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## Mapping of National Cluster Policies and Programmes in the Baltic Sea Region

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# **MAPPING OF NATIONAL CLUSTER POLICIES AND PROGRAMMES IN THE BALTIC SEA REGION**

**Summary and Analysis of National Consultations**

**PART TWO**

June 20, 2007

Lars Christensen  
Hélène Vogelmann  
Emily Wise Hansson

## **PART TWO: NATIONAL SUMMARIES**

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## Denmark

### Summary Notes Danish National Consultation<sup>1</sup> November 29, 2006

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#### I. Summary of Expressed Needs and Agreed Actions:

During meetings with both the Ministry and the NAEC, a number of needs were expressed:

- Clarifying what is meant by the concept of clusters (and what mechanisms can be used for support)
- Understanding of the tools/instruments that are available to support clustering processes (e.g. cluster facilitation techniques, handbooks, training, etc.)
- Mapping and benchmarking of clusters in the Baltic Sea Region (to see how Danish clusters – on national and regional levels – compare internationally)
- Experience on how clusters/clustering processes contribute to regional growth, and how framework conditions affect clusters' performance

<sup>1</sup> Address any comments/suggested changes to Emily Wise Hansson

- Defining new (legislative) frameworks for working with clusters (even trans-nationally)

The following activities will occur within the scope of the BSR InnoNet:

- A summary of the situation in Denmark (with respect to cluster development)<sup>2</sup> will be prepared and sent to meeting participants for input and confirmation.
- A (draft) report summarizing the overall situation in the Baltic Sea Region (with respect to cluster development) will be presented at the upcoming joint meeting of WPs 3&6 to be held in Copenhagen on February 13-14<sup>th</sup>.

## II. Institutional Context

### National

The responsibility for developing policy strategies, designing innovation programmes, and planning financing/budgets is shared between the national and regional levels.

On a national level, both the *Ministry of Science, Technology and Innovation*<sup>3</sup> and the *Ministry of Economic and Business Affairs*<sup>4</sup> have the responsibility for implementing activities to meet objectives regarding innovation – set forth in the country’s globalization strategy (see section on innovation strategy below). The institutional structure for managing areas related to industrial policy (and cluster development) is comprised of a national growth council (*vækstråd*), and five regional growth forums (*vækstfora*)<sup>5</sup>. The *Ministry of Economic and Business Affairs* hosts the secretariat for the national growth council. The *National Agency for Enterprise and Construction* (NAEC)<sup>6</sup> contributes to the secretariat. The growth council is the connection between the regional forums and the national growth policy.

Depending on the policy area, it is possible to have both a nationally-designed (and implemented) programme, as well as parallel regionally-designed (and implemented) programmes. The NAEC is responsible for the design, implementation and evaluation of national-level programmes within the scope of the Ministry of Economics and Business Affairs. Each of the (newly-launched) regional growth forums is responsible for design, implementation (and evaluation) of its own initiatives (see below).

The Ministry of Finance makes decisions regarding financing for national ministries and programmes. The national growth council (*vækstråd*) has a limited budget (10% of the total Danish structural funds), which is available for horizontal initiatives or projects between regions. The remaining 90% of structural funds are distributed to the five regions. The regional councils approve the financing of the strategies (received from the regional growth forums) – and decide which part of the overall regional grant is set aside for regional development.

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<sup>2</sup> The summary is based on the national summaries (prepared by the country), interviews conducted during the national consultation, as well as on various documents and presentation materials received from the country (see Section IV).

<sup>3</sup> <http://videnskabsministeriet.dk/site/forside>

<sup>4</sup> <http://www.oem.dk/sw184.asp>

<sup>5</sup> see the ‘regional’ section for details

<sup>6</sup> a governmental agency within the Ministry of Economics and Business Affairs, working with the areas of housing, construction and enterprise

### Regional

As part of the transformation of the regional structure in Denmark (which took effect 1<sup>st</sup> of January 2007), regions have increased responsibility in the area of business development. Each region has formed their own regional growth forum (*vækstforum*) – comprised of regional and local politicians, business and academic representatives and social partners, and charged with developing a strategy for regional growth. These regional strategies are then submitted to the National Growth Council (*Vækstråd*) for review. (The growth council does not have the ‘right of approval’ for regional strategies or financing; this is the responsibility of the regional councils.) The NAEC supports the regional secretariat of the growth forums to manage their new responsibilities – including the prioritization of the use of structural funds.

There is currently no structure of regional-level implementing agencies (to ‘operationalize’ the strategies of the regional growth forums). Each region finds their own solutions for implementation (e.g. by hiring external consultants or representatives from the municipal level).

## III. Current Situation and Planned Activities

### Innovation Strategy

The Government Strategy for Denmark in the Global Economy<sup>7</sup> presents a vision, two main objectives (wealth and cohesion), and 350 initiatives aimed at realizing the goal of making Denmark among the most attractive countries in the world to live and work in. The proposed initiatives are grouped into four main pillars: education, research and development, entrepreneurship and an innovative society.

In the context of **industrial policy**, the *Ministry of Economics and Business Affairs* focuses on the areas of entrepreneurship and an innovative society – in close cooperation with other ministries (primarily the Ministry of Science, Technology and Innovation).

Denmark does not have a national strategy with regard to **cluster** development; however, the *Ministry of Economics and Business Affairs* is starting up a project to identify Denmark’s positions of strength. Using productivity data<sup>8</sup>, the Ministry will identify ‘strongholds’ and those framework conditions which have a positive impact on the performance of these ‘strongholds’. The aim of this project is to help the regions better understand the drivers of growth in their particular geography, in order to target activities more specifically to the needs of their region. The challenge the Ministry foresees is how it will be possible to support current ‘strongholds’ without distorting the market in the future.

### Programmes<sup>9</sup>

There are no **national** cluster programmes in Denmark, although there are several programmes that are relevant to cluster development and clustering processes:

- As part of the globalization strategy, the *Ministry of Economics and Business Affairs* is implementing partnership agreements with the regions. These agreements will outline how the national level can support the regions in reaching their objectives.

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<sup>7</sup> *Progress, Innovation and Cohesion* (published in April 2006); see <http://www.globalisering.dk/>

<sup>8</sup> comparable with other OECD countries

<sup>9</sup> Certain parts of this section have been excerpted from the national summary ‘brief’ submitted by the Danish representative in WP3: Lotte Langkilde (from FORA).

- The *Ministry of Science, Technology and Innovation* has recently financed the establishment of 6 new regional Centers of Expertise which have obtained financing for a 4-year period. Another 7 regional Centers have had their activities prolonged for 1-year<sup>10</sup>. The centers are part of the government's regional program "Knowledge moves out" and aim at strengthening innovation and growth outside the largest cities in Denmark. The Centers have been established around regional strongholds.
- In 2006, the *Ministry of Environment* launched 5 new partnership agreements in the area of environmental technology based on an analysis of Danish positions of strength<sup>11</sup> (see section below). These partnerships should include representatives from companies, knowledge institutions and government, and should have the responsibility of determining commercial opportunities, concrete strategies for their particular cluster and actual joint product development. The formation of these consortia is currently ongoing.<sup>12</sup>

In three of the five **regions** (Nordjylland, Midtjylland and Syddanmark), a number of cluster facilitation activities – aimed at cementing linkages and developing regional strategies – have already taken place (during 2006), and in all regions a cluster mapping serves as the basis of the work on the long-term strategy for economic growth. Each of the three regions mentioned above is employing different analytical and cluster facilitation approaches, and drawing on foreign cluster consultants, but all have had the same goal of determining regional strongholds and jointly developing a regional growth strategy to be submitted to the national level.

Cluster development activities (methods, approaches or measures) have been integrated into all of the regional growth strategies which were submitted at the end of 2006. The regional strategies aim at strengthening existing clusters in order to gain international competitiveness (and NOT at 'creating clusters'). Specific examples of cluster-related activities on the regional and sub-regional levels include:

- In the old **Sønderjylland County**, the Danish company Danfoss has invested heavily in cluster development by hiring the US-based consultancy Monitor to lead a cluster process centered around Danfoss' strongholds in mechatronics with the purpose of further strengthening the cluster.
- The new Region **Syddanmark** (South Denmark) is launching a cluster programme, which will support established clusters, emerging clusters and potential clusters. It is planned that contracts will be signed in the summer of 2007<sup>13</sup>
- In the **Triangle Region** which is part of the new South Denmark Region, 8 municipalities have engaged the cluster expert Emiliano Duch in order to strengthen the region's clusters within transportation, metals and food.
- In **Region Midt**, the regional authorities have teamed up with the cluster expert Rodin Genoff from Australia with the purpose of strengthening collaboration between companies within the region.
- In region **Nordjylland**, the regional authorities have hired the cluster expert Alec Hansen from the US to run a cluster process with the purpose of identifying cluster initiatives that

<sup>10</sup> The Danish name for the Centers of Excellence is *Teknologicentre* and is a continuation of the national program for *Regionale Vækstmiljøer*

<sup>11</sup> Andersen, Torsten, Marie Degn Bertelsen and Jørgen Rosted (2006), *Miljøteknologiske styrkepositioner – en erhvervsanalyse af klyngeudvikling*, FORA, Copenhagen.

<sup>12</sup> see [www.foranet.dk](http://www.foranet.dk)

<sup>13</sup> See [www.regionsyddanmark.dk/wm190491](http://www.regionsyddanmark.dk/wm190491)



can strengthen the regional clusters in ICT, Food, Medico and Construction. Region Nordjylland was also one of the first regions in Denmark where the regional University (Aalborg University [www.aau.dk](http://www.aau.dk)) took the initiative to make a mapping of the companies within a cluster. This was done for the wireless and mobile communications cluster with the purpose of supporting clustering processes around the regional competencies.

When discussing the development of a trans-national cluster programme, the key opportunities were viewed to be:

- making use of available EU funding under the territorial cooperation objective programmes. Denmark will for instance in the 2007-2013 period participate in four cross border programmes, two transnational programmes (Baltic Sea and North Sea) and one interregional programme. In all of these programmes funds for identifying, analyzing and developing transnational clusters or other innovation projects should be available. Networks of actors around a lead partner could apply for funds.
- establishing critical mass for SMEs (access to human resources, experience in using new technologies, incremental innovation [spread over a network of actors], etc.)
- initiating trans-national programmes targeted at common “need-to-address” areas (such as environment, energy and transport)

Key barriers to the development of a trans-national cluster programme were viewed to be:

- focusing on impacting horizontal framework conditions without distorting the market (NO ‘picking the winners’)
- funding foreign participants
- establishing a vision for clusters in a trans-national sense (e.g. language, trust, traditions for cooperation/competition, etc.)

### Analysis

In the early 1990’s, the *Monitor Group* conducted a cluster mapping of Denmark, using the ‘Porter methodology’.<sup>14</sup> This cluster mapping sparked a great deal of interest – both on the regional and national levels. The mapping results could not be used for policy strategy or programme design purposes, however, as detailed information regarding the composition of the clusters was not made available.

In order to respond to the *Ministry of Environment’s* request to map competitive strengths, cluster mapping methodologies were used as a baseline – supplemented with other techniques in order to gain a more accurate (and forward-looking) perspective. The resulting map identified not only the breadth and depth of the environmental technology field in Denmark, but also defined sub-clusters and outlined the specific companies, knowledge institutions and public sector organizations taking part in each. Following this mapping, a survey was administered in order to determine the competitive strength of sub-clusters. Three criteria were used: **critical mass** (are there enough companies to establish an international competitive position?), **knowledge** (is the quality of knowledge in this area among the best in the world?), and **potential** (is there a global market for the particular environmental technology?). The results of this analysis have formed the basis for the initiation of a number of innovation consortia (see above).

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<sup>14</sup> Industrial clusters are identified using employment statistics on NACE4 and NUTS2 levels, and applying an algorithm to identify co-localization patterns.



Using productivity data<sup>15</sup>, the *Ministry of Economics and Business Affairs* will identify ‘strongholds’ and those framework conditions which have a positive impact on the performance of these ‘strongholds’ (see section on innovation strategy above). This analysis aims at targeting activities to strengthen framework conditions (i.e. more specific to the region’s strength positions).

#### IV. Documents and Other References

Report/codified knowledge	Where to find it	Comments
National Summary ‘Brief’	<a href="http://www.proinno.net">www.proinno.net</a>	Will be available by early February
Denmark in the Global Economy – <i>Progress, Innovation and Cohesion</i> (April 2006)	<a href="http://www.globalisering.dk">www.globalisering.dk</a>	
Regional Growth Forums’ strategies (in Danish only)	<a href="http://www.ebst.dk">www.ebst.dk</a> or <a href="http://www.regionalt.dk">www.regionalt.dk</a>	
Website sharing expertise regarding regional growth	<a href="http://www.reglab.dk">www.reglab.dk</a>	

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<sup>15</sup> comparable with other OECD countries

## Estonia

**Summary Notes**  
**Estonian National Consultation<sup>16</sup>**  
**October 25-26, 2006**

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## I. Summary of Expressed Needs and Agreed Actions:

During meetings with both the Ministry and Enterprise Estonia, a number of needs were expressed:

- Awareness-raising on the usefulness of clusters/clustering processes as a mechanism for driving economic growth and competitiveness (both on regional and national levels)
- Training for cluster facilitators/managers
- Details on “best practice” examples of cluster programmes
- Information/tips on how the public sector can support the formation and development of viable regional/sectoral cluster initiatives
- (Hands-on) assistance with designing Estonia’s national cluster programme

The following activities will occur within the scope of the BSR InnoNet:

- A summary of the situation in Estonia (with respect to cluster development)<sup>17</sup> will be prepared and sent to meeting participants for input and confirmation by mid-November.
- A (draft) report summarizing the overall situation in the Baltic Sea Region (with respect to cluster development) will be presented at the upcoming joint meeting of WPs 3&6 to be held in Copenhagen on February 13-14<sup>th</sup>.

In addition to planned project activities, a number of other activities (outside of the BSR InnoNet scope) were suggested in order to respond to Estonia’s expressed needs:

- Sharing of programme design expertise (VINNOVA-Vinnväxt programme; Innovation Norway-NCE programme); Lars Christensen to establish first contact between Tea Danilov and Lars-Gunnar Larsson and Sven-Gunnar Edlund at VINNOVA, and Olav Bardalen at Innovation Norway
- Other alternatives include a one-day workshop (gathering the people mentioned above) to share experience and/or short-term (3-5 day) “on-site” expert support in programme design activities; Tea Danilov is responsible for initiating action on either of these alternatives

## II. Institutional Context

### National

Background on the Estonian economy can be found at [www.eas.ee](http://www.eas.ee), as well as in the presentation made by the Ministry during the consultation (see Section IV).

<sup>17</sup> The summary is based on the national summaries (prepared by the country), interviews conducted during the national consultation, as well as on various documents and presentation materials received from the country (see Section IV).

On a national level, the Ministry of Economic Affairs and Communications has the responsibility for developing national policy strategies, designing innovation programmes, and planning financing/budgets. In the area of cluster development, the Economic Development Department (through the Economic Analyses and Technology and Innovation divisions) has responsibility for analysis, strategy and programme development. Once programme and financing plans are approved by the national government, Enterprise Estonia is (generally) contracted to be the implementing agency.

Enterprise Estonia is responsible for distributing structural funds through the selection of projects applying to one of the (40) programmes under Enterprise Estonia's implementing responsibility. The system of public agencies, as well as the various programmes focusing on innovation and entrepreneurship, is described in the report *Enterprise Estonia*.

### Regional

Estonia has four relevant regions. These four have developed regional innovation strategies within FP6. However, programmes are currently implemented only on a national level.

