Workshop urban node Hamburg

Summary report on outcomes and conclusions

Wednesday 30 May 2018

Hamburg City Hall (Phönixsaal)

Rathausmarkt 1, 20095 Hamburg, Germany

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Table of contents

1 Introduction 4

1.1 Outcomes 4

1.2 Follow-up 5

2 Fingerprint Hamburg 6

2.1 Characteristics 6

2.2 Trends 6

2.3 Relation between spatial planning and infrastructure planning 7

3 Pitches on current developments 8

3.1 Pitch by Mr. Breitenbach, Hafen Hamburg 8

3.2 Pitch by Mr. Rah, Free and Hanseatic City of Hamburg 9

3.3 Presentation by Mr. Schürmann, Transport Consulting Partners (TCP) 11

3.4 Experiences from Gothenburg 13

4 Challenges 15

4.1 Vulnerability of the network 15

4.2 Environmental impact 16

4.3 Challenge of space – capacity restrictions 16

5 Themes of challenges 17

5.1 Governance on functional urban area level 17

5.2 Spatial restrictions 18

5.3 Cycling 18

5.4 Network of networks – knowledge exchange 18

5.5 Findings on CEF funding 19

6 Lessons learned 20

6.1 The role of and effect on Europe 20

Attachments 21

1. Fingerprint urban node Hamburg (info graphic) 22
2. Map corridor level 28
3. Map regional/urban node level 29

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4. Map city level.....30
5. List of participants Hamburg workshop.....31
6. Programme of the Hamburg workshop.....32

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1 Introduction

The workshop in the urban node Hamburg has been organized on the 30th of May 2018. It is part of the Vital Nodes project – a Coordination and Support Action (CSA) executed under the European Commission's Horizon 2020 program.

Vital Nodes aims at enabling efficient, sustainable freight delivery across the TEN-T urban nodes (functional urban areas), by bringing together existing European, national and regional networks of experts and professionals. As a result of increasing freight transport, these urban nodes need to cope with challenges such as congestion, poor air quality, noise, and road safety risks. The objectives of the Vital Nodes project are to improve European interconnection, while developing sustainable mobility within cities. Vital Nodes will deliver evidence-based recommendations for effective and sustainable integration of the nodes into the TEN-T network corridors, addressing specifically the multi- and intermodal connection between long-distance and last-mile freight logistics. It will also support the deployment of innovations in the urban nodes, while establishing a long-lasting European expert network.

The European Commission has asked Vital Nodes to provide it with validated recommendations on investment needs (for infrastructure and spatial developments), on updating and redefining guidelines for infrastructure investments and on funding instruments on European infrastructure. The focus is on integrating long-distance freight and last-mile delivery.

The Hamburg workshop has been organized in cooperation with the Ministry of Economy, Transport and Innovation of the Free and Hanseatic City of Hamburg. Main goals of the workshops were:

- Addressing the key challenges for the urban node Hamburg and come to a common understanding of these challenges;
- Deepening the key challenges;
- Discussing possible impacts, barriers and solutions;
- Discussing the impact of the challenges and solutions on the EU TEN-T core network corridors.

This report is primarily intended to mirror the discussions during the workshop of May 30th, 2018 in Hamburg and as such cannot replace proper scientific research into the topics touched upon. The conclusions drawn do not necessarily represent the official position of the Senate of Hamburg.

1.1 Outcomes

During the workshop in the urban node Hamburg, good discussions took place and knowledge and good practices have been exchanged. Several stakeholders have presented their views on the relation between the urban node Hamburg and the TEN-T network. Different key challenges have been discussed:

- Vulnerability of the network;
- Environmental impact;
- Challenge(s) of space and capacity restrictions.

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Among others the following lessons have shared:

- The importance of planning on different geographical levels and relating governance structures;
- The necessity of comparable data collection and coherency of EU-policy;
- Importance of knowledge exchange and the usefulness of having/creating a network that adopts the existing networks.

1.2 Follow-up

Validation

Following the outcomes of the workshop, the challenges and the (impact of) solutions need to be validated by the stakeholders related to the specific urban node.

First recommendations to the European Commission

Based on the outcomes of this Vital Nodes workshop in Hamburg and the eight following workshops in other urban nodes as part of the first phase of the project first recommendations to the European Commission will be drafted this autumn.

Second phase of the Vital Nodes project

In autumn 2018, the second phase of the Vital Nodes project will start, deepening the challenges in urban nodes and aiming for further deployment of possible solutions. This phase will be exist of thematic oriented sessions with a growing amount of nodes involved.

Expert pool

Currently an expert pool is under development by the Vital Nodes consortium. The goal of the expert pool is to bring together knowledge from different fields of expertise related to the development of urban nodes and the combination of long distance freight and last mile delivery, and stimulate knowledge exchange between different urban nodes throughout Europe.

Knowledge exchange and policy dialogue

Through the Vital Nodes website (vitalnodes.eu) and the newsletter, outcomes and updates on the Vital Nodes project are shared regularly. Besides, a policy dialogue with the EC will be organized in autumn 2018.

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2 Fingerprint Hamburg

The Vital Nodes project has given a presentation on the Fingerprint of Hamburg: An analysis based on facts, policy documents and figures, and developments on the three scale levels. A comprehensive overview of this analysis can be found in the fingerprint (attachment 1).

2.1 Characteristics

Main characteristics of the urban node Hamburg:

- Hamburg is the 2nd largest city of Germany and core of the Metropolitan Region of Hamburg, and the third largest port in Europe with many intermodal hubs.
- Hamburg is Europe's biggest railway port for maritime transport.
- The urban node Hamburg is located on three core network corridors: Scandinavian-Mediterranean, Orient/Eastern Mediterranean and North Sea Baltic. The node is an important railway junction on the route to Scandinavia and connects 'Northern' Europe with for example Italy.
- The metropolitan region of Hamburg forms the functional urban area for freight of the urban node Hamburg.
- Key economic sectors are finance, commerce, logistics and industry, while the area is a hub for science, research and education with several universities and institutions.

2.2 Trends

Main trends in the urban node:

- Growing population (now 1.8 million inhabitants in the city), passenger flows and freight flows, with a political commitment of supplying 10.000 additional dwellings per year;
- Increasing competition between European ports and a related growth of the service sector;
- Several major infrastructure projects planned, among which the A7 motorway expansion, the A26 motorway expansion, improvement of the central station and its surroundings, new S-Bahn S4, expansion of the AKN line (regional rail) A1, the extension of the metro line U4 and planning of the new metro line U5.

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2.3 Relation between spatial planning and infrastructure planning

The authorities that are in charge for spatial planning think about innovations in passenger transport but miss opportunities in freight and logistics. An important question is the responsibility of the different organizations in logistics.

Spatial developments are highly affected by freight logistics, but this is often forgotten about. The question is what should be the role of government and what could be the role of the market?

The Functional Urban Area (FUA) of Hamburg consists of several logistics centers within one-hour drive of Hamburg: Stade, Brunsbüttel and Lübeck. A third of the activities are value-added services in this FUA.

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3 Pitches on current developments

3.1 Pitch by Mr. Breitenbach, Hafen Hamburg

Port developments take place in the very heart of the city. The port acts as a mayor employer for Hamburg (130,000 jobs), Lower Saxony (14,000 jobs) and Schleswig-Holstein (12,000 jobs). In comparison to the inland ports in the Rhine-Ruhr area, the chances and challenges of Hamburg are completely different: Hamburg's challenges are increasing traffic, limited parking areas and environmental protection.

Initiatives like smartPORT focusing on transportation management should reduce CO2 emissions and air pollution and stimulate efficient use of energy and infrastructure.

Part of the city is the terminal landscape close to the city which brings challenges for urban logistics and traffic.

