

## What next on the European agenda for inland navigation

*Bart Kuipers, Erasmus Universiteit Rotterdam*



I will present a research project about the demands of pan-European shippers (e.g. Heineken, Unilever, Cargill,...) towards logistics and the inland waterway transport. We distinguished 5 very strong demand factors. Inland navigation must find ways to adapt to current and future needs of their customers.

### 5 trends that shape the industry

The world is constantly changing. Shippers need to adapt to these new environments (e.g. influence of the Chinese economy, the oil prices and new technological developments such as the Internet of Things). This also leads global shippers to adapt their logistics strategies accordingly. When the business environment is changing, the logistics chain will have to follow suit. Logistics service providers also have to adapt their strategies

to stay relevant for their customers.

Some examples:

- ❑ In the 1970/80s: price was the main issues for shipping companies.
- ❑ In the 1990/10s: quality and service became increasingly important, services had to be innovation-oriented and responsive to new demands.
- ❑ In the 2010/20s: sustainability and flexibility are key, there is a trend to commoditisation, customers are looking for trusted partners and visibility/transparency.

This led to 5 new demands that shape the agenda of the future.

### Demand #1 towards 2020: Sustainable transport chains

It is increasingly important to show the ecological impact of transport for each logistics chain. Shippers are looking for green and sustainable modes of transport for their goods – preferably without any extra costs. The share of transport costs in the turnover can be up to 20%. Transport has to prove that it is the cleanest mode and show their carbon footprint to shippers. In that sense, IWT performs well, but the competitive advantage compared to road transport is dwindling.

### Demand #2 towards 2020: Total flexibility towards the customer!

Customers demand more and more flexibility from their logistics providers. Contargo is a good example of a tri-modal company that offers different transport options to its customers. That way the cargo is always shipped via the better route. They adapt the mode of transport according to the needs, the congestion and unforeseen circumstances. They offer advice to shippers on the best way to get their cargo to the right place within the specified criteria. This gives them a competitive advantage.

### Demand #3 towards 2030: Transport is a commodity – commoditisation of transport

Like water, transport is a given. It should be readily available, clean and of good quality. And at a competitive price! That's why transport is increasingly 'virtualised' (increasingly outsourced). The way transport happens is irrelevant for shippers: they are not looking to inland waterway transport as such, but rather need a comprehensive logistics service. The inland shipping sector should develop itself from a supplier of inland shipping solutions to a supplier of logistics services solutions.

Danser container group is a good example of this. It also offer rail and road besides IWT. The main promise is to get their customers' goods to their destination at the right time and right cost, whatever happens.

### Demand #4 towards 2030: Trust

The demand shifts from 'reliability' towards 'trust'. Logistics providers should become more pro-active and 'culture-driven'. We need to move from 'performance' towards 'understanding' the needs of customers. We need to be able to honestly share the benefits of joint network development between logistics partners. Collaborative planning practices and Cross Chain Control Centres will become the norm. Closer cooperation in the logistics chains will help solve bottlenecks and improve services.

### Demand #5 towards 2030: visibility and transparency

Customers are looking for transparent logistics chains. We need to integrate information about the situation on the

waterways with logistics transport operations. RIS, IT infrastructure, smart waterways are primordial for this. Planning capabilities need to be improved. This will increase the efficiency of inland waterway transport by limiting waiting times and unreliability (locks, deep-sea container terminals etc.).

The Next Logic' initiative aims at increasing transparency and visibility for inland container shipping in the port of Rotterdam. It increases transparency. At any moment, they know what is happening with their cargo and they can organise alternatives if there are problems ahead.

## The strategic fields of work from Platina 2 answer to these 5 demands

- ❑ Improving market conditions is very much related to commoditisation. IWT increasingly moves from inland navigation operations to holistic logistics operations.
- ❑ Modernising the fleet is linked to sustainability. Innovations are aimed at further greening of inland waterway transport and make it more energy efficient.
- ❑ Developing human capital and training new recruits goes in line with the demand for trust. Platina 2 develops new business practices for cooperation in the logistic chains and is instrumental in new understandings of the demands.
- ❑ We need to strengthen the image of inland navigation. Flexibility will help solve the problems of logistics providers. They gradually move towards becoming full logistics service operators.
- ❑ Improving infrastructure goes in line with visibility & transparency. We need to be ready for the Next Economy and make IWT smart.

## Trends for the coming years

**Internet of Things** will bring a great potential for applications in inland shipping and infrastructure. Cargo and infrastructure will become increasingly intelligent. The waterways need to follow!

**Synchromodal transport** is the answer to new logistics demand concepts. It was invented in Rotterdam and uses different transport modes according to the transport capacity. It is an integrated logistics solution based on customer demand characteristics. It is a development comparable with Uber and AirBnB in which the offer organically matches the demand.

In transport, the logistics demands and customer characteristics are steering the use of transport modalities according to timing and availability of cargo at the lowest price and greenest ecological footprint. Switching between modalities will become easier and this could create more use of inland waterway transport. This will increase flexibility towards the markets and make hinterland logistics more sustainable. It will also lead to efficiency gains at the deep-sea terminals and reduce empty sailings. This will differentiate logistics services to hinterland.

There is also a shift from **Pull to Push**. Deep sea containers are pushed more into the hinterland terminals where there is better access to a network of logistics providers and services. This requires more trust, cooperation, innovation and a strong network that reaches out from Rotterdam into Europe.

The **circular & bio-based economy** also offers a lot of potential for inland waterway transport. There is an increased focus on reusing and recycling goods. The waste terminal in Delft is a good example of this new market. As for the bio-based economy, the port of Amsterdam receives cooking oil from all over the country and turns it into biofuel. This is a very promising market with huge opportunities for the future.

## Questions & answers

**Q: When talking about the carbon footprint of transport, did you take into account the footprint from cradle to grave or only during use?**

A: There is indeed a big difference between the footprint of transport only and the CO<sub>2</sub> generated during the whole lifespan of a barge (building, using, scrapping). Shippers nowadays demand the footprint of the transport used for shipping goods. Sustainable transport has become a requirement.

**Q: What is the role of different stakeholders in greening of transportation? What do you expect from governments, from shippers, etc.**

A: If governments are serious then they should take action in 2 directions. First they need to stimulate innovation (develop new technologies), but secondly also actions need to be taken to green the existing fleet e.g. retrofit ships with LNG. Governments can steer this through subsidies and regulations.

**Q: What about social sustainability? If there is a drive towards further flexibility, what effect will this have on the boatmen.**

A: Flexibility is more about transportation flexibility and not so much about labour flexibility. We need to solve bottlenecks and increase flexibility to make sure cargo can be transported in the most efficient way. A bit like Danser does