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POLICY BRIEF JUNE 2019

Smart Specialisation in the Baltic Sea Region - Good practices from the Bio-, Circular- and Digital Innovation project BSR Stars S3

This policy brief summarizes the key activities and learnings of the BSR Stars S3 - Smart Specialisation through Cross-sectoral Bio-, Circular- and Digital Ecosystems project 2016-2019. The project focused on how to engage business and research actors in the implementation of smart specialisation. This information is essential for public and private sector actors looking for new ways to improve regional innovation capacity and form inter-regional value chains within shared focus areas in the Baltic Sea Region.

The BSR Stars S3 project was a three-year flagship project under the innovation policy area (PA Inno) within the EU Strategy for the Baltic Sea Region. The project was funded by the EU Interreg BSR Programme and had a total of 12 partners from Finland, Sweden, Denmark, Norway, and Lithuania. The Baltic Institute of Finland in Tampere was the Lead Partner of the project. More information on the project can be found at: http://www.bsr-stars.eu/bsr-stars-s3/

THE BSR STARS S3 PROJECT

The main aim of the BSR Stars S3 project was to enhance smart specialisation (S3) within the bio-, circular and digital economy in the Baltic Sea Region. The project has explored methods and tools that enable cooperation between innovation ecosystem actors (companies, researchers and the public sector). By developing and testing different tools and methods, the project has gained valuable insights on how to support innovation capacities. The project has focused on studying and testing how actors from different kinds of innovation communities, and across different BSR regions, can work together and generate new ideas, partnerships and innovation opportunities.

KEY ACTIVITIES FOR SUPPORTING INNOVATION AND SMART SPECIALISATION

The BSR Stars S3 project has generated a wide range of tools, reports, events and approaches to promote transnational collaboration for smart specialisation. A selection of these tools and processes are outlined in more detail.

KEY CONCEPTS

Smart Specialisation (S3) is an innovative approach that aims to boost growth and jobs in Europe, by enabling each region to identify and develop its own competitive advantages. S3 brings together local authorities, academia, business spheres and the civil society, working for the implementation of long-term growth strategies supported by EU funds. See: http://s3platform.jrc.ec.europa.eu/what-is-smart-specialisation.

Bioeconomy aims to develop an economy that is based on the sustainable utilization of renewable resources to reduce our dependency on fossil fuels. The transition from a fossil fuel-based to a biobased economy can contribute significantly to the prevention of climate change.

Circular economy focuses on keeping the added value in products and materials for as long as possible and at the same time minimizing the use of resources and generation of waste. Circular economy offers new innovation, growth and job creation opportunities in all fields and requires rethinking of value chains, ecosystems and new business models.

The European Commission is undertaking a range of actions to support the move to a more bio- and circular economy. The Baltic Sea Region could act as global leader in generating globally significant bio- and circular economy business.

More information: Annala K. &Teräs J. (2017), see: http://norden.diva-portal.org/smash/get/diva2:1092495/FULLTEXT01.pdf

STAKEHOLDER INVOLVEMENT

Matchmaking events

Several regional matchmaking events for bio- and circular ecosystem actors were organised during the BSR Stars S3 project. The matchmaking event is a method to foster cooperation between research, business and public sector actors, as well as to identify the regional strengths and various actors involved in a regional innovation ecosystem. Regional authorities can utilise matchmaking events to support the cooperation of stakeholders within a selected S3 field.

The key learnings of the BSR Stars S3 matchmaking events are:

- It is useful to plan the event in cooperation with other main actors and projects within the field.
- The event should include workshops and concrete level discussions and interactive sessions, rather than long presentations.
- The themes of the workshops should be selected based on the subfields of the main actors. For example in circular economy the subfields could be textiles, nutrient cycles, construction field etc.
- Workshops should focus on concrete challenges identified by the research, business and public sector actors.
- Speed-dating sessions provide the opportunity for participants to get new ideas and contacts.
- Interesting company case presentations can attract participation from the business sector.
- Enough time should be reserved for both free and guided networking.

