



Finnish National Fund for Research and Development

Annual Report 2002





Sitra – aims to further economic prosperity in Finland

- by developing new and successful business operations
- by financing the commercial exploitation of expertise
- by promoting international competitiveness and cooperation

Sitra – an autonomous pioneer

- enjoying economic independence
 - with courage and initiative
- initiating operations designed to break new ground

Sitra – an impartial opinion-shaper

- providing new research information
- anticipating and identifying future challenges
 - developing new solutions

The Finnish National Fund for Research and Development (Sitra) is an independent public foundation under the supervision of the Finnish Parliament. Sitra aims to promote Finland's economic prosperity by encouraging research, backing innovative projects, organising training programmes and providing venture capital. Sitra's activities are financed from the yield of its original endowment and of project finance.

CONTENTS

President Aatto Prihti	2–3
“Know-how, growth and economical thinking guarantee Finnish well-being”	
Research, innovative projects and training	3–8
“Sitra plumbs the challenges of tomorrow”	
Welfare choices must be based on enduring values	
Social capital in support of schoolchildren’s development	
Finland’s future in an enlarging Europe	
Sitra seeks potential growth for companies in neighbouring regions	
OSKU – a way for citizens to access the information society	
Training a pillar of support for decision-makers	
Corporate funding	9–13
“More speed to budding business ideas”	
Funding for the biosciences must be guaranteed	
Sitra seeks promising networks	
New innovations for technological companies	
INTRO became the PreSeed companies’ marketplace	
Examples of portfolio companies	
The know-how of Sitra’s personnel is its strongest card	14–15
Sitra evaluated its activities	15–16
Sitra’s events in 2002	17
Sitra’s Supervisory Board and Board of Directors	18
Sitra at your service	18
Financial Statements	19–32
Board report for 2002	
Profit and Loss Account	
Balance Sheet	
Notes to the financial statements	
Auditors’ report	
Sitra’s publications in 2002	33

“ Know-How, Growth and Economical Thinking Guarantee Finnish Well-Being”



President Aatto Prihti.

■ A welfare state based on traditional Finnish values is best in the view of citizens. The Finnish model is built on know-how.

“A basic prerequisite for success is a balance in the public economy in the long term,” says **Aatto Prihti**, president of Sitra. “Nonetheless, the combination of ageing population, health care, social welfare and education is likely to put strong cost pressures on the Finnish welfare state in the future. Multiculturalism, the infrastructure and security will demand increased investment. The labour force will shrink but the need for services will grow. Since responsibility for more and more social services is being transferred to local government authorities, they will have to cooperate closely in order to be able to develop and provide these services.”

Prihti crystallises Finland’s possibilities of succeeding in two key goals: a faster rate of growth than in other countries, and an improvement in the cost efficiency of the welfare state. To achieve these goals new technology, a field in which Finland leads the world, needs to be encouraged.

The growth of a knowledge-based society lies in the hands of people who can. Prihti divides citizens into developers, adapters and withdrawees. The sore points of political debate revolve around these groups.

“Growth in the future means that the group of withdrawees must be reduced to a minimum; in other words, unemployment must be brought down and there must be sufficient incentives to work. As many as possible adapters must become developers, entrepreneurs, developers of products and services, agents for change. Developers must be persuaded to stay in Finland and their know-how has to be complemented with that of immigrants,” underlines Prihti. “We will attract top international expertise to Finland provided that we can offer them and their families high standards of education and culture, for example. The city of Helsinki will play a key role in this respect.”

“The greatest potential for growth in the near future will lie outside the present growth centres, in places where people will have to work with the most modest of tasks. This has been clearly illustrated by Sitra’s Northern Karelia and Learning Regions projects. Sitra has taken the initiative in charting the willingness of companies to decentralise their operations. Encouraged by the positive feedback we have received we are now experimenting with the nation-wide Nesenta company, which helps to bring together in networks the supply of knowledge work and the demand for it. Regional and employment policies are no longer zero-sum options. The globalisation process wipes out distances and international borders; European firms could relocate their operations to Kuusamo, for example. When it comes to the information society Finland can become the world’s laboratory in global cooperation. Finland is a country that advances by means of innovations.”

Every third company falls by the wayside in the early stages of their existence largely because of the lack of business acumen. This has caused a serious waste of innovations.

In spring 2002 Sitra set up a project designed to develop management skills nation-wide. The result of this has been the Helsinki Business and Science Park,

which is networked with foreign universities and other institutions.

“Our aim is for national efforts in the fields of research, product development and education to bring Finland and Finns prosperity by expanding business operations and creating new jobs.”

The first international evaluation of Sitra’s operations was completed in autumn 2002. This assessment indicates that Sitra has succeeded quite well in its task; it has done the right things in the right way. The challenge now facing Sitra is to find the appropriate strategies to be able to continue to succeed in a rapidly changing environment.

“This kind of evaluation by outside experts is an extremely valuable tool for Sitra in its efforts to proceed forward. It provides us with many strategic questions and new opinions to consider. Sitra’s resources are now fully exploited. What must we give up if we are to embark on something new?” asks Prihti. “The suggestions put forward by the evaluation group have been included in Sitra’s plans for the future strategies.”

“I wish to express my gratitude to Sitra’s governing bodies and our partners for their constructive and inspiring cooperation and to Sitra’s employees for their enthusiastic and conscious efforts in the face of the pressures exerted by a difficult international situation.”

“Sitra Plumbs the Challenges of Tomorrow”



Vice President Kari Tolvanen.

■ Sitra plays its role in strengthening the Finnish welfare state in three main areas.

“By means of research and training we provide information for decision-makers about future changes and their importance for Finland. By means of corporate funding we can help to accelerate growth and strengthen the national economy. Sitra devotes two thirds of its annual budget to this end. We improve the cost efficiency of the welfare state by encouraging the use of new technology and regional know-how, by evolving new innovative models of operation and reinforcing

cooperation between neighbouring regions. But are we doing enough?” asks **Kari Tolvanen**, Sitra’s vice president.

“Sitra’s teams are being encouraged to interact even more, and their operations further developed and adapted to the changes taking place in our environment. This work began at the end of 2002.”

A quarter of century of training decision-makers

Kari Tolvanen was given responsibility for putting into practice and improving Sitra’s programmes for training in economic policy when he came to Sitra as chief economist in 1987.

The training programme stays abreast of the times but remains true to its original principles. Over the twenty-five years of its existence some 2,000 economic and political decision-makers have taken part in Sitra’s training. Most of these have subsequently risen to senior positions in Finland, to the top in politics, public administration, interest organisations and the business world.

“Training for leadership in economic policy teaches decision-makers to see the overall picture and gives them a broad range of information about how the economic structure works and the factors that affect it. It analyses methods for predicting economic events and shows how economic goals can be achieved. Sitra’s training programme also encourages independent and critical thinking, positive criticism, that is. Its main objective is to strengthen Finland’s economic prosperity. For that we

need a strong joint will,” says Tolvanen.

The courses adopt a courageous approach to new phenomena even at a stage when people still do not realise that they will happen or have any effect. For example, Sitra started to assess the impact of information technology on the economy when the first computers were acquired by research institutes. The European Market and its effects on the economy were the focus of study even before Finland joined the EU. In the 1990's a new buzz word began to be heard - globalisation. The ideas that sprouted from this provoked discussion of new themes: the internationalisation of Finnish companies, the European Union's common currency, and the new economy.

“In addition to economic policy proper Sitra's training activities have also acted as a forum for creating contacts and networks. The important thing is that the economic and political decision-makers have been able to throw off their traditional roles and approach things from a new angle. Studying together and discussing matters in confidence have strengthened cooperation between key figures from different fields and given them ideas to help them in their efforts to build up Finnish society.”

Welfare choices must be based on enduring values

“The welfare state is a key part of Sitra's strategy. All our activities aim at Finland being among the three most successful countries in the world by the year 2010,” says **Antti Hautamäki**.

“Finland finds itself at a crossroads faced with major changes ahead. We can no longer succeed using just our old tricks. The decisions that we make now will determine the future of the welfare state. Meeting the challenges that face us means difficult choices and ranking our goals according to their importance. We cannot learn new things by resting on our laurels or staring in the rear-view mirror. We have to develop a model of the welfare state for Finland that is new and unique throughout the world.”

In October 2002 Sitra published a report in Finnish *Hyvinvoinnin valinnat – Suomen malli 2000-luvulla* (Welfare Options – The Finnish Model in the 21st Century). The report aims to provoke social debate; it addresses the challenges facing the welfare state and lists the political alternatives that are open to us.

“The report is not a list of recommendations. Deciding the alternatives and making the decisions is a matter for the politicians,” stresses Hautamäki. “The next

government's political programme must be built on a critical foundation. The choices must not be disguised as expert decisions since they also include values. The ordinary citizen has a right to make up his own mind about them.”

The challenges facing the welfare state can be summarised under five headings: the state's role in our globalising economy, an ageing Finland, employment and alienation from the labour market, a regionally divided Finland, and public services at the crossroads. These five themes are reflected in Sitra's research, its innovative operations and its training programmes.

More efficient use of information technology

According to Hautamäki information technology can help to facilitate more efficient production of services and at the same time ease the burden on workers.

“Network connections have increased but in the use of the Internet Finland lags far behind the United States and Sweden. The first priority is to increase the use of network services by ordinary households. In the USA food, clothes, household machines, cars and travel are all sold via the Internet. People and goods need to move much less. It saves on the environment and increases efficiency. Virtual companies do not even need office space,” says Hautamäki.

“In Finland we stress the importance of lifelong learning. Via the Internet teaching materials can always be kept up to date. It offers the possibility of interactive learning even in those regions where there are no schools or enough teachers. The Internet cannot, of course, replace the living contact between teacher and pupil.”

Information technology can also be used to support old people who wish to live at home and help hospital doctors in making their reports.

Social capital must be increased

“Finland is rich in human resources, in other words, know-how. Strong efforts have been put into education. Nowadays our resources of traditional, i.e. monetary, capital are greater than before. How and when will we learn to invest in social capital? Social networks are valuable resources that need to be exploited. It is essential that information and experience become more mobile and efficient. Confidential interactive network cooperation is also of wide societal importance. Strong social capital prevents society from becoming split and reduces security risks, for example,” says Hautamäki.

“Social capital can improve economic efficiency and innovative thinking. Information networks have opened

up entirely new prospects for developing and maintaining our social capital. Sitra is experimenting with and studying how social capital can be reinforced and social reforms supported.”

Social capital in support of schoolchildren's development

In autumn 2002 Sitra started an all-day school experiment together with the University of Jyväskylä. The experiment will last for two years.

“The background to this is the concern about the increasing problems among children and young people and the risk of their becoming alienated from society. The experiment aims to ease the burden of the school day by introducing hobby and outdoor activities between and after teaching hours and by lengthening the lunch break. In this way afternoons spent alone can be reduced in number and hobby activities brought within the reach of all age groups regardless of the parents' income levels,” says **Timo Hämäläinen** in describing work being done in comprehensive schools in six different parts of the country.

The school's hobby activities, the study shows, have a favourable effect on how the young people develop, on their learning achievements and their social success. At the same time it gives families time to be together in the evenings by reducing the need for parents to help young people by driving them to their evening activities.

“We want to reinforce young people's social networks, their relations with each other and their social skills. We take the view that changes in the structure of the school day will also improve the atmosphere in school and the pupils' well-being.”

How do social innovations start? What impact do they have?

Sitra's Research Program on the National Innovation System, which ended in autumn 2001, emphasised the importance of social innovations in the rapid changes taking place in the techno-economic atmosphere of our modern community.

“Very little research has been done even internationally on how social innovations get started and what impact they exert on the community,” says Hämäläinen. “Many esteemed sociologists have drawn attention in recent years to the fact that social innovations and society's capacity for structural renewal have a strong effect on a community's economy and success.”

In autumn 2002 Sitra set up its research study on Social Innovations, Societal Renewal and Economic Success. The study will analyse how a society's ability to renew itself structurally affects economic growth and will chart the structural changes that took place in Finland in the 1980's and 90's. Development in Finland will be compared with the results of Swedish, German, American and Japanese experiments in recent years.

The study will make use of perspectives from many different disciplines. The aim is to gain new knowledge about how societal models, structures and institutions renew themselves and what support can be given to these processes by political decisions. The project is planned to reach completion by the end of 2004.

Finland's future in an enlarging Europe

More and more of Finland's internal decisions are subject to directives coming from the European Union. Sitra started its international research programme Europe 2020 in autumn 2000. The programme, which aims to serve practical needs, makes use of both research results and fresh experience from the EU. European think tanks and research institutions constitute Sitra's partners in this programme. The first stage of the programme was completed in June 2002.