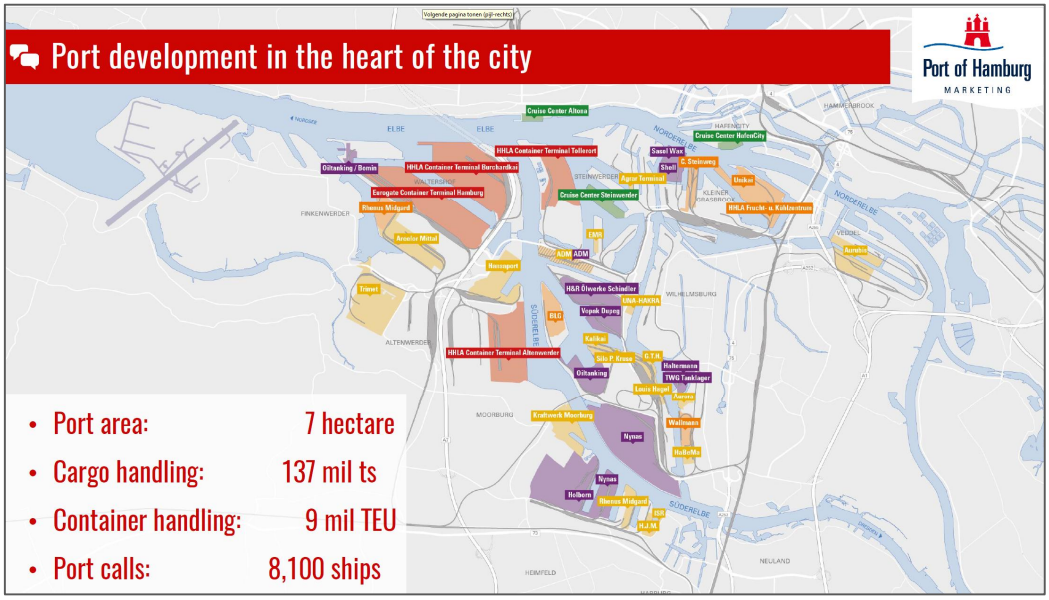

Image: port development in the heart of the city

Driving forces behind current developments in the port:

- High cargo volumes in limited areas (2000: 85 million tons, 2017: 137 million tons)
- Larger vessels and increasing peak times
- Increasing traffic
- Limited parking areas
- Environmental protection

Value added services are not only container business, although it is a big part of it.

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Ship development: vessels are getting bigger and bigger, also cruise ships. The challenge is how to handle these huge ships also in peak times. The terminal size is sufficient, but the infrastructure is limited and especially its location close to the city is a major challenge. Main challenge for landside infrastructure is to get more support for trains and barges. Efficient use of land available is important.

3.2 Pitch by Mr. Rah, Free and Hanseatic City of Hamburg

The outbound part of connectivity is high on the agenda, focusing on building new infrastructure or improving existing infrastructure. Current basis is the 'Mobilitätsprogramm 2013 (mobility program)' that has been passed by the Hamburg's Senate. This program offers several measures related to connectivity. In 2017, the Senate issued another document about goals for mobility with a perspective for actions. These include but are not limited to:

- Higher share of walking, cycling and public transport; strengthening of public transport and multi-modality; Hamburg as a cycling city
- Improving connectivity, optimizing city logistics; good condition of roads and railway network
- Reducing emissions of greenhouse gases, promoting emission-free and low-emission vehicles
- Reducing noxious emissions / noise, improving safety
- Making public space more attractive and liveable

City of Hamburg (1.8 million inhabitants, 755 km²) and Hamburg Metropolitan Area (4 German states, 28.500 km², 5.2 million inhabitants).

Plans in the Federal Transport Infrastructure Plan (Bundesverkehrswegeplan 2030):

- Fairway adjustment of the river Elbe
- Locks Kiel waterway in Brunsbüttel (FD-E)
- Extension Kiel waterway (FD-E)
- New lock in Lüneburg (VB)
- Elbe – Lübeck – waterway (VB)

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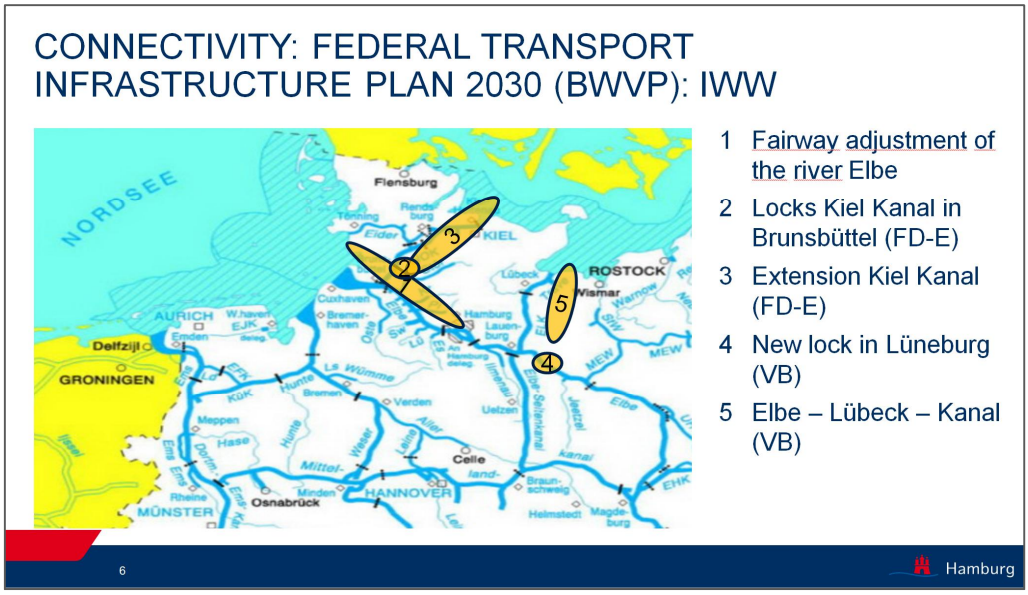

Image: Inland waterways plans in the Federal Transport Infrastructure Plan.

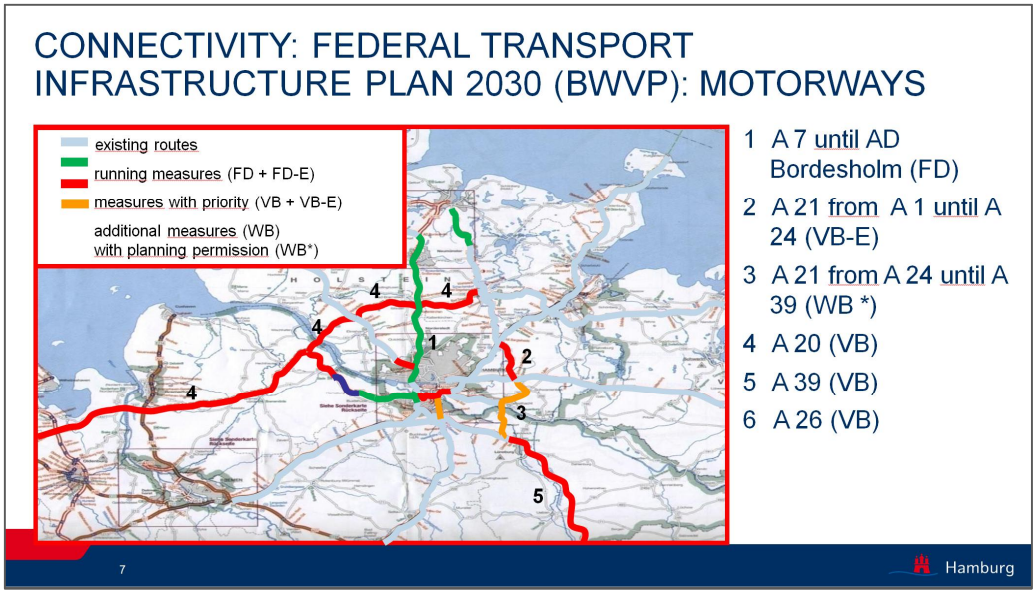

Image: Overview of road extensions in the Federal Transport Infrastructure Plan.

