

ScanBalt Position Paper: EU Framework Programme 8 and the Role of Macro-Regions

Copenhagen January 2011

EU Framework Programme 8 and the Role of Macro-Regions

The Baltic Sea or Nordic-Baltic Region (hereinafter: BSR) is playing a major role in modern Europe. The BSR comprises nine European Union member states plus Norway and Russia and:

- ▶ covers with roughly 1.745 Mio. Sqkm about **40%** of the EU
- ▶ hosts with roughly 85 Mio. inhabitants more than **20%** of EU's population
- ▶ constitutes with an accumulated GDP of **400 bio. €** one of EU's major **economic macro-regions**¹

BSR is based on stable welfare systems and has since long focussed on the built-up of a sustainable, knowledge based economy. Regional and national innovation systems within the BSR are internationally competitive having developed to acknowledged models for other regions.

However, BSR shares with the rest of EU challenges like health and health care costs, demographic development (ageing), environmental threats and climate changes and need for alternative sources of energy. These grand societal challenges are not restricted to single regions or single research areas and are highly complex and closely interconnected. An example can be that facing the challenge of **health** and **healthy ageing** also means to face the challenges of a healthy **environment** including development and implementation of non-fossil sources of **energy** and the existence of non-polluted marine and river **waters**; the availability of healthy **nutrition** and sustainable **agricultural** production.

ScanBalt BioRegion, represented by ScanBalt™fmba (in short ScanBalt) and its academic advisory board ScanBalt Academy would therefore like to contribute to the debate regarding the EU's Eight Framework Programme for Research and Technological Development (FP8) applying the knowledge and experiences gained through nearly 10 years of existence as a macro-regional, bottom-up triple helix network (collaboration between research, industries and public authorities) within the BSR. ScanBalt's recommendations aim to optimize the benefits from Life sciences and Health applying macro-regions and regional clustering to:

- ▶ enhance investments in knowledge
- ▶ improve framework conditions
- ▶ reduce fragmentation
- ▶ avoid duplication
- ▶ address the grand societal needs and challenges mentioned above

October 2009 the BSR strategy was adopted by the European Commission as an integrated framework to address the challenges and opportunities of the Region. It is often presented as a blue print for other possible macro-regions. ScanBalt BioRegion is a working example of an organisational model for implementing the BSR strategy based on smart growth and smart specialization between clusters and regions and is a tool to reach objectives of the European Research Area and the Europe 2020 strategy including the Innovation Union.

We recognize this can only be achieved based on sustainability and taking into account ethical and societal implications.

¹ For this paper the term macro-region means regions comprised of adjacent territories from several different countries that share a number of common challenges.



Promote cross-sectoral approaches for innovation

Innovation within Life sciences and Health is regarded as one of the most important driving factors for the EU during globalization and enhanced competition to ensure health and prosperity. However the relevant interests and responsibilities fall across a broad range of policies and actors exemplified by:

- ▶ Debate about the public and/or private financing of social and health care systems
- ▶ Debate about the needs and benefits of public and/or private funding of innovation
- ▶ Governmental and administrative responsibility for innovation in life science and health is widely distributed between for example ministries of health, education, economy and finance as well as agriculture and/or regional development
- ▶ The need for more cooperation within the research triangle between science, education and economy has been affronted by various institutions and programmes but many gaps, challenges and un-exploited opportunities still exist

ScanBalt recommends:

To strengthen trans-national cluster cooperation and cross-sectoral approaches for launching projects and initiatives aimed at removing disparities, gaps and barriers in the EU and fostering cooperation within innovations in Life sciences and Health in order to overcome the grand societal challenges and bring innovative products and services to the market.

Such approaches would be strengthened by applying as a tool macro-regional bottom-up structures combined with the macro-regional capacity to affect in a coordinated and coherent manner regional strategies advised in a top-down as well as a bottom-up manner. Thereby science, technology and politics develop regional strategies together that can effectively be brought to interact in a more effective manner which will mean a leap forward towards concrete results.

There is thus a strong need for integrated actions under EU FP8.