## **III. Current Situation and Planned Activities**

### Innovation Strategy

In the context of **industrial policy**, the Ministry of Economic Affairs and Communications divides its resources into three main fields of activity:

1. raising innovative activity in existing companies
2. promoting cooperation between companies and R&D institutions, transfer of knowledge and technologies
3. supporting the creation and growth of new innovative companies

The evaluation of policies through 2006 identified certain gaps, which will be addressed in a number of planned activities including, for example: the launch of the Estonian Development Fund (to provide seed capital), and support to the formation and development of regional/sectoral clusters.

Estonia has not formulated a set of policies specific to **cluster** development; however, in the context of its new RD&I strategy, Estonia will focus on activities which support the uptake of prioritized key technologies (ICT, Biotech and Materials) and which address key socio-economic challenges (environment, energy, security, health care). Key technologies were selected based on the existence of scientific excellence (resource base) and the potential for using these technologies in many sectors. These two focus areas will be a part of future cluster support measures. Those clusters to be supported will be identified through a call for proposals, where clusters (themselves) will be required to illustrate their potential based on a number of criteria.

Estonia views cluster development in a trans-national context and would prefer that clusters in Estonia could develop cross-border. The challenge that Estonia wishes to address is how the Triple Helix and industrial value chain (within particular sectors) can be re-organized/better linked to be more competitive on the global market.

Estonia foresees that two of the key challenges for cluster development are the access to a qualified workforce, technology know-how, and marketing skills (helping to bring ideas to the commercial market).

### Programmes

Estonia does not currently have a cluster programme, but does have a number of innovation programmes which are relevant in the context of cluster development<sup>18</sup>:

- Competence Centres
- SPINNO
- Innovation Awareness Programme

Currently there are cluster initiatives that are formed and active – but up to now they have not been supported by the public sector. One of the key questions is what entrepreneurs/enterprises need and how they should be involved in a cluster initiative. Estonia is very interested in learning from best practice in the design and implementation of cluster development programmes, and would benefit from ‘hands-on’ assistance in the design of its national programme<sup>19</sup>.

One of the challenges for a cluster based programme in Estonia is the relatively small size of the municipalities and the connectivity to the national level. Other bottlenecks described are the differences between the statistical mapping of clusters and the more socially-oriented organisation of cluster initiatives.

When discussing the development of a trans-national cluster programme, the key opportunities were viewed to be:

- critical mass for clusters (skills, marketing, etc.)
- skill development within the Ministry and Enterprise Estonia (both through exchange of good practice and, possibly, “real-time” programme design support)

Key barriers to the development of a trans-national cluster programme were viewed to be:

- funding foreign participants

### Analysis

Estonia strives to base its policy development on sound analysis. In addition to the Economic Analyses division within the Ministry of Economic Affairs and Communication, the Institute of Baltic Studies (an independent, non-profit organization) is among other organizations which conduct projects providing economic analyses and policy recommendations.

When discussing cluster studies, a number of issue areas were identified:

- How to measure clusters whose data is not available at statistical offices
- How to find hidden effects of cooperation
- How to measure effects of cooperation projects (e.g. public support initiatives to strengthen networking/cluster development)

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<sup>18</sup> See annual country report at [http://trendchart.cordis.lu/te\\_country\\_list.cfm?ID=23](http://trendchart.cordis.lu/te_country_list.cfm?ID=23) for a more detailed description of these programmes.

<sup>19</sup> planned to take place early in 2007

- How to measure existing value-added (of sectors/clusters) and how to assess their potential on international markets<sup>20</sup>

In the context of cluster development, a number of recent (or draft) reports are serving as a basis for national policy development:

- *Made in Estonia* – a report on the status of the Estonian economy with a focus on the competitiveness and structure of industrial sectors, and how policy measures will need to be targeted at specific sectors in the future
- *Estonian Regional Innovation Strategy* – an initiative sponsored by the European Commission, DG Enterprise. This strategy will report on the developments in 7-8 key industrial clusters in Estonia identified by industrial value-added, employment or emerging market potential, and their position in the Baltic Sea Region. Furthermore, in 2008 a series of discussions will be undertaken in Estonia both at the regional and national level on possibilities for upgrading competitive advantages of the above clusters. However, additional exchanges at the trans-national level in Baltic Sea Region would be crucial to further develop the international competitive position of these industries.

#### IV. Documents and Other References

Report/codified knowledge	Where to find it	Comments
<i>Evaluation of the design and implementation of Estonian RTDI policy: implications for policy planning</i> (December 2005)	<a href="http://www.mkm.ee">www.mkm.ee</a>	
<i>Enterprise Estonia</i> (May 2006)	<a href="http://www.eas.ee">www.eas.ee</a>	
<i>Competitiveness and Future Outlooks of the Estonian Economy</i> (2003)	<a href="http://www.riigikantselei.ee/failid/RTDI_in_Estonia_2003.pdf">http://www.riigikantselei.ee/failid/RTDI_in_Estonia_2003.pdf</a>	
<i>Made in Estonia</i> (Institute of Baltic Studies, 2006)	<a href="http://www.ibs.ee/MiE/">http://www.ibs.ee/MiE/</a>	
Industrial and trade dynamics in the Baltic Sea Region (2006); Intra-industry trade in the Baltic Sea Region (2006)	<a href="http://www.ibs.ee/">http://www.ibs.ee/</a> -> Documents -> Working Papers	
Presentation of Innovation Policy Framework		Tea Danilov
Estonian Regional Innovation Strategy Studies	<a href="http://www.eesti-ris.info">http://www.eesti-ris.info</a> (in Estonian)	
Local clusters as tools for regional/economical development		Aivar Pere
AL M esitlus Klaster 26-10-26		Ülo Kannelmäe

<sup>20</sup> There is currently a lack of studies with an international perspective – assessing global market potential of specific sectors. It would be desirable to address this in WP4.

## Finland

### Summary Notes Finnish National Consultation<sup>21</sup> January 15-16, 2007

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<sup>21</sup> Address any comments/suggested changes to Emily Wise Hansson



## I. Summary of Expressed Needs and Agreed Actions:

During meetings with the various ministries and implementing agencies, a number of needs were expressed:

- Development of an appropriate institutional framework for coordinating, supporting (and, later, evaluating) development and renewal of business networks (currently in learning phase...and will get input from national cluster coordinators)<sup>22</sup>
- Synching needs of clusters with frameworks for structural funds
- Supporting an increasing international focus (particularly opportunities for SMEs to internationalize)

The following activities will occur within the scope of the BSR InnoNet:

- A summary of the situation in Finland (with respect to cluster development)<sup>23</sup> will be prepared and sent to meeting participants for input and confirmation.
- A (draft) report summarizing the overall situation in the Baltic Sea Region (with respect to cluster development) will be presented at the upcoming joint meeting of WPs 3&6 to be held in Copenhagen on February 13-14<sup>th</sup>.

## II. Institutional Context

### National<sup>24</sup>

Although the Science and Technology Policy Council – alongside the Economic Council – has had an important role in formulating broader guidelines, the more detailed content of industrial policy is defined by the *Ministry of Trade and Industry* (MTI). Cluster policy is included within the MTI's scope; it also falls under the scope of the Ministry of the Interior (MI).<sup>25</sup> Both the MTI and the MI have the responsibility for developing national policy strategies, designing innovation programmes, and planning financing/budgets. Within the MTI, the Technology Department and the Industries Department together have the responsibility for cluster policy strategy and programme development – which are formulated in collaboration with other stakeholders (taking part in a national working group for the Centres of Expertise programme – see section below), as well as with cluster coordinators themselves.

*Tekes – the Finnish Funding Agency for Technology and Innovation* is the primary implementing agency for the MTI's innovation policies. Tekes is directly subordinated to the Ministry of Trade and Industry, but enjoys relative autonomy in setting up technology programs and in commissioning the R&D funds that it receives from the state budget. In the area of cluster development, Tekes both takes part in the national working group for the Centres of Expertise programme, and has its own programmes aimed at supporting development of business networking (see 'Programmes' section below).

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<sup>22</sup> Innovation governance, more broadly, was a recurring “theme of interest”

<sup>23</sup> The summary is based on the national summaries (prepared by the country), interviews conducted during the national consultation, as well as on various documents and presentation materials received from the country (see Section IV).

<sup>24</sup> Some text in this section has been excerpted from the ETLA Discussion Paper No. 973: *The Specificities of Finnish Industrial Policy – Challenges and Initiatives at the Turn of the Century*

<sup>25</sup> When clusters/networks consist of universities, the Ministry of Education is also engaged in (although not controlling) the activities. When clustering touches upon the activities of the Academy of Finland, the Ministry of Education is closely linked, as it provides the guidelines for the Academy of Finland.

*Sitra – the Finnish Innovation Fund* (an independent public foundation under the supervision of the Finnish Parliament) conducts research and strategy formulation activities which support cluster development (in specific areas).

### Regional

Finland has 18 provinces in mainland and one autonomous archipelago region (Åland) outside of the EU area. The network of 15 *T&E Centres* (Employment and Economic Development Centres) provides assistance for economic development in provinces of the mainland. T&E Centres are operated under the auspices of the Ministry of Trade and Industry, offering services, consultation, advice and financing governed by many ministries and public agencies.

The new *Centres of Expertise* programme for the years 2007 – 2013 includes 13 major clusters of expertise to develop and 21 centres of expertise to implement the programme. The major clusters of expertise in the new programme period include business activities of at least two provinces (compared to past programme period of the years 1999 – 2006, when the activities to cluster developments were directed to the inside of an individual province only). The Centres of Expertise programme includes public financing only for activation and coordination of the programme. The financing for execution of the individual projects should be found elsewhere e.g. from EU Structural and Social Funds, from the Ministry of Labour, from the Ministry of Education, from Tekes etc.

Even though a number of institutions and support activities are on a regional level, Finland still considers itself one region, operating within a (domestic) European market.

## **III. Current Situation and Planned Activities**

### Innovation Strategy

In the context of **industrial policy**, the Ministry of Trade and Industry has targeted a number of areas to ensure continued economic success for Finland, including<sup>26</sup>:

- an open approach to economic integration
- enhancement of the service sector's innovativeness and productivity
- more attention to the development of consumer products and their user-drivenness
- allocating more development resources to market-driven, non-technical innovations
- establishing strong clusters with the help of centres of excellence, especially in the processing industry – promoting innovativeness and information-technology exploitation in the service industries
- reshaping business and commercialising innovation (requiring innovative entrepreneurs, expansive companies and a favourable environment for them)
- commercialisation of environmental expertise and technology<sup>27</sup>

In the context of **cluster** development and regional innovation policy, the Ministry of Trade and Industry has two main policy targets:

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<sup>26</sup> selected excerpts from *Guidelines for Finnish Industrial Policy* (MTI Publications 37/2006), charts on the bases and guidelines for industrial policy

<sup>27</sup> In addition to these general target areas for the future, manufacturing industries still get a lot of attention in policy formulation. Electronics, metal and wood/paper are perhaps the three most important areas, which also get a big share of all Tekes funding, for instance.

## Policy targets for regional innovation policy

- **Internationalisation at the heart of development activities**
  - Promoting internationally high-level regional-based knowledge clusters
  - Transnational interaction between leading centres and actors
  - Exploit new opportunities on a global scale
- **Creation of favourable innovation environment for businesses and strengthening innovation dynamics**
  - Improving the entrepreneurship culture and business conditions
  - Promoting the commercialisation of innovations
  - Intensifying of co-operation between public and private providers of innovation services
  - Supporting growth-oriented entrepreneurship
  - Increase direct foreign investments to Finland

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Cluster policies are placed in the context of a need for specialisation and networking. “Cluster-based cooperation between various technology and industrial sectors can present a solution to this requirement.”<sup>28</sup> Activities to support cluster-based cooperation will be pursued both on the regional and national levels. These two levels of activities are meant to be interactive and complementary to each other.

Finland is interested in supporting specialisation and networking of their national centres of expertise in an international framework, but sees a need for these national centres (or clusters) to develop a readiness for international activities.<sup>29</sup>

### Programmes

Finland has had a number of cluster-related programmes over the past years (including the **Centres of Expertise** programme). A number of other programmes are currently running:

1. The **TRIO programme**, initiated in 2004 and planned until 2010, has a budget of €100 million. TEKES and Technology Industries of Finland ([www.techind.fi](http://www.techind.fi)) drafted this programme together.<sup>30</sup> The TRIO programme involves all development agencies and financiers. The key objective is to support networking in technology, internationalization, and business processes in four main sectors (electronics, mechanical engineering, metals, and IT industries).<sup>31</sup> Funds are available for applicant companies (or networks of companies) for activities aimed at building existing or developing new networks.

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<sup>28</sup> *ibid.*, p.18

<sup>29</sup> There is a strong recognition that firms need to have a strong focus to international markets. A related, but at somewhat separate, question is whether this internationalizing of firm activities needs international clusters or cluster cooperation at international level to make it happen. At the present time, support to internationalization of cluster activities occurs on an ad hoc basis, depending on the specific activities of each cluster.

<sup>30</sup> with the support of external consultants with process expertise

<sup>31</sup> The objective is to reach 820 companies – within or supplying to the four main industry sectors.

2. A “revised” **Centres of Expertise (CoE) programme** has recently been launched, under the joint responsibility of the Ministry of the Interior and the Ministry of Trade and Industry. This programme was developed through the collaboration of a number of partners<sup>32</sup> – in a National Working Group. The programme focuses on internationality in R&D and business activities, boosting the growth of knowledge-intensive companies, linking the CoE programme closer to national innovation policies, and (a new concept) strengthening cooperation based on fields of expertise in selected *national* competence clusters.<sup>33</sup>

The Ministry of Trade and Industry focuses their support on national coordination of clusters – leading to more effective establishment of contacts with national and international operators and financiers. The Ministry of the Interior focuses their support on the regional level.

3. Tekes, together with the Academy of Finland, has recently (fall 2006) initiated the **Strategic Centres for Science, Technology and Innovation (CSTI)** scheme. With the input of the Science and Technology Policy Council of Finland, the scheme will target five areas in the beginning: <sup>1</sup>)energy and environment; <sup>2</sup>)metal products and mechanical engineering; <sup>3</sup>)forest cluster; <sup>4</sup>)health and well-being; and <sup>5</sup>)information and communication industry and services. Support will be provided for a period of at least five and up to ten years. The annual public financing to each centre is planned to be at least about €10 million. Tekes will facilitate gathering key stakeholders in these five areas in order to form strategic objectives and research agendas, as preparatory steps towards start-up of these centres.<sup>34</sup> Structures for financial support to these centres have not yet been decided.

An example of these centres was presented: *The Forest-based Industry Cluster Ltd.* (see presentation material).

4. Tekes also includes a number of cluster development activities as part of their activation schemes and technology programmes.

In addition to the programmes designed and implemented by ministries or public sector agencies, SITRA facilitates a number of strategy formulation processes in some of their targeted programme areas: healthcare, food and nutrition, and environmental.

When discussing the development of a trans-national cluster programme, the key opportunities were viewed to be:

- Internationalization of existing networks/clusters in Finland
- Internationalization of activities for SMEs
- Utilization of international scientific community

Key barriers to the development of a trans-national cluster programme were viewed to be:<sup>35</sup>

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<sup>32</sup> Ministries of Interior, Trade and Industry, Education, and Labour.

<sup>33</sup> There are 13 CoEs: HealthBio; Well-Being; Food Development; Future Energy Technologies; Ubiquitous Computing; Digital Content; Tourism and Experience Industry; Nanotechnology; Microsystems and Future Materials; Maritime; Intelligent Machines; Forest Industry Future; Housing; and Environmental Technology.

