

Seine Gateway® at the heart of North-Western European freight flows: regional dynamics and current challenges

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Abstract

In the context of global freight flows and increased competition between ports, this article deals with the question how the Seine River Valley and its ports rate in the European geography of exchanges of saleable goods. It is discussed what transport infrastructures the Seine River Valley has and what opportunities will need to have to confront the stakes involved in development. The strategic position of Le Havre, the first importation port, upstream from the Pas-de-Calais strait and Paris' natural maritime inbound port, raises the question of the intensification of East-West exchanges that logically will accompany the shift of Europe's centre of gravity towards the East. The authors present what measure the Seine Gateway® constitutes an adapted response to massify the flows of freight in the Seine River Valley area and to enlarge its hinterlands.

Keywords: Seine Gateway®, sustainable logistics, freight transport, North-Western Europe, hinterland, infrastructures
JEL N74, O18, R42

Introduction

The Seine River Estuary is the end of one of the largest navigable French rivers. It goes through Paris and flows into the English Channel, the sea with the highest amount of traffic in the world. Seine Gateway® bases its dynamics on a key freight transport backbone axis, connecting maritime, inland waterways, railways and roads routes from Le Havre, a coastal city, to the capital city of France, Paris. The port of Le Havre, and more generally speaking, those on the Seine River Valley, must tackle globalisation of the economy which is increasing flows of freight between the largest production hubs and consumption hubs. Europe, because of this globalisation, must be able to resist the saturation of the Northern Range ports as well as the intensity

History: received 8 April, revised 20 October, accepted 26 October

of North-South flows on the Rotterdam-Genoa axis, which crystallize massive saleable goods exchanges. Ports, and more generally speaking, freight transport itself, must focus on progressing in the framework of more sustainable development of these exchanges. Intermodality thus plays a key role, where complementary and alternative transport modes to the road to massify flows in the context of an ever more sustainable freight transport development, must be proposed.

In this context, how does the Seine River Valley and its ports rate in the European geography of exchanges of saleable goods? What transport infrastructures do they have to compete? The strategic position of Le Havre, on a leading maritime coastline and Paris' natural maritime inbound port, raises the question of intensification of East-West exchanges that logically will accompany the shift of Europe's centre of gravity towards the East.

How does Seine Gateway® rank in this changing European context to provide services to a larger hinterland and develop more efficient and stronger exchanges?

As a part of the European Weastflows project as well as the Seine Gateway® undertaking, the Town Planning Agency of Le Havre Area and Seine Estuary (AURH), is carrying out work including research, by building tools to serve the area and regional forward-looking studies. A part of the work undertaken consisted in developing a Geographical Information System (GIS) on freight transport infrastructures covering the seven countries in North-Western Europe: Ireland, the United Kingdom, France, Germany, Belgium, Luxembourg and the Netherlands. This project has allowed Seine Gateway® to become equipped, on one hand, with an *analytical tool* for networks and freight infrastructures, as well as a *decision-making facilitation tool*, serving politicians, local decision-makers, and national and European stakeholders. In the scope of increased competition between ports and their hinterlands, these tools allow the Seine River Axis to be repositioned in the larger European exchange system which includes dynamics taking place in the region, by analysing bottle-necks in the networks and under-used links as well as highlighting existing discontinuities. These are truly regional intelligence tools supporting future development. With this work, the ultimate goal of this project is to propose new routes, which will place Seine Gateway® at the very heart of the North-West European freight transport system, so that it will become a major hub in the current transport system.

Weastflows: what is the geography of North-Western Europe transport infrastructures?

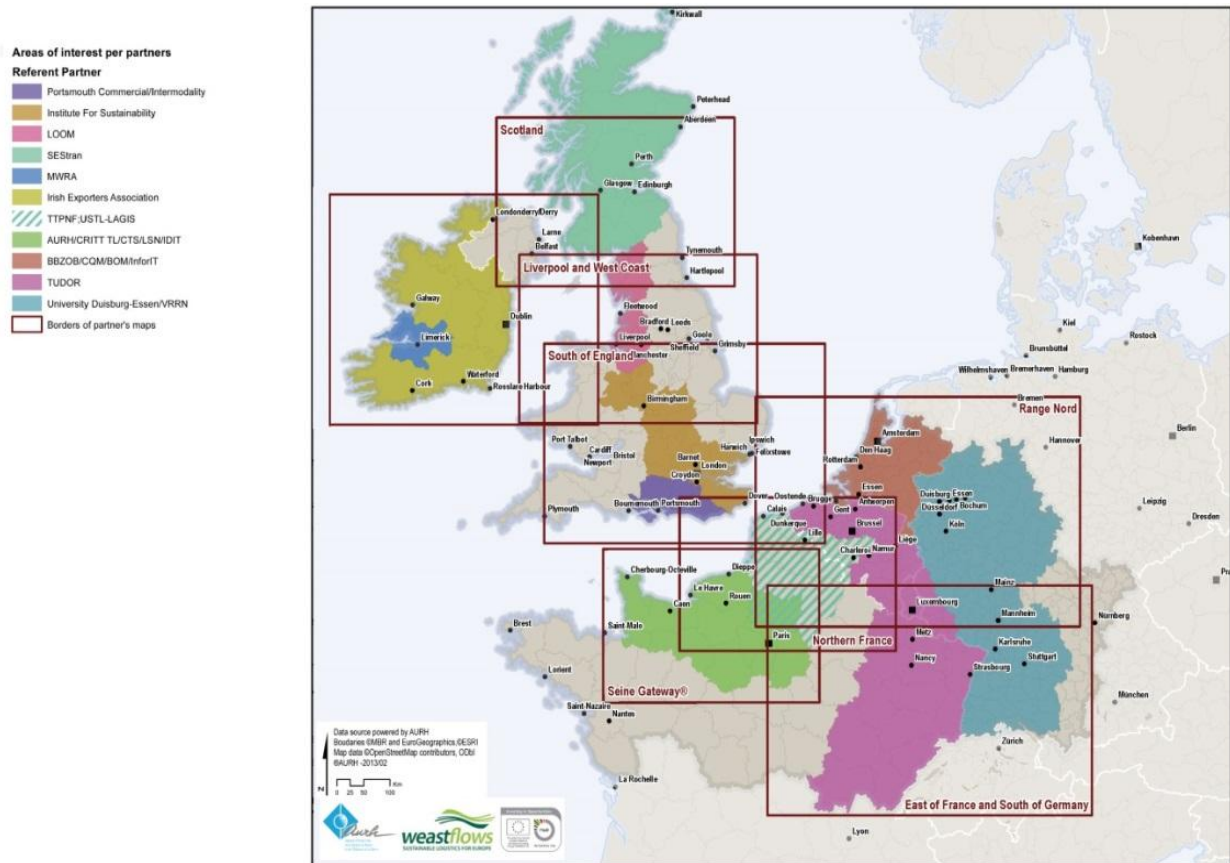
The Weastflows project

The European Weastflows project, a contraction of the terms, “flow,” “west” and “east,” is a part of the European Interreg IVB programme for North-Western Europe. It began in 2011 and will run over a four-year period. This project was recognised by the European Commission as a “strategic initiative,” as it addresses problems identified by Europe concerning sustainability of freight transport.

Steered by CRITT *Transport et Logistique* in Le Havre as well as the Institute for Sustainability in London, this project has 22 European partners, including AURH, and roughly forty observation partners. Focused on North-Western Europe, this project concerns seven countries: Germany (the Western half), Belgium, France (the Northern half), Ireland, Luxembourg, the Netherlands (the Western part) and the United Kingdom (e.g. *see Fig.1*). The project is broken down into 13 actions. AURH is steering Action 1, entitled: “Assessment of sustainable transport capacities.”

In the context of very strong competition between North-Western European ports and in the framework of strong massification of freight flows on the North-South axes, for example on Rotterdam-Genoa Corridor 24, Weastflows aims to create new transport corridors by developing flows on East-West axes. This project, which includes an environmental dimension, also aims to promote modal changes from roads towards more sustainable modes such as railways, inland waterways and short-sea transport, while optimising or creating new transport infrastructures.

