Nordic Benchlearning
A Community of Practice between Six Clusters

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Abstract:
This paper focuses on the Nordic benchlearning project developed between six different networks and clusters, with their base respectively in the counties of Hedmark and Oppland in Norway and Värmland in Sweden, and Karlstad University (Cerut) and NIBR/ØF (VS2010 Innlandet). The networks/clusters have different history, structure and strategies in their struggle to establish and strengthen learning and innovation. The Norwegian networks and clusters are TotAl-gruppen/the Light Materials Cluster, Tretorget/the Wood Industry Cluster, and Bluelight/the Information Security Cluster. On the Swedish side the clusters are The Paper Province, The Graphic Valley and The Packaging Arena. Over a period of three to four years these clusters participated in a mutual learning project called Nordic benchlearning. This project developed a kind of community of practice between the participants, initiated and coordinated by the researchers. This paper focuses on how the project was organised, its processes and activities, the role of the researchers, and the outcome of the project.

1. Introduction

The Nordic benchlearning (NBL) project was part of the cooperative project Nordic benchmarking between the Norwegian Research Council and the Swedish development agency Vinnova, which started in 2003. Three parallel projects were established between Norwegian and Swedish research group and practitioners. The NBL project was developed between six different networks and clusters, with their base respectively in the counties of Hedmark and Oppland (Innlandet) in Norway and Värmland in Sweden, and Karlstad University (Cerut) and NIBR/ØF (VS2010 Innlandet). These two regions are border regions within reasonable travel distance.

The networks/clusters have different history, structure and strategies in their struggle to establish and strengthen learning and innovation. The Norwegian networks and clusters were TotAl-gruppen / the Light Materials Cluster, Tretorget / the Wood Industry Cluster and Bluelight / the Information Security Cluster. On the Swedish side the clusters are The Paper Province, The Graphic Valley and The Packaging Arena.

The researchers had a cooperative project based on to separate projects in each country. Researchers from NIBR/ØF participate through the VS2010 Innlandet project, financed by the Norwegian Research Council and the counties of Hedmark and Oppland, while Cerut/KaU researchers were
funded by Vinnova. The cooperative project had two main purposes: a practical applied component that entailed participation in a number of meetings and benchmarking activities within and between innovation systems and clusters in the two regions, and secondly the research approach based on comparison between the systems/clusters and the experience with the learning project.

Over a period of three and a half years, from August 2004 to March 2007, these clusters have participated in a mutual learning project called Nordic benchmarking. This project developed a rather tight and open relation between the participants, initiated and coordinated by the researchers. This paper focus on how the project was organised, its different processes and activities, the role of the researchers, and the outcome of the project. The first part discuss the different theories, principles and concepts, and the second part present the participants, the practice, and the discussions of the project.

2. Learning between Clusters

The intention with the NBL project was to try to establish a cluster learning project across the national boarders. Cluster development had been going on and was stimulated in the two regions. On the other side have learning theories and learning practices been on the research and action agendas the last years, and have been seen as an important part of innovation and development in companies, clusters and regions (Gustavsen et al 2007). But, how relevant are these theories and experiences in relation to the development of clusters? Can we place our practice of benchmarking into a broader picture of theories and practices?

Individual and Organisational Learning

Humans are “learning beings”, and learning is an important part of being human. It is normal to distinguish between formal and informal learning for humans. In addition to individual learning it has been an increased focus on organisational learning. Relatively little though has been written about learning in networks or clusters.

Individual learning

Learning is a process in two phases. It is both the process of acquiring new knowledge and the outcome in form of new competence, which is “…an ability to apply new knowledge to enhance the performance of an existing activity or task or to prepare for new circumstances and thus change in the future” (Child & Heavens 2003: 309, with reference to Weick 1991).

Formal learning is related to schooling and formal education and training. It has a focus on the individual, where they are taught and tested for their knowledge, often abstract and theoretical, and skills. Formal education/training gives the participants formal competence, and the competence in further learning. “The objective is to build up individual ‘human capital’” (Nyhan 2007:22). Informal learning plays a major role in peoples’ lives. It is “… more significant for our lives than formal learning because it directly shapes our practice. It has a direct impact on how we act.” (Nyhan 2007: 20) Most of this informal learning is done with and from other people, engaged in common activities.

Much of the informal learning is social learning, which gives rise to social capital (Nyhan, 2007). According to Coleman (1968), does social capital help in the building of human capital, through the use of relations to others in the building of individual skills and competences. On the other side are social capital built through social and collective learning processes.