<sup>34</sup> Preparatory processes are planned to be completed by 2008.

<sup>35</sup> Interestingly, financing cluster development activities internationally was not mentioned as a barrier.

- a lack of understanding and acceptance of the benefits to trans-national networking/clustering activities (too busy and focused on their “own” area)
- difficult to plan (in order to ensure a ‘win-win’ situation); national programmes take up to a year to plan – trans-national programmes would likely take longer

### Analysis<sup>36</sup>

ETLA<sup>37</sup> has run major cluster studies in Finland (starting in 1992). At the time, a number of clusters were mapped, and segmented into four categories (see below). More recently, ETLA has conducted cluster studies of ICT energy and maritime sectors.

### **Segmentation of Clusters in Finland**

<b>Strong</b>	<b>Semi-Strong</b>	<b>Potential</b>	<b>Latent</b>
Forestry	Metals	Tele	Construction
	Energy Technology	Health	Food
		Environmental	

Source: Hannu Hernesniemi, ETLA

At present, there is a demand for new cluster studies in Finland – spurred by restructuring of various organizations to focus on prioritized sectors as well as a joint initiative of Tekes and the Academy of Science to support/facilitate five Finnish clusters through the Strategic Centres for Science, Technology and Innovation (CSTI) scheme.<sup>38</sup>

ETLA has employed a number of mapping methods, and is interested in input on this new round of cluster analysis in Finland...on three questions in particular:

- What kind of cluster analysis should be done?
- What kind of cluster evaluation should be done?
- What kind of tools for policy implications should be developed?

This analysis is used for informational purposes, and is planned to be used in later stages to evaluate progress (of, for example, clusters within the Centres of Expertise programme). At present, cluster analysis is *not* used as an integrated part of policy/programme formulation.

### **IV. Documents and Other References**

<b>Report/codified knowledge</b>	<b>Where to find it</b>	<b>Comments</b>
Presentation: <i>TRIO programme for companies and networks (2004-2009)</i>	<a href="http://www.proinno.net">www.proinno.net</a>	will be available by early Feb.
Presentation: <i>Developing Regional Innovation Systems – Centre of Expertise Programme</i>	<a href="http://www.proinno.net">www.proinno.net</a>	will be available by early Feb.
Presentation: <i>Regional Cluster Development Activities – the Ministry of Trade and Industry’s Role in Centre of Expertise Programme</i>	<a href="http://www.proinno.net">www.proinno.net</a>	will be available by early Feb.

<sup>36</sup> Input to this section was taken from the summary notes from WP4’s kick-off in Riga (see [www.proinno.net](http://www.proinno.net))

<sup>37</sup> The Research Institute of the Finnish Economy

<sup>38</sup> see ‘Programmes’ section above

Presentation: <i>Activation Tools for Clusters</i>	<a href="http://www.proinno.net">www.proinno.net</a>	will be available by early Feb.
Presentation: <i>Tekes Technology Programmes</i>	<a href="http://www.proinno.net">www.proinno.net</a>	will be available by early Feb.
Presentation: <i>SITRA – the Finnish Innovation Fund</i>	<a href="http://www.proinno.net">www.proinno.net</a>	will be available by early Feb.
Presentation: <i>Strategic Centres for Science, Technology and Innovation Scheme (CSTI)</i>	<a href="http://www.proinno.net">www.proinno.net</a>	will be available by early Feb.
Presentation: <i>Forestry-based Industry Cluster Ltd</i>	<a href="http://www.proinno.net">www.proinno.net</a>	will be available by early Feb.
<i>Guidelines for Finnish Industrial Policy</i>	<a href="http://ktm.elinar.fi/ktm_jur/ktmjur.nsf/All/508E154D2EB20EAFC22572200032F568/\$file/jul37elo_2006_eng.pdf">http://ktm.elinar.fi/ktm_jur/ktmjur.nsf/All/508E154D2EB20EAFC22572200032F568/\$file/jul37elo_2006_eng.pdf</a>	
<i>The Specificities of Finnish Industrial Policy – Challenges and Initiatives at the Turn of the Century</i>	<a href="http://www.etla.fi/files/1273_Dp973.pdf">www.etla.fi/files/1273_Dp973.pdf</a>	
<i>Making Finland a Leading Country in Innovation</i>	<a href="http://www.sitra.fi/julkaisut/muut/Inno1engl.pdf?download=Download+pdf">www.sitra.fi/julkaisut/muut/Inno1engl.pdf?download=Download+pdf</a>	
<i>Finland in the Global Economy</i>	Prime Minister's Office (2004) <a href="http://www.government.fi/ajankohtaista/tiedotteet/tiedote/en.jsp?toid=1928&amp;c=0&amp;moid=4552&amp;oid=93242">http://www.government.fi/ajankohtaista/tiedotteet/tiedote/en.jsp?toid=1928&amp;c=0&amp;moid=4552&amp;oid=93242</a>	
<i>Future priorities in innovation in Finland</i>	<a href="http://www.tekes.fi/eng/tekes/policies2005.htm">http://www.tekes.fi/eng/tekes/policies2005.htm</a>	



## Germany

### Summary Notes German National Consultation<sup>39</sup> November 23-24, 2006

#### Participants:

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Philippsenburg	and Research	
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## I. Summary of Expressed Needs and Agreed Actions:

### National

The Ministry of Education and Research, (BMWI), expressed interest in exploring how internationalisation effects policies and programs, the impact of user driven innovation and process-oriented programs.

The BMWI also discussed possible interest in regards to evaluations of programmes, usually done by organisations like the DWI in Berlin.

### Regional

The Ministry of Economics, Labour and Tourism Mecklenburg – Vorpommern, would like to address the issue of how to design a more market driven research capability within the innovation system towards SMEs, as well as to go from being production oriented to become more innovation oriented.

- Details on “best practice i.e toolbox” examples of cluster programmes and other experience (explaining – perhaps in the form of a handbook – the type of support that is most helpful for cluster development)
- Bench-learning and (possibly) benchmarking

The following activities will occur within the scope of the BSR InnoNet:

- A summary of the situation in Germany (with respect to cluster development)<sup>40</sup> will be prepared and sent to meeting participants for input and confirmation.
- A (draft) report summarizing the overall situation in the Baltic Sea Region (with respect to cluster development) will be presented at the upcoming joint meeting of WPs 3&6 to be held in Copenhagen on February 13-14<sup>th</sup>.

In addition to planned project activities, a number of other activities (outside of the BSR InnoNet scope) were suggested in order to respond to:

- Agency and cluster visits (in Sweden or other BSR countries) in order to learn more concretely about clustering activities and how they are supported by the national programmes and different support instruments. This was specifically within the ICT sector. The responsibility of Helene Vogelmann, WP3.

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<sup>40</sup> The summary is based on the national summaries (prepared by the country), interviews conducted during the national consultation, as well as on various documents and presentation materials received from the country (see Section IV).

## II. Institutional Context

### National

In Germany two Ministries are responsible for cluster and innovation system based policies and programs. These are the Ministry of Economics and Technology and the Ministry of Education and Research.

	<b>The Ministry of Economics and Technology</b>	<b>Ministry of Education and Research.</b>
<b>Field of responsibilities</b>	<p>Sustained opportunities for the German economy to grow and compete with other economies.</p> <p>A high level of employment</p> <p>Strengthening small and medium-sized companies</p> <p>The promotion of new technologies and innovation to maintain the economy's competitiveness</p> <p>The linking of economic and ecological goals</p> <p>Intensification of the worldwide division of labor and a free system of world trade</p> <p>Secured energy supply at an adequate price</p>	<p>The BMBF supports education and research. Below only the research areas are described:</p> <p>The promotion of basic research and the respective organizations working in this field</p> <p>The promotion of key technologies, particularly in the fields of health research, biotechnology, information technology, ecological research and mobility, research and development for employment and innovative work, transport and aerospace, and marine technology.</p> <p>Promotion of state preventive research in the fields of the environment, climate, ecology and health, the promotion of marine and polar research, research and development to improve working conditions, research into education and training, and research in the field of the humanities and the social sciences.</p>
<b>Coordination functions</b>	<p>The Ministry's legislative, administrative, and coordinating functions are in areas such as competition policy, regional policy, small and midsize business policy, energy policy, and external economic policy.</p>	<p>The Ministry's legislative, administrative, and coordinating functions are in areas such as incentives for investments in research and development as well as framework conditions which promote research and development and enable innovations.</p>

The federal Ministries and the “Bundesländer” have a division of powers and responsibilities in the area of cluster and innovation policies, programs and analyses. The “Bundesländer” are responsible and carry often out own policy based programs. Examples are the innovation policies and programs of Baden-Württemberg and Bayern. The federal Ministries introduce overarching policies and programs to induce change and introduce new features as well as to intervene to distribute wealth more evenly through out Germany. The Ministry of Economics

and Technology implement programs by a call for tender. Agencies compete with each other and the Ministry decides who will act on behalf of the BMWI. Regarding the Structural Funds the resources are mainly directed and governed by the “Bundesländer”. The general framework of the Structural Funds is designed on the Federal level.

### **Regional – Mecklenburg-Vorpommern (MV)**

Mecklenburg-Vorpommern, (MV), focuses on technology infrastructure, technology transfer, Centres of Excellence as well as supporting cluster initiatives. Usually different schemes and actions will be supported by the federal state as well as the European Structural funds. However MV also funds activities. Currently MV area has seven interdisciplinary technology centres, eight technology specific centres and is planning for an additional five centres. The aim of these Centres are to strengthen the collaboration between research and industry to speed up the process of innovative product development. MV has two Universities and three Poly-techs. As The BMWI, The Ministry of Economics, Labour and Tourism of MV implement programs/actions by a call for tender. Agencies compete with each other and the Ministry decides who will act on behalf of the them performing different task.

### **III. Current Situation and Planned Activities**

#### **National Innovation Strategy**

Under the German EU presidency innovation topics will be placed in the other themes and highlighted. As an important element of the new innovation policy, Germany is investing an additional six billion Euro in research and development projects (R&D) during this legislative period. These additional funds are intended for projects which promise to have a great mobilization effect on innovation and the markets of tomorrow. At the same time, this is the beginning of a new process of cooperation across federal ministries. The Federal Government's entire research funding is to be pooled and merged to acquire a new quality. The Federal Government is aiming to build bridges between research and the markets of the future.

To do so, it is currently working on a High-Tech Strategy for Germany with a view to introducing a "seamless" innovation policy. This High-Tech Strategy will pool Federal Government measures over the next years, ranging from research funding right up to shaping the framework conditions in selected high-tech sectors. It will be finalized by summer. The total volume of all measures contained in the High-tech Strategy sums up to €14.6bn for a four year period. Most measures proposed in the Strategy continue along well established routes of research and innovation promotion, including most of the thematic areas, which have been in the focus of Germany's federal technology policy for a long time. The novelty in new approach is to inter-link research promotion with sectoral policy activities and regulatory initiatives.

Among the new measures, a new Research Bonus is planned for public research organisations that conduct contract research for SMEs. This measure is expected to reinforce the orientation of public research to the technology needs of SMEs and to facilitate access to public research for SMEs.

The High-tech Strategy will be reviewed regularly. A first stocktaking is planned for

September 2007. From 2008 onwards, the Federal Report on Research and Innovation will assess the progress made in achieving the ambitious goals of the strategy.

### Programmes

	The Ministry of Economics and Technology	Ministry of Education and Research.
Cluster and innovation based programs	<p><b><u>Initiative Kompetenznetze Deutschland (Networks of Competence Germany)</u></b></p> <p><u>Kompetenznetze gives outstanding innovation clusters the possibility to publicize their activities and services to the public, both national and international. Kompetenznetze Deutschland is conceived as an instrument for international locational marketing due to the presentation of the most competent networks in Germany, and an attractive research source an communication platform for those seeking information and partners in Germany. All the “Bundesländer” are represented and the MV cluster initiative BioCon Valley ist one of the networks.</u></p> <p><b><u>NEMO – Management of Innovation Networks for East Geman SMEs</u></b></p> <p><u>The measure supports the establishment and management of innovative regional networks among SMEs and between SMEs and R&amp;D organisations in eastern Germany. These networks should support SMEs in creating an commercialising the results of their R&amp;D by reducing costs and improving their position on the market. The measure provides financial support for the mangement of the network..</u></p>	<p><b>Entrepreneurial Regions" - The Innovation Initiative for the New German Länder</b></p> <p>The Federal Ministry of Education and Research (BMBF) has therefore been supporting regional alliances in the new German Länder since 1999. The initiatives being supported aim to develop regional competences with innovation potential into regional clusters in a strategic manner, on a high technological level and according to entrepreneurial criteria.</p> <p>The BMBF umbrella initiative "Entrepreneurial Regions" is based on five programme pillars:</p> <ol style="list-style-type: none"> <li>1. InnoRegio</li> <li>2. Innovative Regional Growth</li> <li>3. Cores Centres for Innovation Competence</li> <li>4. Interregional Alliances for Tomorrow's Markets - Innovation Forums</li> <li>5. InnoProfiles</li> </ol> <p>The BMBF is currently designing a new cluster program, the BSR team was not able to meet with the senior officer who could not participate in the meeting on the 24 th of November.</p>

### MV Regional

MV is currently focused on cluster initiatives within ICT, Bio and Marine. It is a bottom up process where committed business leaders and cluster managers will participate in a dialogue with the Ministry of Economics, Labour and Tourism Mecklenburg – Vorpommern to establish cooperation and funding possibilities from MV. MV has a strategy that aims to strengthening of technology based clusters like ICT, Bio, Maritime, Plastic, Mechanical engineering, Hydrogen, Plasma and renewable energy. One of the public communication channels from the Ministry is the journal “Technology and Research in Northern Germany. MV advocates a trans-national outlook in the main clusters initiatives – ICT, Bio, Marine.

Currently the Ministry of Economics, Labour and Tourism is discussing the design of new programs/actions with the Ministry of Education making use of the funding in the European structural funds. The Ministry of Economics, Labour and Tourism wants to direct the

resources towards a more Triple Helix based model where company's needs are the drivers of research. The current cluster initiatives have served as a model on how to reorient research resources. MV has a strong belief that the renewal is driven by committed individuals from the industry, academia and the public sector.

	<b>BioCon Valley</b>	<b>IT-initiative MV</b>
<b>History</b>	Started 10 years ago as a small project – responding to the brake down of the old economy. Round table discussion by the innovation agency with researcher, companies and public officer. What can we do? Professors and companies/start-ups to give money to incubators Biotech Greifswald 1995. Evaluation after 5 years. Renamed to BioCon – close co-op with Medicon Valley and LU, LTU.	Cluster Initiative in early stages: Key objective to increase growth by working together – meeting, small conference – give advice to companies and boost at Cebit – visibility increased. Market-driven initiative
<b>Challenges</b>	BioCon Valley is part of a network of cluster in the BSR region. The initiative has a clear ambition to strengthen the BSR linkages and would like to be part of a trans-national program.  Especially venture capital is needed from a BSR perspective for young biotech companies.	Image is important – put it on the map – nobody knows that is high-tech 15.000 highly educated employees.  Manage the cooperation and competition between the companies in the initiative  Transfer of technology from institutes/universities to the SME's

Examples of cluster initiatives in MV – long version available from BSR

## Analysis

### National

The BMWI has not been conducting cluster analyses but works often with the German Institute for Economic Research is one of the leading research institutes in Germany. It is an independent, non-profit academic institution which is involved in basic research and policy advice.