Rail: connectivity as focus

- Rail (see map); Hamburg central station is now handling 2,000 trains a day. Unsatisfactory quality of operation due to capacity issues. → Solution (**good practice**): Multi-track expansion Hamburg – Bad Oldesloe (S4). The passenger flows will be separated from the freight flows instead of increasing the capacity. “Unbundling” on the Scan-Med-Corridor: S4 will use dedicated tracks resulting in 100 regional trains per day less on the long-distance tracks. The S4 will release capacity within the Hamburg central station (15,000 passengers per day). S4 is tackling the increasing regional traffic

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with higher capacity (shorter intervals and more seats), better quality (larger coverage/more stations and higher reliability/less conflicts), thus making use of infrastructure more efficient.

Digitalization:

- Intelligent Transport Systems (ITS): Hamburg will host the ITS World Congress 2021: The Free and Hanseatic City of Hamburg was selected by the European ITS association "ERTICO-ITS Europe" as the host of the 28th ITS World Congress in 2021. The world congress will take place from 11-15 October 2021. Main topics are: automated and connected driving, MaaS – Mobility as a Service, ports and logistics and intelligent infrastructure.
- "Hamburg as a testbed for different solutions".

3.3 Presentation by Mr. Schürmann, Transport Consulting Partners (TCP)

The MORO project contains a study on 13 German urban nodes on their experiences and expectations of being an urban node. Mid-term results have been presented. The project will end in October 2018 and will make urban node fact sheets, collect good practices and formulate strategies for these urban nodes.

Methods:

- Literature study
- Interviews
- Online survey
- Interviews with EU corridors coordination
- Workshops

Analysis approach

What is an ideal urban node? --> Definition of urban node requirements and characteristics --> identification of specific nodal fields of activities and challenges --> collection of node activities, projects and initiatives --> strategy development

Node characteristics

- Multimodal transport node
- Offering a surplus of functions
- Strong distribution and interconnection functions
- Incubator and testbed for innovative mobility solutions
- Developing and applying innovative planning and financing instruments
- Intensive networking with other nodes (domestically and internationally)
- Proactive participation in corridor activities and cross border initiatives

Interesting note: the European Commission defines the nodes on a high and abstract level, but if you zoom in on an urban node the situation is very specific and more complex. E.g. solutions in the western area of the Hamburg region are different from the solutions in the eastern part.

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Activity fields and requirements:

- Planning measures/projects
- Planning processes and instruments
- **Networking** > this is an important field

Observations in the MORO project, specific in the urban node Hamburg

The governance structure of Hamburg Metropolitan Area with 4 federal states creates challenges. Advantage of being a state, to participate in corridor forums (in Germany only Bremen and Berlin have a similar role) and this independency makes it possible to put aspects on the European agenda in Brussels, also via Hamburg's Brussels office. So Hamburg has much more knowledge on the CEF funding regulations and mechanisms. This makes it easier to be in place in Brussels. A totally different example is Frankfurt, where the airport authority is participating in the corridor forum, but not the Frankfurt city administration.

It is perceived as a risk for cities is to give up autonomy to a higher level / federal level. This is a concern for cities when linking with the Federal Transport Infrastructure Plan. Hamburg has a powerful and exclusive position, as the city is also federal state, Hamburg can act more pro-active in policies compared to cities as Munich and Leipzig.

Exchange of knowledge and experiences

- Feedback loop in networking adds value to planning measures/projects and planning processes and instruments
- From interviews is concluded that lots of nodes are not aware that they are an urban node – lack of awareness of being an urban node
- Example on data issue in Bremen: Statistically (when just looking at NUTS level) there is no cargo flow between Bremen and Bremerhaven so the national level sees no issues ("stupid statistics").

Examples of measures -+also indicated via the MORO project

- For the S4 – S-Bahn line Hamburg – Bad Oldesloe there has been CEF funding by successfully demonstrating the positive influence on corridor level to the European Commission (good practice for the Vital Nodes project).
- GREAT corridor: "Green Regions with Alternative fuels for Transport", 70 fast charging stations for e-vehicles will be installed, plus 3 CNG/LNG stations on the corridor Oslo/Stockholm-Malmö-Copenhagen-Hamburg.
- An Advisory board was installed for the Sustainable Urban Mobility Plans (SUMP) but this is delayed, therefore it is now used broader for transport and even related fields. This board has no decision power, but has an advising role. Also the surrounding areas will be represented in the advisory board.

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3.4 Experiences from Gothenburg

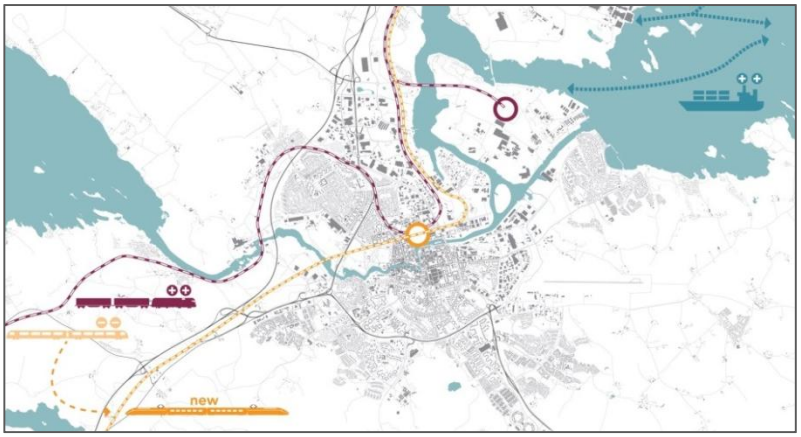
As inspiration and by sharing the experiences from the earlier Vital Nodes workshop in Gothenburg on 12 April 2018, Tomas Holmlund from the Swedish Transport Administration – Trafikverket, gave a presentation about the challenges and good practices in the urban node of Gothenburg.

Gothenburg is located on the Scandinavian-Mediterranean Corridor on the Axis Copenhagen-Oslo and the Core network for inland waterways (IWW), rail and road. It has a core sea port and core rail-road terminal. It forms a vital node for transport from Gothenburg to Stockholm and the Mälardalen region and significant freight flows between Gothenburg and the rest of Scandinavia. Gothenburg is the largest port in Scandinavia, with 6 sea / rail / inland waterways transport (IWT) terminals, direct lines to 140 destinations worldwide and access to Norway and Sweden via rail and roads and an airport. Transport flows meet in a concentrated area around the E6 and Göta älv river in the center of Gothenburg.

The Swedish city is facing a lot of growth in population and flows going on in and around Gothenburg, with the city moving more and more towards the port causing conflicting interest between growth and coexistence of the city.

Good practices

- Rivercity project Gothenburg: an inner city expansion by transforming an adjacent former port, industrial and logistics area located along the river Göta älv;
- The West Sweden Agreement investment package in infrastructure and other measures in and around Gothenburg incl. Wes Link train tunnel, Marieholm tunnel, Hisings bridge: primarily aimed at increasing the capacity and quality of the public transport system.
- A second example is the ElectriCity project on route 45 combining comfortable transport with spatial aspects and a parcel collection point. So, logistics can bring opportunities to combine functions on for example the last mile;
- The Swedish government uses a 12 year plan which is updated every 4 years. Currently the deepening of the waterway in the port and the decision to link the Eastlink from Boras to Gothenburg is included. The Eastlink high speed railway connection is somewhat comparable with the Finnish situation with the connection between Turku and Helsinki;
- Norrköping is an example of a relocation of the harbor and rail activities as inspiration and example of what happened somewhere else. With roughly 150,000 inhabitants, Norrköping is somehow comparable to the city of Turku. The railway with the cut between regional and freight transport and high speed connection might be an example of the connection that is proposed between Turku and Helsinki.



