norden
Nordic Council of Ministers

CHALLENGE
KNOWLEDGE
MARKET

Policy Area Innovation
Strategy Guide

– Putting the Action Plan into Practice

Policy Area Innovation Strategy Guide 2016 - 2020
– Putting the Action Plan into Practice

Printed in Denmark

List of abbreviations

BDF	Baltic Development Forum
BDO	Business Development Organisations
BSR	Baltic Sea Region
DASTI	Danish Agency for Science, Technology and Innovation
EUSBSR	EU Strategy for the Baltic Sea Region
ESIF	European Structural and Investment Funds
ICT	Information and Communications Technology
NCM	Nordic Council of Ministers
MS	Member States
PA INNO	Policy Area Innovation
PA INNO SC	Policy Area Innovation Steering Committee
RDI	Research, Development and Innovation
R&I	Research and Innovation
SME	Small and Medium-sized Enterprises

Nordic co-operation

Nordic co-operation is one of the world's most extensive forms
of regional collaboration, involving Denmark, Finland, Iceland,
Norway, Sweden, and the Faroe Islands, Greenland, and Åland.

Nordic co-operation has firm traditions in politics, the
economy, and culture. It plays an important role in European
and international collaboration, and aims at creating a strong
Nordic community in a strong Europe.

Nordic co-operation seeks to safeguard Nordic and regional
interests and principles in the global community. Common
Nordic values help the region solidify its position as one of the
world's most innovative and competitive.

Nordic Council of Ministers
Ved Stranden 18
DK-1061 Copenhagen K
Phone (+45) 3396 0200

www.norden.org

Policy Area Innovation
Strategy Guide 2016 - 2020

– Putting the Action Plan into Practice

Prologue

Following the inclusion of policy area 'small and medium-sized enterprises (SME)' and part of the policy area 'internal market' as well as the horizontal action 'promo' into policy area innovation, it was necessary to promote and operationalise the EU Strategy for the Baltic Sea Region for Policy Area Innovation. The result is the strategy guide at hand, which is owned and published by the steering committee of policy area innovation.

This multi-annual strategy guide was developed over the course of a year by a task force consisting of the Baltic Development Forum (BDF), the Danish Agency for Science, Technology and Innovation (DASTI), the Polish Ministry of Science and Higher Education, the Estonia's Ministry of Economic Affairs and Communications and the Nordic Council of Ministers. It was done in close dialogue with all the member states throughout the Baltic Sea Region.

The process of developing the strategy guide was structured into the following three tracks; 1) Research and Innovation, 2) Cluster Policy and SME development and 3) ICT and digital growth. These provided input to the strategy guide in the form of a questionnaire on transnational collaboration in the Baltic Sea Region, coordinated by the Swedish innovation authority VINNOVA, and two working papers titled: 1) Clustering and SME-Development and 2) Transnational Digital Collaboration in the Baltic Sea Region. The latter includes an annex on national profiles on digital policy for the Baltic Sea Region states. The working papers were developed through an inclusive process comprising of surveys and interviews with experts and policy makers, thus bringing together expertise, experience and securing support from Member State stakeholders for the development of the policy area innovation strategy guide.

Baltic Development Forum

sustainable growth
innovation
competitiveness

Baltic Development Forum (BDF) is a think-tank and network for high-level decision makers from business, politics, academia and media in the Baltic Sea Region. BDF facilitates collaboration across the region, public/private sectors and levels of decision making, in order to enhance regional coordination and coherence. Given that ICT & Digital Economy is one of BDF's main thematic areas, the think-tank was well placed to take a joint lead on the ICT & Growth track alongside the Estonian Ministry of Economic Affairs and Communication.

Ministry of Higher Education and Science
—
Danish Agency for Science, Technology and Innovation

DASTI's share in the development of the PA INNO Strategy Guide has its base in a thorough expertise and experience on cluster-driven SME development policy. The Danish cluster programme and national work with SMEs in Denmark as well as DASTIs involvement in the flagship BSR Stars and its leadership of the joint call and matchmaking activities of "BSR Innovation Express" under PA Innovation has added value to the activities leading to the PA INNO Strategy Guide.

Ministry of Science and Higher Education
Republic of Poland

REPUBLIC OF ESTONIA
MINISTRY OF ECONOMIC AFFAIRS AND COMMUNICATIONS

Digitalization and the Digital Single Market is a key priority for Estonia. Contributing to the track on ICT & Growth was therefore very much in line with the ambitions and strategy of Estonia's Ministry of Economic Affairs and Communications. The ministry took a lead on the track alongside Baltic Development Forum.

Executive Summary

The EU Strategy for the Baltic Sea Region (EUSBSR) that was launched by the European Union in 2009 as its first macro-regional strategy sets out three overall objectives: 'Save the Sea', 'Connect the Region', and 'Increase Prosperity'. The objective of Policy Area Innovation (PA-INNO) is to promote a globally competitive position within research and innovation for growth in the Baltic Sea Region.

