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# Ten-T policy and the Fehmarnbelt tunnel: Impact on regional development between Øresund and Hamburg

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PhD-Studerende

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## Abstrakt

This article addresses the question of the regional impact of the Ten-T strategy in the Fehmarnbelt region (a region stretching from Malmö to Hamburg), a topic which seems overlooked in the actual discussions on green corridors at the UE level. It presents academic discussions on the matter and sets them in perspective with the current plans for developing a transport corridor across the region and the perception regional transport planning practitioners have on the matter. This article discusses the capacities of those actors to deal with questions regarding the exploitation of Ten-T infrastructure for the benefit of their region. The regional level can also be relevant for integration of sustainable transport solution to the local economic system at a level that national authorities do not have the resources to address. Finally, this article discusses how a regional anchoring allows for the adaptation of such a general EU policy to the local context so that targeted solutions are also adequate for the regions.

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The development of a single transport network has been identify by the EU as a core requirement for the achievement of the single market and the cohesion of the European Union. This goal has led to the development of a comprehensive EU policy aiming at connecting the 28 existing transport systems that compose the EU, referred to as the trans-Europeans networks strategy (Ten-T strategy). The European Commission has recently intensified this policy by adopting regulations and decisions regarding the implementation of a single EU-wide core transport network and by increasing financial support for that purpose. This transport network is to be implemented through the establishment of intersecting long-distance transport corridors linking major infrastructural hubs and cities together. Those corridors guide the planning, development and operation of transport infrastructure, and have already penetrated the planning processes in many member states. They direct the coherent development of transport infrastructure along transport routes in the EU, in order for people and goods to travel unhindered on long distances. The aim is to allow for the effectivization of transport on selected axis that will reduce both

financial and environmental costs for transporting people and goods from one end of the EU to the other. They are described in detail in Regulation No 1315/2013, which includes a comprehensive list of all cities, harbors, stations, roads, rail and waterways that form each corridor, as well as general priorities of the Ten-T strategy. Those priorities are the enhancement of *accessibility* for all regions, *inter-modality* and *interoperability*, the focus on *bottlenecks* and *missing links* in cross-border sections, an *efficient* and *sustainable* use of the infrastructure, the deployment of *IT solutions*, the promotion of *energy efficiency* and *zero carbon energy*, mitigating the exposure of urban areas to *negative effects of transiting transport* and removal of *administrative barriers* between countries. Some of those goals are the object of additional legislation, such as regulation No 913/2010 and decision 2012/88/EU, establishes clear implementation and management procedures for the rail freight component of the corridors, which is the most advanced piece of legislation to date. For the rest of those goals, there is no clear procedure established yet, but member states are required to work towards the development of the said corridors including those goals.

EU legislations clearly establishes the geography of those corridors as well as the functioning of their rail freight component, but they are much less precise regarding the sustainable use of infrastructures, zero carbon energy and accessibility of the regions, which remain very unclear. Regulation 1315/2013 state the necessity to involve stakeholders in order to tackle targets such as regional mobility, integration of regions and urban nodes to the network, sustainable transport solutions and sustainable mobility, promotion of cross-border projects and enhancement of cooperation between stakeholders. Nevertheless, there are no guidelines regarding how to proceed, so it appears that there is plenty of room for innovation in that area.