Organisational learning

Crossan, Lane & White (1999) define organisational learning “…as a multilevel process that begins with individual learning, that leads to group learning, and that leads to organizational learning” (ibid: 525). In their perspective are these levels connected by bi-directional processes that involve both the

1 The project was called “Benchmarking Innovation Processes in Scandinavia: Work and Development Organisation”.

creation and application of knowledge. Individual learning are connected to organisational learning through four processes:

1. **Intuition** as the preconscious recognition of the pattern and/or possibilities inherent in a personal stream of experience.
2. **Interpreting** as the explaining, through words and/or actions, of an insight or idea to one’s self and to others.
3. **Integrating** as the process of developing shared understanding among individuals and of making coordinated action through mutual adjustment.
4. **Institutionalised** as learning that has occurred among individuals and groups and is embedded into organisational thoughts as systems, structures, procedures and strategy.

In the first two phases on individual level are ideas made explicit and named. The third phase on group level, the explicit ideas are incorporated into cognitive maps to be shared through collective action. In the fourth phase on organisational level the collective experiences becomes institutionalised knowledge.²

According to Child & Heavens (2003) are senior managers in a privileged position to enhance learning. “…The potential contribution of leadership to organizational learning encompasses a number of roles… establishing a culture conducive to organizational learning… to support the appropriate culture with a set of accompanying practices that permits the autonomy to encourage the creation of insight and new knowledge… [and] to foster the three channels of communication and relationships across internal and external organizational boundaries that are key to the learning process.” (: 312-313)

“The first channel involves the relationship between higher management and other, more specialized groups within an organization. There is a division of function in that higher management will normally be concerned with strategic learning, whereas other groups will work more on systemic and technical learning. Each area of learning needs to be informed by the others.” (ibid : 313). These are the vertical relationships.

The other two channels are horizontal in nature. “One relates to the integration of knowledge contributions from different specialities within an organization, ranging from the management of knowledge databases and systems to the development of effective teamwork across departments and disciplines. The third channel promotes flows of information and knowledge across the boundaries of an organization through communication with and intelligence from other organizations and groups, including customers, suppliers, network partners, competitors, and research institutes.”(ibid: 313).

In addition to these three channels of communication and relationship we may also add a fourth channel towards the wider organisational networks where the organisations belong for a shorter or longer periode. This could be local and global networks between firms from the same culture (Tsui-Auch 2003) or imaginary organisations in form of value chain clusters (Porter 1990 and 1998, Hedberg & Holmqvist 2003). It could also be between different types of networks and clusters in form of communities of practise (Wenger 1998, Wenger et al 2002). We will look at the NBL-project from this perspective.

Crossan et al (1999) approach learning in organisations as collective cognitive representations. Different views on learning, as the social and cultural approaches, do not focus on different levels of learning. They emphasise the social and collective nature of learning and that development of new knowledge is anchored in communities of practice and that learning is relational in nature (Lave and Wenger 1991, Wenger 1998).

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² For a further elaboration of organisations learning see Filstad and Blåka (2007).
Benchmarking and Benchlearning

The main Norwegian-Swedish project was named “a benchmarking project”. The Innlandet-Värmland part project after internal discussion chooses to focus on benchlearning. We felt that this was a better name for what we intended to do.

Companies use benchmarking to check how good their quality is relative to that of competitors. “Benchmarking is a continuous, systematic procedure that measures a firm’s products, services, and processes against those of industry leaders. Companies use benchmarking to understand better how outstanding companies do things so that they can improve their own operations.” (Ritzman & Krajewski 2003) Benchmarking can also be used in checking the activities and qualities of industries and regions (xx).

With benchlearning in our project we meant to indicate a process of learning between a group of actors where they bench or compare each other, but also learn from each other. In the onset of our project we did not realise that Karlöf Consulting in Sweden had trademarked Benchlearning®, a method which integrates business development with learning from good examples. This implies that the trademark and method can be used by other consultants with the licence from Karlöf Consulting. This does not mean however that the benchlearning concept, written with a small b, is registered and has a limitation on its use.4

For us is Nordic benchlearning, or NBL, the concept signifying our project and approach. The Benchlearning® method of KC consists of seven stages: Identify areas for performance improvement; build the Bechlearning team; analyse performance area; learn from partner; develop suggestions for improvement; implement changes; and review and continuous development.

Others have also used the concept. Freytag & Hollensen (2001) write about “The process of benchmarking, benchlearning and benchaction”. The aim again is to identify best practices that can be adopted and implemented by the organisation with the purpose of improving a company’s performance. The process is also again divided into seven phases: Which functions to benchmark; importance of each subject area; whom to benchmark against; gather the benchmarking information; identify performance gaps; how to learn from the “best-in-class” (benchlearning); and implementation of the changes (benchaction). They see this process as part of a continuous improvement strategy and as a change of management processes.

The perhaps most interesting use of the concept is done by CAF, or Common Assessment Framework in EU. They have developed what they call a Self Assessment and this is organised through the European Institute of Public Administration (EIPA). CAF has produced a brochure which has “bench learning” as an important tool. “Unlike classical benchmarking, bench learning does not necessarily include searching for comparable organisations and using clear indicators for direct comparisons. It emphasises more the process of learning from others rather than making comparisons. The goal of bench learning is to learn from the strengths of other organisations, to learn from them the things they do well, to search for inspiration in our own work and to learn from and to avoid the mistakes that others have made. It is an active, continuous process and not just a comparison of benchmarks: facts and measurements.” (CAF 2006: 40). – This is exactly what was the intention with our NBL project.

