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ENABLE Component 3

Cooperation and Networking of SME Analysis

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Contents

1. Approach

Businesses are today subject to major change forces. Previous local and regional markets are increasingly becoming national markets and the national markets are becoming international. At the same time businesses specialisation is seen as a key strategy to become successful. The answer to this challenge is, especially for SMEs, to develop collaboration and networking. They have to be able to handle quite substantial changes in operations and collaborate with a series of other companies and organisations. An international network will involve other languages, cultures and business traditions. In addition the businesses face new issues of legislation, standardisation, etc. that will influence operations. The challenges for the business community will also be reflected in the regional innovation system. The education and research sector, the local and regional authorities responsible for business development policies and the business organisations themselves have to adapt.

We propose to use the well known "The triple helix" framework as the approach to the network analysis. "The trippel helix" has a focus on businesses, education and research (R&D), and the support system as core to developing future business opportunities.

For this to be successful there need to be networks at different levels in addition to the triple helix, networks between R&D organisations and between the actors in the regional innovation support system. The regional innovation system has to become networked it self and its inter-regional activities is a key part of the changes.

The ENABLE programme is a very good arena to work on these issues as the partners in the project along with the regional partnership represent the R&D organisations and the innovation support system, and together there is lots of connections to regional businesses.

In ENABLE Component 3 the aim is to develop, validate and disseminate a full set of procedures and activities related to regional stimulation of international networking of SMEs.

2. Key Concepts I: The Network Society and Enterprises

The new economy, which is often referred to as the Network Society, is growing as a result of the information technology revolution and it is said to be informational, global and networked (Castells 2000a). The new economy is informational because "the productivity and competitiveness of units or agents in this economy … fundamentally depend on their ability to generate, process and apply efficient knowledge-based information". It is global because "the core activities of production, consumption, and circulation, as well as their components (…) are organized on a global scale, either directly or through a network of linkages between economic agents" The new economy can be referred to as networked because its productivity is generated through and competition is played out in a global network of interaction between business networks.

We see new modes of development that relate the way we use technology to improve efficiencies in production. The informational mode of development is "flexible, pervasive, integrated and reflexive rather then additive evolutionary" (Castells 2000b). Reflexivity refers to the speeding-up process of innovation because both raw materials and end products are information, which is easy to feedback to the production process, to improve the product in the next phase. This reflexivity is the basis for an informational and global economy. The result of this is a restructuring of all economic activities into a new mode of production. This informational mode of production is a challenge for many regions to cope with. Important factors are access to information and processing capability. Processing capability may become a challenge if the "brain drain" continues, this is also affected by the more immediate problem of access to sufficient "infrastructure" which affects enterprises ability to participate in the network society" (Jansen 1998).

Further, Castells (2000a) claims that although the economy is global it is distributed asymmetrically, and it is the "traditional" western countries that are driving the development. Large areas and population groups are excluded, while at the same time the development of the new economical paradigm is affecting all groups directly or indirectly. This fundamental asymmetry affects the level of integration, the competitiveness and the ability to benefit from economic growth. To avoid marginalization it is particularly important for regions to stay abreast of the development of this new type of society.

The rise of the informational, global economy is characterised by the development of a new organisational logic, which however, manifest itself under different forms in various cultural and institutional contexts. The first form has been the move from mass production to flexible production. A second is the crisis of the large corporation, and the resilience of small and medium firms as agents of innovation and sources of job creation. The networking structure can be a mix of vertical and horizontal; it is vertical through subcontracting relations between a central coordinating enterprise and the SME that make up the production and distribution channels. It is horizontal if there exist independent networks between the sub-contracted enterprises in a broader sense than through the sub-contracting network. In these kinds of networks the enterprises can be distributed independent of the location of the other enterprises in the network (Castells 2000b).

Another form of organisational flexibility can be seen in multidirectional network models enacted by SME and large corporations alike. In these networks enterprises seek collaboration with similar enterprises, where no single enterprise leads the network; instead it is a flexible structure where closer alliances are made on a project basis between the enterprises. In this way they may establish themselves in a market niche and gain competitive advantage.

Different trends are occurring in parallel and interact and influence each other, even though they are independent of each other and along very different dimensions. However, the crucial point is that networks are the fundamental stuff of which new organisations are and will be made, and they have the potential to expand and integrate enterprises both locally and globally.

3. Key Concepts II: Regional Economies and Innovation Systems

It seems now widely accepted that the linear innovation and diffusion model which for a long time was dominating, is too simple to describe many of the current innovation processes (se e.g. Lundvall 1992; Malecki 1991; Rogers 1995). This research has pointed to that current innovation processes are influenced by a number of factor, both at a micro and at more aggregate levels. The term regional innovation systems have thus been introduced to explain part of this complexity. The main characteristics of the regional innovation systems, as defined through evolutionary research in the fields of regional economics (Morgan 1997) are learning and innovation, both individual and collective innovations.

Collective innovations are seen as interactive processes where the firms' networks are important aspects of their collective innovative capability. This term captures the trend to build regional organizations and networks to strengthen the innovation capability of enterprises (Cooke 1998). It also includes collaboration of innovative activities (knowledge development and diffusion) between the enterprises and the knowledge organizations such as e.g. research institutes, colleges, libraries, consulting companies etc in the region (Asheim and Isaksen 1997; Lundvall 1992; Smith 1997).

Technology has only recently been considered as a distinct factor in regional economics, such as in Storper (1997) which explains an innovation system as a multi-layered structure including technologies, organizations, and territories. In this structure, technological change is recognized as one of the principal drivers in changing territorial patterns of economic development though in the social context. The organizations are not only dependent on territorial contexts of physical and intangible inputs, but they have greater or lesser proximity to each other.

The innovative activity is seen as partly a local and regional phenomenon that represents a new theoretical understanding of how the innovation processes occurs. An understanding that is concretized in the interactive innovation model (Asheim and Isaksen 1997; Isaksen 2000), which defines innovations as interactive, non-linear knowledge development and transfer: technology and knowledge flows freely between R&D activities, the industry and other stakeholders.

Healey et al. (1999) offers a framework that is based on the interaction between external pressure and local institutional capacities, knowledge and relational resources and mobilization capability. When communities are facing new external challenges, then they need to utilize the Institutional capital in the community to make the change. Institutional capital can be developed to enable regions to allow local initiatives to be “shaped by powerful external forces, can mobilise and transform inherited traditions and practices and thereby shape the futures of localities in ways which enhance quality of life, the business environment and environmental quality in socially-just and inclusive ways".

The communities can reject the challenge but with the risk of inertia, or the technology prone individuals in a community can individually start to use it but with now coordination the community is risking fragmentation, or they can utilize knowledge and relational resources and mobilize to model the external pressure to suit their own needs. To be able to make a change in the path dependent trajectory the three components, knowledge and relational resources and mobilization capability need to be strengthened.

One framework that has been developed and applied in the analysis of several empirical cases (Jansen, 1998; Grøtte & al., 2000; Skogseid & Jansen, 2001, Skogseid & Strand, 2003). This

framework is based analysis innovation processes relating to technical transfer that is they are dependent on; the technical solutions, and the organisational characteristics of the surrounding environment. The framework distinguishes between

i) the external environment and networks,
ii) the regional innovation system[1],
iii) the individual organisations where innovations take place.

The regional innovation system; which we assume has different components, including:

- The regional/local infrastructure and support system; the physical data and telecommunication network, and the organisational resources that support the operation and use of the organisational and technical elements. The regional infrastructure is partly integrated into the national infrastructure, but may also include additional regionally located facilities and services.
- The general ability to handle innovation and change; entrepreneurship, norms and attitudes in the region are represented by the way knowledge and relational resources are utilized and the capability to mobilize to challenge the existing structures.
- Organisations; which are supported by the infrastructure. These may be public or private organisations, described by internal characteristics and their inter-organisational relations. The organisations may be linked together in organisational networks, in which innovative activities are stimulated.

Outside the region or local community we assume that there is an external environment, which influences a regional innovation system through at least two important processes:

- Economic and social change forces; the external pressure that causes changes in local industries and related economic matters, including market relations
- Technical development and diffusion; the development of distinct ICT systems and solutions, and the diffusion of such systems into regional or local organisations. These systems will be characterised by their functionality, technical qualities, usability etc. related to the specific user domain.

These distinctions permit us see how external forces cause the diffusion of new technology into a local community, which may eventually result in a local innovation, the overall structure is illustrated in the Figure below.

[1] A region is here considered as a distinct area, the size of the area can vary dependent on the "zoom" applied, it can be a specific location such as a village, town or community, or it can be a larger geographical area such as a municipality, county or region.