DIW Berlin presents its research results in science journals, within the scope of national and international scientific events as well as at workshops, symposia and colloquia. The research results provide a basis for the exchange of ideas among experts and other relevant groups. Current economic and structural data, forecasts and advices as well as services in the area of quantitative economics are provided to decision makers in economics and policy and the broad public. DIW evaluated the InnoRegio Program of the BMFB in 2005.

### MV Regional

The Ministry of Economics, Labour and Tourism in MV has not been using cluster analyses. The approach has been bottom up.

**IV. Documents and Other References**

<b>Report/codified knowledge</b>	<b>Where to find it</b>	<b>Comments</b>
<i>Technologienpolitik in Mecklenburg-Vorpommern</i>	<a href="http://www.wm.mv-regierung.de">www.wm.mv-regierung.de</a> <a href="http://www.technologie-mv.de">http://www.technologie-mv.de</a>	
<i>Technology and Research in Northern Germany</i>	<a href="mailto:info@lta-mv.de">info@lta-mv.de</a>	
<i>Wirtschaft stärken für Wachstum und Beschäftigung</i>	<a href="http://www.wm.mv-regierung.de">www.wm.mv-regierung.de</a>	
<i>BioCon Valley</i>	<a href="http://www.bcv.org">www.bcv.org</a>	
<i>Hightech Strategie für Deutschland</i>	<a href="http://www.bmwi.de">www.bmwi.de</a>	
<i>ATI-küste</i>	<a href="http://www.ati-kueste.de">www.ati-kueste.de</a>	
<i>IT-initiative</i>	<a href="http://www.iti-mv.de">www.iti-mv.de</a>	

## Iceland

### Summary Notes Icelandic National Consultation<sup>41</sup> November 9-10, 2006

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<sup>41</sup> Address any comments/suggested changes to Emily Wise Hansson



## I. Summary of Expressed Needs and Agreed Actions:

During meetings with the various organizations, a number of needs were expressed:

- Exchange views and experience with Norway and other neighbouring countries (on regional development dimension of clusters); (Need contact persons – from ministries and Innovation Norway and other relevant agencies)
- Awareness-raising on the usefulness of clusters/clustering processes as a mechanism for driving economic growth and competitiveness (both on regional and national levels)
- Information/tips on how the public sector can support the formation and development of viable regional/sectoral cluster initiatives (on a higher level); inspiration for ‘new tools’
- Assistance in developing performance measurements
- Iceland would like to have triple helix perspective/orientation (potentially using the Swedish model), which helps to highlight potential areas for growth in existing clusters. Magnus Lagnevik and others to help out with the introduction of new ideas (in, for example, the food industry).
- Use international examples (e.g. Halifax region in Canada) on how to engage the private sector and answer other questions, such as: What performance measurements should be used to evaluate clusters/sectors? Are Icelandic clusters similar to clusters in other countries? How can activities be balanced between regional development and national economic growth/competitiveness?

The following activities will occur within the scope of the BSR InnoNet:

- Background info on WP4 will be emailed, along with a request for employment data.
- A summary of the situation in Iceland (with respect to cluster development)<sup>42</sup> will be prepared and sent to meeting participants for input and confirmation.
- A (draft) report summarizing the overall situation in the Baltic Sea Region (with respect to cluster development) will be presented at the upcoming joint meeting of WPs 3&6 to be held in Copenhagen on February 13-14<sup>th</sup>.
- WP4 will, if feasible, invite national statistical agency contacts to the workshop on the use of statistical cluster data – to be held in Copenhagen on May 23<sup>rd</sup>.

In addition to planned project activities another activity was suggested:

- Investigate the possibility for a representative from Iceland to describe and present a case on sector development using clustering processes (e.g. from the fisheries/industry technology forum) at the ministerial conference in Stockholm (November 2007).

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<sup>42</sup> The summary is based on the national summaries (prepared by the country), interviews conducted during the national consultation, as well as on various documents and presentation materials received from the country (see Section IV).

## II. Institutional Context

### National

On a national level, the *Science and Technology Policy Council*<sup>43</sup>, which meets twice a year, is responsible for establishing overall strategic priorities for three-year periods. It is then the Ministries' responsibility to translate these strategies into specific programme and activities areas – and assign a budget. The *Ministry of Education, Science and Culture* and the *Ministry of Industry and Commerce* have a strong cooperation in the area of innovation policy. With increasingly strong demands to develop horizontal policies, these ministries work together to develop policies which link the research and business sectors of the economy. Once policy proposals have been drafted, the *Ministry of Finance* has the responsibility of approving financial resources. Following this, *RANNIS* or *IceTec* (the two complementary implementing agencies in this field) have the responsibility for the detailed programme design and implementation. Evaluations are typically carried out by independent entities (related neither to ministries nor to implementing agencies), with data input from implementing agencies.

*Rannis* (the Icelandic Centre for Research) reports to the Ministry of Education, Science and Culture with the purpose of providing professional assistance in the preparation and implementation of science and technology policy in Iceland. In order to accomplish that, Rannis has three main functions. Its main functions are to operate as the financial support system for research and technological development, and provide services, information and analysis to the Council for Science and Technology Policy and its sub-committees. Rannis also coordinates and promotes Icelandic participation in international projects. Rannis communicates through their own magazine and arranges opportunities for discussion (in an informal setting) on different topics.

*IceTec* (the Technological Institute of Iceland) reports to the Ministry of Industry and Commerce, and focuses on transferring technology and expertise to industry. Main activity areas include: applied research, support to entrepreneurs and companies, specialised consultation services in the fields of technology, education and management, and participation in international projects. These consultation services and participation in international projects are provided through IceTec's *Impra Innovation Centre*.

The Ministry intends to integrate Innovation Policy initiatives into Regional Policy, thereby stressing the point that the main objective of regional development is innovation and the creation of jobs based on new knowledge and skills. This is clearly illustrated in the Growth Agreements and the close collaboration being created between organizations focusing on regional development (e.g. Regional Development Agencies) and organizations focusing on innovation and growth (e.g. IceTec/Impra).

The Federation of Icelandic Industry (SI) has a history of infrastructural support (physical and social) to industry. SI works with establishing parks, incubators and legal entities to support business-focused network-building on a regional level. The Federation of Icelandic

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<sup>43</sup> The Science and Technology Policy Council (STPC) was established in 2003. The STPC, which replaced the Icelandic Research Council, is a ministerial-level body headed by the *Prime Minister*. It is comprised of 20 seats: 4 permanent ministerial seats for the Prime Minister and the *Ministers of Education and Science, Industry and Commerce, and Finance*; 2 other ministers with research in their portfolio (added at the discretion of the Prime Minister); and 14 other members with scientific, technical and other relevant experience from higher education institutions (4 seats), labour market organisations (2 seats each for employer and employee associations) and other ministries (6 seats).

industries has around 1160 members, both companies and employer organisations. Among the FI's tasks are: improving the general business environment by influencing government policy; encouraging cooperation between companies; and providing service and advice. The Federation's work is often related to financing, organisation, and project development between companies.

### Regional

Although innovation policy is developed and implemented on a national level, the regions have played a key role in developing cluster policy on a practical level – through the regional growth agreements (which were initiated in 2003). There are eight administrative regions in Iceland.<sup>44</sup> Six of these regions have growth agreements (see a more detailed description of the growth agreements in the 'Programme' section below).

## III. Current Situation and Planned Activities

### Innovation Strategy

The priorities set by the STPC for the current three-year period (2006-2009) are based on results from an evaluation of policies and activities (see Section IV) conducted in 2005. The current priorities are more future and action-oriented than the previous period, and are focused on systemic thinking and triple-helix linkages (encouraging horizontal policy initiatives, rather than vertical/sectoral activities). The key priorities<sup>45</sup> are:

- To establish an internationally outstanding educational and scientific institutional system, closely connected to a dynamic economy, capable of providing leadership in responding to rapid changes;
- To strengthen public competitive funding schemes and merge these in related areas;
- To encourage private firms and the public sector institutions to join efforts in strengthening research and development in order to boost successful and profitable innovation and thus international competitiveness based on knowledge; and
- To redefine the role of the public sector in financially supporting scientific monitoring and research in support of public interest, environmental protection and sustainable economic growth.

In the context of **industrial policy** (and innovation), the council's recommendations focus on facilitating economic stability and creating a favourable business environment for companies in order to foster innovation and growth. **Cluster policy** is viewed as an instrument of industrial policy – focused on strengthening the global competitiveness of sectors. The topic of cluster policy has been discussed in the STPC (most recently at their meeting on December 13<sup>th</sup>, 2006). The 'cluster framework' has been around for quite some time (and has been used for regional development purposes), but it has become necessary to develop a new 'cluster concept' from the perspective of a knowledge society. There is ongoing discussion on the use of the 'cluster framework' both for regional development and for national, knowledge-based growth – is there a need to develop different support mechanisms for different uses of

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<sup>44</sup> The eight regions are: Capital, Eastland, Northland East, Northland West, Southern Peninsula, Southland, Western Fjords, and Westland.

<sup>45</sup> Excerpted from *Science and Technology Policy 2006-2009* (see Section IV)

clustering?<sup>46</sup> In both cases, the government's role is seen as facilitator – primarily in three areas: systems and structures; access to financial support; and knowledge-building.

The use of 'cluster policies' in Iceland has developed over time:

- Initially (starting in the mid-90's), cluster policies focused on providing support to existing industries – strengthening the value chain. This tool was primarily seen from a regional development perspective.
- Over time (and with inspiration from OECD reports), there was a decision to combine industrial and regional policy – which initiated the concept of regional growth agreements in 2003. The new approach focused on encouraging actors in different regions to cooperate in order to create knowledge-based economic growth.
- Now, there is more acceptance of the 'cluster concept' and the belief that clusters (and regional growth agreements<sup>47</sup>) will be a core part of innovation policy. Cluster policies are now viewed not only as a tool for regional development, but also as a tool for national economic growth. Iceland is experiencing a move from the development of regional clusters to the development of national networks of clusters (a 'merging' of regional clusters). The geographical scope of cluster activities is becoming more international.

Through all 'phases' of cluster policy development, the government's role has focused on providing guidance and inspiration (to the regional cluster facilitators), and financial lubrication.

### Programmes

There are two activities – one led by the public sector and one led by the private sector – which support cluster development. The first – the **regional growth agreements** – are an initiative under the responsibility of the Ministry of Industry and Commerce and implemented by Impra (within IceTec). The regional growth agreements grew out of Impra's support activities to SME's in more remote areas. The initial objective was to strengthen the value chain in existing industries. The first step was a 'top-down' identification of strong clusters (based on employment statistics). This broad categorization was done by a 10-person team comprised of the Ministry of Industry, IceTec, local/regional government and companies. Next, the local/regional level (led by a general manager and supported by a number of cluster facilitators) drafted a growth agreement, encompassing a number of activities aimed at increasing the specialization of regional clusters.

In the first two pilot regions (Northern Iceland and the Western Peninsula), objectives and activities were determined by the regions themselves (bottom-up). Awareness-raising activities were undertaken in order to get buy-in on the concept and encourage private sector engagement. After an initial period (when the concept became more accepted), many other regions were interested in initiating growth agreements.

The growth agreements are financed 30-50% by the Ministry of Industry and Commerce, with the remaining portion financed by the regional government and the private sector. The

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<sup>46</sup> The support mechanism that has been established is designed to meet the needs of SME's (clusters for small and medium sized businesses with hands-on guidance), whereas creating clusters with research institutes, universities and established R&D firms requires another approach.

<sup>47</sup> It is believed that regional policy will become an integrated part of the innovation policy mix instead of a policy area of its own.

Regional Development Agency has the responsibility of overseeing implementation of the growth agreements. Impra has the role of supporting the clusters/companies and facilitating progress. In addition, Impra participates in a working group (together with the Regional Development Agency and the Ministry) to derive performance measurements and new policy recommendations.

Growth agreements have been initiated in six regions, of which two will soon complete the first (three-year) phase. These two regions are in the process of negotiating a second (three-year) growth agreement, focused on supporting potential networks (i.e. using traditional knowledge and technology in new ways).

Impra/IceTec and the Ministry of Industry and Commerce mentioned a number of ‘lessons learned’ from the first phase of the growth agreements (2004-2006):

- Growth agreements are a useful tool. Future activities will focus on formalizing structures in the regional growth agreements, strengthening linkages with universities (triple helix linkages) and considering an approach for Reykjavik.
- The importance of cluster management is crucial. The manager/facilitator must be credible, experienced, and neutral. This is a new concept (or position), requiring a new set of skills. There is a need for back-up (or a larger resource pool) from which to draw human resources, and from which to gain inspiration.
- Engaging the private sector is a constant challenge – which needs to continuously be addressed.
- Growth agreements should not have a limited geographical scope (i.e. administrative boundaries); spin-off effects are positive

The second national activity which supports cluster development is *technology forums* – an initiative led by the Federation of Icelandic Industry (SI). The concept of technology forums was initiated in the early 90’s – after participation in an EUREKA project, where the main conclusion was that those industries where both users and producers of technology worked together succeeded (whereas others failed). The SI initiated the *Fisheries Technology Forum*, focused on addressing challenges from either the technology or the fishing industry side. The technology forum provided no financing, but rather served as a facilitator (bringing people together) and door-opener.<sup>48</sup>

The SI leads a 24-hour process (see Section IV for documentation) to help the sector/cluster establish a common vision. This methodology includes a number of steps: bringing key stakeholders together; establishing a future vision; identifying key success factors to reach the future vision; defining and prioritizing activities to reach the future vision; and planning out the activities in time. This same process was followed for the *Health Technology Forum*, and is now being used in a number of other sectors (including service sectors).

A number of lessons were learned from these two technology forums:

- cooperation between users and developers of technology is extremely beneficial (and helps to avoid having too narrow a perspective in R&D)
- the networking activities that the forum catalyzes are helpful for start-ups
- the strategic visioning process is the best tool for companies to identify those areas where the government needs to act (to improve business environment conditions)

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<sup>48</sup> The same methodology is now being used within the European Technology Platforms.



When discussing the development of a trans-national cluster programme, the key opportunities were viewed to be:

- international linkages is a good ‘next step’ for regional clusters/regional growth agreements
- critical mass is very important to international cooperation and trade
- trans-national linkages is a good ‘door opener’ for engaging the Reykjavik area
- a trans-national program could lead to possibilities to find new models for innovation systems and establish new dynamics between industries; trans-national initiatives could be structured around certain common issues (e.g. healthcare or energy) – combining sectoral specialities across national borders to solve common problems in the BSR

Key barriers to the development of a trans-national cluster programme were viewed to be:

- finding and allocating financial resources for trans-national activities
- defining the benefits for participating (i.e. what would clusters get out of it?)
- extremely limited man-power (and time) for Icelandic participants

#### Analysis

At present, there are no strong linkages between national statistics (e.g. Statistics Iceland) and policy analysis (e.g. Rannis); however, there is a strong desire to develop a better coupling between these organizations (and the use of statistical data in policy analysis). These two bodies work together on several projects such as The Community Innovation Survey, R&D survey and other more ad hoc projects.

Industrial statistics are available using the NACE classification system. Statistics Iceland is in the process of improving data quality for industrial statistics. Statistics Iceland is willing to provide input to the work of WP4 in the BSR InnoNet project – but believes that it is important for them (and other statistical agencies) to understand how the data will be used (i.e. what methods, what analytical purposes, etc.).

