Final Event

Conference Report

Rotterdam, 5 February 2016

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WELCOME

Frits Gronsveld, President Board of Directors, STC-Group

It is an honour to welcome you in Rotterdam at STC-Group.

STC-Group provides training and knowledge for the navigation, transport and harbour industries. Our headquarters in Rotterdam provide training for thousands of students and professionals and has one of the largest simulator parks in the sector. Our organisation offers in-house training, vocational training, a master programme and a number of certified training courses. Our educational model adheres to the Chinese saying: what I hear, I forget; what I see, I remember and what I practice, I understand. That's why our students are practicing their skills in task simulators, full-mission simulators, in labs and on the school ships that are moored in front of the building.

STC BV also delivers consultancy and applied research for navigation, logistics and transport all over the world. STC-Group has offices in South-Africa, Brazil, Vietnam and the Philippines, but also has activities in Oman and Kazakhstan. We advise governments across the world to make efficient use of inland navigation.

STC-Group has an obvious interest of in Platina 2 because of its educational component. We are happy we can be part of a European project that aims to harmonise training and education standards for internal waterway transport across Europe. For us, it is important to keep education close to reality so that it serves the needs of the sector in the best possible way.

We are convinced that internal navigation can become a logistics service provider that is able to compete with road transport. But before that, we need to address a few challenges. An increased drive towards digitalisation is one of them, reducing our carbon footprint another. (Future) logistics decision makers need to be made aware of the possibilities and advantages of inland waterway transport. When we address these issues, the future of inland navigation will be promising.

And this conference is definitely looking to the future. A lot of work has been done within Platina 2, so now it is time to ensure its follow up and implementation. I wish you a pleasant day with fruitful discussion.

OPENING SPEECH

Dimitrios Theologitis, European Commission

I would like to thank STC-group for hosting us in this impressive theatre with a stunning view over Rotterdam harbour.

In order to look into the future, we need to be aware of the past. In 2006, the European Commission adopted the Naiades policy package. And even though it was considered a good policy frame, the industry was gnashing its teeth because initially, it did not come with money to implement the policies. Platina was the answer.

In 2008, Platina made the implementation of the Naiades programme possible. Platina 1 & 2 ran over 7 years, invested 11 million euro into 33 deliverables with the expertise of 24 project partners. Platina addressed the challenges for inland navigation in 60 actions, ranging from infrastructure, markets, RIS, human resources and more.

I would like to thank the whole team for contributing all their knowledge, wisdom, time and work. The work went far beyond the 33 deliverables. There was a need for cooperation, for factual information, consultation with the sector and networking between the stakeholders. Platina did all of that. In that sense, it has been a truly successful project that has really helped shape inland navigation and its future.

But what is next? The joined efforts should not stop here. I hope this final conference will give us and your ideas on how to continue to make inland waterway transport fully part of multi-modal transport solutions.

Towards more reliable emission data for the external cost calculation of IWT

Nathaly Dasburg-Tromp, STC B.V., member of STC-Group

We reviewed the quality of datasets used to calculate emissions and external costs for Inland Waterway Transport (IWT) at EU level (€/tkm). We had a look at what data is needed and what is available. This allowed us to identify the knowledge gaps regarding the external costs of emissions to air. Based on these conclusions, we made recommendations on how to close the main gaps and validate these with the sector.

Review of the findings

We did not compare the methodologies for data collection but focused on the data behind it.

Logistics parameters

- There are no complete and reliable datasets available on European level regarding vessel kilometres and average load factor.
- Load (on loaded trips) often depends on the available water depth. Especially in free-flowing sections of waterways this fluctuates, just as well as their bandwidth.
- We also found a huge gap in information regarding the share of empty sailings. The only information available is the voluntary Eurostat data table.
- Eurostat statistics contain only two categories for vessels over 1500 tonnes. We need more differentiation between vessel size classes (especially for large vessels and coupled units)

Energy consumption

- The specific energy consumption differs from waterway to waterway and per vessel type. Models are used to estimate fuel consumption.
- However there is no representative dataset available on actual fuel consumption, measured in real life.
- There is limited information on the parameters that influence fuel consumption: there is for instance only limited data about the effect of sailing speed on the fuel consumption (and emissions).