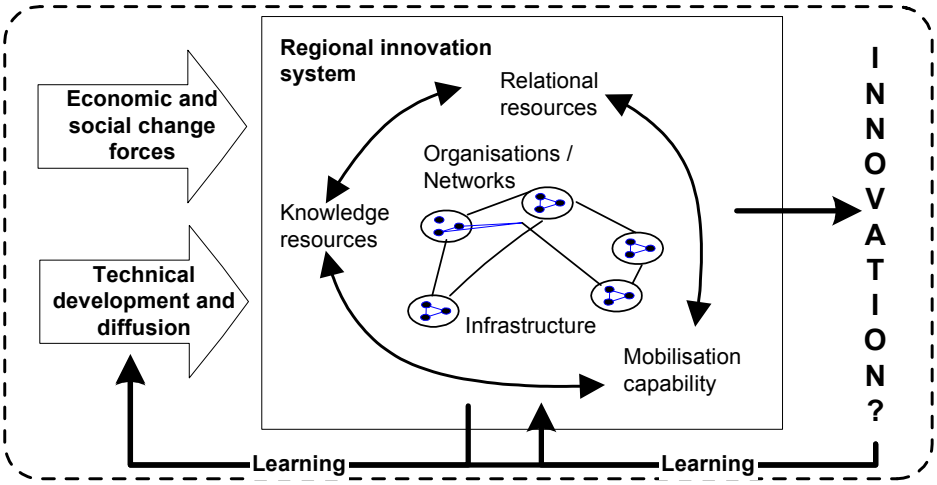

Figure 1. Model describing elements in the regional innovation system (©Skogseid 2004)

4. ICT Supported Networking

When establishing networks across geographical dispersed areas use of ICT can facilitate the continuous activity in the network. ICT supported networking is often described as 'virtual' as in virtual office, virtual organization, virtual community or virtual team. In much of the research literature 'virtual' is used in an unproblematic way to encompass any time and / or place transversing interaction supported by ICT (e.g. Townsend et al. 1998). In addition to physical and temporal location, Watson-Manheim et al. (2002) identified other dimensions (e.g. in Malone & Laubacher 1998) of 'virtual': work group membership, organizational affiliation, relationship with an organization (e.g. permanent vs. self-employed or temporary worker) and functional, organizational, regional, or national culture. From the computer-mediated-communication literature the concept of presence (Lombard & Ditton, 1997) alerts us to discontinuities for people who are used to working closely together, or exchanging ideas and skills (also tacit) on a continuous basis (e.g. Turkle 1996).

When changes are introduced into a work environment by ICT supported work, factors that have *not* changed may become more critical for overcoming the discontinuity (Watson-Manheim et al. 2002). In other words, to make sense of a changing environment, finding out what is still the same may be vital for understanding the change and how to act and relate to it. *Continuities* can be seen as the partial order, or stability, that enables and supports change and flexibility. Such continuities could be, factors such as shared motivation, understanding of the task, mutual expectations, shared beliefs and values, and shared practice. As in a 'real' community or organization, a 'virtual' one is also composed of social aggregations that emerge when people are sharing something meaningful to them. A virtual community or network is thus no different in that it has to support interaction between people over time (Rheingold, 1994). For this kind of continuity Bruckman and Resnick (1995) suggest that the combination of an ability to construct things in and change the context of the platform, i.e. designing objects and spaces in and adding features to the ICT-platform, is particularly powerful in constructing a sense of belonging among members.

Because 'virtual' has become such a buzzword, its meaning has to some extent become blurred (Watson-Manheim et al. 2002). In an attempt to make sense of this research area Watson-Manheim et al. (2002) recognize and distinguish between eight different virtual work environments in their review.

- Virtual Supply Chain: network of individual organizational units organized around a specific task (on-going relationship)
- Virtual Organizations; staffed primarily by contract or temporary workers, with core of full-time permanent employees
- Virtual Corporation: temporary network of independent companies linked through IT
- Volunteer Organization: of individuals (e.g. developing open source software code)
- Distributed Organization: organizations consisting of two or more semi-autonomous units in different geographical locations linked through IT
- Virtual Enterprise Networks: aggregation of small to medium enterprises (as opposed to decomposition of large organizations)
- Distributed Individuals in field settings and
- Distributed Individuals in student groups

They further distinguished between a number of *discontinuities* that could provide a more systematic way of understanding different uses and meanings of 'virtual'. Dimensions of work that was discontinuous in their sample

- physical location
- temporal location
- work group membership
- organizational affiliation
- relationship with an organization)e.g. permanent vs. self-employed or temporary worker
- culture: functional, organizational regional, or national

When introducing discontinuities into work environments factors that have *not* changed may become more critical for overcoming the discontinuity (Watson-Manheim et al. 2002). In other words, to make sense of a changing environment, finding out what is still the same may be vital for understanding the change and how to act and relate to it. From the research review such continuities could be e.g. shared motivation, understanding of the task, mutual expectations, shared beliefs and values, shared media or shared practice. Such continuities can be seen as the partial order, or stability, that enables and supports continuous change and flexibility. Through this perspective ICT that is first introduced into an environment as a discontinuity can in time become a continuity and thus calls for longitudinal instead of cross-sectional research approaches (Watson-Manheim et al. 2002).

Another kind of networking supported by ICT is community networking with new technologies (for such projects see e.g. Bannon and Griffin, 2001, Ferlander and Timms, 2001). Community networking projects date back to 1960's and 1970's, (Bannon and Griffin, 2001), though in those early days they did not attain much success. According to Bannon and Griffin (2001), the reasons for failure of those early projects ranged from lack of funds, lack of technical support personnel, and internal politics around the primary uses of the network, to lack of clear objectives of the overall purpose of the network.

Bannon and Griffin (2001) maintain that although IT has become more stable and robust, interfaces more usable, Internet and standardized www-browsers more accessible, and the effort to learn how to use IT has been minimized, important barriers to developing community networks have not been addressed. Such barriers, they summarize, are lack of clear objectives for the network, poor understanding of the needs of the groups that are encouraged or keen to be involved, lack of understanding of reasons for groups not wanting to communicate and share information, or little real benefits provided from participation in the network. Reasons for the existence of such barriers include: lack of input from targeted community regarding their needs, and emphasis on using technology, i.e. technology-push, rather than attempts to solve real problems perceived by the community. In other words, they conclude, technology should be used as a means to an end defined from within the community and not as an end in itself as often is the case.

Creating and Maintaining Action in ICT-supported Networks

It seems to take a lot of time and practice to get acclimatized to working in an ICT-supported environment. Initiating collaboration in an ICT supported environment raises problems like trusting people one has never met, finding a common language to communicate, understanding the technology, and in some cases overcoming the lack of a shared culture to increase mutual understanding between people. Overcoming these kinds of obstacles takes a

lot of individual effort and willingness to learn from the participants. The members of a network need both time and persuasion from facilitators to adjust to the new environment, which is also the one reason that the development process takes a couple of years to bear fruit. If the initiators and facilitators do not recognize the need to establish common ground among the network participants, the project is quite likely to fail. Only if the participants find real benefits in using the new space, can they grow to appreciate it and learn more about using ICT.

A critical mass of users in the virtual space seems to be crucial for getting a network to work. However, what constitutes this "critical mass" varied case by case, depending on the nature and the purpose of the network.

If the network is to be self-sufficient without future involvement from initiators or facilitators, it is important that the facilitators recognize the need for various types of critical mass and find means to create and maintain it. One of the important tasks for the facilitators and also the initiators, who are from outside the community, is to prepare the time for when they have to extract themselves from the projects. It is important that they leave behind, among the participants, the enthusiasm that they brought to it.

Table 1 (next page) summarizes types of network characteristics, discontinuities, continuities, and problem areas in the literature and in a study of four cases (Gripenberg et.al. 2004). In the analysis of the four cases in relation to the literature additional discontinuities were identified; such as geographical location, language and organizational culture. With regard to continuities; Shared goals was identified as an additional continuity, but at the same time various forms of incentives were used in the cases. Further, lack of resources in terms of time and money also played a role in the development of the networks or communities.

Table 1. Types of network characteristics, discontinuities, continuities, and problem areas (modified from Gripenberg et.al. 2004)

Characteristic		Source
Network characteristics		
	Virtual Supply Chain	as defined in literature
	Virtual Organizations	
	Virtual Corporation	
	Volunteer Organization	
	Distributed Organization	
	Virtual Enterprise Networks	
	Distributed Individuals in field setting	
	Distributed Individuals in student groups	
Identified discontinuities		
	Physical Location	as defined in literature
	Temporal Location	
	Functional Culture	
	Regional Culture	
	National Culture	
	Presence important	
	Geographical Location	Identified as separate from physical location.
	Organizational Culture	Identified as separate from organizational regional culture.
	Language	Identified as separate from culture.
Identified continuities		
	Shared Motivation	as defined in literature
	Understanding of Task	
	Mutual Expectations	
	Shared Beliefs and Values	
	Shared Media	
	Shared Practice	
	Option to construct and change things in ICT-platform (contribute to network)	
	Shared Goal	Identified as separate from motivation.
	Incentive/Sanction	Identified in cases.
Identified problem areas		
	Lack of Funds	as defined in literature
	Lack of Technical Support Personnel	
	Politics around primary use of Network	
	Lack of Clear Objectives of Purpose	
	Poor Understanding of Local Needs	
	Lack of Understanding of groups not wanting to share information	
	Little real benefits from participation (as perceived by target group)	
	Technology-Push/ Lack of local problem-solving focus	
	Technology related problems	Identified in cases as still existing.
	Problems with ICT skills/learning	Identified in cases as still existing and varying highly.
	Insecurity regarding how to act in ICT supported environment	Identified in cases as most time consuming problem.