The aim of this Strategy Guide is to provide policymakers and innovation actors with guidance and inspiration for how best to utilise the EU Strategy for the Baltic Sea Region so as to effectively achieve EU and joint national goals. As defined in the Action Plan of the EUSBSR, Policy Area Innovation is essentially about intelligently combining the regional strengths, competences, research and development (R&D), and players of the entire Baltic Sea Region. More specifically, it is the role of policy area innovation to: *enable shared learning, create and strengthen networks across the BSR, align resources and regulations, and facilitate the joining up of forces in common programmes and investments*.

This document identifies three drivers of innovation that are relevant to the Baltic Sea Region: *Challenges, Knowledge, and Market*. These can be outlined briefly as follows:

1) *Challenges:* The starting point for co-operating on challenge-driven innovation in the BSR must be shared challenges, i.e. challenges that are both specific and common to the BSR. Possible examples include the eutrophication and nutrient pollution of the Baltic Sea.

2) *Knowledge:* Complex knowledge-driven innovation that relies on scientific knowledge is of key interest to the BSR PA-INNO because of the potential of macro-regional co-operation.

3) *Market*: Market-driven innovation is driven primarily by the need of businesses in existing industries to maintain their competitiveness by being innovative. Firms and industries often respond to this need by way of co-operation, which has led to the emergence of a number of successful industries and clusters of industries in the BSR.

The strategy, running from 2016 - 2020, works within the broad framework of these drivers to put forward a number of cross-cutting themes / innovation enablers and strategic policy instruments which are seen as important for achieving the EUSBSR's objective of Increase Prosperity, and therefore as a priority for policy area innovation.

The cross-cutting themes / innovation enablers – i.e. *Digitalisation, SME Internationalisation*, and *Talent Management and Entrepreneurship* – are crucial aspects of accelerating innovation with respect to the three drivers. The cross-cutting theme of digitalisation is understood here as a fundamental process for change in society and business, as opposed to the narrower notion held within the digital industries. With respect to the second cross-cutting theme, the BSR market is already of interest to SMEs, but there is a need to further support the SMEs' capabilities in international innovation collaboration. Lastly, all strategic action in the BSR will rely on the entrepreneurial skills of people in the innovation systems – i.e. within academia, business, and organisations – which is why PA-INNO will focus on developing and spreading good examples of talent management and entrepreneurship.

In a similar fashion, the strategic policy instruments highlighted in this guide – *Smart Specialisation Strategies, Testbeds and Innovation Infrastructure*, and *Clustering and other innovation support structures* – relate to all three innovation drivers and are central to the work encompassed by PA-INNO. The continued utilisation of these strategic policy documents, together with the improved quality of their usage, will enhance the BSR's global competitive position.

It is hoped that the impact of the PA-INNO activities will contribute to the overall goal of Baltic Sea Region research and innovation occupying a globally competitive position. This goal can be broken down into four targeted results which the Strategy Guide aims to achieve:

- Increased stakeholder and institutional capacity,
- Improved engagement through the efficient use of networks,
- Concentration of funding and the alignment of policies and regulations,
- Long-term commitment and joint funding and decision-making.

A monitoring framework (Annex A) comprising these results and corresponding indicators has been developed to track the implementation of this Strategy Guide and assess the overall achievement of the desired impact described above.

Introduction

Innovation is of key importance to the Baltic Sea Region (BSR). As a driving force of increased prosperity, it is highly relevant to realising the potential of all of the 13 Policy Areas and 4 Horizontal Actions established by the EU Strategy for the Baltic Sea Region (EUSBSR). The EUSBSR that was launched by the European Union in 2009 as its first macro-regional strategy sets out three overall objectives: 'Save the Sea', 'Connect the Region', and 'Increase Prosperity'.[1] The objective of Policy Area Innovation (PA-INNO) is to promote a globally competitive position within research and innovation for growth in the BSR. This will be achieved mainly by increasing innovation capacity and supporting entrepreneurship, business development, and science within the three drivers of innovation identified in this document: *Market, Knowledge, and Challenges.*

Innovation is a hallmark of the region, and several of the region's countries top the European and global rankings for innovation capacity. Key overarching guidelines include enhancing this strength, increasing its effectiveness in creating broadly shared economic value, and extending it to parts of the region that are lagging behind in innovation performance.

This Strategy Guide for the period 2016-2020 was developed through close dialogue with the PA-INNO Management Team[2] assigned to the task. It draws on two transnational track reports on Transnational Digital Collaboration in the Baltic Sea Region and Clustering and SME-Development[3] as well as on an online survey of EUSBSR member states on transnational collaboration in the BSR. In addition, input was provided by all BSR member states prior to the Strategy Guide's publication in September 2016 by the PA-INNO Steering Committee.

