TENTacle

Preparing the transport industry for the Fehmarnbelt Fixed Link

EU STRATEGY FOR THE BALTIC SEA REGION FLAGSHIP

Interreg Baltic Sea Region

EUROPEAN UNION

EUROPEAN REGIONAL DEVELOPMENT FUND

Content

Dear readers,

Once completed, the Fehmarnbelt Fixed Link (FBFL) will be an important part of the Scandinavian-Mediterranean TEN-T core network corridor (CNC). It is envisaged that the planned tunnel for road and rail transport reduces the transit time between Rødby on Lolland (DK) and Puttgarden on Fehmarn (DE) to seven minutes by train and ten minutes by car.

The new infrastructure will have an impact on the transport and logistics environment in northern Germany, southern Denmark and southern Sweden. But the expected scale of changes in the international supply chains related to the FBFL is still difficult to asses. This makes it challenging for some stakeholders to respond to modal shift potentials and to adjust their business models or regional policies to benefit from the new infrastructure.

The Fehmarnbelt Pilot Case of the Interreg Baltic Sea Region (BSR) Project TENTacle aims to encourage business stakeholders and regional planners to jointly develop long-term positioning strategies to prepare for the new tunnel. It is one of seven regional showcases in the TENTacle project. Each of these cases works on how to better connect a specific region in the BSR with the TEN-T corridors.

The Pilot Case is comprised of Port of Hamburg Marketing, the Institute of Shipping Economics and Logistics, Rostock Port and Guldborgsund Municipality. The partners compiled a guideline on how the construction of the tunnel will change transport structures and how the changes can act as a stimulus for regional development in the aforementioned countries. The guideline includes best-practice examples and place-based measures addressing development actions in areas which might see negative flow displacement effects.

This brochure will give you an insight into the work of the individual Pilot Case Partners. The full Guidance Paper “How to use the Fehmarnbelt Fixed Link as impulse for regional growth” can be downloaded on the TENTacle website as well as the other reports.

I wish you an enjoyable read and trust that you will find some fresh insights.

With best regards,

Inga Gurries
Port of Hamburg Marketing
Fehmarnbelt Pilot Case Leader

For more information
please scan the QR code.

TENTacle and the Fehmarnbelt Pilot Case

The TEN-T CNCs is a new instrument of the EU transport policy, aimed to improve mobility, intermodality and interoperability on the major transport axes across Europe. The BSR is intersected by three CNCs being Scandinavian-Mediterranean, North Sea-Baltic and Baltic-Adriatic.

A broad range of stakeholders are involved in a joint action to remove physical, technical, operational and administrative bottlenecks along these corridors by the year 2030.

Implementation of the three CNCs has a large but untapped potential to stimulate positive effects in the BSR beyond the pure transport sector and beyond the immediate geographical areas they cross.

