



## **OUTCOMES AND COMMENTS TO RESULTS OF INTERREG IVB PROJECTS IN THE NORTH SEA REGION (2007-2013)**



December, 2013

## TABLE OF CONTENTS

1. INTRODUCTION .....	3
2. AIM OF THE PAPER.....	3
3. INTERREG IVB PROJECTS.....	6
4. RESULTS OF THE QUESTIONNAIRE.....	29
5. CONCLUSIONS AND RECOMMENDATIONS.....	40
6. ANNEX 1 .....	41

## LIST OF TABLES

Table 1. Outcomes and comments on the prioritised requirements list of the Railway Transport Infrastructure.....	29
Table 2. Outcomes and comments on the prioritised requirements list of the Inland Waterway Transport (Part I).....	30
Table 2. Outcomes and comments on the prioritised requirements list of the Inland Waterway Transport (Part II).....	32
Table 3. Outcomes and comments on the prioritised requirements list of the Road Transport Infrastructure (Part I).....	33
Table 3. Outcomes and comments on the prioritised requirements list of the Road Transport Infrastructure (Part II).....	34
Table 4. Outcomes and comments on the prioritised requirements list of the Maritime Transport Infrastructure and Motorways of the Sea (Part I).....	35
Table 4. Outcomes and comments on the prioritised requirements list of the Maritime Transport Infrastructure and Motorways of the Sea (Part II).....	36
Table 4. Outcomes and comments on the prioritised requirements list of the Maritime Transport Infrastructure and Motorways of the Sea (Part III).....	37
Table 5. Outcomes and comments on the prioritised requirements list of the Air Transport Infrastructure.....	38
Table 6. Outcomes and comments on the prioritised requirements list of the Infrastructure for Multimodal Transport.....	39

## 1. INTRODUCTION

With input from a number of successful NSR Interreg IVB projects, the “TEN-T and the North Sea Region” project will analyse transport related opportunities and consequences for the North Sea Region transport. This will be done from a North Sea Region perspective focused on outputs at the regional level using the new European TEN-T Guidelines 2013.

The aim of this paper is to provide findings from the Interreg IVB projects in the North Sea Region (2007-2013) for the activity 4.1<sup>1</sup>. Under the activity 4.1 the detailed questionnaire was created in order to catch the findings of on-going and finalised Interreg NSRP projects in relation to TEN-T infrastructure development. The list of prioritised requirements for the transport infrastructure was taken from the activity 3.3<sup>2</sup>. The electronic questionnaire was set to the 25 lead beneficiaries of Interreg IVB. The outcomes from the questionnaire in activity 4.1 will be used for a toolbox of regional measures in the activity 4.3<sup>3</sup>. It will be developed to help optimise the regional impact of TEN-T and freight transport development and to make suggestions for areas of intervention in the imminent Interreg V North Sea Region Programme, indicating what TEN-T related actions for transport infrastructure and services could benefit from Interreg support.

For further information please contact the FDT team: *Kent Bentzen, Laura Gabenyte and Michael Stie Laugesen.*

### **FDT - Association of Danish Transport and Logistics Centres**

**Address:** Ved Stranden 22  
P.O. Box 1111  
DK-9100 Aalborg  
Denmark

**Email:** fdt@ntu.eu  
**Phone:** +45 99 30 00 08  
**Fax:** +45 99 30 00 07  
**Homepage:** [www.fdt.dk](http://www.fdt.dk)

The date of last update of the document – 25<sup>th</sup> of November 2013.

---

<sup>1</sup> Activity 4.1. Outcomes and comments to results of Interreg IVB projects in the North Sea Region (2007-2013).

<sup>2</sup> Criteria/demands of the transport elements in the guidelines for the Trans-European Transport Network (2013).

<sup>3</sup> Regional TEN-T Toolbox with identified areas where regional and local authorities can make an impact on TEN-T development and deployment.

## 2. AIM OF THE PAPER

This paper reflects to the activity 3.3 in TEN-T and North Sea Region, where the demands/criteria for the transport elements were identified using the Guidelines for the Development of the Trans-European Transport Network (2013). The questionnaire was created as a tool for gathering the outcomes and comments from the Lead Beneficiaries.

In the activity 4.1 it was decided to select the TEN-T defined priorities for the most intensive areas in transport infrastructure with the list of prioritised requirements. The following paragraph shows an example from a fragment of priorities for road infrastructure development in the New TEN-T Guidelines 2013 (Article 22):

### *Article 22*

#### ***Priorities for road infrastructure development***

*When promoting projects of common interest related to road infrastructure and in addition to the general priorities set out in Article 10, priority shall be given to the following:*

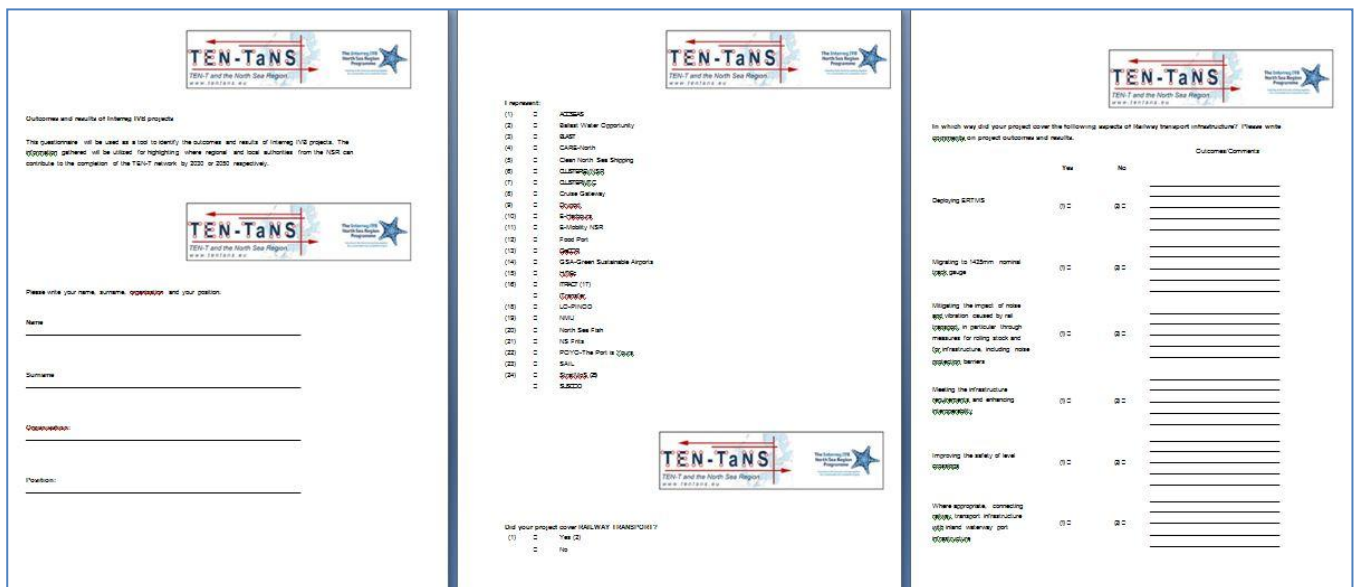
- (aa) improvement and promotion of road safety;*
- (aaa) use of ITS, in particular multi-modal information and traffic management and to enable integrated communication and payment systems;*
- (b) introduction of new technologies and innovation for promoting low carbon transport;*
- (c) provision of appropriate parking space for commercial users with an appropriate level of safety and security.*
- (dc) the mitigation of congestion on existing roads.*

Using this method a comprehensive questionnaire was made (see figure 1; full version in Annex 1) with the prioritised requirement from the activity 3.3 under the following most intense areas in Interreg IVB projects:

- Railway transport,
- Inland waterways transport,
- Road transport infrastructure,
- Maritime transport infrastructure,

- Air transport infrastructure,
- Multimodal Transport.

The electronic version of the questionnaire was sent to Lead Beneficiaries that they could easily give their opinion about the projects that they were involved in.



The screenshot displays the TENS-TaNS questionnaire form, which is divided into three main sections. The first section on the left contains the TENS-TaNS logo and a brief introduction. The middle section features a list of 24 infrastructure projects for selection, including ACES, BALT, CAGL, and others. The right section is a table for recording responses, with columns for 'Yes', 'No', and 'Comments'. The table includes rows for various infrastructure types such as 'Deploying ERTMS', 'Upgrading to 1435mm nominal gauge', and 'Improving the safety of rail crossings'.

Figure 1. The 4.1 questionnaire

In the chapter 3 transport 25 Interreg IVB projects are described and in the chapter 4 the results of responses to the questionnaire are given. The last section of this report presents the conclusions from the data gathered and gives future recommendations.