5. Converting key concepts into networks in Enable

Table 1 above identifies a number of different network characteristics, discontinuities, continuities and problem areas that are important to be aware of when trying to create and maintain network organisations. Not all network characteristics are applicable for the planned Cooperation and Networking of SME in the ENABLE program. It can, however, give an indication for things to look out for.

To make things simpler we will like to propose that we use the following as a structure for our discussion of networks:

- **Horizontal networks**: Are based on equality between the actors involved, there is no one company defining the focus of the activities and discussions in the network. An typical example of this is network between business park leaders
- **Vertical Networks**: are based on business relations and there are clear decision structures, example of this can be a company and their supplier network.
- **Hybrid networks**: Hybrid networks are a combination of the two, this hybrid connection might have a temporal factor, or it might be related to a horizontal network between businesses that vertically link up to an organisation for instance as sub-suppliers.
- **Voluntary Networks**: Based on interests and not business relations/contracts, but can be business related, examples can be Chambers of Commerce, Business sector networks, etc
- **Business related Networks**: are related to producing something, projects, joint efforts etc where a contract is involved.

These five categories are joined in a 2x3 matrix see Table 2 below.

Table 2. Types of networks in ENABLE, matched by the network characteristics from Table 1.

Aim of network	Vertical (Deliberately designed)	Hybrid	Horizontal (Reaction to something)
Voluntary/ Interests		- Virtual Enterprise Networks - Distributed Organization	- Volunteer Organization
By contract/Business /Production	- Virtual Supply Chain	- Virtual Supply Chain - Virtual Corporation	- Volunteer Organization - Distributed Organization

For all of these there are an temporal dimension, networks can be more flexible structures where alliances are changing dependent on tasks and projects that are to be solved.

Cluster vs Network

In the ENABLE regions there are pointed to a number of clusters. As we see it a cluster is a network but the definition of cluster is related to an agglomeration of one industrial sector in a limited geographical area. A network on the other hand can but do not have to be related to a geographical area, it can span regional and national borders, and can span industrial sector.

Further a cluster influences the livelihood in the surrounding community to a certain degree, that is if the companies in the cluster are having a hard time then it influences the other companies in the cluster and further the employees and there through the surrounding community.

6. Recomandations

Cross reference to the analysis in Component 2

In the preparation of the Component 2 Analysis document THATI GmbH (ENABLE 2004) did a survey of all the involved regions. There are many overlapping interests between the data gathered for the Component 2 analysis and the needs regarding Component 3.

For demographic data about the regions we refer the reader to the Component 2 analysis document.

The component 2 analysis gives also useful information to Component 3 regarding common characteristics and important industrial sectors that give opportunity for Development and Technology transfer but also for networking between enterprises in the region.

The component 2 analysis (page 7) summarises the common characteristics of the four regions as follows:

- The service sector is the most important sector of employment.
- Strong importance of industry
- The economy is signed by a plurality of SME's connected with mostly weak capital resources
- Very similar size structures of enterprises
- Presence of large foreign investors in dominating industrial sectors

Further the analysis in component 2 concludes that four technology fields are widespread and overlapping in the four regions. The list identifies and describes possible interest areas between companies and institutes of the ENABLE regions

a) Process engineering

Food process technology belongs to the very important technology areas.
Thermal and mechanical technologies are also important in almost all ENABLE regions.

b) Information- and Communication Technologies, Media

All regions show increasing activities in software development, in communication technology and in the areas of electronic components, devices and systems.

c) Microelectronics and Microsystems

Microelectronics itself in all regions, micro sensor and actuator technologies as well as semiconductor technologies in Carinthia, Westen Norway and Thuringia belong to the fundamental technologies there.

d) Construction Technologies

The construction technologies include building material, building components, building technology and building service engineering. These fields are of high importance for Western Norway and Kaunas region, for the other both regions significant too.

An alternative display of important technological fields is provided in Component 2 analysis in Annex 1: Evaluation of the major regional technological fields. Annex 1 is a table running over two pages listing a number of technological fields and a grading of the importance of

these fields in each region. Table 3 below summarises the table in the Component 2 analysis by pulling forward the technology fields that are of importance, that is "important" or "very important", in at least three of the regions.

Table 3. Technology fields that are "important" or "very important" in at least 3 regions

TECHNOLOGY FIELDS	Important	Very important
Production Engineering		
Shaping technologies	1	2
Plastics technologies	1	2
Handling and packaging technologies	1	2
Process Engineering		
Mechanical process engineering		4
Food technology	3	1
Energy Engineering		
Power engines and plants	1	2
Energy from biomass		3
Hydropower, wind and geothermal energy_		3
Automation, Measuring and Control Engineering		
Mechatronics	1	2
Automation and control technologies	2	1
Information- and Communication Technologies, Media		
Software development	2	2
Communication technology	1	2
Electronic components, devices and systems	2	2
Optics, Optoelectronics		
Optical fibres	1	2
Microsystems, Microelectronics		
Microelectronics	2	2
Semiconductor technology	2	1
Micro sensor and actuators technology _	1	2
Organic Materials		
Synthetic materials	1	2
Rubber / textile / leather / fibre materials	1	2
Logistics, Transportation. Traffic		
Logistic and communication equipment	1	2
Construction Technology		
Building materials	2	1
Building components	1	2
Building technology	1	3
Building service engineering	1	3

This table gives an overview of technology fields where there is a potential for finding enterprises with common interests across the regions.

Survey of networks and clusters, and related instruments

A survey has been performed in Component 3 regarding the networks and clusters and relevant instruments. Focus of the survey was set on the target groups and needs defined in Bergen.

As a result a total of 43 networks have been reported in as having potential in relation to activities and potential projects in ENABLE component 3.

- Thuringen have reported 24 networks

- Carinthia have reported 5 networks
- Western Norway (Hordaland) have reported 3 networks
- Western Norway (Sogn og Fjordane) have reported 11 networks

Given the number of networks that are of relevance to ENABLE and the different way networks are organised in the regions it is difficult to sum up across the answers for instance; Thuringen have reported 24 networks with more specialised purpose, while Carinthia is organised differently with only 5 networks but with a more general focus, and more specific networks may exist underneath these five. Local knowledge is therefore needed when trying to match networks. Further working at an intermediary and an RFO level can provide the different regions with more knowledge about each other and in working at this level in the next round there might be a way to over time reach specific enterprises.

Regarding instruments a total of 15 instruments have been reported that can support networks, clusters and similar organisations.

A full overview of the network can be found in Annex 1 to this document.

Recommendations from discussions in Bergen

In the ENABLE program there are networking activities already defined at the RFO level. In the operation of each component there will be workshops and networking activities that will help the regional development organisation in defining best practices, exchange of experience and learning about each others instruments.

- Technology transfer: As a result of the work in C2 on technical transfer on identifying best practice continue the collaboration in a network exchanging Best Practice; learning from each other discussing across ENABLE regions; Study trips; Networking; Workshops
- Cooperation and networking of SME: As a result of the work in C3 on How to create and maintain/operate networks; best practice learning from each other across ENABLE regions
- Start-ups and Entrepreneurship: As a result of the work in C4 on Start-ups and Entrepreneurship; Learn more about each others way of working with start-ups and Entrepreneurship. Best Practice; discussing across ENABLE regions; Study trips; Networking; Workshops

Further the project based activities in component 3 will be aimed at the following target groups:

[1] Collaboration of groups of SME
[2] Collaboration of intermediates
   a. Administrations (business innovation centres (BIC), Science Parks etc)
   b. Clusters/ networks within BIC etc

Further the discussion defined the challenges that needed to be addressed:

[1] Upgrade of knowledge & exchange of ”best practise” at intermediate level
[2] Stimulate internationalisation of SME
[3] Stimulate networking of SME
[4] Stimulate innovation & change processes.

As there is not much collaboration between intermediaries and businesses in these region at the outset it is likely that most of the proposed networks will be of horizontal and voluntary and not based on business processes at the start.