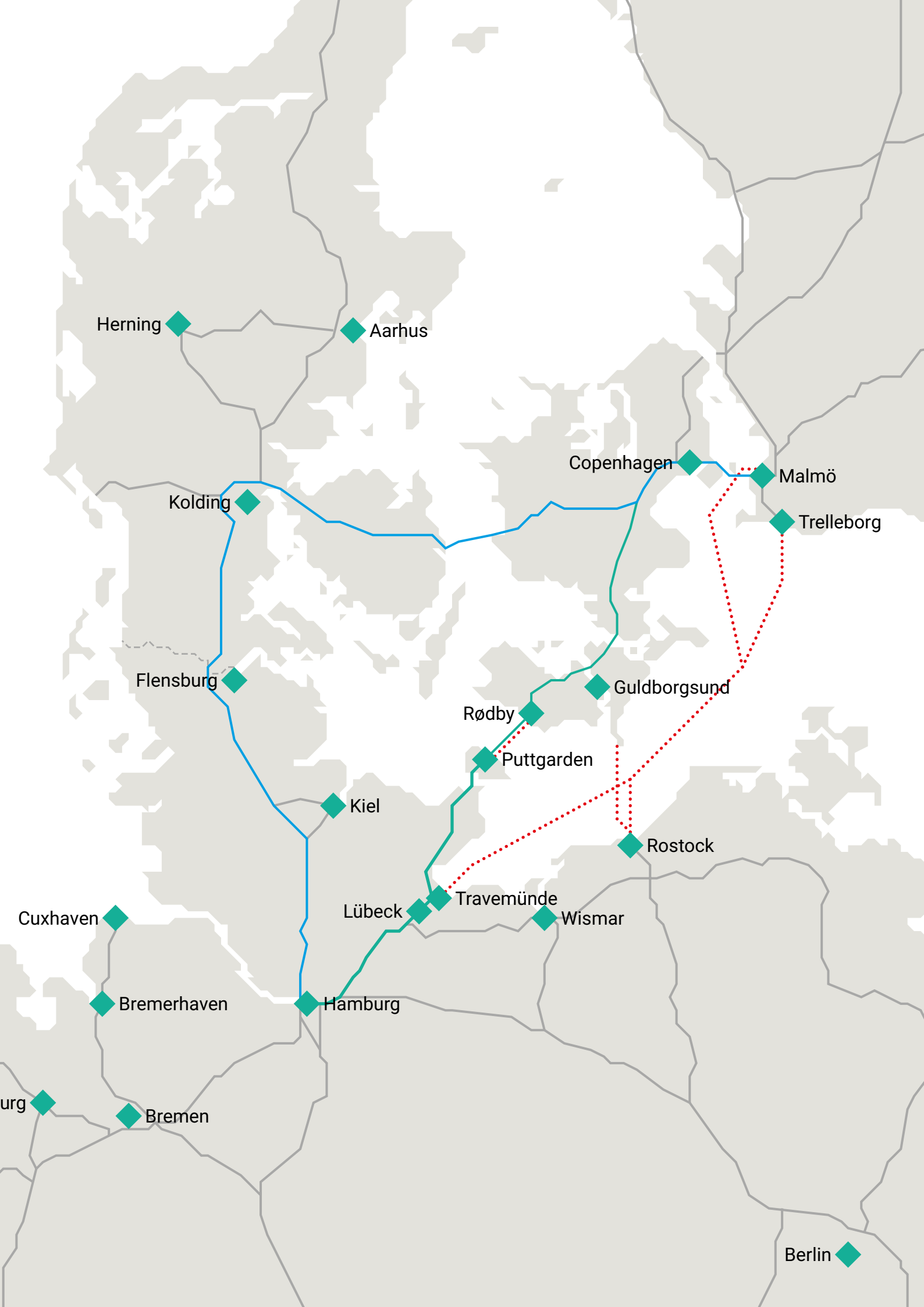
Opening it up for a broader group of stakeholders and a wider geographical area requires tackling major capacity challenges. These are, for example, related with a low awareness and deficient understanding of how the CNC implementation can help improve accessibility and connectivity challenges in specific territories. That is why the TENTacle project aims at:

- Improving stakeholder capacity to reap benefits of the core network corridors implementation for the prosperity, sustainable growth and territorial cohesion in the BSR.

The Pilot Case looked at the effects of the FBFL investment for the routing of freight flows and for the business models of the transport and logistics industries.

The project partners have conducted specialised studies and acquired in-depth insight of both the market and public policy perceptions on the logistics situations caused in different parts of the impact area of the future tunnel – the project partners involved aim to:

- Mobilise business and public players to develop a long-term positioning strategy to prepare for the Fehmarnbelt fixed link and to deploy the related growth potential in the impact area.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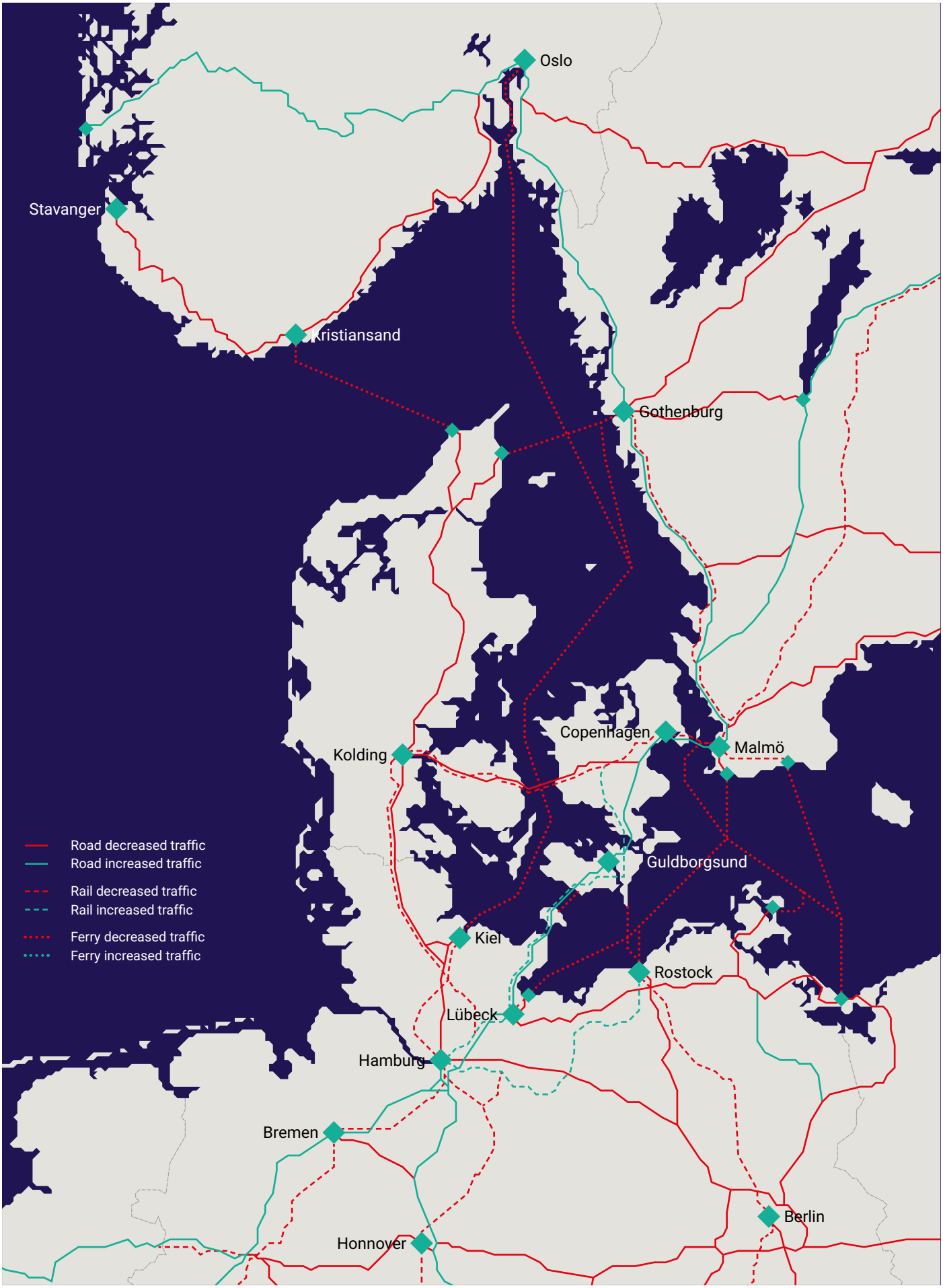
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Ferry increased traffic

Impacts of the Fehmarnbelt Fixed Link on transport flows till 2035

The FBFL will affect all transport modes that are relevant for crossing the straits that separate Scandinavia from central continental Europe. Cargo traffic on the ferry links and across the Great Belt bridge is to a large part international traffic between the Scandinavian countries and central Europe.

In the traffic modelling performed by the Institute of Shipping Economics and Logistics the future price of the tunnel is the decisive variable, particularly for the very cost-sensitive cargo sector. Therefore, the actual amplitude of shifts cannot yet be forecast precisely. However, the route choice calculations show which transport routes will see an increase of traffic and which ones will see a decrease. This helps identifying the changing transport flows in the hinterland and hence the potential impact in different regions and modes of transport.