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Lessons learned

A few lessons learned and outcomes of the Vital Nodes workshop in Gothenburg:

- This meeting has been fruitful for enhancing the relation between the city of Gothenburg and the Swedish transport administration – Trafikverket. So both parties agreed on planning more meeting each other in future, to plan together and to develop a clear vision as closer local-regional cooperation can help to stimulate speaking with one voice to the national government. Focus will be on aligning plans from the city, the region, the national level and other partners;
- Competing and growing flows with infrastructure used for local, regional and (inter)national freight and passenger transport could cause bottlenecks for example a shortage of commuter rail lines results in and increase of road use in and around the city of Gothenburg;
- Freight and passenger flows on the local, regional and (inter)national level are interconnected in the city center of Gothenburg, causing a bottleneck on all levels (with a lack of peak hour capacity in rail and road infrastructure). By completing the ring road of Gothenburg the long distance flows can be separated from local flows, increasing the robustness and vulnerability of the network. Besides, this can have positive effects on livability issues in the city;
- Awareness of the role of the urban node Gothenburg in the TEN-T network;
- Logistics as added value to the quality of the city and region. Gothenburg has a few really good initiatives such as shifting the rail terminals from the city center to the port reduction the amount of heavy transports through the city center.

Follow up

As a follow-up on the Vital Nodes workshop in Gothenburg a second meeting in autumn 2018 has been planned with the stakeholders and the results from the 'first' workshop as a starting point. In addition, Vital Nodes will be present in the Volvo Research and Educational Foundation – Urban Freight Conference in Gothenburg in October 2018.

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4 Challenges

The conclusion was drawn that Hamburg is quite ahead on integrating policy measures on local, regional and corridor level in comparison to other European urban nodes. Nevertheless, of the City of Hamburg is also dealing with specific challenges which have a reasonable impact on the TEN-T core network corridors.

4.1 Vulnerability of the network

As the port of Hamburg is located close to the city, it is perceived as inner-city hub. Freight transport is using the same infrastructure as urban transport and passenger flows. International and national freight flows are competing with local traffic. Besides, 80 percent of the traffic from the port areas goes to the south which makes the infrastructure to the south being heavily used and therefore vulnerable. This vulnerability issue applies for the Elbe river crossings as well which is on the street at the moment possible via the A7 highway and motorway tunnel, the federal highway B75 and the Freihafen bridge. The A7 constitutes quite some livability problems (see next chapter) as there is no by-pass.
By rail the entrance from the south is quite vulnerable as well (one railroad) and there are capacity restrictions on two rail corridors (from Hamburg to Hanover and from Bremen to Hamburg-Harburg) and on the Hamburg railway-node inside.

These local vulnerability aspects are examples of bottlenecks on national and corridor level. For that reason, the conclusion is drawn that putting forward bottlenecks on lower scale levels might be as important as addressing issues on the corridors itself. Bottlenecks are often located within the urban node itself. In relation to this, the comparison is made with the situation in Gothenburg where CEF funding has been received for the 'local' inner city project of the cable car connection.

Better use of existing infrastructure, e.g. via ITS and the European Rail Traffic Management System (ERTMS) on S-Bahn tracks. Deutsche Bahn, Germany's biggest railway company, has made a 'Knotenstudie' (study on nodes) on rail intersections in which they have been assessing the impact of different measures.
At this moment, rail capacity restrictions occur due to mixing passenger and freight trains to the south.

Hamburg is looking for solutions to help an increase of the amount of road traffic via the Elbe bridges, There is no possibility to extend these bridges (the major bridge is consisting of 8 lanes). Other solutions are being discussed:

- The 'Süd Anbindung' – a project that is under discussion for several years.
- The renewal of the Köhlbrandbrücke (with an estimated investment of 200 million Euro).
- Shifting modes in order to get more efficient and sustainable urban transport – EU support in this would be helpful – road space in the city is limited, roads cannot be expanded in the city, so there is need to deal with the infrastructure.
- It is possible to use CEF funding for improving public transport. For example renewing the central station or improving connections to it. Fear is that the biggest proposals will absorb most of the CEF budget.

Implementing a passenger ferry across the Elbe might be an additional means of transport but in terms of capacity this ferry cannot replace the S-Bahn and/or metro.

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4.2 Environmental impact

Air and noise pollution and their environmental impact are huge problems in Germany. In Hamburg especially a zone on the north banks of the river Elbe is highly polluted, close to the port.

In (the surroundings of) Hamburg, lots of measures are implemented to protect the environment from noise and air pollution. An example is the A7 motorway expansion of which 3,5 km will be covered with parks and housing on the surface. Also a discussion is taking place in relation to the A26 motorway expansion (south of the port area) where the construction of a tunnel is proposed in order to protect the surroundings.

A comparable situation applies to the airport which is close to the city and causes complains from the inhabitants living nearby – disturbance of sleep by having lots of flights arriving late in the evening.

Bordering the HafenCity development area is the Grasbrook redevelopment area (south of the Elbe) where noise problems occur.

The environmental challenges show that there are nodes within the urban node having specific challenges. This underpins the relevance to look to challenges on all geographical levels.

4.3 Challenge of space – capacity restrictions

Physical constrains and barriers play a big role for developments. This causes difficulties in finding enough space for inner city distribution centers. As limited amount of space is available the allocation of road space becomes more and more challenging. Innovative solutions are to be found to accommodate the growing freight and passenger flows with more focus on efficiency instead of new infrastructure.

Future urban (re)development of the Grasbrook area on the south side of the Elbe (opposite the HafenCity area) will lead to:

- More pressure on the Elbe bridges
- Noise problems from the port

Another example is the presence of only one by-pass motorway. In the case of the current roadworks this causes 20 kilometer of traffic congestion and people starting to use the route through the city center because there is a lack of alternatives.

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5 Themes of challenges

5.1 Governance on functional urban area level

In order to tackle the involvement of inhabitants, the coordination and cooperation along different areas of responsibility become more and more important. The Metropolitan Region is institutionalized (four federal states and districts + cities) – with a budget. Maintaining a social license to operate and a continuation thereof could be relevant and important for governmental organizations.

Good practice examples from other urban nodes which may be inspiring for the urban node Hamburg.

Involvement of inhabitants – Antwerp example

The Anwerp case shows the 'move' from a sectoral infrastructure-based project scope towards a broader approach combining infrastructure and transport, spatial planning and environmental issues. For citizens in Antwerp liveability is a major topic and the result of a long-term process is the plan to tunnel the existing ring road. The role of an external expert ("intendant", a sort of mediator) has been essential to bring the large amount of parties together for a constructive dialogue.

The decision was made to organise a design competition with 'local' support as one of the main criteria. A specific pilot project in each segment and design strategies and principles that work on the overall ring structure for a short term scenario and long term scenario with complete covering of the ring road. In total the competition was divided in 6 segments on which 6 teams worked during 9 months. Each design team consulted experts and locals.

Connecting to the TEN-T level (EGTC)

An example in which the expectations are managed in an early stage in order to act in advance toward the future is the connection with the TEN-T level (suggestion by the EGTC). With the STRING project in Scandinavia, this organization is also active on European level and setting up new projects like the GREAT project (which originates from the STRING project).

