

Policy Case Studies Finland

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NATIONAL WORKPLACE DEVELOPMENT PROGRAMME:

PROMOTING LEARNING NETWORKS – Timo J. Härmäläinen

1. National workplace development programme

The Ministry of labour in Finland has promoted inter-firm and inter-organizational networking since 1996 as a part of the the National Workplace Development Programme. The aim of the programme is to boost productivity and improve the quality of working life by supporting the development and utilization of knowledge and innovations in Finnish workplaces. The budget of the programme was FIM 95 million for the 1996 – 1999 period and it is currently an important part of the Finnish government's strategy.

The development projects of the programme are facilitated by organizational researchers who bring their theoretical, empirical and contextual knowledge to help in the practical problem solving situations of networks. They also model the problems situations and their solutions which is important for the diffusion of the accumulated knowledge.

The programme gives priority to projects aimed at bringing about a comprehensive change in work organization. This may involve technologies, organizational forms, leadership, vocational and professional skills, working conditions and occupational health issues. The programme supports projects initiated by companies and public-sector organizations. The projects may come from any sector and they do not need to be limited to specific workplaces. However, both management and staff should be committed to cooperation and the project's aims.

2. Network facilitation

In 1996, The State Science and Technology Council of Finland allocated 30 mFIM for the National Workplace Development Programme. The aim of this additional funding was to launch new network facilitation activities and projects. These networking activities also became a part of the eight cluster programs initiated by the Council.

The network facilitation activities of the programme involved 13 networking projects and about one hundred organizations between 1997–1999. About 80 percent of these organizations were manufacturing firms but some government organizations were also included. The projects involved both vertical and horizontal networks; both small and large organizations were involved. In most projects, the Ministry of labour was not the sole source of funding, others included TEKES, ESR, other ministries, etc.

The network facilitation policies of the National Workplace Development Programme are based on the recognized need for a systemic transformation within and among interdependent organizations. In particular, both technological and organizational innovations are needed for good performance and sustainable development. The main goal

of the networking projects is to promote the systemic transformation of firms and other organizations towards learning organizations and learning networks. Moreover, as noted before, the researchers develop a conceptual model the networking process for future use.

The specific problems ("failures") which the network facilitating policies aim to overcome include: (a) lack of information about the potential benefits of network cooperation in organizations (information problem), (b) difficulty of implementing systemic change in organizations and networks (perhaps due to lack of shared understanding, trust and vision), (c) uncertainty about the ability to reap the benefits of human capital investments (required complementary resources), as well as (d) structural, institutional and mental rigidities in the organizational environment (systemic failures).

The government intervention has influenced the different phases of the networking process in the following way.

Awareness creation. The policy makers used publications, seminars and internet in order to create awareness about the potential benefits of networking and the policy instruments available for that purpose.

Search for partners. The programme did not participate in the search of potential partners, it was the responsibility of the applicants to the programme to find their partners. However, it was recognized that this may leave some potential networks and partnerships undeveloped (particularly in service sectors) since small firms often do not recognize the benefits of network cooperation. Reaching such firms may require an active contribution from regional and sectoral players. The information of regional TE-centers was, however, used in the selection of projects by the Ministry.

Building shared understanding and trust. Often in cooperation with a flagship firm, the researcher arrange basic analyses of the network's strengths and weaknesses and development discussions and workshops with the network's organizations. In horizontal cooperation, benchmarking seminars have provided a shared base for learning. All these methods build the network's shared understandings and trust.

Organizing the network. The organization of the network has often taken place parallel with the building of shared understandings and trust. It involves interactive workshops and seminars where the researchers and members of the participating organizations build a shared vision and strategy for the network. The network vision and strategy are then turned into practical development goals and targets for the network. Achieving these goals and targets becomes the task of inter-organizational development teams. The organization of the network also requires shared behavioral rules which are cooperatively developed at this stage.

Complementary resources. The networks have not been complete without some additional resources and development efforts. The personnel of the participating organizations has often required training in the new organizational processes and methods. Intra-organizational structures and operating methods have also needed adjustment. The cooperation has been facilitated with shared information infrastructures and cooperative

cost accounting methods. The network has developed and acquired these complementary resources with the help of the programme.