The aim of the Strategy Guide is to provide policymakers and innovation actors with *guidance* and *inspiration* for how best to utilise the EUSBSR so as to effectively achieve EU and joint national goals. The Strategy Guide that follows this brief introduction is structured in the following sections: *The Role of Policy Area Innovation and Drivers for innovation, The Strategic Action Areas and tools for achieving target results, and Comprehensive overview of Policy Area Innovation.*

[1] *http://www.balticsea-region-strategy.eu/action-plan/17-action-plan-2015*
[2] *The management team consists of: Denmark, Estonia, Poland, Baltic Development Forum and the Nordic Council of Ministers.*
[3] *Reports: 'Cluster-driven SME development' and 'Transnational digital collaboration in the Baltic Sea Region: Input for PA-INNO Strategy Guide'*

The Role of Policy Area Innovation and Drivers of Innovation

Figure 1: The role and targets of PA-INNO

- Enable shared learning through networking and knowledge-transfer activities and other instruments.
  Target: 75% of survey respondents reporting positive feedback on PA-INNO and flagship activities

- Create and strengthen networks through platforms for matchmaking, creating visibility, engaging networks in a dialogue, and opening up funding instruments for their activities.
  Targets: Minimum 10% increased volume of engagement of different actor groups, two new collaboration platforms, and mapping of open-innovation infrastructure facilities in the BSR

- Align funding resources through strong co-ordination of funding sources, flexible procedures for funding allocation, and alignment of funding instruments with common objectives.
  Target: Alignment of EUR 10 million in funding from different funding sources

- Join forces by allocating funds or submitting existing programmes to the decision-making authority of the regional structure.

The macro-regional collaboration is underpinned by the BSR countries' proximity, in terms of both geography and culture. The macro-region's *geographical proximity* creates opportunities by forming regional value chains that build on the respective strengths of the different parts of the region. Proximity can also enable close integration, which would give the macro-region greater critical mass and allow it to compete in global markets for skills and investment.

Countries with *cultural proximity* – expressed as sharing similar cultures and having a deep knowledge of each other – find it easier to learn from each other. In the context of the BSR, the macro-regional collaboration that has existed since 2009 has increased this proximity by bringing about an enhanced understanding of our differences and similarities. This has proven critical to transnational collaboration on policy and demonstrates that the region is ripe for further development of the collaboration.

The Policy Area of Innovation (PA-INNO) as defined by the EUSBSR strategy is, in essence, about intelligently combining the regional strengths, competences, research and development (R&D), and players of the entire BSR.

PA-INNO covers the complete value chain for innovation, from initial idea through to the provision of solutions on the global market, and it is therefore uniquely positioned to reduce barriers to innovation, the aim being to secure a horizontal impact across the policy areas of the EUSBSR. As such, PA-INNO undertakes the role of:
- Enableing shared learning,
- Create and strengthen BSR networks/platforms and improve their utilisation,
- Ensuring alignment and concentration of resources and relevant regulations, policies and funding instruments,
- Joining forces in common programmes and investments.

Moving from the enabling of shared learning towards joint programmes and investments (i.e. from left to right in figure 1 below) requires an increasing level of co-ordination and the submission of own resources to the control of joint decision-making. This movement also offers a rising scale of impact. The monitoring guide for the implementation of this strategy (Annex A) connects the role of PA-INNO to specific targets.

Challenge, Knowledge, and Market-driven innovation

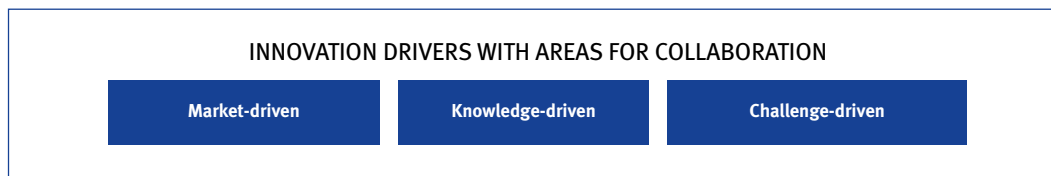| INNOVATION DRIVERS WITH AREAS FOR COLLABORATION		
Market-driven	**Knowledge-driven**	**Challenge-driven**

Figure 2: Innovation drivers with areas for collaboration

Innovation in general is recognised as a leading factor in propelling economic prosperity and productivity. Increasingly it is also seen as the best way to address some of the world's most urgent challenges – e.g., in relation to climate change and sustainable development. From the perspective of the people, companies, and communities in the BSR, innovation is driven primarily by one or more of the following factors: Challenge – Knowledge – Market.

