Baltic Sea Region Innovation Network – BSR InnoNet
Trans-national cooperation on innovation and clusters
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Introduction
Today, it is generally understood that positive dynamics in existing clusters can enhance regional and national competitiveness and economic growth. Over the last decade, the public sector in an increasing number of countries has understood the similarities/links between clustering processes and innovation processes. This has led to increasing public investments in cluster development through different types of innovation programmes and support mechanisms.

The range of potential policies and initiatives for improving the cluster environment is broad - from the establishment of a cluster organization that promotes networking, common branding etc. to a national strategic cluster policy on shaping innovation policy. It is important to acknowledge that each type of initiative has its own purpose, and that different initiatives are complementary - not contradictory.

History
In 2004, the Nordic Council of Ministers’ Committee of Senior Officials for Industrial Policy launched the Northern Dimension Working Group on Innovation to explore, compare and bench learn national innovation policies in the Baltic Sea Region. Parallel to this, FORA (Research Unit in the Danish Ministry of Economic and Business Affairs), Innovation Norway, Tekes and VINNOVA launched the Northern Cluster Alliance inviting all national innovation agencies in the Baltic Sea Region to join the Alliance with the aim to exchange best practice on clusters and national cluster support programmes.

Following this, in 2005, the Working Group and the Alliance agreed to join forces in a proposal to the European Commission, DG Enterprise and Industry’s PRO INNO Europe Initiative call on innovative trans-national networks in innovation policy cooperation. The project – Baltic Sea Region Innovation Network, BSR InnoNet – was approved by the Commission as one of four European inno nets focusing on clusters and cluster support programmes.

Partners of the InnoNet
In September 2006, the BSR InnoNet launched with the following partners:
• Nordic Innovation Centre (Project Coordinator)
• Nordic Council of Ministers (Leader of Work Package 6)
• Swedish Governmental Agency for Innovation Systems, VINNOVA (Leader of Work Package 3)
• Danish Enterprise and Construction Authority’s Division for Research and Analysis, FORA (Leader of Work Package 4)
• Enterprise Estonia
• Estonian Ministry of Economics and Communication
The project runs for three years, until end-August 2009.

Objectives
The objectives of the project are:
1. To establish a joint conceptual framework for cluster policy formation, evaluation and operational activities across national borders in the Baltic Sea Region
2. To establish one or more joint innovation programme(s) (focused on cluster development) among partner countries in the Baltic Sea Region
3. To be one of the core European learning cases

Organisation
Implementation has been organised in three main work packages lead by VINNOVA, FORA and the Nordic Council of Ministers (NCM):

The Project Coordinator (Nordic Innovation Centre) leads the work in Work Package 1 (Project Management), Work Package 2 (Events) and Work Package 7 (European Cooperation in the European Cluster Alliance).

Rationale

1 OECD Reviews of Regional Innovation – Globalisation in Regional Economies – OECD 2007
In the report “Competitive Regional Clusters, National Policy Approaches” from earlier this year, OECD addresses the rationale for cluster support programmes and policy frameworks. From this report a few key quotes are highlighted:

### Why – in practice – there is renewed policy interest in supporting clusters

A number of basic motivations lie behind support for clusters. There is strong quantitative evidence that many industries remain relatively concentrated in specific regions and those firms and research generators in proximity can outperform their counterparts located in less rich environments. Countries are seeking to strengthen or replicate the success factors that have encouraged the concentration of innovative firms associated with the knowledge economy. They are also looking for instruments that can help maintain employment and promote restructuring and adaptation in other sectors. Furthermore, clusters are a convenient and pragmatic organising principle by which to focus resources and build partnerships. A clear rationale for the public sector to support clusters concerns the transaction costs and co-ordination costs to bring the appropriate actors together.

Nevertheless, there are risks related to the use of a cluster approach generally, as well as with more specific risks relating to the design of these programmes. Insufficient economic diversification, lock-in (in the sense of being tied by long-term investment strategies to supporting specific sectors and being unable subsequently to change track) or over-reliance on key firms are among the dangers that are associated with the cluster approach. Other concerns relate to how effective the public sector can be in identifying instruments that can help firms to react to very rapid changes in global markets and production systems.