Europe 2020 has analyses, evaluations and recommendations to support decision-making in three key areas: the importance of the European Council in the integration process, the changing role of small nations in a changing Europe, and the consequences of Europe's enlargement eastwards. The most recent publication, *Tiivistä ja hajautuva Euroopan unioni* (The Integrating and Fragmenting European Union), was brought out in January 2003. Its author, **Peter Ekholm**, who heads the Europe 2020 programme, does not foresee any insuperable difficulties in the EU's process of enlargement. With time he expects the impact to be beneficial. However, the transition period that now faces the Union will be a stage of adaptation both for the EU as a whole and for the present and future member-states. This requires political will above all else.

“Many of the advantages of integration have already been implemented in the new member states since internal markets already operate in practice. One consequence of enlargement will be that the relative influence on the decision-making process of Finland and the present member-states will be weakened while at the same time

their net contributions will increase. Will the solidarity of the present members suffice for them to provide the funds needed to accelerate the economic growth of the applicant members at a time when the whole of the European economy is struggling?” wonders Ekholm.

“The Union will change and many of the consequences will be both favourable and unfavourable.

What we need to do is think about how the benefits can be maximised and the disadvantages minimised.”

The impact of the new members will be most clearly felt in those areas of decision-making where the importance of the EU is on the increase. According to Ekholm cooperation in the fields of foreign and security policy will progress more easily than in social and environmental policy, for example. Even though the EU has adopted a pioneer role in environmental policy, the process of evolving a common environmental policy may be slowed down since many of the new members have more pressing financial needs.

“The new members will not solve the coming labour shortage facing the EU even though the level of education is good, as **Laura Narsakka**’s study shows,” says Ekholm.

In Finland the gap between suspicious citizens and political decision-makers has become too wide. By means of the Europe 2020 programme Sitra wants to bring the results of its considerable research to public debate.

“Different institutions study the impact of the EU from their own narrow perspective. Sitra tries to see the whole picture,” says Ekholm.

“Now it is up to the citizens to take the initiative.”

Sitra seeks potential growth for companies in neighbouring regions

In 2002 Sitra financed a clustering study in northwest Russia. It was carried out jointly by Finnish and Russian companies and research institutes. The study evaluated the opportunities for growth in the forest, metal, energy, ICT and foodstuffs industries. The background to the Advantage Northwest Russia project was a study carried out by Sitra in 1995 the results of which affected the way that Finnish industrial and business policy was formulated.

“The Northwest Russia study resulted in materials about the prospects for cooperation bridging the frontier between the EU and Russia. The aim is to give the EU’s northern dimension policy a concrete content especially from the business perspective,” **Kari Tolvanen** says.

“Cluster studies have been made elsewhere but in Finland they have been taken further and given a practical application. The study has attracted much attention in Russia. It offers strategic material for the needs of Russian business policy and improves the transparency and predictability of such policy. New information about Northwest Russian companies and their competitiveness helps Finnish enterprises that wish to get established in the region.”

OSKU – a way for citizens to access the information society

“In its three-year OSKU (Learning Regions) project Sitra brings the information society to the inhabitants of different parts of Finland on their own terms. Key words are local, a citizens’ network and information technology training. Pilot schemes were set in motion in 2001 in and around Pieksämäki, in the Turku archipelago, northern Lapland, Kainuu, eastern Uusimaa, southern Päijänne and in the urban districts of eastern Turku and Maunula, Helsinki,” says **Kari-Pekka Mäki-Lohiluoma**. As different regions as possible have been selected for pilot schemes in order to test how well the model developed for northern Karelia works.

A channel for information and influence

“In the Maunula district the idea was to develop the region with the aid of community networks. The Maunula network provides a new environment for private individuals who live and work in the district, for associations and clubs, and for public bodies and companies,” says OSKU’s **Heli Rantanen**, locally in charge of the Maunula project.

“A key role for OSKU is to change attitudes and to firmly anchor new patterns of behaviour and ways of acting.” OSKU is founded largely on voluntary involvement. “Enthusiasm comes in waves. To set new waves in motion demands considerable hard work. Building community networks succeeds best in places where there already exist other networks, for example, associations and sports clubs,” says Rantanen.

“These associations have been keen to set up their own intranet channels. The library and workers’ institute in Maunula opened their own channels in autumn. The local parish is trying to exploit the Maunula network in its pastoral work.”

There are about 10,000 people living in Maunula.



OSKU in east Turku.

Each of them has been issued with a personal user name, e-mail address and password in order to log on to the Maunula network.

The principal aim of the OSKU training given in Maunula is directed towards to enhancing the IT skills of older persons. The training is given at Mediapaja, which is situated in the centre of Maunula.

“At Mediapaja people can read and send e-mail and surf the Internet without charge. Via the Maunula network they can chat, inform, read the news and send messages. In particular, the middle-aged and the elderly have derived great joy and satisfaction from Mediapaja’s services. The fact that it is nearby and the threshold to using it low is much appreciated.”

A citizens’ network unites the people of northern Lapland

“The OSKU network covering northern Lapland, i.e. Inari, Sodankylä and Utsjoki, has more than 2,000 users each week. Thirty or so network access points have been set up to serve the local population,” says **Ritva Metsälampi**, who is in charge locally. The OSKU of northern Lapland is publicised at all local events in the area, for instance at fairs and local markets.

Contents production is being developed in collaboration with local government. Interaction between local inhabitants and decision-makers has been improved by training local government officers as users of the OSKU network and producers of services. During elections the network operates as a forum for discussions between both voters and candidates.

By means of the “Between Us” column the local people can discuss and put questions about mental health under the protection of a ‘nom de plume’. Psychologists in northern Lapland run the column.

Elk hunting is a popular sport in Lapland so that how

many animals have been felled is of interest to users of the network. Since autumn 2002 it has been possible to follow how the hunt is going via the OSKU network. OSKU has organised help for the hunters on how to use the network so that they can themselves post their results on the net.

Training a pillar of support for decision-makers

Sitra’s training courses lay the foundation and create models for developing successful national strategies. “The people invited to attend our courses represent all groups of society. Training provides a bridge by means of which we can provide decision-makers with information that will give them support in their work,” says **Tapio Anttila**. “All Sitra’s courses are evaluated by outside experts so that we get important feedback that we can use to improve our training activities.”

For Finland to the year 2015

The Finland 2015 training and development programme is being run over the years 2000–2003. The programme aims to develop senior decision-makers’ knowledge, skills, preparedness and networks so that they can cope with matters affecting Finland’s future. In its structure, methods and content the programme stresses an approach that is multidisciplinary, international and cuts across social classes. Each course makes a report on strategic questions considered most crucial.

“Courses 1–4 held their first seminar in the United States. Since the importance of the Far East and China has grown from Finland’s point of view courses 5 and 6 began their work in Beijing”, says Tapio Anttila as an example of how up-to-date Sitra’s training courses are.

The fifth course considered the factors affecting Finland’s competitiveness, the challenges facing the country’s immigration policy, the foundations of Finland’s security, the position of the family and key factors affecting the nation’s health. Information technology has to be used more than at present in support of regional development, the production of public services, education and cultural life.

The sixth course looked at Finland’s future from the standpoint of creativity, innovations and values. Encouragement and support for creativity are best achieved through a creative strategy in the same way that technology has been in recent decades.

“The final seminar in the Finland 2015 programme

will be held in Tallinn, Estonia, in September 2003. Those invited to attend will be all participants from previous courses, in other words about 150 key Finnish decision-makers from politics, public administration, business, the mass media, representatives of the labour market, and culture.”

The programme continues in 2003 with the builders of Finland’s future. “We also want young people’s views about Finland’s future,” says Anttila.

Learning networks across frontiers

Some 90 decision-makers and experts worked on strategic ideas evolved during the Finland 2015 programme in Sitra workshops using flexible and creative methods.

“The themes addressed in 2002 were Hyvinvoinnin valinnat – Suomen malli 2000-luvulla (Welfare Options - the Finnish Model in the 21st Century) and Oppimisella osallisuutta – vastauksia työn murrokseen (Sharing and Learning – Answers to the Crisis in Work). A new approach gave rise to the desired questions and concrete answers. We organised our workshops in the form of

cooperation between our research and training teams.”

Since 1977 Sitra has been arranging management courses in economics aimed at decision-makers and experts in both the public and private sectors to improve their analytical and planning skills. The largest group of trainees has been made up of newly elected MPs. In 2002 two Economic Policy 2000+ courses were held. The 25th anniversary of Sitra’s training activities will be held in Turku in May 2003.

Russia’s future decision-makers took part in week-long seminars in the years 2001 and 2002. The Russian Future-Makers in Finland training courses acquaint the participants with how Finnish society works and opens up new possibilities for cooperation. The working language of the first two seminars was English and of the third Russian.

“In 2003 we shall be arranging a summarising seminar in Moscow when young Russian leaders and experts will network with each other. Our goal is to establish a genuine and long-standing dialogue with them,” says Anttila.

“More Speed to Budding Business Ideas”



Director Magnus Sjöblom and analyst Marja Karttunen.

■ “The downturn on the American capital markets that began in the year 2000 has continued for an exceptionally long period. Nor is any strong recovery foreseeable in 2003,” says **Magnus Sjöblom**, responsible for finance and corporate funding. “The worldwide decline in the real economy may well have bottomed out, however. The stimulation expected from lowered interest rates might lead to some kind of recovery soon. The present political situation in the world may well change the outlook for the global economy, however.”

The dealflow of Sitra’s corporate funding has dropped. The monetary value of the funding decisions on the declining markets fell 20 per cent from the level of the preceding year.

“Sitra gets no money from the state budget. Our activities are based entirely on the return on our endowment capital and from our venture-capital operations. They, in turn, are almost entirely dependent on the overall market situation. This means that the size of our funding and our operations must be tailored to existing conditions. Sitra’s revenue and expenditure have to be kept in balance in the long term.”

Venture-capital activities have not brought the returns that were expected only a few years ago. “Not all the dreams for the future of technological services have borne fruit,” says Sjöblom.

“We have to look carefully at the companies in which we invest and make more in-depth analyses. On the other hand, it is also Sitra’s duty to try out new ideas.”

The division of labour between the different actors

of the Finnish innovation system needs to be examined from time to time. Sitra has indeed expressed a wish that responsibility for further development of the different regional funds be transferred to organisations subordinate to the Ministry of Trade and Industry. This would liberate Sitra’s resources, which could then be allotted to developing new forms of activity. The idea has elicited a favourable reception.

The whole venture-capital process in the throes of development

Sitra’s portfolio contains about 120 companies. Sitra tries to accelerate the turn-round of its investment portfolio by paying closer attention to the efficiency of its investment and development. In the case of new investment objects the spotlight continues to be trained on encouraging start-up enterprise.

“Our aim is to make all our capital investment activities more efficient. We offer an entrepreneur the tools by which we can provide the portfolio company with value added,” says Sjöblom.

Different corporate structures and consolidation projects are always topical. “What we do is look for larger units with products at different stages of development and more competitive companies.”

“We have concluded agreements with funds that offer our portfolio companies a natural channel to international markets. We are also increasing our cooperation with major industrial players since many of our portfolio companies are their sub-contractors.”

“Although Sitra is acknowledged to be an investor in technology and the biosciences, we will not allow ourselves to overlook more traditional forms of enterprise,” promises Sjöblom. “These we support through our network development and financing operations.”

A framework for the welfare society

Sitra is involved in many new projects in which products and methods to meet the needs of future decades are being developed. The eHealth project aims at more efficient health care. Sitra’s portfolio companies are working to evolve aids for the aged and new methods of treatment for Alzheimer’s and Parkinson’s disease, for example.

“We have plenty of feelers out. We rake the field of new business ideas in our search for suitable companies

that have the potential to develop in which we can invest. We cooperate intimately with universities and institutes of higher education and with their technology-transfer companies. No other investor in Finland has such a wide network,” concludes Sjöblom.

Funding for the biosciences must be guaranteed

Sitra's life-sciences operations have expanded rapidly in recent years. The principal foci of Sitra's investment have been biotechnology and medicine. The aim is to ensure the important innovations made in Finland and business operations based on them become firmly anchored in Finland at the same time as they reach international markets.

“The situation on the finance market for the biosciences has been more difficult than in 2001 and this situation is expected to continue. Companies find it difficult to attract risk capital and funding arrangements take a long time,” says **Hannu Hanhijärvi**. “Nonetheless, it has been refreshing to see that Finnish investors have wanted to continue providing capital. The level of funding remained the same in 2002 even though the markets were more restrained.”

The role of the capital region as a provider of new projects has risen markedly.

“With the present tight markets the barrier to making a favourable funding decision on completely new technology has risen since we have to be in a position to ensure on-going finance. In 2002 we made only three decisions to invest in new technology. Of these two were linked to companies already in our portfolio.”

