampere's candidacy for European Capital of Culture 2011, development projects for electronic services, the architectural policy programme and the new Vuores district which in the coming years will rise on the border between the City of Tampere and its neighbouring municipality Lempäälä.

- health technology
- media services
- knowledge-intensive business services
- the meetings industry

World-class companies operating in the region include, among others, Nokia, Nokian Tyres, Metsäliitto, Kalmar Industries, Sandvik, Metso Automation, Metso

Minerals, Kvaerner Power, Tamglass, John Deere Forestry, Sisu Diesel, Bronto Skylift, Avant Tecno, Santen, FIT Biotech, Inion and Conmed Linvatec Biomaterials.

Representatives of leading-edge research include the institutes of signal processing, hydraulics and automation and biomaterials at Tampere University

of Technology and the Institute of Medical Technology at the University of Tampere.



www.etampere.fi/english

eTampere Programme 2001-2005 • Summary

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Additional copies: Johanna Heikkilä, Marketing Manager, City of Tampere Information Office,
johanna.heikkila@tampere.fi, phone +358 (0)20 716 6652, fax +358 (0)20 716 6710