National and EU level programmes to support clusters and regional specialisation originate from one of three main policy families: regional policy, science and technology policy or industrial/enterprise policy. All three policy areas have undergone changes in policy orientation away from a top-down and single-sector approach towards policies that favour co-operative, multi-actor and often more place-based approaches. These trends have supported increased policy interest in programmes to develop or strengthen regional specialisation and cluster development with an ultimate goal of improving competitiveness and innovation capacity.

The economic rationale for government intervention serves to define the different choices regarding programme targets. Those targets may be places (leading regions, lagging regions, hub areas), sectors (dynamic, exposed, strategic, social significance) or specific actors or groups of actors (universities, SMEs, multinationals, etc.). They could also be a combination of these different target categories. The targets then need to be clearly identified in order to ensure that the resources available for the programme are adequate and that goals are achievable. There are clear tradeoffs to be made in selecting these different targets.

### Activities

The project is process oriented, and each step is anchored with the partner countries in order to decide the most efficient way forward. The main process scheme is shown below:
The three main areas of action 2006 – 2009

- Policy learning and development, joint framework
- Innovation and cluster programmes
- Analytical methodology and cluster analyses

Policy learning and development, joint framework

In order to design a framework for developing and launching trans-national programmes, it is important to understand the current policymaking processes. The following themes have been explored:

- the overall system of innovation policy governance
- the level of cooperation/policy integration between ministries
- the level of cooperation or division of labour between ministries and innovation agencies
- the division of labour between national and regional levels
- the significance of EU financing and its impact on policy and programme design

In general, cluster policies are viewed as one of the many instruments of industrial policy – and are typically integrated into national and/or regional innovation strategies. Most often, policies to support cluster development are not called cluster policies – but rather are referred to as facilitation of networks, ‘triple helix linkages’ or regional innovation systems. Whatever they are called, these policies can be employed to fulfil a number of objectives – on both regional and national levels. A comparison of national priorities highlights four common themes that cluster policies address:

- the desire to identify regional and/or national ‘positions of strength’ in order to **better target public support and improvements to supporting framework conditions**

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2 The findings and the full report “Mapping of National Cluster Policies and Programmes in the Baltic Sea Region, BSR InnoNet 2007.”
• the goal of strengthening ‘triple helix linkages’ (linkages between public, private and academic/research spheres) **within leading sectors/clusters** on regional and national levels

• the target of **facilitating inter-sector cooperation** and identifying new areas for growth on regional and national levels

• the ambition to support leading clusters in **establishing international linkages** – forming networks of clusters in order to strengthen global competitive positions

**Priorities of the Baltic Sea Region**

In the project process the following prioritized list of areas/sectors/clusters (and accompanying criteria driving the prioritization) on which trans-national activities should focus where discussed as well as what criteria’s should guide the design of trans national policies and programmes. Highlighting questions like: What clusters/sectors are most interesting (for starting **trans-national cluster initiatives**); what are the most important criteria for selection of a trans-national sector/inter-sector programme; and which clusters/sectors are the most interested and ready for trans-national collaboration?

The result highlighted that there are nine strongholds which are represented in four or more of the 10 Baltic Sea Region countries:

- Energy and Environmental Technologies
- Food Processing
- Forestry and Wood
- Health and Well-Being
- Information and Communication Technologies (ICT)
- Biotechnology
- Maritime
- Nanotechnology
- Tourism

There are several strongholds which seem to have lower critical mass "on their own" but could have greater potential by being linked to other related or complementary sectors.

There seems to be another group of already strong and/or growing sectors which could be combined in unique ways to create internationally competitive “new sectors” for the BSR:

- Health and well-being + tourism + transport
- Food + life science/biotech (functional food)
- Energy/environment + power generation/transmission

Just as there are different ways of defining and delineating the strongholds, there are also different ways of selecting them. Some countries based strongholds primarily on
sectors participating in national innovation programmes, regional growth programmes, and/or national research programmes. *This method tends to focus on long-term, forward-looking sectors and does not always capture the full range of strongholds that exist in the economy.* Others based the selection of strongholds on a combination of statistical data (co-localization of employment) and more pragmatic information (expert input on selected criteria). And remaining countries based the selection of strongholds primarily on qualitative/pragmatic information.

