

Potential to Network Innovative Clusters in the Baltic Metropoles Regions Present State and Perspectives

Project supervisor: Prof. Dr. Jörg Sydow,
Institute of Management, Freie Universität Berlin

Project team: Dipl.-Kfm. Frank Lerch, Dimitri Kutsenko and Raphael Mallach,
Institute of Management, Freie Universität Berlin

Prof. Dr. Eberhard Stens and Dipl.-Kfm. Gerrit Rössler,
TSB Adlershof

Dr. Helge Neumann and Dipl.-Vw. Christian Denner,
WISTA MANAGEMENT GmbH

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The Baltic Metropolises Innovation Strategy Project (BaltMet Inno) is a joint innovation project of the capital cities in the Baltic Sea Region. It aims at strengthening the role of cities as developers of innovation environments at local, regional, national and international levels.

The project goal is to produce a common innovation policy framework for the Baltic Sea Region and to create transnational metropolis-driven innovation networks. BaltMet Inno activities aim at strengthening innovation capacities of metropolises with a focus on the following themes or work packages:

1. local innovation strategies
2. regional marketing
3. innovative business clusters
4. innovation competencies and entrepreneurship
5. innovation policy framework

The lead partner is the City of Helsinki and the project co-ordinator Culminatum Ltd. The other 14 project partners are the cities of Berlin, Copenhagen, Riga, Malmö, Tallinn, St. Petersburg, Stockholm, County Administrative Board of Stockholm, WISTA Management GmbH, Technology Foundation Berlin GmbH, EVU Center for Business Start Up, Growth and Development, and St. Petersburg State University. In addition, the cities of Oslo, Warsaw and Vilnius participate as observers.

BaltMet Inno is the key project of the Baltic Metropolises Network. The mission of the network, set up in 2002, is to promote innovativeness and competitiveness in the Baltic Sea Region by engaging the focal actors in the area – cities, universities and business enterprises – into close co-operation. Focus of the co-operation is on innovation policies, promotion of mobility of top experts and on pooled marketing. The 2.6 M€ budget of BaltMet Inno is co-financed by the Baltic Sea Region INTERREG III B Neighbourhood Programme. The Project was launched at the beginning of 2005 and will be completed in the end of 2007.

Work package 3 which is the object of this report was especially concerned with the development of clusters. The aims of work package 3 were reinforcement of collaboration in cluster development work and identification and improvement of transferable cluster elaboration tools between the cluster developers in the Baltic metropolitan areas. The developed cluster tools and instruments provide for increased interaction and focused cooperation between the Baltic metropolitan areas in cluster development. This would lead to better networked regions, improved growth conditions and easier market access for innovative companies. Work package 3 was coordinated by Wista Management GmbH jointly with TSB Innovationsagentur Berlin GmbH.

The report first gives a short conceptual background on clusters, cluster development, and on cluster alliances. This section is followed by a description of the methodology that can be used for identifying and comparing clusters and the methods used within work package 3 to gather the relevant information. In section 4 the clusters and developing clusters and networks in selected technological areas in the six regions of Berlin, Øresund, Helsinki, Stockholm, Riga and Tallinn are presented. In section 5 first some conceptual thoughts on opportunities to network clusters are presented. This is followed by a presentation of networking opportunities at the level of technology parks. This leads to a discussion of networking potential at additional levels. Finally in section 6 a summary will roundup this report.

Collecting and using statistical data on high tech fields is rather difficult because such industries (as described in the report) are not represented properly within national statistical data. The problem becomes even worse when comparing innovative high tech clusters across national boundaries. Therefore this project is using an integrative approach. Available statistical data was incorporated and regional development and industry experts were

interviewed to identify and characterize clustering and networking potential in and across the Baltic Metropolises Regions.

In a first step the general innovation context as well as a general characterization of clusters and cluster like structures as well as activities within cluster development approaches in the different Baltic Metropolises Regions were identified and characterized (Summer 2005). The identification of a common understanding of clusters was important for the first steps of the project. Within the project clusters were defined also in the Porterian way (see section 2 in the report). The project partners were asked to give a broad overview about the technology sectors and the potentials of further development in the special regions. This information was needed to develop the technology fields with the most potential in the regions and in the future in the following time period of the project. The given information was analysed and clusters and networks were identified using the following differentiations (clusters, centers of excellence, competency fields and innovation fields).

In the end of this part process the project team developed a result matrix, displaying clusters, centers of excellence, competency fields and innovation fields in different technological fields in the regions. Hereafter and as a result of the analysis, the team decided on three technology sectors, which were forecasted to have the most future influence onto the sum of the partner regions. The project partners agreed upon the following selection criteria: the agglomeration should exist in most of the participating regions (quantity); the agglomeration should be of economic importance for the regions (quality); the agglomeration should have a good potential for growth (sustainability). The fields of biotechnology and medical technologies; information and communication technologies and media; and optics, micro systems and nanotechnologies were selected for further analysis.

In a second step on the basis of the decision for the three technological fields a second questionnaire was developed and information for a SWOT analysis of clusters in these technological fields in the Baltic Metropolises Regions was collected (Fall 2005). The aim of this second evaluating process was the detailed description of the technology sectors for further work. This was needed to build up an information base on which the project team could work and develop methods, to develop the region and complete the work task. The main objective in this process was to identify common issues that were relevant to all partner regions. This helped to derive an effective intervention in the three technology fields, without building up a complex and expensive infrastructure or the use of support facilities. The idea of this method was, to use the existing development and support structures of the partner regions. In the next step exactly these development and support structures needed to be named and collected.

