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Input to the next programming period

Mapping of experiences accumulated in the implementation of the cluster projects and other relevant initiatives invited to the cluster meetings as well as identification of missing thematic areas

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Project partners mainly responsible for the elaboration of this document:



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1 Preamble

Between 2007 and 2013 sixteen projects have been funded under the priority “External and internal accessibility” in the Baltic Sea Region Programme. Those projects dealt with transport related issues like the development of transnational transport corridors, the improvement of road safety, greening transport or reducing emissions from maritime transport.

In 2011 the Baltic Sea Region Programme launched an instrument called cluster initiatives. The Programme supports four clusters in the following themes: energy, water, transport and innovation.

Under the auspices of the Baltic Sea Region Programme, eight projects joined the transport “Cluster: Sustainable, multimodal and green transport corridors”, combining their vast knowledge covering all aspects of sustainable transport development. Being a platform scaling the whole Baltic Sea Region and connecting all modes, the cluster cooperation will lay out the formula for a green BSR transport network. With this coherent concept they will take joint positions on future EU as well as macro-regional transport and regional growth policies.

Opportunities of the cluster co-operation

The transport cluster as the formal successor of the umbrella cooperation is a neutral arena to discuss further input to the MTAP process. Several cluster partners represent transnational projects that were in an early implementation stage at the time of delivery of the MTAP document. Presently, their findings and results are finalized or well advanced in order to be disseminated. In accordance with the cluster philosophy, such outcomes may be structured and generalised to serve the purpose of macro regional transport development and sustainable regional growth.

The MTAP is based on the green scenario, discussed thoroughly between the projects active in the umbrella cooperation. The scenario promotes well-coordinated public policies, positive market response and public acceptance in an attempt to improve sustainable growth as well as to increase socio-economic and territorial cohesion of the Baltic Sea Region. One of the instruments is a network of green and efficient multimodal transport corridors, which shall connect, cross and integrate different parts of the region’s territory.

The ideas of the green scenario and the network of sustainable, multimodal and green transport corridors have been incorporated in the cluster work and further processed e.g. in Output 2.2 (‘BSR green corridor benchmarks’). This liaison provides an additional opportunity to transform the project findings, such as transport greening solutions, into new policy actions in the MTAP or to revise/upgrade the existing ones.

Content of this report

This report contains a mapping of experiences accumulated in the implementation of the cluster projects and other relevant initiatives invited to the cluster meetings as well as identification of missing thematic areas.

In addition this report shall provide an input to the next programming period by comparing the findings with the currently proposed transport priorities in the new BSRP 2014 – 2020 and identifying missing thematic areas.

2 Screening of the eight individual cluster projects and invited initiatives

2.1 Short Overview about the projects and invited initiatives

Projects in the Cluster Cooperation

Amber Coast Logistics (www.ambercoastlogistics.eu)

The Amber Coast region with its natural hinterland, the Baltic States, Northwest Russia, Belarus and the Northern Ukraine, is one of the logistics regions with the greatest potential in Northern Europe. The transport flows have increased substantially in the past years. The number of logistics centres along the eastern and southern coast of the Baltic Sea is rising constantly. They form the foundation for a supply chain that allows logistics players to better balance flows of goods and adapt more quickly to market developments.

Nevertheless, the transport and logistics infrastructure in the southern and eastern Baltic Sea Region today is not adequately developed. Remote areas are often very difficult to reach. The logistics players are not networked. Due to this drawback, the service potential of the region is not being exploited – it remains hidden, just like amber.

This being the situation, the uppermost goal of Amber Coast Logistics is to support the development of multimodal logistics centres in the southern and eastern Baltic Sea Region and thereby improve the accessibility of remote areas.

Baltic Air Cargo Net (www.balticaircargo.net)

Baltic Air Cargo Net provides a complex analysis of the current situation on airfreight transport market in the BSR, associated infrastructural and operational needs of the regional airports, their prospects for future development and their possible role in the global network of air cargo supply chain

The project aims at enhancing the operating environment in the air cargo sector in the Baltic Sea Region and beyond, by providing complex measures that accommodate the demand for air transport in an optimal way to regional airfreight stakeholders. The air cargo sector will be planned and optimized for an optimal mix with other transport modes and relevant characteristics and economic realities.

Bothnian Green Logistic Corridor (www.bothniangreen.se)

The Bothnian Green Logistic Corridor project (BGLC) is following a single goal: to connect northern Scandinavia's raw materials with markets in the Baltic Sea Region and Central Europe. BGLC is working to develop the existing Bothnian Corridor into an efficient, reliable and green transport corridor. Doing so involves mapping the flow of goods and future needs, eliminating bottlenecks and other technical obstacles and introducing new, intermodal solutions for increased flexibility. The project is also examining regional and economic effects and mapping strategically important nodes. From north to south, many different stakeholders along the corridor are working closely together to design business models and pilots. Bothnian Corridor, the vital line from northern Scandinavia down to Mjölby and Helsinki, can be developed to become an efficient transport corridor from Narvik in Norway, through Sweden and Finland, down to Central Europe.