Figure 1: Map of the North-Western Europe Weastflows perimeter



Source: AURH & Weastflows project

Because of the fact that the historic North-South corridors from Northern Range ports are becoming more and more saturated, coupled with the fact that the main North-Western Europe freight corridors, in particular, those in Normandy and its ports are excluded, the European Weastflows project has the high ambition of improving logistics and freight transport in North-Western Europe, relieving congestion stemming from the hinterlands of the Northern Range ports and traditional North-South itineraries by:

- encouraging the passage of road transport towards more sustainable modes, such as railways, short-sea and inland waterways;
- promoting freight flows on a new East-West axis.

AURH’s role: GIS engineering serving this project

In the Weastflows project, work carried out by AURH concerns knowledge and analysis of the infrastructure network dedicated to freight transport. As a European repository of data

dedicated to freight transport does not exist, AURH put in place a Geographical Information System (GIS) covering the seven countries in North-Western Europe based on data from the OpenStreetMap participative cartography project.

This approach aims to integrate and centralise information concerning freight transport and build a repository of geographical data. To build this GIS, AURH based its engineering on data from OpenStreetMap, a free geographical data base. This data were then integrated into the data model that AURH designed and built, in compliance with recommendations given by the INSPIRE¹ European directive. Once integrated, this basic information was completed by including “business data”. The data repository on freight transport infrastruc-

¹ The Inspire Directive “drawn up by the Environmental Department of the European Commission, aims to establish a European infrastructure of geographical data to ensure the interoperability between data bases and facilitate the transmission of, the availability, use, and re-use of geographical information in Europe (<http://inspire.ign.fr/>).”

tures supplies structured and detailed information for North-Western Europe. It is composed of elements which structure the network such as roads, inland waterways, and railways and of key hubs such as ports/terminals and multiple mode platforms and the main infrastructure projects. Once this preliminary information had been structured, an Atlas of North-Western Europe freight infrastructures was published. In a partnership with the Henri Tudor Research Centre, the Luxembourg partner, a dynamic and interactive version was made available for project partners as well as the general public, on the online cartographical platform, "GeoWeastflows²".

Establishing the Weastflows GIS allowed AURH to carry out several quantitative, qualitative and cartographical analyses to draw up the inventory and geography of North-West European transport infrastructures presented in this article. Two analytical approaches were used.

The first one is based on drawing up a series of statistical indicators to have objective figures defined using information from the Weastflows Geographical Information System. These figures were given for each of the eleven remarkable areas in North-Western Europe. They point out relative characteristics: population density, total maritime traffic of the territory, continuities and discontinuities of infrastructure networks, accessibility and length of the network, as well as highlighting the "remarkable" hubs, by their levels of intermodality, accessibility and connection.

The second is based on a grid variation analysis of infrastructure densities. This method is more precise than European statistical references and gives a fair analysis of the infrastructure network without using crosscutting. The European Union statistical system is based on a territorial division shared by the entire European Union called NUTS (Nomenclature of Territorial Units for Statistics). This reference system has three stages of division from NUTS 1 to NUTS 3. It is based on administrative divisions of Member States correlated to population weights. Because of this, there are

large divergences from one country to another, in particular in terms of area, which generates disequilibrium when comparing two zones between themselves and especially when carrying out an analysis of infrastructure densities. Knowing this, AURH has designed a specific grid variation that divides the North-West European area into 1,290 squares of 800 km² each. This division is more precise than the NUTS reference system which divides the same area into 485 NUTS 3, with an average area of 1,650 km². The size chosen corresponds to the area of the smallest German administration division, which is equivalent to districts or city districts. Each square then brings information found by crossing it with infrastructures in the network.

These two approaches, when applied to an analysis of transport infrastructures, in each of the three modes (inland waterways, roads and railways) and for the associated hubs (ports, railway terminals and airports), highlight infrastructure densities, pre-identify bottlenecks and sectors conducive to the development of intermodality. They also show the continuities and discontinuities of the network.

North-Western Europe: an area of contrasts

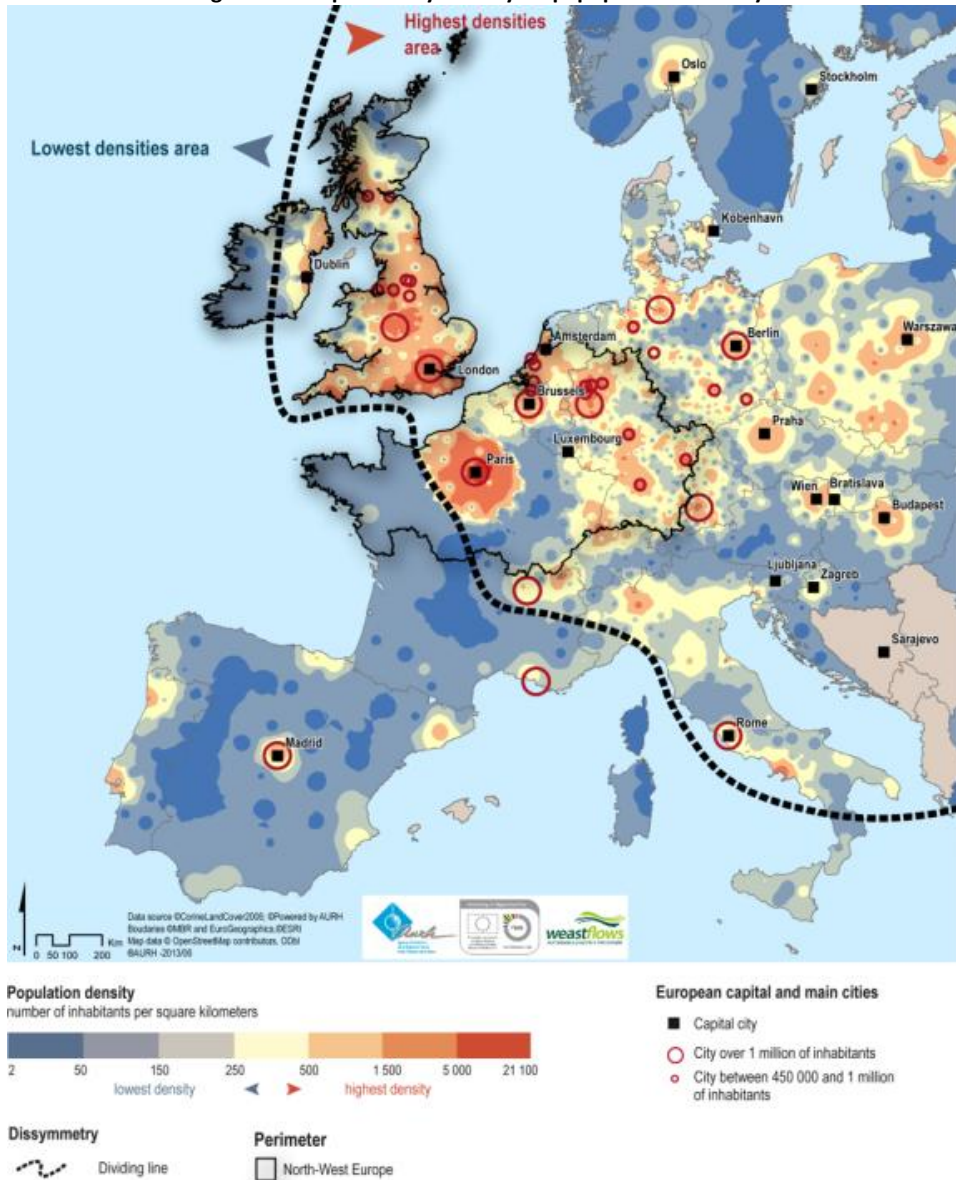
Global trade, transport and supply chains only make sense if they are analysed in the framework of exchanges taking place for production or consumption. This is the context in which we have carried out our Weastflows analysis. North-Western Europe has 176 million inhabitants, amounting to 35% of the population of the European Union, with a high population density: 216 inhabitants per km², compared with 117 inhabitants/km² in the European Union (Eurostat 2012). Population and production basin breakdowns are highly unequal in this area (e.g. *see Fig. 2 & Fig. 3*). This dissymmetry shows "two Europes" on each side of a type of fault line. On the East of this line, regions have heavy populations whereas on the West, population densities are much lighter. In addition, the breakdown of industrial infrastructures follows this "fault line." Industrial infrastructures are highly concentrated from Dublin, Paris and Northern Italy on the European backbone until the East of Poland and Austria, leaving out the Western