Emission parameters

- Real world emission factors NOx and PM2.5 are unknown.
- Emission factors for LNG engines are hardly known yet.
- Information on auxiliary engines is largely missing, we have only limited information on the power they provide and the use made of them.

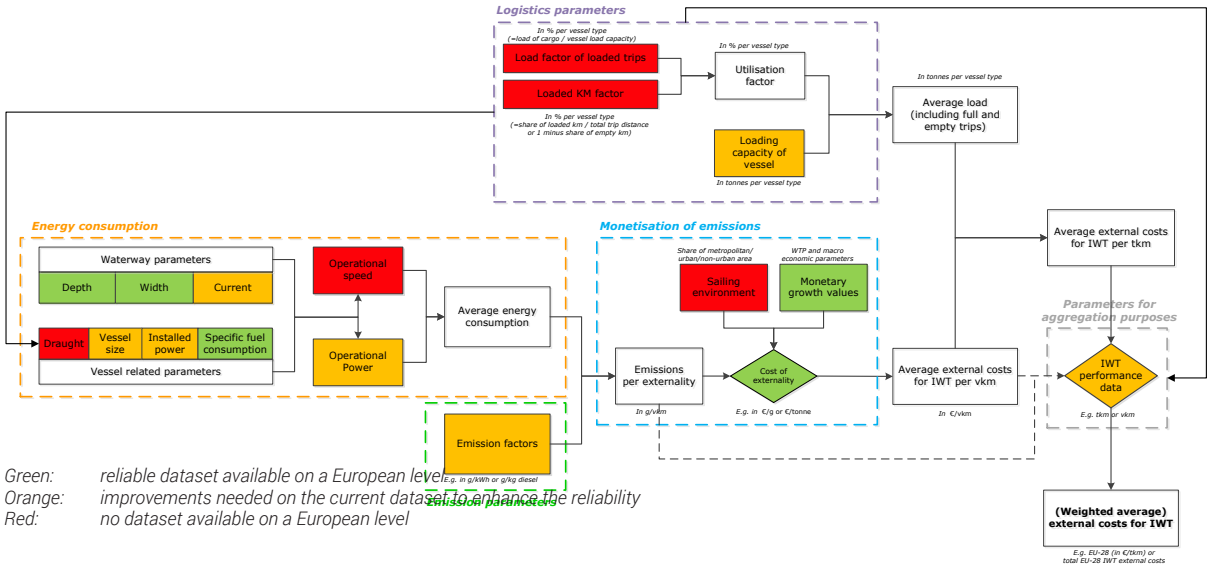
Monetisation

- We found big differences between countries and types of areas as regards the shadow prices for NOx and PM.
- We need more detailed information on the geographic breakdown of the traffic and transport performance: e.g. not only consider rural areas, vessels also pass urban areas.

Aggregation

- Significant information about inland waterway transport gets lost when translating information from a single dataset per trip (where possible) to the aggregated Eurostat statistics.

Visual overview of the main gaps in data



Green: *reliable dataset available on a European level*
Orange: *improvements needed on the current dataset to enhance the reliability*
Red: *no dataset available on a European level*

Recommendations

1. We need to collect data on fuel consumption and develop reliable models based on accurate speeds and waterway information. We could use RIS sources: AIS in combination with ECDIS, NtS,…
2. We need more reliable data on the average tonnage carried by inland vessels per travelled kilometre, properly taking into account the share of empty trips. We could use German data from DESTATIS and extrapolate to similar countries/situations, explore options to use AIS to determine the total km sailed and the load per km, or ask Eurostat/National Statistics Institutes to provide more data.
3. To address the lack of geographic detail to determine impact of NOx and PM2.5 emissions by inland waterway transport, we need to make use of GIS, OD-flow data (e.g. ETIS+) and explore if it is possible to use AIS or TENtec.

Stakeholder exchange activities

These findings were validated with the sector at a Platina 2 expert workshop (5 October 2015, Brussels) and a working group meeting on Inland Waterway Statistics with National Statistics Offices (6 November 2015, Luxembourg). Based on these exchanges, we developed a paper as input for the CESNI Group to explore how we could add consumption and emission data on a variety of engines.