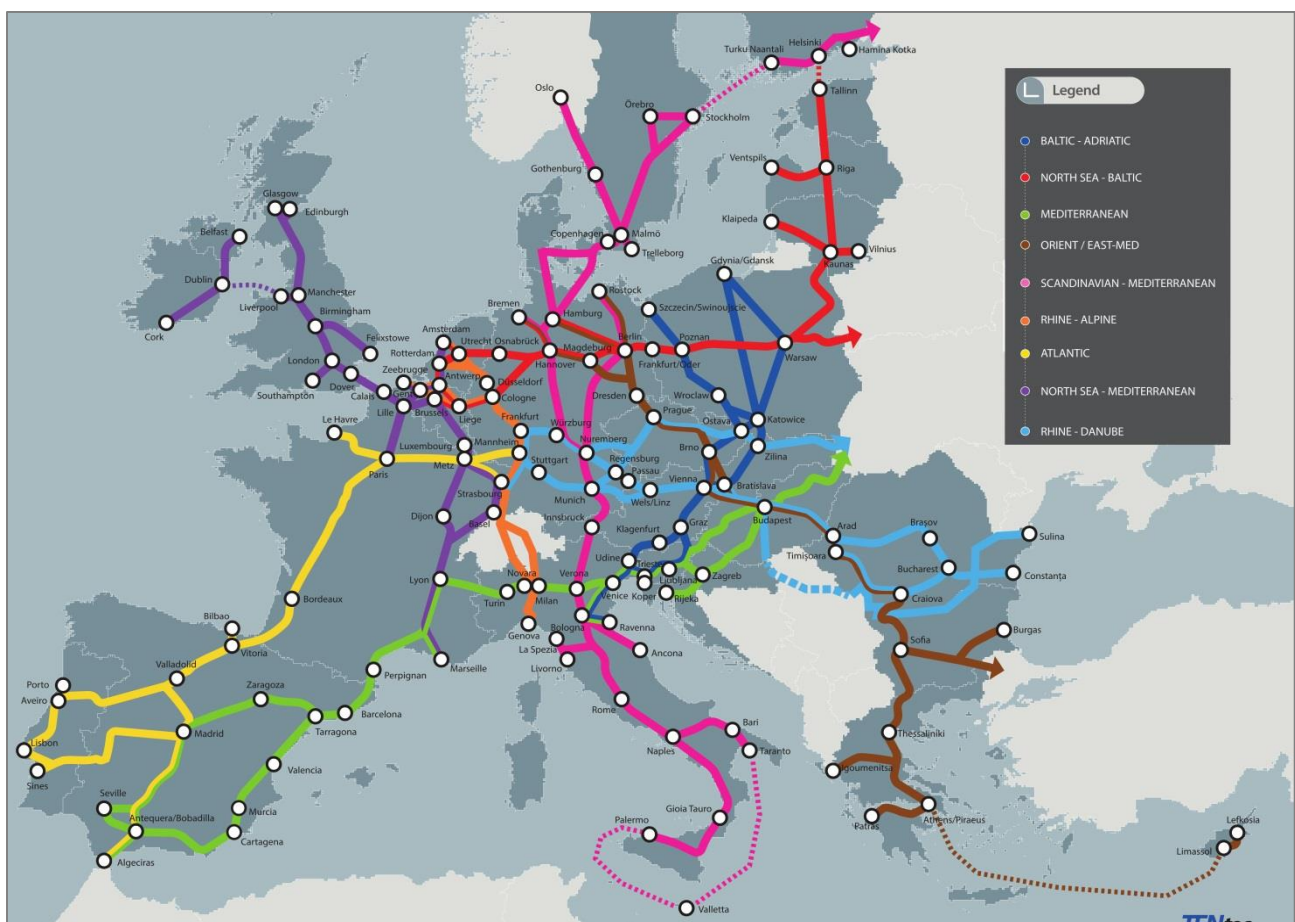


Figure 1. Ten-T corridors after 2013 update

Those corridors cross formerly peripheral regions, around sea and mountain borders, which used to be bottlenecks or dead ends in their respective transport systems. There are nine key corridors, combining rail, road and waterways, which support the development of the core network (cf. fig 1). A core aspect of those corridors is to insure an adequate connection between major centers of production, major center of consumption and major transport hubs in the EU. They have been developed from a supranational perspective for the purpose of efficient long distance transportation in the EU by primarily promoting rail transport and reducing CO2 emissions. However, the Ten-T policy does not directly address how this new system is supposed to benefit the local and regional economies, i.e. the spaces situated in-between those major transport hubs and consumption centers. This tool is supposed to ease the necessary coordination of transport policies along the corridor in order to improve the efficiency and reduce the environmental impact of transportation flows on long distances. For that purpose, the EU has developed a detailed policy apparatus focusing on transnational coordination, but this policy does not say much, if anything on how it will impact the region crossed. As pointed out in ESPON's report on the *Territorial Impact of EU Transport and TEN Policies*, transport policies, as any other policies, should be considered in connection to other policy areas that they affect, since transport is usually serving other sectors of society (Bröcker et al., 2005). For that reason, simply planning supranational management systems is likely to overlook a series of subnational factors with importance for the general purpose of such a policy.