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5.2 Spatial restrictions

Due to the urban growth, the amount of space available for the (extension of) networks have clear capacity restrictions. In order to cope with this limitation of space more investments are needed to put the road in a tunnel and in that way use the space on the ground for housing without the problem of noise and/or air pollution. Therefore, it might be worth preserving some brownfields for future industrial use, as has been done in the City of Vienna.

The approach in Antwerp might be inspiring for the urban node Hamburg, especially concerning the involvement of inhabitants. “The Antwerp experience“ offers an integrated infrastructure design as a catalyst for sustainable urban development. Besides this case tells a story about rethinking infrastructure, seeing mobility challenges as a way to tackle other urban issues and using design as a tool to incorporate dreams and expectations and bring different actors around one table.

Recently the city of Rotterdam analyzed the characteristics of freight transport within the city by initializing the impact on emissions. This analysis learned that the biggest amount of emissions in Rotterdam is caused by construction works / building logistics. The city is now implementing dedicated measures to this target group.

5.3 Cycling

Some cities want to have the cycling lanes separated or on the streets (difference) in regulations per city (and region) which makes it difficult for people to understand and behave accordingly. The one city wants to separate the cycle lanes from the cars, while others are combining them. Lately some fatal accidents happened in Hamburg – cyclists ran over by trucks. So the urgency is there to push the federal government to influence the EU to have trucks use IT systems obligatory in order to keep an eye on pedestrians and cyclists, but also use the TEN-T network as much as possible – bypassing the cities instead of crossing the (inner) cities.

5.4 Network of networks – knowledge exchange

Within the discussion the non-sectoral approach is valued as really useful by the participants. The different fields coming together, not only infrastructural planning, but also spatial planning seems to be of real added value in the discussion on nodal challenges.

For that reason, amongst others, it is thought to be really useful to have a network that adopts the existing networks because there are so many that due to capacity constrains it is impossible to keep track on all of them. In order to continue the knowledge exchange it is important to keep in mind that often people tend to be just willing to share the knowledge or hear the knowledge on specific topics they are working on. Besides the competition point of view might have influence on an actual knowledge.

First of all by the possibility to join other urban ode workshop(s) in the coming months. But also by becoming/being part of the Tier 2 workshops in which combinations/groupings of urban nodes will be made to broaden the scope and deployment but also to exchange knowledge hear and learn from each other. Starting maybe with national connections, but also internationally while having similar challenges.

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5.5 Findings on CEF funding

It is about other forms of criteria, not only about transport criteria. The threshold is a problem.
Now CEF is investing in highways between the cities, but there is not an equal amount of investment budget available to cope with the increasing transport within the cities. Besides the comparability of different situations (caused by the available data) is not always perceived as a fair comparison.

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6 Lessons learned

Besides the challenges that were discussed during the Vital Nodes workshop in the urban node Hamburg, a number of related lessons can be drawn from the discussion.

6.1 The role of and effect on Europe

Coherent EU-policy on air pollution

The EU needs to develop a coherent policy on air pollution

- For example cabs need to use alternative fuels or electric cars.
- Electricity on the shore for ships costs more than on the ships – due to extra fee for electricity producer. The EU should make alternative energy more attractive. Now even producing sustainable energy means paying extra tax. Other port cities should support this change of policy / tax.
- Tackle shipping emission on EU level

Funding mechanisms

- Wish of the stakeholders to keep up the funding level or increasing this, no private investments are expected;
- Blending call should not replace other funding we have now;
- Willingness to look for other financial/funding mechanisms and researching the needs to change the current funding system;
- For small projects funding problems are automatically experienced due to the high amounts taken by the bigger projects.

Increasing the relation between the core-network and the inner city infrastructure

Network development on a transnational and intraregional level cannot be separated from the local and inner city level. Major investments in road infrastructure at the higher scale levels might well lead to more traffic and congestion in the city. This is the challenge in many urban nodes.

Data comparability

The importance of data comparability is stressed in order to make fair comparisons. As an example in Berlin a proposal for funding was rejected because the TEN-T ring road (detour) was not part of the TEN-T network as drawn on their maps while it actually functioned as such. Decision making needs a clear set of criteria and data taking into account the right numbers.

Relevance of a network of networks

As a contribution to future developments and knowledge exchange a network of networks is perceived as really valuable. Platforms as EUROCITIES provide lots of information on the CEF funding regulations as well. So this is a possibility as being a network of cities. The integration of different themes (e.g. infra, logistics and spatial planning) could be of real additional value.

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Attachments

1. Fingerprint urban node Hamburg (info graphic)
2. Map corridor level
3. Map regional / urban node level
4. Map city level
5. List of participants Hamburg workshop
6. Programme of the Hamburg workshop

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1. Fingerprint urban node Hamburg (info graphic)

ECORYS

Rijkswaterstaat
Ministry of Infrastructure and Water Management

VITAL NODES

Hamburg, Germany — **Fingerprints Vital Nodes - Facts and Figures**

A) General facts and figures | B) Corridor | C) Regional (NUTS3) and functional area | D) City of Hamburg | E) Capacity | F) Challenges

	City of Hamburg baseyear 2016	trend	region (NUTS 3 = Metropolitan Region of Hamburg) baseyear 2016	trend
city area (km2)	755	=	28.338	=
population City:	1.787.408	^	5.198.550	^
population density City:	2.367	^	183,4	^
GDP (bn €)	108.511	^	202.245	^
GDP per capita (bn €)	60.709	^	38.904	^

increase ^ neutral = decline v

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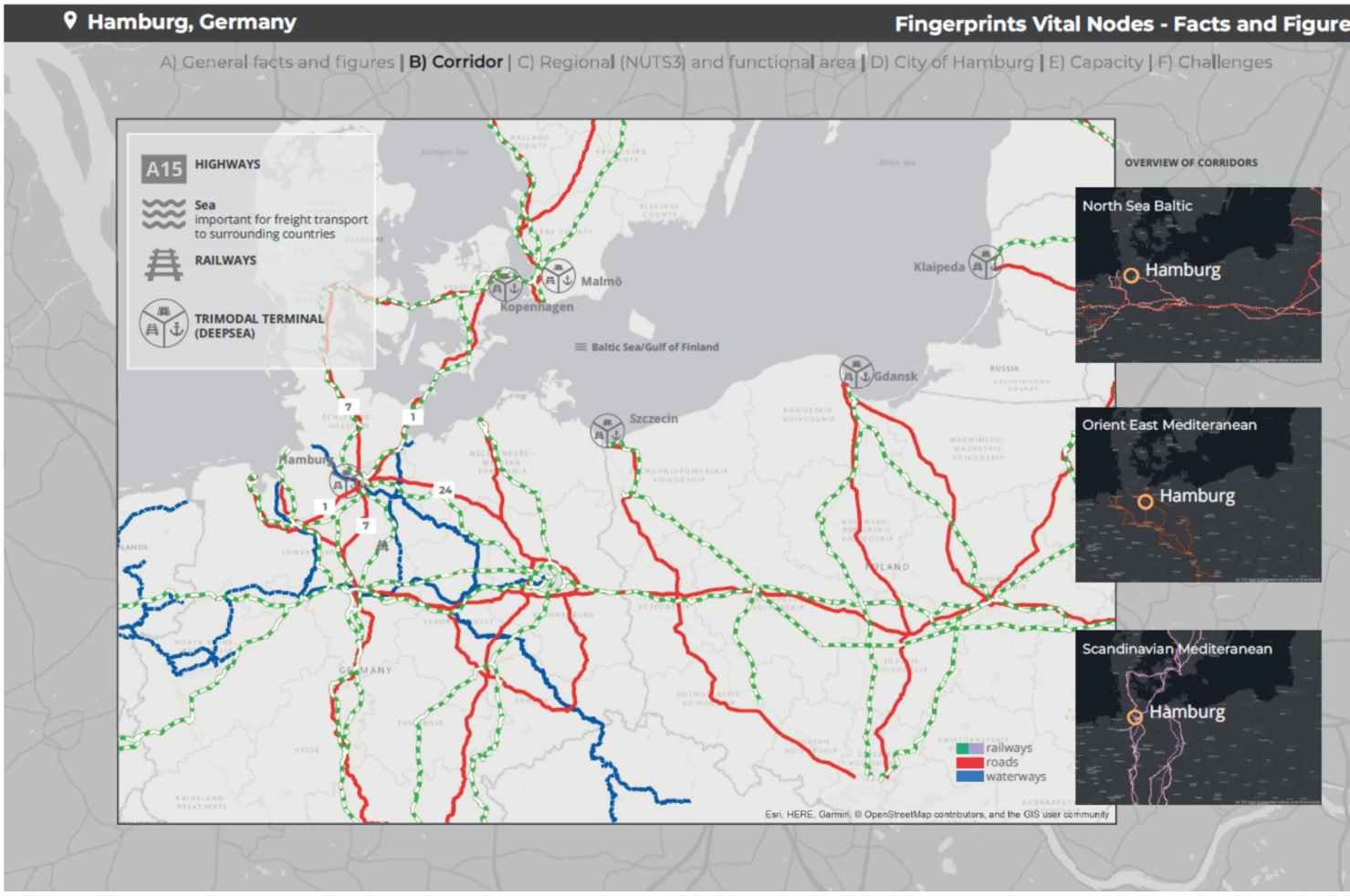
Rijkswaterstaat
Ministry of Infrastructure and Water Management