Challenge-driven innovation addresses challenges that cut across academic disciplines, regional and national boundaries, and even industrial sectors. Examples of such challenges could be climate change, the eutrophication of the Baltic Sea, or the stress placed upon national and regional welfare systems by demographic conditions.

No single academic discipline or institution can bring about the innovations to meet these challenges, making it critical for experts from different disciplines to work together. However, for such co-operation to be efficient, all partners involved must be referring to the same challenge and be able to understand it. There may not be a ready market for a solution that emerges from a challenge-driven innovation; a market may need to be created, which will often involve public sector intervention. In addition, even where challenges are shared, the different backgrounds of the agents of innovation who are addressing them may enhance their ability to understand and tackle these challenges.

Therefore, the starting point for co-operating on challenge-driven innovation in the BSR must be shared challenges, i.e. challenges that are both specific and common to the BSR. A suggested list of such challenges includes:

The eutrophication and nutrient pollution of the Baltic Sea, which draws attention to the importance of innovation for sustainable cities and rural communities both.
- The cold climate, which creates a need for heating buildings and puts innovations to tackle inefficient energy use, and the use of fossil fuels, at the forefront.
- Low density populations, which challenge innovation for more efficient and sustainable Information and Communications Technology (ICT), communications, and infrastructure.
- Ageing populations, which put pressure on both welfare states and the long-term economic dynamism of the region, and challenge innovation for more efficient and accessible health care and other public services.

Future solutions to address such challenges are likely to refer to the efficient use of natural resources and the circular economy.

Knowledge-driven innovation is characterised by complexity and reliance on scientific knowledge. This is of key interest to the BSR PA-INNO because of the potential of macro-regional co-operation. The BSR has numerous academic institutions and research institutes that rank among the world's best across a variety of academic fields. These fields include:
- life-sciences,
- automation,
- energy production and transition systems,
- clean tech,
- transportation,
- ICT.

The rationale behind PA-INNO is that macro-regional collaboration can help overcome some of the lock-in effects of knowledge-driven innovation systems at the regional, national, and industry-specific levels. According to PA-INNO, the actors are encouraged to build a larger critical mass by joining forces, strengthening networks between innovation system agents throughout the macro-region, aligning resources and regulations, and fostering transnational policy learning. Smart-specialisation tools will help give new momentum to macro-regional, knowledge-driven innovation processes.

Market-driven innovation is driven primarily by the need of firms in existing industries to maintain their competitiveness by being innovative. This, however, does not mean that market-driven innovation processes are limited to old or existing industries. In high-cost countries, such as those around the Baltic Sea, it is often a matter of "Innovate or die!" Firms and industries often respond to this by way of co-operation, which has led to the emergence of a number of successful industries and clusters of industries in the BSR. Furthermore, market-driven innovation also leads to people and capital moving out of existing industries and creating new start-ups and hence helping the community to maintain its competitiveness.

As international competition is growing – and multinational firms are looking globally for research and innovation sites rather than focusing on their regions of origin – once successful innovation systems are often found to be too small, too narrowly defined, or too rooted in historic structures. Through BSR co-operation, the scope is opening up for building stronger and globally more competitive systems for innovation. Once again, BSR co-operation can help to build critical mass through

the joining of forces, the formation of stronger networks between innovation system agents throughout the region, the alignment of resources and regulations, and the fostering of cross-national policy learning.

Macro-regional collaboration is always a challenge in and of itself, but in the case of the BSR, such collaboration can draw upon both geographic and cultural proximity in a way that most macro-regions cannot. Furthermore, the individual communities in the BSR already rank very highly in most global innovation rankings. The role of PA-INNO is to make sure that the innovation processes in the BSR build the capacity to meet the increased needs associated with opening up national and sector specific systems.

Strategic Action Areas and tools for achieving targeted results

CROSS-CUTTING THEMES & INNOVATION ENABLERS

| Digitalisation | SME Internationalisation | Talent Management and Entrepreneurship |

→ Activities with output

STRATEGIC POLICY INSTRUMENTS OF PA-INNO PRIORITY

Smart Specialisation Strategies | Test beds and innovation infrastructure | Clustering and other innovation support structures
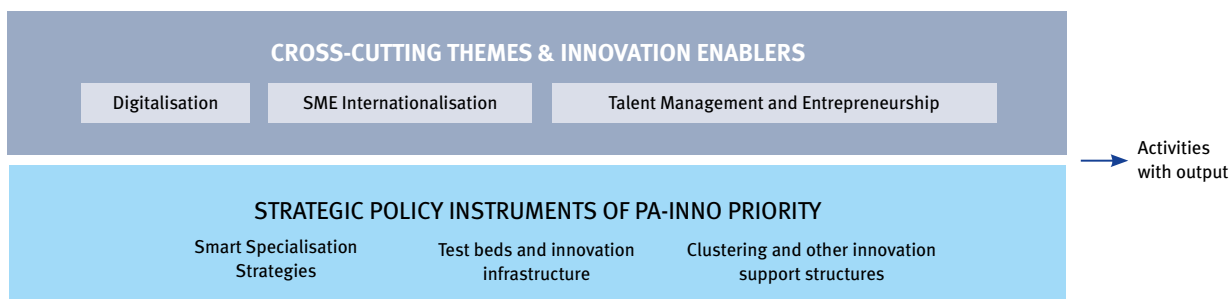
Figure 3: Strategic Action Areas