The most striking impact of the traffic modelling is the traffic shift of rail traffic from the Jutland route to the FBFL. The regions along the current rail corridor between Copenhagen, Kolding and Hamburg will see international traffic (much of it between Sweden and Germany) disappear from their rail tracks while the regions on the Copenhagen-Falster-FBFL-Hamburg link will face increasing rail traffic.

The second larger shift affects the existing ferry services. It is not limited to the Puttgarden-Rødby ferry link, but also concerns the other ferry services between German Baltic Sea ports on the one hand and Denmark and Sweden on the other hand. To a lesser extent, services between Szczecin and Sweden are also going to be affected.

The shifts take place because for some forwarders and some origin/destination relations, using the FBFL will be more attractive than ferries, so it will be their preferred choice. The higher the cost and time advantage, the more forwarders will shift their traffic to the new link. Whether or not it is more attractive depends on the route, i.e. on the start and end of the transport chain. Except for truck traffic shifted from the Puttgarden–Rødby link to the tunnel, the traffic shifts also imply a shift of traffic in the hinterland both to the North and to the South.

Options for regional planners facing transport volumes changes

The opening of the FBFL will significantly alter transport flows in the south-western Baltic Sea. Regional planners often face external, sometimes disruptive changes in demand. Traffic will increase in some regions and decrease in others. A traffic increase may be positive, e.g. when a port sees its traffic and utilization of infrastructure and equipment grow. However, higher traffic volumes may also have a negative impact. Increasing transit rail traffic, for example, leads to more noise without any positive economic impact for the region.

Therefore, regional planners should anticipate the future realignment of traffic flows and develop strategies to mitigate negative impacts and/or realise new potentials.

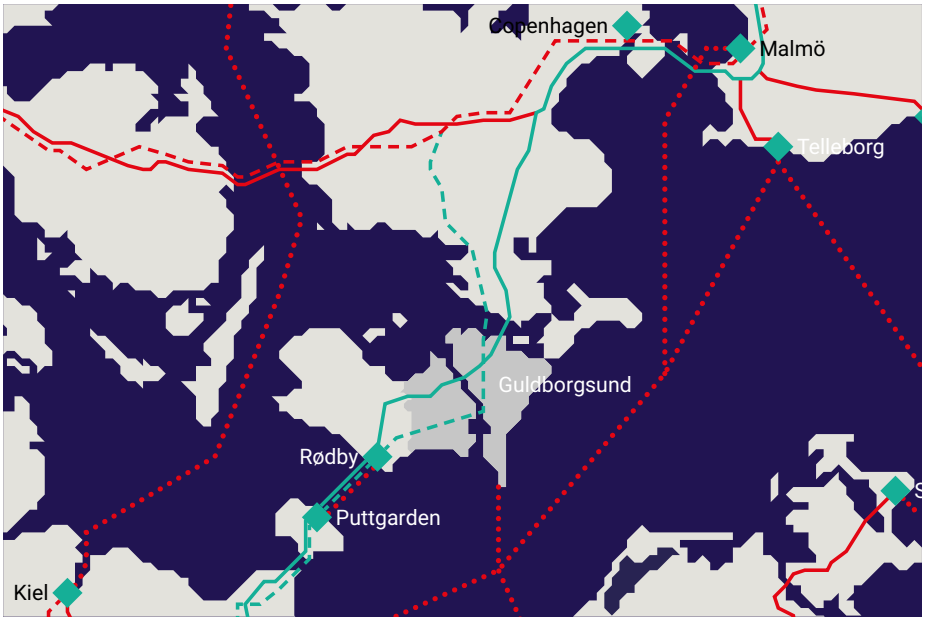
Strategic response matrix

	Strategies to mitigate negative impacts for stakeholders	**Strategies to realize gains/benefits for stakeholders**
Reduced traffic on existing links as a result of the FBFL	Subsidizing traffic infrastructure/ operations which are vital for intra-EU supply chains and passenger traffic in order to maintain critical utilization thresholds.	Redeveloping unneeded traffic infrastructure into residential zones/reaping environmental benefits where traffic can be reduced.
Increased traffic on existing links as a result of the FBFL	Pre-emptive measures to identify future bottlenecks in the traffic infrastructure/provide easy access to funding to measures to shield against noise or pollution on heavily utilized traffic links.	Establishment of logistics parks where new traffic volumes will align/seizing opportunities to bundle traffic using new intermodal connections to shift cargoes from road to rail