3. Results

It is too early to say anything definitive about the results of the network facilitating policies since many of the projects are still continuing. However, it seems clear that external assistance in networking helps the organizations to overcome many practical problems in networking.

Building shared understandings, trust and the vision and strategy for the whole network takes time. Thus policy makers should be patient enough to give the participating organizations a fair chance to learn to cooperate with each other. Successful cooperation will take considerable time to mature.

The method of research-assisted networking has considerable benefits. It not only builds the conceptual models for further dissemination of the results but also puts the projects into wider social and research perspective. There is a clear need for more well-trained researchers and consultants in Finland who can effectively facilitate inter-organizational networking. There is also a clear need for increasing cooperation among network policy makers in different ministries and public agencies in order to spread best practices and foster mutual learning.

The Centre of Expertise Programme – Gerd Schienstock

Introduction

In Finland, regional expertise politics have been practised already in the 1960s and 1970s when regional universities were founded to support processes of innovation and specialisation. The set-up of Science Parks or Technology Centres can be seen as another major element of regional innovation policy. Science Parks or Technology Centres began to operate in Finland as early as 1981; their number has increased during the late 1980s and early 1990s. Today, the Finnish Science Park Association (FISPA) has 17 member centres. The great majority of Technology Centres are located in university cities. All in all, about 1,200 enterprises and training organisations employing about 12,000 experts are located in Technology Centres, which are known as the Finnish Centres of Expertise.

Each centre has a specific technological profile adapted to the needs of the regional economy. They are managed by their own operative companies, which support enterprises and other organisations in issues related to specialised innovation, knowledge and technology transfer and business services. During the past years, the technology centres have transformed themselves into important organisations in the process of regional development with a variety of different functions.

FISPA was founded in 1988 and acts as a national development and networking organ to technology centres. Its member parks are its main clients but it also acts in behalf of different ministries and other institutes and organisations in Finland. FISPA's main task is to co-ordinate activities of its member parks, to open up contacts with other organisations as well as ministries, and to promote co-operation between members and other partners.

The Centre of Expertise Programme

In 1994, a National Centres of Expertise Programme was launched by the Finnish Ministry of Interior as part of the new programme-based regional development strategy, in which the Technology Centres and their operational companies play an active role. The programme is managed and co-ordinated by FISPA. The basic idea of the Centres of Expertise Programme is to focus on regional strengths and to enhance and further develop high-level 'know-how' instead of supporting weak areas.

The general idea of the programme is to improve the conditions that enable the location and development of internationally competitive knowledge-intensive business enterprises (Valtonen 1999: 285). The programme should also support the process of regional specialisation. An important aim of the programme is to improve network building between

companies, universities, research institutes, polytechnics and training institutions as well as regional authorities to jointly develop regional competitiveness. In particular, the programme should stimulate joint projects between industry and universities as well as research institutes in order to tighten the relationship between knowledge creation and application of knowledge.

The expected long-term consequences of the programme are the improvement of the regional vitality and of co-operation opportunities. It is expected that the programme will have a positive impact on regional innovation activities and the set-up of new businesses, and that it will attract foreign companies and investors. There are hopes that, in the long run, the programme will lead to the development of specialised regional agglomeration economies. These should include a number of globally acting high-tech companies, highly specialised supplier companies, local pools of labour with specialised skills and competencies, a cultural and institutional infrastructure, and the development of trust relationships between the key economic actors.

The Centres of Expertise were selected through a heavy competition. Quality, commitment, effectiveness and organisational aspects were the key selection criteria. Altogether, the following nine criteria were set for the selection of the Centres of expertise.

A. Quality criteria

- 1) Quality of research and education: (position of research activities on a national and international scale; utilisation of research activities, patents, licence agreements, etc.; importance of researcher training; national significance of professional training)
- 2) Business activities: (national quality of business activities in the domain – any spearheads?; co-operation between enterprises and research – any spin-offs?; entrepreneurial potential in the near future)
- 3) Internationalisation (significance of international researchers co-operation); degree of internationalisation in enterprises – share of exports)

B. Effectiveness criteria

- 4) Effect on regional development: (utilisation of intellectual resources for renewable, innovative production; significance as a regional Centre of Expertise)
- 5) Effect on national development: (significance of a national Centre of Expertise)