ScanBalt suggests developing and applying instruments in particular focused on:

- Identifying in detail the trans-national cross-sectoral hurdles for innovation in Life sciences and Health
- Promoting platforms – e.g. ScanBalt – for integrated actions cutting across disciplines, stakeholders and borders
- Promoting concepts for macro-regional activities within promising cross-sectoral disciplines like food & health, medical technologies, marine resources, sustainable agro-culture and non-fossil energy development
- Promoting the establishment of macro-regional strategies in other geographical areas of the EU to face the grand challenges
- Promoting inter-actions between macro-regions

Strengthen innovation within the knowledge triangle

Regional clustering is the basis for macro-regional development and has the capacity to mobilize regional financing of research and development thereby enhancing overall investments in knowledge based competitive economy.

The experience within ScanBalt BioRegion shows that cluster-based innovation takes place in metropolitan as well as in remote and lower populated regions given the right conditions. These clusters may ideally consist of public and private institutions aiming at the pooling and joint use of R&D resources, the coordination of research, education and innovation activities, staff exchanges and knowledge transfer as well as the joint implementation of application-oriented projects.

ScanBalt recommends:

EU FP8 should strengthen instruments which aim at the formation of new and the strengthening of existing regional research and innovation-driven (triple helix) clusters supporting smart specialisation strategies.

ScanBalt BioRegion promotes and moves towards smart specialization between the clusters within it thereby strengthening the macro-regional value chain and promoting a more effective use of scarce regional resources for research and development.

This is based on increasing coherence of policies and strategies and ScanBalt believes this is a model which should be strengthened and supported in EU FP 8 by knowledge triangle actions.

ScanBalt suggests developing and applying instruments in particular focused on:

- ➔ Promoting regional knowledge triangle type cooperation by developing instruments supporting smart specialisation between the clusters and supporting clusters to be linked together in complementary innovation chains in order to reach major EU objectives
- ➔ Set-up of SME led knowledge triangle projects (e.g. swift EUREKA and Eurostars to FP8, projects of 2- 5 years duration, with easy administrative principles)
- ➔ Identifying and developing opportunities for internationalisation of regional clusters which will strongly contribute to enhance their triple helix nature and thereby strengthening their regional impact
- ➔ Development of an EU Venture Capital fund in order to increase transnational innovation activities

Strengthen macro-regional concepts based on regional innovation

BSR as is the case with the entire EU varies remarkably between metropolitan and remote regions showing an unequal distribution of innovative SMEs and large industries in the regions. SMEs have a particular challenge in the difficulties to participate in research and development of innovative technologies. Weak transnational and trans-sectoral coordination of the whole innovation chain is:

- ▶ impeding generation of innovative ideas by research in Life sciences
- ▶ obstructing development of innovative ideas by SMEs
- ▶ slowing down transfer of innovative products and services

Also a fragmented system of research and innovation shows weak internal links and a low level of cooperation between actors.

These and further challenges like under-investment in the European knowledge foundation, unsatisfactory framework conditions ranging from poor access to finance, high costs of IPR and too slow standardisation and ineffective use of public procurement are described by the European Commissions Communication "Innovation Union"².

Other countries like the US and Japan is out-investing Europe and China is rapidly catching up. This is a serious challenge when companies can choose to invest and conduct research in many other parts of the world.

ScanBalt recommends:

EU FP8 should support macro-regional development based on regional innovation systems in order to implement the 'Innovation Union' of the EU 2020 Strategy and affront the challenges mentioned above.

Macro-regional collaboration is a suitable tool to reduce fragmentation and duplication leading to a more efficient use of scarce resources. It is also a tool to involve SME's participation in the overall development process. Thereby macro-regions will lead to more efficient use of RTD resources in the EU and contribute to face the societal challenges and the inter-linked challenges of "Innovation Union".