² The GeoWeastflows cartography platform is available at: <http://geo.weastflows.eu/>

part of Ireland, France and all of Spain. The highest maritime traffic can also be found in this part of North-Western Europe, on the maritime facade of the Northern Range. Industrial basins and maritime traffic are also quite logically based on this population breakdown and highlight historical industrial sites that came to life during the European industrial revolution, in North-Western Europe between Glasgow and Edinburgh in Scotland, in the Liverpool and Manchester basin in England, in Normandy and in the Parisian basins

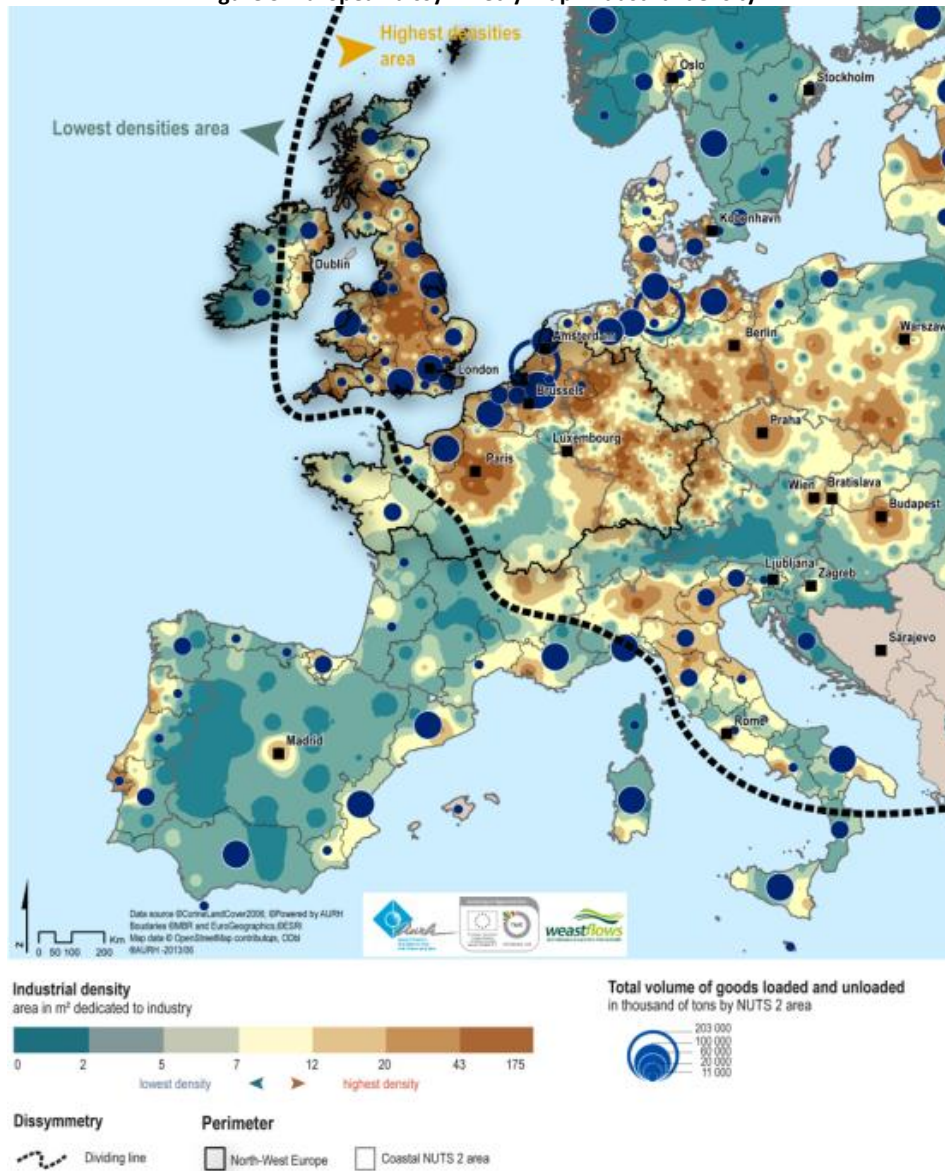
in France, in the Northern part of France, from Belgium to Germany and more precisely from Lille to Liege, Brussels and up into the Ruhr River basin. There is thus a strong correlation between population distribution, consumption basins, and maritime ports with heavy traffic and production basins. This dissymmetry has an impact on public urban planning and political decisions. It also highlights the risk some North-Western Europe regions run of finding themselves excluded from European dynamics.

Figure 2: European dissymmetry map: population density



Source: AURH & Weastflows project

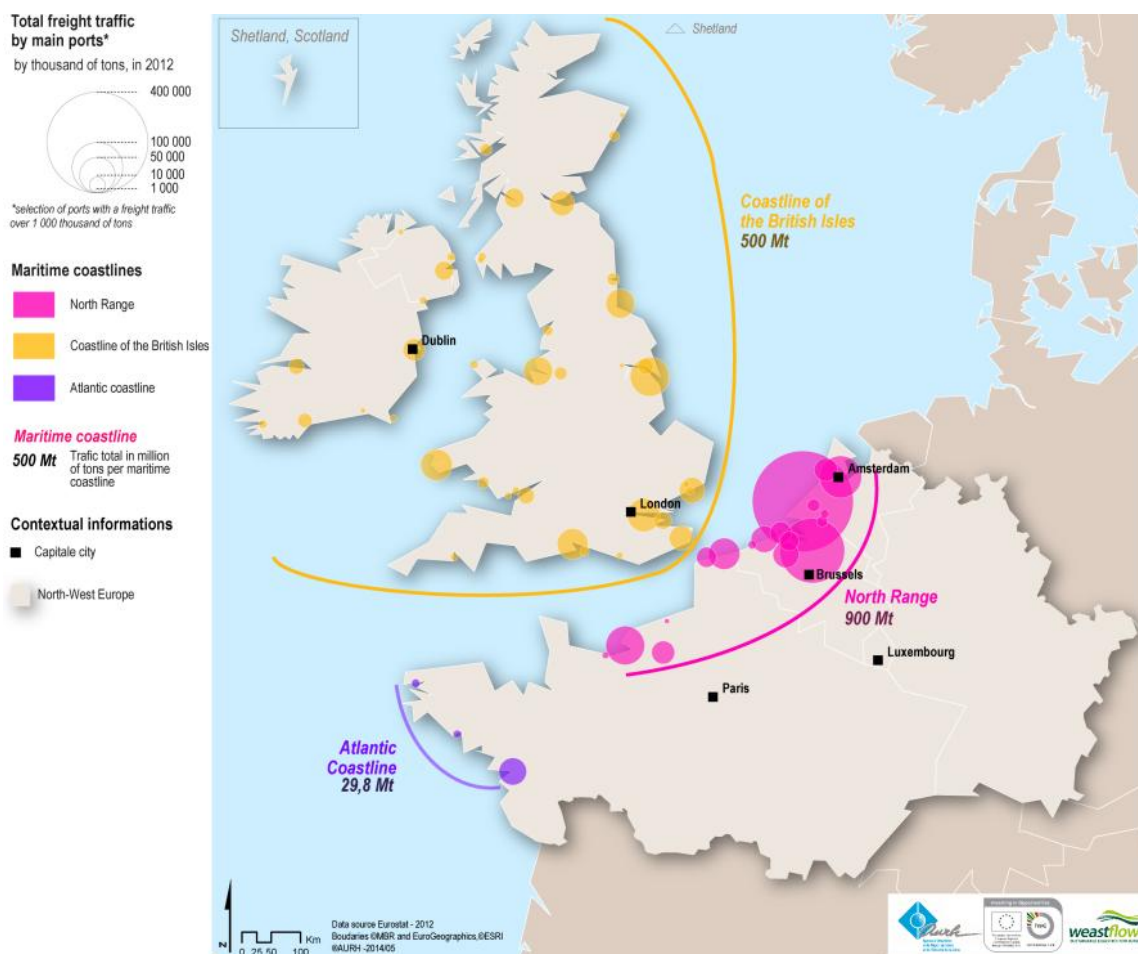
Figure 3: European dissymmetry map: industrial density



Source: AURH & Weastflows project

The North-Western European coastline spans 26,000 km and a third of the population, 61 million people in North-Western Europe, live near a coastal region. North-Western Europe faces the sea with three maritime facades: that of the British Isles, the Atlantic coastline and the Northern Range which goes from Le Havre to Hamburg, though Hamburg itself is not a part of North-Western Europe (e.g. see Fig. 4).