By working in close cooperation with cargo owners and private industry, BGLC wants to introduce new services necessary to satisfy the needs of the industries along the corridor.

The project is analysing consequences of improved or not improved infrastructure and what effect a green logistic system will have on regional economic growth when several mines will be opened and



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metal based industry plan to increase transport from their production units to customers across Europe.

BSR InnoShip (www.baltic.org/bsr_innoship)

Through international agreements of International Maritime Organization (IMO), EU Marine Strategy Framework Directive, HELCOM Baltic Sea Action Plan (BSAP) and the EU Strategy and Action Plan for the Baltic Sea Region, the Baltic Sea countries are obliged to take actions to reduce harmful atmospheric emissions and strengthen joint coordinated efforts to make the Baltic Sea a model area for clean shipping.

BSR InnoShip will address the common challenge of the Baltic Sea countries and the key maritime stakeholders in cooperating to minimize ship based air pollution, while aiming at optimizing competitiveness of the maritime industry. The project will promote new and innovative transnational approaches to mitigate the different needs and interests of the maritime sector and to ensure a level playing field for more sustainable and economically viable management of the Baltic Sea resources. The project will provide the needed knowledge and best practices for policy- and decision-makers in the development and joint implementation of national and transnational policies, strategies and concrete measures to implement the international low emission requirements.

East West Transport Corridors (www.ewtc2.eu)

The East West Transport Corridor (EWTC II) links Minsk, Vilnius, Klaipeda/Kaliningrad with Denmark (Esbjerg) via south Sweden and with Germany via Sassnitz. It includes several TEN-T ports, road and railway links, parts of the Nordic Triangle and Corridor IX B/D in Lithuania/Kaliningrad region. The EWTC is also part of the Northern Transport Axis. EWTC II is a follow up to the EWTC project completed in 2007.

The EWTC II project intends to develop the hubs as growth centers, strengthen railway concepts and improve accesses to hubs. The ambition is also to develop an innovative testing ground for a green corridor concept as described in the EU "Freight Logistics Action Plan" that could serve as a best practice case in the European perspective. It includes deployment of advanced ITS services as well as development and testing of an information broker system. The long term goal is to develop the EWTC to an efficient 'green' transport corridor able to match European policies and market demands for growing freight transport.

Rail Baltic Growth Corridor (www.rbgc.eu)

The Rail Baltic Growth Corridor project (RBGC) promotes transport policies for the development of multimodal logistics and modern railway infrastructure in Eastern BSR. The main focus is set on improving passenger mobility & freight transportation along RB route. Further, the project is organizing multilevel dialogue about transport policies in BSR countries.

BGC aims to improve the competitiveness and accessibility of BSR cities and regions by increasing their interaction and collaboration. RBGC creates a cooperation platform that observes the needs of transport sector and its customers in line with green growth corridor principles. RBGC is linked to the TEN-T Priority Project No. 27 'Rail Baltica'.

Scandria (www.scandriaproject.eu)

The Scandinavian-Adriatic Corridor for Innovation and Growth provides the shortest connection between Scandinavia and the Adriatic Sea along the divide between Eastern and Western Europe. It provides freight transport capacities to relieve overloaded Western European Transport Axes and

accelerates cohesion between Western and Eastern Europe. Scandria is committed to the ideas of a “Green” Corridor of innovation and sustainable growth. Its main objectives are:

1. to increase the infrastructural efficiency for passengers and freight,
2. to improve the accessibility of regional economic potentials by activating new value-added chains and innovative, process-optimised logistic solutions.
3. To build a network of political and economic stakeholders for the corridor’s development.

These goals are reflected in the three main thematic pillars:

Spatial Quality and Improving Accessibility

Scandria in the North and SoNorA in the South as projects strongly supported the two layer concept of the TEN-T procedure. It was and it is crucial for cohesion and economic strength of EU to create and to implement a concept of a consistent system of transport between multifunction nodes.

The goal is to integrate metropolitan regions and to promote and to shorten train travel.

Greening Transport by Innovative Transport and Logistics

An important aim was to advance innovation in technology in order to further environmentally friendly and green logistic concepts with practical and relevance and for optimizing spatial structures.

Ways for good spatial structures, optimized itineraries as well as innovative logistics and optimized energy concepts were shown within the projects.

Economic Impulses by Motivating Economic Interests

Scandria strives to motivate economic interests and to discover regional economic potentials by emphasizing the advantages of the north-south-axis from the Baltic Sea to the Adriatic.