In Table 3 below three integrated ENABLE networks have been put into the 2x3 matrix from Table 2. The three ENABLE networks all fall in category, Voluntary and Horizontal. It is difficult to predict where other proposals will come but it is likely that the networks will start as horizontal and develop over time into more hybrid or vertical networks based on business transactions. It is also possible that existing business relations can develop into a broader horizontal relation such as a joint development network. The arrows integrated into Table 3 below illustrate these possible developments in new and existing networks.

Table 4. Development of ENABLE networks

Aim of network	Vertical	Hybrid	Horizontal
Voluntary/ Interests			- Cooperation and networking of SME network - Start-Ups and Entrepreneurship network - Technology transfer network
By contract/Business /Production			- ENABLE business networks

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Orlikowski, Wanda. 1992. The duality of technology: Rethinking the concept of technology. Organization Science 3(3): 398-427.

Putnam, Robert D. 1993. Making democracy work: Civil traditions in modern Italy. Princeton, NJ: University of Princeton Press.

Rheingold, H. 1994. The virtual community. Finding connection in a computerized world. London: Secker & Warburg.

Rogers, E. M. 1995. Diffusion of innovations. New York: The Free Press.

Skogseid I. and Jansen A. (2001) Booktowns on Internet – Rural Enterprises Enter the Network Society. Paper presented at the Twenty-Second International Conference on Information Systems (ICIS) A Digital Odyssey: Exploring how information technology has transformed our lives and organizations. New Orleans, Louisiana US. pp. 385–394.

Skogseid, Ingjerd and Strand, Geir (2003) “Bottom-up initiatives' role in technological regional development” in Sulevi Riukulehto (ed) New Technologies and Regional Development, University of Helsinki Series A:6 ISBN: 952-10-1091-6

Smith, Keith. 1997. Economic infrastructures and innovation systems. In Systems of innovations. Technologies, institutions and organisations, ed. I. Edquist. London: Pinter.

Storper, Michael. 1997. The regional world: Territorial development in a global economy. New York US: The Guilford Press.

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Annex 1 Survey forms

Thuringen

Date	11.10.2004

Contact details for organisation filling in form	
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Organisation	LEG Thueringen mbH
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E-Mail	holger.czuday@leg.thueringen.de

Survey of networks and clusters and related instruments

At the meeting in Bergen we defined the following target groups for component 3 Cooperation and Networking of SME

[3] Collaboration of groups of SME
[4] Collaboration of intermediates
   a. Administrations (business innovation centres (BIC), Science Parks etc)
   b. Clusters/ networks within BIC etc

(Sustainable networks between partners/region will between organised at RFO level and should not be included in the overview for the component)

The Bergen meeting also defined the topics (thematic and by sector):

[1] Exchange of experience at management level of networks
[2] New services/instruments for networks/ ”clusters”
[3] SME collaboration for new markets and production
[4] Sectors:
   a. Technical oriented production
   b. Research and development
   c. Service sector

and the challenges in this area is defined as:

[5] Upgrade of knowledge & exchange of ”best practise” at intermediate level
[6] Stimulate internationalisation of SME
[7] Stimulate networking of SME
[8] Stimulate innovation & change processes.

Please fill in the forms below with information of relevance to these target groups, topics and challenges. We are only looking for those networks, and clusters that are within the defined ENABLE topics and which are potential partners in ENABLE activities.

1. NETWORKS, CLUSTERS AND ORGANISATIONS

Please fill in the following information for knowledge parks, business innovation centres, technology centres, research institutes clusters and business networks etc. For clusters and business networks it is important that they have a dedicated secretariat or administration established.
Please copy the forms for more organisations, networks and clusters.

Number:	**1**
Name of organisation, network or cluster:	automotive Thueringen e.V.
Contact person	
Name:	RA Michael M. Lison
Address:	Am Künkelhof 4 D-99819 Hörselberg
E-mail:	office@automotive-thueringen.de
Phone:	+49(0)36920 / 72 722
	www.automotive-thueringen.de
Approximate number of organisations involved in network or cluster	80
Year of initiation	
Key areas of activity	Clustering of all automotive suppliers in Thueringen

Number:	**2**
Name of organisation, network or cluster:	BioRegio e.V.
Contact person	
Name:	Dr. André H.R. Domin
Address:	Winzerlaer Str. 2 07745 Jena/Germany
E-mail:	domin@bioinstrumente-jena.de
Phone:	+49 (0) 3641 50 86 50
	www.bioinstrumente-jena.de
Approximate number of organisations involved in network or cluster	56
Year of initiation	1996
Key areas of activity	Cellular and molecular technology Individual medicine and drug targeting Biomaterials Equipment, automation, miniaturization and sensor systems

Number:	**3**
Name of organisation, network or cluster:	PolymerMat, Kunststoffcluster Thüringen
Contact person	
Name:	Herr Grafe
Address:	Grafe Color Batch GmbH Waldecker Str. 21 D-99444 Blankenhain
E-mail:	grafe@grafe.com
Phone:	+49 (0)36459 - 45-0
	www.grafe.com
Approximate number of organisations involved in network or cluster	48
Year of initiation	
Key areas of activity	Organic materials for construction industries, automotive, medicine, micromechanics, engineering

Number:	**4**
Name of organisation, network or cluster:	Medien Cluster Thüringen e.V.
Contact person	
Name:	Gabriele Lau
Address:	Mainzerhofstraße 10 99084 Erfurt/ Germany
E-mail:	info@mediencluster.de
Phone:	+49 (0)361 - 789 23 65
	www.mediencluster.de
Approximate number of organisations involved in network or cluster	47
Year of initiation	
Key areas of activity	Application and development of innovative technology and content creation Establishment support of cooperation structures Development of media and communications competence Public relations and marketing Networking, and internationalization

Number:	**5**
Name of organisation, network or cluster:	Mikrotechnik Thüringen, (micro technology)
Contact person	
Name:	Veit Zoeppig
Address:	MTT Mikrotechnik Thüringen e.V. c/o Steinbeis Transferzentrum Mechatronik Ehrenbergstrasse 11 D-98693 Ilmenau
E-mail:	Veit.Zoeppig@STW.TGZ-Ilmenau.de
Phone:	(+49) 3677 66 85 00
	www.mikrotechnik-thueringen.de
Approximate number of organisations involved in network or cluster	
Year of initiation	
Key areas of activity	Micro technology

Number:	**6**
Name of organisation, network or cluster:	OphthalmoInnovation Thüringen e.V.
Contact person	
Name:	Prof. Dr.- Ing. habil. Günter Henning Dipl.-Ing. Volker Wiechmann
Address:	OphthalmoInnovation Thüringen e.V. Wildenbruchstrasse 15 07745 Jena/ Germany
E-mail:	kompetenz@ophthalmoinnovation.de
Phone:	+49 3641 / 67 56 90
	www.ophtalmoinnovation.de
Approximate number of organisations involved in network or cluster	
Year of initiation	
Key areas of activity	equipment for medicine

Number:	**7**
Name of organisation, network or cluster:	OptoNet e.V.
Contact person	
Name:	Dr. Klaus Schindler
Address:	OptoNet e.V. Mainzerhofstraße 10 99084 Erfurt/ Germany
E-mail:	klaus.schindler@optonet-jena.de
Phone:	+49 (0) 361 / 789 23 21
	www.optonet-jena.de
Approximate number of organisations involved in network or cluster	65
Year of initiation	1999
Key areas of activity	optic industries

Number:	**8**
Name of organisation, network or cluster:	Solar INPUT e.V.
Contact person	
Name:	Frau Neuhaus
Address:	Interessenverbund Photovoltaik und Umwelt Thüringen im AZM Erfurt Südost Konrad Zuse Str 14 99099 Erfurt/ Germany
E-mail:	info@solarinput.de
Phone:	+49 (0)3 61 6631154
	www.solarinput.de
Approximate number of organisations involved in network or cluster	20
Year of initiation	2003
Key areas of activity	photovoltaic industries

Number:	**9**
Name of organisation, network or cluster:	CIB.Weimar e.V.
Contact person	
Name:	Prof. Dr.-Ing. Hans-Joachim Bargstädt
Address:	CIB.Weimar e.V. Marienstraße 7A D-99423 Weimar
E-mail:	info@cib-weimar.net
Phone:	(0049) 3643 584582
	http://www.cib-weimar.net
Approximate number of organisations involved in network or cluster	27
Year of initiation	2002
Key areas of activity	Development, marketing and implementation of innovative materials, products, processes and methods in Construction and building Focus on Weimar Region

Number:	**10**
Name of organisation, network or cluster:	Kompetenznetz Optische Technologien - Industrielle Bildverarbeitung in Thüringen-
Contact person	
Name:	Dr.-Ing. habil. Karl-Heinz Franke
Address:	Technische Universität Ilmenau Koordinierungsbüro Bildverarbeitung, Mustererkennung und Technische Sehsysteme Postfach 10 05 65 D-98684 Ilmenau
E-mail:	karlheinz.franke@prakinf.tuilmenau.de
Phone:	+49 (0) 3677 2010 300
	http://www.kompetenznetze.de/bildverarbeitung-thueringen
Approximate number of organisations involved in network or cluster	40
Year of initiation	1997
Key areas of activity	Image processing network of Thuringian actors