Macro-regional collaboration in relation to PA-INNO is outlined in the strategic action areas below. These actions are of two kinds: those characterised by the cross-cutting themes underpinning most of the interventions for building up collaboration; and the more concrete policy instruments set out for fostering collaboration.

The tools for PA-INNO

The PA-INNO tools for achieving targeted results are mainly connected to the PA-INNO Steering Committee, which consists of representatives from all EUSBSR member states including Norway and Iceland, and relevant European Commission services and the Flagship leaders. The committee selects activities/projects based on an assessment using three overall criteria[1]:

1. Overall importance to the Baltic Sea Region's capacity to compete on innovation,
2. Relevance to large parts of the region and not only to individual countries,
3. Perceived potential for regional collaboration to make a significant and unique contribution.

These selection criteria are mandatory for the Flagships to take into account, as well as being appropriate for adherence to by other project operations.

In addition, PA-INNO has a strategic approach for the utilisation of a flagship, through flagship participation in PA-INNO Steering Committee meetings and through close, frequent, and open dialogue.

[1]*In alignment with criteria for flagships foreseen in the Action Plan of the EUSBSR, p. 17-18.*

Cross-cutting themes and innovation enablers

The cross-cutting themes identified as relevant to the BSR are derived in part from the information presented in the two track reports[4] and the transnational survey on collaboration in the BSR. These are:

- *Digitalisation* – Today's innovation processes all build upon the use and integration of digital technology. A policy tool must take this into account and act upon it.
- *SME Internationalisation* – Innovation immediately becomes global. In other words, any policy tool that depends on the support of innovation in respect of SMEs must take internationalisation into account.
- *Talent management and entrepreneurship* – The individual and the individual driving force are at the heart of all innovation processes. This needs to be acknowledged in policies designed to improve innovation systems.

Digitalisation

ICT is a fundamental factor in digitalisation, both as an enabling technology and as an area of specialisation in itself.[5] Across Europe, ICT is a horizontal enabler of growth in other sectors, and in many regions it is an important sector in itself. Both of these qualities are particularly evident in the BSR, as the countries in the region are global leaders in digital solutions, digital skills, e-government, and digital entrepreneurship.

Economic estimates indicate that better take-up of broadband, digital skills, and stronger e-commerce has the potential to increase annual GDP in the BSR by EUR 29 billion.[6] The Europe 2020 strategy recognises the enormous potential and enabling role of ICT and has made the Digital Agenda for Europe one of its seven flagships. Taken as a whole, the BSR has the potential to become the first digitally integrated market, even before the European Digital Single Market is completed. Creating joint standards for interoperable public and private solutions (e.g. e-identity) and building human capital through exchanges between the best institutions in the region will put the BSR at the vanguard of digital territories both in Europe and worldwide. ICT clusters in the region are destined to become key intermediaries in this transformation process.

It is important to make a distinction between digital industries and digitalisation as a fundamental process for change in society and business. As a cross-cutting theme, it is the latter understanding that is relevant here, i.e. how digitalisation enters into and affects all parts of social life as well as all of business and industry. The way we respond to this process will make a huge difference to innovation.

This means that the cross-cutting area of digitalisation will affect aspects of:

- Promoting the transnational interoperability of digital solutions, including standards,
- Promoting innovation in the ICT sector and support for digital start-ups,
- Increasing the uptake of ICT in SMEs (including Industry 4.0),
- Increasing digital trust and cybersecurity, propelling the uptake of digital solutions in SMEs,
- Developing innovative digital public services and the opening-up of public data to support digital innovation.

These aspects were identified as key digital priorities for macro-regional collaboration in the course of the digital policy analysis and dialogue with policymakers and the ICT industry that were carried out in the preparation of this document.[7]

Finally, it must be noted once more that the cross-cutting focus on digitalisation is not confined to digital industries as such. Digital industries may, however, benefit from the horizontal policy interventions described above, and they may also be included in the policies in the following sections of this Strategy Guide.