### 3. INTERREG IVB PROJECTS

In the following section a small description, main goals and contact information of Lead Beneficiaries in each project are presented. 25 Interreg IVB projects (see the list below) were identified:

- |                              |                                    |
|------------------------------|------------------------------------|
| 1. ACCSEAS                   | 14. GSA-Green Sustainable Airports |
| 2. Ballast Water Opportunity | 15. HyTrEc                         |
| 3. BLAST                     | 16. ITRACT                         |
| 4. CARE-North                | 17. iTransfer                      |
| 5. Clean North Sea Shipping  | 18. LO-PINOD                       |
| 6. CLUSTER:EVNSR             | 19. NMU                            |
| 7. CLUSTER:MTC               | 20. North Sea Fish                 |
| 8. Cruise Gateway            | 21. NS Frits                       |
| 9. Dryport                   | 22. POYO-The Port is Yours         |
| 10. E-Harbours               | 23. SAIL                           |
| 11. E-Mobility NSR           | 24. StratMoS                       |
| 12. Food Port                | 25. SUSCOD                         |
| 13. GreCOR                   |                                    |

#### 1. ACCSEAS – Accessibility for Shipping, Efficiency Advantages and Sustainability



##### *Summary*

The ACCSEAS project addresses improved maritime access to the NSR by developing & implementing e-Navigation within a transnational framework. A North Sea e-Navigation test-bed will be established to demonstrate proof-of-concept solutions. Moreover it enables service providers, researchers & suppliers to develop e-Navigation regional services and to prototype novel marine navigation & communication concepts. ACCSEAS also provides the basis for alleviation of congestion, bottlenecks and accident risk, improving NSR access, with sustained cooperation & actions after the project.

##### *Aim*

The aim of the Programme is to make the North Sea Region a better place to live work and invest in the North Sea Region Programme has a role in enhancing the overall quality of life for its residents by ensuring that there is access to more and better jobs, by sustaining and enhancing the acknowledged environmental qualities of the region, by improving accessibility to places and ensuring that our communities are viable, vibrant and attractive places to live and work.

### *Expected Outcomes*

- Increases the overall level of innovation taking place across the North Sea Region,
- Enhances the quality of the environment in the North Sea Region
- Improves the accessibility of places in the North Sea Region
- Delivers sustainable and competitive communities

### *Lead Beneficiary*

Trinity House (on behalf of the General Lighthouse Authorities of UK and Ireland)

Mr. George Alan Shaw [george.shaw@gla-rrnav.org](mailto:george.shaw@gla-rrnav.org) Tel: + 44 7766 510578

Project homepage: <http://www.accseas.eu>

## **2. Ballast Water Opportunity - North Sea Ballast Water Opportunity**



### *Summary*

Ships' ballast water is a main source of acute and chronic pollution in the North Sea. The project aims to improve the North Sea environment and economy by facilitating the ratification of the Ballast Water Management Convention (BWMC). The implementation of the BWMC creates a new market for innovative products; Ballast Water Opportunity aims to support the NSR industry to enter this market. It encourages the ratification of the BWMC through reducing a major barrier: providing treatment and detection equipment.

### *Aim*

Improve the NSR environment and economy by facilitating ratification of the IMO Ballast Water Management Convention (BWMC) through enabling implementation while stimulating the maritime industry to utilize the NSR leading scientific position on aquatic invasions to capitalize this new market opportunity.

### *Expected Outcomes*

- Model regulation for enforcement, best practice and synthesis on economical, ecological, scientific and technological barriers and opportunities;
- A public private centre for transfer of knowledge and expertise on Ballast Water Treatment systems; a test bed for certification of BWT;
- A public private centre for transfer of knowledge and expertise on Detection of organisms in ballast water, a feasibility of tool development;
- Information portal on best practice/opportunities for mitigation of marine bio-invasive species and models; recommendations on legislation opportunities.

#### *Lead Beneficiary*

Royal Netherlands Institute for Sea Research (NIOZ), the Netherlands

Mr. J.T.M. Flipsen, [hans.flipsen@EMConsult.nl](mailto:hans.flipsen@EMConsult.nl), Tel: + 31 33 253 4820

Project homepage: [www.northseaballast.eu](http://www.northseaballast.eu)

### **3. BLAST - Bringing Land and Sea Together**



#### *Summary*

The BLAST project has a primary focus on "Bringing Land and Sea Together", by harmonizing and integrating land and sea data as well as improving collaboration between member states at national, regional and local level.

#### *Aim*

The overall aim of the project is to improve Integrated Coastal Zone Management and Planning and maritime safety by contributing to harmonising terrestrial (collected by topographic mapping or cadastral agencies for development, nature conservation etc.) and sea geographical data (collected by hydrographical survey services for marine navigation), by developing planning and visualisation tools as well as improvement of navigation, in the context of climate change. The project will provide a prototype for land/sea interoperable database for testing by practitioners. Also a conceptual model for integrated spatial planning utilising GIS, tools for spatial planning in respect to renewable energy plants, and a web based decision support system for ICZM will be developed.

#### *Expected Outcomes*

- Deploy and test the decision-support system in practical planning contexts in four different municipalities
- Disseminate and increase knowledge on estuaries among expert groups
- Increase capacities on tide estuary management
- Regional estuary working groups
- Convince policy makers: Harmonized starting point for future estuary management
- TIDE Measure Box available to other estuary managers, experts and decision-makers
- Catalogue of measures to ensure proper functional estuary design

#### *Lead Beneficiary*

Norwegian Hydrographic Service, Norway

Mr. Roy H. Mellum, [roy.mellum@statkart.no](mailto:roy.mellum@statkart.no), Tel +47 32 11 81 00



#### **4. CARE –North – Carbon Responsible Transport Strategies for the North Sea Region**



##### *Summary*

While the NSR deals with the effects of climate change, transport-related CO<sub>2</sub> emissions continue to increase. We face an urgent need to develop and implement carbon reduction strategies and to secure an ongoing energy supply for transport. The NSR has a huge potential for innovative transport strategies which could improve the economic performance of its regions and cities in a post-fossil economy (see Lisbon Agenda).

##### *Aim*

To develop a comprehensive, strategic and practical approach to urban and regional transport/accessibility in the North Sea Region in the context of climate change and declining oil supplies. After developing CO<sub>2</sub> reduction strategies for transport (phase one), the project will begin implementation of short-term actions and will calculate the potential of long-term actions as lighthouse/pilot actions. The project will compare the process trans-nationally with cities/regions sharing the hands-on knowledge and experience gained through their local projects to provide valuable input for framework setting at the European and national levels, thus bridging the gap between policy, research and practical application by end users.

##### *Expected Outcomes*

- Transnational collaboration will be used in terms of building political support and momentum, as well as in concrete terms of establishing uniform standards and infrastructure across the region.
- CARE-North has developed and plans to implement, innovative carbon reduction strategies for urban and regional transport in order to maintain and improve accessibility in a more carbon-responsible way
- Make the NSR a leader in carbon-efficient accessibility

##### *Lead Beneficiary*

City of Bremen, Germany

Mr. Michael Glotz-Richter, [Michael.glotz-richter@umwelt.bremen.de](mailto:Michael.glotz-richter@umwelt.bremen.de) Tel: + 49 421 361 6703

## **5. CNSS - CLEAN NORTH SEA SHIPPING: Competitive Marine Transport Services AND Reduction of Emission – a North Sea Model**



### *Summary*

CNSS will focus on emission and greenhouse gas reduction from ships, using studies to reveal the status of air quality in ports and surrounding areas. CNSS will create transparency on cost-efficient technology solutions and develop and improve the introduction of successful air quality programs. Promoting the development of efficient and effective logistics solutions, the maritime transport system will step into a transition processes to meet the demands of enlargement and sustainable development at the same time.

### *Aim*

The project will look into available technology and the implementation of cost effective and cleaner energy supply infrastructure to ships in harbours/ports and at sea. CNSS wants to contribute to the large scale installation of "clean shipping" technology e.g. by developing cost-effective implementation concepts (show-cases). Furthermore CNSS wants to pave the way for an incentive and regulatory framework which causes an increased use of environmentally friendly technologies and fuels in shipping and at the same time maintain the competitive position of the North Sea maritime transport.

### *Expected Outcomes*

- Manual on using different Air Quality Programmes;
- Joint North Sea Shipping Strategy;
- Develop a joint "Environmental Statement";
- Guideline on implementation towards cleaner shipping;
- Study on impact of future ship emission scenarios;
- Show case of harmonised monitoring/simulation in 2/4 ports.

### *Lead Beneficiary*

Hordaland County Council, Norway

Mr. Lars Tveit, [Lars.Tveit@post.hfk.no](mailto:Lars.Tveit@post.hfk.no), Tel: +47 55 23 93 21

Project homepage: [www.cnss.no](http://www.cnss.no)

## 6. CLUSTER: EVNSR – Energy Vision North Sea Region

### *Summary*

The EVNSR Project is clustering the INTERREG IVB renewable energy projects. EVNSR is drawing on the value and strengths identified in the individual projects in order to increase the deployment rate of renewable energy in the NSR. EVNSR will interconnect the different individual results and will amplify the successes in order to build a Renewable Energy Strategy.

### *Aim*

The project consists of three parts: 1. Create a stakeholder platform in the field of renewable energy; 2. Identification of impact factors by analyzing projects 3. Define an interregional renewable energy NSR strategy.