The following criteria (some over-lapping with data-driven criteria) seem to be used most broadly and could be considered as examples to be included in a set of criteria for a trans-national programme:

- **national importance** of the cluster/sector/centre (both economic and political)
- **potential on international market**
- concentration, strength and engagement of knowledge suppliers (universities/academia, research institutes, etc.)
- the engagement of leading companies
- the level of cooperation and synergies between the different stakeholder groups
- the level of commitment (including financial) of the different stakeholder groups
- strategic focus and long-term vision/plans
- **innovativeness and growth potential**
- organisation and leadership
- contribution to creating a specific regional profile

**Innovation and cluster support programmes**

Some Baltic Sea Region countries are already experienced in developing national cluster and innovation system based programmes. These programmes and the knowledge gathered from executing them (some times several generations of them) are important inputs to pilot(s) and the full-scale programme(s). Based on the consultations, Sweden, Norway, Finland and Germany seem to have more experiences in program design than the others. The Baltic countries as well as Poland\(^3\) have, on the other hand, clearly expressed identified needs and demands within the BSR InnoNet to develop capacity building activities and share knowledge regarding program design. Iceland and Denmark have a regional approach and are more commercial cluster oriented.

A portfolio of 2\(^{nd}\) and 3\(^{rd}\) generation programmes such as the German Competence Networks Germany, the Norwegian “Arena” and NCE, the Finnish “Centers of Excellence” and the Swedish “VINNVÄXT” and “Visanu” are suggested to be good departure platforms of knowledge and experience on program design, implementation and evaluation as well as policy learning.

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\(^3\) These countries are on the verge to launch national cluster and innovation system programme(s)
The main findings from the consultations\(^4\) suggested that in all BSR countries, the existing cluster and innovation system programmes had the following characteristics:

- were built on the Triple Helix collaboration
- the development of a shared vision amongst the key stakeholders within a cluster initiative was crucial
- the main objectives of the cluster and innovation system programmes were to strengthen the competitive edge of the national and regional industry
- the approach was system-based, and the eligible activities for funding were broad
- the “winner” initiatives were often embedded in research environments with critical mass

A certain typology was also detected, and a pattern emerged:

- Components, or rather starting points, were that geographical scope differed from regional focus to national excellence, and sometimes even combined the two.
- The degree on how much focus was put on innovation and renewal varied between the programmes in the BSR countries.
- The attention given to the form and strength of relationships within the Triple Helix and the quality of collaboration differed.
- The way the programme was design and implemented varied throughout the BSR landscape.

*The way ahead*

All Baltic Sea Region countries have – or are on the verge of launching – cluster and innovation system based programmes. The international dimension, and therefore need for collaboration, is emphasised on the national policy and programme level. Conclusions drawn and confirmed by the BSR InnoNet partners are that trans-national cluster and innovation based programmes should:

- Be launched in two steps: pilot(s) and full-scale programme(s). The pilot(s) programme should have a pragmatic approach (should be broad and flexible) and should be built on the priorities of working groups as well as shown interest and capabilities of clusters.
- Be based on Triple Helix-collaboration, international competitiveness as the main objective and combine a sector approach with inter-sector (thematic) criteria.

During the national consultations, a substantial overall demand for exchange of experience and operative capacities were documented in national ministries as well as in innovation agencies and cluster facilitating organisations. These demands

\(^4\) Mapping of national cluster policies and programmes in the Baltic Sea Region Part 1 and 2.
existed both in the fields of direct cluster facilitation and in fields of design of policy frameworks and cluster support programmes.

