Project corridor developments until Jan. 2012

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Lead partner: REGION BLEKINGE

Baltic Sea Region Programme 2007–2013

The EWTC II project

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EWTC II project structure

WP2: EWTC Association

Project end 2012

WP3: EWTC Action Plan, Green Corridor Manual and Information Broker System

WP4: Railway Concepts

WP5: Hub Development

WP6: Corridor Capacity Support

EWTC Association

Started as a part of the EWTC II project in June 2010

- Currently 30 member organizations from 12 countries on the route from the Baltic Sea Region to China

Adopted EWTCA Action Plan in October 2011

- Working groups started to address administrative hindrances in the corridor, business development as well as research and development

Cooperation for smarter transports

- Association members launched new train services from the Baltic Sea Region to China in the second half of 2011. The train service called “Saule” is a cooperation between the national railway organizations in Lithuania and Kazakhstan and a Lithuanian logistics company.

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Green Corridor Manual

Green Corridor Manual

Designed to guide and identify the basic technical and organizational elements which constitute an environmentally friendly transport corridor. The manual will assist in improving existing corridors as well as implementing new ones.

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Green Corridor Manual

1. Purpose of the manual, definition – **Report available on ewtc2.eu**
2. Vision on future green corridors – **Report available on ewtc2.eu**
3. Recommendations, guidelines, and design principles of green corridors – **Spring 2012**
4. Methodology for selection of indicators and benchmarking of corridor components – **Draft report issued Jan. 2012**
5. Steering and awarding mechanisms – **Draft report issued Jan. 2012**
6. Different options for certification of green corridors – **Draft report issued Jan. 2012**
7. The East West Green Corridor concept – **Summer 2012**

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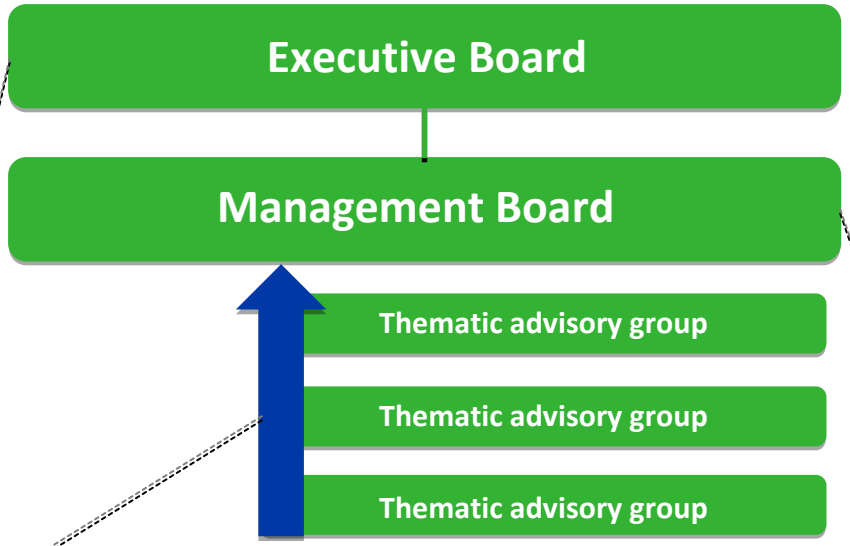
General corridor management structure

Politically appointed – based on Memorandum of Understanding

Handles policy issues, harmonization of regulations

Consists of member state representatives, authorities (national and regional) etc.



Structured organization (e.g. association, consortium, alliance)

Consists of infrastructure providers, railway companies, ports, municipalities, business stakeholders etc.

E.g. corridor operations monitoring, certification issues, ICT/ITS, bottlenecks, ”one stop shop” coordination

Key findings - KPIs

- Operational control of goods flows through key performance indicators has always been a common way of managing performance in transport logistics services. This experience needs to be included in the operational indicators.
- There are difficulties to capture relevant data with sufficient accuracy, with reasonable effort in order to not put all resources into data capturing itself.

Key findings - KPIs

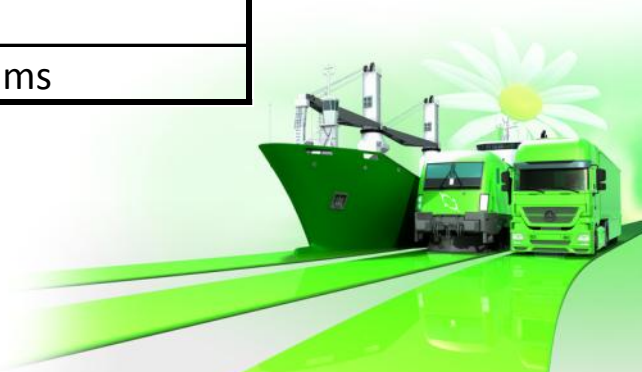
- The system boundary of captured data must be well defined and constant over time when measuring improvements or relations to other corridors.
- Selected KPI´s must be manageable in practice and not over ruled by legislation or other external factors.
- Performance indicators may change behaviour of organisations and people within the process being managed by KPI´s. Reward systems may amplify this potential but also add a potential risk of sub-optimization.

Key findings - KPIs

- Key performance indicators can be counterproductive in relation to the original objective, due to poor performance indicator design. If relevant KPI´s are established, they may initially serve the purpose well, but may over time become outdated. Hence there is a need to continuously evaluate their functionality.
- There is a need for both operational and enabling key performance indicators with totally different time frames, and significant trade-offs between short and long term ambitions. These two groups of indicators influence each other, but need very different design.