The question that arises is thus whether the Ten-T core network will only serve as a pipeline between production centers and urban areas, leaving the regions crossed unconnected, thus counterworking the Cohesion policy itself, and which proactive measures could be employed to insure that it is not the case.

## **Regional impact of Ten-T strategy: the Fehmarnbelt "region"**

The Ten-t strategy has led to a long series of infrastructure projects throughout the EU, many of which aim at removing bottlenecks along borders of the member-states. One of those projects is the construction of a fixed link across the Fehmarn sound between Denmark and Germany. This link is supposed to be the last element of the connection between Scandinavia and the rest of the EU and a central element of the Scandinavian-Mediterranean corridor (cf. pink corridor on figure 1 and 2). The mere magnitude of this investment and the gain of travel-time from Copenhagen to Hamburg will change the geography of the region and connect two regions that were not much connected before. The fixed link will connect more than the two peripheral regions on each side of the sound. It will connect two major metropolitan centers Copenhagen and Hamburg, and the Scandinavian countries to the center of Europe. In order to discuss regional impact, this article is looking at the regions around the fixed link in a corridor from south Sweden to Hamburg.

This portion of the corridor connects three countries and two metropolitan centers: Hamburg and Copenhagen/Malmö and is now starting to be conceptualized as the Fehmarnbelt corridor/region. It is not the only area that is concerned by the implementation of new infrastructures within the implementation of Ten-T corridors. One can find similar considerations along the Alps, Pyrenees or the English Channel, some of which are also mentioned in this article.

### **Regional impact**

The Ten-T policy and the Fehmarnbelt tunnel actually targets long distance transport efficiency, not local development. The new Ten-T policy recognizes the importance of regional mobility, the connection of regions to the network, the promotion of cross-border projects and stakeholders cooperation but does not

clearly address how do to so (Regulation No 1315/2013). In that case, regional growth is not a per se. As Roger Vickerman (1994) puts it, transport is only an enabler for development, it is not sufficient to produce it. Additionally, the Ten-t core network and the Fehmarnbelt tunnel will bring a significant upgrade to transport infrastructure in the region, but it is unsure whether it will benefit the regional economy. The creation of intercity corridors of transnational transport networks in the European Union may in fact increase the economic, social and cultural differences between centre and periphery and hence the dysfunctionality of the single market of the European Union in terms of socio-economic cohesion in the Union (Grindheim & Manga, 1992).

If one looks at the regional level, the establishment of a transport corridor between Copenhagen to Hamburg will greatly ease the flow of goods and people between those to metropolis, as well as increase cooperation between the two cities; and should thus benefit the regional economies. However, a focus on those two cities might leave behind the smaller cities and the territories crossed by the corridor. For example, a faster connection would require fewer stops along the way, eventually resulting in two classes of cities in the region, those connected and those not. Secondly, establishing a corridor could accentuate the drainage of workplaces and capital from peripheral regions towards urban centres, especially if nothing is done within those territories to retain them.

The concerns about the potential impact of this corridor on rural territories is shared by the Danish Ministry of Housing, Urban and Rural Affairs, which works on how to make sure that the Fehmarnbelt tunnel will benefit the Danish regions (Palludan, 2013). It is not the first time that this question arises. As Mr Bruno Fontalirand explained on his presentation of the experience of the department Pas-de-Calais regarding the Channel Tunnel<sup>1</sup>, Pas-de-Calais did not benefit much of the new connection because it started by being opposed to this international project (fearing to loose local jobs) and did not look at potential benefice for the region before the tunnel stood there finished. It eventually benefited metropolitan centers most (Thomas & O'Donoghue, 2013).