CAF 2006 also emphasise – the value of looking for partners from different sectors; it is not measurement of the performance, but the processes and the activities that lead to good practices; bench learning is not fast and easy; and create trust, respecting each other and openly share information is fundamental to successful bench learning projects. In European Public Administrations, according to CAF 2006, do benchmarking usually focus on the learning aspects and is more commonly referred to

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3 See www.benchlearning.com
4 The concept in our project is used descriptively and then does not violate the trademark rights.
5 The concept in our project is used descriptively and then does not violate the trademark rights.
6 See www.eipa.eu
as ‘bench learning’. This means that “…learning how to improve through sharing knowledge, information, and sometimes resources, [and] is recognised to be an effective way of introducing organisational change. It reduces risks, is efficient and saves time.” (44)

In NBL the challenge was the bench learning between clusters. The focus was more on sharing than ranking between the participants. This kind of learning is especially important in developing new networks and clusters where formal learning is scarce, complexity is high, experiences are low, and changes go fast.

3. Communities of Practice
The NBL project was initiated and run as a learning network, but it was more than just a network and project. A form of community developed and what my look like a community of practice. Our further discussion will clarify whether this was true.

Multimembership Learning
Wenger, McDermott & Snyder (2002) in their book “Cultivating Communities of Practice” focus on communities that are formed around common interest and expertise to create, share and apply knowledge within and across the boundaries of teams, business units and companies. This could be first-line managers, customer service representatives, city planners, or business network and cluster managers and facilitators.7

“Communities of practice are group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis… These people don’t necessarily work together every day, but they meet because they find value in their interactions. As they spend time together, they typically share information, insight and advice. They help each other solve problems. They discuss their situations, their aspirations, and their needs… Over time, they develop a unique perspective on their topic as well as a body of common knowledge, practices, and approaches. They also develop personal relationships and established ways of interacting. They may even develop a common sense of identity. They become a community of practice.” (Wenger, McDermott & Snyder 2002: 4-5).

Communities of practice connect personal and professional development and corporate strategy. When they are successful they deliver value to both their members as well as to the member’s organisation. The multiple and complex ways in which communities of practice deliver value to both members and organizations is the reason they have become popular on the management agenda and related to learning and innovation.

A community of practice is very different from a centre of excellence or expertise, where specialists develop knowledge without being involved in line operations. Practitioners themselves, in their dual roles as both community practitioners and operational team members, help link the capabilities of communities of practice to the knowledge requirements of teams and business units. This multimembership creates a learning loop. It combines formal and informal structures, and provides new degrees of freedom for designing organisations.8

Fundamental Elements and Coordination
A community of practice can take different forms, but they all share a basic structure which is a combination of three fundamental elements according to Wenger et al (2002). This is a domain of

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7 This book builds on the concept and perspective developed in Wenger’s book “Communities of Practice: Learning, Meaning, and Identity” from 1998, which again was strongly influenced by Lave & Wengers (1991) “Situated Learning: Legitimate Peripheral Participation” with a focus on traditional apprenticeship.

8 Nonaka & Takeuchi (1995) in their “The Knowledge-Creating Company” use the concept “hypertext organization” to describe the relationship between business units, project teams, and knowledge structures. This is because project teams and formal units draw on the knowledge structures on an as-needed basis as if clicking on hypertext to access information through a URL.
knowledge, which defines a set of issues; a community of people who care about this domain; and the shared practice that they are developing to be affective in their domain.

“The domain creates common ground and a sense of common identity. A well-defined domain legitimizes the community by affirming its purpose and value to members and other stakeholders. The domain inspires members to contribute and participate, guides their learning, and gives meaning to their actions” (ibid: 27-28). The domain denotes the topic that the community focuses on, and creates a sense of accountability to a body of knowledge and therefore to the development of a practice. It concerns complex and long-standing issues for the participation that require sustained learning, not merely passing issues or an abstract area of interest.

“The community creates the social fabric of learning. A strong community fosters interactions and relationships based on mutual respect and trust. It encourages a willingness to share ideas, expose one’s ignorance, ask difficult questions, and listen carefully… Community is an important element because learning is a matter of belonging as well as an intellectual process, involving the heart as well as the head” (ibid: 28). A community of practice is thus nor just a Web site or collection of best practices. It is a group of people who interact, build relationships and learn together and through this process develop a sense of belonging and mutual commitment.

“The practice is a set of frameworks, ideas, tools, information, styles, language, stories, and documents that community members share… [and it is] the specific knowledge the community develops, shares, and maintains” (ibid: 29). The practice is a sort of mini-culture that binds the community together. Its success depends on “…a balance between joint activities, in which members explore ideas together, and the production of “things” like documents or tools”(ibid: 39).