Regions on the Copenhagen-Hamburg axis will witness the largest traffic increase while regions on the Great Belt route and around the existing ferry links will experience the largest traffic decrease.

Guldborgsund Municipality

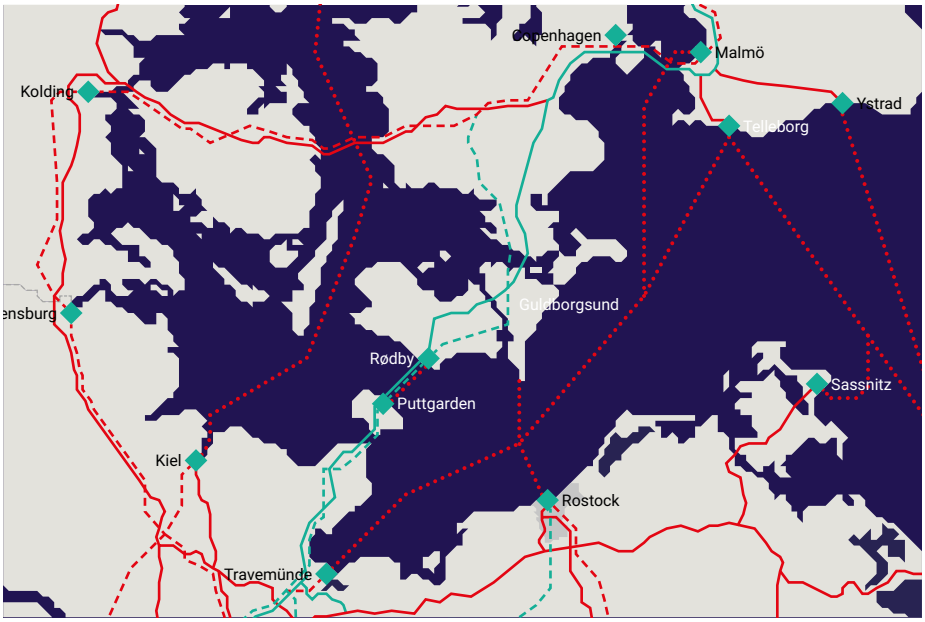
The rail and truck traffic flows between Copenhagen and the Öresund bridge and Central Europe pass through Guldborgsund municipality. In terms of volume, the most important change will be a strong increase in rail freight traffic transiting the municipality on its way to the tunnel. Similarly, traffic on the E 47 passing through the Northern half of the municipality will increase due to the attraction of additional traffic flows after the opening.