### Environmental impact

The Ten-T corridors aim at reducing the environmental of the European transportation system as a whole, by increasing transport efficiency and by moving transport flows from roads to rails and waterways. In order to do so, it is vital to establish coherent corridors that can out-compete the existing road system for long distances. However, the establishment of such corridors will create transport flows through regions that did not have them and increase existing ones. Such an increase of transport flows is likely to have an impact on both the environment of the territories they cross and on the overall CO<sub>2</sub> balance of the EU. The



Figure 2. Scandinavia-Mediterranean corridor in the Fehmarnbelt region

<sup>1</sup> Green STRING corridor kick-off conference during the Fehmarnbelt days in Lübeck, September 2012

fact that the Ten-T strategy might result in negative environmental and socio-economic impacts at the local level despite its aim at improving the sustainability of the EU transport system should not be overlooked. Trucks are a substantial means of transportation for goods in the EU, where 72.5 % of inland freight is done by truck (Kyster-Hansen et al., 2011). This situation is not changing anytime soon and the removal of a major bottleneck on this corridor will facilitate truck freight as well. Additionally, the new corridor across the Fehmarn sound is likely to redirect transport flows and increase environmental impacts such as noise, particles and traffic accidents in those territories. This is actually a major concern on the German side of the sound regarding this project, which has been opposed by the German green party, local politicians and the population up to now. The Ten-T policy and associated corridor strategies focuses on the fact that once the transport corridor is integrated from one end to the other, sustainable means of transportation, such as rail freight, should be prioritized. However, in the case of the transport corridor from Malmö to Hamburg, the amount of freight, the geographical conditions and the available infrastructure may result in an increased number of trucks crossing Holstein and Lolland-Falster/Sjælland territories as well (Stoumann et al., 2012). Moreover, such a policy will also have impacts on the local economy and the local governance systems. Local territorial and political contexts should thus be integrated to the implementation of the Ten-T strategy.

## Regional activities

Concerns regarding the impact of this new transport corridor on the region can already be observed on both side of the sound. The approaches are clearly different and the discussions as well, but local and regional authorities have launched projects in order to evaluate what benefits they could gain at the local level. An interesting project is the Green STRING project that clearly mirrors the Ten-T corridors concepts at the local level. This project led by region Sjælland, gathers regional authorities, municipalities and research institutions from the Scandinavian side. It includes all the priorities stated in Regulation No 1315/2013, but tackles them at the regional level by adding a focus on “sensitivity to local economic and environmental needs of regions, communities and municipalities along the corridor” (Stoumann et al., 2012). Many of the questions addressed by the project are related to the practical integration of the corridor into the local economy, the development of local logistic hubs and the greening of regional transportation systems. Additionally, this project also looks at how to coordinate the activities from the Scandinavian side with the German side, in order to develop a synergy between them. Questions related to the harmonization of standards and technologies or rail freight operation at the corridor level seem too broad for such a project and could be tackled at a supranational level, but topics such as contextual adjustments, local impacts and cross-border cooperation can perfectly be tackled at the regional level. On the German side, another project also addresses the question of how to benefit from the coming transport corridor. However, the focus is rather on business development and tourism with regard to a better connection to Hamburg, and does not tackle questions related to the broader corridor or to environmental impacts. This project, called Achse1, gathers the local “kreis” together with authorities from Hamburg and Schleswig Holstein, which coordinate their strategies vis-à-vis the federal level regarding infrastructure questions in the region.

In the case of the Scandinavian-Mediterranean corridor, a corridor-wide approach seems too broad to make place for the contextual adjustments that are required in different regions of the EU. Moreover, the actors involved in such adjustments are too numerous to be organized at the supranational level, as rail operation can be. The Scandinavian-Mediterranean corridor itself crosses seven countries, three straights of sea and a large mountain range. Seven countries, including Germany and Italy, means that the targets



and stakeholders referred to in art. 50 are too numerous to be effectively involved within one single corridor approach. It also means that solutions on one portion will not necessarily be applicable to other portions. Because of differing regulations and customs, the necessary alterations of infrastructure and operation procedures would also differ. Regions such as the Danish islands between Scandinavia and continental Europe or the Alps require different approaches than the crossing of the German plains. Similarly coordination of efforts across borders are more tricky than between German länders. The evasive mention of regional connection, stakeholder involvement and cross-border cooperation in art. 50 shows that the EU would see public authorities from regional and local levels, but also private companies, do the job.