VITAL NODES



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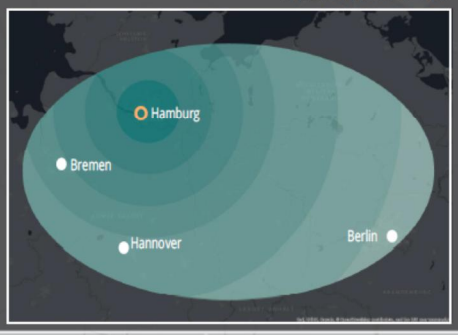
IMPORTANT CHARACTERISTICS:

Hamburg is the 2nd largest city of Germany and core of the Region of Hamburg. And the 3rd largest port in Europe with many intermodal hubs and 40 million ton per year transported to and from the port by rail. Hamburg is Europe's biggest railway port for maritime transport. The urban node Hamburg is located on three core network corridors: Scandinavian-Mediterranean, Orient/Eastern Mediterranean and North Sea Baltic. The node is an important railway junction on the route to Scandinavia and connects 'Northern' Europe with for example Italy.

The metropolitan region of Hamburg forms the functional urban area for freight of the urban node Hamburg. Key economic sectors are finance, commerce, logistics and indus try, while the area is a hub for science, research and education with several universities and institutions.

INDICATIVE FUA



FREIGHT INFRASTRUCTURE
baseyear 2016

	Number	ha	mton	TEU
Road-Rail terminal	1 =	18	na	370.000
Air terminal	1 =	2	0,15	na
Trimodal terminal (deepsea)	19 =	na	na	5,3 mil

increase ^ neutral = decline v

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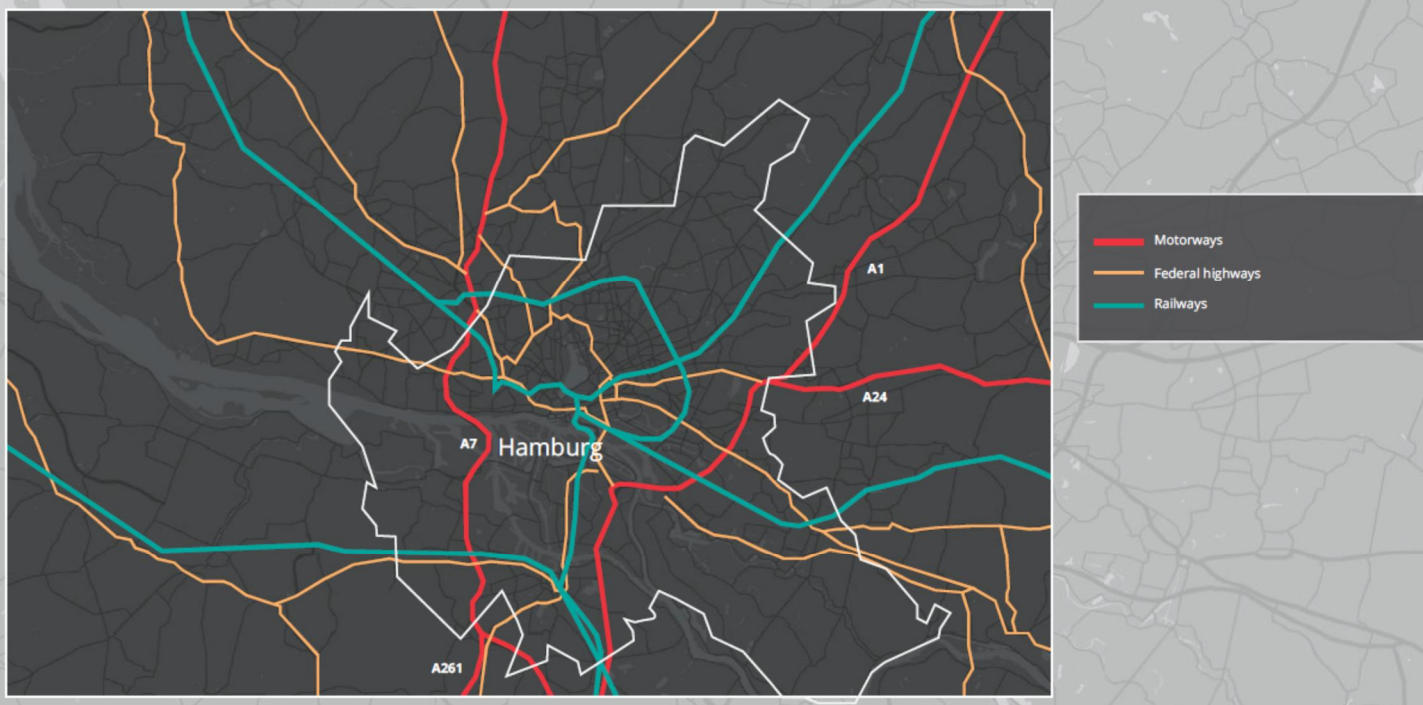

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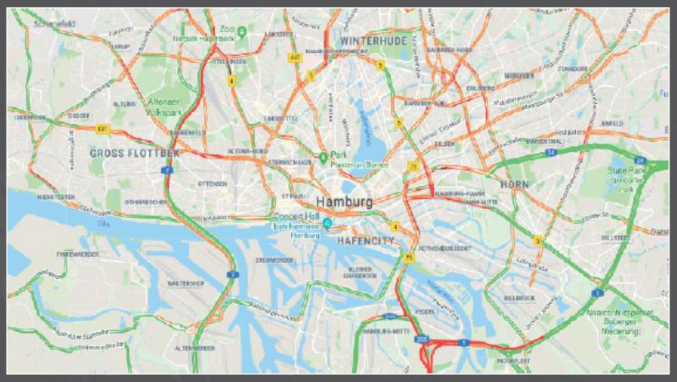
CAPACITY RAIL
No major capacity issues observed

CAPACITY WATER
With regard to the hinterland services, it is a political goal to increase the inland waterway share on the modal split.
The extension of the Nord-Ostsee Kanal is important for feeder transport into the Baltic Sea Region