C. Organisational criteria

- 6) Critical mass: (critical mass of research units and focus in the domain of the Centre of Expertise; importance of the enterprises and suitability of their specialisation degree to match the Centre of Expertise)
- 7) Networking: (significance of the enterprises and research institutes as a part of national and international co-operation networks; realisation of co-operation between enterprises and research institutes and synergy benefits)

8) Organising: (functionality and effectiveness of the programme)

9) Financing: (realism and relevance of the financing plan; commitment of the parties to the financing plan; value gained through the Centre of Expertise financing)

In 1994, the government nominated eight regional Centres of Expertise. The total sum granted to these Centres of Expertise was FIM 10 million. In 1995, three nation-wide network-type Centres of Expertise were appointed by the Government. The total sum granted to these network-type Centres of Expertise was FIM 4.4 million. All in all, on the first round, the total sum of about FIM 15 million (ECU 2.5 million) was granted to the programme.

The first phase of the programme ended in 1998. Then, a decision to continue the programme until 2006 was made. The Ministry of Education and the Ministry of Labour have also joint in supporting the programme through a project implemented by FISPA. The second phase of the programme started in 1999; it now includes 16 centres. Besides fourteen regional centres, still two network-type centres exist. Financing for the programme has increased. The aim is to foster regional specialisation and networking. It is expected that the programme will also have an impact on the profiling of universities.

