4.0
“Logistics Business Development Strategy”
Baltic Sea Region Project #026
“Scandinavian-Adriatic Corridor for Growth and Innovation”

<table>
<thead>
<tr>
<th>Work Package</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>4</td>
</tr>
<tr>
<td>Responsible Partner</td>
<td>Ministry of Energy, Infrastructure and State Development Mecklenburg-Vorpommern</td>
</tr>
<tr>
<td>Author</td>
<td>Project partners 1, 2, 6, 7, 10, 17,19 and Baltic Institute of Marketing, Transport and Tourism</td>
</tr>
<tr>
<td>Version</td>
<td>10</td>
</tr>
<tr>
<td>Date</td>
<td>01.06.2012</td>
</tr>
<tr>
<td>Status</td>
<td>final</td>
</tr>
</tbody>
</table>
Index

1 Introduction.................................................................................................................................3
2 Description of the corridor: Scandria – living logistics today..................................................5
2.1 Scandria corridor’s infrastructure .........................................................................................5
2.2 Scandria corridor’s position in Europe’s Freight Transport......................................................7
2.3 Logistics competence..............................................................................................................7
2.4 Industrial potentials ..............................................................................................................8
2.5 Comparison with other corridors ..........................................................................................10
2.6 Green freight transport corridors .........................................................................................11
3 Scandria WP 4 results................................................................................................................12
3.1 Case studies: Scandria – jointly improving logistics services ................................................12
3.1.1 Hubs and Gateways..........................................................................................................12
3.1.2 Sea to Sea.........................................................................................................................13
3.1.3 Unit trains .......................................................................................................................16
3.1.4 Branch Logistics..............................................................................................................23
3.1.5 Synergies between the case studies .....................................................................................27
3.2 Marketing campaign: Scandria – drawing attention of customers ........................................27
4 Logistics Strategies in the Scandria project area........................................................................29
4.1 Common objectives and features of national and regional logistics strategies .......................29
4.2 Denmark..................................................................................................................................30
4.3 Finland....................................................................................................................................32
4.4 Germany.................................................................................................................................34
4.5 Sweden...................................................................................................................................36
5 Scandria and the White Paper goals .........................................................................................40
6 How to develop logistics in the Scandria corridor ....................................................................43
6.1 The Vision.............................................................................................................................43
6.2 Goal 1: Improved competitiveness and marketing of corridor transport services in relation to competing corridors.................................................................44
6.3 Goal 2: Development of logistics “value-added services” .......................................................47
6.4 Goal 3: Reduced climatic and environmental impact – make Scandria a “green freight transport corridor”.......................................................................................50
6.5 Goal 4: Promotion of innovative transport technologies ........................................................52
6.6 Goal 5: Improved competitiveness of rail and combined transport relative to road transport ......55
6.7 Goal 6: Higher logistics competence and availability of well-trained logistics workers...........58
1 Introduction

Scandria is a European project dealing with the northern part of the Scandinavian Adriatic corridor – or in short: the northern Scandria corridor. This corridor from Scandinavia via Eastern Germany to the South is the shortest connection between the Adriatic Sea, Central Europe and Scandinavia. It links 93 million people, nine capital cities and several metropolitan regions. The corridor offers opportunities for time sensitive cargo from Asia or the Mediterranean, taking the direct way via the Adriatic ports.

The Scandria project is co-financed by the Baltic Sea Region Programme 2007-2013 (“Interreg IV B BSR”, http://eu.baltic.net/) from June 2009 to August 2012. 19 partners from Denmark, Norway, Sweden, Finland and Germany are working together for promoting a green and innovative transport corridor. The main geographic focus of the project is from Stockholm and Oslo via the Øresund region to Berlin.

Content-wise, the Scandria project is working with transport infrastructure (work package 3), logistics (WP4) and broader issues of innovation and cooperation (WP5). The work in WP4 (Innovative Logistics Solutions) entails case studies and marketing, with the overall goal to enhance and promote logistics business along the Scandria corridor. For attracting new businesses, a stable, efficient, modern and sustainable logistics system needs to be established and the marketing activities have to be increased. This development will be in accordance with the European “Green Freight Transport Corridor” concept.

This report as the main tangible output of WP4 is called the Logistics Business Development Strategy. It will summarize regional logistics strategies within the corridor, supplemented with knowledge gained from the case studies and the marketing campaign. It also marks the end of the Scandria project activities and shows a way for corridor development after 2012.
4.0 “Logistics Business Development Strategy”
Baltic Sea Region Project #26

Map 1: Scandria corridor logistics infrastructure

Source: Own depiction based upon ESPON Final Report, Eurostat (2011) and Ranking of European Freight, performed by Deutsche GVZ-Gesellschaft (2010).

Legend
- Scandria transport network
- Scandria core network
- Scandria ferry links
- Scandria supplementary network
- Links to neighbouring transport network
- Intercontinental sea links
- Terminals
- European Top 10 inland terminals
- Further relevant inland terminals
- Relevant Sea Ports
- Major international airports

Metropolitan regions

* TEN-T PP#1, #6, #11, #12, #20, #22 + missing link Berlin–Malmö
** According to Ranking by Deutsche GVZ-Gesellschaft (2010)
*** In 2010 passenger in 1000 (Eurostat 2011)
**** In 2010 passenger in 1000 (Eurostat 2011)
2 Description of the corridor: Scandria – living logistics today

2.1 Scandria corridor’s infrastructure

Map 2 shows the corridor’s major transport infrastructure – based on the TEN-T network from the EU document com (2011) 650, 19.12.2011. A Scandria study called “basic description of corridor functionality”, done by WSP Analysis & Strategy¹, analyzed the corridor infrastructure in detail. According to this report, the corridor has generally a good infrastructure standard. Most major roads are motorways with at least four lanes. Most of the railway network is electrified and double tracks are very common. A wide offer of ferry lines gives plenty opportunities to cross the Baltic Sea. Major cities are almost all connected by flight routes. There are some shortcomings, but even those are being dealt with. E. g. the railway between Rostock and Berlin will be upgraded to a maximum speed of 160 km/h.

According to a Scandria study conducted by the University of Applied Sciences Wildau², the corridor still has free capacities. The potential for freight flows along the Scandria corridor is higher than the current usage.

With many ports (e. g. Rostock, Trelleborg, Malmö/Copenhagen, Gothenburg) and metropolitan regions (e. g. Øresund region, Berlin, Oslo, Stockholm) the Scandria corridor offers a wide variety of logistic centers. There is also an outstanding offer of logistic services. For example, numerous RoPax and RoRo³ ships depart from the Baltic Sea ports within the Corridor, including the railway ferries Rostock-Trelleborg and Sassnitz-Trelleborg.

¹ WSP ANALYSIS & STRATEGY / FRITHIOF, M. & STRÖMBLAD, E. (2010): Basic Description of Corridor Functionality
² UNIVERSITY OF APPLIED SCIENCES WILDAU, MICHALK, P. & MEIMBRESSE, B. (2010): Basic Description of Corridor Functionality - Potentials of Logistic Transport Systems
³ “Roll-on/roll-off (RORO (…)) ships are vessels designed to carry wheeled cargo (…) that are driven on and off the ship (…)The acronym ROPAX (roll on/roll off passenger) describes a RORO vessel built for freight vehicle transport along with passenger accommodation.” (www.wikipedia.com)
Map 2: Scandria corridor regions
2.2 Scandria corridor’s position in Europe’s Freight Transport

Regarding the Trans-European Networks for Transport (TEN-T), Scandria project had a special interest in including the old priority projects

- Priority project 1 – railway axis from Berlin to Palermo
- Priority project 22 – railway axis from Dresden to Athens
- Priority project 11 – the Nordic Triangle (Oslo – Stockholm – Copenhagen)

into the core network. Additionally, there was a strong support on connecting these projects via Rostock. The most direct connection between Berlin and Copenhagen runs via Rostock. This idea has been included in the current draft version of the TEN-T-guidelines\(^4\) (19.10.2011). The corridor also partly covers two of the proposed core network corridors – Helsinki-Valletta via Stockholm, Copenhagen and Hamburg and Hamburg/Rostock-Lefkosia via Dresden and Prague.

Scandria partner University of Applied Sciences Wildau\(^5\) has examined the potential freight flows within the corridor. According to their study, transport volumes from Berlin, Brandenburg and Mecklenburg-Vorpommern to southern or eastern destinations are somewhat higher than to Scandinavia. The conclusion is that the Baltic Sea is still a barrier, and that offers for transport across the Baltic Sea should be improved further. Another argument is the changing transport geography after EU accession of Poland and neighboring states – this opens possibilities for high growth along the Scandria corridor. In general, this supports the idea of the Scandria project: there is a high potential for transport within the corridor and there are enough free capacities for an increase of freight.

2.3 Logistics competence

93 million people live within the Scandria corridor – jointly producing a GDP of 2.5 trillion Euros per year. With Oslo, Stockholm, Copenhagen, Berlin, Prague, Vienna, Bratislava, Budapest and Ljubljana, the corridor encompasses nine capital city regions. Additionally there are several metropolitan regions like Øresund region, Metropolitan Region Central Germany, Nuremberg, Munich, Milan and the region of Venice / Trieste.

These preconditions indicate that supplying this corridor with goods entails the need for outstanding logistics infrastructure. Regarding the northern part of the Scandria corridor, a strong focus needs to be put on the infrastructure for sea and railway transport.

Table 1 shows some important hubs and nodes for the regions within the northern part of the Scandria corridor.

<table>
<thead>
<tr>
<th>Hubs and Nodes</th>
<th>annual turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gothenburg port</td>
<td>42.9 mio t (2010)</td>
</tr>
<tr>
<td>Rostock port</td>
<td>23.7 mio t (2010)</td>
</tr>
<tr>
<td>Sköldvik</td>
<td>21 mio t (2009)</td>
</tr>
<tr>
<td>Copenhagen Malmö Port</td>
<td>18 mio t (2010)</td>
</tr>
<tr>
<td>Trelleborg port</td>
<td>10.8 mio t (2010)</td>
</tr>
<tr>
<td>Helsinki</td>
<td>10 mio t (2009)</td>
</tr>
<tr>
<td>Kotka</td>
<td>8 mio t (2009)</td>
</tr>
</tbody>
</table>

\(^5\) UNIVERSITY OF APPLIED SCIENCES WILDAU, MICHALK, P. & MEIMBRESSE, B. (2010): Basic Description of Corridor Functionality - Potentials of Logistic Transport Systems
4.0 “Logistics Business Development Strategy”
Baltic Sea Region Project #26

<table>
<thead>
<tr>
<th>Port/Location</th>
<th>Cargo Volume (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxelösund port</td>
<td>7.3 mio t (2010)</td>
</tr>
<tr>
<td>Naantali</td>
<td>7 mio t (2009)</td>
</tr>
<tr>
<td>Port of Helsingborg</td>
<td>7 mio t (2009)</td>
</tr>
<tr>
<td>Oslo port</td>
<td>5.9 mio t (2008)</td>
</tr>
<tr>
<td>Københavns Havn og Frihavnen</td>
<td>5.1 mio t (2010)</td>
</tr>
<tr>
<td>Wismar port</td>
<td>5 mio t (2010) (3.4 mio + 1.6 mio onshore turnover)</td>
</tr>
<tr>
<td>Sassnitz / Mukran port</td>
<td>4.8 mio t (2008) (4.74 mio + 0.1 mio onshore turnover)</td>
</tr>
<tr>
<td>Stockholm port</td>
<td>4.4 mio t (2010)</td>
</tr>
<tr>
<td>Helsingør Havn</td>
<td>4 mio t (2010)</td>
</tr>
<tr>
<td>Inland port Berlin-Westhafen</td>
<td>4 mio t</td>
</tr>
<tr>
<td>Norrköping port</td>
<td>3.8 mio t (2010)</td>
</tr>
<tr>
<td>Inland port Königs Wusterhausen</td>
<td>3 mio t</td>
</tr>
<tr>
<td>Borg Havn IKS</td>
<td>2.8 mio t (2008)</td>
</tr>
<tr>
<td>Ystad port</td>
<td>2.8 mio t (2010)</td>
</tr>
<tr>
<td>Halmstad port</td>
<td>2.1 mio t (2009)</td>
</tr>
<tr>
<td>Køge Havn</td>
<td>1.7 mio t (2010)</td>
</tr>
<tr>
<td>Varberg</td>
<td>1.6 mio t (2009)</td>
</tr>
<tr>
<td>Gedser</td>
<td>1.5 mio t (2010)</td>
</tr>
<tr>
<td>Moss port</td>
<td>0.5 mio t (2008)</td>
</tr>
<tr>
<td>Falkenberg</td>
<td>0.4 mio t (2009)</td>
</tr>
<tr>
<td>Kastrup airport</td>
<td>0.3 mio t (2010)</td>
</tr>
<tr>
<td>ETTC Frankfurt (Oder)</td>
<td>65,000 TEU (2010)</td>
</tr>
<tr>
<td>Großbeeren (Berlin)</td>
<td>55,500 TEU (2010)</td>
</tr>
<tr>
<td>Wustermark (Berlin)</td>
<td>8,000 TEU (2010)</td>
</tr>
</tbody>
</table>

Table 1: Major hubs and nodes within the northern part of the Scandria corridor

Within the Scandria corridor, there are several logistic network organizations bundling the competences on different logistic areas. The Logistics Initiative Mecklenburg-Vorpommern (http://www.log-in-mv.net/) is a business driven non-profit organization. It works towards cooperation within the transport industry and tries to strengthen logistics within Mecklenburg-Vorpommern. The region Berlin-Brandenburg has a Logistics Network organization that aims at strengthening logistics within the region (http://www.logistiknetz-bb.de). It is a contact point for all businesses working within the logistics sector.