### *Lead Beneficiary*

Energy Valley

Robbin van der Linde [lok@energyvalley.nl](mailto:lok@energyvalley.nl) Tel: + 31 161 3977 532

## 7. Cluster - MTC – Maritime Transport Cluster



### *Summary*

MTC will build a structure for exchanging information on the latest knowledge and experiences concerning maritime transport issues by establishing a network covering all transport related NSRP projects. MTC will identify synergies between NSRP project results and consolidate these into overall programme outcomes on transport. The results will be discussed with the business, public sector & research actors and matched with industry and research trends. Afterwards outcomes will be connected to policy developments with a focus on future transport and cohesion policy and the MTC Policy Paper will be drafted.

### *Aim*

The overall goal of the Maritime Transport Cluster is building a structure for exchange on the latest knowledge and experiences concerning maritime transport in the context of the Interreg IVB NSRP, aiming to develop the common voice of the Interreg IV B NSRP on maritime transport. In the end the MTC Policy Paper will be composed based on experiences gained in the North Sea region, which shall contribute to discussions on future transport policy developments in Europe.

### *Expected Outcomes*

- To establish an MTC network covering all NSRP transport projects as a platform for discussions on exchange.
- To identify synergies between the NSRP project result and to consolidate these into overall programme outcomes on transport
- To match the programme outcomes and discuss these with the business community
- To compose a policy advice based on the NSRP experiences to contribute input to help focusing on future transport and cohesion programmes.
- To convince the relevant decisions-makers at the national level and EU institutions to make use of the MTC police advice.

### *Lead Beneficiary*

Hafen Hamburg Marketing e.V., Germany

Mr. Sebastian Doderer, [doderer@hafen-hamburg.de](mailto:doderer@hafen-hamburg.de) Tel +49 403 770 9113

## **8. CRUISE GATEWAY - towards sustainable growth of cruise shipping in the NSR**



### *Summary*

Cruise Gateway will increase the maritime accessibility by developing the NSR as a cruise destination and promoting it as a 'lighthouse' for sustainable cruise. Cruise Gateway, at the end of the day, will have launched the brand 'Green Cruise North Sea' and will have opened up 'white spots', thus attracting more and new cruise passenger consumer groups to the NSR ports and their hinterland.

### *Aim*

Cruise Gateway seeks to develop the recognition and attractiveness of the NSR by highlighting the cultural richness as well as sustainable, economic development. Being at an early stage in this respect, the NSR has a unique chance to set the course for success while at the same time taking into consideration aspects of sustainability right from the start.

### *Expected Outcomes*

- Creation of the brand 'Green Cruise North Sea';
- Establish a marketing strategy and base-line study to strengthen the touristic potential of cruise tourism;
- Develop policy blueprints and dissemination in the Policy Forum;
- Improve of service quality in ports; Deliver and transfer best practices regarding passenger transport, sustainability and services;
- Environmental certificates for environmental-friendliness of cruise ships.

### *Lead Beneficiary*

Hafen Hamburg Marketing e.V., Germany

Mr. Sebastian Doderer, [doderer@hafen-hamburg.de](mailto:doderer@hafen-hamburg.de), Tel: +49 40 37709113

Project homepage: [www.cruisegateway.eu](http://www.cruisegateway.eu)

## **9. Dryport - a modal shift in practice**



### *Summary*

Working together through a programme of workshops, studies and site visits, the Dryport partners will examine the development, design and effective operation of dry ports that are fully integrated with the freight handling systems of the seaport facilities they serve. Dryport is about helping to support port capacity by improving hinterland distribution hubs and looking at the potential of 'inland ports' with multimodal connections.

### *Aim*

The project aim is to develop effective Hinterland intermodal freight transport nodes –Dry ports that are fully integrated with the Gateway's freight handling systems, to adapt a public concept to a private sector model, to monitor CO<sub>2</sub> effects and to integrate Dry ports into the EU Motorways of the Sea concept. The project includes the identification of suitable dry port land sites in the NSR, to assess the environmental and socio-economic impact of improved inter-modality, to develop a business model blueprint and to develop and start-up an IT system. All project activities will contribute to connecting the dry ports with the short sea shipping system to shift interregional transport from road to sea.

### *Expected Outcomes*

- Three dry ports set up in cooperation with gateways,
- Gateway with a hinterland dry port structure,
- Transformation of hinterland hubs towards dry ports,
- Monitoring-Instruments for gateway-hinterland movements,
- Research material on rail potentials,
- Estimation of CO<sub>2</sub> claims of various modes of transport,
- Motorway of the Sea scheme.

### *Lead Beneficiary*

Västra Götalandsregionen Regionutvecklingssekretariatet, Sweden

Mr. Rolf Thor and [rolf.thor@vgregion.se](mailto:rolf.thor@vgregion.se); Tel: +46 31 630947

Mr. Dirk Harmsen [info@dryport.org](mailto:info@dryport.org), Tel: +46 70 5144977

Project homepage: [www.dryport.org](http://www.dryport.org)

## 10. E-Harbours - E-Logistics in NSR Harbour Cities



### *Summary*

E-Harbours aims to create a lasting change towards sustainable energy logistics for NSR harbour cities. It will set innovative energy standards to create a transformation of the energy network in harbour areas. Show cases will provide examples for the NSR, guided by a European expert platform. By this the project will implement EU energy policies, develop innovative solutions and allow economic growth.

### *Aim*

The aim of E-Harbours is a transformation of the energy network in NSR harbour cities towards a more sustainable and accessible energy model. This will be achieved by setting/implementing new standards with a focus on two key aspects: virtual power (VPP) plants for industrial end-users and electric mobility.

The network plans to:

- Enlarge the uptake of renewable energy;
- Improve energy efficiency;
- Integrate electric mobility;
- Maintain the stability of the energy network.

E-Harbours will create a transnational knowledge platform and methodology for optimal integration of renewables in energy intensive harbour cities using available features as electric cars, electric boats, flexible consumption patterns of industrial end-users and ICT-infrastructures.

### *Expected Outcomes*

- Implement 7 innovative show cases in the participating harbour areas;
- Create a VPP: transnational methodology for optimal integration of renewable energy sources in a energy intensive harbour cities;
- Create a framework (technical, economical, organizational) for large scale implementation of E-Harbours in the NSR.

### *Lead Beneficiary*

Municipality of Zaanstad, The Netherlands

Mr. Jan Schreuder, [J.Schreuder@Zaanstad.nl](mailto:J.Schreuder@Zaanstad.nl), Tel: +31 (0)62 902 7834

Project homepage: [www.eharbours.eu](http://www.eharbours.eu)

## 11. E-mobility NSR - North Sea Region Mobility Network



### *Summary*

The project North Sea Region Electric Mobility Network (E-Mobility NSR) provides state of the art information which may help policy development in e-mobility in the NSR. It also provides insight into the gaps and needs in respect of infrastructure, logistics and preliminary standards for multi charging techniques. Ultimately, the project will deliver a long-term basis upon which regional and local governments as well as other relevant stakeholders in the NSR may engage on e-mobility.

### *Aim*

Increase accessibility by fostering the diffusion of e-mobility and stimulating the use of public and private electric car transport as well as freight across the North Sea Region.

### *Expected Outcomes*

- To provide state of the art information this may help policy development in e-mobility in NSR.
- To provide insight on gaps and needs in respect of infrastructure, logistics and preliminary standards for multi charging techniques.
- To develop a NSR smart grid concept with charging points, hence increasing accessibility in the region;
- To provide a long-term basis upon which regional and local governments as other relevant stakeholders in the NSR may engage on e-mobility, among others by creating physical or virtual e-mobility information centres in each participating region or city.
- To integrate the urban freight logistics dimension into the e-mobility network promoting better accessibility and cleaner cities by stimulating the use of electric vehicles as a more efficient solution.

### *Lead Beneficiary*

Hamburg University of Applied Sciences, Germany

Kathrin Rath [walter.leal@haw-hamburg.de](mailto:walter.leal@haw-hamburg.de), Tel: + 49 404 2875 6313

## 12. Food Port - Connecting Food Port Regions - Between and Beyond



### *Summary*

Food Port will develop the NSR as the best food cluster and hub in Europe for food products delivered via efficient and sustainable transport systems. The project will investigate and develop green transport corridors for food products between regions around the North Sea. This will lead to concrete modal shift pilots along the identified green transport corridors and to the development of (new) food platforms or hubs. In order to improve the food-logistic chains, new technological solutions will be incorporated.

### *Aim*

The central aim is to improve the accessibility and transport-logistic system of different food clusters, in order to strengthen the food industry within the NSR and its strategic position as a food hub. This will be achieved through the optimisation and coordination of the food supply chains, delivering tangible benefits to food and logistics sectors and the companies involved. These companies will benefit from measures designed to improve efficiency, effectiveness and sustainability.

### *Expected Outcomes*

- Realisation of a minimum of 5 modal shift pilots for selected green transport corridors for food products;
- Data sets for the food supply chain and appropriate ICC-technologies;
- Strategic master plan for the further development and realisation of food hubs and distribution centres;
- Regional food logistic action plan/transnational logistic action plan;
- Market inventory on inter/intra oriented regional food products flows.