Statistics Iceland made a preliminary recommendation to include export data in the analysis of clusters in the BSR; however, this data point is difficult to assess at the NACE 4 (industrial classification) level. It was also suggested that statistical agencies be invited to participate at the upcoming workshop on ‘the use of statistical cluster data’ to be held in May 2007 – helping to integrate suppliers of data with those who would like to use the data as input to the policymaking process.

#### **IV. Documents and Other References**

<b>Report/codified knowledge</b>	<b>Where to find it</b>	<b>Comments</b>
Evaluation of Innovation Policies		
<i>STPC External Evaluation Report</i>	Internal distribution of the Scienc committee and the Technolgy committee and relevant ministries	Commissioned by the Ministry for Education, Sceine and Culture.
<i>Science and Technology Policy 2006-2009</i>	The Prime Minister’s Office, 2006 ( <a href="http://www.vt.is/english">http://www.vt.is/english</a> )	
<i>Policy Mix for Innovation in</i>	OECD, 2006 ( <a href="http://www.oecd.org/datgaocd/15/62/35548">http://www.oecd.org/datgaocd/15/62/35548</a> )	

<i>Iceland</i>	<a href="#">108.pdf</a> )	
24 hour process	Confederation of Icelandic Industry	



## Latvia

### Summary Notes Latvian National Consultation<sup>49</sup> January 8-9, 2007

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## I. Summary of Expressed Needs and Agreed Actions:

During meetings with the Ministry, LIDA, Statistics Agency and cluster representatives, a number of needs were expressed:

- Training for cluster facilitators/managers
- Awareness-raising (in a visible and easy-to-understand way) on the cluster concept (for civil servants, companies and the public more generally) and arguments for why government (and others) should be interested
- Awareness-raising regarding clusters' needs for support (e.g. generally little need for financial support for administration, but legitimacy and financial support for specialized training, coupling between research and specific industry needs, etc.) and anchoring these with policy decision-makers; more integration of the policymaker and practitioner spheres
- Details on "best practice" examples of cluster programmes and other experience (explaining – perhaps in the form of a handbook – the type of support that is most helpful for cluster development)
- Bench-learning and (possibly) benchmarking
- International links ('twin cluster' initiatives) and development of the international perspective in existing clusters (through, e.g., mobility schemes, visitation programmes, etc.)
- Support to develop (sectoral) strategies and policy inspiration for the whole of the BSR
- Longer time perspective for and greater integration between ministries' support to cluster development

The following activities will occur within the scope of the BSR InnoNet:

- A summary of the situation in Latvia (with respect to cluster development)<sup>50</sup> will be prepared and sent to meeting participants for input and confirmation.
- A (draft) report summarizing the overall situation in the Baltic Sea Region (with respect to cluster development) will be presented at the upcoming joint meeting of WPs 3&6 to be held in Copenhagen on February 13-14<sup>th</sup>.

In addition to planned project activities, a number of other activities (outside of the BSR InnoNet scope) were suggested in order to respond to Latvia's expressed needs:

- Cluster visits (in Sweden) in order to learn more concretely how the cluster activities (and national programmes/support instruments) work

## II. Institutional Context

### National

On a national level, the *Ministry of Economics* has the responsibility for developing national policy strategies, designing innovation programmes, and planning financing/budgets. In the area of cluster development, the Department of Entrepreneurship and Industry has

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<sup>50</sup> The summary is based on the national summaries (prepared by the country), interviews conducted during the national consultation, as well as on various documents and presentation materials received from the country (see Section IV).

responsibility for analysis<sup>51</sup>, strategy and programme development. Policy needs are defined by different interest groups, including sector associations and the economic council. Inspiration is gained from these organizations, as well as from international experience. Programme design is done in cooperation with other relevant ministries. The Ministry of Economics works closely with the *Latvian Investment and Development Agency (LIDA)*. In addition, the Ministry gains input from monthly meetings of the Economic Council.<sup>52</sup> Programme budgets are planned in coordination with the Ministry of Finance. Once programme and financing plans are approved by the Cabinet of Ministers, LIDA is contracted to be the implementing agency. Generally LIDA implements activities related to innovation policy, export promotion and attraction of foreign investments. LIDA also administrates EU Structural funds and state support programmes for entrepreneurs.

In 2006 LIDA participated in the elaboration of models for the state support programmes, involving recognized EU consultants from Innovation Coach and INTRO groups. As a result, the following programmes were developed: business incubators, competence centres, entrepreneurship motivation and innovation culture, pre-seed facility, technology transfer, technology incubators and skills centres as a sub-programme for the cluster programme.

### Regional

Latvia has five administrative and six statistical (NUTS 3) regions. The regional level has been the main channel for dissemination of information and promotion campaigns about the coming cluster development programme.<sup>53</sup> Other promotion activities will likely take place during 2007.

## **III. Current Situation and Planned Activities**

### Innovation Strategy

The National Development Plan (NDP) has been developed in accordance with the Regional Development Law of the Republic of Latvia and is a medium-term planning document for the period from 2007 until 2013. The objective of the plan is to facilitate a balanced and sustainable development of the country, as well as to ensure an increase in Latvia's competitiveness.

The National Lisbon Programme of Latvia for 2005-2008 is a policy planning document which shows how, in 2005-2008, Latvia will reach the Lisbon strategy goals. The Programme reflects the most essential problems for Latvia to achieve the Lisbon strategy goals, indicating

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<sup>51</sup> The Department of Entrepreneurship and Industry has conducted several sector studies (of certain branches of manufacturing industry) to analyse development trends, sector-specific problems and challenges that may require policy action.

<sup>52</sup> The National Economy Council (NEC) was established in 1999 and operates as an advisory institution to the Ministry of Economics. Founders of the NEC are the Ministry of Economics, the Latvian Chambers of Commerce and Industry, the Employers' Confederation of Latvia, the Industrial Confederation of Latvia, the Free Trade Union Confederation of Latvia, and the Latvian Association of Local and Regional Governments. NEC consists of the Ministry of Economics and 21 experts designated by the founders of the NEC, including representatives of entrepreneurs, public institutions and other organizations. The NEC reviews and monitors settlement of issues important for the development of the Latvian economy (e.g. drafts of regulatory documents, concepts of development of the national economy, state budget and other documents). NEC meetings are held once a month.

<sup>53</sup> Promotion activities have taken place at regional innovation days in nine different regions.

the main lines of action and activities to solve these problems, as well as performance indicators for achieving the goals.

The Programme points out five main economic policy directions to reach the Lisbon goals in Latvia, namely:

- securing macroeconomic stability;
- stimulating knowledge and innovation;
- developing favourable and attractive environment for investment and work;
- fostering employment;
- improving education and skills

Both strategic documents are national-level strategies covering a wide range of policy areas. Both documents mention clusters as an instrument to boost the competitiveness of industry sectors and companies.

The Ministry of Economics has elaborated the Competitiveness and Innovation Promotion programme 2007-2013 (CIPP) to be approved in the first quarter of 2007. It consolidates three main policy areas: SMEs, innovation and industrial policy and respective policy documents (SME Development Policy Guidelines; National Innovation Programme and Industrial Development Guidelines). The main objectives of the CIPP are:

- Creation of favourable framework conditions for business development and start-ups;
- Improvement of the capacity and efficiency of the National innovation system – creating a favourable regulatory, financial and information environment for innovative activity;
- Improvement of competitiveness and productivity levels in manufacturing – promoting production with high value-added and increasing the share of high-tech products in the total manufacturing output and exports.

Cluster development is recognised as one of the tools to improve international competitiveness by helping companies make better use of knowledge resources, facilitating development and implementation of a joint vision and strategy, building critical mass for joint projects of common interest, and fostering inter-sector operations to develop new products and services.

### Programmes

Latvia has had one cluster promotion programme – financed by Phare, and running between 1999-2002. The goal was to create clusters.<sup>54</sup> An analysis was conducted to identify strong sectors in Latvia: IT, Forestry, New Materials, and Mechanical Engineering. These sectors/clusters were approached regarding initiation of activities, and two (IS/IT and Forestry) initiated clustering activities in 2001. These two clusters still exist today.

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<sup>54</sup> Although today, it is well understood that one cannot ‘create clusters’, but rather develop already-existing clusters.

The Phare cluster activities have had many helpful results:

1. raising awareness and promoted the cluster approach (both within the public sector, but also in the private sector)<sup>55</sup>
2. bringing together players in the two sectors – and providing the opportunity for them to develop longer-term joint goals and activities
3. helping to re-introduce the cluster policy perspective for the current planning period (2007-2013)

Latvia does not currently have a cluster programme, but has prepared a draft proposal which they plan to launch late 2007 or early 2008. This proposed cluster programme has been formulated with the input from many stakeholder groups (through a promotion campaign during 2006), and will be anchored with key groups prior to being launched. The programme will provide support for the coordination of clusters and some cluster activities. There are no prioritized sectors; clusters will identify themselves and apply for support. Clusters will be chosen in an open competition – based on certain criteria (e.g. level of value-added, commitment from companies, export orientation, etc.).

Following recent discussions within the Ministry of Economics, the draft programme has been adjusted (changes to the type of activities that will receive support, lower overall budget, etc.) in order to prevent overlap with other programmes.

Presentations of the Forestry and IT clusters highlighted that clustering activities were perceived as valuable, but that there was scepticism regarding the coming national programme. Cluster actors did not think that policymakers (in general) have really understood what clusters are, and have therefore not been able to design a programme that meets their needs.

When discussing the development of a trans-national cluster programme, the key opportunities were viewed to be:

- mixing different countries' experience with cluster facilitator and cluster manager training in order to develop a 'best practice' school within the BSR
- share information and experience on elaboration of indicators to evaluate cluster development and potential (This can be used to develop further methodologies for increasing effectiveness of cluster work and capacity.)
- support networking and contact-building between national clusters in the BSR

Key barriers to the development of a trans-national cluster programme were viewed to be:

- making the cluster concept easy to understand and visible (on a company level)
- ensuring national relevance and demand from companies for this
- the traditions to support national enterprises (registered in the territory of Latvia) are still strong

### Analysis

Initial work in the area of clusters (through the Phare programme in 2000-2001) started out with an analysis<sup>56</sup> to identify sectors with strategic priority and clustering potential in Latvia.

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<sup>55</sup> According to a recent European survey (presented at INNOVA conference in Vallencia), 60% of Latvian companies recognize that they are working in a cluster environment. This is compared to 15-20% of Estonian and Lithuanian companies.

These (four) sectors were approached regarding their interest in participating in clustering activities.

Aside from the (sectoral) analysis mentioned above, most statistical analysis is done in the context of regional development – comparing indicators of socio-economic development in order to provide input to local governments and prioritize support from structural funds. The territorial development index is also used for correlation analysis (e.g. with voter activity) and forecasting. The possibility of adding industrial statistics with the territorial statistics (for cluster identification and benchmarking purposes) was viewed as an interesting possibility.

The Forestry/wood processing cluster has looked into international benchmarking of clusters in their scope, but believes that this is not possible. It is perceived that clusters in other parts of the world are too different to be able to draw any useful conclusions from international benchmarking.

The current EU mapping of clusters in Latvia was not viewed as being very useful – primarily because of the methodology (i.e. clusters have been identified based on employment data). It was suggested that – at the upcoming BSR InnoNet workshop on the use of statistical cluster data – discussion materials include a summary of the shortcomings with the currently-used mapping methodology, and recommendations regarding changes and next steps.

There is rather wide information prepared by Central Statistical Bureau (CSB) of Latvia, which could be used in the process of analysis (both sectoral and regional) of cluster development, such as:<sup>57</sup>

- GDP per capita in regions, cities and districts;
- economically active statistical units in regions, (5 planning regions and 6 statistical regions), cities under state jurisdiction (7 cities) and districts (26 districts);
- non-financial investment in regions, cities and districts, of which construction work;
- main industrial activities and the ratio of employment in industry to the total number of employed in cities and districts;
- sown area, crop production, yield, output of livestock products by region and district;
- forest cover and main categories of trees in regions and districts;
- basic indicators of health care in regions, cities and districts;
- cultural and education institutions in regions, cities under state jurisdiction and districts, including public libraries, culture houses, general schools, pre-school establishments;
- housing in cities and districts;
- average monthly wages and salaries in public sector in cities and districts;
- employees at the main job in public and private sectors in regions, cities and districts;
- vital statistics in regions cities and districts;
- demographical burden in regions cities and districts;
- long-term migration by region, city and district;
- resident population by ethnicity in regions, cities and districts;
- population by sex in regions, cities and districts.

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<sup>56</sup> conducted by (then) Arthur Andersen

<sup>57</sup> This information was prepared and submitted by Edvīns Vanags (see Section I).



Some indicators (unemployment level, personal income tax per capita, density of population, demographical burden etc.) are also possible to get by smaller territorial units: towns, rural municipalities and areas.

#### IV. Documents and Other References

<b>Report/codified knowledge</b>	<b>Where to find it</b>	<b>Comments</b>
<i>Latvian National Development Plan (2007-2013)</i>	<a href="http://www.nap.lv/">http://www.nap.lv/</a>	
<i>Latvian National Lisbon Strategy</i>	<a href="http://www.em.gov.lv/em/images/modules/items/item_file_11635_2.pdf">http://www.em.gov.lv/em/images/modules/items/item_file_11635_2.pdf</a>	



## Lithuania

### Summary Notes Lithuanian National Consultation<sup>58</sup> January 10-11, 2007

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\*On the 11 th of January a seminar was held with approximately 80 participants. Prof. Robertas Jucevicius also briefed on his work in progress mapping the industrial structures in the Baltic Sea Area.

#### I. Summary of Expressed Needs and Agreed Actions:

Dimensions of cooperation considered:

- Innovative governance (capacity)
- Program implementation
- Twinning projects
- Programme portfolio/typology
- Implementation of the Operational Program ERUF.
- Czech Invest – mention as a good example to learn from
- Geography of BSR area relevant regarding trans-national cooperation

<sup>58</sup> Address any comments/suggested changes to Hélène Vogelmann

- Advice on program design
- High-level awareness raising actions/conferences/seminars
- Cluster training courses directed towards cluster managers/ and agencies

The following activities will occur within the scope of the BSR InnoNet:

- A summary of the situation in Lithuania (with respect to cluster development)<sup>59</sup> will be prepared and sent to meeting participants for input and confirmation.
- A (draft) report summarizing the overall situation in the Baltic Sea Region (with respect to cluster development) will be presented at the upcoming joint meeting of WPs 3&6 to be held in Copenhagen on February 13-14<sup>th</sup>.

In addition to planned project activities, a number of other activities (outside of the BSR InnoNet scope) were suggested in order to respond to:

Twinning projects are considered to be useful tools in order to gain more knowledge. A question put forward was could there be a possibility to have a bilateral project on program design and supportive actions. Other needs addressed were bench learning and fact finding trips to other countries within BSR to inspire. It is the responsibility of Helene Vogelmann to address this issue.

## **II. Institutional Context**

### National

Two Ministries are directly involved in the R&D and Innovation policy formulation and program design process. These are the Ministry of Economy and the Ministry of Education and Science. The Ministry of Economy, while aiming at promoting economic development of Lithuania, well being of its citizens, and following EU requirements, performs the following functions related to innovation policy:

- Implementation of long term economic development programme, providing a basis for economic development perspectives and priorities, devoted for strengthening of Lithuanian economy competitiveness at a global scale;
- Coordination and monitoring of implementation of State long term development strategy;
- Implementation of industrial policy – providing necessary conditions for strengthening of industrial competitiveness, certification of production, promotion of export;
- Participation in and formation of investment policy;
- Planning and implementation of financial measures foreseen in Single programming document related to the competence of the Ministry of Economy.

These functions are mainly performed by three departments, namely Investment and Innovation Department, Industry and Business Department, and EU Structural Assistance Department.