Figure 4: Map Maritime facade



Source: AURH & Weastflows project

Each of these three maritime facades has its own port grid with differing traffic density. All in all, on the three maritime facades in the North-West European perimeter, we can total sixty-five maritime ports where freight traffic, all types of goods included whether they are solid, liquid or in containers, exceed a million tonnes. In 2012, they generated a total traffic of over 1.5 billion tonnes of freight. Because the United Kingdom and Ireland are islands, they have a high concentration of ports on their coastlines: 11 in Ireland and 32 in the United Kingdom. The British Isles coastline has 43 ports generating a total amount of traffic of a bit more than 500 million tonnes of goods. Because of the layout of the North-West European perimeter, the Atlantic coastline, whose main European entranceway is the Nantes-St Nazaire port, is more marginal, with 29.8 million tonnes of freight. Lastly, the Northern Range coastline has 17 ports where 900 million tonnes of goods flow through,

which amounts to over 60% of North-West European freight traffic. Four of the five leading North-West European ports in terms of freight traffic in 2012 are located on the Northern Range: Rotterdam, Antwerp, Amsterdam and Le Havre. Most freight traffic in North-Western Europe is concentrated on this Northern Range maritime facade, generating heavy traffic and requiring the existence of extremely large port infrastructures as well as railway, road or inland waterway services which can be used to absorb and/or evacuate heavy flows of freight traffic towards the hinterlands.

North-Western Europe transport infrastructures

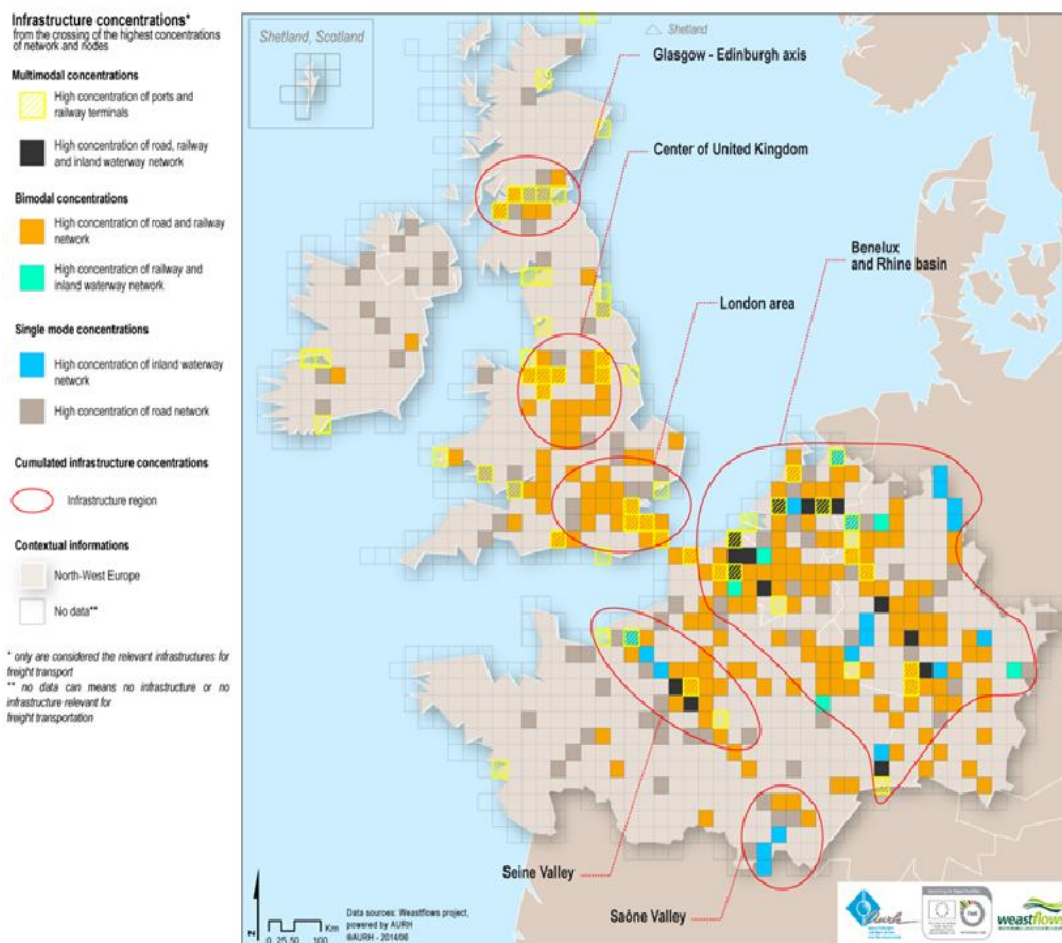
The geographical breakdown of transport infrastructures is strongly linked to production and consumption basins as well as inbound and outbound port structures. This highlights

divergences in terms of network organisation, a consequence of national territorial development policies. The infrastructure of North-Western European infrastructures dedicated to freight transport is composed of 10,966 kilometres of inland waterways, 39,384 kilometres of railways and 42,317 kilometres of roads, respectively representing 11.8%, 42.5% and 45.7% of the cumulated lengths of these networks. We have also identified 775 poles, including 92 airports, 247 ports and 436 railway poles, either terminals or hubs (Duszyński et al., 2014b).

The analysis of strong network concentrations and strong hub concentrations give us a synthetic readout of North-Western Europe's geography of transport infrastructures (e.g. see Fig. 5). It highlights under-connected regions, regions with intermodality that have infrastructure clusters, as well as pre-

identification of bottlenecks in terms of network density and intensity of use. This type of pre-identification supposes that there is a correlation between the cumulated infrastructure concentrations and traffic density. Six regions stand out in this analysis: the Glasgow-Edinburgh axis, the centre of the United Kingdom, the London area, the Seine River Valley, the Saone River Valley and the Benelux/Rhine River Basin area. This last area is the largest and enjoys the highest grids. It is characterised by strong continuities of multimodal networks, leading it to be recognised as a very connected region with heavy and multiple-connection flows. Several sub-assemblies corresponding to heavy and multiple mode hubs can also be identified: the Rotterdam-Duisburg axis, the Antwerp region and the Mannheim/Ludwigshafen region.

Figure 5: Map of infrastructure concentrations



Source: AURH & Weastflows project

The Seine River Valley is one of the few regions in North-Western Europe, with Benelux and the Rhine River Basin, where modal changes could take place massively towards inland waterways and railways, because of network densities. The map however, highlights an “insular operation,” and a region poorly connected to the rest of France and Europe, in particular on an East-West axis, but also on a North-South one.

Seine Gateway® : the Seine River Valley’s response to intensify flows and serve hinterlands

From hinterland to gateway

In the past few years, the definition of hinterlands has changed, from a descriptive and static one of “a region lying inland from a coast” (Brunet et al 2005) to a “hinterland impacting port performance.” Whereas ports have become interchangeable components in supply chains, building efficient networks with the hinterland has opened a strategic dimension in port development, as competition between ports will take place more and more on land (Notteboom 2009).