### *Lead Beneficiary*

POM West-Vlaanderen, Belgium

Mrs. Liesbet Pauwels, [liesbet.pauwels@west-vlaanderen.be](mailto:liesbet.pauwels@west-vlaanderen.be), Tel: +32 5040 7225

Project homepage: [www.food-port.eu](http://www.food-port.eu)



### 13. GreCOR – Green Corridor in the North Sea Region



#### *Summary*

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

#### *Aim*

GreCOR will work in close collaboration with public and private stakeholders, and its overall aim is to improve knowledge about the logistic needs and conditions; develop and implement the first green corridor in the North Sea Region in a strategic policy setting.

#### *Expected Outcomes*

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

#### *Lead Beneficiary*

Swedish Transport Administration, Sweden

Mr. Rikard Engstrom, [rikard.engstrom@trafikverket.se](mailto:rikard.engstrom@trafikverket.se) Tel: + 46 702 919148

Project homepage: <http://www.grecor.eu/about-grecor/>

### 14. GSA – Green Sustainable Airports



#### *Summary*

Small and medium sized airports are crucial for regional accessibility and competitiveness, however at the same time European policies and national set strict environment targets. Green Airports aims to develop strategies and solutions for a more eco-efficient, sustainable and green regional aviation. Tackling the challenges of regional accessibility, sustainability and regulation Green Airports is modelled to decrease green house gas and noise emissions as well as operation specific waste volumes, to increase energy efficiency and surface accessibility of airports by innovative concepts on public transportation. As cross sectional

objective the project comprehensively focuses on regional airport communication, regional cooperation and policy resolutions to safeguard the role of regional airports as accessibility gateways by improving public perception and acceptance.

#### *Aim*

The expected results will contribute to a better, faster, cheaper and greener way of running airports while benefits will be realized to all stakeholders.

#### *Expected Outcomes*

- Integrating aspects for sustainability (i.e. renewable energy sources) in airport management
- Reducing the amount of chemicals for example for de-icing;
- Introducing CO<sub>2</sub> reduction and noise-abating measures for arrival and departure procedures;
- Improving public transport to and from the airports and make it 'green'.

#### *Lead Beneficiary*

Province of Drenthe, The Netherlands

Mr. Ben L.J. van Os, [b.os@Drenthe.nl](mailto:b.os@Drenthe.nl) Tel: + 31 592 365 665

## **15. HyTrEc – Hydrogen Transport Economy for the North-Sea Region**



#### *Summary*

HyTrEc aims to support the validation, promotion and adoption of innovative hydrogen technologies across the North Sea Region and enhance the region's economic competitiveness within the transport and associated energy sectors. The project will provide a platform to support the collaborative development of strategy and initiatives (at regional, supra-regional and transnational level) and that will inform and shape the development of infrastructure, technology, skills and financial instruments to support the application of hydrogen based technologies across the NSR.

#### *Aim*

The HyTrEc project aims to improve access to and advance the adoption of hydrogen as an alternative energy vector across the North Sea Region. The project will identify and address structural impediments constraining development of, access to and adoption of this alternative fuel in urban and rural settings

### *Expected Outcomes*

- Establishing a Hydrogen Transport Stakeholder Group to identify barriers hindering access to and adoption of innovative hydrogen technologies, and develop strategies/initiatives to create a fully functioning NSR hydrogen corridor
- A transnational pilot study to improve the accessibility and connectivity of existing regional hydrogen corridors and support the development and deployment of hydrogen supply chain infrastructure in urban and rural settings
- Piloting a novel, portable hydrogen refuelling station demonstrator
- Developing an NSR education forum to identify skills gaps and develop training solutions including two modular training programmes concerned with the design of infrastructure and hydrogen safety
- Facilitating access to public/private sector financial instruments supporting the development of hydrogen technology via an annual innovation forum which will provide a platform supporting the design/development of new financial instruments (including cross-regional/pan-European)
- Supporting the development of SME clusters to deliver new hydrogen turnkey infrastructure solutions

### *Lead Beneficiary*

Aberdeen City Council

Yasa Ratnayake [yratnayake@aberdeencity.gov.uk](mailto:yratnayake@aberdeencity.gov.uk) Tel: + 44 1224523807

Project homepage: <http://www.hytrec.eu>

## **16. ITRACT – Improving Transport and Accessibility through new Communication Technologies**



### *Summary*

ITRACT aims to improve the connectivity and accessibility of remote areas in the North Sea Region through the integration of innovative transport and communication infrastructure. The project will focus on the development and use of novel ICT applications and brings together technology experts - in the fields of ICT, satellite, wireless broadband and sensor technology - with socio-economic experts.

### *Aim*

The aim of ITRACT is to create sustainable and inclusive regional economies and communities throughout the North Sea Region by improving the virtual and physical modes of transport through innovative technologies.

### *Expected Outcomes*

- Design of innovative information architecture and exchange mechanisms for intelligent and efficient transport solutions

- Pilot actions (e.g. more efficient train, bus and car sharing services)
- Training modules to encourage people to make use of the new services
- Policy report and recommendations regarding the implementation of intelligent transport services

#### *Lead Beneficiary*

Hanze University Groningen, UAS, The Netherlands

Mr. Theo Miljoen, [t.a.miljoen@pl.hanze.nl](mailto:t.a.miljoen@pl.hanze.nl) Tel: + 31 505 955 565

## **17. iTransfer - Innovative TRANsport Solutions for Fjords Estuaries and Rivers**



#### *Summary*

Improving water-based public transport is a key issue in the NSR to safeguard sustainable accessibility of regions which would otherwise be inaccessible or suffering from their remote location. The iTransfer partners pursue an implementation-oriented approach to improve water-based accessibility by fostering development of Technology, Operation and addressing Policy issues (TOP) on the national and EU level.

#### *Aim*

The aim of iTransfer is to develop and present innovative, sustainable solutions to improve regional accessibility by water-based public transport in the NSR via a TOP approach:

- Resolve Technological issues (design of ferries and landings),
- Improve ferry Operation (integration of ferries with the public transport system and set-up of new ferry connections)
- Support a Policy environment which resolves tendering problems and recommend comprehensive barrier-free access solutions.

iTransfer seeks a strategy on 'how' to make efficient use of the potential of ferries for public transport. The project will develop a new ship design, adapt a ship for eco-fuel and build a tide proof landing, and build critical mass to show new policy options.

#### *Expected Outcomes*

- Installation and launch of an innovative accessible NSR ferry-landing and a sustainable standard NSR ferry operating with liquefied natural gas (LNG);
- Set-up of new ferry connections;
- A joint knowledge base on ferry operation;
- Improve accessibility of places, higher sustainability of passenger transport and increase efficiency of public transport systems.

### *Lead Beneficiary*

Institute for Sustainability, UK

Mr. Ed Metcalfe, [ed.metcalfe@instituteofsustainability.org](mailto:ed.metcalfe@instituteofsustainability.org), Tel: +44 0207 517 1835

Mr. Mark Thirkell [mark.thirkell@instituteofsustainability.org](mailto:mark.thirkell@instituteofsustainability.org), Tel: +44 0207 517 1834

Project homepage: [www.itransferproject.eu](http://www.itransferproject.eu)

## **18. LO-PINOD - Logistics Optimisation for Ports Intermodality: Network, Opportunities, Development**



### *Summary*

LO-PINOD aims to enhance multi-modal accessibility and interconnectivity of ports of regional importance. The project will focus on three aspects: the seaside, the port itself and the hinterland connections.

### *Aim*

LO-PINOD's aim is to make regional ports more accessible, sustainable and competitive transshipment nodes and thereby contribute towards a more balanced polycentric European transport network. The project seeks to enhance selected segments of the multi-modal transport network, to demonstrate how it is possible to facilitate more efficient movement of goods, to make better use of available capacities and spread the associated opportunities beyond large gateways.

Three topics will be addressed:

- INLAND - Improving multimodal landside links, testing how multimodal schemes integrate regional ports to their national/EU transport network and to each other.
- PORTS - Developing regional ports into efficient and diversified transshipment nodes through joint staff schemes to improve procedures e.g. security, safety, and to develop and integrate new markets;
- SEASIDE - Seaside accessibility and linking ports with towns by developing connections to main routes and gateway ports, and activities with local communities.

### *Expected Outcomes*

- Investment initiation for multi-modal inland connections of regional NSR ports;
- Upgraded skills & staff knowledge pool of LO-PINOD ports;
- Set-up of new transport connections and integrate new port services into the EU multi-modal network;
- Increased strategic support on the national and EU policy level.