2.4 Industrial potentials

The Scandria corridor has substantial growth potential. According to the 2025 German maritime forecast⁷, the ports of Mecklenburg-Vorpommern will double their cargo turnover in the 2004-2025 period. Within the parameters of this development, a key function will be assigned to the corridor ports


⁷ PLANCO CONSULTING GMBH (2007): Prognose der deutschlandweiten Verkehrsverflechtung 2025 – Seeverkehrsprognose; Essen
in Rostock, Sassnitz, Gedser, Trelleborg, Malmö, Gothenburg and Halmstad. In addition to these ports and those at the Adriatic coast, the Scandria corridor covers several logistics centers and hubs of European significance: e.g. Gothenburg, Øresund Region, Baltic and Adriatic ports, HUB 53/12° and Berlin. The Øresund region is considered to be the main gateway to Sweden and Norway within the Scandria Corridor. The Capital Region Berlin-Brandenburg has three intermodal freight villages playing an important role for transferring goods in the north-south-direction. Project partner HUB 53/12° (located between Rostock and Berlin) consists of a couple of smaller cities which jointly market their potential as a logistics business region.

The study on freight flow potentials by the University of Applied Sciences Wildau also confirms that the corridor has free capacities and is a good alternative for many transports.

The study on the basic description of corridor functionality (WSP Analysis & Strategy) analyzed the industry structure within the northern Scandria corridor. In Sweden and Denmark the service sector grows very fast, while in Mecklenburg-Vorpommern and Berlin / Brandenburg the industry sector has increased.

![Share of employed 2007](image)

**Figure 1:** Share of employment in sectors in the Scandria region 2007; source: Eurostat & WSP

---

8 [www.hub5312.de](http://www.hub5312.de)
10 WSP Analysis & Strategy / Frithiof, M. & Strömblad, E. (2010): Basic Description of Corridor Functionality
2.5 Comparison with other corridors

Transport from Scandinavia to the south can be done via several routes. The neighboring routes to the Scandria corridor are the link via Fehmarnbelt (Rødby – Puttgarden) and the so-called Central European Transport Corridor (CETC) via Świnoujście.

A Scandria study done by UNICONSULT Universal Transport Consulting GmbH concluded that for certain transport relations, the Scandria corridor is the most time and cost efficient solution. It also

---

saves CO$_2$ to use the Scandria corridor. E.g. the shortest transport route from Bavaria to Sweden leads through the Scandria Corridor. Table 2 shows a summary of the results of the study. It displays the five source and four destination regions. The best route between these regions is indicated, regarding all the criteria (time, costs and CO$_2$-emissions).

The study on corridor potentials by the University of Applied Sciences Wildau$^{12}$ confirms this – especially for transports from Sweden and Norway. For Danish and Finnish transport it might sometimes be more reasonable to use other routes for certain transport relations.

2.6 Green freight transport corridors

In 2007 the European Commission published a freight transport logistics action plan$^{13}$, Chapter 2.5 mentions the concept of “Green” transport corridors for freight. This was the starting point of many discussions and the development of “green corridor” projects. The Swedish government established a working group for Green Corridors. There are several definitions for green corridors. One of the most recent ones has been drafted by the Interreg-project EWTC II:

“Green transport corridors promote the development of a ‘greener-oriented’ transport system. They endorse the EU vision towards an integrated and sustainable transport system. Green Corridors provide the most environmentally-friendly, sustainable, efficient and safest connection for freight transport in Europe.” (Tetraplan et.al.$^{14}$)

The Scandria Corridor is turning into a sustainable, i.e. cost and time efficient, socially acceptable and environmentally friendly corridor. Thus it fulfills the general criteria of a green corridor. It is the direct connection from the Adriatic Sea to Scandinavia. Using the corridor means avoiding detours and saving time, costs, and also reducing greenhouse gas emissions. The corridor is also less congested than the routes via Western Germany which makes transport even more efficient and environmentally friendly.

Green logistics are very important regarding climate change. The demand for efficient transport is growing among customers and thus among logistics operators. They can benefit from using the Scandria Corridor. The project is analyzing several innovative solutions for logistics and which – among other topics – contributes to the “greening” of the Corridor.

Scandria project has developed a green corridor strategy which can be downloaded on www.scandriaproject.eu.$^{15}$

---

$^{12}$ UNIVERSITY OF APPLIED SCIENCES WILDAU, MICHALK, P. & MEIMBRESSE, B. (2010): Basic Description of Corridor Functionality - Potentials of Logistic Transport Systems


3 Scandria WP 4 results

3.1 Case studies: Scandria – jointly improving logistics services

3.1.1 Hubs and Gateways

3.1.1.1 Port Hinterland Logistics

If a certain transport service would be less expensive than its alternative, it would improve the attractiveness of a region as an industrial location, as companies located in this region would have lower transport costs to the connected regions. Concerning the economic “location theory” such reduction in specific transport costs will create an advantage of this location in comparison with other competing locations (PUU1997).

At the same time a higher share of train transport could considerably decrease CO\textsubscript{2} (and other greenhouse-) emissions, due to the usually lower emissions of trains.

However, the development of block-train concepts within the Scandria project, showed the difficulties of implementing such solutions in the corridor.

Intermodal transport is a business with a very small operating margin (in Germany the operating margin for intermodal transport is usually stated to be at about 4%). Depending on operational concepts, transport distances and certain regulations, intermodal transport is often slower than road transport. Additional pre- and post-carriage and the necessary transshipment operations add costs to the transport chain. Economic advantages can be realized through the economy of scales, due to the much larger transport capacity of a train. However this necessitates a high enough demand on the train relation as well as a stable demand. Especially in port-hinterland transport, the demand is known to be relatively volatile.

Therefore the TH Wildau developed a mathematical model that explains how an intermodal transport chain needs to be designed, in order to maximize customer satisfaction and to create a maximum advantage for a customer towards the pure road transport alternative.\textsuperscript{16}

The model confirmed the usual approach of designing intermodal port-hinterland chains with a rail transport leg of at least 400 km length and short post-carriage legs. However, it also showed the high potentials for customer satisfaction for long post carriage chains (>100 km). It also shows that time sensitive customers can be very well a target group for marketing intermodal port hinterland transports. While it remains questionable in how far a significant number of time-sensitive customers can be found for hinterland transport of long haul intercontinental sea connections\textsuperscript{17}, time sensitive customers could be found for short haul sea transports, such as transports across the Baltic Sea. These findings could result in new approaches, especially in creating hinterland chains for the Baltic Sea Ports.

3.1.1.2 The development of new logistics chains

The city of Neuruppin was responsible for finalizing the study on the development of new logistics chains. The main focus of their efforts was the HUB 53/12°, the logistics network Guestrow,Prignitz,Ruppin. This region is located at the intersection between hinterland connections from Baltic- and North Sea ports as well as the metropolitan regions Berlin and Hamburg. The aim is to develop HUB 53/12° into an important logistics node in Northeast Germany. Target groups are (international) logistic operators and companies interested in settling within the HUB 53/12° area as part of a value added logistics chain. The geographic focus of this activity was the HUB 53/12° region.


\textsuperscript{17} As land transport times have a small share on the overall transport time.
Within the framework of Scandria HUB 53/12° support ed and moderated actions towards the revitalization of the railway connection Herzberg (Mark) - Neuruppin - Neustadt (Dosse) for goods transport. This is an important feeder line for the main bypass of HUB 53/12°, the railway line from the ports of Rostock via Guestrow and Neustadt (Dosse) to Berlin. After a scenario analysis for operating this railway connection an implementation plan was developed. The involved municipalities agreed to support the operation of the railway connection for three years in order to secure the financing of the project. The first trains are expected to start operating in 2012.

HUB 53/12° plans to establish a traffic management system to guide trucks to commercial and industrial parks within the region. The system will have to be tested by a pilot project, which will be done for the commercial park Prignitz. As a part of the Scandria project, the project partner interviewed several companies in this park. Their input was essential for the planning of the pilot phase. It is planned to extend the traffic management system over the whole Brandenburg-part of the HUB 53/12°. A similar system could be installed in the hinterland of the ports of Rostock within the Guestrow area.

During the project’s lifetime HUB 53/12° worked on extending its area for further establishing a logistic region between the ports of Rostock and the metropolitan area of Berlin (e.g. the town of Wittenberge with the inland port at the Elbe). This will most likely increase the perception of this region in the European logistics context.

HUB 53/12° participated at trade fairs, also presenting the Scandria project. It proved difficult to get in contact with international stakeholders. Therefore a project like Scandria is a good framework for smaller regions to be noticed as an important part of a large transport corridor.

As one of the main goals of HUB 53/12° is to shift transport from road to rail, it contributes to the concept of green corridors. Traffic management systems are also important to make transport more efficient. Transport costs and times can also be reduced by using the corridor – and crossing the HUB 53/12° region – for certain transport relations. So HUB 53/12° could be an example how rural regions can benefit of the globalisation by “glocalisation”: Local vision meets global perspective.

As the freight flow from Scandinavia via Eastern Germany still has many free capacities, HUB 53/12° can contribute to making the region more attractive for stakeholders. This can lead to an increased use of the corridor. The corridor can help the HUB 53/12° to gain international attention. The HUB 53/12° can – among other logistic nodes – raise the regional added value of the corridor.

So far the reactions to their activities have been very positive – both within the press and at the political level. Transport by rail is becoming more popular, raising the importance of railway networks which can be found in the HUB 53/12° region. An effective marketing strategy embedded in the marketing strategy for the whole the SCANDRIA-corridor can increase the positive results of the work done for developing logistic nodes.

### 3.1.2 Sea to Sea

#### 3.1.2.1 New ferry links

The original plan for this task was adapted to new insights from relevant studies. The responsible project partner Rostock Port focused on establishing a Motorways of the Sea project between Rostock and Gedser. The task covers the geographic regions of Mecklenburg-Vorpommern in Germany and Falster in Denmark. Target groups are the ports, ferry companies and freight forwarders.

The activities concentrated on the eligibility check for funding possibilities in the framework of the European Motorways of the Sea programme. All tasks to be carried out during the improvement of the ferry terminal of the Port of Rostock (and the Port of Gedser) have been checked and evaluated if they are conform with the rules for funding of MoS. Afterwards an external consultant has been hired to develop with the shipping company Scandlines a comprehensive application for funding, including e.g. a net-benefit-analysis and a socio economic analysis of the new / improved ferry link. All these

---

activities have to be seen in the context of an improvement of Scandria’s transport infrastructure, transport connection and to facilitate new connections in our corridor.

The peripheral location of Scandinavia and very strong economic relations of Sweden, Denmark and Norway with countries in the rest of Europe as well as the positive economic development of the Baltic States had caused an increasing goods flow in the area covered by the Scandria project. To ensure the safety of such transport chains in the future too, it is necessary to establish new or improve existing shipping links around the Baltic Sea. The Port of Rostock with its favourable location can serve as the hub for many traffic flows between Scandinavia, the Baltics and Central Europe. Against this background the potential for new or improved shipping lines to be ready for increasing cargo volumes is in the focus of the Rostock Port in the framework of Scandria.

Partners for activities will be the ferry operators already active in the port in close co-operation with the port operators on the other end of the respective link. All partners are aiming at the improvement of the links in order to comply with upcoming increasing cargo flows in the Scandria area, respectively the Central Europe North-South-Corridor.

The so called target group consists of a huge number of forwarding companies already active on the road or rail in the Scandria corridor. Better services, sustainable and reliable links are mandatory to convince those companies to use a ferry on their way to and from Scandinavia instead of the pure land transport. The vessels serving the Rostock-Gedser route are rather old and do not match the expectations of all potential users. Therefore new vessels have been ordered and an adaption of the ports is needed as well. Moreover the importance of the ferry links for Europe respectively the European added value of the links was the reason why the project consortium applied for funds from the European Commission and to put the links on this list of European Motorways of the Sea.

In December 2010 the MoS application Rostock-Gedser was approved. Approximately 230 million Euro are being invested in two new ferries which almost double the capacity. Approximately 50 million Euro are being spent for new terminals in Rostock and Gedser each. In addition, a bypass for Nykøbing/Falster will be built for 28.4 million Euro. Approximately 25 million Euro are financed from EU budget (TEN-T multi-annual programme). It is planned that the ships will start their service in late 2012, and the bypass for Nykøbing will be fully operational in 2014. The port construction works have been finished in Summer 2012 and enable efficient and fast port operations according to the needs of Scandlines’ improved service concept and to the needs of its customers.

All the preparation activities needed to achieve this result were part of Scandria project. The result is clearly to identify: better services on the sea for all cargo flows in the corridor for the next 20 to 30 years, reliable services without any interruptions and environmentally friendly transport solutions as well. The new sea based transport product is well comprehensive to the pure land based transport, due to short turnaround times in the ports, short handling times in the port and departure every two hours … so to say: the logistic chain does not have to stop at the border between land and sea, it will be an smooth process, never interrupted by long waiting times in ports … In other words: The cargo is moving at every time.