A clearer portfolio

Sitra had about 40 companies in its life-sciences portfolio at the end of 2002; this was ten fewer than the year before.

“The number of our companies shrank markedly as a result of exits and mergers. The range of product development among Sitra's portfolio companies has to be broad and strong. We will continue to examine our portfolio,” confirms Hanhijärvi. “Investment in those companies that remain has long been steady. This means that present investors have to have a long-term commitment to these companies.”

“We actively cooperate with our international investment partners and we are building up a financial network in Finland, too. The bio field needs vertically

integrated flagship companies that work as channels for the product-development efforts of smaller enterprises to help them reach international customers and financial markets.”

eHealth markets slow to open up

A key aim of investment in the life-sciences field has been to develop eHealth services to a level where citizens can take better care of themselves, to widen the range of choices of health services and to make health information and its use more accessible.

“Sitra's portfolio companies continued to strive to open up the eHealth markets in Finland in 2002,” says Hanhijärvi. “Many clients also took advantage of portfolio companies' products but so far there has been no real breakthrough in the eHealth field. Nonetheless, it is encouraging to note that the first export agreements have been signed and business activity strengthened, especially in Sweden.”

Sitra seeks promising networks

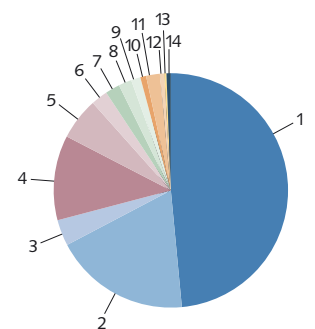
Sitra's new form of venture-capital operations, Network Development and Finance, began in the year 2002. First, a study was made of existing business networks in cooperation with Finpro.

“We are looking for networks that need injections of capital and development in order to grow and go international. We have found 162 different networks in all. The real figure may well be twice or three times as large,” says

Heikki Ojanperä.

“The most common networks operate in the fields of metal and engineering, mechanical wood, electronics and automation, and furniture and interior design. The networks are fairly evenly distributed throughout the country as far north as Lapland. They need to develop in their own region; this is long-term regional development policy.”

Investment portfolio by branch
31.12.2002



	no of companies	€ M
1. Medical/health-related	34	60.2
2. Computer-related	26	23.3
3. Industrial products and services	10	4.5
4. Biotechnology	9	14.5
5. Other electronics-related	9	7.2
6. Other services	5	2.9
7. Chemical industry and materials	3	2.5
8. Internet-technology	3	2.2
9. Telecommunications	3	1.6
10. Consumer-related	3	1.0
11. Other production	2	2.3
12. Agriculture and silviculture	2	0.7
13. Construction	2	0.4
14. Financial services	1	0.7
Total	112	124.0

Finance and know-how to flagship companies

Network Development and Finance provides help for both existing and planned networks between traditional small and medium-sized enterprises. New business models are constructed in collaboration with the companies. The work is based on combining traditional know-how and new technology.

“Advanced IT systems, for example, can considerably facilitate communications between the different companies of a network and the control of operations as well as customer service and logistics in international markets,” Ojanperä points out.

“We examined all fourteen spearhead networks identified by the initial study and several other potential network projects in 2002. What we took into account included not only their business prospects but also the social capital of the entrepreneurs together with the structure of the network and its flagship company. The first injection of funds in a flagship firm has already been made and preparatory work for others is also well under way. Sitra’s professional skills bring value added to the network since we are ready to put in both money and know-how into the cooperation,” underlines Ojanperä.

Networking cooperation brings power

Ojanperä takes the view that competition both in Finland and the world at large will change from being interaction between companies to interaction between networks. Instead of components customers want larger entire units and these they can buy through the flagships of each network. As a member of a network an SME can strengthen its competitiveness.

A network shares a common business idea that can only be put into practice through cooperation between the members of the network. There is strong common desire to become more competitive and committed to joint projects. Each company has a clearly defined role to play within the network. Relations between entrepreneurs are open and confidential and cooperative agreements clear.

Networking cooperation strengthens the know-how of the individual companies, their development and renewal, rapid growth and ability to operate internationally.

Public investors have a common goal

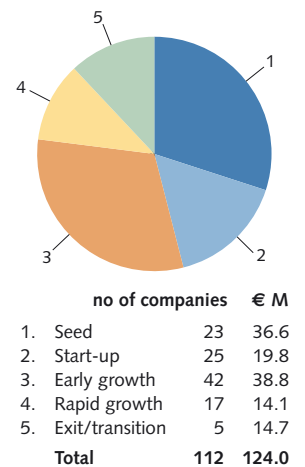
Finland’s Employment and Economic Development Centres, Ministry of Trade and Industry, the National Technology Agency (Tekes), Finnvera, Finpro and Sitra have set up a joint group to coordinate the search for and development and funding of SME networks.

“We intend to establish a screening process that we can

use to identify existing and potential networks in Finland and plans for new networks. Networking among SMEs that aims at success, growth and international markets will be encouraged with help and advice from all the public bodies involved and balanced injections of capital according to the companies’ needs.”

Networking Development and Finance will profit from the experiences of Sitra’s Skills Technology project. The three pilot schemes of this project tested networking among companies and their ability to go international and developed new funding models. The musical instruments pilot scheme ended in August 2001, the bags and leather goods and interior design schemes at the end of 2002. According to Ojanperä the appreciation of handicraft skills has risen and skills technology has a promising future in Finland.

Investment portfolio by stage of development 31.12.2002



New innovations for technological companies

After the enchantment with the technological sector had evaporated, the ICT communications markets returned in 2002 to normal, even quietening down somewhat. The number of contacts made dropped by a fifth, which was nonetheless considerably lower than the average for Europe. “New investment was made in five new technology start-up firms. We have concentrated on evaluating the business potential of our existing companies and on arranging further finance for them. Projects continue to be assessed carefully since revolutionary new technology is difficult to find,” says **Anu Nokso-Koivisto**. At year-end the number of portfolio companies totalled 52.

Pioneer enterprises

Nokso-Koivisto emphasises that Sitra invests in new kinds of innovative companies even though the risk involved is often greater than in the case of traditional businesses. Examples of such new investment are Clothing+, which develops clothing technology, and Avain Technologies, which produces protected electronic documents and forms.

Sitra’s task is to evolve new types of business concepts. Last year we set up Nesenta Oy, a company that develops and markets via the Internet firms producing mobile services and know-how. “Our aim is to make productive

the know-how that exists in different parts of Finland,” notes Nokso-Koivisto.

Information to support decision-making

The commercial application of new technologies, and especially the process of putting them on international markets, demands thorough market-oriented information about which technologies and fields it pays to invest in. With this in mind Sitra made a number of studies of technology last year. These studies concerned the fields of opto- and microelectronics, photonics, environmental and energy technology and wireless LANs (local area networks).

In autumn 2002 Sitra also analysed the importance of remote support as a competitive factor for both large Finnish companies and small and medium-sized enterprises. “We wanted to get an over-all picture of the situation in these markets for small technological companies. The results show that remote support offers considerable opportunities for growth and specialisation,” Anu Nokso-Koivisto says.

Cooperation between innovation organisations

New joint projects were started in cooperation with other public investment and service organisations – Finpro, Tekes (National Technology Agency), Finnvera, the T&E centres (Employment and Economic Development) and Finnish Industry Investment Ltd. “We aim at being able to serve new innovative companies as efficiently as possible.” Working together the partners in the project set up a network service, www.yritysuomi.fi so that entrepreneurs and private companies can easily find the finance and services offered by the public sector.

INTRO became the PreSeed companies’ marketplace

“LIKSA has made it possible for 70 companies to put into practice their plans to go commercial. Of these almost half operate in the ICT field,” **Risto Kalske** is pleased to report. LIKSA is a joint funding programme operated by Sitra and Tekes (National Technology Agency). With its help a new company can get advice from outside experts to refine its business idea into a working entrepreneurial plan.

Sitra’s PreSeed funding service provides expert advice on the commercialisation of technology and helps to arrange start-up finance. It is a process that provides support for companies seeking to gain access for good

ideas to venture capital.

“Technological companies at an early stage of their existence are often no more than research and development projects whose course is determined by technological choices. They lack capital and business acumen. A company at this stage of its existence does not interest venture-capital companies. On the other hand, private investors, or business angels, are ready not only to provide such companies with start-up capital but also to share with them their experience of industry and international business. They want to create success through young spearhead enterprises,” says Kalske, giving Sitra’s PreSeed viewpoint.

Sitra hosts the INTRO marketplace

Sitra’s PreSeed activity changed quite markedly in 2002 when it became the INTRO marketplace. INTRO screens new technological companies before preparing them and introducing them to private investors.

“For a company to enter the INTRO programme it has to have a core team committed to the company’s business, a realistic possibility of international success and a unique business idea. The most important document in this respect is the company’s own strategic plan. When this has been approved, an Internet introduction of the company is presented to those investors who subscribe to the INTRO programme. But it is the firms themselves who present their projects at the business forums arranged by Sitra,” says Kalske.

Generator of innovations

“In the INTRO marketplace an investor gains access to a range of companies that have already undergone Sitra’s screening processes. In the first year of its operations INTRO made a large number of introductions that led to funding. INTRO has operated extremely well as a meeting place for individual investors and has accelerated the formation of alliances aimed at joint funding. About 140 private investors have been involved. Like Sitra, they, too, have a firm and genuine desire to create a Finnish culture of private investment.”

As a part of the INTRO service Sitra is prepared to share risk and responsibility by participating in joint funding ventures.

“Public and private money together can achieve more than if they act on their own,” notes Kalske. “A well-composed syndicate can place a wide spectrum of know-how and value added at a company’s disposal. Sitra’s involvement as an investor at an early stage opens up possibilities for further investment at a later date at which stage private investors can then exit.”

STICK TECH HELPING DENTISTRY IN FINLAND AND THE WORLD AT LARGE

■ Stick Tech Oy was founded in 1997 in order to commercialise Prof. **Pekka Vallittu's** glass-fibre reinforcement technology. Vallittu leads the research group on fibre-reinforced biomaterials in the Dental Laboratory at the University of Turku. The glass fibre is used to reinforce tooth caps and bridges, to make orthodontic restraints and false teeth, to correct or straighten faults, and to rebuild root canals.

Stick Tech's everStick® glass-fibre reinforcement is unique in the whole world. With it the dentist can preserve a patient's own healthy dental tissue as long as possible. Glass fibre is just as durable as metal and as flexible as natural dental tissue.

"Treatment with the aid of glass-fibre technology is economical both for the patient and to the health authority offering dental care," emphasises **Thomas Tapio**, Stick Tech's managing director. "Fibre

reinforcement looks natural in the mouth and feels comfortable. It is an excellent alternative to gold or ceramic treatment."

Home to Stick Tech's 15 experts is the Turku High Tech Centre. The company cooperates in its research with more than 40 top experts in universities in different parts of the world. Stick Tech trains dentists and dental technicians in how to use the fibre reinforcement in the countries to which it exports.

"We operate actively in ten countries. Companies with widespread sales networks handle the distribution of our products. Stick Tech leads the market by far in Finland and Denmark in the Nordic countries. We have also established our niche in Italy and Britain. In the USA sales have begun to get under way, and we recently obtained a sales permit in Japan. Also China's large markets have shown an interest", says Thomas Tapio. "Our

turnover almost doubled last year. We aim at doing the same in the coming years, too."

The year 2002 was in other respects a successful one for Stick Tech. In August Stick Tech was awarded an ISO 9001 certificate of quality for its operations. In November the company won the nation-wide INNOSUOMI prize in recognition of its meritorious innovative enterprise in developing everStick® glass fibre.

"The prize was a pleasant surprise and brought us to the awareness of a large public. It is a deserved 'Thank you' to Stick Tech's personnel, owners and others who have supported our work," says Tapio.

Sitra is one of four investors putting venture capital into Stick Tech Oy. "Sitra's international network of contacts has opened new doors for us and created opportunities for global success."

CLOTHING+ DEVELOPS CLOTHING TECHNOLOGY FOR GLOBAL MARKETS

■ "Six years ago we began looking for strategic alternatives to Reima-Tutta Oy's traditional business. We examined clothing from a new perspective and decided to develop a new kind of survival suit for drivers of snow scooters using electronic components," says **Pentti Hurmerinta**, managing director of Clothing+. "We gave the project the name Cyberia. We were joined by the Tampere University of Technology and the University of Lapland together with companies such as Nokia, Suunto, Polar Electro and Du Pont as partners in the project. Tekes, the Finnish National Technology Agency, promised to finance the project. We set up our own research centre, Clothing+, in Kankaanpää for the purpose of developing clothing technology. The centre employs 17 experts. Sitra came in as a minority shareholder when the centre was turned into a company in 2002."