In order to innovative logistics parts of the Scandria project (block trains) and the add on project IloTech also new fields of economic activities were offered.

TransBaltic (www.transbaltic.eu)

TransBaltic addressed two issues of common concern for the BSR, namely: inward oriented transport solutions in individual Baltic Sea countries and fast growing freight volumes - mainly in the road transport. As diagnosed in the BSR Programme, inefficient transnational components make the transport networks and logistic patterns of the countries not compatible and not building a consistent transport system in the area. Such transport deficiencies are regarded by enterprises and transport operators as one of the most prominent barriers to economic prosperity and growth in the BSR.

Transport performance deficiencies are regarded by the business stakeholders as one of the most prominent barriers to economic prosperity and growth in the Baltic Sea Region (BSR). As underlined in the EU Strategy for the Baltic Sea Region, appropriate public policy response is needed to increase the accessibility of territories and the quality of connections, and to master the increasing flows in and across the Region.

The overall objective of TransBaltic is to provide regional level incentives for the creation of a comprehensive multimodal transport system in the BSR. This is to be achieved by means of joint transport development measures and jointly implemented business concepts.

The project wishes to address this key challenge by complementing actions taken by the national authorities within the framework of the EU Baltic Sea Strategy. The envisaged action plan will contain measures, which will address internal connectivity, interoperability and intermodality constraints of the Baltic Sea Region from the sustainable regional development perspective. The plan will also feature regional preparedness measures for the increasing intercontinental transport flows to unlock investments serving better external accessibility of the Region.

Invited initiatives

CETC-ROUTE65 (www.cetc.pl)

The Central European Transport Corridor (CETC) ROUTE65 is an initiative striving for lasting regional cooperation as a means to revive economies of member regions, increase employment, improve the quality of natural environment and living conditions of its inhabitants.

CETC-ROUTE65 is aiming to ensure the compatibility of transport infrastructure of the entire Corridor region in order to reduce development barriers of new transport technologies in various regions of the CETC-ROUTE65 area. By that a promotion and development of intermodal transport links as well as stimulating efforts to transfer freight from road to multi-modal, sea – land connections, which are more environment and people friendly is targeted.

The project aims to develop a green corridor focusing on co-modality, environment, innovation, economic growth and regional cohesion.

GreCOR (www.grecor.eu)

Green Corridor in the North Sea Region (GreCOR) will promote the development of a co-modal transport corridor in the North Sea Region. Important in this collaborative approach, is the focus on secondary networks and the hubs, and the regional hinterland around the Green transport corridor Oslo-Randstad from a co-modal perspective.

The main idea of the project is to influence the green corridor consisting of infrastructure and transport development in the area. Furthermore, GreCOR aims to:

- Improve knowledge about the logistics needs and conditions in the corridor
- Test innovative logistics solutions through the development of pilot projects
- Promote the development of sustainable transport in the North Sea Region
- Focus on the role of the hubs and the regional hinterland
- Understand and develop the logistics utility creation in a green corridor taking a co-modal perspective.

GreCOR Aims to develop the first green corridor in the North Sea Region taking into account results and experiences from existing initiatives in other regions.

Green Corridor Brenner (www.bbtinfo.eu/de.html)

The project's main aim is to avoid unnecessary losses of electrical and caloric energies by applying new techniques and increase their efficiency. This is demonstrated at the Brenner corridor (Munich - Verona) by partner from three member states involved (Austria, Italy and Germany).

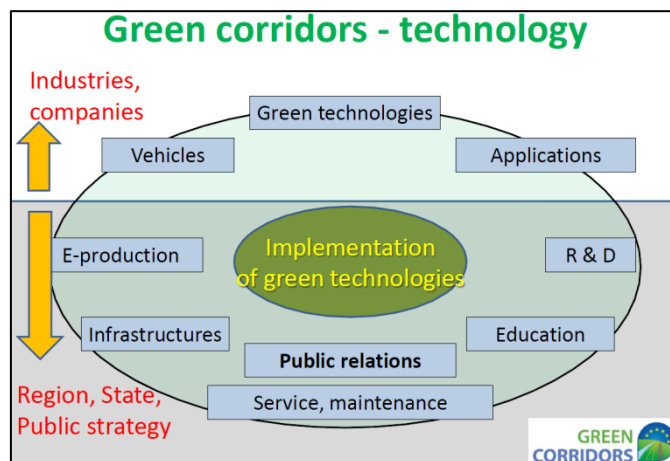
Green Corridor Brenner is investigating and demonstrating on a holistic perception, with the following steps for real actions along the corridor:

1. Energy saving, respectively reducing unnecessary losses. It requires analysis of the weak points on already existing structures and infrastructures.
2. Increasing the energy efficiency of techniques, structures, plants, buildings. Needs continuous education, research and development.
3. Substitute the fossil energies with renewable ones from regional origin. Local available sources have absolute priority.

