

Summary

Container transfers at the Port of Rotterdam are expected to experience rapid growth until 2040. This will occur despite the economic crisis. To prevent gridlock on the roads around Rotterdam, inland waterway and short sea shipping must acquire a larger share of container transport. The various market parties themselves are generally regarded as already initiating the necessary changes for this to occur. A selection of measures will serve to expand hinterland transport capacity. It remains unclear however if this will in fact also strengthen the position of inland waterway and short sea shipping. The Dutch government's primary role herein is to reduce administrative barriers and burdens and to streamline spatial planning procedures. Moreover, governmental orchestration, in the form of bringing together all the various parties involved container transfers, is of crucial importance.

Motivation and objective of this research

This research of hinterland congestion and the role of waterborne transport was conducted against a backdrop of an increasing flow of containers arriving at the Port of Rotterdam. The Tweede Maasvlakte is being built to satisfy these growth demands. The Netherlands does not want to be choked by this increased flow of containers. At present, transporting containers to the hinterland is routinely done via the country's road network: in 2009, 56% of all containers were transported by road. To prevent the roads from becoming even more congested, it is vital to use railway and waterborne transport to their full potential. This report focuses on the possibilities for giving inland waterway and short sea shipping greater roles to play in container transport to the hinterland.

Owing to the Port of Rotterdam's prime location on the North Sea and the country's major rivers, it is indeed possible to allocate more container transfers to inland waterway and short sea shipping. Both the Port of Rotterdam Authority and the Dutch government have focused their policies on stimulating this development.

The objective of this research is to identify the developments in inland waterway and short sea shipping that can contribute to a sustainable and attainable hinterland connection to the Port of Rotterdam and surrounding seaports. KiM has also conducted research to determine if, and in what ways, the government can stimulate container transport via inland waterway and short sea shipping.

Expected growth of container flows and bottlenecks

Due to the economic crisis, in 2009 container transfers dropped precipitously by 16% in the Hamburg-Le Havre port range. However, compared to the big hits Hamburg (-28%) and Antwerp (-16%) took, the Port of Rotterdam's 10% decrease in container transfers is regarded as a positive development. In the first quarter of 2010, container transfers in most ports in the port range once again increased significantly, although the expectation remains that it will still be some time before container transfers return to the top levels experienced in 2008. The economic crisis has unquestionably made the future less certain.

Despite future uncertainties, various future scenarios can be used to support investment and policy decisions. Taken together, these various scenarios present a plausible bandwidth in which future developments are likely to unfold. Owing to the decline of the key economic drivers, in 2009 the average long-term developments

were once again fully within the bandwidth of long-term environmental scenarios, as established by the Netherlands' various planning agencies. Kim concluded that the bandwidth between the highest and lowest growth rate scenario remains a plausible starting point for a robust long-term outlook for the anticipated growth of container flows. Depending on the future scenario, by 2040 long-term container transfers in the Netherlands will have increased to 145 million tons in the 'Regional Communities' scenario and to 540 million tons in the 'Global Economy' scenario²⁶. Compared to the current level of slightly more than 100 million tons of container transfers, this marks a growth of approximately 40% to 425%.

In all scenarios, the largest growth is expected to occur in short sea shipping of sea containers. However, container transport via the hinterland modalities of road, inland waterways and railway will also substantially increase. In future, container transport especially via road to and from Rotterdam, and to a lesser extent via rail and inland waterway shipping, will face capacity bottlenecks and congestion in the hinterland infrastructure. Over the longer term, road container transport on the hinterland junctions will particularly encounter congestion problems created passenger car traffic.

Opportunities for short sea and inland waterway shipping

Based on desk research and 'open interviews' with representatives from industry and the scientific community, the following ten proposals were compiled to give mainport Rotterdam possibilities for expanding its waterborne container transport capacity:

1. Developing container transfer terminals situated just outside the port area;
2. For the Tweede Maasvlakte, the Port of Rotterdam Authority's stated ambition is that more goods must be transported via inland waterways and railway, and less by road;
3. For European destinations, more sea-sea transfers from large, intercontinental route-sailing container ships to smaller vessels;
4. Develop inland waterway terminals in the hinterland that, in addition to container transfers, also perform the border and customs duties traditionally handled by sea terminals (extended gates)
5. Improve information systems in vehicles and ships;
6. Improve the information flow in the transport chain and between shippers/carriers;
7. Accelerate the execution of overdue maintenance operations on the national waterways;
8. Alleviate bottlenecks in the international waterway infrastructure and associated network of container transfer terminals;
9. 'Greening' of the goods chain;
10. Develop secure lanes for inland waterways.

All of the above-stated proposals involve the Ministry of Transport, Public Works and Water Management and have already been initiated or are in their initial stage of development: conceptual stage, pilot stage, or first practical application. In terms of quality and capacity, these ten proposals are key building blocks for the transition to a stronger hinterland transport system. The majority of these proposals do not automatically strengthen waterborne container transport's competitive

²⁶ The scenarios will be discussed in Chapter 2.

position with regard to other modalities. In some cases the proposals stimulate inland waterway shipping as well as road transport. In this growth market, many of the measures also do not automatically guarantee that inland waterway shipping will acquire a larger or even equal share of the hinterland transport market.

A 'greening' of the hinterland transport market requires an internalization of the external environmental costs of all the modalities involved, and hence inland waterway shipping would be in relatively favourable position compared to other modalities, although the 'cleanest mode' does not yet exist.

What can government do to exploit these opportunities

The ten proposals were evaluated based on an economic framework of public interests. What emerged from this is the realisation that the government's role is seemingly limited in terms of implementation. In many cases, implementation of these proposals is already underway. The Port of Rotterdam plays a key role in this. Additionally, there are enough financial incentives in place to encourage market participants to initiate change, including, in some cases, with additional financial assistance from the government. The government's role is primarily to streamline spatial planning procedures and to mitigate administrative barriers and burdens. Economists refer to this as reducing government failure. In this framework, the public management perspective acquires added value. From this we come to understand that the government should not only play a facilitating role in mitigating government failure but must also assume an orchestrating role in bringing together all the various parties involved in container transfers.