SME Internationalisation

In the development of a more innovative Baltic Sea Region, internationalising SMEs is a crosscutting element. Today, an increasing number of companies are "born global", and a large number of companies face global competition early on. In many instances geography is no longer a market issue, since business takes place on the Internet. SMEs in the BSR are already deeply involved in

---

[4] 1)Track report on 'Clustering and SME-Development', 2) Track report on 'Transnational digital collaboration in the Baltic Sea Region: Input for PA-Inno Strategy Guide'.

[5] Kleibrink, Alexander and Jens Sörvik (2014), The Digital Agenda Toolbox, Luxembourg: Publications Office of the European Union.

[6] Baltic Development Forum (2015), A Digital Single Market: Growing the Baltic Sea Region. http://www.bdforum.org/wp-content/uploads/2015/11/DSM_report.pdf.

[7] Transnational Digital Collaboration in the Baltic Sea Region: Working Paper for the PA Inno Strategy Guide"

global markets and are thus at the forefront of providing innovative solutions for the challenges facing global communities. Many SME clusters and networks in the BSR support SMEs by engaging actively with other clusters in the macro-region, through transnational policy initiatives such as Innovation Express and the Cluster Matchmaking Conference.

However, there is a need to further support SMEs in order to stimulate their interest in and capability for international innovative collaboration. All firms must approach markets and competition from an international perspective, and all policy needs to take this as its point of departure. The BSR is already an interesting market for SMEs. Companies in the region's member states and associated states have each other as primary export partners on the basis of the proximity of their language, culture, market standards, and so forth.

There are a variety of actions that policymakers and clusters can take in this area, such as:
• Helping to "package system solutions" from groups of companies working within the same sector and linking these to other markets in the region (using the neighbouring markets as test markets or as first-reference customers for SMEs).
• Further developing Innovation Express with a stronger focus on scale ups in the region and with a stronger link to more long-term transnational partnerships between clusters and SMEs, and continued development of annual Innovation Express Cluster-2-Cluster Matchmaking Conferences, allowing new companies to share needs for innovation and engaging in clusters within the region through the Enterprise Europe Network matchmaking tool.
• Communicating the opportunities and benefits of transnational collaboration via strong clusters/ innovation hubs in the BSR.
• Developing the Enterprise Europe Network to work with and contribute to clusters.

Talent Management and Entrepreneurship
Talented people are at the heart of innovation processes. Different types of talents are needed – e.g. skilled researchers, innovators, and entrepreneurs. Although the BSR ranks highly on most indicators for innovation, including having good access to talented people, the region also shares some challenges in this respect. Among these are its small national markets, its peripheral relationship with global centres, and some structural characteristics that are typical of many high-cost communities. A further characteristic held in common is the generally low rankings on entrepreneurship in BSR communities.

Any strategic action in the BSR will rely on the entrepreneurial skills of people in the innovation systems, i.e. within academia, business, and organisations. Progress has been made in these fields throughout the BSR in recent years, but experience and knowledge of the key success factors are often lacking. This is why the PA-INNO will focus on developing and spreading good examples of talent management and entrepreneurship.

PA-INNO will emphasise the following aspects of talent management and entrepreneurship:
• Sharing experiences of support measures relating to innovative entrepreneurship and of how can we create more successful support structures for innovative entrepreneurship through collaboration in the BSR
• Activities to increase talent density
• Talent exchanges between different hubs
• Further developing the ability to foster talent

Strategic Policy Instruments

Finally, we suggest calling attention to three strategic policy instruments that are central to the work being guided by the PA-INNO Strategy. These three instruments are:

• Smart Specialisation Strategies – i.e. to promote and support smart specialisation processes and the implementation of smart specialisation strategies at the level of the BSR.
• Test beds and innovation infrastructure – i.e. to promote and support the build-up and use of BSR-common research and innovation infrastructure and test beds.
• Clustering and other innovation support structures – i.e. to promote and support the development of existing clusters, the formation of new clusters, and collaboration between clusters, as well as to promote an innovative focus in other support structures such as incubators or science parks.

Supporting Smart Specialisation Strategies

Smart specialisation is a strategic tool introduced by the European Commission into European regional policy. Such strategies, which make use of regional processes attempting to identify the competitive edges of each region's industries, draw on the industries' competitiveness, the specialisation of research and development, and innovation. The rationale for such strategies building on place-based opportunities is that they permit the focusing of policy investments on a limited set of priorities. This means that transformative new initiatives can be identified which can potentially modernise existing fields of specialisation, leverage existing capabilities in order to facilitate a move into related fields, or give rise to technologies enabling the emergence of new fields.

One key element is pursuing and utilising smart specialisation at the macro-regional level. Thus far, smart specialisation processes have, in some instances, attempted to link the regional and national levels, although attempts to do this at a transnational level are still at an early stage. The role of PA-INNO is to promote the processes of smart specialisation so that they are taken to the macro-regional level.