S3 Accelerator Camp

The S3 Accelerator Camp was organized in Vilnius, Lithuania for the BSR Stars S3 partner regions Skåne (SE), Tampere (FI), Trondelag (NO) and Vilnius (LT) to develop solutions to regional bio- and circular economy challenges. The format of the S3 Accelerator Camp was developed using business acceleration and value chain support methods that engaged experts from different regions in transnational teamwork with support from professional facilitators.

The Accelerator Camp provides opportunities to analyse regional challenges effectively and develop potential solutions through deliberation and learning with other regions. Before the Camp, each region identified a real challenge, which was discussed in the Camp by relevant experts from other regions. An example of a regional challenge was: "How to develop a bioeconomy cluster and engage SMEs of the region to cooperate?"

The following process was used for onsite teamwork at Accelerator Camp:

1. Problem tree analysis

Transnational teams examined different regional challenges and applied the Problem tree analysis method.

Result – each team created a problem breakdown tree of their specific case. The core problem was identified and problem statement elaborated. Then teams identified first, second and third level causes, if needed, for the core problem. Based on this, they chose one preferred line of causes based on importance to the problem, and defined the one primary cause to be addressed further with a specific solution.

2. Identification of best possible solution for the primary cause of problem statement

Each team member suggested a minimum of three possible solutions. The accumulated pool of solutions was developed and solutions were rated by each member of the specific team.

Result – the highest rated solution was chosen for further development, and possible solution alternatives were initially identified.

3. Identification of customer, benefits, and initial structure of project pitch

Teams used NABC (Need-Approach-Benefit per cost-Competition) model to define the project logic, key aspects and structure. At this stage, the teams discussed and identified their potential customer and quantified benefits of proposed solution in order to prove its advantages over other existing alternatives.

Result – Initial project structure was elaborated, and a brief pitch was prepared and presented to all participants using NABC structure.

4. Solution Prototyping

Teams identified key elements of the selected solution and developed a visual prototype using various materials, including papers, scissors, glue and pens.

Result – Visual prototype was developed.

5. Measure and validate

Teams presented the visual prototypes of their solutions to other teams and collected feedback. Team-to-team discussions were organized for more detailed feedback from other teams.

Result – First solution validation took place, and suggestions for improvement were collected.

6. Final Pitch

Teams presented their solution according to universal NABC presentation template with questions-answers and feedback provided by participants.

Result – A slide pitch with clear value proposition addressing the challenge, ready and tested with broader audience.

BSR Stars S3 Sounding Board

The BSR Stars S3 Sounding Board was organised in September 2017 in Stockholm in cooperation with the Interreg projects *EmpInno* and *Smart Blue Regions*. The event was arranged by the Nordic Council of Ministers and Nordregio.

The Sounding Board was created to provide a platform where ideas and cases can be presented for evaluation by a group of experts. Furthermore, Sounding Board facilitates knowledge transfer across regions, and possibly increases the uptake of findings beyond the individual project partner regions.

At the BSR Stars S3 Sounding Board event, each project was asked to present 2-3 transnational pilots or activities with the potential to be transferred to other parts of the Baltic Sea Region. The invited group of experts evaluated the cases to estimate possibilities for a wider geographical uptake.