### *Lead Beneficiary*

Institute for Sustainability, UK

Mrs. Laurienne Tibbles, [laurienne.tibbles@instituteofsustainability.org.uk](mailto:laurienne.tibbles@instituteofsustainability.org.uk), Tel: +44 (0) 207 517 1846

Project homepage: [www.lopinod.eu](http://www.lopinod.eu)

## **19. NMU - Northern Maritime University**



### *Summary*

The NMU project is building on the broad range of knowledge and expertise in the NSR which is being harnessed within a common and lasting transnational network of universities. The "Northern Maritime University" will directly address the needs of the maritime industry: To better prepare maritime business managers to cope with growing maritime traffic, port development, and rising environmental challenges, by developing multidisciplinary and internationally oriented qualifications at Bachelors and Masters level.

### *Aim*

- Strengthen the maritime business sector and to increase its capacity for innovation within the NSR (and BSR);
- Strengthen the competitiveness of the industry and services sector;
- Contribute to sustainable development of the growing maritime transport business sector
- Establish a European Area of Research and innovation for the maritime business;
- Strengthen the competitiveness of the European education industry in the maritime business sector in comparison to global competitors and removing obstacles for labour, academic and student mobility.

### *Expected Outcomes*

- Common curricula for North Sea Region oriented maritime business management programmes with qualifications at Bachelors, Masters and CPD levels,
- Qualification offerings in maritime business management including e-learning modules,
- Stakeholder study, a NMU "Toolbox" identifying the maritime sector's educational needs in the NSR,
- NMU portfolio and a roadmap for programme and content development,
- Professional accreditation of programmes and qualifications,
- NMU network

### *Lead Beneficiary*

Transport Research Institute, Napier University, UK

Mr. Gordon Wilmsmeier, [g.wilmsmeier@napier.ac.uk](mailto:g.wilmsmeier@napier.ac.uk), Tel: +44 (0) 131 455 2976

Project homepage: [www.nm-uni.eu](http://www.nm-uni.eu)

## **20. NSF – North Sea Fish**



### *Summary*

The approach of the North Sea Fish project is to enhance logistics in the total supply chain of wet fish from catch to plate. This includes logistical solutions for fish based regional economies to benefit local communities. North Sea Fish focuses on broadening the supply chain to include alternative sustainable solutions, specialization of activities in parts of the chain and increasing the efficiency between chain parts. These innovations aim to safeguard the much needed change of fisheries to towards a sustainable, consumer-oriented and competitive future.

### *Aim*

Increase the innovative capacity of fishery ports and fish based regional economies across the North Sea Region by promoting the development of efficient, effective and sustainable logistics solutions. The partners aim to do this by considering the total supply chain of wet fish from catch to plate to benefit local communities. Broaden the supply chain to include alternative sustainable solutions, specialization of activities in parts of the chain and increasing the efficiency between parties in the supply chain.

### *Expected Outcomes*

- Increase the innovative capacity of fish based regional economies by means of specializing within the fish supply chain
- Increase the innovative capacity of fish based regional economies by means of broadening the wet of fish supply chain
- Contributing to the sustainable transition of fishing, by implementing concrete strategies, technologies and methods
- Communicate North Sea Fish in such a way that other regions with fishery economies in (and outside) the NSR can benefit and take advantage from the outcome and results of North Sea Fish

### *Lead Beneficiary*

Municipality De Marne – The Netherlands

Arjan Dijkstra, [a.dijkstra@demarne.nl](mailto:a.dijkstra@demarne.nl) Tel: + 31 595 575 500

Project homepage: [www.northseaballast.eu](http://www.northseaballast.eu)

## 21. NS Frits



### *Summary*

The project addresses efficiency and effectiveness of the North Sea Region transport freight. To secure the NSR as a global competitor, the project develops an intelligent transport solution (ITS), which will improve accessibility, reduce environmental damage in the North Sea Region and enable the NSR to develop a dynamic logistics solution which is scalable across the EU.

### *Aim*

An electronic communications and data capture network will be developed into ITS that will be placed at strategic positions in key transport corridors to provide live, up to date information regarding traffic flow, congestion, safety and security.

The ITS will initially be aimed at the freight supply chain and will employ the most relevant Information and Communication Technologies (ICT) and equipment to transmit and receive data in a series of languages to lone workers as they travel throughout NSR.

### *Expected Outcomes*

- A multi-lingual electronic communication and data capture system for the freight supply chain to provide information to end users/drivers, fleet/transport managers, freight handlers about the conditions in the area that they are about to enter.
- Three pilot projects to test the effectiveness of the communications system;
- Recommendations to regional and national level entities and other potential stakeholders;
- Valuable information for freight supply chain making the sector better able to plan and manage their business operations including traffic flow, efficiency, safety and security issues.

### *Lead Beneficiary*

People United Against Crime, UK

Mrs. Helen Parr, [helen.parr@people-united.org](mailto:helen.parr@people-united.org), Tel: +44 114 2758688

Project homepage: [www.nsfrits.eu](http://www.nsfrits.eu)



## 22. POYO - The Port is Yours

### *Summary*

POYO is focussing on maintenance processes in order to increase the efficiency in the production process of the ports in the North Sea Region and thereby to enlarge competitiveness and innovation opportunities. POYO is strengthening and empowering networks to create an international cluster in the NSR, thereby laying the basis for knowledge transfer on innovative maintenance techniques and the development of an EU standard towards certification of all maintenance techniques.

### *Aim*

POYO will enable knowledge transfer in the field of innovative maintenance techniques so that European certification can be fostered. The binding factor in the strengthening of a 'maintenance cluster' will be to come towards a standard on certification of all maintenance techniques. This will enable the industry, policymakers and knowledge institutes to focus on their core competences, reaching innovation and economic growth for the whole area. Certification also means education. To ensure conformity to certification standards staff has to get and kept up to date through training.

### *Expected Outcomes*

- State of the art-inventory on maintenance techniques and the skills needed;
- 4 physical centres of excellence on maintenance issues;
- POYO portal, digital platform for training, and exchanges of experiences between different sectors;
- 4 digital courses on maintenance;
- Network of 500 companies in at least five countries;
- Action plan and Handbook for a European certification on maintenance courses.

### *Lead Beneficiary*

Albeda College, The Netherlands

Mr. M. Rescigno, [m.rescigno@albeda.nl](mailto:m.rescigno@albeda.nl), Tel: +31 (0)622556230

Project homepage: [www.poyo.eu](http://www.poyo.eu)

## 23. SAIL – Hybrid (Freight) Sailing



### *Summary*

Alternative propulsion systems for (freight) sailing, defined here as “hybrid sailing concepts”, have high potentials, due to rising oil prices and environmental aspects. Hybrid sailing concepts can lead to new business opportunities, job creation, more attractive regions and a more sustainable future. SAIL will build capacity, develop, improve and test concepts, develop business cases, build alliances and will embed hybrid sailing in policy and society. A Strategic Sustainable Sea Transport Plan and a Communication Plan will guarantee project follow-up and implementation.

### *Aim*

Facilitate a joint North Sea Region that stimulates the transition process towards a sustainable shipping sector with focus on zero emission freight sailing by the development and promotion of competitive sustainable hybrid sailing concepts. To make use of market conditions and policy aspects, and supporting actions like clean shipping labelling and public awareness. Develop innovative, effective and efficient sustainable sailing solutions.

### *Expected Outcomes*

- Capacity building in competitive economic AND sustainable hybrid sailing concepts
- Development and testing of living lab solutions and modelling tools in view of sustainable hybrid sailing concepts.
- Steps to embed sustainable hybrid freight sailing in policy and legislation.
- Developing a Strategic Sustainable Sea Transport Plan containing scenario planning tools with Roadmaps till 2050, bearing zero emission sailing in mind. Communication and promotion of Sail results to society

### *Lead Beneficiary*

Province of Fryslan – The Netherlands

Anne de Vries [a.j.devries@fryslan.nl](mailto:a.j.devries@fryslan.nl) Tel: + 31 646 322 642

## 24. StratMos - Motorways of the Seas Strategic Demonstration Project



### *Summary*

The project aims to promote and facilitate the shift of cargo from road to sea based inter-modal transport. STRATMOS strives to improve accessibility within the North Sea Region by supporting the implementation of the Motorways of the Sea concept and related transport

networks in integrated logistical chains. The project intends to provide input for the Master Plan to be developed by the North Sea MoS Task Force. Also practical demonstration projects will be carried out in order to demonstrate actions to be taken by public and private actors to improve the effectiveness of inter-modal transport, in particular related to hubs and hinterland connections.

### *Aim*

Promote and facilitate shift of cargo from road to sea based intermodal transport, and to improve accessibility within the NSR, by supporting the implementation of MoS and related transport networks in integrated logistical chains.

### *Expected Outcomes*

- Transnational solutions for 'invisible' intermodal transport (pilot trials, recommendations on intra-port traffic, technology related change management),
- Recommendations for efficient hubs, hinterland connections and on intra-port traffic,
- ICSO platform for container monitoring, ICT platform for cargo operations,
- Strategies for connecting transport networks and corridors. Develop functional concepts for connecting transport networks, comprising hubs and transport axes / corridors, by defining requirements for investments in infrastructure and facilities,
- A system model of MoS and intermodal transport,
- Guideline MoS strategic demonstration project.