PA-INNO initiatives will involve:
• Providing better overviews of thematic priorities and existing smart specialisation strategies in the sub-national regions of the BSR macro-region.
• Supporting processes for adopting and implementing smart specialisation strategies at the BSR level.
• Exploring the potential for a Smart Specialisation Strategy Vanguard Initiative in the BSR.

Test Beds and Innovation Infrastructure

A second key element is macro-regional collaboration on research and innovation infrastructure and the development of macro-regional test beds. Work conducted according to this priority shall correspond closely with the efforts described above in relation to smart specialisation strategies.

Innovation often requires large-scale investments in research infrastructures. Such investments are often too big for individual countries or regions to shoulder. This is one factor contributing to the increasingly 'spiky' map of global innovation activity. European programmes such as Horizon 2020 aim to ensure that existing investments are being used by a broad range of stakeholders, yet a study commissioned by the Nordic Council of Ministers shows that very little of public and private innovation infrastructure (e.g. test-sites and demonstration facilities within the green-growth sectors) is actually shared across nations or businesses.

Due to the relatively small size of the BSR, it is not often a natural location for large-scale innovation infrastructure. When it is, as in the case of ESS in Lund, it must create a regional platform to make these investments viable. Such regional collaboration can further enhance the value that these investments bring to the region and support the emergence of related industry networks.

The 'soft' infrastructure of innovation support – through networks, incentive systems, and the like – is a crucial complement to the existing 'hard' input factors, such as innovation infrastructure and skills. Innovation policies across Europe have increasingly focused on these enabling factors, organising programmes around regional clusters, networks, demand-driven challenges, and so forth.

The focus here is on the following measures:
- Providing a better overview of existing innovation infrastructure and test-beds,
- Aligning resources and funding for new innovation infrastructure,
- Creating and testing instruments, such as innovation-vouchers, etc., for transnational use of innovation infrastructure,
- Promoting public procurement in new innovative measures in order to create new and open test beds,
- Enabling data access and the use of open data and big data

Clustering and other innovation support structures

Last among the PA-INNO agents is investing resources in the further advancement of BSR clusters, including knowledge clusters that are occasionally organised as a flagship within PA-INNO. Many BSR clusters have emerged out of one or more of the three different driving forces of innovation identified above (Market, Knowledge and Challenge-driven). However, as many innovation processes in such clusters revolve around academic institutions and large-scale firms, there is still a need to support the innovation process within SMEs. It is largely these SMEs that are at the heart of clusters and cross-clustering activities. Many BSR areas are organising their innovation support to SMEs through other structures, such as innovation support agencies, incubators, and science parks. There is also a need to further stimulate the development of the innovation support agencies and their institutional capacity. Examples of emerging areas for which it is important to further develop innovation support – sometimes as new flagship initiatives within PA-INNO – include the sustainable energy sectors, clean tech for sustainable urban and rural areas, accessible health care, and the experience economy. Of course, other clusters may also be pertinent to the PA-INNO Strategy's policy tools – e.g., clusters relating to ICT industries.

The main activities to be promoted under the PA-INNO are:
- Competence development and the sharing of knowledge and tools for cluster development,
- Creating incentives for cross-cluster collaboration on innovation,
- Linking cluster processes to smart specialisation strategies,
- Links between clusters and organisations as part of innovation support structures – e.g. between research technology organisations, incubators, and science parks at the level of macro-regional collaboration for innovation,
- Collaboration among innovation support organisations, including clusters, with the aim of improving their institutional capacity.

Comprehensive overview of Policy Area Innovation

The roles of PA-INNO

Enable shared learning

Create, strengthen and better utilise networks across BSR

Align resources and regulations

Join forces in common programmes or investments

Focus of PA-INNO

INNOVATION DRIVERS WITH AREAS FOR COLLABORATION

| Market-driven | Knowledge-driven | Challenge-driven |

CROSS-CUTTING THEMES & INNOVATION ENABLERS

Digitalisation | SME Internationalisation | Talent Management and Entrepreneurship

STRATEGIC POLICY INSTRUMENTS OF PA-INNO PRIORITY

Smart Specialisation Strategies | Test beds and innovation infrastructure | Clustering and other innovation support structures

Activities with output

TARGETS

Increased stakeholder and institutional capacity | Improved engagement through efficient use of networks and new networks | Concentration of funding and alignment of policies and regulations | Long-term commitment and joint funding and decision-making