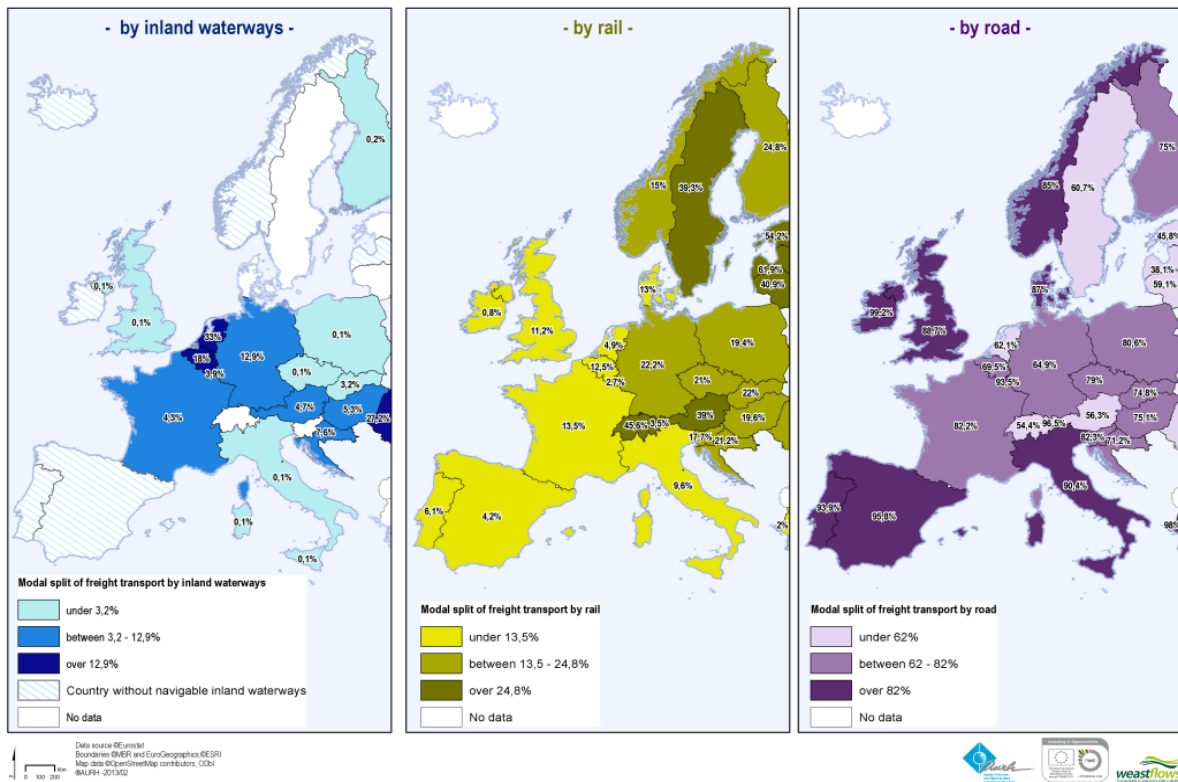
Beyond the notion of port location, ports must now act as value streams and corridors. In port competition, market shares, excluding the port’s own equipment and performance, are won in port hinterlands.

In France, most of our port hinterlands are only French, with limited extension possibilities that can be explained by a complex equation of dynamic factors. The road mode is the dominant one with 82.2% (the opposite of our neighbouring countries: 69.5 % in Belgium, 62.1 % in the Netherlands and 64.9 % in Germany (Eurostat 2010)). Influential areas that could win our ports over are relatively limited, whereas France is “covered” by the hinterlands of foreign ports (e.g. see Fig. 6).

“Thinking of ports as a simple interface managing flows to attract ships is a thing of the past. (...) But supply chain value streams are built and taken down in just a few years depending on demands and the adaptability of services offered. Ports are no longer in the competition; now corridors are competing. These integrated systems or gateways change

the paradigms of competition between ports (Alix 2012: 29).”

Figure 6 Modal distribution of North-Western Europe freight transport



Understanding the region as a “territorial system organised by flows” is required: from a theoretical point of view, a gateway acts like a network playing the role of an inbound and outbound gate towards other networks. It is often applied to port complexes including terminal equipment, maritime liaisons, making up forelands, logistics zones, and load connections hinterlands, composed of freight corridors and interior platforms. These sets formed by ports, their hinterlands and forelands, work as mass flow circuits, that are interdependent and relate to each other through shared smart systems; this is what we call a “gateway.” A gateway will be efficient and functional because of the grid of links it has in the hinterlands as well as the links between the nearest hinterland and the farthest hinterland, which structures a corridor. A gateway must thus be thought of a reconciliation between flows and a given territory. The gateway on the Seine River Valley approach was conceived through the idea of generating added value from the flow of freight and passengers.

Seine Gateway®: the regional development model for the Seine River Valley
 AURH, in its role as a decision-making facilitator, designed the strategic Seine River Valley economic project, entitled “Seine Gateway®,” including port, supply chain, industrial, university and tertiary structuring, from the Seine River Valley by its infrastructures but also through synergism contributing to building and organising a balanced metropolitan territory opening up to the rest of the world. The “gateway” approach concerns physical links: infrastructures, equipment, relationships between stakeholders, flows and exchanges. This is a network based approach, exceeding territorial competition and including the entire Normand coastline: Dieppe, Fécamp, Cherbourg and Caen-Ouistreham. At the beginning of 2011, AURH kicked off a partnership-based approach in the preliminary planning of the Seine Gateway®.³

³ This work was carried out over a one-year time frame and the following organisations participated: Grand Port Maritime du Havre (GPMH) [Seaport of Le Havre] – Grand Port Maritime de Rouen

Our definition of a gateway model, an original one both because of its geographical dimensions and its components, was honed using experiences of foreign gateways. The Extended Gateway® (Antwerp, Belgian Flanders), is based on port and supply chain added value, serving an economy of freight flows. This serves the European backbone, from the Range, through a myriad of inland waterway ports, logistics platforms and distribution centres. Thames Gateway is an enriching example of a territorial gateway that federates the zones between London and the sea and includes the construction of a new deep water port, at the head of the estuary: “London Gateway,” (DP World). This gateway ensures the decongestion of London whilst sharing development between the State, municipalities and private partners. Though these gateways are different, they all share the particularity of going beyond the question of an individual site to introduce connectivity and flows. The current boom in Paris and the Ile-de-France region has reached its limits in its surrounding area. The Seine River Valley and the Normand coastline could allow Paris to take advantage of a high-quality area located in its natural geographical outskirts, but above all, an opening onto ports with Le Havre and Seine River and coastline ports. Our position is that this maritime opening will confer to Paris a global city dimension necessary in the ferocious competition that the largest international cities will be having in the 21st century. An area with a high level of services as well as optimal environment quality, at a “reasonable distance” of 200 km, is what is required. Seine Gateway® is based on four main goals (Duszyński et al. 2013b):

- quickly reaching the huge Parisian consumption basin from the freight exchange intersection, which is the sea;
- developing multiple mode platforms by conferring the deserved place to railways and inland waterways in ports to better connect to hinterlands;
- allowing Seine River ports to develop a critical mass for their competitive advantage at an international scale, thanks to a domestic hinterland, which little by little will become an international one;
- building a unique identity based on a natural and agricultural cornerstone as well as its world-heritage dimension.

The port and supply chain dimension at the heart of the Seine Gateway® model

“Stakes are simple for France, Normandy, the Seine River Axis, Rouen and Le Havre: either we admit our coastal evidence, or we find ourselves simply out of the picture, economically speaking.”⁴ Paris is in dire need of a coastal opening, in the framework of European port competition, but Antwerp and Rotterdam are well placed to become Paris’ ports. Seine River ports have lagged behind their Belgian or Dutch neighbours. These results (e.g. see Fig. 7) show a spectacular progression of freight container traffic between 1990 and 2010, in particular for Antwerp, Rotterdam and Hamburg, whereas the French ports of Dunkirk, Rouen and Le Havre, have all lost market share compared with Benelux ports.