Rostock

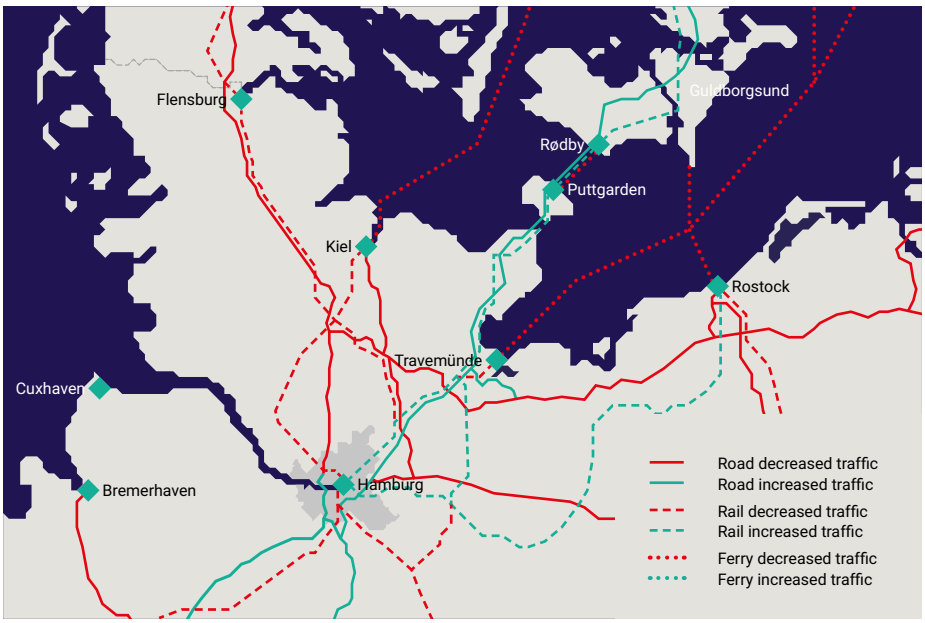
The port of Rostock is connected to Denmark and Sweden with several ferry links. The traffic – and particularly the intermodal volume – generates value added in the port so a reduction of volumes will have a negative economic impact on the region.

Once the FBFL is operational, part of Rostock's ferry cargo will be re-routed. The port therefore commissioned studies on the potential of certain cargo segments that may compensate the shift of traffic away from the port.



Hamburg

Hamburg is at the crossroads of the "old" and "new" land routes, namely the route over the Great Belt and the route via the Fehmarnbelt. Accordingly, while the volume of flows transiting the city state will not change significantly, the geography of flows will. Direct rail traffic between eastern Denmark and Sweden on the one hand and central Europe on the other will come in from Lübeck now instead of Neumünster. The same is true for road traffic, but the shifts are much less pronounced because road traffic is already predominantly using the Puttgarden–Rødby links or other ferries instead of the Great Belt bridge.



The new FBFL will change the traffic flows in a remarkable extent at the expenses of well established ferry links. But it has to be noted here that the volume shift depends largely on the pricing of the tunnel and the strategies of the ferry and ro-ro operators, particularly for accompanied traffic. Intermodal traffic will be less price-sensitive as long as it relates to Rostock's consolidation function.

Preparing Rostock Port for future impacts of the Fehmarnbelt Fixed Link

- Develop a reliable logistics hub as an alternative transport chain to pure landbased transport and future fixed links
- Develop business strategies according to existing customer needs to keep a strong and trustworthy business
- Be ready for future challenges and opportunities
- Invest in high-capacity rail and road infrastructures

Rostock Port is committed to the development and support of logistics chains from northern Europe to central Europe. Their participation in the project focused on the identification of risks and opportunities resulting from the construction of the FBFL. Therefore, Rostock Port conducted three studies on the port's core cargo groups – grain, steel/metal and pulp/paper.

The first study concluded that the opening of the FBFL will not lead to substantially decreased agrarian quantities at Rostock Port. There will be changes in logistics chains, which need to be considered in future business plans. The tunnel will create a further high-capacity land route between central Europe and southern Sweden for road and rail transport in competition to existing land, sea and combined routes. Import market stakeholders from the agriculture sector and Rostock Port work together to jointly develop the port into an important hub for grain and other agriculture goods. Growing volumes via Rostock in the last ten years confirm this decision.

Northern European countries are exporting and importing steel and metal products from/to central Europe. Although the FBFL is going to create a new land-route for metal transport, the second report shows that due to the characteristics of the metal trade, ports in the southern Baltic Sea are generally speaking in a good position to become transshipment centers for the nordic metal production industries.

More than 20 million tonnes of pulp and paper are exported yearly from production facilities in Sweden and Finland to consumer markets in central Europe. The majority share of those volumes are going on dedicated RoRo-vessels via German Baltic Sea ports such as Rostock.