Targeted results

CHANGE
A globally competitive position within
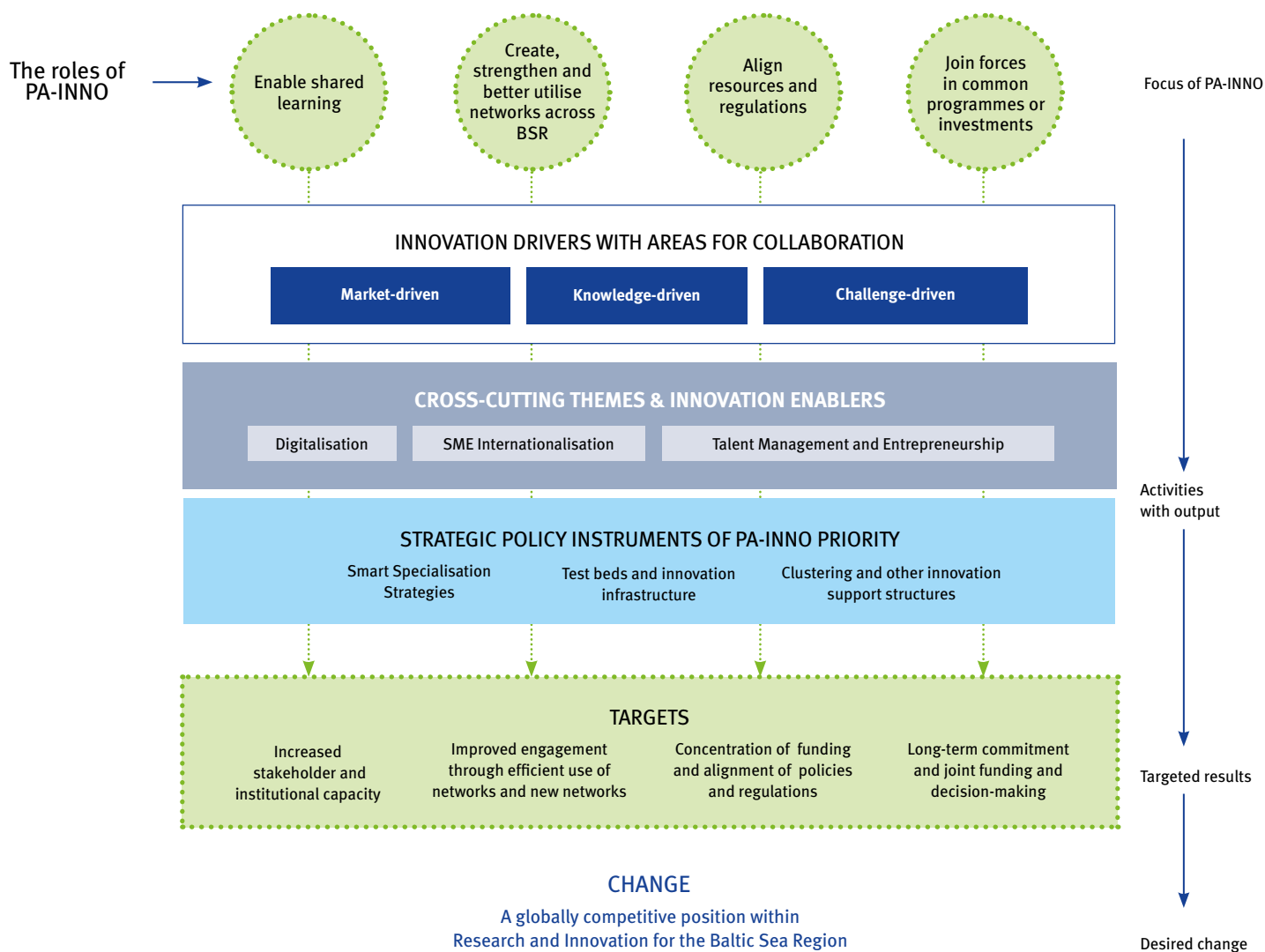Research and Innovation for the Baltic Sea Region

Desired change

Figure 5: PA-INNO comprehensive overview

The PA-INNO Strategy Guide needs to be well communicated within the EUSBSR, especially with regard to the scope of activities under the PA-INNO umbrella. This will help to identify potential synergies for collaboration with other policy areas. The Strategy Guide furthermore aims to be a guidance tool for external innovation actors and organisations.

The illustration above demonstrates the logic of PA-INNO. It suggests that the roles of PA-INNO, as agreed by the EUSBSR member states, are best explored jointly in a macro-regional context. The intention is to concentrate resources in order to achieve targeted results contributing to the desired change. The innovation drivers identified are intended to inspire and spur innovation activities within the BSR. These activities will help to develop innovative new cross-cutting solutions and new innovation enablers. In addition, the further utilisation and improved quality of the Strategic Policy instruments will enhance the BSR's competitive position globally.

norden

Nordic Council of Ministers

Ved Stranden 18
DK-1061 Copenhagen K
www.norden.org

EUSBSR
EU STRATEGY
FOR THE BALTIC
SEA REGION

POLICY AREA 'INNOVATION'

Interreg
Baltic Sea Region

EUROPEAN UNION

EUROPEAN
REGIONAL
DEVELOPMENT
FUND