The new survival suit was launched in 1999. It was equipped with a satellite-assisted GPS system, an electric compass and mobile telephone. It was an excellent suit and attracted international interest but the markets were not yet ready for this kind of smart clothing. Now Clothing+ is putting its hopes into new innovations.

"We have carried our project further. We protect our innovations by means of patents. In the course of four years we have progressed to corporate status. This year we expect to launch new products that will serve customers both at work and during their leisure hours. The Wearaphone clothing technology has been approved in Britain. Together with the mobile operator Orange we are bringing out a hands-free pouch next summer. Several other international manufacturers of pouches have also bought our technology."

Cooperation with Polar Electro has resulted in a textile pulse transmitter that is more comfortable to wear than a plastic headband. The electrodes measuring the pulse are sewn into the cloth. The transmitter is just one of many Reima-Tutta products.

Clothing+ can succeed on international markets only by networking with major distributors. "Manufacturers of sportswear and operators in the world are very interested in our R&D", Hurmerinta is pleased with the way that discussions are advancing.

"The really major breakthrough in clothing technology is still at the gestation stage with us."

SABRISCAN OY PROVIDES MOULDS FOR THE NEEDS OF INDUSTRY AS A NETWORKING PARTNER

■ In Finland the demand for industrial moulds far exceeds their supply. When **Jari Kokkonen** founded Sabriscan Oy in 1998 such moulds were imported from abroad at a cost of more than € 100 million. Good management of the entire manufacture of tools made it possible to find a domestic substitute for these imports. Sabriscan drew up a business plan for networking cooperation in which it took responsibility for being the flagship of the network. The local T&E (Employment and Economic Development) centre and Finnvera provided financial backing in order to get the company started. Tekes joined in to help develop Sabriscan's plan.

"As a flagship company Sabriscan is responsible for design, technology transfer, project leadership, and sales and marketing. Our concept rests on three equally strong pillars: technology, production and networking," says Kokkonen. "Sabriscan supplies customers with moulds manufactured by

companies of the network designed specifically to meet their specifications. Our strong cards are our versatility, flexibility and cost efficiency. We can supply customers rapidly with even major turnkey projects."

Moulds are needed in the manufacture of a wide range of everyday consumer goods and consumer durables. Sabriscan, which is based in Riihimäki, has customers in many industries. Each member of the network has a manufacturing process that differs from that of the other members of the network. This makes it possible to find the best producer to meet the customer's requirements.

"Our network has ten or so very different companies that concentrate their core competencies and endeavour to be the best in the field. We build a lasting cooperative relationship that benefits everybody. Sabriscan's task is to turn the know-how of the network's members into the strongest

possible whole. The network uses clean, environmentally friendly technology in its manufacturing processes. That, too, is an important competitive factor."

Sabriscan Oy was the first company in Sitra's Network Development and Finance project in 2002.

"We were looking for an active provider of venture capital who was also capable and willing to help us develop our business. Sitra's network found us. Sitra provided us not only with expertise but also proved to be an excellent sparing partner."

The mould manufacturer has a large domestic market and an even larger one in neighbouring countries.

"When it comes to international markets we look both east and west. But we have to meet the demands of the Finnish market first," says Kokkonen with regard to the prospects for 2003.

The Know-How of Sitra's Personnel is its Strongest Card



Personnel Manager Vilma Eskelinen.

■ “The Finnish parliament has imposed on Sitra a demanding task. We have to be pioneers and show the way in Finnish society, we have to be open-minded in seeking new ideas, and we have to show courage when faced with difficult problems,” says **Kari Tolvanen** when describing Sitra’s field of activities.

“We can fulfil these expectations only by developing and renewing ourselves as people, co-workers and experts.”

Sitra is an organisation of about one hundred experts. The size of Sitra’s personnel has tripled since 1995. According to Tolvanen the limits to growth have now been reached. The average age of the personnel is 40.5 years.

“Sitra is a community where everybody has to be fully aware of his or her duties, goals and the role they play in the overall organisation. This is how motivation and strength are generated. As a tool in our efforts we have adopted strategic management that is firmly anchored in Sitra’s system of values. The personnel draw up Sitra’s strategy for the board of directors to approve at three-year intervals. When the strategy has been confirmed, it is used as a basis for Sitra’s annual plan and budget and is given a concrete form in individual goals and tasks in the course of development discussions. Sitra adopted

a bonus system of payment two years ago. How well the personnel achieve their individual goals is used as the yardstick in this system.”

Mastery of the task strengthens capacity

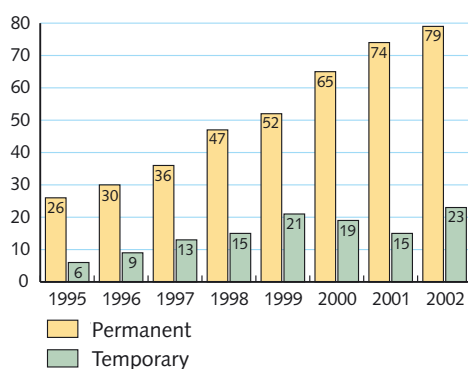
“Know-how is Sitra’s strongest card,” stresses **Vilma Eskelinen**. “A high level of professional competence is a resource that has to be continuously renewed by learning new things. We try to support individuals in their efforts to better their professional development. A sum of money is set aside for further training for each Sitra employee in the budget and how this money is used is decided in discussion with the employee’s superior. Joint language and computer courses for all are organised during working hours at Sitra’s headquarters.”

Special introduction courses are held for new Sitra employees throughout the year. “They are occasions open to all at which the heads of the different divisions present their team’s activities,” says Eskelinen.

“Details of the board’s decisions are reported to the personnel at special sessions immediately after a board meeting. The weekly Thursday coffee meetings to encourage a sense of group feeling are important. At these we have an opportunity to discuss current issues. The Thursday coffee tradition was instituted by the first president of Sitra, Klaus Waris, 35 years ago.”

Leisure activities also form a part of Sitra’s programme. In addition to parties and excursions organised by the entertainment committee Sitra also supports employees’ sports and cultural interests.

Personnel 1995–2002
(permanent and temporary)



The aim of research – job satisfaction

Job satisfaction among the personnel at Sitra is charted at two-year intervals by means of a special study.

“This is a penetrating and comprehensive study that creates a picture not only of the whole company’s but also of each team’s achievements, of each individual’s work, of the overall working environment and of management. The results are then used to set up development plans for each team,” says Kari Tolvanen.

“Eighty-five per cent of the personnel took part in the study carried out in spring 2002. Sitra’s employees are very committed to their work community and they

want to improve it. Our most important challenge is communication. We have built up many channels for this including an internal Sitranet network.”

Tolvanen emphasises the importance of working together as a way of achieving results.

“Together we are more. A humane organisation takes into account that people are different and values each individual. The atmosphere in our work community will improve when everybody is given the room to grow and feels able to make his or her own contribution to the total in the best possible way.”

Sitra Evaluated its Activities

■ The field of Sitra’s work has expanded over the 35 years of its existence from technological research and product development. It now covers a wide range of tasks serving society and business in research, innovative operations, training and venture capital. Administration and management have also been developed. In the summer of 2001 Sitra’s board of directors decided to set up an international group to evaluate whether Sitra does the right things in the right way.

Those invited to be members of the group were Reijo Vihko, Director-General, Academy of Finland, Professor Manuel Castells, University of California, Berkeley, Professor Luke Georghiou, PREST, University of Manchester, Professor Sirpa Jalkanen, MediCity, University of Turku and Finnish National Public Health Institute, Professor Frieder Meyer-Krahmer, Fraunhofer Institute for Systems and Innovation Research (ISI), and Pirjo Vuokko, Director, Institute of Management Training, Turku School of Economics and Business Administration.

In the course of making their assessment the members of the group and consulting organisations interviewed some two hundred representatives of Sitra’s interest groups and observers of Sitra’s operations. The report was given to Sitra’s board of directors in October 2002.

The report was in the main favourable and the proposals put forward in it were directed towards



The evaluation group published its report in October 2002.

ensuring that Sitra continues to operate successfully. The key challenges facing Sitra according to the group lie in extending its cooperation with both Finnish actors and international networks.

As a supporter, factor for change and mediator Sitra should aim at genuine dialogue with those responsible for innovation policy. Sitra’s flexibility in different fields is a distinct advantage but when cooperating the ability to inspire others is a critical factor for success, the group points out.

Sitra should put more effort into giving publicity to its research results and provoking debate about them.



Vice President Kari Tolvanen and professor Frieder Meyer-Krahmer.

Strengthening the internal synergy between Sitra's different fields of operation would also make for more efficient spreading of best practices.

A key condition for the development of Sitra's work according to the group is continuing self-assessment. Drawing up a benchmarking system to facilitate comparisons would provide support for this. Sitra's present administrative structure has been a success and also meets future demands.

More efficient communications to strengthen Sitra's public image

As a part of the evaluation process an analysis was made of Sitra's media image and public profile over the years 1999–2001. It was based on material published in national, regional and local newspapers, in free publications and in business and professional journals.

During the period covered Sitra received mentions 4,521 times.

The publicity that Sitra received grew steeply during the years of the study. One explanation for this was more efficient communications. The publicity accorded Sitra was greatest in the most important newspapers and business magazines. The media showed greater interest in Sitra's research, training projects and innovative operations in the years 2000 and 2001 than in previous years. Sitra's overall image in the media improved during the three-year period. Most of the publicity was neutral in tone with a negative view being expressed in only a few rare cases.

The media showed appreciation of the expertise of Sitra's leaders and asked them for their comments on many important economic and social questions.

Riitta Supperi



The Future for Handmade – Prospects for Handicrafts Enterprise was published in October 2002.

SITRA'S EVENTS 2002

PRESS CONFERENCES

Finland 2015 – publication of final report from Course 4
10.1.2002

Announcement of PreSeed/INTRO funding service
14.1.2002

Introduction of Database for Business and Public Administration: Russia, Estonia, Latvia, Lithuania, Poland
Sitra and Aleksanteri Institute
29.1.2002

Introduction of Yritys-Suomi portal (Business Finland)
13.2.2002

Announcement of the project Welfare Options
29.5.2002

Finland 2015 – publication of final report from Course 5
19.6.2002

The Two-Tier Mobile Society – Young People's Use of and Attitudes towards the Information Society – publication of the report (OSKU project) in the Young in Finland 2001 study
9.8.2002

The Risks Facing Finland – publication of preliminary findings
10.9.2002

Information and the Economy – What Remained of the New Economy – publication of report and seminar
18.9.2002

Evaluation of Sitra 2002 – publication of report
2.10.2002

The Future for Handmade – publication of report and seminar
21.10.2002

Welfare Options – The Finnish Model of the 21st Century – publication of report and seminar
30.10.2002

Sharing and Learning – Answers to the Crisis in Work – publication of report and seminar
26.11.2002

The PreSeed funding service has arranged investor meetings and INTRO forums.