### *Lead Beneficiary*

Rogaland County Council, Norway

Mr. Gunnar Eiterjord, [Gunnar.Odd.Eiterjord@rogfk.no](mailto:Gunnar.Odd.Eiterjord@rogfk.no), Tel: +47 51 51 66 00

Project homepage: [www.stratmos.no](http://www.stratmos.no)

## **25. SUSCOD - Sustainable Coastal Development in Practise**



### *Summary*

SUSCOD aims to make a step change in the application of integrated coastal zone management (ICZM). 7 partners from 5 countries will develop an innovative ICZM 'assistant'. This practical web based tool will allow coastal development practitioners to fully realise coastal potentials: economical, social and environmental.

### *Aim*

Central to SUSCOD is the development of a practical tool: the ICZM-assistant and its introduction to potential users and demonstrated value at test locations. Existing tools that assess the state of ICZM are of ex ante and too much of that which is scientific in character. The development process will apply and test the assistant in a variety of pilot situations and

it will allow coastal developers to assess their project at any stage in the development process and to determine points of attention to ensure the fully integrated development of their project.

#### *Expected Outcomes*

- Risk analysis scenarios, an integrated evacuation and a warning system.
- Inventory and analysis of existing ICZM tools and indicators available. Reviewing the present status of ICZM implementation in the partner regions, including ICZM tools as being applied in the light of challenges imposed by climate changes.
- Developing a practical and innovative web-based ICZM-assistant for coastal practitioners with stakeholder participation.
- Multimedia hub and related educational materials: a course for regional and coastal development officers throughout the NSR.
- Development of waterways.

#### *Lead Beneficiary*

Province of North-Holland, the Netherlands

Mr. Gertjan Nederbragt, [nederbragt@noord-holland.nl](mailto:nederbragt@noord-holland.nl), Tel: +31 23 5143199

Project homepage: [www.suscod.eu](http://www.suscod.eu)

## 4. RESULTS OF THE QUESTIONNAIRE

This chapter gives summarized information of the questionnaire received from 52% of contacted respondents (see tables 1-6). The rest of lead beneficiaries were not interested in answering the questionnaire and giving comments of their projects.

**Table 1. Outcomes and comments on the prioritised requirements list of the Railway Transport Infrastructure.**

Railway Transport Infrastructure	Involvement (Yes/No)	Comments/Outcomes
Deploying ERTMS	NO	
Migrating to 1435mm nominal track gauge	YES	<ul style="list-style-type: none"> <li>Did not know about it.</li> </ul>
Mitigating the impact of noise and vibration caused by rail transport, in particular through measures for rolling stock and for infrastructure, including noise protection barriers	YES	<ul style="list-style-type: none"> <li>The aspect of noise and vibration reduction has been the main focus on designing and working for the new dry port sites in Sweden and Belgium;</li> <li>Possibly, as part of planning requirements related to local infrastructure investments to reinstate or improve rails connections to regional ports.</li> </ul>
Meeting the infrastructure requirements and enhancing interoperability	YES	<ul style="list-style-type: none"> <li>New sites with a clear focus on interoperability were established. In Sweden an RFID project specifically worked with improved interoperability between rail track owner, railway planning and port.</li> <li>LO-PINOD project includes many regional port partners. Improving and enhancing multimodal connection has been a key element of the project, including investments to reinstate rail lines and associated infrastructure, such as multimodal terminals, to encourage modal shift for freight transport. Regional ports have been improving their operational capacity in order to cement their place in the comprehensive European transport network.</li> </ul>
Improving the safety of level crossings	YES	<ul style="list-style-type: none"> <li>In Belgium the rail connection to and from the port of Zeebrugge passes several villages. A program has been set up to meet the demands of the inhabitants for safe and regular access to the housing areas on both sides of the track.</li> </ul>
Where appropriate, connecting railway transport infrastructure with inland waterway port infrastructure	YES	<ul style="list-style-type: none"> <li>In the Netherlands inland waterway is an integral part of the freight transport system, and with any development of ports trimodality is basic. In the case of the port of Harlingen it is therefore natural to integrate rail, road and inland water. In the case of Coevorden inland water is an option for the future existing canal capacity is low.</li> <li>The LO-PINOD project is exploring the capacity of regional ports to develop their multi-modal connectivity, with the aim of transferring freight from road to rail and inland waterways.</li> </ul>

**Table 2. Outcomes and comments on the prioritised requirements list of the Inland Waterway Transport (Part I).**

Inland Waterways Transport	Involvement (Yes/No)	Comments/Outcomes
For existing inland waterways: implementing measures necessary to reach the standards of the inland waterways class IV	YES	<ul style="list-style-type: none"> <li>In the case of Coevorden there are plans developed for an upgrade of existing canal.</li> </ul>
Where appropriate, achieving higher standards for modernising and for new waterways in accordance with the technical aspects of infrastructure of the ECMT in order to meet market demands	YES	<ul style="list-style-type: none"> <li>An impact of the Dryport project in Sweden has been where more in the region such dry ports should be established. One of the options is north of Gothenburg, where the river transport could be developed more. A process has started by the Region Västra Götaland to introduce and implement the Inland Waterway Regulation even in Sweden.</li> <li>iTransfer has focused on developing new ferry transport routes to connect communities in the NSR and improving the sustainability and efficiency of vessels in use.</li> </ul>
Implementing telematic applications, including RIS	YES	<ul style="list-style-type: none"> <li>Indirectly one follow up of then wish to strengthen inland water connections the Region Västra Götaland supports a project to establish GOTRIS at the Göta Älv river that is meant to manage and steer water and land transport.</li> <li>Ferry operators have been looking at using telematics to assess occupancy of their ferries in order to improve ferry services to passengers, and meet health and safety requirements.</li> </ul>
Connecting inland port infrastructure to rail freight and road transport infrastructure	YES	<ul style="list-style-type: none"> <li>In Belgium the estuary barges are an example to connect the inland port structures in the Ruhr area with Zeebrugge.</li> <li>Not applicable, focus on passengers and crew boats to off shore wind farms.</li> <li>LO-PINDO partner, Meppel, are Exploring master planning options for their port and developing opportunities to transfer freight from road and rail to their inland water transport network.</li> </ul>
Paying particular attention to free-flowing rivers close to their natural state and which can therefore be subject of specific measures	YES	<ul style="list-style-type: none"> <li>In Harlingen any development always should be monitored for impact on the nature area of the Waddenzee.</li> </ul>
The promotion of sustainable inland waterway transport	YES	<ul style="list-style-type: none"> <li>Apart from promotion in the Netherlands, Belgium and Sweden even efforts were made to introduce inland water connection between ports in the Edinburgh area.</li> <li>Through design of sustainable vessels to meet emissions regulations and European and local environmental requirements &amp; through increased efficiency of vessel is use, promoting fuel and emissions reductions.</li> <li>Low carbon harbour action plan.</li> <li>Meppel are developing a Low Carbon Harbour plan for their Port and inland water transport network.</li> <li>Develop methodologies for safer navigation and Nautical chart and maritime information.</li> </ul>



**Table 2. Outcomes and comments on the prioritised requirements list of the Inland Waterway Transport (Part II).**

Inland Waterways Transport	Involvement (Yes/No)	Comments/Outcomes
Modernisation and expansion of the capacity of the infrastructure necessary for transport operations within the port area	YES	<ul style="list-style-type: none"> <li>• In Belgium the estuary barges are an example of port activity where infrastructure is made available for inland water transport.</li> <li>• Sustainable vessel landings and pontoons have been designed and delivered by the project to enable better integration of ferry routes. Innovative design has enabled challenging conditions such as large tidal reach to be overcome and enable extending working hours of infrastructure to overcome tidal constraints and meet disability requirements.</li> <li>• Meppel are exploring this as part of their master planning and low carbon harbour plans, and collaborating with other regional ports to develop a regional port cluster that is providing additional capacity for larger ports, such as Rotterdam which is nearing critical capacity.</li> </ul>



**Table 3. Outcomes and comments on the prioritised requirements list of the Road Transport Infrastructure (Part I).**

Road Transport Infrastructure	Involvement (Yes/No)	Comments/Outcomes
Improvement and promotion of road safety	YES	<ul style="list-style-type: none"> <li>• In the concept of Dryport road is essential to connect incoming rail with end user. Often the last part has been realized by road. In Sweden the new dry port site had explicitly road safety as a focus, where the existing road network is being adapted with crossovers and roundabouts. The project started a project to allow larger lorries on specific roads to allow transport of two 40TEU containers at the same time. This requires changes in road legislation and end 2013 it is expected that it finally can be done in practice.</li> <li>• LO-PINOD Port partners are developing port master plans that look at all aspects to develop sustainable port, which fully integrate transport modes and develop multimodal connections. As such, this will include review of road access and capacity to ports and areas that need or require improvement.</li> <li>• Especially for non-motorised modes.</li> </ul>
Use of ITS, in particular multi-modal information and traffic management and to enable integrated communication and payment systems	YES	<ul style="list-style-type: none"> <li>• Information about PT and Car-Sharing.</li> </ul>
Introduction of new technologies and innovation for promoting low carbon transport	YES	<ul style="list-style-type: none"> <li>• In the area of the Haven Gateway/Felixstowe UK two projects were implemented. The carbon calculator has been developed that how the impact of choosing a certain mode of transport concerning carbon emission. The CCC was meant to be a decision instrument for freight forwarders in their choice of transport mode. The second project that started in the UK was a specific programme aiming at SME's to reduce their carbon impact when moving freight from road to rail.</li> <li>• LO-PINOD port partners are developing port master plans and infrastructure to develop multi modal connections. These encourage sustainable transport modes with reduced emissions of carbon.</li> <li>• Intermodal offers – integrating Car-Sharing into mobility patterns</li> </ul>
Provision of appropriate parking space for commercial uses with an appropriate level of safety and security	YES	<ul style="list-style-type: none"> <li>• PINOD port partners are developing port master plans that look at all aspects to develop sustainable port, which fully integrate transport modes and develop multimodal connections. As such, this will include review of road access and capacity to ports, including parking, and areas that need or require improvement.</li> </ul>