ScanBalt suggests developing and applying instruments in particular focused on:

- ➔ Concept development for cluster collaboration
- ➔ Competence and trans-national complementation analysis
- ➔ Joint agenda development
- ➔ Implementation of joint agendas by coordination of research, education and innovation activities; pooling and joint use of R&D resources; staff exchanges and knowledge transfer; as well as the joint implementation of application-oriented projects
- ➔ Development of tools for impact measurement on regional economy, EU collaborative research and development and the EU grand societal challenges

² Communication from the Commission to the European Parliament, the Council, The European economic and Social Committee and the Committee of the Regions, Europe 2020 flagship initiative Innovation Union, SEC (2010) 1161.

Strengthen transnational public-private partnership models

Trans-national public-private partnership models are a key to realize the potential of macro-regions and collaboration between clusters³. Public-private partnership models are regarded as relevant for various areas like education, innovation and SME-support as well as marketing and internationalization.

ScanBalt recommends:

EU FP 8 should focus on the development and implementation of transnational public-private partnership models for research, education, innovation and SME-support as well as marketing and internationalization.

Transnational public-private partnership in PhD-education between universities and industries should be promoted. The intentions are to strengthen coordinated trans-national public-private PhD-education in life sciences and biotechnology by involvement of regions, clusters, institutions and industries throughout and between macro-regions. A good example is the Nordic PPP PhD programme launched by NordForsk (www.nordforsk.org).

Modular Shared Service and Support between clusters on a macro-regional basis will ensure more effective screening for commercially viable project ideas and improved coordination between Academia-SME trans-national research and development. It thereby supports SMEs to strengthen their innovation pipeline and economic performance in collaboration with universities and research institutes via trans-national collaborations and projects. This will lead to more and better public-private investments at the regional, national and supra-national level. Transnational thematic networks of science parks/ campuses can facilitate the shared service and support activities.

Internationalization: Life science and health technologies, investment opportunities and research collaborations are all becoming increasingly international in their perspectives as is the market for human resources. New strong players are appearing due to strong investments in Life science e.g. in Asia. As a consequence macro-regions should strive to build up strategic active collaborations with Life science macro-regions, national competence centers and regional clusters abroad both within the EU and globally. Such collaborations would be of particular benefit for SMEs as they normally only possess limited resources for exploring collaborations with Academia and Business abroad.

ScanBalt suggests developing and using instruments in particular focused on:

- Enhance trans-national knowledge exchange and collaboration between industry and academia in order to form a basis for lasting research collaboration
- Offer PhD-students training in both the public and private sector
- Provide PhD-students with a comprehensive set of complementary skills, such as entrepreneurship and management of intellectual property rights (IPR)
- Offer life science and biotech enterprises the possibility to enhance the application of new research-based knowledge in innovation processes through strengthened research competence and collaboration with relevant academic communities
- Develop, test and implement models for Modular Shared Service and Support in macro-regions with the aim of obtaining self-sustainable entities based on public-private collaboration
- Support the development of a Global Match Making Program for macro-regions

³ *Smart Growth: Bridging Academia and SMEs in the Baltic Sea Region* released from Bridge-BSR, June 2009 (EU FP 7).

Annex

Background on ScanBalt BioRegion and ScanBalt

ScanBalt BioRegion is composed of life science and biotechnology stakeholders and other important actors within Life sciences and biotechnology in the region. There are more than 60 universities and over 2100 life science/biotech companies including ~700 research based biotech SME's active in ScanBalt BioRegion.

The not for profit association ScanBalt fmba acts as a service provider for the ScanBalt BioRegion community and is a registered trademark ScanBalt™. Members are regional networks and clusters, universities, companies, hospitals, national innovation agencies, regional and national authorities.

ScanBalt is a mediating, coordinating and communicating umbrella and/or platform.

The secretariat is located in Copenhagen (Denmark) while regionally financed liaison offices are located in Tartu (Estonia), Gdansk (Poland), Rostock (Germany) and Copenhagen (Denmark).