SEMINARS

Exploiting Research seminar
15.1.2002

Changes and Challenges in Corporate Funding seminar
13.2.2002

Labour changes and well-being in the information society seminar
Sitra Spearhead Network, Institute of Occupational Health, Ministry of Labour, Tampere University Dept. of Further Education, ICL Invia Oyj and Elisa Communications Oyj
21.3.2002

WTO and China seminar
Sitra, Bank of Finland and University of Helsinki
22.5.2002

Factors of success for new technological companies
17.10.2002

The worthless information society?
Sitra Spearhead Network, Finnish Information Development Society (TIEKE) and Ministry of Transport and Communications
7.11.2002

EUROPE 2020 PROJECT

Legal rights and internal affairs in an enlarging Europe
11.3.2002

Publication of The Laeken Council
12.3.2002

Publication of The Barcelona Council
27.6.2002

Publication of The Seville Council
23.10.2002

FAIRS

Your Own Company Fair
Sitra PreSeed team
27.3.2002

Bio 2002 Toronto
Sitra Life Sciences team
9–12.6.2002

BIOTEC 2002 Exhibition
Sitra Life Sciences team
18–19.9.2002

TRAINING

Finland 2015, 5th Course
3–9.3.2002 Beijing
7–11.4.2002 Moscow, Berlin
6–7.5.2002 Helsinki
3–4.6.2002 Sannäs

Finland 2015, 6th Course
8–14.9.2002 Beijing
6–10.10.2002 Moscow, Berlin
4–5.11.2002 Helsinki
2–3.12.2002 Sannäs

Economic Policy 2000+, 7th Course
13–17.5.2002

Economic Policy 2000+, 8th Course
18–22.11.2002

Russian Future-Makers in Finland courses
18–22.3.2002
11–15.11.2002

SITRA'S SUPERVISORY BOARD AND BOARD OF DIRECTORS

Supervisory Board

Ilkka Kanerva, MP
Chairman

Virpa Puisto, MP
Vice-chairman

Members of parliament

Olavi Ala-Nissilä
Anneli Jäätteenmäki
Antero Kekkonen
Mauri Pekkarinen
Martti Tiuri
Kari Uotila
Ben Zyskowitz

Secretary

Anton Mäkelä, L.I.B

Board of Directors

Raimo Sailas, Permanent State Secretary
Ministry of Finance
Chairman

Erkki Virtanen, Permanent Secretary
Ministry of Trade and Industry
Vice-chairman

Markku Linna, Permanent Secretary
Ministry of Education

Satu Lähteenmäki, Professor
(from January 1, 2003)
Turku School of Economics
and Business Administration

Esko Ollila, L.I.M (until December 31, 2002)

Hannele Pohjola, Head of Department
Confederation of Finnish Industry and Employers

Aatto Prihti, President
Sitra

Secretary

Kirsti Uotila, Executive Assistant
Sitra

SITRA AT YOUR SERVICE

Prihti Aatto, President

Tolvanen Kari, Vice President

Ekström Jaana, Executive Assistant

Uotila Kirsti, Executive Assistant

Sjöblom Magnus, Director of Finance and
Corporate Funding

Anttila Tapio, Director (Training)

Eskelinen Vilma, Personnel Manager

Hanhijärvi Hannu, Director (Life Sciences)

Hautamäki Antti, Director (Research)

Hilke Marja-Leena, Communications Manager

Hämäläinen Timo, Director (Innovative Operations)

Lindblad Olli, Director (Development)

Ojanperä Heikki, Director (Industry Ventures)

Board Report for the Year 2002

■ The year 2002 was the 35th in the history of the Finnish National Fund for Research and Development, Sitra. In accordance with its terms of reference Sitra started and completed many new projects designed to promote Finland's prosperity.

The strong period of growth that had characterised the world economy for several years came to a halt in 2001. Some recovery was noted in the first half of the year under review when industrial production in the USA, the euro zone and Japan gained impetus. Many other key indicators pointed to a promising recovery in the global economy.

However, prospects for the world economy again took a turn for the worse in the autumn. The rising price of crude oil and falling share prices caused consumers and companies alike to lose faith in the economy in both the USA and the euro zone.

Domestic consumption in the USA favoured imports. As a result the deficit in the country's current balance deepened and even exceeded its previously exceptionally large figure. During the year under review the US dollar fell in value by almost 20 per cent against the euro. Nonetheless, the national debt problem as a whole remained the same. Economic growth in the European Union in 2002 was sluggish. This was mainly due to the difficulties encountered by the German economy. The poor economic situation combined with the large budget deficits in France and Germany affected efforts to maintain stability in the euro zone's monetary policy.

The international money markets experienced a low during the year. World stock markets as indicated by the key barometers fell during the year under review by about a third. This was mainly due to the loss of trust

brought about by bookkeeping scandals in the United States, unrest in the Middle East and the threat of war in Iraq. Financial policy throughout the world, however, continued to be directed towards encouraging revival. Both the American and the European central banks reduced their base lending rates at the end of the year.

In Finland total growth accelerated compared with the previous year but fell clearly short of the 2000 level. Both Finland's trade and current balances remained well in surplus despite the modest increase in exports. The public-sector surplus was among the highest in the EU countries.

During the year Sitra continued its policy of furthering Finland's economic growth by acting impartially with the aid of its research, innovative operations and training and by encouraging the Finnish innovation system through its corporate funding.

Sitra's economic resources grew strongly during the period 1995–2000 on the back of the generally favourable trend. However, during the last two years the world has seen a major setback in the economy, a cooling of the stock markets and a lull in the enthusiasm for technology. Together these have bedevilled Sitra's efforts to develop its corporate funding in the way that it was able to do with its injections of finance during the boom years. As a result the number of Sitra's investment decisions using mainly the yield from its endowment capital fell by 25 per cent compared with the previous year's level to € 48 million. Payments made on the basis of decisions already taken in earlier years amounted to € 42 million, in other words 19 per cent less than the preceding year.

Sitra reported a loss for the year 2002. This was principally due to a revaluation of Sitra's investment in



Sitra's Board of Directors met ten times during the year. Members of the Board from left Chairman Raimo Sailas, Aatto Prihti and Esko Ollila (top), Hannele Pohjola, Erkki Virtanen, Kirsti Uotila (Secretary of the Board) and Markku Linna (bottom).

venture-capital and endowment-capital companies and the poor returns from Sitra's portfolio companies. Sitra's strong balance sheet, however, and its ability to adapt its financial backing to market conditions ensure that the fund will continue to have access to good sources of finance for its operations.

In the summer of 2001 Sitra's board of directors decided to set up an international group to evaluate whether Sitra does the right things in the right way. Those invited to be members of the group were Reijo Vihko, Director-General, Academy of Finland, Professor Manuel Castells, University of California, Berkeley, Professor Luke Georghiou, PREST, University of

Manchester, Professor Sirpa Jalkanen, MediCity, University of Turku and Finnish National Public Health Institute, Professor Frieder Meyer-Krahmer, Fraunhofer Institute for Systems and Innovation Research (ISI), and Pirjo Vuokko, Director, Institute of Management Training, Turku School of Economics and Business Administration. The report was in the main favourable and the proposals put forward in it were directed towards ensuring that Sitra continues to operate successfully. The key challenges facing Sitra according to the group lie in extending its cooperation with both Finnish actors and international networks.

RESEARCH, INNOVATIVE OPERATIONS AND TRAINING

The main aim of Sitra's research, innovative operations and training is to predict the forces of change affecting Finnish society and provide information about them for decision-makers. Sitra's activities strive to give respected, reliable and impartial back-up to decision-makers in their efforts to develop the welfare society.

Research

One of the principal projects during the year was a study aimed at considering alternative methods for developing the welfare state. Its purpose is to inspire debate about the present standing of the welfare state and the changes that need to be carried out in the light of the parliamentary elections that will take place in 2003. The project was carried out in the form of workshops. Experts took part with the researchers engaged in the study in discussions on the present situation of the welfare state and the main challenges and alternatives that it faces. A book on the topic, entitled *Hyvinvoinnin valinnat – Suomen malli 2000-luvulla* (Welfare Options – The Finnish Model in the 21st Century) was published in October.

During the year under review the final report on the new economy, *Tieto ja talous – Mitä "uudesta taloudesta" jäi* (Information and the Economy – What Remained of the "New Economy") was published. The report stressed the importance of using information and know-how to strengthen the economy and of adapting information and communications technology to traditional fields.

The first two-year stage of the Europe 2020 research programme, which addresses the future of Europe, was completed in the summer. Parts of the programme dealt with the enlargement of the European Union, the role

of small nations, an analysis of the meetings of the European Council, and legal and internal affairs. The project was carried out in collaboration with the Brussels Centre for European Policy Studies and EuroComment. During the year analyses of three summit meetings and reports on legal and internal affairs were published. At the end of the year Sitra published a book, *Tiivistystä ja hajautuva Euroopan unioni* (The Integrating and Fragmenting European Union). Further subjects for research in the programme include the long-term prospects and policies for the European Union. The analyses of the meetings of the European Council will continue.

A preliminary study on risk management in Finland was published. This covered some ten different risk areas (e.g. the economy, ageing, technology, the environment and terrorism) and charted what bodies are responsible for coping with the risks. The purpose of the report is to identify the need for further research and development linked with how to handle the main risks.

Developing and renewing traditional business activities constitute one of Sitra's key responsibilities. Sitra has therefore from time to time made studies of handicrafts and design. During the year under review a study was made of the opportunities for enterprise in the field of handicrafts. This project was carried out in close cooperation with the Ministry of Trade and Industry and the Ministry of Education. The report, *Käsin tehty tulevaisuus – Näkökulmia käsityö-yritysjyyteen* (The Future for Handmade – Prospects for Handicrafts Enterprise), was published in October. The book included recommendations on how the handicrafts industry might be developed in the future.

In the autumn Oxford University Press published two

of Sitra's works. These were Networks of Innovation, which forms part of the innovation system research programme, and Manuel Castells and Pekka Himanen's *The Information Society and the Welfare State: The Finnish Model*, which is an expanded version of the book on the Finnish information society published the previous year. During the year projects were continued or started on the economic difficulties associated with an ageing population, family-friendly work, immigration, cultural know-how, the effects of globalisation, social innovations and merit payment.

Innovative operations

In 2002 two new projects were started within innovative operations (Innoclubs and the all-day school). The OSKU (Learning Regions) programme together with the Centre for Social Innovations in Eastern Finland (ISO INKE) and the Spearhead Network continued. In addition, four preliminary studies were carried out (the virtual skills school, a recruitment company for young people, special agricultural production and NetCenter) and models for innovative projects continued to be developed.

The purpose of the Innoclub project was to strengthen regional innovative activity and regional development outside the main centres of growth. Innoclub activities were tested in three places: in the province of Oulu, in the region of Pieksämäki and in the local government authority of Pukkila. The clubs succeeded in finding both business and social innovations.

In the autumn Sitra initiated the all-day school experiment. The purpose of this is to help support young people as they grow and develop. It is being carried out in six schools in Jyväskylä, Kuopio, Sievi and Sipoo. In these schools the burden of the school day is eased by introducing hobby and outdoor activities between and after teaching hours and by lengthening the lunch break. In this way afternoons spent alone can be reduced in number and hobby activities brought within the reach of all age groups regardless of the parents' income levels.

The Learning Regions (OSKU) project develops the local information society and citizens' networks. Locally organised networks were successfully set up in eight areas. In addition, schemes to improve content aimed at bettering the services offered by the private, public and third sectors by means of the Internet were also initiated. The results of research and evaluation of the schemes will allow the project to be updated in the areas.

The Spearhead service oriented towards developers of the information society continued its work according to plan.

The ISO INKE project being carried out in the Pieksämäki region is engaged in the process of evolving new models of operations for the production of welfare services. The aim is to widen the range of services offered by encouraging cooperation between companies providing such services and also joint purchase schemes and collaboration between local government authorities. Networking of service companies, quality training and the development of cost accounting for local services and call-centre operations mediating services continued. An evaluation made towards the end of the year will help Sitra to define more accurately the aims of the project. This will be done in early 2003.

The planning of new projects continued with preliminary studies. These covered the virtual school project, a company that aims to help young people over the difficulties of finding work, opportunities for specialised agricultural production in Finland, and the NetCenter project.

Training

The training strategy drawn up in 1999 continued to be put into practice in the year under review. Courses five and six of the Finland 2015 programme were held. The opening seminars of both were held in Beijing, the following in Moscow and Berlin, and last two in Finland.

In its report the fifth course raised the themes know-how and innovations, Finland's attractiveness for both people and enterprises, a secure state with adequate protection of citizens' rights and the family and health. Course 6 penetrated more deeply the problems of creativity and innovativeness and a secure society founded on strong values. The reports put forward proposals for further discussion by Sitra workshops. These included the definition and measurement of social capital, the foundations of Finland's creative strategy together with family policy and responsibility for upbringing. Workshops proposed by earlier courses were held and reports made on *Hyvinvoinnin valinnat – Suomen malli 2000-luvulla (Welfare Options – The Finnish Model in the 21st Century)* and *Oppimisella osallisuuutta – Vastauksia työn murrokseen (Sharing and Learning – Answers to the Crisis in Work)*.

Two week-long courses were arranged within the framework of the Economic Policy 2000+ programme. Two Russian Future-Makers in Finland courses aimed at young Russian decision-makers were held during the year. These lasted a week and acquainted the participants with the workings of Finnish society.

CORPORATE FUNDING

By means of its corporate funding activities Sitra tries to put money into commercialising technology, evolving new and successful business, and promoting international competitiveness and cooperation.

During the year the PreSeed service and technology transfer operations sought out projects based on know-how and with a strong commercial future and business plans in an early stage of their existence. Sitra's venture-capital operations are directed primarily towards investment in start-up enterprises with investment being made directly in companies or investment funds. In 2002 Sitra extended its venture-capital work from technology and medicine to networks of more traditional enterprises.

Funds made available from Sitra's corporate funding decisions amounted to € 41 million, which was 32 per cent less than the previous year.