The project therefor definitely has pilot character in Europe (testimonies of feasibility of real actions against climate change). Some examples of actions are the following:

- Railroad: use of renewable energies, optimize old energy structures, use of energies produced from the new track

- Highway with renewable fuels (hydrogen), supply infrastructures with renewable energies
- Initiatives in energy saving, increase efficiency and use of renewables in cities and municipalities along the 'Green Corridor', ClimaHouse, CO2-neutral cities
- Energy networking between regions and stakeholders in the Corridor



Source: Dr. W. Huber in his presentation: Green Corridor Brenner, Brussels 22nd Nov. 2011.

Nordic Logistic Corridor Cooperation (www.nordiclogisticcorridor.com)

The Nordic Logistic Corridor is an existing transport and logistics route connecting Norway, Sweden and Finland. All three nations have made extensive regional investment in infrastructure, for example logistics areas and ports, resulting in shortened road transport routes, excellent access to intermodal transport (the use of multiple forms of transport for freight and passengers) and modern cargo handling solutions.

This, in turn, helps stimulate better conditions for growth within trade and industry. However, in order to create attractive transport solutions further investment is necessary alongside the implementation of measures aimed at boosting capacity. All in all, it's a case of creating better conditions for goods transit in the northern region via Norway, Sweden and Finland, on to Russia and the other northern regions of the EU area.

The project Nordic Logistic Corridor has strong environmental objectives, and will promote accessibility within the EU. Due to rising fuel prices and political governance within the EU, the project dovetails perfectly with the aspiration to move traffic from road to railway and maritime shipping.

The objective is to develop the route into an efficient, viable, environmentally friendly transport alternative for the regions in Norway, Sweden and Finland, thereby creating the conditions for continued transportation towards Russia and on to the EU area.

The corridor also opens up the possibility of freight forwarding to North America, China and Japan, with the added benefit of dramatically reduced lead times.

Super Green (www.supergreenproject.eu)

The purpose of SuperGreen is to promote the development of European freight logistics in an environmentally friendly manner. Environmental factors play an increasing role in all transport modes, and holistic approaches are needed to identify 'win-win' solutions. SuperGreen will evaluate a series of 'green corridors' covering some representative regions and main transport routes throughout Europe.

The general objective of the SuperGreen project was to support the development of sustainable transport networks by fulfilling requirements covering environmental, technical, economic, social and spatial planning aspects. The specific objectives of the project were:

- Giving overall support and recommendations on green corridors to EU's Freight Transport Logistics Action Plan.
- Conducting a programme of networking activities between stakeholders (public and private) and ongoing EU and other research and development projects to facilitate information exchange, research results dissemination, communication of best practices and technologies at a European, national, and regional scale, thus adding value to ongoing programmes.
- Providing a schematic for overall benchmarking of green corridors based on selected KPIs, also including social and spatial planning aspects.
- Delivering a series of short and medium-term studies addressing topics that are of importance to the further development of green corridors.
- Delivering policy recommendations at a European level for the further development of green corridors.
- Providing the Commission with recommendations concerning new calls for R&D proposals to support development of green corridors.

2.2 Main topics addressed by the participating projects and initiatives

Analyses clearly showed that most projects have large ambitions in developing and/or greening transport corridors. While having analysed the taken up topics by projects and invited initiatives, a concentration on the following thematic headlines was identified (for details compare the table):

1. Corridor planning and development
2. Sustainability (greening aspects)
3. Economic development
4. Supply Chain Optimization
5. ICT
6. Education and Common Learning Actions

However, projects' focuses differ and include e.g. governance aspects, development and forwarding of recommendations to policy makers, optimized supply chain and modal shift to more environmental means of transport, identification of bottlenecks, ICT tools to support shifting of cargo to barge and rail as well as knowledge transfer and training.

A holistic perception in actively greening a corridor is given by the project "Green Corridor Brenner" which can be considered as a state-of-the-art example. Same is valid for the "Super Green" project concerning the developed KPIs to benchmark green corridors or the "SCANDRIA" project when it comes to the governance of corridors and multi-level cooperation.