(GPMR) [Seaport of Rouen] – *Ports de Paris* – [Ports of Paris] *Ports Normands Associés* (PNA) [Association of Norman Ports] – AUCAME (Caen) – APUR (PARIS) – AUDAS (Seine Aval) – AURH (Le Havre) – *Conseil Régional de Basse-Normandie* [Lower Normandy Regional Council] – *Conseil Régional de Haute-Normandie* [Upper Normandy Regional Council] – *Voies Navigables de France* (VNF) [French Waterways] – *Logistique Seine Normandie* (LSN) [Seine Normandy Logistics].

⁴ Antoine Grumbach in the “Paris Rouen Le Havre Future of the Seine” seminar on 4 May, 2010

Figure 7: Traffic and market share on the Rouen-Hamburg line, in millions of twenty foot equivalent units

	Rouen	Le Havre	Dunkirk	Antwerp	Zeebrugge	Rotterdam	Bremen	Hamburg	Total
1990									
Twenty foot equivalent units	0.1	0.8	0.1	1.6	0.3	3.7	1.1	2.0	9.7
Market share (%)	1.0	8.2	1.0	16.5	3.1	38.1	11.3	20.6	100%
2010									
Twenty foot equivalent units	0.1	2.4	0.2	8.5	2.5	11.1	4.9	7.9	37.6
%/2009	+6	+5	-6	+16	+7	+14	+7	+13	+13
Market share (%)	0.3	6.4	0.5	22.6	6.6	29.5	13.0	21.0	100%

Source: Port internet sites (2011).

“This is one of the reasons why HAROPA was created: it’s not just increasing size just for the sake of increasing size, but to better tackle these new power relationships, to fix values for extremely mobile supply chains (Alix 2012: 29).”

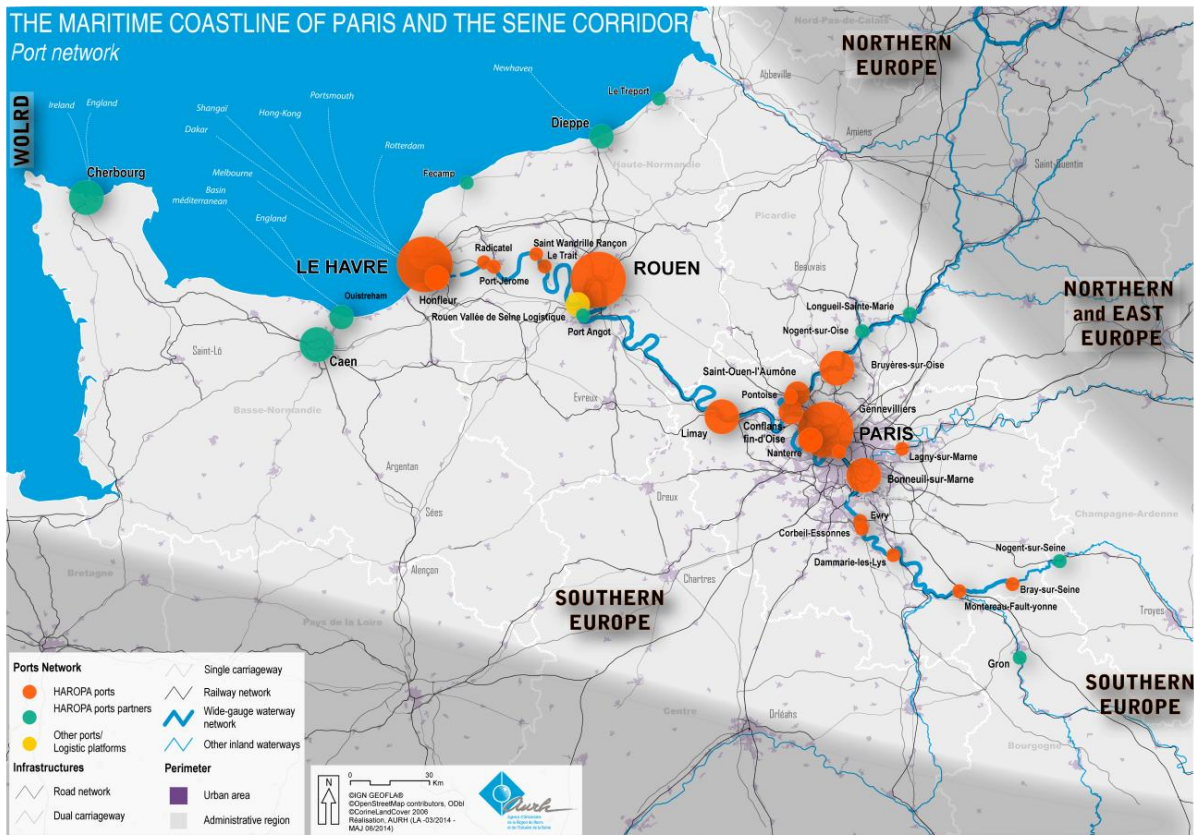
In January, 2012, the Economic Interest Group, HAROPA, was launched. This includes ports in the Seine River Valley: the maritime port of Le Havre, the largest freight container port in France, the maritime port of Rouen, the largest grains port in Europe, as well as the autonomous port of Paris, a key inland river French port.

This group ranks HAROPA as the 5th European port complex,⁵ conferring it with a greater European visibility. In the past few months, this cooperation has given rise to new partnerships (e.g. see Fig. 8), which prove the shared interests between Norman ports and Seine River ports and show a double spatial

strategy that is both interior, with inland waterways, and coastal.

⁵ Traffic of 120 million tonnes of freight handled each year.

Figure 8: the Maritime Facade of Paris and the Seine River Corridor



Source: AURH

The study and analysis of transport infrastructures at a North-Western European scale, placed in a more complete geographical context, where population densities and port traffic are studied, allows us to highlight the Seine Gateway® potential. In 2012, 61.4% of total maritime traffic of the North-West European zone⁶, came through Belgian and Dutch ports, and took corridors outside of France. The share of Seine River Valley port traffic was 7.2% of the total maritime traffic of the North-West European zone in 2012 (Duszyński et al. 2014b). Faced with this dissymmetry, it is easy to understand the absence of a direct railway line between Le Havre and Mannheim. This missing link also shows a large development potential. Taking into account traffic capacities, Le Havre could raise its total capacity to 6 million twenty foot equivalent units. As traffic in the ports of Antwerp, Rotterdam and Zeebrugge continue to grow, it is clear that the Le

Havre-Mannheim axis has a large development potential, and this was recognised by the European Union when they classified this axis in the Atlantic Corridor with a TEN-T ranking. This ranking allows us to accompany the port development of the Seine River Valley by expanding its hinterlands towards the East, while, at the same time, tackling Northern Europe infrastructure congestion.