In addition to the MoS application Rostock - Gedser also the link between Rostock and Trelleborg was classified as Motorway of the Sea by the European Commission in 2012. The core of this innovative concept - supported by Scandria as well - is the implementation of “green technologies” on the ferries between Rostock, Lübeck and Trelleborg. This means an installation of emission cleaning respectively reducing facilities like scrubbers and catalyst on two ferries as well as shore side electricity e.g. in Trelleborg and an improved operating concept.

By implementing the MoS idea on that service as well, the emissions from the ferry operations can be reduced significantly. Moreover the installation of new emission cleaning respectively reducing technologies gives the maritime industry new knowledge how they can keep the strong emission reduction obligations being in force from 2015 on. Due to the lengthening of the vessels the emission per transported unit will also be reduced dramatically. Having this in mind, it is easy to summarize, that this MoS project really helps to develop Scandria towards a real green transport corridor.
But not only environmental effects result from this MoS project. Also the intermodal transport opportunities will be improved significantly during projects lifetime. As part of the project the intermodal terminal in the Port of Rostock will be extended by three new tracks and two new gantry cranes. The latter replace the currently used rubber-wheeled trucks on the terminal. The overall investment amounts to 82 million euro, thereof in Rostock and Trelleborg 25 million euro and 40 million euro. The contribution of the European Commission amounts to 20% thereof.

3.1.2.2 Common development of a new RoRo-connection between the ports of Rostock and Halmstad

The project partners Rostock port and Halmstad port and stevedoring company worked together on the development of a new connection between their ports. This task was planned to be finalized by spring 2012. The Scandria-regions covered by this study are the regions of Mecklenburg-Vorpommern (Germany) and Halland (Sweden). Target groups are forwarding and industrial companies.

Due to the fact, that Southern Sweden and Germany are already linked by well working services, the project partners agreed to change the focus from RoRo to the container business. This field of maritime services is absolutely underrepresented in Mecklenburg-Vorpommern. There are different reasons for that, but the partners are determined to eliminate the burdens and to establish a container feeder service at the Port of Rostock. The Port of Halmstad is already included in a container feeder network and this makes it easier to get in contact with potential operators. Moreover a new link between both ports improves the connections between Scandinavia, the Baltic States, Russia and Germany in general, meaning: containerized cargo flows which have to be transported via Hamburg nowadays can find a shorter and faster route between the points of origin and destination in the future.

The idea is quite easy: to develop a concept how to convince a container feeder company serving already the Port of Halmstad to serve the Port of Rostock as well. The reason for that is very simple: container feeder service companies have well established round trips across the Baltic Sea and sail along the coast of Mecklenburg-Vorpommern - but never stop there - already today. Three important steps are planned to achieve this goal:

1) Market surveys: development and sending around a questionnaire to a broad variety of forwarding and industrial companies in the direct hinterland of Rostock (Mecklenburg-Vorpommern; Berlin/Brandenburg; Saxonia; Thuringia; Bavaria; Czech Republic; Austria; Switzerland). To include not only the forwarding companies is necessary from our point of view, because these companies decide which way and which mode of transport the cargo takes in direction of their destination.

2) Market development: After getting back the questionnaires respectively having been in contact with responsible representatives, a potential for a cargo volume per week shall be examined and presented to container feeder companies, mainly to those already active at the Port of Halmstad. As a likely result their own sales staff will work in close co-operation with Rostock port to finally convince the forwarding or industrial companies to use the Port of Rostock and the Port of Halmstad for their North-South cargo flows.

3) The last step in the concept is the adaption of the port facilities in Rostock to accommodate a container feeder vessel as well as checking the handling equipment needed additionally.

Which benefit will the target group have? There is a simple, but important advantage for our target group: the shortest and direct way between Central as well as South Europe and Scandinavia leads via Rostock. Currently, all containers have to go via Hamburg or Bremen, which means very long, time consuming and cost intensive detours. Additionally the potential customers can benefit from a much smoother forwarding process, because there are so many bottlenecks around the currently dominating Baltic Sea container ports (Hamburg most of all) on road and rail but also within the ports (delayed handling processes). All these negative circumstances can be eliminated by a realization of our concept. Moreover, the negative environmental effects of that detours could be eliminated by using the direct way via Rostock and Halmstad instead. The last fact will also contribute to “greening” the Scandria corridor.
3.1.3  Unit trains

The objectives of the SCANDRIA cooperation, as defined in the SCANDRIA Berlin declaration, include the development of “…environmental friendly co-modal transport solutions in order to establish SCANDRIA as a green corridor…”. Concerning the economic “location theory” a reduction of transport costs will create an advantage of this location in comparison with other competing locations. So the development of economically feasible unit train concepts is a logical measure in order to meet the objectives of reducing greenhouse gas emissions, fostering economic accessibility, utilizing existing infrastructure and relieving road infrastructure.

However the SCANDRIA corridor is, from a transport engineer’s view, highly heterogenic. There are economically highly developed agglomerations, such as the Öresund Region, the Berlin Capital Region and the Adriatic regions around Venice and Trieste, but also the regions “in between” characterized by small and medium-sized cities. In addition, the Baltic Sea is an obstacle for freight transport between Scandinavia and Central Europe. Equally important: The market calls for Shuttle connections, while classical liner services are phased out gradually.

In order to develop connections that meet the aforementioned criteria and still cover as much of SCANDRIA as possible it is necessary to develop different transport concepts that will overlap and complement each other. In WP 4, two concepts have been developed (see chapters 3.1.3.1 and 3.1.3.2). Additionally, there have been investigations within WP 3 and the SoNorA project, which will be described in chapter 3.1.3.3. These concepts are intended for intermodal freight, i.e. trailers / semi-trailers, swap bodies and containers. Trains for bulk cargo have not been investigated.

3.1.3.1  Development of unit trains – Berlin-Brandenburg

Project Partner Joint State Planning Department of Berlin and Brandenburg and Ministry for Infrastructure and Agriculture Brandenburg developed a concept for a unit train. The case study on the development of unit trains has the aim to create a pilot train for combined transport running regularly on the Scandinavian-Adriatic Corridor via the region Berlin-Brandenburg.

The activity is based on the output SoNorA 5.5.12 (www.sonoraproject.eu). This is a study for the development of a unit train. Scandria continues to analyze the market and the railway infrastructure and develops a technical and economical concept.

The case study is interesting for suppliers, logistic service providers, operators of trains or terminals, policy makers and project partners in Scandria or other European projects. The area of the investigations covers the Scandinavian-Adriatic Corridor with focus on Berlin-Brandenburg. The freight village Berlin West Wustermark is of main concern in the investigations, but also the freight village Berlin South Grossbeeren and other handling points in Berlin-Brandenburg (e.g. Hub 52/12°) are considered. The freight villages Wustermark and Grossbeeren themselves are already examples for green logistics.

21 IPG INFRASTRUKTUR- UND PROJEKTENTWICKLUNGSGESSELLSCHAFT MBH, WAGENER & HERBST MANAGEMENT CONSULTANTS GMBH (2011): Scandria Block Train Development Berlin-Brandenburg
Railway lines from the Baltic Sea via Berlin-Brandenburg to the South can be organised faster, less expensive and greener than on previous relations. Furthermore tracks in the East of Germany are less crowded than tracks, e.g. south of Hamburg or on the Rhine river.

At the moment construction works (e.g. Rostock-Berlin) constrain the traffic at the Scandinavian-Adriatic Corridor, but in the future additional capacities exist to handle the growing good transport.

The research analyses potential for shifting traffic from road to rail. Interest on the corridor exists and for the following three routes major demand was identified:

2. Sassnitz – Berlin – Munich – Verona – Venezia/Ravenna
3. Berlin – Ulm / Stuttgart – Milano

The realisation of smaller segments is more realistic and at points, like Villach, Munich or Ulm the train can be linked to existing or planned train connections. Furthermore the identified potential is not only containers, but also general cargo. As solution combination of different wagons (wagons for containers, for cars or with sliding walls) and train types (unit trains, single wagons, multiple section trains) are suggested.

The customers ask for offers, which are scheduled, reliable and reasonably priced. According to an analysis conducted by the TH-Wildau within WP3.1 the train is economical and offers a competitive price, when it circulates twice a week, i.e. 2 departures per week are guaranteed. With growing utilisation rate the benefit raises.

The three identified routes for pilot trains are discussed with the target group, especially operators. The routes are interesting and especially the locations in Wustermark and Grossbeeren are enquired. But the feedback to operate a train is restrained. Reasons among others are the high financial risk of a new train, the specific requirements of the costumers and challenges by combining different wagons and train types. The research has shown that some existing train connections stop in Berlin-Brandenburg or new lines need more support. Therefore investigations concentrate on building a unit train by strengthening existing train services and freight delivery by shuttle.
A paper train operated by Captrain runs 3 times a week between Sweden and Berlin (via Öresund, Padborg and Maschen) and has free capacities especially to the north. Furthermore Captrain considers an adaption of their tracks.

Trans Eurasia Logistics organises a new connection between Berlin and Ulm running directly five times a week. In Ulm a project partner in Transitects is organising a train to Mortara (Milano).

Moreover it is possible to strengthen a train to Stuttgart from Brieselang (Wustermark) operated by DB Schenker 3 times per week. This train has space for cargo from Berlin-Brandenburg.

Besides the obstacles for the operators other facts restrain the project. More demand to the south is identified, which is typical, but also caused on the concentration of the potential analysis on Berlin-Brandenburg.

The official operator of the terminal in Wustermark was DB Intermodal. Since September 2010 no goods were handled anymore. From October 2011 the new owner of the terminal is BahnLogistik Terminal Wustermark GmbH.

As marketing activities the concepts and results were presented at different workshops, meetings and at the fairs “Innotrans” in Berlin and “transport logistic” in Munich. Furthermore a continual exchange with the project Transitects took place. The unit train project was discussed with the target group at various events. Presentations, a common flyer with unit train concepts in Scandria and a special flyer with focus on the freight village Wustermark support the activities.

The presentation of Scandria worked in general well. The target group is interested in the Scandinavian-Adriatic Corridor. In the future similar activities and more digital marketing, like a corporate video or the freight village Berlin West Wustermark are recommended.

In the last years the total amount of container handlings in Berlin and Brandenburg did not grow that much. It was rather shifted between the terminals in the region. To shift more traffic from road to rail other solutions are necessary. A first overview to alternative cargo handling solutions is presented in the study. Further investigations and project related research are necessary.

To create the described train concepts, transhipment points for container and general cargo are necessary. The development of so called railports could be a solution.

At the moment the most important marshalling yard of the region - Seddin – is overloaded, i.e. shunting activities restrain fast train traffic. An alternative to Seddin is the marshalling yard Wustermark that has free capacities. In combination with the terminal and the freight village in Wustermark the logistic location Wustermark has good chances for a positive progress.

The freight village Grossbeeren with the business location Ludwigsfelde nearby has the potential to develop as a hub in the region. The terminal has already connections in the direction East-West, a good infrastructure and possibility to get extended.

Figure 4: Main potential for the Berlin-Brandenburg Scandria trains

The presentation of Scandria worked in general well. The target group is interested in the Scandinavian-Adriatic Corridor. In the future similar activities and more digital marketing, like a corporate video or the freight village Berlin West Wustermark are recommended.
3.1.3.2 Development of unit trains – Öresund

The initial study

The study has been conducted by Öresund Logistics in cooperation with Lund University (SE), University of Linköping (SE) and Roskilde University (DK). The study has included a short mapping of the infrastructure, mapping of the goods flows in the corridor and an analysis on the customer requirements. Based on these analysis three potential concepts have been designed. The report has been used as a first step to achieve an innovative logistics concept in the corridor. At a later stage in this process the three concepts have been modified into one concept that could be up and running on a short time frame.

The mapping of the infrastructure indicates that railway transportation is a potential alternative for transportation in the Scandria Corridor. However, there are several barriers that could interfere in the set-up of a railway concept and the choice of route. For instance the well-known problems of different railway electrification systems and different train control systems make it often complex to cross borders.

In the report the goods flows have been studied for the northern Adriatic ports Trieste, Venice and Koper. These are the ports that handle the largest volumes in the northern Adriatic Sea. Relevant connections to Northern Europe have been analyzed. However, the current situation indicates that the amount of goods between the Adriatic ports and northern parts of the corridor are probably too low. Instead a strategic location like Villach (Austria) or Verona (Italy) could be suitable to work as funnels for the Adriatic area. The solution with a funnel also seems to be the best solution for Scandinavia where one strategically placed terminal node could cover several industrial areas.

The mapping of customer requirements indicates that the price is the most important aspect followed by the delivery reliability (given that the lead time remains the same). Flexibility is also an important aspect to some companies.

The analysis of the corridor resulted in the design of three different logistics concepts that includes a railway shuttle. Concept 1 and concept 2 includes loading points in Berlin and Munich and northern end point in Trelleborg. The south node in concept 1 is Verona, and in concept 2 the suggestion is Villach. For concept 3 Trelleborg is used as northern end point and Berlin, Prague, Vienna are potential loading points. The south endpoint for concept 3 is Koper in Slovenia. All three railway concepts include trucks as a back-up to absorb irregular demands and problems on railway tracks. The back-up system gives the concept a more reliable approach for the customer. In the future the trucks in the back-up system could run on bio-fuels.

A benchmark of the three concepts indicates that concept 1 has a quite good chance of getting a high fill rate in both directions, but the competition is hard on the route. Concept 2 would probably be a good alternative because of the few electrification systems and train control systems crossed, but it is still not enough goods flow in the corridor. Concept 3 is more of a concept for the future, due to many barriers. However, by using this route in the future bottlenecks and congestion can be avoided.