These three elements, when they function well together, make a community of practice “…an ideal knowledge structure – a social structure that can assume responsibility for developing and sharing knowledge” (ibid: 29). Communities of practice can be planned or spontaneous, but they all have in common “… a coordinator” who organize events and connect community members”. (ibid: 55) The vitality of the leadership, and especially the coordinator, is important for the success of the community.

**Interorganisational Communities of Practice**

Wenger, McDermott & Snyder (2002) focus primarily on the ability of communities of practice to steward knowledge inside organisations. But they also emphasise that “… the complexity of markets and learning systems in the knowledge economy have sparked a trend toward communities that are not confined to the boundary of a single organization” (ibid: 220). “The extended knowledge system” as they call it, includes suppliers, customers, partners and colleagues outside the firm. This boards to the open learning and innovation perspective described by Chesbrough (2003).

When firms outsource processes, interorganizational communities of practice may help to maintain internal expertise while strengthening relationships with outsourcing partners. “Indeed, manufacturers, suppliers, and distributors in common industry sectors form natural clusters that provide fertile soil for the growth of interorganizational communities of practice.”(Wenger et al 2002: 221). This is what Toyota has done. They have invested a great deal of effort in creating a knowledge-sharing network among its suppliers.

Organisations may also join forces with competitors to take advantage of market opportunities that require complex knowledge. Different alliances and partnerships that intend to provide access to new capabilities for participating firms depend on trust between practitioners on all sides as well as high levels of “absorptive capacity” – the ability to make use of what you learn – within each firm. “The internal capacity as well as external trust with colleagues across firms in turn depend on communities in relevant areas of practice, both inside and across the participating firms” (ibid: 223). The interorganisational communities of practice are ideal vehicles for realising the knowledge potential
that exists across firms. – The question is whether the NBL was this kind of interorganisational community of practice? We will return to that later.

4. Action Research and Coordination
The role as coordinator is important in both a benchlearning project and especially when the learning processes takes the form of communities of practice. In the NBL project the researchers at VS2010 Innlandet (NIBR og ØF) and Cerut (KaU) had an active role, like action researchers.

According to Robson (2002) is action research a special brand and an influential approach within social research. Action research “…is primarily distinguishable in terms of its purpose, which is to influence or change some aspect of whatever is the focus of the research… It adds the promotion of change to the traditional research purposes of description, understanding and explanation. Improvement and involvement are central to action research. There is, first, the improvement of a practice of some kind; second, the improvement of the understanding of a practice of some kind; and third, the improvement of the situation in which the practice takes place.” (ibid: 215)

Central to action research is further the collaboration between researchers and those who are the focus of the research, and the researcher participation in the process. Action research is about contributing to social change and that this is accomplished by engaging the field actors or practitioners themselves in the research process (Greenwood and Levin 1998). The role of the researcher in action research differs from that of the more conventional social researcher in that the action researcher in some way need to assist the research process of the field actors. The conventional researcher does research in or on a field, through a set of practices that make the world visible to the researcher - who afterwards need to tell the others what was discovered. In action research the research is performed by or with the field actors themselves, so that they can gain a better understanding and thereby more control of their own reality.

Action research then “… is dependent upon working with specific people in specific contexts” (Gaustavsen et al 2008: 63). Scandinavian work research, which is a brand of action research, in the 80’s and 90’s discovered the importance of locally constructed initiatives and the role of democratic dialogue. This was expressed in a number of design criteria. A few of this are as follows (Gustavsen 2001/6: 19):
- Dialogue is based on a principle of give and take, not one way communication.
- All concerned by the issue under discussion should have the possibility of participating.
- Participants are under an obligation to help other participants be active in the dialogue.
- All participants have the same status in the dialogue arenas.
- Work experience is the point of departure for participation.
- All arguments that are to enter the dialogue must be represented by actors present.
- The dialogue should continuously generate decisions that provide a platform for joint action.

The core element in different work related activities is “…the notion of dialogue as the main constructive force”, according to Gustavsen et al. (2008: 69), and the dialogue conference is seen as the first practical expression of this notion of democratic dialogue. – As we can see, it is a close relation between these ideas of dialogue, benchlearning and communities of practice.

5. The Regions and the Participating Clusters
The two regions that cooperated in NBL, Innlandet (Hedmark and Oppland) and Värmland, are neighbour regions. There are close similarities, but also differences between the regions.

Innlandet
The Innlandet region consist of the two counties of Hedmark and Oppland, and are dominated by four strong industries – the forest and wood industry, agriculture and food industry, mechanical engineering and tourism and cultural industry. Three of these industries are based on strong natural
resources in the region, agricultural land, forests and mountains. The fourth industry has partly its background as suppliers to the other industries (Johnstad 2004b).