The Investment and Innovation Department is in charge of innovation and technology development policy and the development of business environments and business support

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<sup>59</sup> The summary is based on the national summaries (prepared by the country), interviews conducted during the national consultation, as well as on various documents and presentation materials received from the country (see Section IV).

infrastructure: i.e. meaning; Development of science and technology parks, innovation centres, business incubators and business information centres, Incentive and support for company innovation and R&D activities. As well as analyses of the policy innovation of innovation development and samples of benchmarking in the EU and other countries, submission of suggestions to the commission on Science, Technology and Innovation development for implementation of innovation policy measures. The Ministry of Economy is in charge of the operational program of the ERUF.

The Ministry of Education and Science, namely Department of Higher Education and the Department of Research and Technology, perform formation and implementation of State policy in research and experimental development as well as coordination of the activities of research and higher education institutions. This involves drafting of decisions on the allocation of the state budget funds to the institutions of research and higher education.

Important agencies that are partly implementing the above policies and programs are the Agency of International Science and Technology Development Programmes, which primarily is responsible for administration and coordination of the EU Framework programme and other research and development oriented EU programmes.

Agencies that are accountable to the Ministry of Economy are the Lithuanian Business support Agency (LBSA), the Lithuanian Development Agency, the Public Institution Lithuanian Innovation Centre, the Lithuanian Development Agency for Small and Medium Sized Enterprises (SMEDA).

LBSA is a public institution established by the Ministry of Economy as an implementing agency to manage and administer financial assistance provided by the European Union Structural Funds and national support programmes. As an implementing agency, it is responsible for project administration and monitoring, i.e. LBSA is responsible for the administration and monitoring of the measures of the Single Programming Document that fall under the competence of the Ministry of Economy.

The Lithuanian Development Agency is concentrating on export oriented, and FDI-activities. **Lithuanian Development Agency**, a public organization under the Ministry of Economy, provides **fast and efficient support** for starting a business in Lithuania by:

- providing relevant business information;
- servicing investors through the investment decision process;
- identifying local suppliers;
- organizing site and company visits.

The Public Institution **Lithuanian Innovation Centre** (LIC) is a non-profit organisation, providing innovation support services to enterprises, research institutions, industry associations and business support organisations. The **mission** of the Lithuanian Innovation Centre is provision of the innovation support services by implementing Lithuanian innovation policy. The main **strategic goal** of LIC is increasing of Lithuanian international competitiveness by stimulating innovations in business. This goal is divided into the following **objectives**:

- To foster capabilities of the companies to develop and implement innovations.

- To accelerate commercialization of achievements of advanced sciences.
- To decrease the risk of innovation implementation.

The Lithuanian Innovation Centre performs tasks given by the Ministry and acts as a lubricator of the program implementation phase as well as helping cluster initiatives and technology platforms to be part of national and EU programs.

The Lithuanian Development Agency for Small and Medium Sized Enterprises (SMEDA) was founded in 1996 as a non-profit organisation seeking to create favourable conditions for development of small and medium - sized business. In July 1997 SMEDA was reorganised into a public institution.

The owner and the highest managing authority of SMEDA is the [Ministry of Economy of the Republic of Lithuania](#). Collegiate managing authority, that coordinates the activities of SMEDA, is the Board.

SMEDA's mission is the development of small and medium business through the promotion and encouragement of competitive enterprises.

SMEDA is responsible for:

- analysis of the economic environment for small and medium - sized business development in Lithuania,
- updating and disseminating information on small and medium - sized business development in Lithuania,
- production and distribution of publications for Lithuanian entrepreneurs,
- provision of information regarding business funding opportunities,
- collection and analysis of statistical information relevant to small and medium - sized business,
- management of the SMEDA's Web Portal and the Internet Supply Exchange,
- production and distribution of monthly bulletins for the business community,
- organization and management of subsidised counselling and training services for entrepreneurs,
- provision of methodological support and information, co-ordination of the activities of state supported Business Information Centres and Business Incubators,
- participation in national and international programmes and projects.

The BSR team draws the conclusion that the national agencies are involved in program implementation, but that there is no clear division as in Finland or Sweden. The agencies compete, like in Germany, to be the operative part in a certain program or action.

### Regional

The regional level is important from a cluster perspective, but more from a national approach. Micro-clusters are part of important national value chains and there are ambitions to strengthen those by linking them together in a more systemic fashion.

### III. Current Situation and Planned Activities

#### Innovation Strategy

Recent developments in national innovation policy have demonstrated attempts to improve its co-ordination and implementation. The idea of cluster development in Lithuania was initiated in the national Mid-term Industrial policy in 2000 as well as the Long-term Industrial Policy in 2003. EU accession in May 2004 was followed with the first round of implementation of EU Structural funds, which allowed to double amount of funds available for innovation.

Several measures directly addressing innovation are under implementation which aims to strengthen innovation support infrastructure and develop its institutional capacities, to improve R&D and business co-operation in innovation development, to improve quality of human resources for R&D and innovation and to strengthen public and private R&D base. Direct support for innovation in firms was offered as well.

Innovation policy discussion have intensified and addressed innovation culture, cluster development issues, and the problems industry is facing - intensifying brain-drain and international migration of qualified labour. Lithuanian preparation for the participation in FP7 programme, science prioritization was brought to the highest level discussion stressing the importance of R&D improvement for the national economy.

Development of innovation support systems are being made, including the development of innovation centre's with co-ordination by Lithuanian Innovation Centre (LIC), development of technology transfer and technology dissemination systems and provision of related services, including information, promotion of any type of innovation (in technologies, processes, marketing, management, etc.), consulting services for innovative start-ups and their development issues, promotion and awareness of opportunities to finance innovation.

#### Programmes

Traditional innovation programs, FDI programs; SME-oriented programs and export-oriented programs have been design and implemented at national level since year 2000. Experience and knowledge has been gained and is being used in a action plan for cluster.

A new Cluster Policy and program is currently being designed by the Ministry of Economy. The approach of the program is not yet decided on it might contain soft measures as well hard investments, although hard measures are considered more interesting. This should also be contemplated in the light of the very strong impact of the EU program on technology platforms in Lithuania. Currently there are 24 of them and some of them harness cluster initiatives/networks.

The Ministry of Economics and the Ministry of Education and Science are currently working together on a innovation and cluster based program.

The forest cluster expressed a need to further develop the "concept of cluster and cluster initiatives" on different levels. Discussions were focused on "legal status" of cluster initiatives and the need to strengthen the industrial needed infrastructures of the initiative in regards to research and development.

### Analysis

There have been several cluster oriented cluster analyses with the first one initiated in year 2000. Examples of this are a literature study describing cluster as a vehicle for competitiveness and an evaluation on international experiences. Another is the sectorial study on the Wood Industry and a research study on all major industries (8) with recommended principles for Cluster policy. One of the latest studies emphasis the importance in tightly integrate the national business system into the value chain and clusters of the Baltic Sea Area. The most recent cluster mapping project is addressing the industrial structures in the Baltic Sea Area. This study is going to be presented and act as an input in the forming of the cluster policy and the cluster program of the Ministry of Economy.

### **IV. Documents and Other References**

<b>Report/codified knowledge</b>	<b>Where to find it</b>	<b>Comments</b>
<i>Industrial cluster mapping BSR area – finalised march 2007.</i>	<i>Professor Robertas Jucevicius Director of Business Strategy Institute at Kaunas University Of Technology</i>	<i>+370 37 300121 rjucev@ktu.lt</i>
<i>Lithuania your partner – in research and experimental development.</i>	<i>Ministry of Education and science of the Republic of Lithuania.</i>	<i><a href="http://www.smm.lt">http://www.smm.lt</a></i>
ANNUAL PROGRESS REPORT ON THE IMPLEMENTATION OF THE NATIONAL LISBON STRATEGY IMPLEMENTATION PROGRAMME OF LITHUANIA 2006	Ministry of Economy of the Republic of Lithuania	<i><a href="http://www.ukmin.lt">http://www.ukmin.lt</a></i>
<a href="#">NATIONAL LISBON STRATEGY IMPLEMENTATION PROGRAMME (2005-2008)</a>	Ministry of Economy of the Republic of Lithuania	<i><a href="http://www.ukmin.lt">http://www.ukmin.lt</a></i>



## Norway

### Summary Notes Norwegian National Consultation<sup>60</sup> November 6-7, 2006

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<sup>60</sup> Address any comments/suggested changes to H el ene Vogelmann



## I. Summary of Expressed Needs and Agreed Actions:

During meetings with the various organizations, a number of needs were expressed:

- Strengthen the ties between cluster initiatives and the international FDI offices – internationalize cluster initiatives
- Find synergies by cross-sector approach between industrial sectors
- Develop/find a methodology for identifying emerging sectors

The following activities will occur within the scope of the BSR InnoNet:

- A summary of the situation in Norway (with respect to cluster development)<sup>61</sup> will be prepared and sent to meeting participants for input and confirmation by end-November.
- A (draft) report summarizing the overall situation in the Baltic Sea Region (with respect to cluster development) will be presented at the upcoming joint meeting of WPs 3&6 to be held in Copenhagen on February 14-15<sup>th</sup>.

In addition to planned project activities, a number of other activities (outside of the BSR InnoNet scope) were suggested in order to respond to Norway's expressed needs:

- Applying to NICE call for proposals (together with VINNOVA, Region Skåne, FORA, Nutek, ISA) on “Value stars in digital interactive industry/moving images – DIIMI-STAR”
- Initiation of a “Nordic School of Cluster Management” to make use of the knowledge and lessons learned from experience in the region
- Finding specific sectors, technologies, or competence areas (e.g. environmental technologies, etc.) where acting together as a group of countries provides stronger competitive positioning (e.g. where the group of countries is greater than the sum of its parts)

## II. Institutional Context

### National

The report “Fra idé til verdi” – the government's plan on a coherent innovation policy (published in 2003) – gave a foundation and is an example of a formalised national policy. This policy was signed by five Ministries and takes a cross-policy approach and points out five important policy areas to address:

- general frame conditions
- knowledge and competence
- research and development/commercialisation
- entrepreneurship/new companies, and
- infrastructure

The policy also states that to be successful in implementing there is a need to work together between private and public actors, but also be able to on work local, regional and national levels in a coordinated way.

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<sup>61</sup> The summary is based on the national summaries (prepared by the country), interviews conducted during the national consultation, as well as on various documents and presentation materials received from the country (see Section IV).

National agencies such as Innovation Norway, the Research Council, SIVA and SND work together with the ministries to collaboratively develop policies and programmes. The ministries have also developed a constructive collaboration with the Norwegian Institute Sector.

There are three primary “innovation agencies” in Norway, who work very closely together: Innovation Norway, the Research Council of Norway and SIVA. *Innovation Norway* has the responsibility both of strategic policy development, programme development and implementation. Innovation Norway also finances programmes in the development and pilot phases (e.g. project activities during two-three years). After a pilot phase, Innovation Norway requests supplementary financing (from various ministries) to expand programme activities. This “request process” occurs once a year. A decision on whether proposed budgets are approved or not is made on the first Friday in October every year.

The *Research Council* focuses on competence-development aspects in innovation networks. MOBI is an example programme in this area. The Research Council has worked very closely with the Ministry of Local Government and Regional Development.

Financial resources are usually negotiated in collaboration between the Ministries and the budgets for agencies are decided by the government on a yearly basis. New programmes are usually specified specifically in the formal directives to the agencies. It is usually faster to start new actions/project within existing programmes.

#### Regional

*SIVA* has a history of infrastructural support (physical and social) to industry. SIVA works with establishing parks, incubators and legal entities to support business-focused network-building on a regional level.

Norway and its regional development policy and operative programmes are traditionally strong, and the resources are to a large extent regionalized. A trend is seen where the regional development focus is combined with metropolitan focus and policies. An example of this is Oslo’s current work with growth strategies together with 56 municipalities and Akershus “Fylkekommune” and the Ministry of Local Government and Regional Development.

### **III. Current Situation and Planned Activities**

#### Innovation Strategy

Norway has a newly elected government which wants to be more active in the field of providing sound frameworks and programmes in order to enhance the competitiveness of the Norwegian Enterprises. The goals are to increase public spending on R&D, develop an active industrial policy and strengthen the agencies’ role and scope. Examples of this are the objectives to increase spending on R&D to 3% of the GDP, which translates to 50 billion NKR by 2006. Also the budget for the Research and Growth agencies and their programmes are increased by 30%. This is done with the goals set by the renewed Lisbon Strategy and being part of the future framework programmes such as FP7 and CIP. (See the report Innovation Tomorrow)

One of the future tasks for developing policies is to find “new” areas that combine traditional areas of strength (e.g. oil and maritime) with new research areas (e.g. nanotechnology and

biotechnology) that can be the future foundation of the Norwegian industry. The road ahead implies that the following actions need to be taken:

- Innovation Growth Strategy
- Increase Seed Capital – and regionalize functions
- Ownership
- White paper on Innovation Policy
- OECD review of Innovation Policy with start 2007
- Cross policy departmental/ministerial group to enforce the Innovation Policy
- IPRs and how to increase activity
- Increased focus on the service sector and the it's low innovativeness
- From regional development focus to metropolitan and regional policies

In the context of cluster policy, the regions have played an important role. National ministries strive to have close relations with regional policymakers. Regional political strategies, as well as the structure of knowledge institutions and industrial support infrastructure (e.g. SIVA offices), drive national innovation strategies and programmes.

### Programmes

The primary cluster development programmes currently running in Norway are:

- ARENA
- Norwegian Centres of Expertise (the NCE programme)

The aim of the Norwegian Centres of Expertise programme is to trigger and strengthen innovation and internationalisation processes based on cooperation (e.g. between companies, public institutions, and research and development institutions). The NCE programme is targeted at well-established clusters. The first six projects were selected Spring '06.

Another programme which was launched Spring '06 was the Centres for Research-based Innovation programme. The main objective of this program is to enhance the capability of the business sector to innovate by focusing on long-term research. The programme will promote the development of industrially-oriented research groups that are part of strong international networks. Moreover, a goal is to stimulate researcher training in fields of importance to the business community, and encourage the transfer of research-based knowledge and technology.

Cluster programmes are part of Innovation Norway's network-based programmes<sup>62</sup>. Within this programme area, several programme types are included: cluster programmes, regional development programmes, and international network-building programmes.

Through REGINN, and other programmes, Norway has developed the insight that innovation processes are a learning process. Policy mechanisms are therefore focused on supporting (and developing) this learning process. Projects are focused on increasing the interaction between dynamic industry players and leading knowledge institutions – on a regional level. Innovation Norway has included the relevant ministries in the development of the Norwegian Centres of

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<sup>62</sup> This type of programme started in 1992, based on experience in Denmark. The first major programme focused on the development of regional innovation systems (industry, research/knowledge institutions and the public sector) was REGINN, initiated by the Research Council in 1997.

Expertise (NCE) programme. The NCE programme received a budget of NOK 35 million. The primary financiers are the Ministry of Regional Development and the Ministry of Industry.

So far, there are no clear conclusions regarding the drivers of success in cluster development programmes (e.g. which clusters survive/develop best after financing has finished, and why?). However, there are certain qualitative lessons learned:

- It is important to work with existing networks/clusters and engagement.
- Clear expectations/guidelines from the national level (programme) are important.
- In addition, a long-term perspective has been important.
- (Different types of) analysis can help to identify current and potential “strongholds” to work with. Analysis is helpful in providing strategic guides and factual basis for programme design.
- Clusters have experienced that the development of the cluster/network (cooperation between the triple helix stakeholders) went much faster with support from the national programme. The programme activities highlight the importance of having knowledge institutions tightly involved together with industry.
- Most importantly, the national programmes have served to mobilize the business sector in activities.