**Table 3. Outcomes and comments on the prioritised requirements list of the Road Transport Infrastructure (Part II).**

Road Transport Infrastructure	Involvement (Yes/No)	Comments/Outcomes
The mitigation of congestion on existing roads	YES	<ul style="list-style-type: none"> <li>• Inland waterways are excellent alternatives to solve congestion and it guarantees that a just in-time delivery can be reached.</li> <li>• LO-PINOD port partners are developing port Master plans that look at all aspects to develop sustainable port, which fully integrate transport modes and develop multimodal connections. As such, this will include review of road access and capacity to ports and areas that need or require improvement. Port of Esbjerg has effectively made a significant reduction in hinterland congestion through relocation of port access road to avoid the local town.</li> <li>• Promotion of walking, cycling and public transport and Car-Sharing in order to achieve modal shift and to reduce the number of private cars (and the space consumed) through Car-Sharing.</li> </ul>

**Table 4. Outcomes and comments on the prioritised requirements list of the Maritime Transport Infrastructure and Motorways of the Sea (Part I).**

Maritime transport infrastructure and Motorways of the Sea	Involvement (Yes/No)	Comments/Outcomes
<p>Promoting motorways of the sea including short sea shipping, facilitating the development of hinterland connections and developing, in particular, measures to improve the environmental performance of maritime transport in accordance with the applicable requirements under Union law or relevant international agreements</p>	<p>YES</p>	<ul style="list-style-type: none"> <li>• A close cooperation has occurred between the MOS project and Dryport about themes like synchromodality, hinterland connections. Both projects aimed at introducing the need of good hinterland connections and worked actively to influence national maritime policies. The Dryport project was presented at the European Maritime Day in Gothenburg for example, where the central theme was blue growth.</li> <li>• The main objective of was to bridge the results and outcomes of cluster work and link them up to ongoing policy developments within the European Union, by taking into account EU policy papers on transport and cohesion policy (e.g. White Paper, Europe 2020 strategy, CEF, Annual MoS review, ERDF regulation, NSR 2020). A first draft of the MTC Policy Paper containing concrete recommendations for the Members of the European Parliament, the European Commission and the countries in the North Sea Region (EU Member States and Norway) was drafted and has been discussed with sector organisations at national land European levels. The final version of the policy paper was actively disseminated to political stakeholders to create awareness about actual hot topics in maritime transport and hinterland transportation.</li> <li>• Setting up new green transport corridors via rail/short sea shipping.</li> <li>• The ACCSEAS project will develop solutions, based on the IMO's e-Navigation concept, to help the mariner and shore-based organisations to use the North Sea Region shipping routes more effectively. In particular, with the increased use of the North Sea for energy extraction (e.g. wind farms and oil/gas platforms), the impact on shipping is the increased risk of collision or grounding, or increased fuel usage due to longer routes to avoid the obstacles. ACCSEAS is developing ideas to help the mariner to reduce these risks, and allow for more efficient travel through the region by enhancing route planning. For example, the "no-go area" service will allow the mariner to increase their spatial awareness by highlighting areas that are not suitable for the vessel they are sailing to enter. Another example is the Maritime Safety Information service that provides authoritative safety information by digital means that is instantly available on the electronic systems used by the mariner for navigation.</li> <li>• LO_PINOD Partners have completed feasibility studies and business cases to look at establishing short sea shipping alternatives to established road connections, such as fresh produce from Northern Norway to Denmark &amp; Belgium; and between the North and Baltic seas.</li> </ul>

**Table 4. Outcomes and comments on the prioritised requirements list of the Maritime Transport Infrastructure and Motorways of the Sea (Part II).**

Maritime transport infrastructure and Motorways of the Sea	Involvement (Yes/No)	Comments/Outcomes
Interconnection of maritime ports with inland waterways	YES	<ul style="list-style-type: none"> <li>Large focus in the Netherlands and Belgium.</li> </ul>
Implementation of VTMS and e-Maritime services		<ul style="list-style-type: none"> <li>Whilst ACCSEAS will not been developing e-Maritime services directly, the project will demonstrate a common framework, based on the IMO's e-Navigation concept. This, we see, is a powerful, scalable platform on which services can be implemented to ensure consistency of operation and experience from the user's point of view. The e-Navigation concept is underpinned by Resilient Position, Navigation and Timing (PNT), and this is used to good effect to ensure that all the services onboard the vessel have access to robust location and timing information. This could be the key to reducing the difference between the Estimated Time of Arrival and the actual time of arrival, thus reducing overheads at the port and for the vessel. The ideas within ACCSEAS are easily scalable to the rest of the EU, and even beyond, particularly because it is based on a global initiative by the IMO.</li> </ul>
Introduction of new technologies and innovation for promotion of alternative fuels and energy efficient maritime transport, including LNG		<ul style="list-style-type: none"> <li>The ACCSEAS project will develop ideas that will allow the vessel travelling through the North Sea Region to use fuel more efficiently. For example, a service could be developed to notify the mariner when a berth is available in the destination port. This would allow the mariner to slow down, if necessary, to ensure that they arrive just in time. This minimises waiting times, improved fuel usage efficiency and reduce costs. Such a service could be built upon the common framework developed in ACCSEAS with relative ease, and with integration to the other services that the framework supports (e.g. Route Topology Model).</li> <li>Regional Port partners are exploring diversification opportunities as they have flexibility and capacity to respond to market conditions and develop into new business areas such as renewable energy and bunkering facilities for LNG.</li> </ul>

**Table 4. Outcomes and comments on the prioritised requirements list of the Maritime Transport Infrastructure and Motorways of the Sea (Part III).**

<b>Maritime transport infrastructure and Motorways of the Sea</b>	<b>Involvement (Yes/No)</b>	<b>Comments/Outcomes</b>
Modernisation and expansion of the capacity of the infrastructure necessary for transport operations within the port area	YES	<ul style="list-style-type: none"> <li>• This is the core activity for ports like Zeebrugge and Gothenburg. The first one for example with its efforts to combine inland water and port. The port of Gothenburg introduced their concept of Rail ports which resulted in the fact that half of the ports transport into the hinterland is realized by railway.</li> <li>• E-Navigation is a berth to- berth concept, and is not only about vessels at sea. The ideas within ACCSEAS have the potential to modernise how ports and ships interact. A port information service, for example, could be integrated into the ACCSEAS common framework, and provide a useful, harmonised tool for the mariner to determine what services are available at the destination port. More immediately, ACCSEAS will be demonstrating the "no-go area" in the entrance to the Humber Estuary to enable more efficient access to the port whilst reducing the risk of grounding. During the same demonstration, the "route exchange" service will allow nearby vessels to see each other's routes, and therefore increase the spatial awareness of the mariner whilst using the port approach channels.</li> <li>• Regional port partners are exploring diversification opportunities as they have flexibility and capacity to respond to market conditions and develop into new business areas including: reviewing existing capacity and potential through master planning; developing port infrastructure such as new alongside quay facilities, multi modal rail terminal and reinstated rail lines; updating existing facilities, such as cranes etc.</li> <li>• 3D harbours and 3D navigational chart prototypes.</li> </ul>

**Table 5. Outcomes and comments on the prioritised requirements list of the Air Transport Infrastructure.**

<b>Air transport infrastructure</b>	<b>Involvement (Yes/No)</b>	<b>Comments/Outcomes</b>
Increase airport capacity	YES	<ul style="list-style-type: none"> <li>Runway extensions.</li> </ul>
Support the implementation of the Single European Sky and of air traffic management systems, in particular those deploying SESAR	NO	
Improve multi-modal interconnections between airports and infrastructure for other transport modes	NO	
Improving sustainability and mitigating the environmental impact from aviation	YES	<ul style="list-style-type: none"> <li>Introduction CO<sub>2</sub>.</li> </ul>
Improving the multimodal interconnections of the airports with infrastructure of other transport modes	NO	