The forest and wood industry is strong particularly in Hedmark, but also in Värmland. In Hedmark it is the Glåmdalen and Hamar region which is dominating this industry. Moelven Industries is the locomotive which is strong on both the Norwegian and Swedish side of the border. The second dominant industry is agriculture and food industry. Two of Norway’s biggest slaughtering houses are located in Hedmark, Nortura/Gilde at Rudshøgda and Spis at Brumunddal.

Partly based on the supply to the agriculture/food and forest/wood industry did a mechanical engineering industry developed in the 1800’s and beginning of 1900 on both sides of lake Mjøsa. This craft industry was particularly strong at Toten, which was the most industrialised rural area in Norway in the 1860’s according to Sundt (1867). More modern industries gradually developed at places like Gjøvik, Brumunddal, Moelv and Raufoss. Cornerstones in this industry up to the Second World War were Mustad at Gjøvik and RA (Raufoss Ammunisjonsfabrikk) at Raufoss. In the 70’s and 80’s Raufoss formed the core of the development of a new lightweight material industry (Johnstad og Leirvik 2006).

The region has seen a strong growth of the tourism industry and what recently has been called the culture and event industry. In addition it also has experiences the growth of some new and technology based industries. The biotechnology industry in the region has strong relations to agriculture and the breeding companies located at Hamar. They have experiences interesting spin offs and growth the last years. Information security is the other technology based industry in the region with its node in Gjøvik. Based on many dispersed, but strong actors in the field in the region, it was possible to join them in a fast growing network and cluster a few years ago.

The Lightweight Material Cluster and the TotAl-gruppen
During the last 10 years the industry at Raufoss has gone through a complete transformation from a single company town, with RA as the single company, with the core activity in military production, towards an industrial cluster of 70-80 companies and between 4-5000 employees with its core in the production of automotive components in aluminium. Out of these are 35 companies in the Raufoss Industrial Park, the previous site for RA. The fission processes and organisational change has gone very fast. The challenge they experienced 5 years ago was the development of a dynamic cluster and efficient innovation system out of the new industrial agglomeration (Johnstad 2004b and 2007a).

In 1998 was TotAl (Toten Aluminium) formed as an informal network between smaller aluminium processing companies in the region. They partly wanted to help each other in becoming better in marketing, resource allocation and development of competence. In 2005 it was formalised as an organisation and employed a professional daily manager (Johnstad & Leirvik 2006). In 2003-6 a cluster development project, “Arena Lettmøttal”, was financed by Innovasjon Norge. In the beginning this had a close cooperation with the newly started and fragile R&D-unit RTIM (Raufoss Technology and Industrial Management). Later it cooperated closer with TotAl, and together they strengthened the cooperation with schools and Gjøvik University College. The project was also important in stimulating and integrating the cluster (Johnstad 2007b). The R&D project VS2010 Innlandet was also an important part of this cluster development (Johnstad 2007a).

RTIM should gradually become the driver of the development in the cluster, especially after it became the Norwegian Centre of Expertise or NCE-Raufoss in 2005/6, with the main focus on automatisation and light material technology. This is a 10 years cluster development project partly financed by the Norwegian Research Council and Innovation Norway. An important focus is also on integration between industry, research/universities and the regional public sector (triple helix).

Tretorget and the Wood Industry Cluster
Hedmark has a strong forest and wood industry, which is partly specialised in Glåmdalen within sawing mill and wood mechanical industry. Norway’s biggest sawing mill is located here. The other
important part of the wood industry is the wood house industry in the Hamar region. The first initiative to organise and create cooperation in the industry was the establishment of Tretorget in 2001. The wood industry in the Glåmdalen region had experienced reduced employment and few new businesses. There was a need for increased innovation and new businesses. This was the main focus in the first phase of development which also included the Arena-project Trepiot (Aasen 2004, BI-rapport 2003). These ambitions were difficult to achieve.

In 2005-6 the focus gradually changed towards supporting the development in established firms through the focus on process innovation and development of competence. The access of support through the RDA (regional differentiated employee tax) money was important for this new strategy and its success. The local companies got resources they could use on development and did that through cooperation with other firms. There is a new climate for joint efforts and development in the region (Ørbeck et al 2008).

In addition and parallel to this change did VS2010 Innlandet together with Sparebanken Hedmark take the initiative to establish an informal network of the wood house industry in the Hamar region. The Moelven Industries, with its daughter Moelven Byggmodul, is a locomotive in the region and industry. Byggmodul and three other important producers from this region joined in the network and after a years trust building and cooperation decided to open up for the supply industry represented with Forestia in Glåmdalen. – Together do this initiative, and the cooperation in Glåmdalen, have the potential to develop the whole wood industry in Innlandet into a more dynamic cluster.