The cluster handbook has been a useful tool (for cluster managers/facilitators) to guide and understand processes in cluster development. The project financing and administrative routines could function a bit more smoothly.

There are no new cluster development programmes planned. In the future, Norway may consider:

- a follow-up form of the ARENA programme, as this programme focuses on “proof of concept” for clusters (vs. the NCE programme, which focuses on world-class clusters)
- a programme to help clusters/networks develop their value chain (work with related industries)

Some ideas/opportunities for a trans-national programme are viewed to be:

- Initiation of a “Nordic School of Cluster Management” to make use of the knowledge and lessons learned from experience in the region
- Finding specific sectors, technologies, or competence areas (e.g. environmental technologies, etc.) where acting together as a group of countries provides stronger competitive positioning (e.g. where the group of countries is greater than the sum of its parts)

The primary barriers to development of a trans-national programme are viewed to be:

- Differing initial situations and objectives (e.g. aiming to learn “best practice” or establish “next practice”)
- The levels of trust (and cultural heritage) between the various national partners

One concern is the ongoing European discussion regarding limitations on state aid to clusters (maximum 50% financial support over a maximum of five years).

### Analysis

Since the Porter trend in the mid-90's, no national mapping of clusters has taken place. There has been a regional mapping (of the Oslo area), financed by the EU. In Norway, the focus is on "bottom-up" (self-identified) clusters, and support for triple helix collaboration.

Evaluation of these ongoing cluster programmes will take place. A baseline assessment of the (six) NCE has been conducted by Oxford Research. This will provide the platform from which ongoing monitoring and evaluation will be conducted. The cluster facilitator will have the primary responsibility for monitoring (and logging information). In addition, Norwegian accounting databases and targeted surveys will be used.

The mid-term evaluation of ARENA will be conducted in March 2007 – comprised of case studies of seven clusters (done by the business school in Bergen). In general, evaluations are used to draw on experience (learn from successes and failures) in order to design new programmes. Evaluation is used for learning rather than comparative analysis/bench-learning.

It has been observed that the information provided in statistical mappings (using the 'Porter methodology') lack dynamism, do not identify emerging clusters (e.g. Maritime IT) and give no information on how clustering processes are working. The expectation for the BSR InnoNet project is to develop a framework for cluster analysis (e.g. models to convert analytical results to policy).

### **IV. Documents and Other References**

<b>Report/codified knowledge</b>	<b>Where to find it</b>	<b>Comments</b>
Fra idé til Verdi – regeringens plan for en helhetlig innovasjonspolitik (2003)	publikasjonsbestilling@ft.dep.no	
Regjeringens innovasjonspolitik (2005)	publikasjonsbestilling@ft.dep.no	
St.meld.nr.21 (2005-2006) Hjarte for heile landet – Om distrikts- og regionalpolitikken	www.odin.dep.no	
Osloregionens muligheter for næringsutvikling i et internasjonalt perspektiv (maj 2005)	www.asplanviak.no	
odin.dep.no/nhd/english		
www.rcn.no/english		
www.innovasjon norge.no/english		
www.siva.no		
http://trendchart.cordis.lu/		

## Poland

### Summary Notes Polish National Consultation<sup>63</sup> December 11-12, 2006

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### I. Summary of Expressed Needs and Agreed Actions:

During meetings with representatives at the regional (cluster initiatives, West Pomeranian region Marshall's Office and ZARR) and national (ministries, the national implementing agency PAED, the national statistical office and GIME) levels, a number of needs were expressed:

- Training (and handbooks) for cluster facilitators
- Good examples of working clusters (internationally), as well as success stories within Poland
- Regional and national-level strategies, frameworks/guidelines for activities (and financing) to support cluster development (provides leadership and legitimacy)
- Awareness-raising for companies and other actors of clusters as a mechanism to help increase competitiveness
- Insight into how best to employ structural funds' financing for supporting clusters (with competition-based selection)
- Consultative/advisory help in designing national programme(s) to support cluster development

The following activities will occur within the scope of the BSR InnoNet:

- A summary of the situation in Poland (with respect to cluster development)<sup>64</sup> will be prepared and sent to meeting participants for input and confirmation by end-December.

<sup>64</sup> The summary is based on the national summaries (prepared by the country), interviews conducted during the national consultation, as well as on various documents and presentation materials received from the country (see Section IV).

- A (draft) report summarizing the overall situation in the Baltic Sea Region (with respect to cluster development) will be presented at the upcoming joint meeting of WPs 3&6 to be held in Copenhagen on February 13-14<sup>th</sup>.

In addition to planned project activities, a number of other activities (outside of the BSR InnoNet scope) were suggested in order to respond to Poland's expressed needs:

- Insight into Finnish approach to cluster development (cluster-based approach to industrial development)

## II. Institutional Context

### National

On a national level, three ministries have responsibility for developing the National Operational Programme for the Innovative Economy: the Ministry of Economy (responsible for demand-side areas), the Ministry of Science and Higher Education (responsible for supply-side areas), and the Ministry of Internal Affairs (responsible for ICT). The *Ministry of Economy*, together with the *Ministry of Science and Higher Education*, have the responsibility of formulating strategies, preparing the operational programme, and proposing a menu of instruments for regions to use in the implementation of their regional operational programmes.

The *Ministry of Regional Development* has the role of speeding-up the use of structural funds – approving budgets, coordinating activities between different ministries, and dividing responsibilities between national and regional levels (ensuring no overlap of activities). The Ministry of Regional Development works together with the various *vovoidships* (see next section) to coordinate implementation of activities and advise the regions (*Marshall's Office*) on the balance between national and regional priorities.<sup>65</sup> The Marshall's Office (with the support of regional implementing agencies) is responsible for implementation of those activities under the responsibility of the regional level.

For those activities that are under the responsibility of the national level, the *Polish Agency for Enterprise Development* (Polish abbreviation – *PARP*)<sup>66</sup> implements programmes aimed at promoting and developing innovative attitudes, projects, enterprises and research and development centres, as well as stimulating the development of technology transfer. PARP also co-operates with the Ministry of Economy in programming system solutions and implementing pilot programmes (such as pilot grant schemes supporting the creation of spin-offs and projects concerning industrial property) aimed at encouraging the development of new companies, co-operation between entrepreneurs and taking advantage of industrial property in order to increase the competitiveness of the enterprise.

In order to improve the efficiency of implementing innovation policy, it is necessary to create an agency which would be responsible for the process of implementation. It is recommended that an agency be created by transforming an existing entity. The final shape of the agency will be determined upon completing *The Feasibility Study for the Institution Implementing the Instruments of the State's Innovation Policy*. The aim of delegating the tasks of the

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<sup>65</sup> Coordination between the national and regional levels is a challenge, as there are no clear definitions of scope (i.e. are divisions of responsibility based on budget levels or what other criteria?).

<sup>66</sup> a governmental agency subordinate to the Ministry of Economy

Agency implementing the innovation policy to an existing agency or agencies would be to improve the conditions of implementing the said policy, in particular promoting the policy and increasing the level of expenditure on innovation activities in enterprises. The transformed Agency would play a coordinating, informative, consulting and training role in the National Innovation System, as well as perform the function of an implementing authority for selected initiatives which support the growth of economic innovation financed from structural funds.

### Regional

On a regional level, a number of actors take part in the development, financing, and implementation of innovation/cluster development policy. In Western Pomerania, there are two main actors responsible for developing and financing the regional innovation strategy:

1. The **Marshall's Office** (Self Government Authority) is responsible for shaping and conducting the region's development policy. This includes implementing the Regional Innovation Strategy and developing *Regional Operational Programme 2007-2013* along with the detailed supplement to the ROP, which guides the innovation activities/projects in the region.
2. The **Vovoidship Office** (which represents Polish Government) is responsible for administering financing of EU funds (e.g. social funds, structural funds, etc.) implemented at regional level, by way of transferring the money to implementing institutions or beneficiaries upon formal acceptance of respective documents.

The **West Pomeranian Regional Development Agency (ZARR)** is owned by regional self government with the mission to stimulate and support regional development. ZARR cooperates with the Marshall's Office in developing regional programmes and strategies, assists companies (and clusters) with applying for financing from national and EU programmes, and coordinates certain innovation activities/projects. ZARR was also the coordinator of the Regional Innovation Strategy Project (RISP-WPR).

It should, however, be noted that the legal status of ZARR (joint stock company) makes it impossible for the Marshall's Office to delegate to ZARR any long-term, statutory responsibilities along with respective budgets. Such is the case in all Polish regional development agencies. Therefore, ZARR's responsibilities are limited to fixed-term tasks. For example, ZARR is the Regional Financing Institution representing Polish Agency for Enterprise Development in implementing operational programmes for entrepreneurs (promotion, evaluation, awarding, administrating, auditing). Similarly, the Marshall's Office mandated ZARR to become the implementing institution for Measure 2.6 of the Regional Integrated Operational Programme concerning Innovation (European Social Fund).

The Regional Innovation Strategies (RIS) and operational programmes play a significant role in developing the regional competitive economy. They are aimed at building a permanent regional partnership between scientific centres and the industry sector, increasing the competitiveness of small and medium enterprises by introducing new technologies and improving the qualifications of the scientific staff and enterprises concerning R&D studies, managing the studies and the commercialisation of their results.

### III. Current Situation and Planned Activities

#### Innovation Strategy

In the context of **industrial policy**, the Ministry of Economy has several main priorities:<sup>67</sup>

1. Human resources for the modern economy, aimed at the transformation of social awareness, in particular that of entrepreneurs, scientists and administration, as a result of which innovation will be perceived as the most significant development opportunity for Poland and the basis for gaining competitive advantage on local and international markets
2. Research for the economy, aimed at increasing the use of the results of R&D studies in enterprises and adjusting the possibilities of scientific units in order to satisfy the needs of modern economy and create the supply of new solutions in economy
3. Intellectual Property for innovation, aimed at increasing the efficiency of the innovation market, in particular the flow of innovative solutions by promoting industrial property rights, copy rights and other related laws
4. Capital for innovation, aimed at mobilising private capital for establishing and developing innovative companies
5. Infrastructure for innovation, aimed at improving the conditions of the functioning of innovative enterprises

Currently, there is no concrete **cluster policy** in Poland. However, the Gdansk Institute of Market Economics (GIME) began working with clusters (and cluster mapping) in 2000. The government commissioned GIME to propose a national strategy on cluster development, but later decided to incorporate policies for cluster development into the national (and regional) innovation strategies for the 2007-2013 operational period. The Ministry of Economy has the responsibility for addressing the strategies of providing support for networking and strengthening cooperation between research and companies (within *Infrastructure for Innovation*). Specific actions that are suggested include:<sup>68</sup>

- Increasing the awareness of entrepreneurs concerning the benefits of co-operating with scientific units and other enterprises
- Establishing an effective public-private partnership
- Providing proper conditions for network co-operation
- Supporting the development of clusters
- Supporting the development of technological platforms in technologically advanced sectors

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<sup>67</sup> detailed in the *Strategy for the Innovativeness of the (Polish) Economy – 2007-2013*

<sup>68</sup> These are described in more detail in *The Operational Programme for the Innovative Economy – 2007-2013*.

### Programmes

**Within the scope of national ministries, support is targeted at nationally-significant clusters (spanning multiple regions and fulfilling other criteria regarding scale and strategy).<sup>69</sup> The Ministry of Economy and the Ministry of Science and Higher Education have worked together to design support measures that address joint needs. Currently, a project to support clustering is being piloted by PARP. Support is not directed to a particular sector, for a number of reasons: the government will not “pick winners”; new sectors are continuously emerging; and different sectors are linking-up together (establishing new industry mixes, or ‘cluster categories’). Rather, the focus is on the specific instruments that will be employed.**

**PARP has prepared a pilot project for support of clusters, which is awaiting legal approval. This pilot is expected to be launched in the first couple of months of 2007. The (national-level) pilot will support soft activities<sup>70</sup> and investment for development of existing clusters. The programme will be jointly<sup>71</sup> financed by the national budget (NOT by structural funds). In addition, PARP has initiated a separate pilot project (financed by the European Social Fund), focused on providing training for the consortia making up the various cluster initiatives.**

In addition to national-level activities, the Marshall’s office is working on developing a cluster policy – initiating ways to finance cluster activities – through the European Regional Development Fund (as part of the regional operational programme for 2007-2013).

In the Western Pomeranian region, universities, science and technology parks, regional development associations, the chamber of commerce, and private companies are active in various cluster initiatives. These (eight) initiatives are part of four main projects (all of which are financed by the European Social Fund): the RSI, the InMor, the BTT and the IT projects. ZARR plays the role of Implementing Authority for these projects. All of these initiatives aim at bringing together key actors (universities, research institutes and companies) in order to identify possibilities of cooperation to increase competitiveness and innovativeness. There is also one international initiative (within INTERREG IIIC) – TEICO-Net (coordinated by ZARR), which aims to develop cooperation between innovative SMEs.

The key challenges that the cluster initiatives (and regional implementing agency) face are:

- no tradition of (or systems to support) collaboration between companies, between universities and between universities and companies – lack of trust,
- lack of over-arching frameworks and priorities to guide cluster development (national and regional-level strategies), including:
  - programming gap (matching of priorities and frameworks for activities between regional and national levels)
  - operational gap (even with priorities, no organization with mandate to implement),
- no experience with developing different tools (flexible mechanisms/resources),
- European and national-level restrictions (on programming and financing) which “squeeze” the Marshall’s office – who has the responsibility for launching a regional strategy,
- poor knowledge on sectoral statistics (e.g. number of entrepreneurs representing specific branches).

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<sup>69</sup> Neither the specific types of support mechanisms, nor the criteria for selection, have been detailed yet.

<sup>70</sup> including, for example: cluster facilitator skill development, promotion and marketing, services, and cooperation with other clusters (even on an international level)

<sup>71</sup> by both the Ministry of Economy and the Ministry of Science and Higher Education



When discussing the development of a trans-national cluster programme, the key opportunities were viewed to be:

- help to raise awareness of benefits of clusters,
- exchange of experience and expertise in working with clusters,
- effective flow of information, human resources, knowledge etc.

Key barriers to the development of a trans-national cluster programme were viewed to be:

- little tradition for business-to-business cooperation; Polish entrepreneurs are at early stages of being “cooperation ready” (not yet ready for international cooperation) – lack of trust,
- lack of resources (for businesses)...too much to do to invest time in establishing cooperation with other companies,
- difficult for companies (and others) to find the most appropriate means of financing,
- difficulties in identifying needs by entrepreneurs (other than funds)

### Analysis

In 2002 and 2004, the Ministry of Economy and Labour prepared analyses concerning the Competitive Position of the Polish Regions<sup>72</sup>. In 2002, the analysis, which was based on statistical data for the year 2000, was prepared for purposes related to the preparation of the Sectoral Operational Programme. Another analysis was then made in 2004 on the basis of statistical data for 2002. The Gdansk Institute of Market Economics is the primary actor in the field of cluster analysis in Poland. They have conducted a mapping based on employment statistics (NACE 3 and NUTS 4 levels), and have contributed to OECD’s report on *Business Clusters in Central and Eastern Europe* (see Section IV below).