INNOVATION ECOSYSTEM MANAGEMENT

Innovation ecosystem management tool

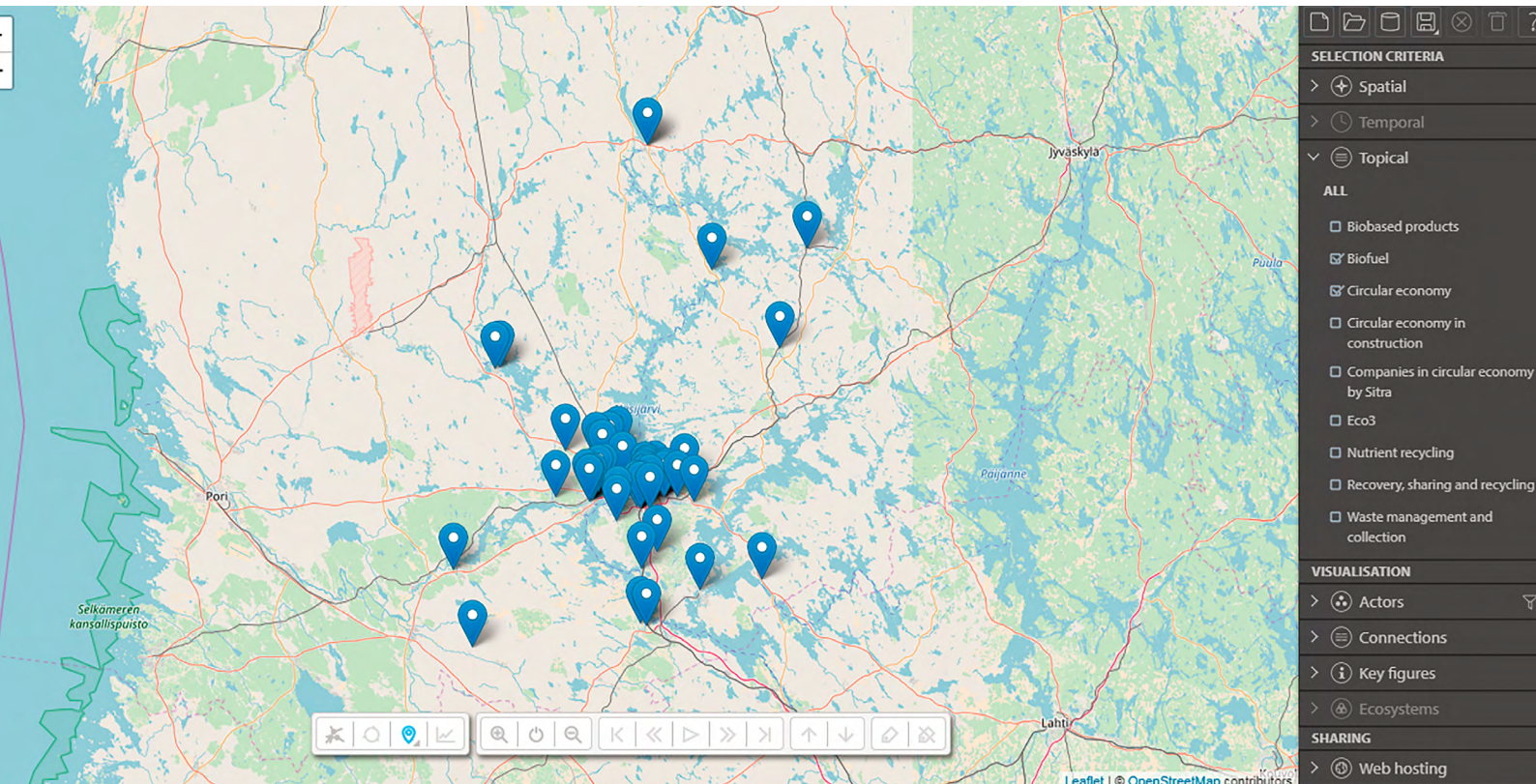
As an essential part of the BSR Stars S3 project, the Council of Tampere Region elaborated a prototype of a real-time innovation ecosystem visualization tool that was piloted within the circular economy. The digital tool was created to support regional innovation management and provide a real-time overview of the regional circular economy. Regional innovation ecosystems are particularly significant in the development and implementation of the circular economy, where stakeholders along the production and consumption chain must work closely together to increase the use of renewable products and reduce the consumption of raw materials and energy.