The modification of the concept

Due to the economic crisis that started in late 2008 it is not a simple task to establish new railway shuttle concepts in Europe today. At the same time there is not much timber, paper, and steel left that is not already transported on different railway shuttles. Remaining is the potential to increase the intermodal traffic but still it is not growing at the expected pace. The logistics industry have to develop a new approach in order to make rail transportation more attractive for new markets; such as for high tech products. The conclusion is that in order to get some real action towards an increase of intermodal transportation the three concepts have to be modified into a feasible concept that could start immediately.

In order to develop a sustainable concept for transfer new volumes from road to rail the goods flows on the roads should first be adopted to fit into an intermodal concept. An alliance of a couple of supplementing companies can consolidate enough goods at terminals that are located at close proximity to intermodal terminals. Through a couple of innovative actions at the logistics terminal the
fill rate (for the trucks) can increase and at the same time extra services as tracking devices, labeling and repacking could be added.

Hence, the concept should start as an ordinary road “shuttle service” where the consolidation actions starts and operations prepare the concept for the transition to railway. After some time when the volumes are good enough and constant the concept shifts to a railway service, between the same destinations.

The corridor and potential customers

The initial study indicated that the flow between Czech Republic and Sweden could be of special interest for the setup. The trucks between Czech Republic and Sweden have a filling rate of 51% in average and consequently the consolidation potential and better usage of already existing capacity on the flow between Sweden and the Czech Republic is huge. Especially the automotive industry provides a special opportunity to increase the loading capacity in the given corridor. Over the last years the European suppliers to the automotive industry have been under tremendous competition from Asian suppliers. At the same time little, or next to nothing, has been done to make the transportation and logistics operations more efficient in collaboration with other producing sectors. While suppliers have been working on streamlining the production and cutting costs in the manufacturing system, innovation in logistics is limited to looking at the operations for only auto parts. The focus should be on combining different auto part components with products from other sectors making sure that the filling-rate is high and the logistics concept is cost-effective.

The concept in a nutshell

Description

The concept is a road “shuttle service” where the consolidation actions starts and operations prepare the concept for the transition to railway. When the volumes are high enough the concept shifts to a railway service, between the same destinations. The concept is designed together with a consortium of companies.

Target group, locations and approach

Since the concept combines auto parts with products from other sectors such as packaging material, textile, and high tech products the target group is both the automotive industry but also other types of industries. The target group is mainly located in southern part of Sweden and in Czech Republic.

The target group has already been approached but the companies are also in the process of designing a mutual offer for the customers. The concept will be a cost effective alternative that provides a flexible solution with good traceability and an integrated IT system in the customers’ ordinary system. The consortium plans to use the Marco Polo programme as a tool to get the action started with great volumes.

3.1.3.3 Other unit train activities

Berlin – Ulm – Mortara (IT)

A train connection between Berlin (Wustermark) and Ulm shall start operations in April 2012. The train connection will be operated by “Trans Eurasia Logistics”\(^23\). The train will run five times a week.\(^24\)

The SCANDRIA lead partner determined a certain demand on this relation. The TH-Wildau conducted an economic feasibility analysis. The SCANDRIA concept included a further extension of this line to Mortara near Milano.

\(^{23}\) [http://www.transeurasialogistics.de/](http://www.transeurasialogistics.de/)

Rostock – Lovosice (CZ)
The TH-Wildau conceptualized an intermodal train connection between Rostock and Lovosice.\textsuperscript{25} This connection would serve transport demands between Scandinavia and the Czech Republic, thereby opening the SCANDRIA corridor to another important Central-European market. It also can be a complement to the Oresund-Logistics Green Line concept described in chapter 3.1.3.2, as it would offer rail transport on the leg between Rostock and Lovosice.

Rostock – Trieste (IT)
The Port of Rostock developed a train concept between Rostock and the Adriatic Sea, as a continuation of a study in the SoNorA project, which led to a Marco Polo application.\textsuperscript{26} The train would run twice a week to Trieste. As the Port of Rostock is an important gateway to the SCANDRIA corridor, this train would be an actual connection between Scandinavia and the Adriatic region, focusing on the transport of trailers, which are one of the main load units on transports between Scandinavia and Germany. This concept targets transports to Turkey and Greece, countries served from the port of Trieste.

3.1.3.4 Conclusions / Objectives accomplished
Though the transport potentials ascertained were often not large enough to enable the economical operations of unit trains, it seems reasonable that globalization and European integration will raise demand for freight transport along the SCANDRIA corridor. This demand will be further fueled by the opening of the Brenner Base Tunnel.

The SCANDRIA project accomplished the very important feat to make the corridor more visible to logistics companies, as this increases the chances that such companies will act swiftly when a market for further connections emerges. The developed concepts will serve as a guideline for market actors to show what is possible and how certain solutions could work.

Also, the block-train concepts were an important foundation in order to involve market players, and thus complete the triple-helix approach. They made the project and its value for market actors public.


\textsuperscript{26} MINISTRY FOR TRANSPORT, BUILDING AND REGIONAL DEVELOPMENT MECKLENBURG-VORPOMMERN (ed.) (2010): Business Case for Mecklenburg Service
Figure 5: Unit train concepts developed within the SCANDRIA project; source: University of Applied Sciences Wildau
3.1.4 Branch Logistics

3.1.4.1 Shippers’ behaviour

The University of Applied Sciences Wildau worked on analyzing shippers’ behavior\(^{27}\).

**Introduction:**

In times when environmental awareness is rising, while transport demand is increasing, alternatives to road transport become more and more important. One main alternative is rail transport. Rail transport offers a high transport capacity per trip, thereby substituting numerous trucks, as it is usually cheaper (through its economy of scales), if enough load can be provided, and the steel-wheel/steel-rail combination offers a possibility to transport large masses with a comparatively low energy demand. In comparison to road transport however, railway networks can by far not provide a similar areal cover.

A solution to this problem can be provided by intermodal transport: Standardized load units, such as standard shipping containers, swap-bodies or trailers can be easily and economically transshipped from truck to train, thereby combining the good areal coverage of road transport in pre- and post-carriage with the economical and environmental advantages of rail transport. Intermodal transport in Europe is dominantly provided by companies that act on a free market. This also means that they choose by themselves which relations to serve and which regions to connect.

To foster intermodal transport however, it is necessary to understand shippers´ decision processes, when deciding on a transport mode. For this reason, the study at hand concentrates on shippers´ behavior in regard to intermodal transport and especially in regard to intermodal transport.

**Obstacles preventing the use of intermodal transport:**

The study leads to the following findings:

- Transport time in intermodal transport is usually longer than in classic road transport.
- Intermodal transport is less reliable if a national border needs to be crossed; it is however at least as reliable as road transport, if no national borders are being crossed.
- Intermodal transport requires large load volumes to make a train economical feasible.
- Transport distances usually need to be longer than 300 km to make intermodal transport feasible.
- A lack of knowledge and experience in intermodal transport on the forwarder side is a significant obstacle for the use of this transport type.
- Some forwarders and shippers stated that they did not use intermodal transport due to a lack of knowledge or understanding about governmental stimulations programs.
- Forwarders are more likely to organize an intermodal transport chain, if they have a cooperation partner in the receivers region. The lack of a cooperation partner is therefore an obstacle to intermodal transport.
- The perceived lower flexibility in terms of frequency and dealings with fluctuation in shipment sizes can be an obstacle for shippers to use intermodal transport.

**Possible solutions as part of the SCANDRIA strategy:**

- Using existing online tools, such as the INTERIM/SoNorA/FLAVIA tool, developed by the TH Wildau, as a base for an information tool. Such a tool could then be used by shippers to plan intermodal transports nearly as effortless as using conventional road transport. In further steps such a tool could grow to be a intermodal freight exchange.
- Creating a new rail network product, that allows for higher priority of freight trains. First steps in creating such a product would include studies on the impact of higher priorities for

\(^{27}\) UNIVERSITY OF APPLIED SCIENCES WILDAU, MICHALK, P. (2011): Shippers’ Behavior
intermodal trains. Impacts would need to be examined in relation to the schedules of other trains, using other products. The implementation of the product could later be restricted to parts of the network, where the quality of other train services would not be impaired below a certain threshold. In order to define such a threshold rules for the application of the product would need to be formulated. This would call for the simulation of representative typical parts of railway networks that allow for the transfer to the complete real network.

- Dissemination measures through a dedicated network. The organization disseminating the information needs to be highly knowledgeable in the logistics business, as the dissemination measures target practitioners. The organizations who conduct these measures should furthermore have some kind of network or access to a network of companies and other industry players. A logical choice for such a dissemination organization would be therefore a logistics network such as the Logistiknetz Berlin-Brandenburg) or Öresund Logistics or Universities with a specialized working field in Logistics.

3.1.4.2 Relevance of RoRo Baltic Sea links

The Baltic Sea constitutes a natural barrier in the Scandria corridor. As road transports still is the most important means of connecting the Scandria regions economically (in a physical way), the ferry and RoRo links across the Baltic Sea are of outstanding importance to the whole corridor.

The study, conducted by the TH Wildau, will develop a model that allows a ranking, and thereby evaluation, of the links and the related ports. The model will also be applied to the planned fixed Fehmarnbelt link, assessing the impact and the relevance of this link for the corridor.

The results of the study shall allow for a targeted development of new links and fostering of existing links, to strengthen the corridor in the most effective way.

3.1.4.3 Bioenergy transports from Jyväskylä region to Central Europe

Project partner Jyväskylä Regional Development Company Jykes Ltd. worked towards an improved intermodal transport actions in Central Finland. The target groups of this study are the transportation industry, bioenergy industry and technology industry.

Concept: Improved Freight Terminal with possibilities to transport Bioenergy fuels with intermodal cargo containers.

Target Group: Bioenergy industry and Bioenergy fuel users

Target group location: Nordic countries and Central Europe

Approach: Introducing Jyväskylä Region’s potential for Bioenergy fuel and technology usage to relevant stakeholders

How: The concept of Jyväskylä Regional Development Company Jykes Ltd. is to create open, reliable and cost effective Bioenergy fuel markets, which are based on reliable intermodal transportation networks.

What is working: The bioenergy fuel market is dependent of taxes and other actions of governments and also it is a young industry with a great future. Improvement of Intermodal transportation is welcome. Due to these framework conditions the concept has to be seen in a long term perspective.

What should be improved: More discussions and co-operations in international level have to be done. There are material flows in place that can be put to better use. More innovative concepts should be found to activate Intermodal transports.

MIETTUNEN, M. (2011): Bio-energy logistics from Jyväskylä region to Central Europe via the Scandria corridor
Potential of logistic services: Bioenergy transports are massively increasing. In Finland alone the use of bioenergy fuel will reach (at year 2020) 18 million cubic meters. That means that at least a growth of 10 million cubic meter transports is coming in the next year's. There will have to be solutions for intermodal transports to solve the transportation problems. In other European countries the problem is even bigger.

Green freight: There is no use of intermodal transports in Finland, so by introducing intermodal services we automatically become greener.

Transportation costs and time: With regard to railway transportation especially the development of intermodal transports is challenging in Finland at this moment. Costs per unit are lower, but there are hardly any experiences of using it. It is mainly question of principles, transportation time is almost in every case possible to handle and costs are mainly lower.

Results: Volumes of Finland are meaningless for the corridor. Only the innovations of Bioenergy transports and possible innovations in low volume intermodal transport are probably transferable to other Scandria regions.

Suggestions: Growth of Bioenergy transports is going to need intermodal transportation solutions in Northern Europe.

Marketing:
Jykes has organized Intermodal transports seminar in Jyväskylä in cooperation with Transportation fair. Seminar was held 19th of May 2011.

Topic: Development of intermodal transports in Finland.

Target groups Transportation industry, railway companies and shipping companies.

Feedback: Participants urged similar annually scheduled seminars.

Participants: 48 persons.
VISION 2015

GOALS

1. Regular unit train connections to main ports and industry centers
2. Reliable and cost effective dry port services
3. Growth of customers in the area of Intermodal transports and dry port services.

GROUND OF STRATEGY

NEEDS
- Growth of Container transports.
- Efficiency, costs, environment, legislation.

POTENTIAL
- Location
- Connections
- Group of global companies located in the area
- Russian markets

PARTICIPANTS AND ROLES

- City of Jyväskylä
  - Infrastructure
  - Competitiveness of companies
  - Development of business park
  - Old paper mill area
- Jykes Ltd
  - Needs of companies
  - Service providers
  - Cooperation of participants
- Consultants
  - Network
- Unit train operators
  - Operations
- Terminals
  - Operations
- Customers
  - Wood- paper and metal industry
  - Bioenergy and recycling
  - Ports and shippers
  - Transportation industry and forawrders
  - etc.

Figure 6: Business Development Strategy, Innoroad Freight Terminal, Jyväskylä
### 3.1.5 Synergies between the case studies

In addition to the four groups containing similar studies (hubs and gateways, sea to sea, unit trains and branch logistics) there are also other interrelations between the studies.

The groups of hubs and gateways, sea to sea and unit trains could be considered to be parts of a multimodal network. The development and improvement of port hinterland logistics is important for both the ferry and RoRo connections as well as the unit trains. HUB 53/12° located in Rostock port's hinterland is a feeder for the Scandria corridor. Concepts on how to do this in a sustainable way can be found in the unit train studies. These unit train concepts also connect the Scandinavian part via the Baltic Sea with the southern part of the Scandria corridor. New transport opportunities change the cost model for all types of transportation.