PreSeed service

The first full year of the PreSeed service's operations came to an end at year-end. By then it had achieved all its major objectives. The mainstay of the PreSeed service is made up of the INTRO marketplace, which brings together investors and companies looking for capital in order to facilitate start-up funding. The business plan, entrepreneurial potential and level of the technology of such a company are all evaluated in the INTRO marketplace, and account taken of quality demands made by investors in their wish to put money into the enterprise. In drawing up its business plan and especially in developing commercial applications the company may apply for LIKSA funding from Sitra and Tekes (National Technology Agency) jointly in order to reach the necessary INTRO level. In return for LIKSA funding Sitra gets the right to negotiate with the company the terms of first investment in the market. The committee of investment advisors consists mostly of private individuals (so-called business angels). The INTRO investment is usually in the form of a syndicate between several private investors.

The principal reason why the financing of companies registered with INTRO has been a slow process is the lack of professional and reliable selling skills. During the year one idea of the new service was to open up the INTRO marketplace to sales and marketing professionals and to present companies wanting this service to them as possible places for employment.

The year 2002 saw 139 new LIKSA applications

being processed. LIKSA granted funding amounting to € 1.3 million to 40 applicants. Sitra's share of this sum was half. Forty-five LIKSA projects were completed during the year.

The number of INTRO investors rose during the year to 140. Twelve investments were made as part of the INTRO programme, in three of which Sitra holds a minority share. During the course of the year 48 companies registered with INTRO; of these 22 were at the active presentation or negotiation stage.

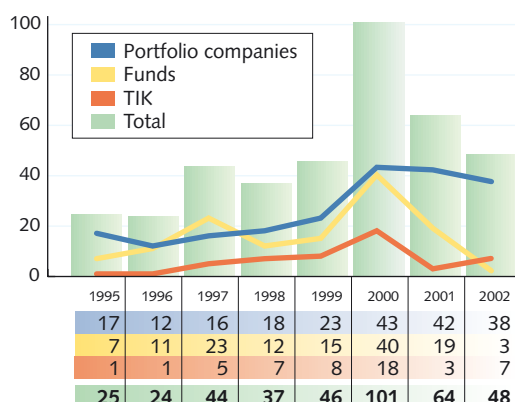
Commercialisation of technology

Commercialisation of technology means bringing the innovations from universities, research institutes and companies to the market. After being patented the innovation is usually commercialised either through a licensing agreement or by a company set up for the purpose of technology transfer.

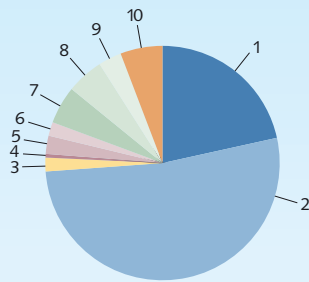
When endeavouring to find a commercial application for a new idea or product the most important actors are the technology-transfer companies that specialise in licensing. Sitra is a minority shareholder in six such technology-transfer companies, and Sitra backed up their operations during 2002 by financing part of their licensing operations.

By commercialising technology Sitra also tries to get started business operations based on innovations. The task of setting up and developing new enterprises is encouraged by companies specialising in helping and developing new business, for example, technology centres and incubators. Sitra's role here in this respect advanced considerably during the year when the forces of Helsinki Science Park Ltd and Sitra's business know-how project were amalgamated to form the Helsinki Business and

Sitra funding decisions 1995–2002 (M €)



Sitra's funding decisions 2002



	€ M	%
1. Growth companies	10.3	21.5
2. Seed investments	25.1	52.2
3. Network development and financing	0.9	1.9
4. PreSeed	0.3	0.5
5. Commercialisation of technology	1.2	2.5
6. Other funding	0.9	1.9
7. Fund investments (Finnish 0.0 %, foreign 5.2 %)	2.5	5.2
8. Research	2.5	5.1
9. Training	1.5	3.2
10. Innovative operations	2.8	5.8
Total	48.0	100.0

Science Park. The purpose of the Park is to promote the establishment and development of new companies, especially those fostered by the University of Helsinki, the Helsinki School of Economics and the Helsinki Swedish School of Economics and Business Administration.

Venture-capital operations

Technology and knowledge-intensive companies

During the year under review the technology sector was extremely quiet. Sitra's dealflow and the number of projects evaluated fell markedly compared with the preceding year. The situation was similar throughout Europe. Many factors, such as falling share prices, the difficulties encountered by telecommunications operators, and the news of the first failures of ICT projects in the new economy were reflected in the caution shown by companies, investors and funds. At the same time differences of opinion over evaluating investments increased rapidly and made it difficult to find venture capital.

Sitra concentrated its efforts in the technology sector on ensuring continuing finance for those portfolio companies considered to have the greatest chances of success. Further investment amounting to € 2.8 million was made in nine companies. Sitra exited entirely from a total of twelve companies and in part from four others. Three decisions leading to new investment were made last year at a cost of € 2.5 million. Other funding

decisions amounted to € 1.9 million, some of which was in research and development projects.

In the course of the year Sitra also charted the level of know-how in technological fields other than information technology. These studies were carried out mainly by research teams in the fields of opto- and microelectronics, photonics, and environmental and energy technology and also in wireless local networks for companies.

The technological spin-off potential of major Finnish enterprises was also studied. This research concentrated on projects developing new technology where, because of the benefits of the technology, it was thought desirable to involve outsiders with whom to share the risk.

Public-sector actors – the Ministry of Trade and Industry, the T&E (Employment and Economic Development) centres, Tekes, Finnvera Oyj, Finnish Industry Investment Ltd., Finpro and Sitra – joined forces to set up the www.yrityssuomi.fi portal. With the aid of this portal entrepreneurs can easily identify public-sector funding and service products. Other forms of cooperation were pursued in other projects, for example, a common brand and a wide-ranging survey directed at the personnel of public-sector actors to chart the opportunities for cooperation and the need for further development.

Sitra continued its policy of reinforcing strategic cooperation with other funds when it comes to investing in Finnish and foreign technology. This was especially true of those funds where points of contact exist from the viewpoint of the internationalisation of Sitra's own portfolio companies and the development of Sitra's investment activities.

Life Sciences

Sitra's life-sciences operations have expanded considerably in the last years. The biosciences account for 46 per cent of Sitra's venture-capital operations. The main foci of attention are biotechnology and medicine. Sitra's aim is to ensure that the most important innovations made in Finland and business based on those innovations are first developed in Finland before they go international.

During the year Sitra concentrated more than ever on ensuring the operational capabilities of the principal companies in its portfolio and strengthening the product development portfolios. The downturn on the venture-capital markets led to less risk capital being available. This made it considerably more difficult to conduct funding negotiations for investment in new companies

and especially in more advanced enterprises. In particular, when it came to further funding it proved difficult to persuade new investors to take on the role of lead investors. Given the difficult market situation this often led to temporary funding solutions, especially bridging investment. Cooperation with existing funds that invest in this field was strengthened.

During the year Sitra took an active part in organising planned enterprises or consolidating those already in existence. This work will be emphasised even more in 2003. Efforts were made to increase the turn-round rate in Sitra's portfolio by trying harder to accelerate exits. Sitra exited, either totally or in part, from eight companies altogether during the year under review.

As part of the eHealth project efforts are being made to bring greater efficiency to health care using digital methods. However, to get the project going proved more difficult than expected. A tendering operation for health advice services in the Helsinki region had still not been resolved by the end of the year. The project will continue, nonetheless, in 2003 regardless of what the outcome is.

Investment decisions on life-sciences operations during the year amounted to € 26 million. Of this sum € 6 million was first-time investment and € 19 million in further investment.

Network development and finance and regional operations

During the year under review Sitra started a new unit for network development and finance. The goal of this is to promote regional development by seeking out, evolving and financing local networks of traditional small and medium-sized enterprises and, in particular, their flagship companies.

A study made in January 2002 of existing SME networks as a start to this new project revealed the existence of 162 such networks. From these were extracted the 14 most interesting and a further 26 potential networks for continued attention. The total number of SME networks in Finland may well be twice or three times greater than the number found by the study.

Sitra's network development and finance evaluated 66 networks during the year. In 31 of these further discussions were being held with entrepreneurs. Letters of intent on measures to develop business planning were signed with nine networks. One has already been

completed and led to Sitra investing in the flagship company.

The three-year Skills Technology project was completed at the end of the year. The main purpose of this project was to modernise the traditional operations of entrepreneurs by networking SME enterprises with the aim of strengthening their international competitiveness and customer orientation. An evaluation of the project will be made in 2003.

The bags and leather goods and interior design pilot schemes continued until the summer of 2002. The creation of new product designs and their realisation by a number of companies proved to be a keen challenge in both schemes. Sitra took the initiative in proposing the establishment of a "Bag Valley" development centre to continue the task of further helping firms making bags and leather goods.

Sitra has been involved as an investor and builder of a network of regional venture-capital funds for more than ten years. The funds invest not only in technology companies but also in companies in traditional industries without prejudice. Five regional management companies and one such sector-oriented company run the funds. In all of these Sitra is a shareholder. Sitra has invested a total of € 21.3 million in 20 regional venture-capital funds in different parts of Finland.

During the year under review decisions were taken to invest a total of € 2.5 million in regional funds. Sitra also took decisions on direct investment amounting to € 2.5 million in new and portfolio companies. Of this sum the majority was made up of joint investment with regional venture-capital funds.

Sitra Management Oy

Sitra Management Oy is a subsidiary wholly owned by Sitra. Its task is to administer Sitra's holdings in management companies with venture-capital operations. Sitra decided in 2002 on a process whereby the shareholdings held in companies administered by Sitra Management Oy are the company's property. This was put into practice in such a way that Sitra transferred its shares in management companies as a capital contribution to Sitra Management Oy.

Sitra Management Oy employed an average of two persons during the year. The company made a loss of € 0.8 million for the year and the balance sheet total for the year was € 4.3 million.

ADMINISTRATION AND PERSONNEL

Sitra is a public fund under the supervision of the Finnish Parliament. Its Supervisory Board is made up of the parliamentary Supervisory Council of the Bank of Finland. During the year under review the Supervisory Board met on five occasions. Its members consisted of MPs Ilkka Kanerva (chairman), Virpa Puisto (vice-chairman), Olavi Ala-Nissilä, Anneli Jäätteenmäki, Antero Kekkonen, Mauri Pekkarinen, Martti Tiuri, Kari Uotila and Ben Zyskowitz. Anton Mäkelä acts as secretary to the Board.

Sitra's Board of Directors met ten times in the course of the year under review. Members of the Board of Directors were Raimo Sailas (chairman), Erkki Virtanen (vice-chairman), Markku Linna, Esko Ollila, Hannele Pohjola and Sitra's president, Aatto Prihti. Secretary to the Board was Kirsti Uotila. At its meeting on December 14, 2002 the Supervisory Board elected Professor Satu Lähteenmäki as new member instead of Esko Ollila, who retired from the Board at the end of year 2002.

Auditors appointed by the Finnish Parliament are Johannes Leppänen (chairman) (deputy Paula Lehtomäki), Matti Saarinen (Ulla Juurola), Iivo Polvi CPFA, AA (Arto Kuusiola, APA), Juha Karpio (Kalervo Kummola) and Prof. Reino Majala APA (Kari Manner APA). Secretary to the auditors was Prof. Kalervo Virtanen APA.

Juha Wahlroos APA of the auditing company SVH PricewaterhouseCoopers Oy was appointed by the Supervisory Board to be responsible for Sitra's internal audit and for auditing Sitra's portfolio investments.

Sitra's personnel at the end of the year under review numbered 102, of whom 25 were in research, innovative projects and training, 41 in corporate funding and 36 in administration. Of the personnel 59 per cent are female and 41 per cent male. Sixty-one of the personnel have university or higher education; 37 are men and 24 women.

ENDOWMENT CAPITAL

Responsibility for managing the equities and fixed-income securities that make up Sitra's endowment capital has been entrusted to outside asset-management companies. Alfred Berg Omaisuuudenhoito Oy and Mandatum Omaisuuudenhoito Oy handle the Finnish equity portfolio. The same companies also invest in the interest markets. Finnish investments account for 57 per cent of the entire market value of Sitra's endowment. Lombard Odier Darier Hentsch & Cie, Morgan Stanley & Co. Int. Ltd. and JP Morgan Fleming Asset Management Ltd acted as asset managers for foreign equity investments. Sitra invested in two new mutual

funds during the year. At the beginning of the year Sitra invested € 10 million in the equity-index fund managed by Handelsbanken, and the same sum was invested in the international ABN Amro's Multi Strategy fund that invests in hedge funds at the end of the year. The rest of Sitra's endowment capital consists of real estate and venture-capital funds. Sitra's new investment in real estate, Innopoli II, was completed in 2002.

The nominal value of Sitra's endowment capital is € 235 million. The market value of the capital at year-end was € 565 million. The value fell during the year by € 190 million.

PROPOSAL FOR THE DISPOSAL OF LOSS

The Board of Directors proposes that the net loss for the year, amounting to € 62,599,981.48, be carried forward.