Bluelight and the Information Security Cluster

With the development of internet and the 911 attack in New York it suddenly became clear that more knowledge and education was needed in the information security field. Many relatively small but fragmented actors in Innlandet joined to form an information security network in 2001 which later was called Bluelight. This included the security unit in Telenor, located at Lillehammer, the military communication unit at Jørstadmoen outside the same town, Norsk Tipping at Hamar, Ergogroup at Gjøvik and around 40 others. With their own money and support from SND/IN and a regional development program (Morgenlandet) the first aim was to establish a master degree in information security at Gjøvik University College.

The Gjøvik Innovation Centre (Kunnskapspark) played an important role as facilitator for the development of Bluelight. In addition was NISLab developed as an important R&D unit at Gjøvik University College. In 2006 they had 30 researchers of which 6 were professors or associate professors. In the same year they also succeeded in getting the national security unit NorSis located to Gjøvik. The milieu has also developed a security incubator with 10? start up companies in 2007. All together this centre of knowledge in Gjøvik is the second largest in Europe in information security, and we gradually see the growth of a information security cluster (Bergum 2004 and 2006).

Värmland

Business in Värmland has largely been based on raw forest products since the early days of industrialisation. While it is true that the iron ore of the Bergslagen region was the primary raw material of iron and steel manufacturing, the forest supplied the foundries and blast furnaces with the charcoal required to smelt the iron. When charcoal was replaced by other sources of energy, it created room for the emerging sawmill industry and thereafter the paper and pulp industry. The combination of raw forest products, water routes for driving timber, waterfalls that could be converted to hydropower, viable shipping routes to reach the market – all of this contributed to Värmland’s development into a region that made a significant contribution to Swedish prosperity through extensive production and export of pulp and paper.

An engineering industry that saw potential customers with extensive needs for forest and paper machinery soon emerged. The products were developed in close cooperation between the forest and engineering industries. The geographical proximity between the companies was also advantageous from the standpoint of innovation. Technical innovations and product development could take place in
networks of suppliers and customers. – Gradually this industry has developed into three dynamic networks and clusters in the region.

The Paper Province
The Paper Province consists of about fifty companies mainly in the paper and pulp industry and is organised as an economic association. The purpose is to promote skills development, marketing, project development and regional growth processes. The Paper Province (TPP) was born of a 1998 initiative by an enterprise promotion organisation called Etablerringsregion Karlstad (ERK) co-owned by several municipalities and the companies Jaako Pöyry, Tetra Pak, Metso Paper, Kvaerner Pulping and Kvaerner Kamfah, Stora Enso and Ångpanneföreningen. The discussions among that group led to a study of the paper and pulp industry. Funded by the County Council, County Labour Board, the ERK municipalities and private enterprise, TPP was started in spring 2000, primarily for the purpose of working with labour recruiting issues. ERK has since been dissolved, but The Paper Province has lived on as an economic association (Forslund & Johnstad, 2004).

The Graphic Valley
Graphic Valley is of a less formal nature and innovation system activities are carried out primarily within Broby Grafiska Utbildning in Sunne, a school orientated towards media production, flexographic printing and packaging design. Skills development, research, product development and design development are the cornerstones of Graphic Valley, which was started in 1992 when some 15 graphic artists lost their jobs after a bankruptcy (Rudérus 2003). With funding from the County Labour Board, Brobyskolan in Sunne was commissioned to start an academic programme for the unemployed graphic artists. In November 1992, the head of the sponsored education programme, Inga-Lill Lindqvist, formed an Industry Council at the school with representatives from what was then Karlstad College, the Graphic Workers’ Union, members of the Swedish Graphic Arts Association, the municipality of Sunne and the County Labour Board. The work of the Industry Council led to new contacts and proposals for new academic programmes. With a municipal budget appropriation of SEK 11.5 million, a new upper secondary flexographic printing and media programme was started while the sponsored education programmes continued (Rudérus 2003).

An industry association, SweFlex, was formed in 1995 and now has some 120 member companies and organisations. Svenska Flexografiinstitutet (“The Swedish Institute of Flexography”) was founded in 2000 by SweFlex and the municipality of Sunne in partnership with Karlstad University. Several QVE (Qualified Vocational Education) programmes have been started within Broby Grafiska and several EU projects have contributed to developing operations. Many of the activities and programmes are now gathered within Ideum, an educational and business centre. The companies in TGV have gradually grown from 50 into 650 employees over the last 10 years.

The Packageing Arena
Packaging is the focus of the current initiative because regional interests can combine the expertise in the paper industry, already manifest in the innovation system “The Paper Province” (TPP) and specific knowledge within the graphics industry and education in Graphic Valley. This is bolstered by close cooperation with Designstudio Värmland, Karlstad University, the local authority association Region Värmland and the Värmland County Council. Private enterprise, public agencies and the university are united in a common initiative, popularly called the Triple Helix, devoted to promoting regional growth.