In 2006 a specific means of cluster development and a potential means to network clusters – services provided e.g. by technology parks within regional clusters – was analysed in more detail. After the collection and separation of the independent development and support structures of the partner regions this was the logical consequence. It was now important to understand the possible connection points of further interregional-cooperation in detail at the level of technology parks. In more detail it was useful to collect information on and compare influencing methods in the regions and sectors. After this the strengths and weaknesses of the supporting activities were discussed at several meetings and new services based on the third evaluation and the cooperation potential of the region could be processed.

Finally a fourth round of information gathering was conducted in the summer of 2007 by semi-structured interviews in order to analyse and characterize the evolution and development of the three identified innovative clusters in the Baltic Metropolises Regions. The questionnaire was sent to the interviewees in order to collect especially updated statistical data on the clusters. In a subsequent follow-up telephone interview (approximately 30 minutes to one

hour each) especially the topics of cluster development and central cluster activities were discussed.

The table on the last page summarizes the results of the cluster analysis process within WP 3 of the BaltMet Inno Project.






















































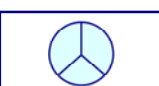



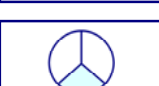



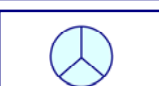








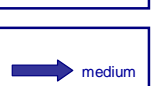

Work package 3 of the BaltMet Inno Project was started in 2005 with the aim to exchange ideas and knowledge of project partners on the development of clusters in order to improve the developmental process. In addition the aim was formulated to develop cluster tools and instruments that provide means for increased interaction and focused cooperation between clusters in the Baltic metropolitan regions.

The report gives a short introduction to relevant concepts. These included clusters, alliances, cluster alliances, and management of cluster alliances. The methodology section provides an overview of the steps taken to gather the necessary information for several analyses within the project. The main part of the report is mapping the three identified high potential technological fields or clusters in Berlin, Øresund, Helsinki, Stockholm, Riga and Tallinn to get a better understanding of the competencies and activities within the partner regions. Finally collaboration potential between clusters is identified. First with a special focus on science and technology parks followed by a more general discussion of such instruments and means at alternative levels.

At the science and technology park level these activities (which have partly already been implemented) include connecting science parks by organizing strategy seminars with park management members from different regions. It includes the exchange of best practice for building innovation infrastructure. In the educational sector networking of clusters can be organized by organizing technologically focused summer schools. Technology parks may also provide soft landing services for companies from partner regions or support cooperation and offer discounted rates for trade centres. Technology parks may also organize visiting, meeting and matchmaking programs. They provide marketing assistance at conference and expositions as well as concrete financial services. Finally technology parks may offer a frame for the organization of interregional project networks.

However, alternative levels of cluster collaboration exist. Additional activities can be organized at and between these additional levels. These may include workshops (professional, EU FP7 competence, entrepreneurship); the installation of a black board information system which contain up-to-date information about funds, jobs, summer courses; info events at universities, company presentations in the region to increase awareness of the project; bachelor and master theses on selected regional topics; Awards for student projects; shared curricula at universities; guest courses and lectures between universities; professional databases (know-how, best practices) – require current content and administration; Contact databases (yellow pages) containing info about regional players in the 3 sectors, investors, research institutions (triple helix). For organizing an inter-regional cluster alliance some kind of governance structure needs to be implemented. Part of such a structure could be a strategic steering committee as well as strategic innovation councils recruiting members from different partner regions and from different organizations.

These and other activities are currently in the planning process. Due to the short time period of the project, a detailed development, description and implementation for the project partner was not possible. The development of clusters and cluster alliances takes time. To foster and focus the networking and development activities in the Baltic Sea region time and continuing support from the project partners, the clusters, and political actors is needed.

	Competence	Profile	Influence upon others	Inter-connectivity	Existing structures	Level of maturity
Berlin	 Optics & Photonics/ Microsystems-/ Nanotechnology		 high	 high	OpTecBB Laserverbund ZEMI	high
	 Information and Communication Technology		 high	 middle	Metrology	middle
	 Biotechnology & medical technology		 high	 low	BioTop TSBmedici	low
Øresund	 Optics & Photonics/ Microsystems-/ Nanotechnology		 medium	 strong	NKT Photonics	adolescence
	 Information and Communication Technology		 high	 strong	Øresund IT Academy	mature
	 Biotechnology & medical technology		 high	 middle	Madicon Valley Alliance	mature
Helsinki	 Optics & Photonics/ Microsystems-/ Nanotechnology		 strong	 middle	CoE-AMM	adolescence
	 Information and Communication Technology		 strong	 strong	CoE-SPB, CoE-DM	adolescence
	 Biotechnology & medical technology		 medium	 strong	CoE-GT, Invivo Diagnostics, Pharmaceutical, Biomaterial, Bioinformatics/BioSystems, CoE-MWT	adolescence
Stockholm	 Optics & Photonics/ Microsystems-/ Nanotechnology		 high	 middle	Acreo AB FMOF	infancy
	 Information and Communication Technology		 high	 strong	Kista Science City Electrum AB	mature
	 Biotechnology & medical technology		 high	 strong	Stockholm Bio Region Karolinska Institutet	adolescence
Riga	 Optics & Photonics/ Microsystems-/ Nanotechnology		 low	 low	none	very low
	 Information and Communication Technology		 medium	 middle	Latvian Information Technology and Telecommunications Association (LITTA)	emerging
	 Biotechnology & medical technology		 high	 strong	none	emerging
Tallinn	 Optics & Photonics/ Microsystems-/ Nanotechnology		 low	 low	none	very low
	 Information and Communication Technology		 medium	 middle	ITL EITF	emerging
	 Biotechnology & medical technology		 medium	 middle	Estonian Biotechnology Association (EBio)	emerging