Number:	**11**
Name of organisation, network or cluster:	inprosys - Produktions- und Fertigungstechnik im attraktiven Umfeld – Schmalkalden
	INNOREGIO (innovative regions) production technology
Contact person	
Name:	Rico Knorn
Address:	Innoregio Südthüringen e.V. Asbacher Straße 17 d D-98574 Schmalkalden
E-mail:	knorn@inprosys.de
Phone:	+49 (0) 36 83 - 40 99 60
	http://www.inprosys.de/
Approximate number of organisations involved in network or cluster	42
Year of initiation	2000
Key areas of activity	aquire and support project-work managing and coordinate the projects organisation of scientific workshops organize and carry out personal consultations in enterprices organize and carry out scientific seminars for special industrial Partner arrange contacts organisation of fair-participations for the region

Number:	**12**
Name of organisation, network or cluster:	Micro Innovates Macro - Bautronic Konzept 2001 - Erfurt
Contact person	
Name:	Steffen Peter
Address:	Projektbüro INIT e.V. Wilhelm-Wolff-Str. 1 D-99099 Erfurt
E-mail:	info@init-ev.de
Phone:	+49 (0)3 61 - 4 26 72 12
	http://www.init-ev.de/
Approximate number of organisations involved in network or cluster	20
Year of initiation	2002
Key areas of activity	Buildings, construction, automation

Number:	**13**
Name of organisation, network or cluster:	fanimat - Funktionelle anorganische nichtmetallische Materialien - Hermsdorf (2001 - 2003)
Contact person	
Name:	Dr. Bärbel Voigtsberger
Address:	Hermsdorfer Institut für Technische Keramik e.V. Michael-Faraday-Str. 1 D-07629 Hermsdorf
E-mail:	baerbel.voigtsberger@hitk.de
Phone:	+49 (0)3 66 01 - 6 39 02
	http://www.fanimat.de/
Approximate number of organisations involved in network or cluster	20
Year of initiation	2001
Key areas of activity	Our task is to find and demonstrate successful new methods in material research, development and production. fanimat stands for "functional inorganic non-metallic materials" and for a real network. 12 companies and 7 research institutes combine their forces to offer their business partners an unequalled synergetic potential.

Number:	**14**
Name of organisation, network or cluster:	ALCERU HIGHTECH - Cellulosewerkstoffe - Rudolstadt (2004 - 2007)
Contact person	
Name:	Herr Dr.-Ing. Ralf-Uwe Bauer
Address:	Thüringisches Institut für Textil- und Kunststoff-Forschung e.V. Breitscheidstraße 97 D-07407 Rudolstadt
E-mail:	Management-TITK-OMPG@titk.de
Phone:	+49 (0) 36 72 - 37 91 00
	http://www.titk.de/
Approximate number of organisations involved in network or cluster	9
Year of initiation	2004
Key areas of activity	Development of the region Rudolstadt to a national and international center for modern production of fiber- materials on basis of cellulose

Number:	**15**
Name of organisation, network or cluster:	ultra optics - Jena
Contact person	
Name:	Prof. Dr. Andreas Tünnermann
Address:	Friedrich-Schiller-Universität Jena Physikalisch-Astronomische Fakultät Max-Wien-Platz 1 D- 07743 Jena
E-mail:	tuennermann@iap.uni-jena.de
Phone:	(0 36 41) 65 76 40 / (0 36 41) 80 72 01
	http://www.ultra-optics.org/ http://www.paf.uni-jena.de/
Approximate number of organisations involved in network or cluster	
Year of initiation	
Key areas of activity	New optical Technologies

Number:	**16**
Name of organisation, network or cluster:	Netzwerk Biogas – komplexe Verfahren und Anlagen zur Nutzung regenerativer Ressourcen aus Biomasse
	Bio- gas facilities
Contact person	
Name:	Prof. Wesselak
Address:	Fachhochschule Nordhausen Weinberghof 4 99734 Nordhausen
E-mail:	wesselak@fh-nordhausen.de
Phone:	+49 (0)3631 - 420456
Approximate number of organisations involved in network or cluster	20
Year of initiation	2004
Key areas of activity	Development, production and marketing of bio-gas facilities

Number:	**17**
Name of organisation, network or cluster:	Hochleistungskeramik in Thüringen (high performance ceramics)
Contact person	
Name:	Verfahrenstechnisches Institut Saalfeld GmbH
Address:	Wittmannsgereuther Straße 101 D-07318 Saalfeld
E-mail:	vti-saalfeld@t-online.de
Phone:	+ 49 (36 71) 822-0
	www.vti-saalfeld.de
Approximate number of organisations involved in network or cluster	6
Year of initiation	
Key areas of activity	Network of the value added chain of ceramics producerc/ developers (SME´s)

Number:	**18**
Name of organisation, network or cluster:	Innovations- und Dienstleistungs-Cluster Handwerk (innovation and service cluster craft)
Contact person	
Name:	RKW Thüringen GmbH
Address:	Konrad Zuse Str. 5 99099 Erfurt
E-mail:	
Phone:	03 61 / 5 51 43 0
	www.rkw-thueringen.de
Approximate number of organisations involved in network or cluster	10
Year of initiation	
Key areas of activity	Supports craft companies in R&D and marketing

Number:	**19**
Name of organisation, network or cluster:	Innovative Bau- und Umweltsensorik (IBUS) (innovative construction and environment sensors)
Contact person	
Name:	Institut für Fertigteiltechnik und Fertigbau Weimar e.V. (IFF)
Address:	Cranachstraße 46 D-99423 Weimar
E-mail:	kontakt@iff-weimar.de
Phone:	+49 (0) 3643 / 8684-0
	www.iff-weimar.de
Approximate number of organisations involved in network or cluster	
Year of initiation	
Key areas of activity	Network initiative for innovative construction and environment sensors

Number:	**20**
Name of organisation, network or cluster:	AGASEN - Innovative Abgassensorik (innovative exhaust sensorics)
Contact person	
Name:	INNOMAN GmbH
Address:	Auenstrasse 3-5 D-98529 Suhl
E-mail:	
Phone:	+49 (0)3681-80 71 40
Approximate number of organisations involved in network or cluster	6
Year of initiation	2003
Key areas of activity	Development of innovative exhaust sensorics

Number:	**21**
Name of organisation, network or cluster:	VisQuaNet (visuelle Qualitätssicherungssysteme) (visual quality assurance systems)
Contact person	
Name:	MTT Mikrotechnik Thüringen e.V. c/o Steinbeis Transferzentrum Mechatronik
Address:	Ehrenbergstrasse 11 D-98693 Ilmenau
E-mail:	Veit.Zoeppig@STW.TGZ-Ilmenau.de
Phone:	(+49) 3677 66 85 00
	www.mikrotechnik-thueringen.de
Approximate number of organisations involved in network or cluster	8
Year of initiation	
Key areas of activity	Network project of 8 SME`s for visual quality assurance systems

Number:	**22**
Name of organisation, network or cluster:	Micro Mold - Netzwerk Mikrotechnologie in Formenbau und Spritzgießtechnik (microtechnology for mold production and inject-casting technics)
Contact person	
Name:	Brigitte Kaminsky
Address:	micromold.net Geschwister-Scholl-Str. 15 07545 Gera
E-mail:	info@micromold.net
Phone:	+49 (0)365/55242-0
	www.micromold.net
Approximate number of organisations involved in network or cluster	14
Year of initiation	
Key areas of activity	Developement and implementation of microtechnology for mold production and inject-casting technics

Number:	**23**
Name of organisation, network or cluster:	NEOB
Contact person	
Name:	Mr. Hossbach
Address:	IMG gGmbH An der Salza 8a D-99734 Nordhausen
E-mail:	g.hossbach@img-nordhausen.de
Phone:	
	www.img-nordhausen.de
Approximate number of organisations involved in network or cluster	10
Year of initiation	
Key areas of activity	Surface technologies

Number:	**24**
Name of organisation, network or cluster:	Biocompatible surfaces to minimise medical device associated infections
Contact person	
Name:	IBA Heiligenstadt
Address:	Institut für Bioprozess- und Analysenmesstechnik e.V. Rosenhof D-37308 Heilbad Heiligenstadt
E-mail:	iba@iba-heiligenstadt.de
Phone:	+49 (0) 36 06 - 67 10
	www.iba-heiligenstadt.de
Approximate number of organisations involved in network or cluster	
Year of initiation	
Key areas of activity	establishment of an optimal function of a catheter surface by making highly specific biomimetic modifications in order to avoid bacterial adhesion as the prerequisite of infections.