The Paper Province and Graphic Valley are carrying out a joint initiative aimed at becoming world leaders in the packaging sector within the framework of The Packaging Arena. The packaging market is highly diversified, with a total market value of nearly SEK 4 trillion. It comprises 100,000 firms worldwide with more than five million employees and growth of about 4% a year. The market can be divided into one third cellulose fibre-based packages, one third plastic and one third other materials (aluminium, glass, etc.). (Larsson 2003). It a big potential in entering this market more systematically, and Värmland has a few advantages in doing so.
6. The Nordic Benchlearning Project

The Nordic benchlearning (NBL) project was part of the cooperative project Nordic benchmarking between the Norwegian Research Council and the Swedish development agency Vinnova. Three parallel projects were established between Norwegian and Swedish research group and practitioners.

Initiation and Organisation

The NBL project was developed between six different networks and clusters, with their base respectively in the counties of Hedmark and Oppland (Innlandet) in Norway and Värmland in Sweden, and with the support from Karlstad University (Cerut) and NIBR/ØF (VS2010 Innlandet). These two regions are borderer regions within reasonable travel distance, which made it possible to have regular meetings between the involved parties.

The networks/clusters have different history, structure and strategies in their struggle to establish and strengthen learning and innovation. The Norwegian networks and clusters that participated was the above presented TotAl-gruppen/the Light Materials Cluster, Tretorget/the Wood Industry Cluster and BlueLight/the Information Security Cluster. On the Swedish side the clusters were The Paper Province, The Graphic Valley and The Packaging Arena. Over a period of three and a half years, from August 2004 to March 2007, these clusters have participated in a mutual learning project.

The first seminar was in Hamar (Hedmark) in August 2004. The program was the discussion of the possibility of arranging a learning network between clusters in the two regions, and the form and content of such a project. The participants were enthusiastic about the idea and wanted to join, and they decided on an plan and organisation of further cooperation in the group.

The core activity in the project was to arrange a seminar at each cluster to better learn about each other, through visiting the sites, have a presentation from the host organisation. All together this formed six seminars running through 3 years, in average one seminar each semester on each side of the border. A core of around 18-20 practitioners participated, beside a handful of researchers, on each seminar. Of these participants 2-3 came from each cluster, in addition to a few regional representatives. This mix of participants made up a triple helix collection of representatives.

The seminars followed the same procedure, running from lunch day 1 to lunch day 2. Through this approach we got three meals together for informal discussions, and especially the common dinner was an important social event. In addition to the pauses in the program this gave the participants the possibility to become better known with each other and to create confidence and trust an through this a more open and free flow of information.

The seminars were normally held on the site for the cluster administration or important development units affiliated with the cluster. This gave a closeness to the field or site of practice. The seminar started with a session that presented the host and its activities. All participants were advised on beforehand to inform themselves about the host through their homepage or other forms of basic information. This made it possible to make a more thorough presentation.

Perhaps the most important part of the seminar was the working groups focusing on 2-3 special topics of interest for the development of clusters. The topics differed from seminar to seminar, but did all the time focus on important issues inside the interest of the clusters. The participants decided on beforehand, often on the previous seminar, what should be the topics. This was introduced through a presentation by the host and their practice, or through a guest speaker. The groups, which differed from seminar to seminar, had normally two secessions. One session was on the first day, and the second on the second day. Every session were reported and presented in the plenum.

A final seminar was hold in Arvika in March 2007 with specially invited guests. The researchers here tried to summaries their research findings on the similarities and differences between the clusters through a common matrix. These findings will be presented through a separate article (by Berger and Johnstad). In addition it was also a final discussion of the experience with the NBL and on the possible
future of the project. The feedback was very positive and it was a general interest in trying to continue
the work, which might happen through an Interreg project, or other forms of cooperation.

The question here is what kind of mutual learning process has been going on? How does the NBL fit
the international view on benchlearning? And, was NBL a kind of community of practice? First we
will look at the learning process, and then the community characteristics.

Interorganisational Benchlearning

The NBL has been a mutual learning process between six clusters. It shows the relation between the
different processes that connect individual learning and organisational learning (Crossan et al 1999):
- The interpretation or explanation through words and illustrations of the insight and
  experiences from the different clusters.
- The integration or developing shared understanding among the participants.
- And hopefully, this might lead to institutionalisation of the learning from the project into
  organisational thoughts and practices in the different cluster organisations – through new
  or adjusted strategies, procedures, structures and/or system, and through that influence the
  cluster development.

NBL was an important channel for communication and relationship across the particular organisations
in the project in Child & Heavens (2003) sense. Further, in the NBL the participants benched or
compared each other, but also learned from each other as input in improving their performance. Like
the recommendations from CAF2006, the emphasis has been on the process of learning from others
rather than making comparisons. Further has the goal been “…to learn from the strengths of other
organisations, to learn from them the things they do well, to search for inspiration in …[one’s] own
work and to learn from and to avoid the mistakes that others have made.” In this way it has been a true
benchlearning project.