The digital tool uses data from multiple sources to provide information on the region's circular economy actors and their interactions, the ecosystem structure, key stakeholders and emerging circular economy themes. The online software visualizes data in an easily understandable, user-friendly form, using information from both open databases (the internet) and private databases (e.g. closed national databases). Some of the data is retrieved by web crawling, i.e. the tool uses circular economy keywords to process website information. Through web crawling, the tool categorizes circular economy actors, such as companies, into different ecosystems by analyzing the terms used on their websites. **The pilot tool has three levels of observation:**

- **Topics:** Highlights key circular economy actors in different thematic areas (e.g. bioenergy, nutrient recycling, bio-based products)
- **Flows:** Outlines the different flows of, e.g. raw materials and waste
- **Projects:** Shows connections between actors working in ongoing collaborative circular economy projects (planned for the commercial version of the tool).

The visualization allow for an analysis of ecosystem development, including growing and declining thematic areas, and both strong and missing links between actors. The ecosystem tool makes ecosystem data open, transparent and contributes towards ecosystem-based development and management by connecting key stakeholders throughout the production and consumption chain.

More information: www.nordregio.org/publications/developing-and-managing-innovation-ecosystems-in-the-circular-economy



S3 Transnational Platform – towards the BSR S3 ecosystem

The 'next wave' of the EU's policy framework for Smart Specialisation will have more focus on inter-regional collaboration by aligning regional S3 priorities and inter-regional innovation investment efforts. However, the regions still have very different understandings of how to utilize S3 successfully and lack the capacities to strengthen S3 through inter-regional cooperation.

The BSR Stars S3 project has, in co-operation with the EUSBSR PA INNO, worked intensively to create a collaboration structure around the smart specialisation concept. As a result of this work, a new "BSR S3 Ecosystem Platform" project - lead by Region Västerbotten (SE) - was accepted for Interreg BSR Programme funding in April 2019. The Platform will enhance interaction between BSR regions to identify and learn good practices of S3 implementation and setup better capabilities for forming inter-regional value chains and investments within shared S3 focus areas.

BUSINESS PROMOTION FOR TRANSNATIONAL SMART SPECIALISATION

Transnational innovation Voucher pilot

The BSR Stars S3 project made efforts to connect key Nordic Research and Technology Organisations (RTOs) and their testbeds in the Baltic Sea Region by offering SMEs access to testbed infrastructures across borders with the support from Innovation Vouchers. Based on a Call by the Nordic Council of Ministers within a BSR Stars S3 project, th**e transnational innovation voucher system was piloted in 2018-2019 with the following companies and institutions:**

- Finnish company Dagsmark Petfoods Oy had an extrusion processing test undertaken of selected raw materials for dog dental sticks at the pilot plant at Danish DTI.
- Finnish company Paptic Ltd was supported in testing a novel fiber-based packaging material at the RISE's Swerea textile testbed in Sweden.
- Norwegian company Kvanne Industrier AS undertook a test at RISE Built Environment testbed in Sweden of the physical properties of prototypes for sound insulation in efforts to improve manufacturing of high-performance industrial doors.
- Norwegian company Biocluster AS undertook a test at RISE Processum in Sweden on the feasibility of production scale-up of single cell proteins.

> "The project has explored methods and tools that enable cross-sectoral cooperation between innovation ecosystem actors (companies, researchers and the public sector) with an emphasis on improving innovation capacity at the macro-regional level.

The vouchers, with a value up to 10.000 EUR, contributed to transnational product testing and development in the BSR, and provided some **important lessons for further transnational activities:**

- SMEs benefitted from being able to carry out tests they could not have done in their home country, which helped to speed up product development.
- RTOs/testbeds benefitted from network building with Nordic RTOs/testbeds, and an increased awareness on challenges that need to be addressed to realize a macro-regional testbed infrastructure.

As a result of the transnational innovation voucher scheme, GTS Denmark, RISE, SINTEF and VTT have decided to put together a joint Memorandum of Understanding for future cooperation.