2. INSTRUMENTS TO SUPPORT NETWORKS

In this context we define an **instrument** to be either

[1] Organisations such as the business innovation parks etc and

[2] Concrete development programs in the region that support networks

Related to the defined topics for component 3: Which instruments does your region have to support networks, clusters and similar organisations?

Please copy the forms for more instruments.

Number:	**1**
Name of instrument:	STIFT (Foundation for Technology, Innovation and Research Thueringen)
Contact organisation	STIFT
Name:	Dr. Olaf Schuemann
Address:	Mainzerhofstrasse 10 D-99084 Erfurt
E-mail:	Olaf.schuemann@stift-thueringen.de
Phone:	+49 (0)361 – 789 2375
	www.stift-thueringen.de
Year of initiation	1993
Approximate number of businesses involved	
Short description of instrument	assistance of innovative processes (technology monitoring) support of sector-specific networks (clusters) incentives for technology-oriented infrastructure projects support of innovative technologies in Thuringia support of R&D collaboration conception, planning and establishing of application and technology centres

Number:	**2**
Name of instrument:	LEG Thueringen
Contact organisation	
Name:	Dr. Bertram Harendt
Address:	Mainzerhofstrasse 12 D-99084 Erfurt
E-mail:	Bertram.harendt@leg.thueringen.de
Phone:	+49 (0)361 – 5603 189
Year of initiation	1992
Approximate number of businesses involved	
Short description of instrument	industry-focused consulting teams corporate site development for industry and business project and enterprise financing packages spatial planning real estate project management services for expatriates investment aftercare

Number:	**3**	
Name of instrument:	Technology Centers/ incubators in Thueringen	
Contact organisation		
Name:	On behalf: BIC Nordthueringen	
Address:	Alte Leipziger Straße 50 D 99734 Nordhausen	
E-mail:	info@bic-nordthueringen.de	
Phone:	+49 3631 918 - 0	
	www.tz-thueringen.de	
Year of initiation		
Approximate number of businesses involved	10	
Short description of instrument	Gründer- und Innovationszentrum Eisenach	www.gis-eisenach.de
	Technologie- und Medienzentrum Erfurt	www.tmz-erfurt.de
	Technologie- und Gründerzentrum Gera	www.tgz-gera.de
	Applikationszentrum Ilmenau	www.apz-ilmenau.de
	Technologie- und Gründerzentrum Ilmenau	www.tgz-ilmenau.de
	Technologie- und Innovationspark Jena	www.tip-jena.de
	BioInstrumentezentrum Jena	www.bioinstrumentezentrum.com
	Business and Innovation Centre Nordthüringen Sondershausen/OT Berka Nordhausen/OT Bielen	www.bic-nordthueringen.de
	Innovations- und Gründerzentrum Rudolstadt	www.igz-rudolstadt.de
	Technologie- und Gründer-Förderungsgesellschaft Schmalkalden/Dermbach	www.tgf-schmalkalden.de

Carinthia

Date	11.10.2004

Contact details for organisation filling in form	
Editor	Reinhard Schinner
Organisation	Kärntner Wirtschaftsförderungsfonds
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Survey of networks and clusters and related instruments

At the meeting in Bergen we defined the following target groups for component 3 Cooperation and Networking of SME

[5] Collaboration of groups of SME
[6] Collaboration of intermediates
   a. Administrations (business innovation centres (BIC), Science Parks etc)
   b. Clusters/ networks within BIC etc

(Sustainable networks between partners/region will between organised at RFO level and should not be included in the overview for the component)

The Bergen meeting also defined the topics (thematic and by sector):

[5] Exchange of experience at management level of networks
[6] New services/instruments for networks/ ”clusters”
[7] SME collaboration for new markets and production
[8] Sectors:
   a. Technical oriented production
   b. Research and development
   c. Service sector

and the challenges in this area is defined as:

[9] Upgrade of knowledge & exchange of ”best practise” at intermediate level
[10] Stimulate internationalisation of SME
[11] Stimulate networking of SME
[12] Stimulate innovation & change processes.

Please fill in the forms below with information of relevance to these target groups, topics and challenges. We are only looking for those networks, and clusters that are within the defined ENABLE topics and which are potential partners in ENABLE activities.

1. NETWORKS, CLUSTERS AND ORGANISATIONS

Please fill in the following information for knowledge parks, business innovation centres, technology centres, research institutes clusters and business networks etc. For clusters and business networks it is important that they have a dedicated secretariat or administration established.

Please copy the forms for more organisations, networks and clusters.

Number:	**1**
Name of organisation, network or cluster:	[Micro]electronic cluster
Contact person	
Name:	General Manager Mr. Markus Flach
Address:	Technologiepark Europastraße 8, 9500 Villach
E-mail:	office@me2c.at,
Phone:	0043-4242-9003-3000
Approximate number of organisations involved in network or cluster	Appr. 90 companies with market maker Infineon , SEZ, Wild and others
Year of initiation	1999
Key areas of activity	Services and projects for micro- and electronic companies – see website www.me2c.at

Number:	**2**
Name of organisation, network or cluster:	Development Agency Carinthia – Entwicklungsagentur Kärnten GmbH
Contact person	
Name:	Mr. Wolfgang Sattler
Address:	Primoschgasse 3, A-9020 Klagenfurt 3, A-9020 Klagenfurt T. +43 (0) 463 38 75 100 F. +43 (0) 463 38 75 112 E-
E-mail:	E-Mail office@entwicklungsagentur.at Web www.entwicklungsagentur.at
Phone:	T. +43 (0) 463 38 75 116 F. +43 (0) 463 38 75 112
Approximate number of organisations involved in network or cluster	About 60-80 enterprises
Year of initiation	
Key areas of activity	3 networks plastics, wood, environment 3-5 kinds of Innovation- technology parks

Number:	**3**
Name of organisation, network or cluster:	Chamber of commerce
Contact person	
Name:	Mrs. Elisabeth Hauer,
Address:	Bahnhofstraße 42
E-mail:	Elisabeth.hauer@wkk.or.at
Phone:	0043 463 5868-742
Approximate number of organisations involved in network or cluster	Different branches of activities for networking
Year of initiation	
Key areas of activity	Innovation relay Center Austria – branch Carinthia – Mrs. Hauer IT-Network – Mr. Christian Inzko Start-ups – Mr. Herwig Draxler

Number:	**4**
Name of organisation, network or cluster:	BIC Lakeside Science&Technology Park GmbH
Contact person	Mrs. Maria Mack
Name:	
Address:	Heuplatz 2, 9020 Klagenfurt (till November)
E-mail:	mack@lakeside-scitec.com
Phone:	0043 463-55800-45 Mob. 0043-664-8399301 till November
Approximate number of organisations involved in network or cluster	S&T-Park with about 10 technology orientated IT-companies
Year of initiation	2004
Key areas of activity	Park management, international projects, cooperation between science and economy

Number:	**5**
Name of organisation, network or cluster:	Alpen-Adria-University of Klagenfurt
Contact person	Still open
Name:	
Address:	Universitätsstraße 65-67
E-mail:	
Phone:	0043 463-2700-0
Approximate number of organisations involved in network or cluster	Several institutes concerning informatics, start-ups, business economy, research&development
Year of initiation	1972
Key areas of activity	They have to be confirmed by next meetings with the representative of the University

2. INSTRUMENTS TO SUPPORT NETWORKS

In this context we define an **instrument** to be either

[3] Organisations such as the business innovation parks etc and

[4] Concrete development programs in the region that support networks

Related to the defined topics for component 3: Which instruments does your region have to support networks, clusters and similar organisations?

Please copy the forms for more instruments.