**Table 6. Outcomes and comments on the prioritised requirements list of the Infrastructure for Multimodal Transport.**

Infrastructure for Multimodal Transport	Involvement (Yes/No)	Comments/Outcomes
Providing for effective interconnection and integration of the infrastructure of the comprehensive network, including through access infrastructure where necessary and through freight terminals and logistic platforms	YES	<ul style="list-style-type: none"> <li>• This has been the core of the Dryport project. Essential is to realise a consistent hinterland network otherwise no port can meet the future.</li> <li>• iTransfer focused on movement of people, and integration of ferry routes with other modes of transport. As well as infrastructure (pontoon &amp; landings) we have explore integrated ticketing to promote sustainable travel.</li> <li>• Loading at shippers' premises is sometimes a challenge.</li> <li>• Logistics Hub development.</li> <li>• Ports Optimisation and intermodality are at the heart of LOPINOD partner activity.</li> </ul>
Removing the main technical and administrative barriers to multimodal transport	YES	<ul style="list-style-type: none"> <li>• In four cases a Dryport was set. Some in reality and based on integrated approach and support. In Scotland and the Netherlands existing freight terminals have been identified as being potential dry ports. The process to adapt and transfer these existing sites into integrated parts of a port system has started. Many more barriers are met in the latter cases.</li> <li>• Within the policy paper recommendations to MS, EC and MEPs were drawn dealing with an optimisation of ITS issues and combined transport.</li> <li>• Improved infrastructure and landings, as well as integrated ticketing, removes the barriers between transport modes.</li> <li>• Insurance issues.</li> <li>• The LOPINOD partners have shared their experiences of establishing and developing intermodal connections. Based on Transnational experience we are developing a Joint Transnational Accessibility Validation Strategy that identifies the issues and barriers within planning and policy framework and develops recommendations and a road map for delivering multimodal connectivity to ports.</li> <li>• Looking at the potential of non-motorised modes and collective modes, integration of Car-Sharing into urban street space (legal barriers).</li> </ul>
Developing a smooth flow of information between the transport modes and enabling the provision of multimodal and single-mode services across the trans-European transport system	YES	<ul style="list-style-type: none"> <li>• The Swedish RFID project supported and realised by the national traffic authority is an example of smooth flows thinking. Trafikverket aims at having RFID at European scale and as a standard for rail IT.</li> <li>• ICT systems to monitor passenger numbers enable operators to provide and improve services as well as journey information.</li> <li>• Developing new shuttle and transition lines.</li> <li>• Ports optimisation and intermodality are at the heart of LOPINOD partner activity.</li> </ul>

## 5. CONCLUSIONS AND RECOMMENDATIONS

The summary of the outcomes and comments in the activity 4.1 gave an input for the activity 4.3 and using the gathered data the following conclusions can be made:

- Not all the requirements were known or covered.
- Respondent identified insurance and loading at shippers' premises problems.
- The most intensive area of Interreg IVB projects is maritime transport and Motorways of the Sea.
- The air transport infrastructure is the most difficult to evaluate.
- New sites with clear focus on interoperability between rail, road and port can be seen.
- Improvement of multimodal connections.
- Regional ports improved their operational capacity.
- Enhanced integration of ferry routes.

### **Recommendations:**

- Information to Interreg secretary to include a stronger focus in Interreg V programme about the new perspectives and demands guided by the new TEN-T Guidelines 2013.
- To find regional demands/impacts, etc.
- Awareness rising about new conditions.



## 6. ANNEX 1



### Outcomes and results of Interreg IVB projects

This questionnaire will be used as a tool to identify the outcomes and results of Interreg IVB projects. The information gathered will be utilized for highlighting where regional and local authorities from the NSR can contribute to the completion of the TEN-T network by 2030 or 2050 respectively.



Please write your name, surname, organisation and your position:

**Name**

---

**Surname**

---

**Organisation:**

---

**Position:**

---



**I represent:**

- (1) ☐ ACCSEAS
- (2) ☐ Ballast Water Opportunity
- (3) ☐ BLAST
- (4) ☐ CARE-North
- (5) ☐ Clean North Sea Shipping
- (6) ☐ CLUSTER:EVNSR
- (7) ☐ CLUSTER:MTC
- (8) ☐ Cruise Gateway
- (9) ☐ Dryport
- (10) ☐ E-Harbours
- (11) ☐ E-Mobility NSR
- (12) ☐ Food Port
- (13) ☐ GreCOR
- (14) ☐ GSA-Green Sustainable Airports
- (15) ☐ HyTrEc
- (16) ☐ ITRACT
- (17) ☐ iTransfer
- (18) ☐ LO-PINOD
- (19) ☐ NMU
- (20) ☐ North Sea Fish
- (21) ☐ NS Frits
- (22) ☐ POYO-The Port is Yours
- (23) ☐ SAIL
- (24) ☐ StratMoS
- (25) ☐ SUSCOD



**Did your project cover RAILWAY TRANSPORT?**

- (1) ☐ Yes
- (2) ☐ No



**In which way did your project cover the following aspects of Railway transport infrastructure? Please write comments on project outcomes and results.**

	Yes	No	Outcomes/Comments
Deploying ERTMS	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Migrating to 1435mm nominal track gauge	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Mitigating the impact of noise and vibration caused by rail transport, in particular through measures for rolling stock and for infrastructure, including noise protection barriers	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Meeting the infrastructure requirements and enhancing interoperability	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Improving the safety of level crossings	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Where appropriate, connecting railway transport infrastructure with inland waterway port infrastructure	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>



Did you project cover INLAND WATERWAYS TRANSPORT?

(1) ☐ Yes (2) ☐ No



In which way did your project cover the following aspects of Inland waterways transport? Please write comments on project outcomes and results.

Outcomes/Comments

	Yes	No	
For existing inland waterways: implementing measures necessary to reach the standards of the inland waterways class IV	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>
Where appropriate, achieving higher standards for modernising and for new waterways in accordance with the technical aspects of infrastructure of the ECMT in order to meet market demands	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>
Implementing telematic applications, including RIS	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>
Connecting inland port infrastructure to rail freight and road transport infrastructure	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>
Paying particular attention to	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>

	Yes	No	Outcomes/Comments
free-flowing rivers close to their natural state and which can therefore be subject of specific measures			<hr/> <hr/> <hr/> <hr/>
The promotion of sustainable inland waterway transport	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/>
Modernisation and expansion of the capacity of the infrastructure necessary for transport operations within the port area	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/>



**Did your project cover ROAD TRANSPORT INFRASTRUCTURE?**

(1) ☐ Yes (2) ☐ No



**In which way did your project cover the following aspects of Road transport infrastructure? Please write comments on project outcomes and results.**

	Yes	No	Outcomes/Comments
Improvement and promotion of road safety	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/>

	Yes	No	Outcomes/Comments
Use of ITS, in particular multi-modal information and traffic management and to enable integrated communication and payment systems	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Introduction of new technologies and innovation for promoting low carbon transport	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Provision of appropriate parking space for commercial uses with an appropriate level of safety and security	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
The mitigation of congestion on existing roads	(1) <input type="checkbox"/>	(2) <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>



**Did your project cover MARITIME TRANSPORT INFRASTRUCTURE AND MOTORWAYS OF THE SEA?**

(1) ☐ Yes (2) ☐ No



**In which way did your project cover the following aspects of Maritime transport infrastructure and Motorways of the Sea? Please write comments on project outcomes and results.**

Outcomes/Comments

**Yes**

**No**

Promoting motorways of the sea including short sea shipping, facilitating the development of hinterland connections and developing, in particular, measures to improve the environmental performance of maritime transport in accordance with the applicable requirements under Union law or relevant international agreements

(1) ☐

(2) ☐

## Interconnection of maritime ports with inland waterways

(1) ☐

(2) ☐

## Implementation of VTMS and e-Maritime services

(1) ☐

(2) ☐

Introduction of new technologies and innovation for promotion of alternative fuels and energy efficient maritime transport, including LNG

(1) ☐

(2) ☐

Modernisation and expansion of the capacity of the infrastructure necessary for transport operations within the port area

(1) ☐

(2) ☐

(2) ☐



Outcomes/Comments

Yes

No

with infrastructure of other  
transport modes

---



---



---



Did your project cover MULTIMODAL TRANSPORT?

(1) ☐ Yes (2) ☐ No



In which way did your project cover the following aspects of Multimodal transport? Please write comments on project outcomes and results.

Outcomes/Comments

Yes

No

Providing for effective interconnection  
and integration of the infrastructure of  
the comprehensive network, including  
through access infrastructure where  
necessary and through freight  
terminals and logistic platforms

(1) ☐

(2) ☐

---



---



---



---

Removing the main technical and  
administrative barriers to multimodal  
transport

(1) ☐

(2) ☐

---



---



---

Developing a smooth flow of

(1) ☐

(2) ☐

---



---

Yes

No

Outcomes/Comments

information between the transport modes and enabling the provision of multimodal and single-mode services across the trans-European transport system

---

---

---

---



Would you be interested in further dialogue concerning your provided answers in this survey?

(1) ☐ Yes

(2) ☐ No



Would you like to receive a print copy of your answers? If yes, please write your e-mail address in the following table:

---



Thank you for your answers!