Listing of Taken-Up Topics by the Eight Projects and Invited Initiatives (Main Points)

		Projects in the Cluster Cooperation				
Project	Amber Coast Logistics www.ambercoastlogistics.eu	Baltic Air Cargo Net www.balticaircargo.net	Bothnian Green Logistic Corridor www.bothniangreen.se	BSR InnoShip www.baltic.org/bsr_innoShip	East West Transport Corridors www.ewtc2.eu	
Taken up Initiatives by Cluster	Corridor planning/ development	Optimisation of hinterland connections from ports.		A methodology on how to manage the Bothnian Corridor and its extensions in a larger perspective will be developed. Identification of the most important strategic freight and passenger nodes in the BSR keeping in mind the latest TEN corridor planning.		Green Corridor Manual contains a set of recommendations and guidelines on how to develop and implement a Green Corridor concept.
	Sustainability (greening aspects)			An action plan on how to upgrade the Bothnian Corridor to a Green Corridor will be developed. BGLC will result in the Bothnian Green Transport Strategy	BSR InnoShip project efforts to make the Baltic Sea a model region for clean shipping. InnoShip partners collaborate in the development and adoption of innovative low emission technical solutions.	A manual of how to buy, sell, and plan eco-friendly transports, which can be used by different customers has been developed.
	Economical development	Identification of macroeconomic development potentials.	BSR Transport Policy should recognize and accept the importance of the Road Feeder Service or "Flying Truck" concept much stronger than it does today. This concept might be the only realistic concept for remote and / or regional airports when they are trying to access to the air cargo market.	By working in close cooperation with cargo owners and private industry, BGLC will describe new services for actors along the corridor. During the project, BGLC is going to go from "contacts to contracts" by showing good examples of new market and business models.		
	Supply Chain Optimisation	Optimisation of border crossing transport.		Mapping of infrastructure performance for analysis of missing links for unit trains. Capacity analysis of the Iron Ore Line (Malmbanan). Step-by-step capacity improvements to meet the combined demand forecast for 2020 are being analyzed.		Proposals have been developed on how to remove bottlenecks in port hinterlands, intermodal logistics centres and in hub connections.
	ICT	New web service platform that enables shippers and logistic centers, freight villages and ports in the region to better present their services available on the short term.	Innovative air cargo transport information system. Improved usability, functionality and accessibility of the ICT network in the air-cargo sector the capacity of regional airports increases		Creation of a web-based investment decision support tool (for the innovative low emission technical solutions) as part of the best practice manual.	An innovative IT-based "Information Broker System" for transport and traffic information which will increase efficiency and reduce the environmental impact
	Education/ Common Learning Actions	Involvement of the business sector to establish joint logistic activities. Learning processes between stakeholders (obstacles and challenges of border crossing transport). Dissemination and knowledge exchange (private sector and policy level) + staff exchange programme.		Study visits.	Policy- and decision-makers are provided with knowledge and best practices to develop and jointly implement both national and transnational policies, strategies and concrete measures to implement the international low emission requirements for the Baltic Sea.	
	Other			Cost-benefit analysis of investments and their expected outcomes.		