Although the existing clusters analyses are not currently used for formulation of cluster policy strategies or programmes, it was discussed that analysis of statistical cluster data (combined with qualitative data) could be useful for:

- Identifying which clusters exist, and which are growing vs. declining
- Helping cluster facilitators to identify potential cluster members
- Coordinating policies between sectors
- Providing input to evaluation of applications (or *ex-post* programme evaluation)

The Central Statistical Office informed of upcoming changes to European innovation surveys. There will be a special emphasis on linkages – including questions regarding innovation cooperation – implemented from 2008. Data will be collected on a NUTS 2 level. Eurostat’s programme “Community Innovation Survey (CIS) 2008” will include methodological recommendations from “Oslo Manual: guidelines for collecting and interpreting innovation data”, a joint publication of OECD and Eurostat. “Oslo methodology” will constitute a methodological basis for statistical research in the field of innovation in the EU and EFTA countries. It is worth to note that “Oslo Manual 2005”, in contrary to the previous edition “Oslo Manual 1997”, includes new chapter „Linkages in the innovation process”.

### **IV. Documents and Other References**

Report/codified knowledge	Where to find it	Comments
Cluster Initiatives in the West Pomeranian Region	<a href="http://www.proinno.net">www.proinno.net</a>	ZARR presentation at the meeting
GIME presentation at the meeting	<a href="http://www.proinno.net">www.proinno.net</a>	

<sup>72</sup> The Ministry of Economy and Labour: *The Competitive Position of Polish Regions*, Warsaw, 2002, 2004.



<i>The Strategy for Increasing the Innovativeness of the Economy for 2007-2013</i>	<a href="http://www.proinno.net">www.proinno.net</a>	will be available on BSR InnoNet intranet
<i>Operational Programme for the Innovative Economy (2007-2013)</i>	<a href="http://www.proinno.net">www.proinno.net</a>	
<i>Peer Review of the Policy Mix for Innovation in Poland (OECD draft country report)</i>	<a href="http://www.proinno.net">www.proinno.net</a>	
<i>Business Clusters – Promoting Enterprise in Central and Eastern Europe (OECD, 2005)</i>	<a href="http://www.oecd.org/LongAbstract/0,2546,en_33873108_33873739_34925855_1_1_1_1,00.htm">http://www.oecd.org/LongAbstract/0,2546,en_33873108_33873739_34925855_1_1_1_1,00.htm</a>	
Innovation and Technology Unit Information (word document)	<a href="http://www.proinno.net">www.proinno.net</a>	will be available by early February

## APPENDIX I

### Baltic Sea Region – Innovation Network (BSR-InnoNet) Szczecin, December 11<sup>th</sup> 2006

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## Sweden

### Summary Notes Swedish National Consultation<sup>73</sup> December 1 and 7, 2006

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<sup>73</sup> Address any comments/suggested changes to Hélène Vogelmann

## I. Summary of Expressed Needs and Agreed Actions:

Dimensions of cooperation considered:

VINNOVA could consider cooperation and trans-national programs in the following dimensions:

- Sectorial innovation systems
- Regional innovation systems
- National innovation systems
- Supporting activities

The following activities will occur within the scope of the BSR InnoNet:

- A summary of the situation in Sweden (with respect to cluster development)<sup>74</sup> will be prepared and sent to meeting participants for input and confirmation.
- A (draft) report summarizing the overall situation in the Baltic Sea Region (with respect to cluster development) will be presented at the upcoming joint meeting of WPs 3&6 to be held in Copenhagen on February 13-14<sup>th</sup>.

In addition to planned project activities, a number of other activities (outside of the BSR InnoNet scope) were suggested in order to respond to:

VINNOVA as well as Region Skåne is positive towards hosting bench learning delegations, exchange of knowledge and methods on a bilateral basis. Responsible contact person is Hélène Vogelmann.

## II. Institutional Context

### National

From a cluster and innovation point of view two ministries are the most important ones. Namely the Ministry of Industry, Employment and Communication and the Ministry of Education and Research. Sweden does not have a national cluster policy. But cluster programs/activities serve as a vehicle of economic growth on national and regional level within a broader scope of industrial and research and development policies.

The Ministry of Industry, Employment and Communication is responsible for policies concerning industrial development, innovation and regional development as well as Research and development within technology, space exploration, energy, transport and communication, working life and testing and measuring techniques. The Ministry of Education and Research objectives of research policy is that Sweden should be a leading research nation, where research of a high scientific standard is conducted. The Government's goal is for central government appropriations to research to increase to an equivalent of 1 per cent of GDP during its term of office.

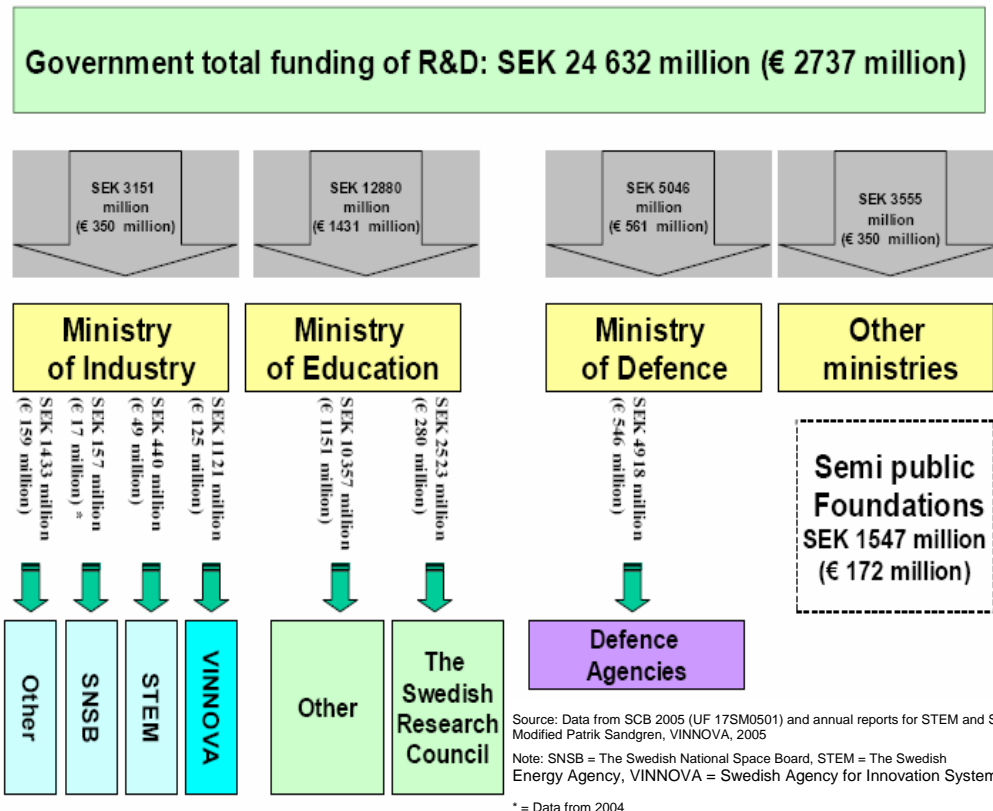
National agencies that are involved in innovation system and cluster based programs are; Swedish Agency for innovation systems, VINNOVA, the Swedish Agency for Economic and Regional Growth, Nutek, and Invest in Sweden Agency, ISA (under The Ministry for Foreign Affairs). The agencies have a strong position and can suggesting and developing policies and programs to the ministries. There is a collaborative approach between agencies and

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<sup>74</sup> The summary is based on the national summaries (prepared by the country), interviews conducted during the national consultation, as well as on various documents and presentation materials received from the country (see Section IV).

ministries, this is usually labeled “agency-dialogue” but the ministries can also approach the agencies with specific requests and give input to ministerial policy formulations. Legally the agencies are responsible to their board of directors and governed by the “yearly regularization letter” and measured by the government’s applicable political goals.

VINNOVA was created in 2001. The agency was created to put more focus on the Triple Helix collaboration in regards to innovation systems and to renew and strengthen the Swedish innovation policy and the implementation thereof.



### Regional

The Regional policy issues, including regional aid areas, support to enterprises and regional policy coordination of different sectors of society. Regional Growth Programmes. Geographical and national target programmes 1 and 2, and the Community initiatives Interreg, Urban and Leader+. European Spatial Development Perspective (ESDP) is the responsibility of the Ministry of Industry, Employment and Communication on the national level.

**The Swedish regions**, currently 21<sup>75</sup>, have relatively high degree of autonomy in designing regional innovation policies and programs. In 1998/99 the Swedish government proposed regional growth agreements, and in 2002 (?) these were revised. All regions have cluster and innovation as part of their regional programs and are also funding cluster initiatives.

Furthermore, **the local authorities** (municipalities) and the **county councils** are important actors in general policy making and in the creation of an innovative and technology adaptive

<sup>75</sup> An investigation is over viewing the regional structure and will propose fewer regions in the future.

environment. Both the municipalities and the county councils finance R&D. Estimates made by researchers in Sweden indicate that the total sum of these investments can be as high as SEK 7000 million (€778 million).

### III. Current Situation and Planned Activities

#### Innovation Strategy

In Sweden, the concept of innovation policy was more or less absent from the general political rhetoric until the end of the 1990s, although the importance of innovation and production of new knowledge for socially and ecologically sustainable economic growth has been widely recognised since the 1970's. In the absence of an innovation policy the policy agenda has developed along two different strands, one in growth policy and another in research policy. This dual development is partly manifested in the distribution of responsibilities between the Ministry of Industry, Employment and Communications and the Ministry of Education, Research and Culture, as well as the different Government agencies under their respective authority.

However, during the last years, there has been a significant move towards an increased and more efficient coordination between these policy fields. This move is crucial for a real impact on innovation policy in the Swedish industrial, research and economic policy debate and policy thinking. The increasing policy coordination has been made more obvious within each of the two strands of the policy agenda (growth policy and research policy) than between them. Increased coordination in growth policy was manifested, for example, by the merge of three ministries in the all-embracing Ministry of Industry in 1999. In spring 2000, the Minister for Education and Science, became formally responsible for the overall co-ordination of research policy. The merge was followed by a major reorganisation of the organisational structure for public funding of R&D and support to business and regional development. This can be seen as a move towards a national innovation policy, most explicitly manifested by the establishment of the Swedish Agency for Innovation Systems (VINNOVA) in 2001.

On example of the policy formulation process describe above is the strategy “**Innovative Sweden – a strategy for growth through renewal**”<sup>76</sup>. The strategy was developed by the Industry, Employment and Communication and the Minister for Education and Research with input from the agencies as well.

The strategy Innovative Sweden – a strategy for growth through renewal<sup>77</sup>” also mirrors **the national strategy on regional competitiveness, entrepreneurship and employment**. This strategy is Sweden's national program regarding the ERUF<sup>78</sup>.

Also, the Ministry Industry, Employment and Communication launched sectorial programmes in 2005. These were also design in a collaborative process together with the industry, agencies and other Ministries. The sectors are:

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<sup>76</sup> The Ministry Industry, Employment and Communication is preparing a new strategy which will be launched in 2007.

<sup>78</sup> National Strategy for regional competitiveness, entrepreneurship and employment.



- Aviation and Space Industry
- Minerals and Metallurgy Industry
- Automotive Industry
- Forestry and Wood Manufacturing Industry
- Pharmaceuticals, BioTech and Medical Technologies Industry
- ICT and Telecom

Currently the Swedish Government is working on a bill regarding Research and Development, as well as Innovation. This is foreseen in 2008.

### Programmes

Despite the fact that Sweden was part of the well-known Porter study presented in the book “*Competitive advantage of nations*” in 1990, Sweden was rather late to jump on to the Clustering bandwagon. First in 2001, the Swedish government introduced bills emphasizing a policy that focused on growth through regional collaboration, clusters and regional innovation systems – although similar conceptual ideas and policies had been in vogue before, i.e. Dahmén’s development blocks. At the same time VINNOVA, the Swedish State Agency for Innovation Systems, was founded with the mission to support national and regional innovation systems as well as funding problem-oriented research.

One of the first actions on VINNOVA’s agenda in 2001 was to design and implement the 65 M€ VINNVÄXT-program – to support regional innovation systems. Shortly after the VINNVÄXT-program was introduced in 2002, the Swedish Business

	VINNVÄXT	VISANU	TRANSFORMA
<b>Operator</b>	Vinnova	Nutek, Vinnova, ISA	Nutek
<b>Objects</b>	Regional IS	Clusters and RIS	Clusters
<b>Focus</b>	Triple Helix	Firms	Firms
<b>Selection</b>	Competition	Dialogue	Competition/dialogue
<b>Volume</b>	75 MEuro	7 MEuro	7 MEuro
<b>Time frame</b>	10 years	3 years	6 years

Development Agency (NUTEK), Invest Sweden Agency (ISA) and VINNOVA joined in a complementary 7 M€ program, VISANU – *the national program for clusters and regional innovation systems*. VISANU closed its activities in early 2006 but was succeeded by a new cluster program funded by NUTEK: The Regional Cluster program or TRANSFORMA as it is called. At present, both VINNVÄXT and TRANSFORMA are up and running involving approx. 20 initiatives.

### Barriers for trans-national programmes and support activities

The challenge to motivate national and regional authorities and ministries in financing trans-national programs.

### Opportunities – drivers for trans-national programmes and support activities

The dimension of creating a viable “non-geographical” cluster concept and the ability to build on the Scandinavian model and expand on the knowledge already gained.

### Analysis

Within the Visanu program two analyses were conducted. One building on the Porter methodology by Örjan Sölvell and Göran Lundquist, Stockholm School of Economics, and a qualitative study based on interviews with the regions. The qualitative study gave a foundation to start a dialogue with the regions and the over 242 cluster initiatives identified. The VINNVÄXT programme used the method of call for proposals. After rigorous

prioritisation process by three different panels on the national level 8 initiatives where awarded and 5 are considered initiatives in early stages.

Several regions are working with both quantitative methods as well as qualitative to be able to track and assess investments made in cluster initiatives.

VINNOVA is currently working on evaluation and analysing methods related to innovation systems and Nutek is working on an Innovation Index inspired by the American professor Richard Florida.

#### IV. Documents and Other References

<b>Report/codified knowledge</b>	<b>Where to find it</b>	<b>Comments</b>
<i>This has been approved by the Riksdag (Govt. Bill 2000/01:1, Committee Report 2000/01:UbU1, Parliamentary Communication 2000/01:99 and Committee Report 2000/01:KrU1, Parliamentary Communication 2000/01:59).</i>	<a href="http://www.sweden.gov.se/sb/d/2063/a/20752;jsessionid=aZmpUzPMhTpe">http://www.sweden.gov.se/sb/d/2063/a/20752;jsessionid=aZmpUzPMhTpe</a>	
<i>Regional tillväxt – för arbete och välfärd</i>	<i>Regeringen proposition 1997/98</i>	
<i>En politik för tillväxt och livskraft i hela landet prop. 2001/02:4</i>	<a href="http://www.regeringen.se/sb/d/108/a/2104">http://www.regeringen.se/sb/d/108/a/2104</a>	
<i>Innovativa processer</i>	<i>SOU 2003:90</i>	
<i>Forskning för ett bättre liv Prop. 2004/05:80</i>	<a href="http://www.regeringen.se/sb/d/108/a/41135">http://www.regeringen.se/sb/d/108/a/41135</a>	
<i>Innovative Sweden – a strategy for growth through renewal</i>	<a href="http://www.regeringen.se/sb/d/283/a/26652">http://www.regeringen.se/sb/d/283/a/26652</a>	
<i>National Strategy for regional competitiveness, entrepreneurship and employment.</i>	<a href="http://www.regeringen.se/sb/d/2498;jsessionid=ajHP0iVMvvJc">http://www.regeringen.se/sb/d/2498;jsessionid=ajHP0iVMvvJc</a>	