The studies about branch logistics give examples for multimodal transport within certain logistics sectors. The infrastructure that the other studies referred to is being analyzed regarding one special logistics branch. Barriers regarding the use of intermodal transport are identified in the shipper’s behavior study. This helps to determine what factors should be stressed when establishing multimodal transport chains.

### 3.2 Marketing campaign: Scandria – drawing attention of customers

The goal of the marketing activities was to introduce the idea of the Scandria corridor to logistics market players. This target group was addressed both within the corridor and its different regions but also outside the corridor. The Logistics Initiative of Mecklenburg-Vorpommern, a round table of regional logistics stakeholders, was an important partner during this marketing campaign.

Throughout the lifetime of the project, several marketing activities were performed. A fair stand for the project was designed. Together with market players (Logistics Initiative Mecklenburg-Vorpommern and port association of Mecklenburg-Vorpommern), this fair stand was used at the German Logistics Congress 2009, 2010 and 2011 in Berlin and at the Transport Logistic 2011 in Munich.

The choice of these strategically important fairs (the German Logistics Congress for the German market and the Transport Logistic for the international market) helped gaining access to the target groups.

A concrete example can be given by project partner University of Applied Sciences Wildau. They were at the Transport Logistic and represented Scandria with a flyer on different train concepts for the Scandria corridor. Contacts with 35 companies from the logistics and transport industry resulted in follow-up talks with six companies about the possibilities to implement train concepts in the corridor.

With the help of the Logistics Initiative Mecklenburg-Vorpommern, there was a regional kick-off conference green corridors / green logistics organized in March 2010. Additionally, the annual logistics branch conference of the Logistics Initiative in 2010 was financed by Scandria – promoting the Scandria corridor. For the branch conference in 2011 Scandria was one of the smaller sponsors. On this occasion, the corridor was promoted among other topics. In May 2012, Scandria will once again finance the branch conference which will focus on the corridor and major topics from the Scandria project – discussed from a business point of view.

Both conferences were designed to help introducing the topic of green logistics and the Scandria corridor to market players. The conferences were both placed at a time shortly after discussions about green corridors and TEN-T had started at EU level.

WP 4 published a brochure called Logistics Solutions was published – describing the different project partner regions with regards to logistics. Based on this brochure, a logistics portal was developed (www.scandria.eu). Additionally, project partners also developed a brochure on Mecklenburg-Vorpommern’s role within the corridor – displaying the advantages of the corridor “Mecklenburg-Vorpommern – natural hub in the Scandinavian-Adriatic-Corridor”.

Version 10, 2012-06-01 - 27 | 60
This marketing material helped introducing the topic to market players. It was used at various fairs, conferences and meetings – also by other project partners.

The cooperation with the Logistics Initiative Mecklenburg-Vorpommern definitely improved the possibilities to gain the market's interest. Throughout the project the impression rose, that the originally political topic “has arrived” at market level. A lot of market players know about the Scandria corridor. Some even use it for their own purposes. They see themselves as part of the corridor, understand the contents and participate in the promotion activities.

In general terms, cooperation with market players bears the problem of differing interests. Interreg regulations do not always match with local interests. This is a problem that remains to be solved. It involves a lot of diplomacy and requires that both sides understand and accept the limits and chances of such a co-operation.

Based on the good experience, future projects should try to liaise with businesses for similar marketing activities. Political concepts and ideas will then be given a framework – it will be easier to transform them into real actions.
4 Logistics Strategies in the Scandria project area

The Logistic Business Development Strategy provides input to the Scandria Action Plan. It is based on the analysis of the outcomes of several case studies on logistic concepts carried out in the framework of WP 4 on one hand and the orientation for logistics development given in strategy documents on national and regional level in the closer Scandria region as well as in the EU-Commission’s White Paper “Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system” on the other hand.

4.1 Common objectives and features of national and regional logistics strategies

All countries and some regions in the Scandria core region have adopted and published strategic documents for the development of freight transport. The scope of these documents is different – they deal with logistics as well as with human mobility, traffic safety and infrastructure development.

The position as transit region / country shapes the perception of and perspective on logistics services growth. In Denmark, Germany and in Skane considerable transit traffic is a common feature seen with apprehension because of environmental effects, external costs and various nuisances but also as an opportunity for value creation and occupation.

Common features of the analysed documents are:

- Logistics are considered an important business branch generating income.
- Logistics are a growth factor of the national economy influencing the competitiveness of manufacturing industries in international markets.
- Sustainable logistics development is common concern with respect to effects on air emissions, climatic change, noise emission and land use.
- Sea transport is considered an important element of sustainable transport with seaports as major hubs in the transport system.
- There is a close relationship between transport and spatial planning.
- Importance is attributed to information technologies, seen as a major tool for better freight transport.
4.2 Denmark

In April 2009 the Danish government and opposition parties agreed to conduct a strategic analysis on a green transport policy discussed on a series of “Transport days”. The strategic analysis should be finally completed in 2013, after which the parties discuss the results during the transport planning process. In the focus are projects for infrastructure development. In this setting the Danish Transport Ministry published in May 2011 a report titled “Denmark as a transport land in the international transport system”\textsuperscript{29}.

The report characterizes Denmark as a transport land with a knowledge-based, innovative, flexible and internationally oriented transport industry taking responsibility for safety and environment. It stresses the close relationship between transport infrastructure, logistics services and transport research and education:

“One of the prerequisites for being able to take advantage of the increasing international transport remains to develop a good road and rail infrastructure complemented with modern combi terminals, ports, airports and transportation centres to ensure an efficient handling and transshipment of cargo between modes. In addition, there must be focus at a high level of knowledge and innovative solutions to ensure that transport has a high productivity that can compete with other countries.” (p10)

Danish strengths are:

- High knowledge of transportation - including logistics and freight forwarding
- Advantageous location between Sweden and Germany - ideal for a transit
- High degree of automation and efficiency in the transportation industry, which partially compensates for the high wage levels
- The future Fehmarn Belt link, double tracks in Sønderjylland (South Jutland) and a generally improved infrastructure
- Low congestion and short distances, attractive for the transport of heavy and time sensitive goods

Particular challenges

- Southern Sweden and Northern Germany are competing logistics areas close to Denmark.
- The coupling between transit and Danish imports and exports is underutilized - for much of transit transportation runs through Denmark without stopping.
- A need for more sidings and more efficient combined transport terminals and ports;
- Lack of parking space including secure rest areas;
- Need to strengthen innovation in the freight transport sector (p. 69)

Stated goal is that Denmark continues to stand as a strong transportation country. In order to maintain this position in international freight transport the following focal points are highlighted (p.11):

1. Access to the international transport system must be strengthened (so-called gates).
2. Denmark will promote the development of strong transport and logistics centers.

\textsuperscript{29} Danmark som transportland i det internationale transportsystem, Transportministeriet, København 2011, http://www.trm.dk/da/publikationer/2011/danmark+som+transportland/
3. Denmark must focus on innovation and high quality transportation and logistics services.
4. Freight transport must be done on a level playing field, where all players comply with Danish and European rules.
5. Growth in freight transport must be sustainable for the environment and road safety.
6. All provinces should have easy access to international transport.

The report characterizes the main transport corridors in the country and stresses the importance and effects of the existing and planned fixed links. Ferry connections constitute also one of the major transport corridors for the transportation of goods between Denmark and Germany and towards further continental countries. The position as a transit country is considered beneficial for the transport system itself as well as for the national economy as a whole.

A key area of focus is a continued strengthening of the country’s eight transport and logistics centres, which play a pivotal role in the overall transportation system for strengthening the interaction between the modes. With the "Agreement for a green transport policy" (2009) and the agreement on "Better Mobility" (2010) the government took the initiative to improve the framework for major transport and logistics centres. (p.25)

Under the title "An efficient transportation system throughout Denmark" there are discussed proposals for:
- More freight on rail
- Effective international road transport (road trains and increased limits for axle loads and heavy trucks weight)
- Sea ports as transport hubs
- Development of air cargo

To ensure continued productivity growth in transport programs for research and education in this field are needed. For short-term training and higher education a review of transport logistics training and further development of professional training in Value Chain Management is proposed. (p.28)

In relation to innovation, the government established in 2009 an "Innovation Network for Transport", which deals with themes like energy optimization, security and infrastructure investment as a potential topic of innovation. The Ministry of Transport recommends that independent "strategic research on transport and infrastructure" continues. It should be examined whether there is interest and basis for building up an innovation-based research institute with a focus on enhancing productivity in the transport industry to sharpen competitiveness in the growing freight transport. (p.30)

Denmark is also working to create green corridors, for example, in relation to the corridor from Stockholm via Copenhagen and Hamburg to Palermo. This corridor is particular significant for the international transport and transit traffic in Denmark. (p.60)

Regional logistic strategies for Scandria corridor regions are not known. Initiatives for development of logistic services focus around the Øresund region. Until recently Øresund Logistics acted as a network organization of Danish and Swedish logistics stakeholders in industries, universities and administration. For instance, the organization developed the Marco Polo project Scandinavian.
Shuttle service - a freight corridor for intermodal traffic between western continental Europe and the Scandinavian Peninsula via Jutland. In the framework the NordLog project action plan developed 5 proposals for capacity building and to heighten innovation:

- Humanitarian Logistics Innovation Platform
- ICT for Supply Chain Management
- Green STRING Corridor
- Sustainable City Logistics
- Regional capacity building through increased education within logistics.

4.3 Finland

Finland’s Government has laid down transport policy guidelines for several parliamentary terms. The first report was issued to Parliament in 2008; in future transport policy guidelines will be laid down in the beginning of every parliamentary term.

The Finnish Government underlines the importance of a smoothly functioning transport system and its development, along with measures to reduce transport-related emissions and promote sustainable development. A report on transport policy has been announced in the Government Programme 2011. Important projects include plans serving large volumes of traffic that also support economic growth, have the best cost-efficiency rates, promote traffic safety, reduce emissions, and are of regional importance. Special attention will be paid to increasing rail traffic and enhancing the standard of rail services.  

The report “Finland State of Logistics 2009” is the most recent in a series going back to 1992. It highlighted again the relatively high logistics cost in international comparison. The significance of logistics to companies’ competitiveness has continuously increased. Expertise in logistics at manufacturing firms is on a good international level, many firms are found in Finland whose logistics functions are amongst the world’s most effective in their field.

There is a tradition in the work with strategic concepts on freight transport and logistics in Finland, may be due to the peripheral geographic situation of the country. “Strengthening Finland’s Logistics Position – An action programme” was published by the Ministry of Transport and Communication in 2005.

“Transport 2030. Major challenges, new directions” followed in 2007 as a framework directing transport policy over the coming years. It addressed among others as main challenges to the development of the transport system:

- Climate change and quality of the local environment
- Competitiveness of business
- Transport safety

---

• New, intelligent technology
• Efficiency of the transport sector

In order to preserve the high quality of logistics services investments in logistics competence and related research and development, information and communication technology are considered essential, as well as effective markets for logistics services and information systems for planning and management of transport services.

In 2009 “Finland’s Strategy for Intelligent Transport”\(^{33}\) was adopted. The strategy was prepared and discussed in a process open to all stakeholders in the transport sector and other interested parties. It creates a vision for intelligent transport in 2020, defines the principles of development, transport policy objectives and points of emphasis for the strategy. There are eight rather comprehensive key projects identified and the roles of the various stakeholders described. Finally, the document presents an action plan for intelligent transport and a budget.

Important for logistics development are features of the vision 2020 like:

• Cost-effective logistics will improve Finland’s competitiveness.
• Finnish businesses will produce innovations that are further developed into successful ITS exports.

The Finnish transport system supported by ITS should, among others, achieve the following objectives by 2020:

• Increased productivity of transport infrastructure management growing faster than general productivity;
• Greenhouse gas emissions caused by transport will have been reduced significantly
• Reduction of private sector logistics costs to a level almost on a par with those main international competitors.
• Be in the world’s forefront in the use of intelligent transport services and products.
• Produce and export a significant amount of intelligent transport services and products. (p.12)

Intelligent transport leads to new transport policy starting with a transport administration reform (effective since 2010) focussing the transport system as a whole.

A key element is the four-step principle - the first step in solving transport problems is to assess whether the problem can be fixed by influencing transport demand. Next, the possibility of increasing the efficiency of the existing transport infrastructure is reviewed. Only when small-scale improvements are found to be insufficient are new transport infrastructure construction projects considered.

Under the headline More efficient logistics a “smooth-flowing, incident-free multimodal transport network” features as the corner stone for predictable transport and efficient logistics. Important elements are realtime traffic information and forecast, electronic processing of shipping and customs clearance documents at border stations, as well as automated identification of both cargo and transport vehicles.

The logistics strategy being prepared should be closely tied to the development of intelligent transport. This will ensure active interaction between customer needs and service producers. The key project for more efficient logistics is “Electronic operating models for goods transport” (p.20)

4.4 Germany

In 2008 in the result of a consultation process with the transport industry, shippers and transport researchers the German Federal Government adopted a much debated “Freight Transport and Logistics Masterplan”\textsuperscript{34}.

The Masterplan formulates six objectives:

1. Making optimum use of transport infrastructure - shaping transport to make it more efficient
2. Reducing the number of journeys - ensuring mobility
3. Transferring more traffic to the railways and inland waterways
4. Upgrading more transport arteries and hubs
5. Environmentally friendly, climate-friendly, quiet and safe transport
6. Good working conditions and good training in the freight transport industry

These were to be achieved by means of 35 concrete measures described in detail with regard to the issues, the way to be realized, responsibilities, costs, impacts and timescales.