PROFIT AND LOSS ACCOUNT

(in € 1,000)

		1.1.–31.12.2002	1.1.–31.12.2001
		€	€
ACTUAL OPERATIONS			
Corporate funding			
Income			
		1,122	2,276
		1,076	3,291
		2,053	1,651
	1)	4,252	7,218
Expenses			
	2)	-49,477	-30,440
	3)	-769	-729
		-3,838	-2,999
		-54,083	-34,168
		-49,831	-26,950
Research, innovative projects and training			
Income			
	4)	19	15
Expenses			
	5)	-7,357	-7,719
	6)	-271	-273
		-1,401	-1,225
		-9,029	-9,217
		-9,010	-9,202
Administration			
Expenses			
	7)	-7,114	-5,901
	8)	-545	-622
		-1,315	-1,668
		5,239	4,224
		-3,736	-3,967
Loss		-62,577	-40,119
INVESTMENT OPERATIONS			
	9)	69,458	88,855
	10)	-69,481	-73,617
		-23	15,239
NET LOSS FOR THE YEAR		-62,600	-24,881

BALANCE SHEET

(in € 1,000)

		31.12.2002	31.12.2001
		€	€
ASSETS			
Fixed assets			
Tangible assets			
		1,040	1,288
		14,518	14,415
		110	142
	11)	15,669	15,844
Funding operations			
		144,124	177,024
		18,278	16,875
		10,816	11,508
	12)	173,218	205,406
Endowment capital investments			
		112,314	124,266
		144,506	222,119
		56,360	38,890
		46,477	30,190
		95,550	85,600
	13)	455,208	501,065
		644,096	722,316
Current assets			
Receivables			
	14)	3,975	5,546
		2,208	6,042
		6,183	11,588
TOTAL ASSETS		650,279	733,904
LIABILITIES			
Equity			
		235,463	235,463
		378,495	403,375
		-62,600	-24,881
		551,358	613,958
Accumulated appropriations			
		32,042	40,437
Liabilities			
Short-term			
		0	3
	15)	21,238	22,397
	16)	45,640	57,110
		66,879	79,510
TOTAL LIABILITIES		650,279	733,904

NOTES TO THE FINANCIAL STATEMENTS

ACCOUNTING PRINCIPLES

Receivables and payables in foreign currencies have been translated into euros at the exchange rate in force on the last day of the financial year.

Shares, participations and bonds in endowment investments have been valued at the original acquisition cost or at market value in accordance with the lower of cost or market principle.

The Balance-Sheet value of investments in portfolio companies and funds is recorded at their historical acquisition value or a lesser sum determined by internal valuation. The internal valuation procedure is performed twice a year and any necessary value adjustments (revaluation or devaluation) made on the basis of the valuation at year-end is included in the financial statements. The value of investments in venture-capital funds is calculated using the same principles where applicable. The basis of their value is the same as that given by the funds for their portfolios.

Sitra's accounts follow the same principles as laid down in the Finnish Accounting Act with the following exceptions:

- in the case of corporate funding early-stage investments (seed finance) a risk reserve is made in accordance with the principle of prudence.
- expenses incurred in the commercialisation of technology, innovative projects and training are recorded as expenses and the same applies to debts on which repayment is conditional.
- repayments related to funding decisions (income) are recorded only after payment has been received.

NOTES TO THE PROFIT AND LOSS ACCOUNT (in € 1,000)

Further details are given here of the different items in the Profit and Loss Account. The number refers to the corresponding entry in the Profit and Loss Account.

CORPORATE FUNDING

1 Income from corporate funding	2002	2001
seed finance	323	246
growth companies	2,473	3,142
investment in venture-capital funds	1,384	3,679
PreSeed	3	0
network development and finance	5	0
commercialisation of technology	65	150
	4,252	7,218

Seed finance		
capital refunds	86	51
interest payments	163	174
profit from sales	15	0
other income	60	22
	323	246

Growth companies		
capital refunds	0	57
interest payments	280	231
profit from sales	1,016	2,250
dividends	1,032	279
other income	144	326
	2,473	3,142

Investment in venture-capital funds		
capital refunds	112	0
shares in profits	1,076	3,291
interest payments	6	15
profit from sales	92	26
dividends	98	326
other income	1	20
	1,384	3,679

PreSeed		
other income	3	0
	3	0

Network development and finance

other income	5	0
	5	0

Commercialisation of technology

capital refunds	5	0
interest payments	4	11
dividends	56	139
	65	150

2 Expenses from corporate funding

	2002	2001
seed finance	15,978	20,082
growth companies	19,037	4,560
investment in venture-capital funds	12,314	4,142
PreSeed	990	943
network development and finance	259	0
commercialisation of technology	899	714
	49,477	30,440

Seed finance

expenses	283	468
value adjustment	24,039	7,372
change in risk reserve	-8,344	12,242
	15,978	20,082

Growth companies

expenses	858	877
value adjustment	18,178	3,683
	19,037	4,560

Investment in venture-capital funds

expenses	72	-98
value adjustment	12,242	4,239
	12,314	4,142

PreSeed

expenses	990	943
	990	943

Network development and finance

other expenses	259	0
	259	0

Commercialisation of technology

expenses	648	714
value adjustment	251	0
	899	714

3 Other expenses

	2002	2001
seed finance	0	16
growth companies	501	566
investment in venture-capital funds	31	47
PreSeed	48	26
network development and finance	133	0
commercialisation of technology	56	73
	769	729

RESEARCH, INNOVATIVE PROJECTS AND TRAINING

4 Income on investment

	2002	2001
research	19	15
	19	15

5 Investment expenses

	2002	2001
research	2,109	2,095
innovative projects	4,019	4,505
training	1,229	1,119
	7,357	7,719

6 Other expenses	2002	2001
research	65	178
innovative projects	140	12
training	66	83
	271	273

A total of 42 research, training and innovative projects received funding during the year under review. The most important of these were:

Research projects	
Information and the Economy – What Remained of the "New Economy"	
Welfare Options – The Finnish Model in the 21st Century	
Europe 2020 – research programme	
The Future for Handmade – Prospects for Handicrafts Enterprise	
The Economic Impact of an Ageing Population	
Family-Friendly Work	
The Effects of Globalisation at Grass-Roots Level	
The Impact of Culture on the Economy	
Risk Management in Finland – preliminary study	
Innovative operations	
The All-Day School	
Learning Regions	
The Centre for Social Innovations in Eastern Finland (ISO INKE)	
Spearhead Networks in the Information Society	
Training	
Finland 2015 – programme	
Economic Policy 2000+ – programme	
Russian Future-Makers in Finland – programme to acquaint young decision-makers from Russia with Finnish conditions	
Training's Answer to the Challenges of Work – workshop	

ADMINISTRATION

7 Personnel expenses	2002	2001
Personnel expenses		
wages and salaries	5,036	4,072
pension expenses	882	881
other payroll expenses	1,195	948
	7,114	5,901

Personnel at year-end		
corporate funding	37	28
research, innovative projects and training	19	13
administration	36	33
	92	74

During the year one person from corporate funding was on leave of absence and one on maternity leave. From research one person was on rotation leave and from administration two were on maternity leave and one on nursing leave.

The number of people engaged in Sitra's projects was ten (2001 15), of whom one was on nursing leave. The wages and salaries and other payroll expenses for project personnel amounted to € 1.0 million (in 2001 1.3 million) and are included in expenses for funding projects.

8 Depreciation	2002	2001
Depreciation according to plan		
machinery and equipment	491	494
other capitalised expenditure	51	67
renovation of office premises	3	62
	545	622

Depreciation according to plan on fixed assets is calculated in equal instalments of the original acquisition value for the useful life of the asset.

Useful life as used in depreciation according to plan	
other capitalised expenditure	5 years
renovation of office premises	10 years
machinery and equipment	5 years
computer equipment acquired after 1.1.1999	3 years

Depreciation of € 0.3 million on invested assets during the year (2001 € 0.3 million) has been calculated in the same way as depreciation on fixed assets. The sum is included in expenses for investment operations.

INVESTMENT OPERATIONS

9 Income from investment operations	2002	2001
profits from sales	45,212	58,322
interest income	9,192	11,123
bond price gains	2,689	4,209
exchange-rate gains	1,168	3,019
dividend income	8,492	10,135
rental income	2,688	1,974
shares in profits	17	73
	69,458	88,855

10 Expenses from investment operations	2002	2001
asset depreciations	47,654	55,197
regained depreciations	-880	-3,212
losses on sales	18,182	18,496
bond price losses	1,020	1,837
exchange-rate losses	2,688	539
asset management fees	677	880
real-estate expenses	980	627
value adjustment of real-estate shares	-770	-730
other expenses	-71	-17
	69,481	73,617

Depreciation has been recorded per each acquired asset group. For both Finnish and foreign shares the latest trading price has been used. Bonds and debentures have been valued according to the price given by the Helsinki Stock Exchange.

NOTES TO THE BALANCE SHEET (in € 1,000)

Further details regarding the contents of the Balance Sheet are given here. The number refers to the corresponding entry in the Balance Sheet.

11 Tangible assets

During the year Sitra acquired fixed assets amounting to € 0.4 million (2001 € 0.9 million).

	Acquisition cost Dec. 31, 2002	Accumulated depreciation according to plan Dec. 31, 2002	Book value Dec. 31, 2002
machinery and equipment	2,845	1,977	867
other capitalised expenditure	405	304	102
renovation of office premises	617	608	9
other fixed assets	174	0	174
	4,041	2,889	1,151

shares and participations	2002	2001
shares in office premises	14,509	14,405
other shares	9	9
	14,518	14,415

12 Fund investments	2002	change	2001
seed finance	32,042	-8,395	40,437
growth companies	37,150	-4,147	41,297
investment in venture-capital funds	100,620	-19,663	120,283
commercialisation of technology	2,873	-127	3,000
other investments	533	143	390
	173,218	-32,188	205,406

Seed finance, 48 companies

Abmin Technologies Ltd	IWS International Inc.
Ailocom Oy	Juventus Pharma Oy Ltd
Arbonaut Ltd	Karyon Ltd
Artscan Oy	Lamicon Ltd
Bio-Nobile Oy	LT Linkkitechdas Oy
BioTie Therapies Corp.	MoBiDiag Oy
BonAlyse Ltd	Nanobac Oy
Boneca Corp.	Nanoway Oy
CadFaster Inc.	Neoforest Oy
Chempolis Oy	Neomed Oy
Clothing Plus Oy	Nesenta Oy
CTT Cancer Targeting Technologies Oy	Nexstim Oy
Deltagon Group Ltd	Oseir Ltd
EigenValue Ltd	Osfix International Oy
Elcard Oy	Panphonics Oy
Enterprixe Software Ltd	Polymer Corex Kuopio Ltd
FIT Biotech Oyj Plc	Privanet Capital Corp.
Focus Inhalation Oy	Quantronics Oy
Gallaeus Oy	SafetyCity Ltd Oy
GeneOS Oy	SourceCode Finland Oy
Geniem Oy	u-NAV Microelectronics Corporation
Hauler Oy	Unicrop Ltd
Hormos Medical Corp.	Vivoxid Ltd
Ipsat Therapies Oy	Voxlab Oy

Venture-capital investments	Dec. 31, 2002	change	Dec. 31, 2001
shares and participations	35,473	1,813	33,660
capital loans	18,319	3,498	14,821
other loans	2,590	-144	2,734
value adjustments	-24,340	-13,561	-10,779
	32,042	-8,395	40,437

Nine new seed companies were added to Sitra's portfolio during the year. In these Sitra invested € 6.2 million altogether. During the year nineteen companies were removed from Sitra's seed-company portfolio. Of these one was sold, one was transferred to a growth company in the form of a capital contribution, seven went into liquidation (original investment € 7.1 million), eight were transferred to the growth list and one was dropped from the active portfolio. In addition two seed companies merged during the year.