Transnational business coaching

One of the key aims of BRS Stars S3 project was to find ways to involve business in smart specialisation activities. The transnational business coaching programme was designed and delivered to over 100 companies in the Baltic Sea Region.

Companies were selected directly from the Enterprise Europe Network (EEN) and from those having concrete research and/or public sector cooperation resulting from matchmaking events organised within the project. The aim was to support companies to make the best use of the commercial potential of their research.

The programme brought together business coaches from different regions to facilitate discussion and learning. International coaches bring new perspec-

tives based on their different experiences. They have specific market knowledge about their home markets and access to new networks.

The Coaching programme was delivered in four main stages that each company goes through: Suitability assessment; Assessment of SME gaps and needs; Action plan development; and Action plan implementation. Companies were assessed by the selected needs criteria aiming to identify their skills and resources gaps. Following this assessment, companies were grouped by their individual needs and interests to receive the most suitable coaching available. Usually the participating company needed support in areas such as business plan development, sales & marketing, strengthening their IP position, or building the leadership and managerial skills.

Key recommendations for the Baltic Sea Region are:

- Business support organizations could exchange coaches on a 1:1 basis. Later a pool (or database) of coaches and business organisations interested in transnational coaching could be developed.
- Use existing networks in the Baltic Sea Region for transnational coaching (e.g. Enterprise Europe Network and BSR cluster organisations).
- Transnational coaching sessions for innovative SMEs could be a part of conferences targeted at the innovative SMEs in the Baltic Sea Region.

Transnational research-to-business platform

The BSR Stars S3 project developed an existing research-to-business (E-science gateway) platform of Lithuanian R&D equipment and services. As a result, the platform was developed to provide information on transnational research infrastructure and incorporate business entities and research institutions into larger entities for greater synergy and cooperation.

MITA, the Lithuanian Agency for Science, Innovation and Technology, coordinated the process in which an online questionnaire was sent to 60 Lithuanian companies which were registered at the existing "E-science gateway". The companies that participated welcomed the transnational dimension provided by the BSR Stars S3 project. Many companies stated that they have recognized new transnational cooperation opportunities in R&D e.g. with Finnish and Norwegian universities. The major challenges in adding a transnational dimension are mobilising actors, providing efficient communication, and finding the best ways of using the web platform for transnational purposes. After the BSR Stars S3 project, MITA is prepared to provide additional improvements to the platform, especially related to better use experience, and attractiveness for international use.

BSR STARS S3 POLICY BRIEFS

BSR Stars S3 Policy Briefs provide project partners and stakeholders with key learnings and recommendations based on experiences from the project.

The following BSR Stars S3 Policy Briefs have been prepared and published by Nordregio:

- Inclusive digitalisation in the Baltic Sea Region (2017)
- Building Effective transnational partnerships: The case of Smart Lighting (2018)
- Developing and Managing Innovation Ecosystems in the Circular Economy – outline of a digital monitoring tool (2018)
- Industrial Symbiosis in the Baltic Sea Region (2019)

BSR STARS S3 PROJECT PARTNERS

The Baltic Institute of Finland (FI), Nordregio (SE), Council of Tampere Region (FI), Nordic Council of Ministers (DK), Business Copenhagen (DK), Tillväxtverket (SE), Region Värmland (SE), Region Västerbotten (SE), MITA – Agency for Science, Innovation and Technology (LT), Vilnius Gediminas Technical University (LT), Lithuanian Innovation Centre (LT), Trondheim Region (NO).

KEY POLICY RECOMMENDATIONS

Based on key findings from the BSR Stars S3 project, the following policy recommendations are proposed to encourage and promote smart specialisation, innovation and transnational collaboration in the Baltic Sea Region.

■ **Promote a culture of joint learning and sharing of good practices.** Regions have different understandings of how to utilise S3 strategies the best way to boost innovation and transnational cooperation. Sharing good practices with other regions is a precondition for efficient transnational cooperation to enhance complementary competences.