In 2010 under a new government this discussion process led to the publication of a “Freight Transport and Logistics Action Plan – Logistics Initiative for Germany”\textsuperscript{35} replacing the Masterplan. The Action Plan is seen as a framework for action to tackle current challenges and as a basis for further improvements to Germany as a centre for logistics.

The following objectives are set:

(1) Strengthen Germany as a logistics centre
(2) Enhance the efficiency of all modes of transport
(3) Exploit the strengths of all modes of transport by interlinking transport infrastructure in an optimum manner
(4) Promote the compatibility of transport growth with environmental protection and climate change mitigation
(5) Support good conditions of working and training in the freight transport industry

For each objective a set of particular measures is defined (30 measures in total) aiming at a more efficient freight transport system. They are of different character – from rather general policy declarations to very precise measures. For each measure particular objectives, steps for realization and the actual status are given.

As especially important the following measures are assigned to the first objective:

1A - Implement the National Strategy for Sea and Inland Ports
1B - Implement the Federal Government’s 2009 National Airports Strategy (wherever it is freight-related)
1C - Market Germany as a centre for logistics
1D - Security strategy for the freight transport and logistics industry


Other measures to be implemented:

1E - Freight transport and logistics network
1F - Permanent point of contact: Federal Government Coordinator for Freight Transport and Logistics

The National Strategy for Sea and Inland Ports\textsuperscript{36} was adopted in June 2009 as part of the Freight Transport and Logistics Masterplan with a time horizon of ten years. German ports are not federal property but the Federal Government is legally obliged to provide for the capability of sea ports. Port policy and development is a joint task of the Federation, the federal states, port cities and the port business community. The Strategy is the result of a process of discussion and consultation of all stakeholders.

The goals of the port strategy are to

- eliminate bottlenecks in ports and hinterland connections,
- improve the ports’ competitive standing,
- secure training and employment,
- promote environmental protection,
- optimize supply chains security.

To market Germany as a centre for logistic means to profit from its geographic position at the heart of Europe and at the gateways to the world. By means of targeted activities, Germany will be promoted as a centre for logistics internationally. Cooperation between the Federal Government, the federal states and regional marketing initiatives is to be intensified.

The “Freight transport and logistics network” will serve for improved communication and better exchange of ideas and experiences between the Federal Ministry and the logistic business.

For the realization of objective (3) of the Freight Transport and Logistics Action Plan the following measures are planned:

3A - Improve the framework for combined transport
3B - Fund innovations and capacity enhancements in intermodal transport
3C - Strategy for short sea shipping
3D - Analyze the potential for multimodal transport

The system of funding for combined transport will be revised and funding is to be increased in order to shift more traffic to the railways and waterways in the interests of environmental protection and to relieve congestion on the roads.

Short sea shipping is seen as a possibility to relieve congestion on the roads and railways. Measures will be developed that promote a shift of flows of goods to waterborne transport. Upgrading of combined transport transhipment facilities at seaports will be supported and funding for the national Short Sea Shipping Promotion Center will be provided until 2012.

On a regional level policy documents of the Chambers of Industry and Commerce are still focussed on infrastructure projects. These documents seldom mention questions of sustainable transport,

\textsuperscript{36} Nationales Hafenkonzept für die See- und Binnenhäfen, Federal Ministry of Transport, Building and Urban Development, Berlin, 17. Juni 2009
training etc. Regional logistic networks in Berlin / Brandenburg and Mecklenburg-Vorpommern are project orientated and did not publish yet any strategic orientations.

4.5 Sweden

The National Plan for the Transport System is the supreme state document on the development of the national transport system. It is essentially an investment programme; nevertheless, the stated objectives and the policy approach adopted are of interest for the Scandria Logistics Strategy. The basis for the plan is Bill 2008/09: “Future travel and transportation - infrastructure for sustainable growth”, adopted in 2008. This parliamentary decision mandated the government transport agencies (Banverket, Vägverket, Sjöfartsverket and Transportstyrelsen) to develop a joint proposal for a national transport master plan. A draft version was published in 2009. The government approved the draft National Plan in March 2010. Local government bodies participated in the planning process.

Overall transport policy objective is to “ensure economically efficient and sustainable transport for citizens and businesses throughout the country”, supplemented by two equal goals:

- a performance goal (availability, accessibility) and
- a goal of minimum external effects (safety, environment and health).

In addition to the transport policy objectives, non-transport aspects considered in developing the plan were:

- jobs and enterprises,
- transport user (shippers and travellers/passengers) needs and regional priorities,
- climate-effective transport,
- socio-economic analysis and environmental assessment as important tools.

The four stages principle has been the basic methodology used to develop proposals for action:

1. Measures that can reduce and affect transport demand and modal choices (planning, control, regulation, information and education).
2. Measures that result in more efficient, safer and more environmentally friendly use of existing infrastructure.
3. Limited reconstruction measures of existing infrastructure improving capacity, traffic safety or sustainability.
4. New investments and major conversion steps.

In 2009 work started on a multimodal transport strategy and action plan for the use of intelligent transport systems and services (ITS) in the transport system up to 2015. The objective is to expand the use of ITS solutions in order to exploit the potential of ITS for contributing to the attainment of the transport policy targets in both freight and passenger transport. The multimodal transport perspective again constituted an essential point of departure.

---

37 Nationell plan för transportsystemet 2010–2021, Stockholm 2010
For the policy area “freight transport” as targets were identified:

- Better information support for more efficient, intermodal transport chains
- Internationally harmonized services

The formulated strategies focus on:

- Information supply by collaboration between public and private players in all transport modes
- Integration of traffic information into planning and implementation of freight transport
- Integration of the concept of Green corridors and intermodal terminals
- Coordination with EU initiatives in the field of logistics

Measures in the action plan include i.a. the creation of a Swedish forum for ITS freight and logistics, pilot projects for a single electronic freight document and ITS in green corridors and activities for terminal development.

The Swedish Road Administration (now Swedish Transport Administration) was in charge of developing the strategy and action plan. It is now responsible for implementation and follow up.

An Action Plan for Logistics and Freight Transport was published in 2010 by a working group of the Logistikforum. The Logistikforum is an advisory body to the government formed in 2007 with appointed members representing cargo owners, transport industry and transport research.

The plan defines customer orientated transport with less environmental and climatic impact as the major common challenge of society and transport industry. A central point in the Swedish transport policy is that it is the user who should decide how the journey or transport will be implemented.

A series of priority actions is proposed that contribute to increased prosperity and international competitiveness. Most of the measures should be implemented in collaboration between shippers, transport industry and the state:

- Develop an aggressive freight strategy covering all modes of transport with special attention to the intermodal market with nodes and hubs. Great importance should be attached to the development of ports, airports and rail and truck terminals into intermodal hubs as well as to the use of advanced traffic management systems
- Stimulate research, development and demonstration in freight transport
- Improve the decision support and planning tools needed to make well balanced decisions on to develop freight transport on short and long term.
- Support the development of green corridors.
- Collaboration for the future of urban distribution.
- Internationalisation of Swedish transport policy.
- A harmonized, balanced and up-to-date regulatory framework.
- Maintenance and development of freight logistics competences and skills.
- Develop alternative and more speculative future scenarios for the Swedish and international freight transport development as a complement to traditional transport forecasts.
- Systematic and sustained communication.

39 HANDLINGSPLAN FÖR LOGISTIK OCH GODSTRANSPORTER- RAPPORT FRÅN EN ARBETSGRUPP INOM LOGISTIKFORUM, Regeringskansliet (2010);
The **Swedish Transport Administration** (Trafikverket), formed in 2010 as single state agency for all modes of transport, published in 2011 its own **freight transport strategy**\(^{40}\). Without explicit reference to the above summarized documents it takes up their main lines of reasoning and develops guiding principles for the newly formed agency. After characterizing the relevant variables the document summarizes strategic challenges and objectives in “strategic routes”:

1. - be proactive in efforts to collect, process, analyze and disseminate information on freight transport needs and the corresponding range.
   - support and be proactive in order to contribute to energy efficiency improvements made in the areas of logistics and freight transport.

2. - streamline logistical phenomenon in metropolitan areas that are relevant for efficient transport and urban development.
   - in collaboration with, among other municipalities and regions, secure the space necessary for freight transport nodes development.

3. - work for a high market efficient freight transport in the long run,
   - conduct a structured dialogue with the industry on priorities for action directed particularly towards freight
   - prioritize the development of transportation systems that support the co-modal concept, focusing on the strategic network.

4. - care for a robust and reliable transport infrastructure

5. - increase the benefits of resources used, working with four-stage principle at every stage.
   - increase the benefits of R&D efforts through international information gathering, collaboration and dissemination of results.

6. - be a proactive and competent party in international context and enhance the development and harmonization of regulations.
   - work for a continued dialogue with stakeholders in the logistics chain

In the **Skane region** a new regional freight strategy for the years up to 2030 is under discussion. This process will update the strategy document developed in 2004\(^{41}\). Stated objective of the freight strategy is to make Skåne a green transport region and to make optimal use of the regions geographic position.\(^{42}\) For public discussion four dialogue meetings were held in 2011. Much of the discussion was on the regional administration’s role in the process and its relation to the local communities. Contents and scope of a regional freight strategy were debated. According to the summary document on the dialog process, the strategy needs to be clear about the objectives and to whom they are addressed.

It should provide

- an integrated knowledge base to provide input into actions, and
- should highlight the interplay between long distance and regional transport.
- The strategy needs to be formulated so that it supports the possibility to work actively with the business community and
- it should strengthen the role of Skane as a “green transport region”.

---

\(^{40}\) Trafikverkets godsstrategi, Trafikverket, 2011-05-15
\(^{41}\) Strategies for goods transport in Skåne, Abridged version, Final Draft, April 16, 2004
• The close link between logistics and spatial planning and to sustainable urban development was stressed.

There were discussed many concrete questions concerning railways capacity and competitiveness as well as the unquestionable importance of ports for regional goods transport. The region's role as a transit region leads to a major focus on transit, not least heavy road transport.

Participants in the dialogue meetings emphasized the importance of integrating a variety of issues such as land use planning, sustainable urban development, business and more. A freight strategy is thus not a freight transport strategy alone, but rather a regional development strategy based on the logistics sector.

Another regional initiative in logistics is the border-crossing Swedish – Danish Øresund Logistic network (see 4.2).
5 Scandria and the White Paper goals

The SCANDRIA Logistics Business Development Strategy (LBDS) in this chapter aims to demonstrate, that the project and its results is in line with aims and means of EU-Commission's White Paper “Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system” and has to be seen as one of the instruments for the realization of the roadmap.

That will be demonstrated by three aspects:

(1) SCANDRIA has an important role in the TEN-T core network

The newly defined TEN-T core network corridor no. 4 Rostock/Hamburg – Berlin – Praha – Brno – Bratislava – Budapest – Lefkosia in large parts covers the transport corridor from Scandinavia to the Adriatic Sea. In the north by the MoS Rostock – Gedser it is well connected with the core corridor no. 5 Helsinki – Stockholm – Malmö – Copenhagen – Hamburg … Valetta. For middle and southern Europe destinations the node of Brno provides connections to Austria and Italy, interalia by TEN-T corridor no. 1.  

The SCANDRIA project, therefore, is in accordance with the White Paper declaring, that “new transport patterns must emerge, according to which larger volumes of freight and greater numbers of travellers are carried jointly to their destination by the most efficient (combination of) modes” (no. 19). That can be reached by a core network of corridors, carrying large and consolidated volumes of freight and passengers traffic with high efficiency and low emissions.” (no. 50).

The Scandinavian Adriatic Freight Corridor is connecting such European metropolitan areas in Northern Europe as the Copenhagen-Malmö region, Stockholm, Helsinki and Oslo with Berlin and further with metropolitan areas in middle and southern Europe (Prague, Vienna, Bratislava, Budapest, Ljubljana, Venice/Trieste, Milano).

The SCANDRIA corridor is the shortest north-south connection. As many as 4 core network sea ports (Copenhagen, Malmö, Trelleborg, Rostock) and 12 comprehensive ports are located in the SCANDRIA regions.

It is a general advantage of the SCANDRIA corridor, that there are free infrastructure capacities available for growing freight transport, especially in the railway network.

(2) SCANDRIA is a means to reach full modal integration by optimizing the performance of multimodal logistics

Whereas the White Paper of 2001 focused on modal shift and the midterm review of 2006 introduced the concept of co-modality, the White Paper 2011 aims at full modal integration. To exploit efficiently a multimodal, integrated and intelligent network includes “optimizing the performance of multimodal logistic chains, including by making greater use of inherently more resource-efficient modes” (no. 19).

43 see Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Union guidelines for the development of the trans-European transport network COM/2011/0650 final/2 - 2011/0294 (COD)
The SCANDRIA project contributes to that aim by a focus on intensified use of multimodal transport chains, by the extension of existing and the development of new multimodal freight terminals and by additional sea connections.

- Already today in port hinterlands traffic combined transport is well established and increasing in importance. The Port of Rostock, for instance, is connected with terminals in Italy, Austria, Switzerland, Czech Republic, South and Western Germany by more than 30 trains weekly, substituting annually 70,000 truckloads. There is a considerable potential for additional connections in combined transport from continental Baltic Sea ports to continental European hinterland destinations as well as from Scandinavian ports to inland destinations.