Another large EU infrastructure project, the Channel tunnel, can give indications on the challenges and the potential impact the Fehmarnbelt tunnel could have on the region. This tunnel has been opened for 20 years now, which gives a good timespan for observation. It appears that the concerns of the regional authorities around the Fehmarn belt are well funded, since the channel tunnel does not appear to have been very beneficial for the rural part of the corridor between London and Paris (Thomas & O'Donoghue, 2013). There has been no coordinated attempt at uplifting the hinterland together with the construction of the tunnel, which was a rather high politics endeavor. However, the metropolitan area of Lille has greatly benefited from the tunnel, which indicates that urban nodes do benefit of such alterations of the transportation system, and that smaller cities and rural territories are the one that require particular attention.

## Conclusion

The recent adoption of the Ten-T core network by the EU aims at reducing the impact of transport on EU Co2 emissions by promoting rail and waterways instead of road transports; and at closing the gaps between national transportation systems that hinder the free movement of goods and people within the Single Market. However, such a modification of the transport infrastructure in the EU is bound to have an impact on the territories their cross. Linking all major urban centers of the EU together with transport hubs and production centers requires the creation and redirection of large transport flows, which inevitably need to cross the territories in between. The question that arises is thus whether the Ten-T core network will only serve as a pipeline between production centers and urban areas, leaving the regions crossed with all the costs but no benefits, thus counterworking the Cohesion policy itself. Prior experience with the connection of London, Paris and Brussels by an extensive rail system show that such an initiative is not guaranteed to benefit the hinterland. The question of how regional and local authorities can make use of this type of infrastructural investments remains. On a side note, the implementation of a transport corridor through the region means that those territories will come closer to major metropolitan centers and their inhabitants will thus gain access to capital in the form of new job opportunities and better salaries, thus being less tempted to move out to urban centers. But it would somehow take the dormitory town concept to a new level. Therefore, even though local economies might lose workplaces, they may gain through their inhabitants' increased access to a center of capital, which makes a cost-benefit analysis trickier.

Additionally, if the aim is to reduce the CO2 footprint of transport, then it needs to be implemented all the way down to the operational level at regional scales. A coordinated action regarding the territorial impact of Ten-T corridors at the corridor level would require the participation of too many stakeholders to be efficiently coordinated at the national level and a regional scale might play a role.

In the case of the Fehmarnbelt tunnel, a supranational management platform takes care of rail improvement, but it is already doubtful if rail will provide the necessary capacity, and other green transport technology should be looked at.

The regions do not necessarily need to take care of infrastructure planning itself since national authorities and supranational coordination are already in charge, but they should focus on how their territories can benefit regarding the integration of cities to the Ten-T network, business retention, logistic services and synergy through cross-border cooperation. Those topics are often very contextual, and do not require the same amount of funding or the regulatory power that larger infrastructure projects entails. It is still unsure which specific sector is the Holy Grail of regional development, or if one set of measures would work in every regions, but it is necessary to develop projects that look at how to connect regional activities to the general Ten-T core network. Moreover, some of the goals mentioned in article 50 of Regulation 1315/2013 are actually directly addressed at subnational actors, such as the promotion of cross-border cooperation, sustainable urban mobility, regional mobility and green transport technologies. The regulation also mentions that such actors should make use of merely every European Union funds for this endeavor. Projects to anchor those targets at the regional level like the Green STRING project show potential and should serve as model, especially in cross border sections, where major bottlenecks are being targeted. They could also serve to inspire similar projects in all regions crossed by Ten-T corridors, also central regions of countries like Germany and France. This approach will allow for the adaptation of targets from the Ten-T strategy at the local level, in order to find the most relevant ones in context and the most adequate ways to implement them in practice.

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