The role played by Seine Gateway® in the geography of North-Western European transport infrastructures: strengths and weaknesses

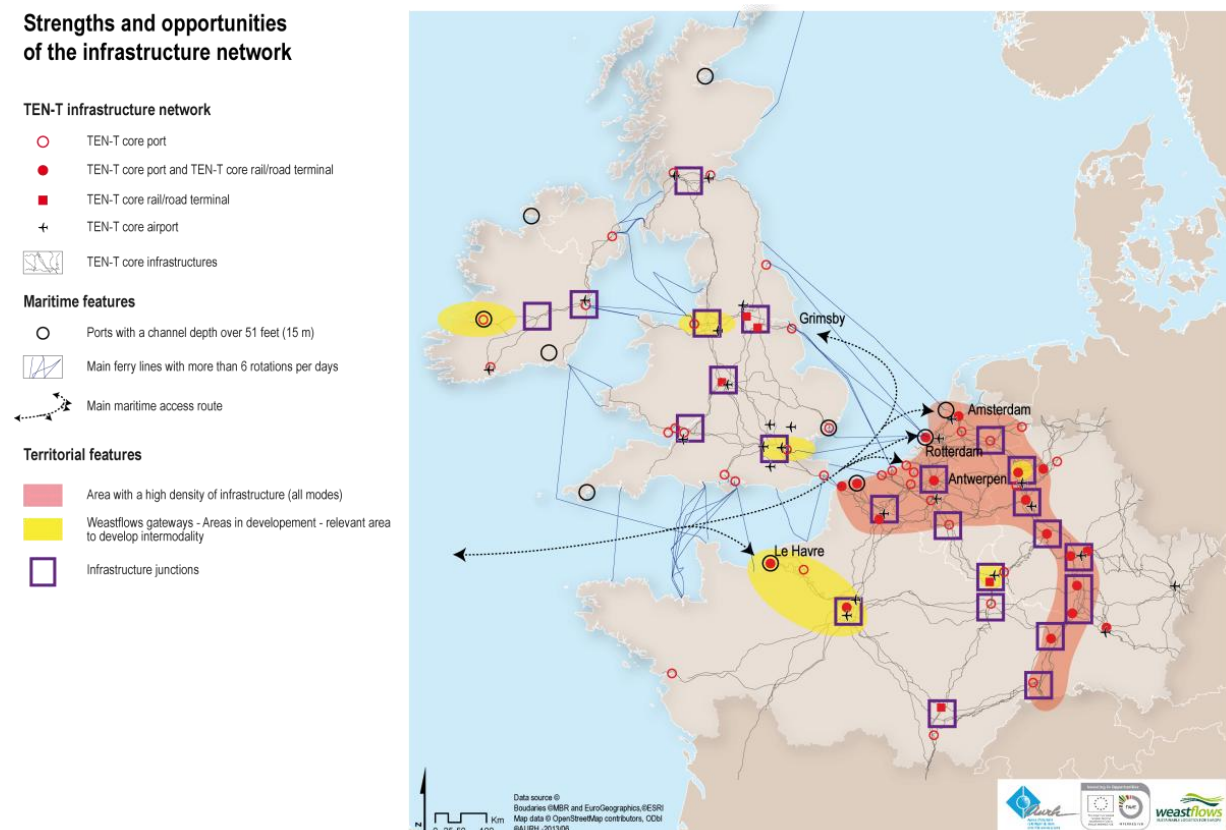
In terms of population and industrial density, Seine Gateway® is one of the densest and most dynamic; it is also the gateway that is the most Western one, in North-Western Europe, to the East of this infamous “fault line”. The Seine River Valley enjoys a strategic position with the Le Havre port, the first deep water port upstream from the Pas-de-Calais strait. As we can see in Figure 9, Seine Gateway® has port, railway and airport infrastructures that are a part of the Trans-European Network of Transport (TEN-T), with the Le Havre, Rouen and Paris ports and the Roissy-

⁶ Traffic from the Hamburg port is not taken into account here, as this port is located outside of the North-West European perimeter, which is the master perimeter of Interreg IVB programmes.

Charles de Gaulle and Orly airports. In terms of inland waterway transport, the Seine River can host deep-water ships, as it has a class V navigation level (in the ECMT classification), cf. Reference N° 3. Though it enjoys many assets, the Seine River Valley must also tack infrastructural weaknesses that hamper it in its position compared with North-Western Europe’s multi-connected zones. Congestion of the outskirts of Paris around Mantes-la-

Jolie, the distance between Parisian infrastructures and other North-West European ones, make it difficult to link the Seine River Valley to the heart of Europe’s multi-connected zones in Germany and Benelux. This relative distance is heightened from an inland waterway point of view by the marked discontinuity outside of the Normandy-Ile-de-France waterway network.

Figure 9: Map of the transport infrastructure strengths in North-Western Europe

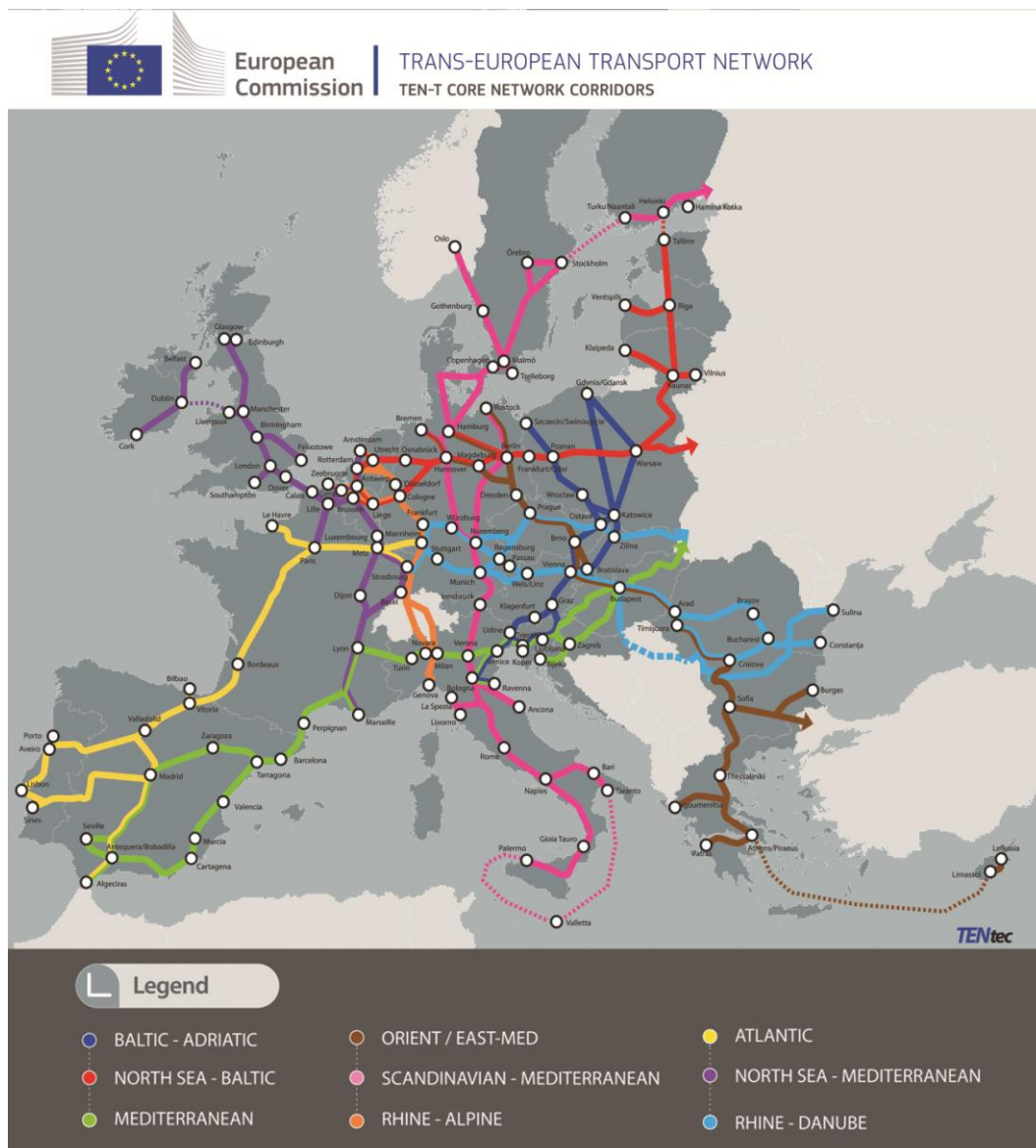


Source: AURH & Weastflows project

Faced with these strengths and weaknesses of the Seine River Valley, a corridor and gateway logic allows us to value the complementarity of freight transport infrastructures with an integrated approach to the transport system in order to better connect them to all territorial components. The European Union defines a European corridor as an axis that must include at least three transport modes, three Member States and three trans-border sections. The new European Union policy for transport infrastructures, made public in October, 2013 (e.g. see Fig. 10), lists priorities

that the Weastflows project share as goals, in the framework of gateway development, thus justifying this project once again: construction of missing links, resorption of bottle-necks and development of intermodal connections (Duszyński et al. 2014b).