proposed key challenges to be covered

Project	Rail Baltic Growth Corridor www.rbqc.eu	Scandria www.scandriaproject.eu	TransBaltic www.transbaltic.eu	
Taken up Initiatives by Cluster	Corridor planning/ development	<p>The Rail Baltic Growth Strategy has been set-up.</p> <p>Rail Baltic has become a classic case of for multilevel governance. The tripod structure of the Rail Baltic process consists of the EU authorities, inter-ministerial Rail Baltic Joint Venture, and Rail Baltic Growth Forum representing cities and regions.</p>	<p>In autumn 2007, ministers responsible for regional development of the Eastern German Federal States signed the Berlin Declaration demanding "an attractive transport infrastructure as well as internationally competitive and efficient means of transportation within the Scandinavian- Adriatic Development corridor". In 2011 the cooperation was further confirmed by the Declaration of the Development of Innovation and Growth along the corridor. Among others the signed parties agreed to contribute to the SCANDRIA Action programme.</p> <p>Establishing a multi-level cooperation platform (SCANDRIA Alliance), including stakeholders from policy level, a EU coordinative body and work groups at expert level.</p>	<p>Macroregional Transport Action Plan with infrastructure, logistics and transport capacity measures addressing pan-Baltic connectivity, interoperability and intermodality problems from the sustainable regional development perspective.</p> <p>Traffic forecasts and scenarios for particular TEN-T and secondary transport corridors in the Baltic Sea Region – as a decision support basis for regional and national transport investments</p>
	Sustainability (greening aspects)	<p>The vision shifts a major part of freight transport from road to rail, and this structural shift would mean stronger greening of transport than anywhere in Europe. The partners of RBGC have committed themselves to contribute to the realisation of this ambitious vision, which is based on growth and sustainable transport.</p>	<p>Strategic corridor functionality to compose a "Common strategy of Corridor Functionality" to improve the performance of the corridor, to improve the linkage of economic potentials, to take concerted action in regard to political issues and to organize transport environmentally-friendly.</p> <p>Scandria Green Corridor Strategy defining major pillars for greening transport in the Scandria Corridor.</p>	
	Economical development	<p>Besides the greening effect, Rail Baltic when fully operationalized would lower transport costs and make local production far more competitive in the European market. Examples of rail Baltic's business potential are highlighted during the project.</p>	<p>Involvement of a number of business stakeholders as well as chambers of commerce and industry.</p> <p>Close co-operation with business stakeholders for assessing their needs towards the Scandria Corridor. Support of innovative developments related to sustainable transport (e.g. biofuels, e-mobility, innovative transshipment technologies).</p>	
	Supply Chain Optimisation	<p>The vision of Rail Baltic is empowered by its potential ability to bring the Eastern Baltic Sea Region to the same level of interconnectivity in transport as the other parts of EU have already reached.</p>	<p>Development of innovative logistics solutions within the corridor to compose a "Common strategy on logistics business development.</p> <p>Development of innovative transshipment technologies.</p> <p>Development of several intermodal train concepts, support of Motorways of the Sea in the Scandria Corridor</p>	<p>Guidelines on BSR-specific transport intermodality and interoperability solutions (BSR transport blueprints) – which would test and verify EU transport and cohesion policy proposals.</p> <p>Manual and handbook on empty freight reduction – to decrease space requirements and road/rail haulage cost in container traffic. Feasibility studies and implementation plans for dry ports and for port-bound road traffic telematics.</p>
	ICT	<p>Logistics centre tool INIS (Intermodal Node Information System for the Rail Baltica Growth Corridor).</p> <p>Mobility guide for travellers (online: http://www.iu-info.de/fileadmin/user_upload/07_Download/RBGC/Mguide.html)</p>		<p>ICT toolbox (a web-based tool to help business users, especially SMEs, plan optimum intermodal door-to-door solutions for the transport of cargo).</p>
	Education/ Common Learning Actions		<p>Improve knowledge of transport operators for comodal/intermodal transport solutions.</p>	<p>Training methodology for a competence management system in harbour logistics.</p> <p>Business plans for, inter alia, the empty container management and for the ICT toolbox (a web-based tool to help business users, especially SMEs, plan optimum intermodal door-to-door solutions for the transport of cargo).</p>
	Other	<p>Setting up an inter-ministerial Rail Baltic Task Force</p> <p>Two pilot activities to define a chain of logistics centers and to develop a multimodal travel planner for passengers</p>	<p>Development of recommendations for the Scandria Action Plan, besides others this includes improvement of:</p> <ul style="list-style-type: none"> - rail operation (standards and train management across the countries) - establishing of a network of certified open access terminals - development of biogas infrastructure - Governance of corridors 	