Green Corridor Manual – General set of KPIs

Performance area	Indicators
Finance - operational	Turnover
	Total cost
	On time delivery
Finance - enabling	Corridor ability and capacity
Environment - operational	Total energy use
	Green house gases, CO_2e
	Engine standards share
	ISO 9001dg
Environment - enabling	Alternative fuels tank stations
Social - operational	ISO 31 000
	ISO 39 000
Social - enabling	Fenced terminal
	Safe parking
	Common rating systems



Transport provider

	Transport service provider	
Performance area	**Absolute**	**Relative**
Finance - operational	Turnover [€]	Turnover transport work ratio [€/tkm]
	Total cost [€]	Contribution to cover fixed costs [€]
	On time delivery [n]	Deviation ratio [%]
Finance - enabling	Corridor ability/capacity scorecard [1/0]	n/a
Environment - operational	Total energy use [MJ, kWh]	Energy transport work ratio [MJ:kWh/tkm]
	Green house gases, CO_2e [ton]	Green house gases, CO_2e [g/tkm]
	Engine standards [n]	Engine standards share [%]
	ISO 9001 DG [1/0]	n/a
Environment - enabling	Alternative fuels tank stations [n]	Alternative fuels tank stations [n/1000 km]
Social - operational	ISO 31 000 [1/0]	n/a
	ISO 39 000 [1/0]	n/a
Social - enabling	Fenced terminals use [1/0]	n/a
	Safe parking use [1/0]	n/a

Shipper

	Shipper	
Performance area	**Absolute**	**Relative**
Finance - operational	Total cost [€]	Totalcost transport work ratio [€/tkm]
	On time delivery [n]	Deviation ratio [%]
Evironment - operational	Total energy use [MJ, kWh]	Energy transport work ratio [MJ:kWh/tkm]
	GHG, CO_2e [ton]	GHG, CO_2e [g/tkm]
	Emissions, engine standard [n]	Engine standards distribution [%]
	ISO 9001 DG [1/0]	n/a
Social - operational	ISO 31 000 [1/0]	n/a
	ISO 39 000 [1/0]	n/a

Corridor service provider

	Corridor service provider	
Performance area	**Absolute**	**Relative**
Finance - operational	Turnover [€]	Turnover transport work ratio [€/tkm]
	Total cost [€]	Contribution to cover fixed costs [€]
	On time delivery [n]	Deviation ratio [%]
Finance - enabling	Corridor ability/capacity scorecard [1/0]	n/a
Environment - operational	Total energy use [MJ, kWh]	Energy transport work ratio [MJ:kWh/tkm]
	Green house gases, CO_2e [ton]	Green house gases, CO_2e [g/tkm]
	Engine standards [n]	Engine standards share [%]
	ISO 9001 DG [1/0]	n/a
Environment - enabling	Alternative fuels tank stations	Alternative fuels tank stations [n/1000 km]
Social - operational	ISO 31 000 [1/0]	n/a
	ISO 39 000 [1/0]	n/a
Social - enabling	Fenced terminals [1/0]	n/a
	Safe parking [n]	Safe parking [Safe parking/1000 km]

Testing KPIs

TASK:

To try out the practical aspects of data collection and data processing on a selection of components of a transport corridor, i.e.

-to find out the availability of the requested data and the willingness among the operators/stake holders to supply the requested data

-to try out the calculations yielding the KPIs

-to draw conclusions based on the experiences from the cases in order to suggest any necessary changes to the selected KPI:s

Case selection – KPI testing

The enabling dimensions

•the port of Karlshamn (RoRo operations)

•the port of Helsingborg (unit loads)

Transport operations

•sea operations (no company name)

•rail operations (Train Viking)

•road operations (Swedish haulier)

The cargo owners

•retail business (with road transports between Sweden and East European countries)

•heavy industry in the automotive sector

Findings – KPI testing

Final selection and development of KPIs must be made based on the actual corridor

- Environmental data – good availability
- Transport operational data – some difficulties due to sensitivity regarding business
- KPIs on economic sustainability – difficult , needs to be complemented
- KPIs on social/society sustainability needs more development

Incentives - Recommendations

- **A green corridor** will never be realised unless there is a **sound business model for all actors involved**. A successful green corridor can only be achieved if a combination of economic; legal; supporting and voluntary incentives is implemented.

Incentives – Prioritizations

- Agree on **harmonized KPI-operational data reporting systems and emission calculation methods**
- Agree on setting a **transport mode specific baseline** on i) emission levels, ii) energy use iii) social conditions and iv) economic performance for a 'green corridor transport' service that are significantly better compared to a regular transport service.
- **Do not regulate which technical/organisational solution** that the actors should use in order to meet the green corridor requirements

EWTC II – Information Broker System

Information Broker System

Real-time access to reliable and up-to-date information is a key to efficient performance with as small ecological footprint as possible. The challenge in the transport system is not the lack of information but the process of retrieving it.

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EWTC II – Information Broker System

Ongoing live test case

- Involves national transport administrations and businesses

Final report to be issued early 2012

- Mapping user needs, legacy systems, design of demonstration case, test case evaluation, potential business models etc.

Test case "On Time" – Information sharing for more accurate ETA predictions

- Combination of
  - Road traffic disturbances
    - Type of disturbance (congestions, accidents, road works, weather conditions etc.) leading to updated travel time
  - Rail traffic disturbances
    - Cargo train departures, arrivals and information on estimated delays.
  - Tracking of cargo carriers
    - Cargo carrier ID-number and position (trailers, swap bodies, containers). Use of RFID to track freight wagons
  - Tracking of vessels
    - AIS data (vessel ID, location, speed, direction, port of departure, departure time, destination port and ETA)
- All parameters have impact on calculating predictions of Estimated Time of Arrival (ETA)

Thank you!

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