Number:	**[1] see under Networks above. Nr. 2 and 4**
Name of instrument:	
Contact organisation	
Name:	
Address:	
E-mail:	
Phone:	
Year of initiation	
Approximate number of businesses involved	
Short description of instrument	

Number:	**2**
Name of instrument:	[2] Guidelines for subsidies for co-operation
Contact organisation	KWF
Name:	Reinhard Schinner
Address:	Heuplatz 2, 9020 Klagenfurt
E-mail:	schinner@kwf.at
Phone:	0043 463 55800 23
Year of initiation	
Approximate number of businesses involved	
Short description of instrument	Guideline which supports as a minimum three companies (one from Carintha) for their need of consultancy in defining co-operation fields, common strategy, legal basis, marketing, training and some technical equipment; the eligible costs can be cofinanced up to a mximum of 50% (see also under www.kwf.at "support programmes – basic information 02")

Number:	**3**
Name of instrument:	[2] Guidelines for subsidies for the access to new markets
Contact organisation	KWF
Name:	Reinhard Schinner
Address:	Heuplatz 2, 9020 Klagenfurt
E-mail:	schinner@kwf.at
Phone:	0043 463 55800 23
Year of initiation	
Approximate number of businesses involved	
Short description of instrument	For as a minimum of three companies (sectors production or technology orientated services) market research and the development of the new market can be supported; the eligible costs and the conditions are very similar to those under the instrument Number 2. (see also under www.kwf.at "support programmes – basic information 02")

Number:	**4**
Name of instrument:	Guideline Technology Fund
Contact organisation	KWF
Name:	Klaus Friessnig
Address:	Heuplatz 2 9020 Klagenfurt
E-mail:	friessnig@kwf.at
Phone:	0043 463 55800 25
Year of initiation	
Approximate number of businesses involved	
Short description of instrument	All projects improving the technology surrounding and performance of Carinthia and its companies can be supported up to an percentage of 50%. (see also under www.kwf.at "support programmes – basic information 02")

Hordaland

Date	19.10.2004

Contact details for organisation filling in form	
Editor	Thore Thomassen
Organisation	Hordaland Fylkeskommune
Phone	+47 55 23 95 36
E-Mail	Thore.Thomassen@hordaland-f.kommune.no

Survey of networks and clusters and related instruments

At the meeting in Bergen we defined the following target groups for component 3 Cooperation and Networking of SME

[7] Collaboration of groups of SME
[8] Collaboration of intermediates
   a. Administrations (business innovation centres (BIC), Science Parks etc)
   b. Clusters/ networks within BIC etc

(Sustainable networks between partners/region will between organised at RFO level and should not be included in the overview for the component)

The Bergen meeting also defined the topics (thematic and by sector):

[9] Exchange of experience at management level of networks
[10] New services/instruments for networks/ ”clusters”
[11] SME collaboration for new markets and production
[12] Sectors:
   a. Technical oriented production
   b. Research and development
   c. Service sector

and the challenges in this area is defined as:

[13] Upgrade of knowledge & exchange of ”best practise” at intermediate level
[14] Stimulate internationalisation of SME
[15] Stimulate networking of SME
[16] Stimulate innovation & change processes.

Please fill in the forms below with information of relevance to these target groups, topics and challenges. We are only looking for those networks, and clusters that are within the defined ENABLE topics and which are potential partners in ENABLE activities.

1. NETWORKS, CLUSTERS AND ORGANISATIONS

Please fill in the following information for knowledge parks, business innovation centres, technology centres, research institutes clusters and business networks etc. For clusters and business networks it is important that they have a dedicated secretariat or administration established.

Please copy the forms for more organisations, networks and clusters.

Number:	**1**
Name of organisation, network or cluster:	Industrinettverket AS
Contact person	
Name:	Sylvi Sørfonn
Address:	
E-mail:	sylvi.sorfonn@industrinettverket.no
Phone:	+47 53 41 32 77
Approximate number of organisations involved in network or cluster	19 companies
Year of initiation	1987
Key areas of activity	Technology center for southern parts of Hordaland, one of a number of local knowledge centre. Received funding form Ministry of Local Government and Regional Development. Aim to strengthen and improve the technological cluster. Further the center is supposed to improve the value creation in enterprises to make them more competitive and to create new work opportunities.

Number:	**2**
Name of organisation, network or cluster:	Vestnorsk Filmsenter AS
Contact person	
Name:	Hans Dragesund
Address:	Georgernes Verft, 50111 Bergen Norway
E-mail:	
Phone:	+47 55 56 09 05
Approximate number of organisations involved in network or cluster	
Year of initiation	1994
Key areas of activity	Vestnorsk filmsenter is owned by Bergen Kommune and Hordaland Fylkeskommune. Vestnorsk filmsenter receive funding form the The Ministry of Culture and Church Affairs that is to be used for short movies and documentary movies. All professional film producers with a project can apply for funds/support from Vestnorsk Filmsenter

Number:	**3**
Name of organisation, network or cluster:	EOS-Medical NordicNeuroLab AS (NNL) whish to establish an interregional network in electronics, optics and senorics.
Contact person	
Name:	Tormod Thomsen
Address:	Møllendalsvn. 61 A, N-5009 Bergen
E-mail:	[tormod@nordicneurolab.com]
Phone:	+47 41 41 34 23
Approximate number of organisations involved in network or cluster	8
Year of initiation	2003
Key areas of activity	The network is initially planned to include the following partners from Hordaland -NordicNeuroLab, represented by Tormod Thomsen, Vegard Vangdal and Sverre Døving -Bergen University College, Departement of Engineering, represented by Atle Våge -Haukeland University Hospital, Department of Clinical Engineering, represented by Jan Randa -Vik & Sandvik, industrial design, represented by Sveinung Åkra From the region of Thüringia we whish to include the following partners -TETRA Gesellschaft für Sensorik, Robotikk und Automation, mbH, represented by Olaf Mollenhauer -Technische Universität, Ilmenau, represented by Prof. Günter Henning -CIS institut für Mikrosensorik gGmbH, represented by Arndt Steinke -asphericon GmbH, represented by Alexander Zschäbitz

Sogn og Fjordane

Date	19.10.2004

Contact details for organisation filling in form	
Editor	Arne Monrad Johnsen/Ingjerd Skogseid
Organisation	Sogn og Fjordane Fylkeskommune/Western Norway research Institute
Phone	+47 57 65 62 48
E-Mail	arne.monrad.johnsen@sf-f.kommune.no

Survey of networks and clusters and related instruments

At the meeting in Bergen we defined the following target groups for component 3 Cooperation and Networking of SME

[9] Collaboration of groups of SME
[10] Collaboration of intermediates
a. Administrations (business innovation centres (BIC), Science Parks etc)
b. Clusters/ networks within BIC etc

(Sustainable networks between partners/region will between organised at RFO level and should not be included in the overview for the component)

The Bergen meeting also defined the topics (thematic and by sector):

[13] Exchange of experience at management level of networks
[14] New services/instruments for networks/ ”clusters”
[15] SME collaboration for new markets and production
[16] Sectors:
a. Technical oriented production
b. Research and development
c. Service sector

and the challenges in this area is defined as:

[17] Upgrade of knowledge & exchange of ”best practise” at intermediate level
[18] Stimulate internationalisation of SME
[19] Stimulate networking of SME
[20] Stimulate innovation & change processes.

Please fill in the forms below with information of relevance to these target groups, topics and challenges. We are only looking for those networks, and clusters that are within the defined ENABLE topics and which are potential partners in ENABLE activities.

1. NETWORKS, CLUSTERS AND ORGANISATIONS

Please fill in the following information for knowledge parks, business innovation centres, technology centres, research institutes clusters and business networks etc. For clusters and business networks it is important that they have a dedicated secretariat or administration established.
Please copy the forms for more organisations, networks and clusters.

Number:	**1.**
Name of organisation, network or cluster:	Farm tourism and local food production
Contact person	
Name:	Roar Werner Vangsnes
Address:	
E-mail:	rwv@fmsf.no
Phone:	+47 57655198 Mobil: +47 90629730
Approximate number of organisations involved in network or cluster	
Year of initiation	
Key areas of activity	Organisation for farm tourism and local food processing. small scale food production.

Number:	**2**
Name of organisation, network or cluster:	Sogn og Fjordane reiselivsråd
Contact person	
Name:	Jens Chr Skrede
Address:	
E-mail:	sfr@sfr.no
Phone:	
Approximate number of organisations involved in network or cluster	9 destination companies (at second level 600 SME)
Year of initiation	
Key areas of activity	Tourism development and marketing, consisting of nine regional tourist destination companies each being a network between its members, having more than 600 SMEs as members. Potential for best practice and increased knowledge and competence. Potential focus: sustainable tourism, use of ICT in tourism organisations

Number:	**3.**
Name of organisation, network or cluster:	Business innovation centers
Contact person	
Name:	Øystein Stavli
Address:	Fjøreveien 10, 6851 Sogndal
E-mail:	oystein@kunnskapsparken-sf.no
Phone:	+47 924 07 326
Approximate number of organisations involved in network or cluster	6 One knowledge park and five business parks Kunnskapsparken i Sogn og Fjordane Sandane næringshage Stryn Næringshage Nordfjord Næringshage Leikanger Næringshage Florø Næringshage
Year of initiation	1999 first Bic established
Key areas of activity	Business development Start-ups innovation

Number:	**4.**
Name of organisation, network or cluster:	Indutrial site development
Contact person	
Name:	Sunnfjord 2020 Contact: Olav Steimler Phone: +47 57 75 45 00 email: olav.steimler@sunnfjord2020.no Årdal Utvikling Manager Phone +47 57 66 11 77 Email: kurt.jevnaker@ardal-utvikling.no Høyanger Næringsutvikling Petter Sortland, Phone: +47 5771 3030 email: petter.sortland@hnu.no
Approximate number of organisations involved in network or cluster	
Year of initiation	
Key areas of activity	Not organised but 3 (5) companies have been established in three municipalities (Florø, Årdal, Høyanger). These three municipalities have all been granted a restructuring status.