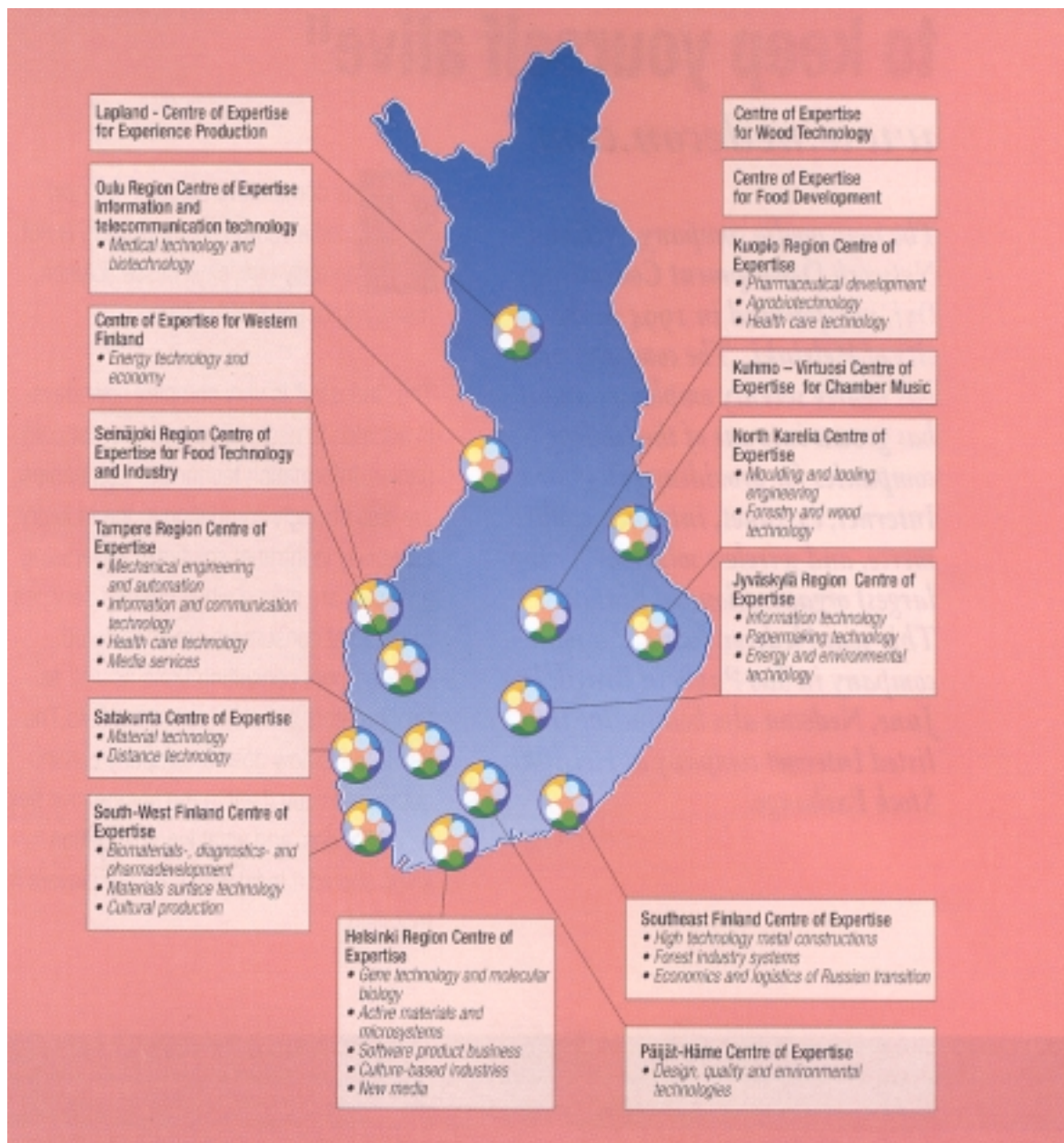


Figure 1: Regional Distribution of Centres of Expertise

Network policy

Enabling and supporting network formation can be seen as the main aim of the Centre of Expertise Programme. Central is the idea of providing a platform for various actors to meet and get in touch with each other. Spatial closeness, it is assumed, creates an environment in which people from various companies meet regularly and talk to each other. These informal contacts may lead to the identification of common problems, complementary research, production activities, or other aspects that can become the basis for co-operation. It is not the idea of the programme that the few people employed by the centres should actively approach companies and make them aware of the network possibilities; instead, working under 'the same roof' should make the opportunities of co-operating and network formation visible. Of course, the extent to which employees try to sell the idea of networking to the member enterprises of the centres varies.

Also, concerning the search for partners, the active involvement of employees of the centres varies. Again, the basic philosophy is that spatial closeness should help companies find co-operation partners among the member enterprises of the centres. However, in the case the needed partners cannot be found within the centre, employees of the centre may assist companies in finding the right partners.

Building trust and a shared knowledge base takes time. It is the general idea of the programme that spatial closeness, enabling companies to monitor each other, may contribute to the building of trust. People working under the same roof get to know each other and through informal contacts may build up trust, which can then lead to co-operation. Through organising seminars or other meetings, the centres may help in establishing a common knowledge base that allows for informal knowledge exchange.

It seems to be quite common that employees of the centres help organise the network. They can arrange meetings among possible partners and suggest forms of co-operation. In general, however, it is assumed that companies will organise the network themselves and employees of the centre will only assist, when asked for advice or help. Ensuring or providing complementary resources is probably the most important contribution of the centres to the formation of networks. Some centres, for example, also include the development of a risk finance system. The aim is to improve the availability of risk finance capital for SMEs at the various stages of their development. The centres, in general, are not actively involved in training activities but they can assume some kind of a bridging function between business and the regional education system.

The extent to which the staff of the centres is involved in supporting and stimulating active co-operation also varies. In some centres, employees are more actively involved in keeping the networks going. Then participation of staff members in meetings of the networks is quite common. Other centres, however, do not engage in those kind of activities that aim at keeping the networks alive, assuming that only those networks will survive, in which in common interests are strong enough to continue co-operation. Summing up, we can argue that the Centre of Expertise Programme covers more or less all aspects of networks-enabling policy. However, centres may differ according to the active engagement of their employees in various functions. The philosophy is more to provide a platform for the self-organisation of networks. Centres become most actively involved in the search for partners and in ensuring complementary resources, such as venture capital, for example.

Table 1: Aspects of networks-enabling policy covered by the Centre of Expertise programme

Policy aspect	Yes	No
Awareness of the network possibility	X	
Search for partners	X	
Building trust and shared knowledge base	X	
Organising the network	X	
Ensuring/providing complementary resources	X	
Active co-operation	X	

Practical experiences and results

An evaluation of the first operating period of programme, made by the Technical Research Centre of Finland (VTT) (Ahola et al 1997), came to the conclusion that it produced some positive results, although it was still in a development phase. Co-operation among regional universities, research institutes, enterprises, and public authorities started to intensify. In particular, network building between universities and research institutes got a strong push. However, at the beginning of the programme, the commitment of enterprises was rather low. While increased availability of funding, new contacts and image benefits were seen as important results developing from the programme, it did only seldom result in new products or innovative practices. For the centres which could build upon already existing networks, the take-off phase was short, while other centres had difficulties in producing early results. A full-time employed co-ordinator, a clear vision for the future, and strong ties to regional development strategies were the most important factors to success (Ahola et al. 1997).