■ **Establish and promote inclusive regional innovation ecosystems** which invite both private and public sector actors inside and outside the region. Combine top-down and bottom-up initiatives to fully unlock the innovative potential of the regions and their actors.

■ **Identify and involve stakeholders.** It is important to implement activities that enable the identification and formulation of innovation ecosystems in S3 priority fields. In BSR Stars S3, this was supported by organizing regional, national and transnational matchmaking events that were promoted efficiently. The digital Innovation Ecosystem Management tool pilot is a first step towards a real-time identification of innovation ecosystem stakeholders, their interlinkages and development needs.

■ **Cooperate with other related projects.** It is useful to contact and discuss with other related transnational, national and regional projects when planning S3 activities. In BSR Stars S3, some matchmaking events were organized in cooperation with other projects and key organisations promoting bio- and circular research and business. Also, the sounding board tool enabled discussion and evaluation of good practices in different transnational projects. Cooperation with other related projects reduces duplication of activities and promotes deeper understanding, analysis and learning of good practices.

■ **Involve business sector.** The involvement of the business sector is crucial for enhancing smart specialisation. S3 requires cooperation with business promotion organizations and professional knowledge on how to attract businesses. In BSR Stars S3, matchmaking events had concrete level workshops, networking sessions and possibilities to discuss concrete cooperation possibilities with relevant research and public sector representatives. Transnational business coaching provided professional support for business development and internationalization.

KEY LEARNINGS FROM THE BSR STARS S3 PROJECT

The BSR Stars S3 project has tested a rich variety of good practices and tools for developing and implementing smart specialisation in a transnational context. The project has made a major contribution to learning in relation to:

- **Moving Towards macro-regional smart specialisation:** Bottom-up measures and concrete actions are essential for promoting macroregional learning and sharing good practices in the BSR. Transnational projects provide a platform to test and implement innovative tools with practitioners. The tools and practices developed in the BSR Stars S3 project have smart specialisation characteristics which promote a strong industrial innovation focus, often within a macro-regional context. Upscaling, connecting and further developing these successful practices to the BSR level offers significant scope for industry, businesses and research institutes to 'widen the net' of their innovation efforts, to access new markets and collaborate with a wider range of innovation actors.
- **Promoting human interaction and dissemination:** Communication and dissemination of project activities and project results is important for promoting transnational learning. BSR Stars S3 gained a lot by investing in communication and dissemination throughout the project. The project matchmaking events and study visits gathered a wide variety of stakeholders from business, research and public sector from the whole Baltic Sea Region. Several activities were also planned and implemented with organisations beyond the partnership. Some of the tools and methods developed can be used without additional localization, but in some cases, such as innovation ecosystem management tool, adaptation and further piloting will be needed in relation to local circumstances, laws, and culture.

ABOUT THIS POLICY BRIEF

This policy brief is a part of BSR Stars S3 (Smart specialisation through cross-sectoral bio-, circular and digital ecosystems) project which seeks to enhance growth opportunities in the Baltic Sea Region, focusing on the bio-/circular and digital economy fields. The project is partly financed by the EU Interreg Baltic Sea Region Programme.

Read more:
https://www.bsr-stars.eu/bsr-stars-s3/
http://s3platform.jrc.ec.europa.eu/

Research contacts
Johanna Leino
Development Director at the Baltic Institute of Finland
johanna.leino@tampere.fi

Jukka Teräs
Senior Research Fellow at Nordregio
jukka.teras@nordregio.org

John Moodie
Senior Research Fellow at Nordregio
john.moodie@nordregio.org

Photos:
Frontpage: Accelerator camp event in Vilnius (Johanna Leino).
Other photos: p.2: Paper recycling (Unsplash), p.4: The ecosystem-monitoring tool (The Council of Tampere Region), p.7: Project partners at the study tour in Lapland (Vaida Razaityte).

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