CAF 2006 also emphasise the value of looking for partners from different sectors, or “learning from
differences” as expressed by Ennals and Gustavsen (1999). In NBL the focus was on learning
between different clusters. The clusters came from different countries, different industries and were in
different phases of their development. The members were rather diverse, representing different
interests towards the development of networks/cluster (triple helix). Further – they also represented
different types of networks/clusters. - “With enough common ground for ongoing mutual engagement,
a good dose of diversity makes for richer learning, more interesting relationships, and increased
creativity”, according to Wenger et al (2002: 35). Further, as expressed by CAF2006 – “bench
learning is not fast and easy”. The ability to create trust, respecting each other and openly share
information is seen as fundamental to successful benchlearning projects, and this we feel was the case
in NBL.

A Nordic Community of Practice – Domain, Community and Practice

The NBL has been a genuine benchlearning project, but did it develop into a genuine “community of
practice”? – According to Wenger et al (2002) are communities formed around common interest and
expertise to create, share and apply knowledge within and across the boundaries of teams, business
units and companies. “Communities of practice are group of people who share a concern, a set of
problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by
interacting on an ongoing basis… they spend time together, they typically share information, insight
and advice… help each other solve problems… Over time, they develop a unique perspective on their
topic as well as a body of common knowledge, practices, and approaches. They also develop personal
relationships and established ways of interacting. They may even develop a common sense of identity.
They become a community of practice.” (ibid: 4-5).

The seven stages of benchlearning suggested by the consultants might be boiled down to the three
elements that form the basic structure of a community of practice: a domain of knowledge, which
defines a set of issues; a community of people who care about this domain; and the shared practice that
they are developing to be effective in their domain.
The domain, or the focusing topic of the NBL project, was “the art of establishing, managing and developing clusters”. The community, or the people who care about the NBL domain, were managers, facilitators or supporters of networks/clusters. The shared practice the participants of NBL develop to be effective in their domain, was on key issues that they commonly experienced in their work concerning the organisation and running of the cluster and cluster organisations.

In the NBL a community of practice was built through regular seminars on issues important to their domain. The seminars where held at each members location to strengthen the mutual knowledge and trust which gradually prospered. Whether the participants developed “a common sense of identity”, which could make it a true community of practice, is difficult to conform, but we have the impression that the project might aspire.

Coordination and Action Research
Action research is about the researchers influence on change of practice, through collaboration between researchers and those who are focus of research, and even to assist the research process of the practitioners. Further, democratic dialogue through conferences was developed by work researchers as the main constructive force in learning, change and innovation.

Both VS2010 and Cerut have a tradition and practice of action research. In VS2010 this was a core activity, and in the VS2010 Innlandet project they cooperated close with regional clusters (Johnstad 2004a). At Cerut several of the researchers who participated on the NBL had participated in action research projects earlier (Räftegård 2008?).

We have seen that the researchers have played an active role in the development of NBL. They initiated and participated in the project, and played the role of coordinator or facilitor of a series of dialogue seminars/conferences, in form of a benchlearning project and process, which lasted for 3 ½ year. The researchers even had meetings in between the seminars to prepare the work and the research. Together with the hosts they prepared the different seminars.

In relation to Robson’s (2002) view on action research can we see that the researchers:
- have been involved in the project and process of benchlearning; and
- have contributed to the improvement of understanding and practice in the participating organisations,
  - through the seminars, presentations and work groups, in form of formal program and knowledge, and through the informal part that creates trust and extra knowledge, and
  - through the research and publications.

The improvement of understanding, might improve practice in the short and long run. The research on the process and the results of the working groups is a way to assist the research process of the practitioners.

7. Conclusions
The NBL was formed as a dialogue conference and learning network between clusters in Norway and Sweden. It was intuitively named a benchlearning project, but we may conclude that the project has been a genuine benchlearning project as described in international literature. It also looks as if the project developed into a community of practice between the different participants. The length, frequency and continuity of the participants and their gradual made of a certain identity made this into a community of practice across the organisations, clusters and borders.

At the final seminar in Arvika in March 2007 the learning experience got a very positive feedback. Some participants even gave this project better feedback than the learning processes in the Norwegian Arena programmes. The project has resulted in practical learning and organisational adjustments in some of the organisations. It has also resulted in extra direct contact between some of the participants. It has even resulted in a direct spin-off or innovation in form of a new Norwegian-Swedish initiative. Byggskolen in Norway and Hammarö Treteknik in Sweden are both educational institutions that have
cooperated earlier and were participants in NBL. They have taken the initiative to develop a Nordic Industry College project.

There was a positive attitude on the Arvika seminar to continue the project. But first the researchers have to report on the project. This paper is the first result, focusing on the process and project as such. Another paper will come relatively soon. There is also a possibility of revitalisation the project through the new Interreg program.

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