Figure 10: TEN-T map



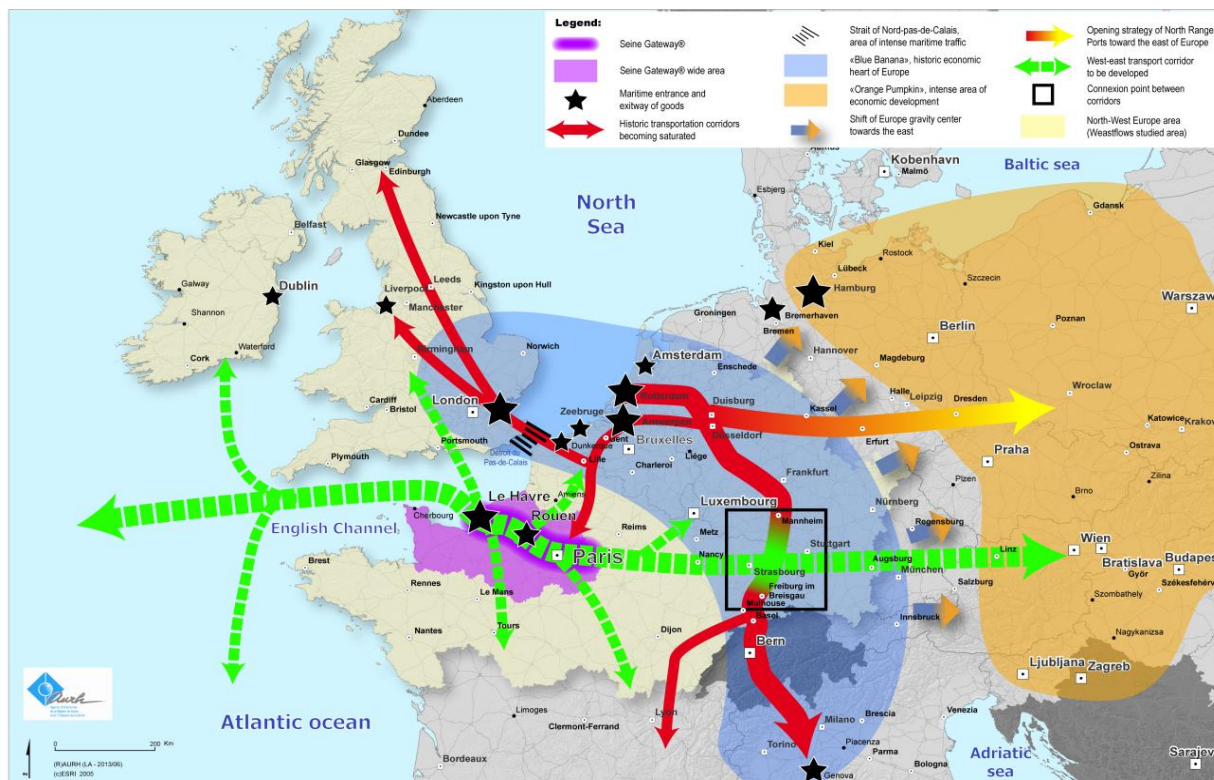
Source : European Commission <http://ec.europa.eu/transport/themes/infrastructure/ten-t-guidelines/corridors/doc/ten-t-corridor-map-2013.pdf>

Recognising the Seine River Valley as a key link in the Atlantic Corridor (cf. following map), characterises the entrance of the Seine River Valley into the European scope, which, until now, had completely forgotten about its Atlantic coastline. This so-called Atlantic Corridor links Lisbon to Madrid, Bilbao, and Bordeaux and in its east-west section: Le Havre, Rouen, Paris to Metz and Strasbourg up to Mannheim. This is the symbol of the recognition of work carried out since 2010 to develop this area and the justification of dynamics to be continued with the strategy of the HAROPA extension, put into place by the Paris-Normandy New Line and activation of the Seine Gateway®.

Conclusion: A strategic vision of Seine Gateway®: developing new routes to build the future of the region

With Weastflows, we are in the early stages of the development of a European gateway that will play an important part in global exchanges and that will include the East, as well as linking it to the West. In the context of a greater Europe towards the East, local stakes include etching a new European freight transport geography in which ports in the Seine River Valley, Normandy and Seine Gateway® will play the role of a much needed dowel pin to capture and organise freight flows.

Figure 11: Seine Gateway®'s strategic vision



Source: AURH

Ever since the Berlin Wall fell and borders were opened, the European backbone has gradually been shifting towards Eastern Europe. Global value streams coupled with the fact that Germany has transferred its activities towards the East, in particular to Poland, which has become its “factory”⁷, or the Czech Republic, are at stake. According to Eurostat, these two countries have the largest European GDP growth rates. This phenomenon is easy to identify, and has been shown in our maps measuring industrial and demographic densities.

The reality of this fault line that cuts through Europe must be taken into account to measure the importance of the goal that Le Havre, Normandy and the Seine River Valley have: that of staying “on the right side” of the line, staying where Northern and Eastern Europe’s economic force lies, rather than tipping towards the losing side of Europe, with its Southern and the Western parts. Because today Normandy is near this barrier and the more Europe thrives on its Eastern side, the

more Normandy finds itself at the limit, in a “dangerous Western position.” Though the “Blue Banana” or European backbone and now the “Orange Pumpkin” with Poland and the Czech Republic are tangible realities, being connected to these driving and thriving regions is one of the key stakes for the Seine River Valley. So economic and territorial dynamics depend on this. This is what we showed on the map with stakes of Seine Gateway® in Weastflows. This schematic illustration demonstrates the strong ambition our region has: Le Havre / Rouen, a European gate, well-placed to relieve traffic in the Pas-de-Calais strait (e.g. see Fig. 11).

Work carried out in Weastflows has allowed us to take a huge step recently. In November, 2013, the Paris-Le Havre axis was registered for the very first time in the network of European corridors published by the European Commission. This convergence of local, national and European interests: absorbing bottlenecks, building missing links, developing multiple mode connections and reducing greenhouse gas emissions, prioritises the implementation of Seine Gateway®, which is all the more necessary.

⁷ Contrary to France, German companies decided to outsource some parts of their value streams, which were less profitable.

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Electronic resources

The AURH in Weastflows

blog:www.aurhinweastflows.com

The official Weastflows project website:

www.weastflows.eu

GeoWeastflows, the cartographical platform:

<http://geo.weastflows.eu/>

The official AURH website:www.aurh.fr

IVB Interreg site: www.nweurope.eu

The official HAROPA website:

<http://www.haropaports.com/>

Seine Gateway® w centrum północno-zachodnich europejskich przepływów towarowych: regionalna dynamika oraz aktualne wyzwania

Abstrakt

W kontekście globalnych przepływów towarowych i wzrostu konkurencji między portami, niniejszy artykuł stanowi swoistą próbę odpowiedzi na pytanie w jaki sposób dolina rzeki Sekwany oraz porty zlokalizowane wzdłuż niej wpływają na zasięg europejskiej geograficznej wymiany towarów. W artykule omawiany jest stan infrastruktury transportowej rzeki Sekwany oraz kwestia możliwości, z którymi trzeba się zmierzyć w celu doprowadzenia do jej rozwoju. Strategiczne położenie pierwszego naturalnego portu przywozu w dolinie rzeki – Hawre, rodzi pytanie o intensyfikację wymiany Wschód-Zachód jako logicznego przesunięcia centrum Europy w kierunku Wschodu. Autorzy podejmują próbę odpowiedzi na pytanie czy ustanowienie Seine Gateway® prowadzi do zintensyfikowania przepływów towarowych w głąb lądu w obszarze doliny rzeki Sekwany.

Słowa kluczowe: Seine Gateway®, zrównoważona logistyka, transport towarowy, północno-zachodnia Europa, infrastruktura.