In order to operationalize the objectives of the project, the practitioners group suggested two task forces to be launched. This was done in October 2007. The two task forces are on:

- Capacity Building Programme
- Trans-national innovation and cluster programme

Analytical methodology and cluster analyses

As a result of the increasing level of investments in this type of cluster support, there is an increasing demand from policymakers to understand the resulting impact. How does public support – through what can be called ‘cluster policy’ – have an impact on cluster performance? How has cluster performance impacted regional/national economic growth over time? Do certain framework conditions have a stronger influence on performance – and should the public sector focus their support on these?

The main purpose of work is to answer these questions through systematic benchmarking in the Baltic Sea Region. In short, this means testing the link between cluster performance and what can be called cluster framework conditions or the cluster environment for innovation. If it is possible to find a pattern between the BSR countries/regions with the most successful cluster(s) and the existence of specific framework conditions in these regions, it gives a unique possibility for the countries to learn from the best performing regions.

The way ahead

The plan has three main objectives in illustrating the impact of clusters and cluster policy in the Baltic Sea Region:

> Mapping and analyzing the regional clusters in the BSR – to understand how clusters are located in the region and how their value is created
> Identifying cluster potentials – to find potential cluster improvements and areas for collaboration in the BSR
> Analyzing which policies can make a difference for clusters – to find effective cluster policies in the BSR

In order to target these objectives, five analytical steps are taken (described in detail in The Cluster Benchmarking Project – Pilot Project Report⁵, FORA, November 2006):

1. Identifying clusters for benchmarking
2. Assessing key economic indicators in a common standardized database
3. Measuring cluster performance and cluster-specific framework conditions

⁵ Available for download at http://www.nordicinnovation.net/_img/cluster_benchmarking_project_final_report.pdf
4. Testing the correlation of cluster performance and cluster-specific framework conditions
5. Learning from best practice through peer reviews

First, the analytical work provides a picture of clusters in the BSR region. The mapping is based on the Porter-defined clusters, translated into European standards (by Sölvell and Ketels at Stockholm School of Economics), and assessed to fit the BSR context (by FORA and Copenhagen Economics6).

Second and third, the analytical framework and database on cluster employment and real wage will serve as a tool for detecting interesting areas for collaboration in the BSR, and (over time) for monitoring the development of clusters in the region.

Fourth, the standardized database will enable us to identify and map the best-performing clusters in the region thereby gaining valuable insight into the geographical location of top-performing clusters – and to identify the framework conditions conducive to the creation of top-performing clusters.

Last, peer reviews – the identification and analysis of the conditions used in the areas with the best-performing clusters – can provide a unique basis for evaluation and changes to domestic framework conditions. The methods and conditions used in the best regions may work as useful inspiration.

The benchmark analysis allows countries inside the Baltic Sea Region to draw inspiration from each other and to detect areas for further collaboration. At the same time, the identification of best practice will be a very powerful tool in political debate. The continued monitoring and comparison of cluster performance using indicators such as growth, employment and productivity will ensure political attention and commitment. This will facilitate improvements in cluster framework conditions over time.

The analytical work within the BSR InnoNet has three main deliverables in three phases:

1. **Mapping of clusters and cluster performance**
   - To map and measure performance of clusters (employment, specialization, real wage etc.)
   - Output: *The BSR Cluster Database on performance*

2. **Mapping of cluster-specific framework conditions**
   - To see the presence of cluster-specific framework conditions
   - Output: *The BSR Cluster Database on cluster policy*

3. **Evaluating cluster policy**
   - To test the impact of cluster policy on cluster performance
   - Output: *The BSR Cluster Benchmarking Model*

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6 Documentation of the regional assessments are presented in a technical paper, discussed at the WP4 meeting on the 24th of May, 2007 and described in Chapter 2.
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Nordic Innovation Centre

The Nordic Innovation Centre initiates and finances activities that enhance innovation collaboration and develop and maintain a smoothly functioning market in the Nordic region.

The Centre works primarily with small and medium-sized companies (SMEs) in the Nordic countries. Other important partners are those most closely involved with innovation and market surveillance, such as industrial organisations and interest groups, research institutions and public authorities.

The Nordic Innovation Centre is an institution under the Nordic Council of Ministers. Its secretariat is in Oslo.

For more information: www.nordicinnovation.net