- The capacity of multimodal terminals has to be extended, in order to attend the growth of combined transport. In the SCANDRIA project it was shown, that especially seaports need capacity extension in order to cope with traffic growth while inland terminals in some cases are not fully utilized and need able operators.

- The increase of sea transport is pushed by the motorways-of-the-sea concept. In SCANDRIA the MoS project Rostock – Gedser has been developed. The result will be a doubling of transport capacity in 2012 by investments in new ships and modernization of port terminals resulting in higher efficiency of ship-to-shore processes in both Rostock and Gedser. The modern new buildings will reduce the vessels’ specific emissions; they will be prepared to switch to alternative propulsion systems with lower emissions. Additionally new ferry lines have been investigated (for instance between Halmstad and Rostock).

(3) SCANDRIA aims at fostering modal shift from road to rail in long distance transport

The White Paper stipulates that higher shares of long-distance freight transport have to be shifted away from road transport. “30% of road freight over 300 km should shift to other modes such as rails or waterborne transport by 2030, and more than 50% by 2050, facilitated by efficient and green freight corridors” (para 2.5/3).

For that goal, SCANDRIA developed several proposals dealing with new shuttle trains for long-distance freight transport between Scandinavia and continental Europe.

Example 1

The case study on the development of unit trains operating from Baltic Sea ports via Berlin/Brandenburg multimodal transport terminals to Adriatic ports has the aim to create a regularly running pilot train connection for combined transport on the Scandinavian-Adriatic Corridor via the region Berlin-Brandenburg. It builds on output of the European Union Central Europe Programme project SoNorA.

Interest in the corridor could be proved and demand was identified. Further work on three routes is proposed:

2. Sassnitz – Berlin – Munich – Verona – Venezia/Ravenna
3. Berlin – Ulm / Stuttgart – Milano
Example 2

The project partners port of Rostock (Germany) and port of Halmstad (Sweden) and respective stevedoring company collaborate in the development of a new shipping line connecting both ports.

Southern Sweden and Germany are already linked by several well working ferry services, therefore project partners agreed to study the viability of a container service. The Port of Halmstad is already part of the Baltic Sea container feeder network, while Rostock offers fast and frequent direct combined transport connections to Italy, Switzerland and Austria.

Example 3:

Port hinterland logistics will be analysed in a study that covers the Scandria corridor and neighbouring regions. Strategies shall be developed to shift trailers arriving or departing at/from Mecklenburg-Vorpommern’s Baltic Sea ports to other transport modes, i.e., to railways.

The strategies shall be practical and attractive for truck operators, forwarders and shippers, so that the realization of the strategies becomes highly likely.
6 How to develop logistics in the Scandria corridor

6.1 The Vision

The Scandria Logistic Business Development strategy follows the vision for the development of the Scandria corridor as laid down in the Scandria Berlin Declaration:

“The signing parties DECLARE their will to initiate a closer cooperation within the Scandria corridor from Oslo and Stockholm via Malmö and Copenhagen to Berlin and further to the Adriatic Sea in order to achieve more innovation and sustainable growth…”

- AIM for a well-balanced, coherent and sustainable development along the Scandinavian Adriatic Corridor based on the Corridor potentials and functionalities.
- SUPPORT effective and environmental friendly co-modal transport solutions in order to establish Scandria as a Green Corridor…”

To attend these aims with respect to logistics services the following objectives will be pursued:

- High quality logistics services are offered to industries and consumers in the Scandria corridor.
- Logistics services offered guarantee a seamless, convenient and cost efficient transport for users located in the corridor. For transit cargo they constitute as well a competitive alternative to corridors east and west.
- Local and regional logistics services will be well connected with long-distance transport.
- The idea of sustainable mobility or Green transport will be a criterion in the assessment of all decisions in the corridor logistics.

With regard to the means to be employed applies the following:

- The overall goal is an efficient, competitive and environmentally sustainable offer of logistic services.
- All instruments adopted should work in conformity with market forces.
- A cross-sectorial approach between investment, logistics and environmental strategies will be pursued.

Based on this vision, on the Scandria case studies (chapter 0), and on the existing national and regional strategies (chapter 4) as well as the White Paper – “Roadmap to a Single European Transport Area” (chapter 5), the following six goals should be pursued:

1. Improved competitiveness and marketing of corridor transport services in relation to competing corridors
2. Development of logistics “value-added services”
3. Reduced climatic and environmental impact – make Scandria a “green freight transport corridor”
4. Promotion of innovative transport technologies
5. Improved competitiveness of rail and combined transport relative to road transport
6. Higher logistics competence and availability of well-trained logistics workers

These six goals are closely interrelated and influence each other. They are elaborated in the following sections.
6.2 Goal 1: Improved competitiveness and marketing of corridor transport services in relation to competing corridors

Problems to be addressed

The Scandria corridor constitutes a short North – South connection. This opens possibilities to offer shippers cost efficient and environmentally sustainable transport services. Nevertheless, despite its undeniable advantages for many transport relations, the Scandria corridor is much less frequented than its Western alternative.

The attractiveness of the corridor services for long running transport chains depends on the quality and cost efficiency of the solutions offered to potential customers. Studies in the framework of the Scandria project show that fast and cost efficient transport products can be offered. Main weakness to be overcome is quality deficiencies.

A second obstacle to wider use of Scandria corridor services is the insufficient awareness of Scandria corridor potentials and advantages for modern logistics solutions. The chances and advantages offered by the Scandria corridor for international logistics services need to be widely communicated, the corridor as a whole marketed and the name “Scandria” established as a brand mark. Therefore, the manifold existing marketing activities promoting Scandria corridor logistics services need to be coordinated and harmonized.

Competitiveness and marketing are features specifically dealt with in the Danish and German logistics strategies.

Targets:

- Develop transport services in the Scandria corridor competitive in cost and quality with alternative corridors.
- Make the Scandria corridor a visible and established brand in the market for long running North-South transport services.

Actions:

- Establish a Scandria Logistics Network (SLN) comprising stakeholders from the freight transport and logistics business (logistics service providers, logistics centres, ports, ferry companies, forwarders etc.), administration, training and research institutions.
- Identify market niches and occupy them.
- Prepare the practical implementation of new shipping lines.
- Make advantage of infrastructure capacity reserves to develop logistics services with special capacity requirements, i.e. heavy transport.
- Market research, promote networks of shippers and logistic service providers
- Establish and operate a “Scandria” internet portal.

Actors:

- Business associations
- Chambers of commerce and industry and similar bodies
- Logistics initiatives
- Logistics service providers
• Research and logistics training institutes

**Cases:**

*Port Hinterland Logistics (open until 4/2012)*

**New ferry links** - Scandlines is going to introduce the “Traffic machine concept” between Rostock and Gedser with 9 departures per port per day and short port turnaround times of approx. 15 minutes. To warrant this top performance, purpose built port infrastructure and new vessels will be put in service. Additionally, the investments will allow the development of intermodal traffic, which is expected to reach 6% of the link’s annual traffic (2017).

**Detailed proposal for action no. 1:**

Establish a Scandria Logistics Network.
The network will be part of the broader Scandria Alliance proposed for fostering the development of the Scandria Corridor.

**Background:** Improved logistics competitiveness and marketing of the corridor as a bundle of logistics services requires joint action and cooperation across borders and branch limits.

**Objectives:** Maintain a vivid dialogue between logistics partners in the Scandria Corridor. Create contacts between logistics service providers in the Scandria Corridor. Provide a platform for co-operation with the SoNorA project area. Develop and promote common projects for improving the logistics services offer.

**Elements:**

- Organization / support to various forms of contact for the logistics business community, such as thematic conferences, exhibitions and other forms of get together
- Formation of standing ad-hoc sub-groups dealing with subjects of common interest in the Scandria Corridor logistics community. Possible subgroups could be e.g.:
  - Action groups for combined transport in specific transport nodes
  - Introduction of “green logistics service packages”
  - “Intelligent transportation solutions” (ITS) for freight and logistics
  - Environmental regulation
- Lobby action at the regional and international level
- Operation of the Scandria Logistics Online Portal *“Logistics in the Scandinavian"*
Adriatic Corridor” continuing and extending the portal developed in the current Scandria project (http://www.scandria.eu)

Organization:
No specific organization will be established. An agreement between the principal actors defining distribution of tasks and responsibilities will be sufficient. Scandria Logistics Online Portal serves base for different actions.

Actors:
- Principal actors should be business associations, chambers of commerce, regional logistics initiatives. These principal actors will form the organizational structure for the network.
- The network should be open to all parties interested in improving the logistics offer in the Scandria Corridor.

Steering the action: Logistics Initiative Mecklenburg-Vorpommern jointly with Logistics Initiative Berlin-Brandenburg, University Lund

Timeframe: short-term action, first activities should start in the last phase of the project

A first concrete measure could be common activities of interested parties promoting the enhanced possibilities for logistics development after opening of the improved Rostock – Gedser ferry service.
6.3 Goal 2: Development of logistics “value-added services”

Problems to be addressed
Logistic services usually are bought and sold to the final client as package of several logistic services where freight transport constitutes only a part in the package. Quality and diversification of the services package is decisive for the competitiveness of the logistic service offer, and for the value added in the corridor.

The provision of logistic services takes place in the nodes of the freight transport network. Freight centres / freight villages as well as multimodal terminals in seaports can be focal points for the production of value-added services.

The necessary increasing production and use of renewable energy requires new and complex types of logistics services:

- The development of wind power generation on-shore as well as off-shore creates a new challenging field for specialized logistics services, particularly with respect to the huge dimensions of the packages.
- The still incipient new fuels and propulsion concepts in transportation (LNG, CNG, bio methane, fuel cells, battery vehicles) require new distribution concepts and infrastructures.

Targets:
- Increase the share of value-added services in the total of logistic services produced in the Scandria corridor
- Bring the specific location and infrastructure advantages of the Scandria Logistics Corridor to bear
- Diversify and broaden the offer of value-added logistic services

Actions:
- Promote the development, diversification and networking of logistic centers.
- Identify suitable locations and develop inland logistics centers as “sub-hubs” in the hinterland of seaports.
- Develop collaborative networks of logistic service providers.
- Promote international cooperation for higher competence in land based and off-shore wind power generation logistics.
- Promote international cooperation in the development of logistics for gas and/or electric driven vehicles
- Provide additional areas “ready for investment” in direct neighborhood to or close to ports and other freight centers for the location of logistics enterprises.

Actors:
- Logistics associations
- Regional governments, local administration
- Logistics service providers
Cases:
- Development of nodes / freight villages, distribution centres (WP 3)
- Port Hinterland Logistics – (not yet finished)
- HUB 53/12

Detailed proposal for action no. 2

Develop a network of Logistics Service Terminals in seaports and other suitable locations serving LTL and FTL cargoes, offering railway and combined transport pre- and on-carriage and short-sea shipping connections. Develop on this basis an offer of value-added services according to regional specifics and needs.

Background: In order to increase income generation in logistics, improve logistics competitiveness and serve people and enterprises in the corridor with better logistics, more value-added services have to be added to the service offer. This can be done more easily and advantageously in points of concentration and crossing of freight flows, where already various cargo handling processes take place. Especially sea ports functioning as gateways and meeting points for at least three transport modes are suited for the production of value-added logistics services in close connection with basic cargo handling operation.

Objectives: Provide the Scandria corridor with an infrastructure for the development of a diversified offer of logistics value-added services in form of a network of cooperating multipurpose intermodal terminals.

Provide terminals and nodes for the Scandria blocktrain and “Green Line” projects

Elements:
- Identification of suitable locations with direct access to rail and sea transport
- Develop a model business project for the operation of Logistics Services Terminals
- Establishment of a network of logistics terminals
- Ample offer of railway pre-carriage and on-carriage
- Make use of turn-table function of seaports by developing service packages based on short-sea shipping services
- Connect terminals in sea ports by shipping services
- Develop an offer of multi-modal service packages, e. g.:
  - groupage services
  - distribution services
  - warehousing
  - order picking
  - inventory management
- Identify market niches for specific services of multifunctional terminals, e.g. services for off-shore power generation, finishing of distributed products
- Develop a Marco Polo II project for the collaboration and connection of logistics services terminals

**Actors:**
- port authorities,
- logistics service providers
- multimodal transport operators
- regional development agencies

**Steering the action:** logistics service providers

**Time frame:**
In short term:
- market potentials study
- basic concepts developed and agreed upon
- Marco Polo II project

Development of the network of logistics terminals itself is a process with medium-term perspective.
6.4 Goal 3: Reduced climatic and environmental impact – make Scandria a “green freight transport corridor”

Problem to be addressed
As part of the efforts to alleviate climate change, there has to be a further reduction in the specific CO₂ emissions from transport. The objective of reducing greenhouse gas emissions by 40% by 2020 compared with 1990 levels means that the transport sector will also have to make a substantial contribution.

Other environmental effects of transport to be addressed are SO₂, NOₓ and other air emissions, noise and land use.

The consideration of environmental effects of business decisions must become part of the daily working routines in logistics companies.

Greening the corridor is a cross sectional issue. Isolated measures in one field may produce undesired results in others, for example, the regulation adopted by the members of the International Maritime Organization (IMO) to reduce drastically the sulphur content in ship exhaust in the Special Emissions Control Area (SECA) “Baltic Sea” will, according to various studies, result in considerably higher sea transport cost and thus transfer transport volumes from sea to road.