Growth companies, 64 companies

Add2Phone Ltd	Kibron Inc.
Aplac Solutions Corporation	Kielikone Oy
Aplicom Oy	Kivia Oy
Auditbit Oy	Kuntokumppanit Oy
Avain Technologies Oy	Labmaster Ltd
B-Band Ltd	Mail Systems Oy
Beveysys Oy	Meconet Oy
Biofons Ltd	Medikro Ltd
BPM Group Oy	Med-In Oy
Camelina Ltd	MediXine Ltd
DBC International Ltd	Mega Elektroniikka Ltd
Delfin Technologies Ltd	Megatrex Oy
Diomed Inc.	Mehiläinen Oy
Exomi Oy	Moduleo Oy
FibroGen Inc.	Neorem Magnets Oy
Fimet Oy	Net Release Global Oy
Finnsonic Oy	Okmetic Oyj
Fluid-Bag Ltd	Optatech Corp.
Fluilogic Ltd	Pharmatory Oy
Glocal Oy	Pharming B.V.
Heptagon Oy	Prowellness Ltd
Hidex Oy	Puuman Oy
HMM Software Oy	QPR Software Plc
Innomedica Ltd	R 5 Vision Oy
Innotrac Diagnostics Oy	Reactionlab Ltd
Ion Blast Ltd	Sabriscan Oy
IST International Security Technology Oy	Setec Oy

Shanghai Fimet Medical Instrument Co. Ltd	Sysline Oy
Smartner Information Systems Ltd	Tassu-Taimisuoja Oy
Smilehouse Oy	Toolmakers Lahti Oy
Stick Tech Ltd	TR-Tech Int. Oy
Syncron Tech Oy	VLSI Solution Oy

Investments	Dec. 31, 2002	change	Dec. 31, 2001
shares and participations	50,701	7,876	42,825
capital loans	12,280	4,824	7,456
other loans	4,668	-412	5,080
value adjustments	-30,500	-16,436	-14,064
	37,150	-4,147	41,297

During the year four new companies were added to Sitra's growth portfolio. In addition, eight companies were transferred from the seed portfolio to the growth portfolio. Eleven companies were dropped from the growth portfolio. Of these three were sold, five went into liquidation (original sum invested € 4.7 million) and three were dropped from the active portfolio.

Investment in venture-capital funds	Dec. 31, 2002	change	Dec. 31, 2001
international funds and management companies	47,638	-13,064	60,702
regional funds and management companies	20,497	3,011	17,486
other Finnish funds and management companies	32,485	-9,610	42,095
	100,620	-19,663	120,283

International funds and management companies**Funds**

Advanced European Technologies N.V.	Russian Technology Fund L.P.
Apple Tree Ventures II L.P.	Strategic European Technologies N.V.
Associated Venture Investors III	Technologies N.V.
Atlas Venture Fund III	Technologiesholding Central and Eastern European Fund N.V.
Baltic Investment Fund I	Trident Capital Fund V
Baltic Investment Fund II	Ventech Capital II L.P.
Baltic Investment Fund III	

Management companies

Baring Capricorn Ventures	3TS Venture Partners Oy *)
Boston Millennia Partners LP	Baltcap Oy *)
Crescendo III, L.P.	Baltic Investment Fund Management Ltd *)
Diamondhead Ventures L.P.	Baltic Venture Advisers Oy *)
Edison Venture Fund IV	BIF Management Ltd *)
European Renaissance Capital L.P.	Proventure Oy
Euroventures Nordica II B.V.	European Fund Investments Carried Interest Unit Trust *)
Global Private Equity II L.P.	Nordic Russian Venture Partners Ltd *)
Hambros Advanced Technology Trust II L.P.	Norum (Cyprus) Ltd
Hambros Advanced Technology Trust III L.P.	RTF Founders Ltd *)
HealthCap 1999 KB	RTF Management Ltd *)
InnKap 2 Partners	
InnKap 3 Partners	
Merlin Biosciences Fund L.P.	
Norum (Cyprus) Ltd	*) through Sitra Management Oy

No new investment was made in international funds during the financial year. One fund investment was transferred to endowment capital fund investments. Holdings in six asset-management companies were transferred in the form of a capital contribution to Sitra Management Oy. In addition, one management company has bought out Sitra's holding. Sitra has the following sums invested in 27 funds and two management companies

	Dec. 31, 2002	change	Dec. 31, 2001
shares and participations	53,722	-9,243	62,965
capital loans	0	0	0
other loans	3,158	-25	3,183
value adjustments	-9,242	-3,796	-5,446
	47,638	-13,064	60,702

Regional funds and management companies**Funds**

Aboa Venture Ky I	Spinno-seed Oy
Aboa Venture III Ky	Tamseed Ky
Ganal Venture Ky	Teknoventure Oy
Grow How Rahasto I Ky	Teknoventure Rahasto II Ky
Indekon Oy	Vakka-Suomen
Innoventure Oy	Pääomarahasto Ky
Karinvest Oy	
Lapin Rahasto I Ky	Management companies
Matkailunkehitys Nordia Oy	Aboa Venture Management Oy
Midinvest Oy	Innofinance Oy
Midinvest I Ky	Nordia Management Oy
Pikespo Invest Oy Ltd	Sentio Invest Oy
Sention kasurahasto Ky	Teknia Invest Oy
Savon Teknia Oy	Teknoventure Management Oy
Seedcap Ky	

During the year under review Sitra made three new regional fund investments. Altogether Sitra has invested in 20 regional funds and six management companies

	Dec. 31, 2002	change	Dec. 31, 2001
shares and participations	21,417	3,931	17,486
capital loans	0	0	0
other loans	0	0	0
value adjustments	-920	-920	0
	20,497	3,011	17,486

Other Finnish funds and management companies**Funds**

Bio Fund Ventures I Ky	Sitra Management Oy
Bio Fund Ventures II Ky	Bio Fund Management Oy *)
Bio Fund Ventures III Ky	Eqvitec Partners Oy *)
CIM Venture Fund for Creative Industries Ky	*) through Sitra Management Oy
Eqvitec Teknologiarahasto I Ky	
Eqvitec Teknologiarahasto II Ky	
Finnventure Rahasto II Ky	
Finnventure Rahasto III Ky	
MB Equity Fund Ky	

During the year under review no new fund investments have been made in Finland. In these 9 funds and one management company Sitra has invested

	Dec. 31, 2002	change	Dec. 31, 2001
shares and participations	36,615	-2,110	38,725
capital loans	0	0	0
other loans	3,370	0	3,370
value adjustments	-7,501	-7,501	0
	32,485	-9,610	42,095

Commercialisation of technology

AboaTech Oy Ab	Innopoli Oy
Culminatum Oy	Innotalli Oy
Finn-Medi Tutkimus Oy	Licentia Oy
Helsingin Tiedepuisto Oy	Oulutech Oy
Helsingin Yliopiston Holding Oy	Sitrans Oy Ltd *)
Innokarelia Oy	Tuotekehitys Oy Tamlink

*) through Sitra Management Oy

During the financial year one new investment was made in a technology-transfer company. In addition, one such company has been transferred in the form of a capital contribution to Sitra Management Oy. In eleven such companies Sitra has invested

	Dec. 31, 2002	change	Dec. 31, 2001
shares and participations	2,513	71	2,442
capital loans	505	-88	593
other loans	143	0	143
value adjustments	-288	-110	-178
	2,873	-127	3,000

Other investments

NASDAQ Europe S.A.

Navicre Oy

16 companies have been dropped from the active portfolio.

In these 18 objects Sitra has invested

	Dec. 31, 2002	change	Dec. 31, 2001
shares and participations	5,299	-2,472	7,771
capital loans	1,656	-169	1,825
other loans	835	-194	1,029
value adjustments	-7,257	2,978	-10,235
	533	143	390

13 Endowment capital investments 2002 2001

Long-term investments

bonds and notes	112,314	124,266
Finnish shares	90,214	134,277
foreign shares	54,292	87,843
mutual fund investments	31,791	9,855
private equity fund investments	24,569	29,035
real-estate investments	46,477	30,190

Short-term investments

bonds and notes	2,733	6,465
certificates of deposits	89,487	76,862
cash	3,268	2,188
other short-term investments	62	85
	455,208	501,065

Difference between the capitalised acquisition cost and market value of publicly quoted endowment capital securities

market value	286,996	504,250
corresponding book value	176,300	231,975
difference	110,696	272,275

14 Accrued income

Interest for the financial year has been entered as income from investment operations and amounted to € 3.2 million (2001 € 4.6 million).

15 Accrued expenses

Accrued liabilities include € 17.2 million (2001 € 18.2 million) debts to private equity funds, where agreement has already been reached and for which Sitra's liability exists.

16 Liabilities from funding operations

Debts arising from funding agreements where agreements has already been reached and for which Sitra is liable.

LOANS DUE FOR REPAYMENT ENTERED AS EXPENSES 31.12.2002

Loans due for repayment have been entered as expenses. They amounted at the end of the financial year € 3.1 million (2001 € 2.3 million). Of these loans € 0.1 (0.2) million are sums that have been repaid and where repayment follows a fixed timetable, and € 2.0 (1.4) million where repayment is bound to royalties instead of a fixed timetable. Loans that have not been repaid or where the terms of repayment have not yet been agreed amounted to € 0.9 (0.8) million.

OFF-BALANCE SHEET LIABILITIES**– 31.12.2002**

Where funding has been agreed

	2002	2001
but no agreement yet signed		
seed funding	13,146	13,232
growth company funding	5,676	5,492
fund investments	6,025	8,030
PreSeed	3,544	3,715
network development and finance	248	0
commercialisation of technology	309	744
research	1,829	2,393
innovative projects	5,194	11,019
	35,971	44,625

GUARANTEES

Guarantees for others total € 0.1 million (2001 € 0.1 million).

Helsinki, February 10, 2003



Raimo Sailas



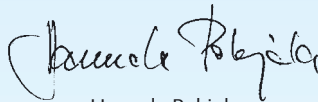
Erkki Virtanen



Markku Linna



Satu Lähteenmäki



Hannele Pohjola



Aatto Prihti

AUDITORS' REPORT

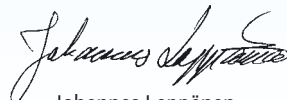
Having been appointed by the Finnish Parliament as auditors we have examined the financial statements, the bookkeeping and administration of the Finnish National Fund for Research and Development (Sitra) for the financial period 2002 to the extent required by good auditing practice.

Authorised Public Accountants PricewaterhouseCoopers Oy have performed the internal audit and audit of funded projects. We have familiarised ourselves with their reports of these audits.

The financial statements, which show a net loss of € 62,599,981.48 have been drawn up in accordance with current legislation. The financial statements present a correct and adequate description of the Fund's activities and its financial position.

We recommend that the Profit and Loss Account and the Balance Sheet be adopted and that members of the Board of Directors and the president be discharged of responsibility for the financial period covered by our audit. We recommend that the proposal for the losses for the year made by the Board of Directors in their report be approved.

Helsinki, February 12, 2003



Johannes Leppänen



Juha Karpio



Reino Majala

Authorised Public Accountant



Iivo Polvi

Chartered Public Finance Auditor
Approved Accountant



Matti Saarinen



./ Kalervo Virtanen

Authorised Public Accountant

PRINTED PUBLICATIONS

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S. Niemelä

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(A Successful Business Network – A Network Builder's ABC)
Edita Publishing Oy
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Oikeusturvan perusteet Suomessa
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EuroComment
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P. Ludlow

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(only in print)

P. Ludlow

The Seville Council
EuroComment
(only in print)

Finland 2015 – Factors of Success and Challenges in Finland's Future 4

Finland 2015 programme 4, final report
(in Finnish)

Finland 2015 – Factors of Success and Challenges in Finland's Future 5

Finland 2015 programme 5, final report
(in Finnish)

Publications of the OSKU project

P. Kurikka

Kahden kerroksen kännykkäkansaa – Nuorten tietotekniikan käyttö ja tietoyhteiskunta-asenteet Nuorten Suomi 2001 -tutkimuksessa (The Two-Tier Mobile Society – Young People's Use of and Attitudes towards the Information Society in The Young in Finland 2001 study)

J. Nurmela, S. Öörni, R. Nyberg, P. Hokka
Matkalla kansalaistietoyhteiskuntaan? Raportti asukkaiden suhtautumisesta tietö- ja viestintätieteiden käyttöön OSKU-alueilla syksyllä 2001 (Towards a Citizens' Information Society? Report on People's Attitudes to the Use of Information and Communications Technology in the OSKU Regions)
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Finland 2015 – Factors of Success and Challenges in Finland's Future 4

Finland 2015 programme 4, final report
(in English and Swedish)

Finland 2015 – Factors of Success and Challenges in Finland's Future 5

Finland 2015 programme 5, final report
(in English and Swedish)

M. Kangas

e-service, investointihyödykkeiden etähuolto – Teollisuuden muutos tuotelähtöisyydestä ratkaisujen ja tuotteen elinkaartien toimittajaksi sekä muutosprosessin mahdollistamat uudet liiketoimintamahdollisuudet; e-service-raportin tiivistelmä
(e-service, Remote Support of Investment Utilities – Industrial Change from Product Orientation to a Provider of Turn-Key Solutions and Life-Cycle Support together with New Business Opportunities Made Possible by the Process of Change; e-service Report – Summary)



Finnish National Fund for Research and Development
Itämerentori 2, P.O.Box 160, FIN-00181 Helsinki, Finland
Phone +358 9 618 991, Fax +358 9 645 072
www.sitra.fi