The network-type Centres of Expertise had more difficulties in getting started. The top down approach applied by one of the centres, which was based on the idea to transfer the knowledge from universities to businesses in a linear process, turned out to be less successful due to lack of commitment on the part of the companies (Valtonen 1999). National networks were obviously too far away from actual business processes. A new approach, developed in 1997, focused more on the regional network formation, while at the same time obtaining know-how and resources from the national network. Still, some problems concerning trans-regional co-operation continue to exist.

After a four-year period, some quantitative results could also be reported. About 1,200 production enterprises and 300 service enterprises participated in the programme. During the first period, it created about 8,000 new jobs and contributed to the renewal of about 7,000 jobs (Jääskeläinen 1999). Some 290 new high-tech enterprises were established in the various centres, and about 130 enterprises moved to these areas. In 1997, more than 100 regional projects with a total value of FIM 260 million were implemented. At the beginning of 1998, the value of ongoing projects was over FIM 800 million. The volume of financing for the projects included in the first four years of the programme totalled to some FIM 1.920 million (ECU 320 million). The catalyst nature of the programme becomes visible in the fact that the financial contribution of the Ministry of Interior, which launched the programme, was only 2%, while the enterprises covered about 30% of the project financing. One quarter of the finance came from Tekes and 15% from cities and municipalities. The finance coming from the European Union amounted to about 13%. Also, the universities with about 630 man-years participated very actively in the programme. In some cases, universities set up a new unit to service companies. The regional units of the Technological Research Centre of Finland (VTT) have been partners in a significant number of projects. However, the participation of small business was rather low.

Conclusion

The Centre of Expertise Programme can be seen as a focused attempt to support knowledge creation and knowledge dissemination through supporting network formation. It is widely accepted among key national actors in the national innovation system, and regional actors have also participated very actively in the programme, indicated by the financial support given by cities and municipalities. Early problems, resulting from the top-down approach, have been reduced and new strategies have been developed which represent a real network approach. Various actors, including universities, research institutes, companies, and regional authorities, are nowadays co-operating on an equal level.

The programme seems to have contributed to processes of sectoral specialisation and competence building. It also had a positive impact on the labour market, although this is always difficult to measure. The catalytic character of the programme seems to be very efficient, as only a small sum of the whole finance for all the projects came from the programme itself.

There are, however, also some problems related to the programme. The networking was very successful in stimulating co-operation between universities and research institutes, whereas the participation rate of enterprises needs to be increased. Particularly, the participation rate of small companies is rather low. Furthermore, while the programme helped stimulate co-operation within regions, inter-regional co-operation has not materialised. Actually, some kind of competition between regions seems to hinder inter-regional co-operation. Last but not least, the focus on existing strengths and infrastructure may in the long run lead to lock-in situations (Valtonen 1999). There is a need to focus more on future-oriented programme activities.

References

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The Finnish Cluster Programmes – Tuomas Pentikainen

There are eight Finnish cluster programmes under six ministries. The programmes were planned to take place during the period 1997–99. In practice, most programmes started during 1998 and they will last until 2000 or 2001. The total financial volume of the programmes is more than FIM 600 million. One fourth (FIM 170 million) of funding is public 'ear marked' cluster-specific funding, which was allocated to ministries. TEKES and the Academy of Finland are other major public financers. Ninety seven per cent of funding is domestic, 60 per cent is competitively allocated and public, and one fourth is private. (see Table 1).

Two of the programmes, WoodWisdom and the programme of the Well-Being Cluster have been analysed in a recent evaluation (Pentikäinen, 2000). The others will also be evaluated in the near future.

WoodWisdom is a research-oriented activity. Its rationale is to create incentives for collaboration between forest sector's non-profit research organisations and companies, in particular SMEs. There are principally two rationales for the programme. First, there is a lack of incentives for collaboration between research organisations in the forest sector, and this programme aims to correct this problem. Second, the programme aims to improve collaboration between public research organisations and companies, with SMEs in particular. Thus the programme has horizontal activities and a clear vertical focus, too. In practice, the activities have focused on the improvement of collaboration at the public non-profit research sector.