		Invited Projects/Initiatives				
Project	CETC-ROUTE65 www.cetc.pl	GreCOR www.grecor.eu	Green Corridor Brenner www.bbtinfo.eu/de.html	Nordic Logistic Corridor Cooperation www.nordiclogisticcorridor.com	Super Green www.supergreenproject.eu	
Taken up Initiatives by Cluster	Corridor planning/ development	Development of the CETC-ROUTE65 green corridor as reference axis to actual EU transport and port policy.	Aims to develop the first green corridor in the North Sea Region. Create a common strategy on how to develop the green corridor between Oslo and Rotterdam	Holistic approach by forming a corridor to a green corridor (transport, private and public actors covered), e.g. local green energy production for local consumers (private and business). Increasing of energy efficiency and avoidance of energy wasting.	Developing the corridor into an efficient, viable, environmentally friendly transport alternative for the regions in Norway, Sweden and Finland, thereby creating the conditions for continued transportation towards Russia and on to the EU area. The ambition is to produce a coordinated joint standard for the transport system (for both freight and passengers) along the Nordic Logistic Corridor within 20 years. The nations involved are continually working in an integrated way towards developing a sustainable route, which is included in the TEN-T and the Norwegian backbone network.	Policy recommendations to the European Commission concerning the formulation and harmonisation of policies on Green Corridors.
	Sustainability (greening aspects)	This project understands „sustainable“ as being a holistic approach covering following perspectives: 1. Environmental 2. Economic 3. Technical 4. Social		Rail - Renewable energies for traction, signals, illumination, ventilation and geothermal energies from galleries used for civil applications - More efficient electric grids, energy efficient stations Highway - Hydrogen refill stations along the highway, production of green H2 and refill stations at exits: accessible from highway and outside - Battery recharging facilities, natural gas refill stations - Brenner: electricity, district heating, hydrogen, all from wind energy - Shifting heavy traffic from road to rail via transfer terminals - Noise protection walls with photovoltaic panels Regional traffic sectors - Local traffic logistics, promoting and extending public transport - Organizing and de-carbonize: work traffic etc. - Touristic traffic, park & ride, e-bikes, special offers and logistics Civil initiatives - Low energy buildings of all categories by applying ClimateHouse criteria - Promote local available renewable energies and local smart grids - District heating with local biomass, biogas and cogeneration in Sterzing, Freienfeld, Brixen industrial zone: Energy autarky,	Shift traffic from road to railway and maritime shipping.	Benchmarking of Green Corridors Based on a total picture of KPIs like energy consumption and emissions, operational aspects and SCM issues, external costs (including social and spatial planning aspects), infrastructure costs and internal costs: identification of areas and candidates for improvement (i.e. bottleneck). Identification of Green Technologies with the purpose of making corridors greener and solving the identified bottlenecks (>200 technologies identified, 60 chosen) in the following categories: - engines and propulsion systems; - fuels and energy sources; - cargo handling and transfer technologies; - heating and cooling technologies; - innovative loading units and their treatment; - vehicles; - navigation technologies; - best practices of technologies integration
	Economical development	Supporting economic growth of involved regions in a sustainable way, which will translate into an increase in employment and an improvement in the quality of natural environment and quality of life for inhabitants.				
	Supply Chain Optimisation					
	ICT		Development of the PTS Marketplace tool. On the supply side the marketplace delivers better insight in and access to multimodal transport possibilities to SME companies who offer cargo. On the demand side PTS will realize a more efficient use of available cargospace (e.g. LCF, FCF etc.) in short sea shipping by enlarging the amount of guaranteed demand in favour of peak and urgent shipments who are largely transported by road at the moment. The real time management of supply and demand on the marketplace will lead to more efficient use of multimodal transport.			Defined and exploited the role of Information and Communications Technology (ICT) flows towards the goal of greener transport to allow to identify win-win solutions and best practices based on implementation of methodologies that achieve a cost-effective utilisation of transport resources on the one hand, and a green supply chain management on the other.
	Education/ Common Learning Actions		PTS marketplace enables SME companies to gain knowledge and share experiences about Multi Modal transport opportunities. // Best practice exchange of intermodal hub development.			
	Other	Cross border cooperation and trans-national planning		4 pilots represent different perspectives on logistics and transportation, on corridor development and its implementation: more efficient usage of existing infrastructure, ITS support of collaborative logistics and new business models supporting cooperation between a number of actors.		Recommendations for future R&D programmes.

2.3 Comparison with the currently proposed key challenges to be covered the new BSRP 2014 – 2020

The Baltic Sea Region Programme held a thematic programming workshop “Transport” on 24th April 2013 in Riga. During this workshop following proposed key challenges were presented to be considered by the Baltic Sea Region Programme 2014-2020:

Key Challenge 1 - Governance of transport corridors.

- Regions’ specific characteristics require own transport corridors
- Governance models to steer the corridor development
- Integration of TEN-T into the territory's development
- Bridging TEN-T and BSR transport networks

Key Challenge 2 - Increasing interoperability of transport modes.

- Regional transport networks and modes are not fully interoperable
- High transportation cost
- Increase transportation efficiency

Key Challenge 3 - Decarbonisation of the transport systems.

- All transport modes of mass transportation are major contributors to CO₂ emissions
- More efficient transport solutions and modes as well as new fuels

Key Challenge 4 - Accessibility of remote areas (also demographic change).

- The Baltic Sea Region features some of the least accessible areas in the European Union
- Long distances to European core markets
- Distant extraction sites for raw materials, remote and sparsely populated settlements
- Specific transportation needs of ageing society

Key Challenge 5 - Developing the advantages of the port and shipping sector.

- Well-developed shipping lines combined with port and port-hinterland infrastructure is an asset
- Well-coordinated activities within the port and shipping sector
 - Increase flows of goods and passengers
 - Help to open new transport and business opportunities with and on non-European markets

Key Challenge 6 - Mitigate environmental consequences of shipping.

- Heavy shipping has negative effects on the marine environment: air emissions, illegal and accidental discharge of oil, hazardous substances, other wastes
- Introduction of alien organisms via ships ballast water and hull is a continuous danger

A key challenge for which the added value of transnational cooperation needs further justification is “improved urban mobility”.

Additionally it was indicated that there might be a cross-cutting challenges. The decarbonisation topic may form a part of other thematic priorities.

3 Identification of missing thematic areas in the suggested new operational programme of the Baltic Sea Region 2014-2020 according to the proposed key challenges

The identified key challenges by the BSRP listed in chapter 2.3 give a very good picture of future hot topics the transport sector will face and needs solutions for. Within the following paragraphs some areas which missing attention are highlighted in order to support the BSRP in forming an attractive programme to push forward the BSR as a sustainable region covering the environmental, economic, technical and social perspective.