CAPACITY AVIATION
No major capacity issues observed

CAPACITY ROAD
Average intensity road on evening peak:



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VITAL NODES

Hamburg, Germany

Fingerprints Vital Nodes - Facts and Figures

A) General facts and figures | B) Corridor | C) Regional (NUTS3) and functional area | D) City of Hamburg | E) Capacity | **F) Challenges**

CHALLENGES

- Vulnerability of the network
- Environmental impact
- Challenge of space – capacity restrictions
- International port transshipment competition
- Depth of waterways at destination ports (tidal challenges)

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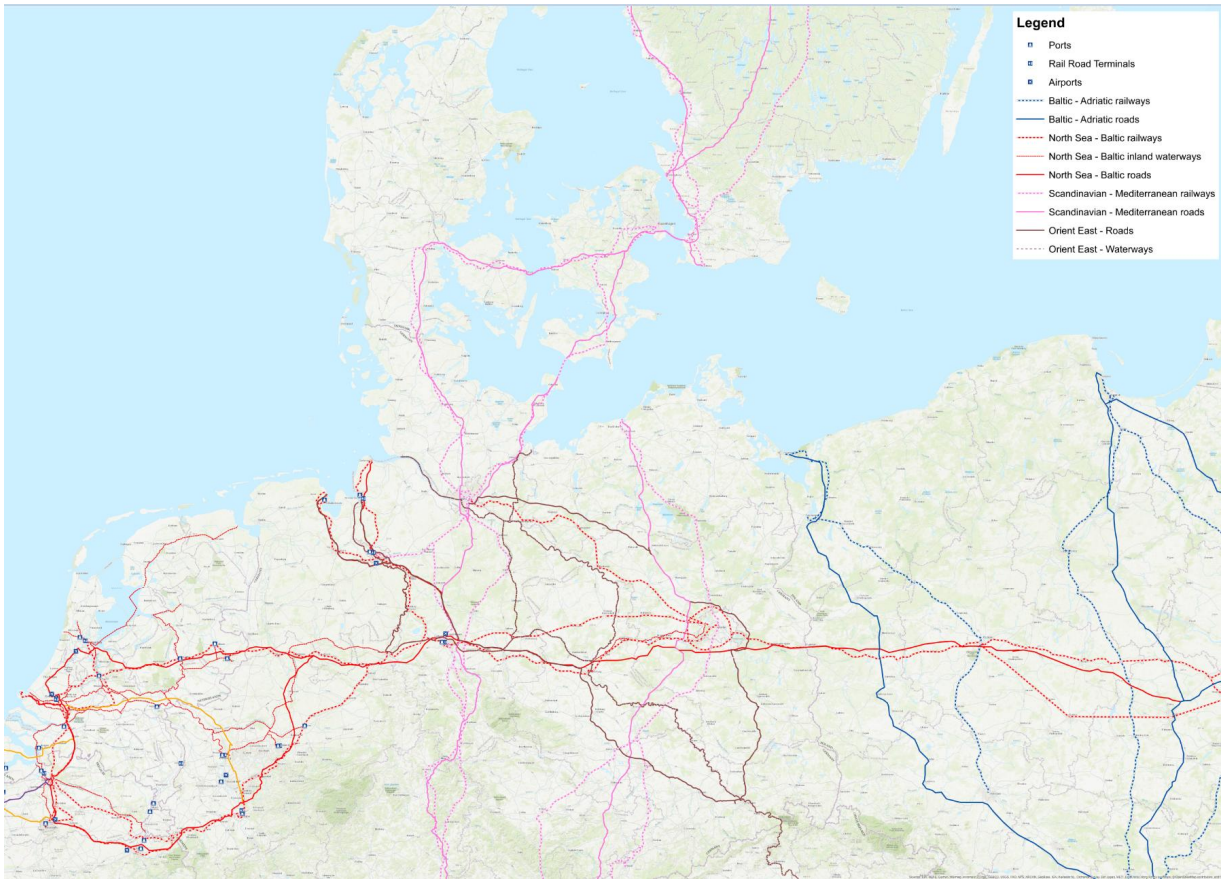
2. Map corridor level



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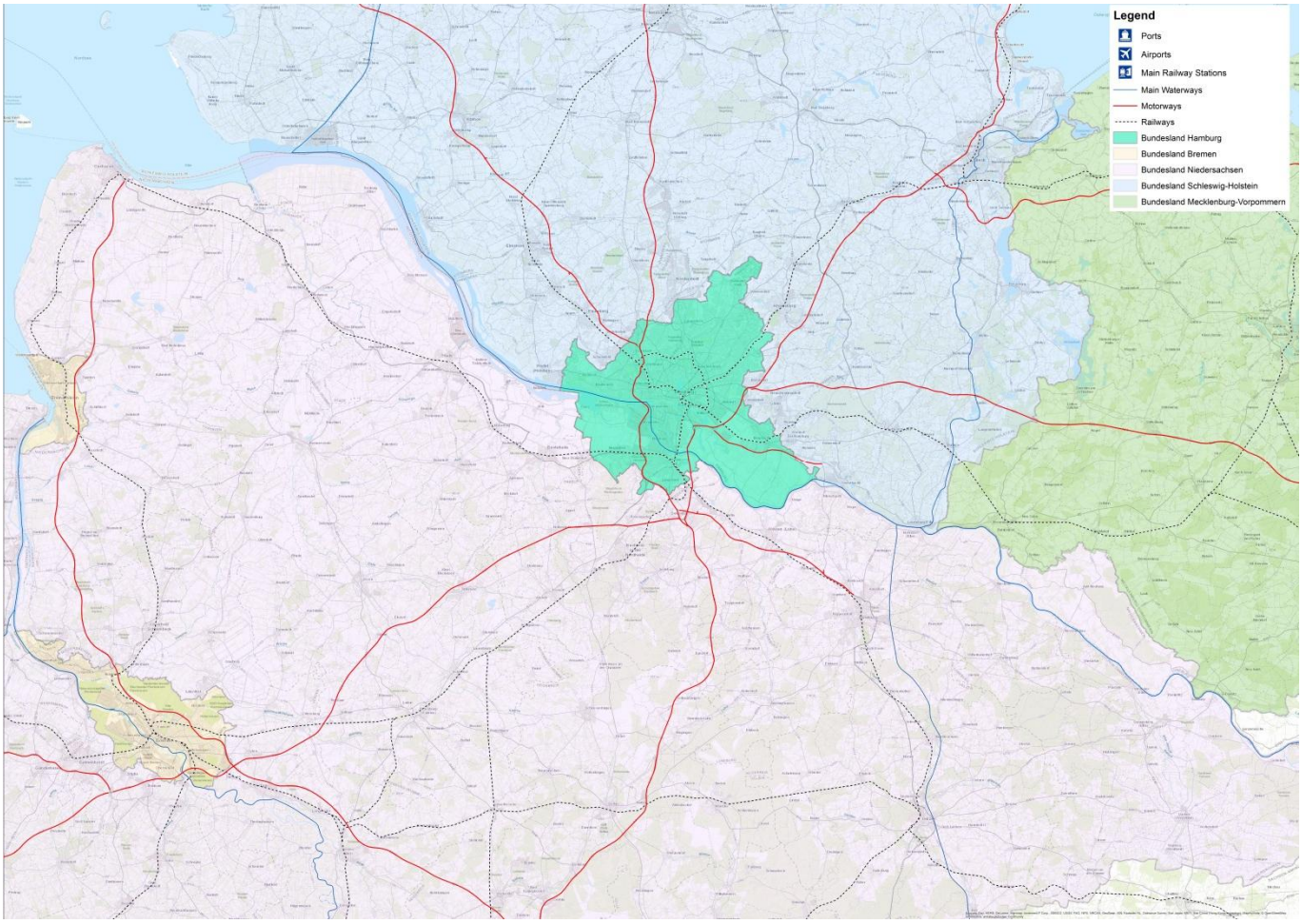
3. Map regional/urban node level