Organisationally WoodWisdom has a dedicated co-ordinator and it has a formal organisation. In evaluation the network members reported this kind of governance to be efficient and good. The programme is national and it has a fixed duration of circa three years. Participants enter the programme in open competitions, which has caused a high stability in the network, even though all participations are, in principle, project participations with fixed durations.

Well-Being Cluster aims to create an operative network of social and health sectors' regional practitioners. The underlying idea is to create collaboration incentives to sectors that are heavily supplied, demanded and regulated by public bodies. The programme tries to build a private-public network with clear horizontal and vertical features. It aims to foster SME-participation but it has been problematic. Well-Being cluster also has a clear regional aspect, as it is a regional pilot of a planned national activity.

Table 1. Overall information and the division of funding of the Finnish cluster programmes

cluster programme	background information				Financing by financier FIM 1,000,000														
	starting date	# of projects	# of participating companies	# of participating units	public cluster specific funding					other domesticpublic funding			int. Public funding		Public total	private funding	own funding	grand total	
					KTM ¹	MMM ¹	STM ¹	LM ¹	TM ¹	YM ¹	Academy of Finland	TEKES	other	EU	other				
Wood Wisdom	1.5.1998	113	12	61	2.4	12.5					27.2	75.0		n.a.	n.a.	117.1	87.5		204.6
The Well-being cluster	1.11.1998	17	8	30			25.5		0.7				15.5	12.2		53.6		1.6	55.2
Food cluster	11.12.1997	12	17	29		12.0					0.3	0.5	1.9			14.7	0.5	11.7	26.9
KETJU ²	1.12.1998	30	60	70	1.4			12.0			0.8	20.0		3.8		38.0	46.0		84.0
TETRA ²	1.1.998	48	29	71				11.0			0.3	1.0	34.5	1.5		48.3	7.5	7.4	63.2
NetMate ²	7.4.1998	10	n.a.	n.a.	0.6			9.0					0.6	0.6		10.8	1.3	1.3	13.4
Workplace development	05.1997	13	86	n.a.					30.0							30.0		50.0	80.0
Environmental cluster	1.1.1998	60	70	180	1.5					25.0	5.7	13.0	3.6			48.8	5.8	25.5	80.1
total		303	282							25.0	34.3	109.5	56.1	18.1		361.3	148.6	97.5	607.4

¹KTM = Ministry of Trade and Industry, MMM = Ministry of Agriculture and Forestry, STM = Ministry of Social Affairs and Health, LM = Ministry of Transport and Communications, TM = Ministry of Labor, YM = Ministry of the Environment

²TETRA and KETJU are transport cluster programmes. NetMate is a programme of information technology, particularly telecommunication

Well-Being cluster has a dedicated and formal organisation . In principle it is a fixed-term project, but in practice its activities – if continued – will require permanent and substantial public funding.

In both cases it is very early to evaluate the benefits and disbenefits of the programmes. However, the WoodWisdom has been able to create improved financial and operative co-operation in Finnish forest research. It remains to be seen whether this improvement will

prove permanent and whether it will have economic impacts. However, network members report that ability to deal with complexity, learning effects and scope and scale of activities have improved due to the programme. They also tend to anticipate economic benefits. There is still room for improvement of public-private networking.

What comes to the Well-Being Cluster, it seems to be fair to say that the complexity and friction of the programme has been higher than what was expected. Thus it is too early to truly evaluate the effectiveness of the programme. Clearly, the programme itself has been a valuable learning process, and – at least – it has revealed the high complexity of the governance of deeply public networks where motives, incentives and resource problems are difficult to control.

Types of programmes	The Finnish cluster programmes		
	Wood Wisdom	Well-being cluster	
Awareness of the network possibility	x	X	
Search for partners	x	X	
Building trust and a shared knowledge base	x	X	
Organising the network	x	x	
Ensuring providing complementary resources		x	
Active co-operation	x	x	

Reference: Pentikäinen T (2000) Economic Evaluation of the Finnish Cluster Programmes. Working Papers 50/00. VTT, Group for Technology Studies; Espoo.