Governance

It is pleased to see that TEN-T developments have an influence and will play a role in the new BSR programme as well. While most programmes concentrate on the primary network there is a chance that the BSR will find its niche in supporting regions connecting their secondary/tertiary networks to TEN-T main corridors.

Possible actions:

- Supporting regions connecting their secondary/tertiary networks to TEN-T corridors, including questions of demographic change (reaching remote and sparsely populated areas)
- Effective future actions (cases/initiatives) on TEN-T core and comprehensive network development in the BSR, thus making sure that the BSR is well-positioned for responding to the main requirements of EU's transport initiatives

Transport

Greening of corridors and transport chains is important. Therefore it is definitely acknowledged that the key challenges listed in chapter 2.3 indicate a further concentration on this aspect. However, the efficiency of transport systems shall be fundamentally included as well in the new programme, which contains a well-functioning and interaction between all modes of transport. An efficient transport system is the backbone of international trade and welfare in the BSR. This might imply strengthening road transportation (especially city logistics and last-mile transportation) in specific circumstances.

A shift of cargo on more sustainable transport modes can only be realised, if it is economically attractive for shippers. Ecological aspects are mostly not pivotal, which implies that a more efficient and by that competitive transport system/chain is the key factor for a shift of cargo to more environmental friendly modes of transport. Barge/inland shipping services as well as short sea shipping might play a crucial role if explicitly promoted in the programme.

Urban mobility is an important factor to study and to improve as well, which includes city logistics. The on-going trend of migration into cities results in logistical problems as infrastructure is not easily extendable (costs are high and space is rare or not available). Additionally the aging society plays a role; it will demand and make use of its mobility needs.

Possible actions:

- Actions strengthening capacity, efficiency and quality of intermodal nodes and transport chains (incl. last-mile transportation)
- Actions improving the hinterland connections of BSR sea ports in order to secure a sustainable and efficient transport chain
- Actions exploring the potentials of inland waterways as hinterland link for sea ports and other transport hubs for improved access to TEN-T network
- Actions to improve urban mobility

Strategic outlook

Since the EU Strategy for the Baltic Sea Region (EUSBSR) has been put into action, it is a unique starting point for the BSRP by the fact that it is the first macro-regional strategy in Europe. The BSRP should make use of this important instrument to develop the region further.

As the concept of core network corridors will be decisive in future transport policy, especially for transnational transport links, the BSR programme should concentrate and deliver valuable input especially concerning the connection of core network corridors to regional transport networks and regional development. This might be emphasized at appropriate place in the operational programme.

Therefore the BSR Programme should take into account developments which have an impact on the BSR like the TEN-T network or the White Paper on Transport.

The BSRP could be a laboratory to implement the EU White Paper on Transport. Possible actions:

- Actions which demonstrate a greening of transport (seed/experimental actions) in practice
- Actions supporting testing, verification and/or dissemination of business models and policy conclusions
- Actions which include all perspectives of sustainability (environment, economy, technology and society)
- Actions combining the macro and corridor approach (sustainable multimodal transport system and network of transport corridors)
- Actions which operationalize the “EU Strategy for the Baltic Sea Region” (EUSBSR)
- Actions which show the effect of infrastructure measurements on the regional Added Value

Following the core network corridor logic, which exceeds borders of the BSR programme, administrative levels and sectors, the BSRP 2014-2020 should provide mechanisms that assure cooperation with neighbouring program areas or across different program priorities to complement core network corridor development from a regional perspective.

Mechanisms for information exchange should be installed right from the programme start to improve the interface between BSRP 2014-2020 funded projects, EUSBSR PA Transport and other relevant funding programmes as well as initiatives. This might influence project activities as possible synergies could get addressed.

The continuation of the cluster initiative in future programmes is strongly supported as it is a meeting place for projects. It is needed from the outset of the new programme, as it turned out being very valuable and effective in respect of exchanging information, learning from each other, making use of different networks and pushing forward results and solutions. In our opinion clusters can be of enormous benefit for the projects, the BSRP and the European Union.

Involvement of the business sector

The viewpoint of private companies is mostly lacking e.g. in respect of corridor development, planning and implementation. Why and how the business companies should start using the transport corridor and create services for cargo owners needs to be placed. Different business models for potential 3Mode transport corridors were studied by J. Lehtinen and A. H. Bask¹ which give some valuable input as food for thought.

The BSR Programme can act as lighthouse initiative in embedding private owned companies actively in projects. The reductions of administrative burdens are playing the on the one hand the same important role in order to get the business sector involved, as on the other hand explicit and not changing rules and regulations.

¹J. Lehtinen, A.H. Bask in: Analyses of business models for potential 3Mode transport corridor, Journal of Transport Geography 22 (2012), p. 96-109, in: http://www.rbqc.eu/media/articles/inis_report.pdf, 27th Aug. 2013.