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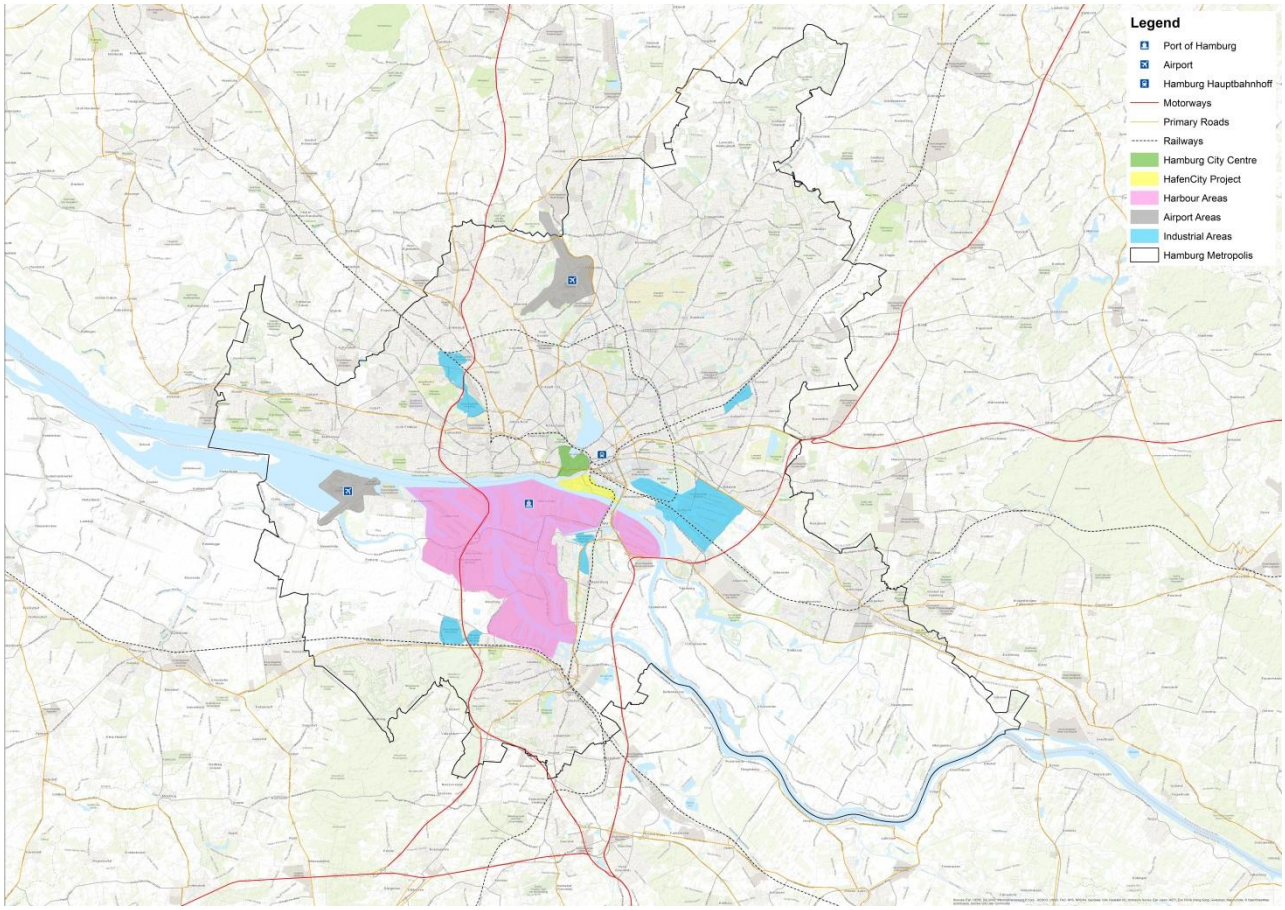
4. Map city level



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5. List of participants Hamburg workshop

Name	*Organisation*
Dr.-Ing. Susanne Böhler	Rupprecht Consult – Forschung & Beratung GmbH
Mr. Stefan Breitenbach	Hafen Hamburg Marketing (HHM) – Leiter Projektleitung
Mr. Tomas Holmlund	Trafikverket – Swedish Transport Administration
Mr. Oliver Mau	Metropolregion Hamburg (MRH) – Verkehr, Grundsatzfragen, Statistik und stellv. Leitung
Mr. Prof. Dr. Jan Ninnemann	HSBA Hamburg School of Business Administration – Studiengangsleister Logistics Management
Mr. Dr. Sicco Rah	Freie und Hansestadt Hamburg, Behörde für Wirtschaft, Verkehr und Innovation (BWVI) – Verkehrspolitik
Mr. Dr. -Ing. Carsten Schürmann	Transport Consulting Partners (TCP) – MORO Project
Mrs. Dana Vornhagen	Freie und Hansestadt Hamburg, Behörde für Wirtschaft, Verkehr und Innovation (BWVI) – Verkehrspolitik
Mrs. Dr. Tina Wagner	Freie und Hansestadt Hamburg, Behörde für Wirtschaft, Verkehr und Innovation (BWVI) - Verkehrsentwicklung
Mr. Daniel Wolf	Deutsche Bahn AG (DB AG)
Vital Nodes Organisation	
Mrs. Britt Doornekamp	Ecorys
Mr. Kevin van der Linden	Rijkswaterstaat
Mr. Raymond Linssen	Rijkswaterstaat
Mr. Ricardo Poppeliers	Ecorys

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6. Programme of the Hamburg workshop

09.00 – 09.10	Welcome
09.10 – 09.30	***Moderator: Mrs. Susanne Böhler, Rupprecht Consult - Forschung & Beratung GmbH*** Start, welcome and introduction round - Welcome by ***Mrs. Dana Vornhagen***, *City of Hamburg* - Short introduction to the Vital Nodes project, including goal of the Vital Nodes project and goal of this workshop ***Mr. Raymond Linssen***, *Rijkswaterstaat*
09.30 – 09.45	Presentation "Fingerprint Hamburg" – by ***Mrs. Britt Doornekamp***, *Ecorys* - Facts and Figures - Challenges and barriers
09:45 – 10:00	Survey on German urban nodes (MORO project) by ***Mr. Carsten Schürmann***, *TCP International*
10.00 – 10.15	Pitches on perspectives from the city and harbor by ***Mr. Sicco Rah***, *City of Hamburg (Transport policy)* and ***Mr. Stefan Breitenbach***, *Port of Hamburg*
10.15 – 10.30	Break
10.30 – 11.00	Working on Hamburg's challenges - Interactive discussion on the challenges of the urban node Hamburg
11:00 – 11:15	The Gothenburg experiences by ***Mr. Tomas Holmlund***, *Trafikverket*
11.15 – 12.00	Working on Hamburg's challenges and solutions, drivers & barriers and possible impacts - Interactive discussion towards (directions of) solutions for the urban node Hamburg
12.00 – 12.45	Lunch at Bürgermeistersaal
12.45– 13.30	Working on Hamburg's challenges and solutions, drivers & barriers and possible impacts - Interactive discussion on solutions, drivers & barriers and possible impacts
13.30– 14.00	What is the added value for Europe, what do we need and what can we recommend? - Interactive discussion on "Integrating urban node Hamburg in the TEN-T network"
14.00 – 14.15	Wrap up by the moderator and follow-up by ***Mr. Kevin van der Linden***, *Rijkswaterstaat*
14.15 – 15.00	Informal networking

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