Number:	**5**
Name of organisation, network or cluster:	Rural community development network (bygdeutviklingslag)
Contact person	
Name:	Christian Rekkedal
Address:	
E-mail:	christian.rekkedal@fmsf.no
Phone:	57723242
Approximate number of organisations involved in network or cluster	
Year of initiation	
Key areas of activity	A number of rural development projects have been initiated in Sogn og Fjordane. FMLA manages state grants to development studies and infrastructure in the countryside. The grants are meant to support a profitable development of new jobs, based on farming and forestry.

Number:	**6**
Name of organisation, network or cluster:	Marin Vest
Contact person	
Name:	Program manager: Kari Holmefjord Vervik (51545125/95858545) kari.holmefjord.vervik@invanor.no Sogn og Fjordane: Jan Gurvin, Innovasjon Norge (57651948) jan.gurvin@invanor.no Hordaland: Sidsel Lauvås, Innovasjon Norge (55559351)
Address:	
E-mail:	
Phone:	
Approximate number of organisations involved in network or cluster	Many but difficult to say specifically?
Year of initiation	
Key areas of activity	sea food network Increasing value of sea food production, technological efficiency of production

Number:	**7**
Name of organisation, network or cluster:	Oil and gas industry
Contact person	
Name:	Audun Erik Sunde Sogn og Fjordane County municipality
Address:	
E-mail:	audun.erik.sunde@sf-f.kommune.no
Phone:	
Approximate number of organisations involved in network or cluster	?
Year of initiation	
Key areas of activity	Oil and gas related industry in Sogn & Fjordane

Number:	**8**
Name of organisation, network or cluster:	Western Norway Film Commission
Contact person	
Name:	Torill Svege, bergen media by
Address:	Georgenes verft 12 5011 Bergen
E-mail:	
Phone:	
Approximate number of organisations involved in network or cluster	11-12
Year of initiation	
Key areas of activity	Production of media and film events; locations, professionals and production facilities. Working in both Hordaland and Sogn og Fjordane

Number:	**9**
Name of organisation, network or cluster:	IT-forum Sogn & Fjordane
Contact person	
Name:	Svein Ølnes
Address:	Postboks 163, 6851 Sogndal
E-mail:	sol@vestforsk.no
Phone:	+47 57676155
Approximate number of organisations involved in network or cluster	50-70
Year of initiation	1995
Key areas of activity	IT-forum Sogn og Fjordane was established in 1995 as an organisation where private and public sectors, research and education could work together to create an IT region. In 1996 IT-forum became a foundation for the collaboration with local projects and European projects. It has become the focal point of both the national and European community. Has 6 sub-networks focusing on different applied areas. Board strategy group broadband development and application (see also network 10 below) operation og technology Geographic Information System Educational network /schoolnetwork

Number:	**10**
Name of organisation, network or cluster:	Broadband forum Sogn & Fjordane
Contact person	
Name:	Øyvind Heimset Larsen/Geir Strand
Address:	Postboks 163, 6851 Sogndal
E-mail:	ohl@vestforsk.no / gst@vestforsk.no
Phone:	+47 57676150
Approximate number of organisations involved in network or cluster	35
Year of initiation	2001
Key areas of activity	Broadband-forum 'Sogn og Fjordane' (BBF); is a network organisation, initiated in 2001, in response to the increasing interest and need for broadband infrastructure in the region. BBF is organised as a network BBF is a task force that places focus on establishment, development and utilization of broadband infrastructure in local communities. BBF initiated and participated in a number of activities, such as; information meetings and an annual conference, surveying the availability of broadband infrastructure, and participated in a number of externally funded broadband projects focusing on the utilisation of the network for provision of services or education.

Number:	**11**
Name of organisation, network or cluster:	Confederation of Norwegian Business and Industry Sogn og Fjordane
Contact person	
Name:	Regional director Karin Helen Halle
Address:	Strandgaten 52/54 Postboks 217 6901 FLORØ
E-mail:	karin.halle@nho.no
Phone:	57 75 21 00
Approximate number of organisations involved in network or cluster	540 member
Year of initiation	
Key areas of activity	NHO is the main organisation for Norwegian employers. Nationally membership consists of more than 16 000 enterprises ranging from small family-owned businesses to large industrial enterprises. Regionally NHO has about 540 member enterprises employing almost 12.500 persons.The largest business / brance organisations are: the Norwegian Hospitality Association, Federation of Norwegian Process Industries, Federation of Norwegian Manufacturing Industries, Norwegian Seafood Federation og The Federation of Norwegian Construction Industries.

Number:	**12**
Name of organisation, network or cluster:	Verdiskaping Sogn og Fjordane (Business development /improvement through brad participation)
Contact person	
Name:	PM: Geir Strand,
Address:	Vestlandsforsking, Postboks 163, 6851 Sogndal
E-mail:	gst@vestforsk.no
Phone:	+47 57676167
Approximate number of organisations involved in network or cluster	
Year of initiation	2004
Key areas of activity	An project/program working together with a number of enterprises in the region with the aim to improve the value creation in the enterprise involving employees in the enterprise along with the managers. Are focusing on two geographical and themes: Tourism and local food culture (Aurland) Industry (mainly process industry) in Florø Are working closely with companies and can recommend connections

2. INSTRUMENTS TO SUPPORT NETWORKS

In this context we define an **instrument** to be either

[5] Organisations such as the business innovation parks etc and

[6] Concrete development programs in the region that support networks

Related to the defined topics for component 3: Which instruments does your region have to support networks, clusters and similar organisations?

Please copy the forms for more instruments.

Number:	**1**
Name of instrument:	Rural development
Contact organisation	
Name:	Christian Rekkedal
Address:	
E-mail:	christian.rekkedal@fmsf.no
Phone:	57723242
Year of initiation	
Approximate number of businesses involved	
Short description of instrument	FMLA manages state grants to development studies and infrastructure in the countryside. The grants are meant to support a profitable development of new jobs, based on farming and forestry.

Number:	**2**
Name of instrument:	SIVA – business innovation centers and knowledge parks
Contact organisation	
Name:	Øystein Stavli
Address:	Fjøreveien 10, 6851 Sogndal
E-mail:	oystein@kunnskapsparken-sf.no
Phone:	+47 924 07 326
Year of initiation	
Approximate number of businesses involved	
Short description of instrument	Knowledge and business park development, provide funding for the establishment and operation of business parks.

Number:	**3**
Name of instrument:	Innovation Norway
Contact organisation	
Name:	Jorunn Åsfrid Royrvik
Address:	
E-mail:	jorunn.asfrid.royrvik@invanor.no
Phone:	57 65 19 40
Year of initiation	
Approximate number of businesses involved	
Short description of instrument	Several funding programs for individual and groups of enterprises: capital: low risk loan high risk loan Stipends start-up stipends development contracts regionally aimed stipends (not all regions have these) development stipends Skattefunn: in collaboration with research counsil. up to 20% Tax return on approved R&D projects in companies (nationally this covered more than 3000 enterprises in 2003)

Number:	**4**
Name of instrument:	County municipality plan
Contact organisation	Sogn og Fjordane Fylkeskommune
Name:	Arne Monrad Johnsen
Address:	
E-mail:	arne.monrad.johnsen@sf-f.kommune.no
Phone:	+47 5 62 48
Year of initiation	
Approximate number of businesses involved	
Short description of instrument	Number on program activities for different sectors competence and training/education energy production, oil gas and mineral resources start-ups and restructuring fishery & fish farming tourism agriculture and rural community development Young people in Sogn & Fjordane public health culture & local community

Number:	**5**
Name of instrument:	Marin Vest
Contact organisation	
Name:	Program manager: Kari Holmefjord Vervik (51545125/95858545) kari.holmefjord.vervik@invanor.no Sogn og Fjordane: Jan Gurvin, Innovasjon Norge (57651948) jan.gurvin@invanor.no Hordaland: Sidsel Lauvås, Innovasjon Norge (55559351)
Address:	
E-mail:	
Phone:	
Year of initiation	2003
Approximate number of businesses involved	?
Short description of instrument	This is a program activity supporting sea food networks, organisations and enterprises Collaboration between Sogn & Fjordane, Hordaland and Rogaland county municipality

Number:	**6**
Name of instrument:	Verdiskaping Sogn og Fjordane (Business development /improvement through brad participation)
Contact organisation	
Name:	PM: Geir Strand,
Address:	Vestlandsforsking, Postboks 163, 6851 Sogndal
E-mail:	gst@vestforsk.no
Phone:	+47 57676167
Year of initiation	2004
Approximate number of businesses involved	
Short description of instrument	An project/program working together with a number of enterprises in the region with the aim to improve the value creation in the enterprise involving employees in the enterprise along with the managers. Are focusing on two geographical and themes: Tourism and local food culture (Aurland) Industry (mainly process industry) in Florø Are working closely with companies and can recommend connections