After the opening of the FBFL, railways using the fixed link will increase their market share in the export of Swedish forest products from the current level of around 25 % to roughly 30 %. The shift is expected to take place almost exclusively by changing to combined transport instead of direct road transport and consequently also at the expenses of ferry transport. Ferry and port operators in the Baltic Sea have little chance of securing their current transport shares. However, there are business opportunities to preserve the status quo, especially in the cargo segment of forest product exports from southern Sweden to central Europe.

Therefore, Rostock Port permanently looks at the market to identify changed customers needs and works to adapt its infrastructure and processes as fast as possible. This includes permanent optimisation of handling and storage facilities – also within the port area – to reduce waiting and handling times. Digitalized processes and real-time data transfers directly with the customer's information system are an absolute necessity for a multimodal hub eqquipped for various cargo groups like Rostock Port.

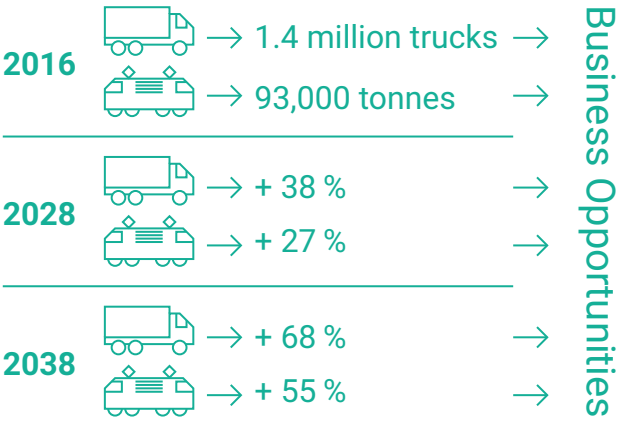
Developing Business Park Falster

Future location of Business Park Falster

Business Park Falster at the intersection of two European transport corridors

The most important change will be a strong increase in rail freight traffic transiting the municipality on its way to the FBFL.

Expected traffic flow



Main scenario: Safe park and motel

- Storage facilities for construction sites (closed area)
- Duty free warehouses
- Mixed businesses with service facilities for carriers and transport companies
- Combined terminal
- Green hub – transshipment to greener transport solutions
- Other (production area)

The work of Guldborgsund Municipality in the Fehmarnbelt Pilot Case has assisted in revealing development opportunities arriving from the regions close proximity to the future FBFL and two European transport corridors.

The general benefits include:

- Improved commuting opportunities from Guldborgsund to the metropolitan regions and between the intermediate corridor nodes along the route.
- Improved traffic infrastructure and accessibility to other markets for local businesses.
- Business opportunities for local stakeholders in providing services to passing passenger and cargo traffic (e.g. fuel filling station to restaurants, cargo storage, safe parks and combined terminals).

Updated data on future traffic volume and changes in the traffic patterns following the opening of the FBFL confirm an attractive future foundation for business development along the traffic corridors. The traffic analyses shows an significant increase in truck and train cargo.

Using workshops, dialogues and in-depth interviews with key stakeholders and investors within the transport and logistics industry, the optimal location of the Business Park Falster was confirmed. It will serve traffic coming via two current ferry connections from Germany (Puttgarden–Rødby and Rostock–Gedser) and the future tunnel.

The chosen business model targets the immediate demand for safe storage (“safe park”) and rest time (“motel”) for truck drivers, which is the result of the following developments:

- In spring 2017, several EU Member States introduced a ban on drivers having the regular weekly rest of 45 hours in the vehicle or nearby the vehicle. A similar ban is expected in Denmark in the next parliamentary session, which will lead to an increasing demand for new forms of accommodation for the truck drivers.
- There are increasing problems with long-haul drivers parking illegally in rest places or in residential areas everywhere close to the transport corridors.
- An increasing number of robberies, stolen vehicles and thefts from parked trucks has been experienced all over Europe leading to a public demand pushes for more secure parking opportunities.

The basic scenario is a “Safe park and motel” (including warehpuse facilities). However, a number of relevant add-on services could be developed during a time span of three to ten years, where an increase in demand for truck freight is expected.

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