Background on ScanBalt Academy

ScanBalt Academy (SBA) consists of a group of distinguished and prominent life scientists from academia as well as industry and government. Fellows of SBA must be born in or residents of countries and regions within ScanBalt BioRegion. Purposes of SBA:

- ▶ Adds credibility to the scientific quality of ScanBalt projects and initiatives
- ▶ SBA or SBA committee's serve as external advisory boards to ScanBalt activities

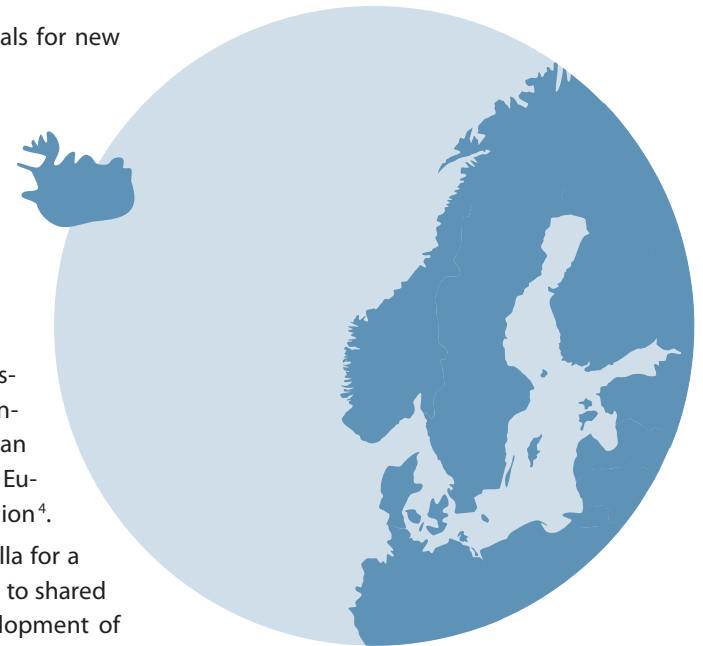
- ▶ SBA Fellows gives lectures or teach courses in ScanBalt BioRegion
- ▶ SBA Fellows act as ScanBalt Ambassadors
- ▶ SBA Fellows act as evaluators on proposals for new ScanBalt activities and projects
- ▶ SBA assists to reverse brain-drain from ScanBalt BioRegion, and help to engage ScanBalt BioRegion expatriates in ScanBalt activities

Background on ScanBalt Health Region

The ScanBalt Health Region (full title "Cross-Sectoral and Transnational Projects for Innovation in Health and in Life Sciences") is an acknowledged flagship project within the European Union Strategy for the Baltic Sea Region⁴.

ScanBalt Health Region serves as an umbrella for a multitude of coordinated activities applying to shared visions, values and strategies for the development of the region and utilizing a common communication structure. Otherwise the individual activities act independently. This is a discipline (Health) specific bottom-up approach combined with a top-down advisory structure which has been developed, tested and applied for ScanBalt BioRegion since 2001.

It ensures specific themes to be dealt with in depths by a multitude of groups while still referring to an overall strategy and using existing structures for coordination and efficiency.



⁴ The EU BSR Strategy and the Action Plan in its last version.

Selected articles and publications on ScanBalt BioRegion (chronological order)