Targets:
- Establish green corridors
- Reduced specific carbon dioxide emissions of the logistics industry as a whole
- Reduced air emissions
- Reduced noise emissions

Actions:
While the core initiatives for green corridors are dealt with in the respective strategy document “Green Corridor Strategy” in the LBDS actions closely related to the logistics business are dealt with.

Action to be considered in the LBDS context:
- Promote systematic environmental management according to internationally accepted standards in logistics enterprises operating in the Scandria corridor
- Promote an environmentally sound modal split in Scandria corridor freight transport
- Develop a concrete marketable offer of “green logistics services” in the Scandria Corridor.
- Develop a low-emissions service package for Scandria corridor logistics
- Prepare for the transport consequences of the IMO regulation on sulphur content in marine fuels, especially the 0.1%-limit for SECAs.
- Study solutions for sustainable city logistics in the corridor and develop best-practice proposals.

Actors:
- Logistics service providers
- State and regional authorities, business associations, chambers etc.
Cases:
- Alternative Fuels in Heavy Goods Vehicle Transport, Trafikverket
- Wood pellets logistics from Jyväskylä region to Central Europe
- Potentials of logistic transport systems, TH Wildau

Detailed proposal for action no. 3

Development of a concrete **marketable offer of “green logistics services”**

**Background:** The “Scandria Green Transport Corridor Strategy” developed in WP 5 is an essential element of the Scandria process. The “Green Corridor” will be one of the three Scandria Alliance Platforms. An effective reduction of emissions caused by logistics has to be achieved by the “greening” of logistics services.

**Objective:** Make sustainability a decision criterion in transport chain choice.

**Elements:**
- Develop an offer of “green” logistics services packages based on existing environmentally friendly logistics services. A first product could be based on the introduction of new day ferries with high energy efficiency and low emissions on the Rostock – Gedser route.
- Define precisely tasks and duties of transport chain partners with respect to environmental, operational and legal obligations.
- Determine and publish “environmental footprints” of particular transport services in the corridor and facilitate and spread the use of tools for the calculation of the environmental footprint of specific transport service packages.
- Devise a marketing campaign including the declaration of the environmental footprint on relevant commercial documents (offer, freight documents, invoice etc.)
- Use the Scandria internet portal for development and marketing of “green logistics services”.

**Organization:**
Interested logistics companies reach agreement on a commercial basis for development and marketing of “green logistics services”.

**Actors:**
- Major logistics service providers,
- ferry lines,
- port operators

Steering the action:
- Scandlines takes the lead for first action.

**Timeframe:** short-term action
6.5 Goal 4: Promotion of innovative transport technologies

Problems to be addressed

Due to the nature of logistic services and the structure of the branch there is only a modest research activity within the transport industry. That makes innovation sometimes difficult. Nevertheless, increased value-added, market success and sustainability require the rapid introduction of innovative solutions. Networks for studying and testing of innovative logistics solutions can provide the required wider base and risk sharing.

The realization of extensive research projects targeting logistics problems in the Scandria Corridor (e.g. European Union Framework projects) requires the formation of cross-border consortia. Networks in research and development as well as in education and professional training will result in improved competitiveness and better understanding of the corridors opportunities and problems.

Innovative solutions may require changes in regulation, sometimes opposed by interest groups. Impartial evaluation of possible effects is essential. A prominent example constitutes the much debated case of maximum weights and dimensions in road transport – discussed under the buzzwords “road train”, “ecocombi” or “gigaliner”.

Innovation, intelligent transport technologies, application of information technologies in freight transport etc. are key strategies in all national freight transport strategies.

Targets:

- Create an innovation receptive climate in Scandria corridor logistics
- Build a network of logistics research institutes in the Scandria corridor
- Build capacity for cross-border research projects in logistics
- Prepare new technologies for upcoming cargo flows (bio fuels, bio mass)
- Identify specific infrastructure requirements for making successful use of specific Scandria corridor advantages

Actions:

- Promote logistics research at universities and research institutions in the Scandria corridor
- Establish a “Scandria Logistics Research Forum” in the framework of the Scandria Logistics Network for the promotion of international cooperation of researchers in the Scandria region
- Prepare pilot actions for new technologies in combined transport.
- Promote international cooperation for higher competence in renewable energy logistics (land based and off-shore wind power generation, bio-mass logistics etc.)
- Study the environmental and economic effects of road trains in transport in the corridor.

Actors:

- research institutes
- universities
- logistics associations
Cases:

- Port Hinterland Logistics
- Unit trains – introduce new concepts for handling of multimodal units

Detailed proposal for action no. 4

Establish a “Scandria Logistics Research Forum” in the framework of the Scandria Logistics Network as a platform for better cooperation and coordination in logistics research.

Background: Development and promotion of innovative transport technologies requires an adequate research and development basis. Close cooperation of research capacities located in the corridor provides valuable inputs of insider knowledge on the various regions from Scandinavia to the Adriatic and allows for tackling demanding projects with joined capacities. Fundamental for successful cooperation in research and development is the knowledge of possible partners and their capabilities.

Objective: Closer cooperation of logistics research and academic institutions in the Scandria Corridor and development of common Scandria related research projects.
- Promotion of discussion and exchange of ideas between transport and logistics researchers in the Scandria area.

Elements:

- Create a database of logistics related research and development institutes in the Scandria corridor accessible on the Scandria internet portal.
- Create a page “logistics research” in the Scandria Logistics Online Portal providing the portal with information on research results relevant for the Scandria corridor.
- Create and maintain a discussion forum for Scandria related subjects on the Scandria Logistics Online Portal
- Hold informal Scandria researchers contact meetings during fairs, conferences and other relevant events.
- Development of Scandria projects in the framework of European Union research programmes.

Organization: A “Scandria Logistics Research Forum” provides the framework for specific research projects and actions. Members deliver information and news to the moderated web portal forum. The homepage will be edited by one of the regional logistics associations in close cooperation with the web portal editor.
### Actors:
Universities and institutes engaged in logistics

### Steering the action:
Technical University Wildau, University Lund

### Timeframe:
short-term action
6.6 **Goal 5: Improved competitiveness of rail and combined transport relative to road transport**

**Problem to be addressed**

Strengthening railways and short sea shipping is a major contribution towards making the transport system more environmentally sustainable, and towards reducing external costs.

Shifting road traffic to the railways and short sea shipping reduces the strain on the road network capacity.

Economies of scale and economies of scope play a great role in intermodal competition. As production units in railway transport (whole train in combined transport) and maritime shipping (vessel) are much bigger than in road transport, economic risks are higher and large cargo volumes have to be collected.

Insufficient volume of cargo flows seems to be the major obstacle to modern railway goods transport and multimodal transport concepts in the Scandria corridor. Concepts for bundling of various cargo flows may provide an answer to this problem.

These problems are addressed in all analysed national strategies for freight transport and logistics (see chapter 4).

**Targets:**

- Establish competitive combined transport connections in the corridor
- Establish competitive rail transport concepts complementing block and shuttle trains

**Actions:**

- Bundle local and regional traffic with transit traffic in order to achieve a sufficient traffic volume for competitive service frequencies
- Bundle different types of cargo for higher transport service frequency in logistics services terminals (see action proposal no. 2)
- Prepare and support the practical implementation of new unit trains
- Support introduction of technologies for handling of not craneable semi-trailers in combined transport terminals
- Develop an information tool for planning of intermodal transports
- Develop efficient transport services for single wagon loads or wagon groups
- Dissemination measures for existing and new rail and combined services offers through a dedicated marketing network (e.g. the Scandria logistics portal)
- Create transport alternatives promoting new ferry connections
- Followup Marco Polo II application “Green Line” submitted by Lund University and a consortium of 5 companies.

**Actors:**

- Networks of interested companies, close contact to business (shippers) required
- Regional logistics initiatives and other development initiatives active in the field of transport and logistics
Cases:

- Shippers’ behaviour:
- Development of unit trains – Berlin-Brandenburg
- Development of unit trains – Öresund region
- New ferry links
- HUB 53/12

**Detailed proposal for action no. 5**

Development of **unit trains running in the Scandria Corridor**
(based on proposals developed in WP 4.11-1a)

**Background:** Scandria project case studies proved, that rail transport through the Scandria corridor is a feasible alternative to road transport – especially in times were environmental awareness is rising while transport demand is increasing. In order to tap this potential competitiveness of rail and combined transport relative to road transport must be improved. A new unit train service Berlin (Wustermark) – Ulm is expected to commence operation in April satisfying transport needs identified in Scandria case studies. The train operated by “Trans Eurasia Logistics” will run five times a week.

**Objective:** Extend the offer of competitive rail and combined transport services in the Scandria corridor

**Elements** (following the approach developed in WP 4.11-1a):

- Interconnecting the SCANDRIA corridor with other regions for enhanced bundling capacity with:
  - key regions in Mecklenburg-Vorpommern and Berlin-Brandenburg.
  - further sea-connections to the ports in Mecklenburg-Vorpommern;
  - Berlin-Brandenburg acting as hinterland-hub for the ports Bremen/Bremerhaven and Hamburg.
- Identify and involve market players in the project: Universities, other research institutions or consultants proved to be successful in establishing links between the projects and the business agents.
- Further potential analysis:
  Further potential analyses should be directed at certain promising branches and aim at interconnecting the corridor with neighboring regions and other corridors (e.g. the East-West corridor) in order to develop gateways in the Scandria corridor.
- Involve potential shippers in market studies aiming directly at developing new transport and logistics services.
- Marketing activities:
  The development of transport services should therefore be further pursued and expanded. Service concepts need to be communicated to market players, thereby promoting the corridor idea.
Actors:

− combined transport operators, terminal operators,
− regional development agencies,
− universities or other research institutions, consultants

Steering the action:

combined transport operator, combined terminal operator
Technical University of Applied Sciences Wildau as facilitator

Timeframe: short-term action
6.7 Goal 6: Higher logistics competence and availability of well-trained logistics workers

Problem to be addressed:
Transport and logistics workers represent a key factor in ensuring that the Scandria corridor logistics and transport industry enjoys a successful development. Currently they are affected by changes in the transport sector making their work harder and rendering jobs in the industry less attractive compared to other industries.

Modern logistics is a knowledge intensive industry requiring know-how and skills in a rather wide range of subjects and academic disciplines and the ability to work in international networks. Intercultural competence and knowledge of differing business and operational processes in Scandria corridor countries are important factors for international projects.

The demographic changes under way in all Scandria countries point in the direction of a growing scarcity of labour resources, it is already becoming apparent that there will be a shortage of skilled labour.

While the necessity for more research in logistics is addressed in several strategic documents in the Scandria countries training, and education and improved working conditions constitute a particular objective only in Denmark and Germany.

Targets:
• Jobs and working conditions in the logistics industry are have to be attractive.
• Training and further training needs of the industry are must be efficiently satisfied.
• Specific features of the Scandria corridor are to be dealt with in training and further training

Actions:
• Develop cross-border cooperation in the field of professional training in logistics in Scandria corridor countries.
• Establish an international cooperation of logistics companies and training institutions providing tailor-made further training for young professionals in Scandria corridor logistics.
• Promote bachelor and master studies in logistics subjects, study possibilities for border-crossing studies, support cross-border cooperation efforts of universities in logistics training (study tours, students exchange etc.).
• Develop cooperative education in logistics as close cooperation between universities and logistics companies. Students receive university education according to curricula with a high percentage of practical training in companies (in Germany Berufsakademie).
• Project and carry out corridor oriented dissemination measures
• Ensure good working conditions in view of the increasing pressure to meet tight delivery deadlines.
Actors:

- Bodies in charge of professional training and higher education
- Universities
- Regional governments
- Logistics companies

Cases:

In WP 5.21 “Basic Description of Corridor Functionality – Potentials of Logistic Transport Systems” universities teaching logistics as well as various research institutes in the field are mapped without closer analysis.

Detailed proposal for action no. 6

Establish an international cooperation of logistics service providers and training institutions in „Scandria logistics professionals training”.

Background: High quality logistics services in an international corridor comprising several countries require a well trained work force. Personnel should be familiar with operation in countries making part of the transport chain. Availability of trained workers is a common concern of the industry. Recruiting problems are expected to aggravate due to demographic factors.

Objective: Improve the quantitative and qualitative offer of well-trained labour force for logistics services.

- Improve contacts and understanding between professionals cooperating in the supply chain along the Scandria corridor.

Elements:

- Determine training needs in Scandria specific logistics subjects focussing on multi-modal transport, short-sea shipping, green transport services.
- Design a modular programme for training in Scandria logistics.
  Training modules should not exceed 2 -3 days. Practical applicability is essential.
- Cross-border thematic study tours in the Scandria corridor for logistics professionals and shippers will make part of the training offer.
- Scandria Logistics Online Portal will be used for online teaching, guidance and dissemination of knowledge as well as for marketing the training offer..
- Cooperation with university courses in logistics providing practical knowledge on logistics in the Scandria corridor.
- Co-financing by European and national programmes will be sought for (e.g. Marco Polo II Common learning Actions, Leonardo da Vinci programme as part of the European Commission's Lifelong Learning Programme).
### Actors:

- Institutions / companies responsible for and realizing professional training
- Chambers of Commerce, industrial branch associations in Scandinavian countries
- Logistics business associations, regional logistics initiatives
- Logistics professionals associations

### Steering the action:

Professional training institutes, Technical University of Applied Sciences Wildau, University Lund

### Timeframe:

Short-term action