- Peter Frank: The EU Baltic Sea Region Strategy, *Biotech og Diagnostik* 5/2009, p 16-17.
- Hans Robert Metelmann and Peter Frank: The EU kicks the ball to ScanBalt BioRegion, *The Green valley, The Health Region, Baltic Rim Economies, Biomonthly review* 4/2009, p. 24.
- Hans Robert Metelmann and Peter Frank: ScanBalt BioRegion – On Top of Europe with an Eco-agenda, *Life Science Cluster Magazine, Spring* 2009 p. 12-13.
- Hans-Robert Metelmann, Bo Samuelsson et al: Bridging Academia and SMEs in the Baltic Sea Region, report from the EU FP 7 project Bridge-BSR, *ScanBalt* June 2009, p. 1-37.
- Peter Frank, Tuula Palmén, David Featherston: ScanBalt promotes Innovation on Top of Europe, *Biotech Scandinavia*, 6/2008, p. 23.
- Peter Frank & Hans Robert Metelmann: ScanBalt BioRegion: Innovation and Regional Cohesion, book chapter in "Evaluating, Experiencing and Creating Entrepreneurial and Enterprising Network", University of Tampere, Finland, June 2008, p. 208-230.
- Peter Frank: Clusters –The Future of The Baltic Sea Region, *European Life Science*, No 1, Spring 2008, p. 64.
- Peter Frank: Creating Global Competitiveness and Regional Cohesion, *Life Science Cluster Magazine, Summer* 2007, p. 22-24.
- Wolfgang Blank et al: Top of Europe in Life sciences and Biotechnology – ScanBalt BioRegion in brief, *ScanBalt* January 2007.
- Wolfgang Blank et al: ScanBalt – Top of Europe, Competencies in Life sciences and biotechnology in the Baltic Sea Region (abstract), *BioCon Valley* January 2007. p. 3-28.
- Wolfgang Blank et al: ScanBalt CompetenceRegion – A string of Competence Clusters, *Mapping report* 2006, *Bio-Con Valley*, p. 3-30.
- Bo Samuelsson et al: ScanBalt BioRegion – Europes first Metaregion: Creating a knowledge based Bio-economy, *ScanBalt Report* 2006 p. 1-29
- Peter Frank: More than the Sum of Their Parts (Interview,) *EMBO Rep.* 2006 February; 7(2): 133–136.
- Peter Frank: Decentralization the Key to ScanBalt, *Nature Biotechnology*, Vol 23, No 10, October 2005.
- Peter Frank: ScanBalt BioRegion – Toward Europe's first Metaregion, *Biozoom*, No 1, 8, 2005, p. 25-28.
- Bo Samuelsson: Metaregioner i et Nordisk Perspektiv: ScanBalt BioRegion som modell for Europa, *Mot en nordisk biopolitikk?*, Rapport fra seminar om bioteknologi og bioetikk, *Nordisk Råd*, 26 Januar 2005.
- John, Wedderburn and Peter Frank,: *ScanBalt Forum* 2004, *Turku, Finland – Two days of top level networking, science and business*, *BSSSC Newsletter*, No 4, 2004.
- Bo Samuelsson: Åbo med i unikt biotekniksamarbete, article from *ScanBalt press Conference, Åbo Underrättelser*, Friday 27 August, 2004.
- Bo Samuelsson: På jagt efter eliten, *Interview, Biotech Denmark*, No 3, March 2004.
- Bo Samuelsson: Meta-regionalisation necessary for the EU, *Scandinavian Life Science Magazine*, No 2, 2004.
- Bo Samuelsson: Kunskapen finns runt Östersjön (The knowledge is around the Baltic Sea), *Kemivärlden Biotech*, no. 1, 2004.
- Bo Heiden: ScanBalt Coordinates Intellectual Property in Northern Europe, *Interview* 15 January 2004, *Nature*.
- Peter Frank: The First Bio Meta-Region, *TransPharma*, Spring 2004, p. 34-39.
- Lise V. Clausen, ScanBalt network wins EU cash (Interview), *The Scientist*, 13 August 2004.
- Habeck, Martina: Northern Europe says Skol to Biotechnology, *The Scientist*, July 28, 2003, no 15, vol 17.
- Wolfgang Blank, Bo Samuelsson, Peter Frank: ScanBalt BioRegion – a model case for Europe, *Journal of Commercial Biotechnology*, *Journal of Commercial Biotechnology* No 2, Vol 10, Dec 2003, p. 147-153.
- Wolfgang Blank, Börge Diderichsen, Anna Podhajska, Bo Samuelsson: Borderless Biotech: Europe's First Meta-Region Taking shape, *Euro Biotech News* no. 3, vol 2, 2003, p. 22-25.
- Bo Samuelsson and Peter Frank: ScanBalt – The Networks of Networks, *Interview, Look at Scandinavia*, No 2, 2003, p. 60.



Contact information:

ScanBalt™ fmba

Mobile + 45 27141078

e-mail pf@scanbalt.org

skype pfranksb

www.scanbalt.org

Layout: Steinbeis Team NorthEast

www.steinbeis-nordost.de

Design Steinbeis Team Northeast