Some concrete outcomes

- As the current data is not reliable, there is no basis yet to start discussions about internalising external costs. The data quality needs to be improved first before any comparison of aggregated external costs of different transport modes can be compared.
- As the legal framework regarding data collection on EU level cannot be changed on short term, we need to focus on voluntary actions in the meantime to close data gaps.
- EUROSTAT and NSIs could take the following voluntary actions:
  - Explore how to use energy statistics as a basis to determine fuel consumption and CO2 emission.
  - Address the lack of information about the empty trips/sailings.
  - Expand the information about different vessel sizes (especially the larger classes).
- CDNI fuel bunkering information can be used to estimate fuel consumption on a macro level. A research project and publication is already planned by CCNR in the framework of the Market Observation of IWT in the EU.
- It is too costly to extract aggregated and anonymise data from AIS. There is too much data and it would require too much effort from NSIs and EUROSTAT. Building on CoRISMA seems more appropriate, involving national RIS authorities. Aggregated AIS data could possibly be supported by the European Commission as a Connecting Europe Facility project.
- We could think of extending the European Hull DataBase with more accurate engine information. CESNI mentioned in its draft work programme: “Adaptation of ES-TRIN in relation to the content and the functions of the European

hull database" which would link the 2 databases and provide more info on engines.

- Another option would be to improve the IVR database with more accurate data on installed engines, validated by ship owners and possibly linked to EHDB. This database can be adapted without changing the legal basis. The question remains whether ship owners will be happy to input data and effectively feed the database with accurate information.
- PROMINENT is currently measuring real world fuel consumption and emissions.
- TENtec 2016 will have a call for tender to collect data on IWT related to their geographical position (Lot 2 call for tender MOVE/B1/2014-527).

Questions and answers

Q: Where you surprised to see lack of data?

A: Yes and no. The key indicator for emissions is fuel consumption. There are some studies, but not all that many. This work also shows the complexity of this kind of calculations. A central database validated by experts and the sector would be a good step forward.

Q: Would you prefer legal or voluntary actions to improve this data?

A: That doesn't matter so much, as long as we obtain the most accurate information possible.

Q: We need a lot of data, as it helps entrepreneur to see the real cost of IWT. Did you compare with other industries? e.g. road, sea,… How do they do it? Can we learn from them?

A: We did not compare to other transportation modes. For IWT, the emission calculation is more complex than other transport modes. There is a large variety in vessels, types of waterways, sailing conditions. That is why getting accurate data on emissions for IWT is more complicated than e.g. road transport.

Q: How does road transport know their average fuel consumption?

A: Average car fuel consumption and emissions are known. You multiply the distance with the average emission of the truck divided by the cargo. For internal waterway transport, there are estimates but the challenge is to unify the information in a standard way so that they are truly comparable.

Q: This piece of work focuses on emissions and fuel consumption. But Voies Navigables de France go a step further and also calculate e.g. damage to infrastructure and the cost to repair it. There is a wider impact of transport than only emissions. Did you take that into account?

A: We know that there is an impact on a variety of external aspects: noise, damage, etc. However, within this study, we focussed only on NOx and PM. The other elements could be brought into the equation in a future study.

Q: Did you look at other fuel types such as GTL, electric propulsion, etc.

A: For the emission indicators, we looked at LNG, Diesel, GTL and also other fuel types. However, most information is available about diesel engines as they are most known and most popular. There is scope for more research into other energy sources.

Comment: At the ISPRA research facilities in Italy, a working group is working on emission standards for different modes of transport. We could have a look at that.

A: Newer engines are indeed cleaner. We hope to be able to improve our data in the next 5 years to be able to compare IWT with other modes of transport. This would allow for evidence-based decision making.

Q: Within Royal BLN-Schuttevaer, we ask our members about their fuel consumption in relation to their trajectory. We started this pilot project with 20 ship owners. How big should the sample be to extrapolate?

A: This is a great pilot project to get a first estimate. Of course we need something similar also from other countries. The sample size depends on the size of the fleet, to be representative and valid.

How to attract continental cargo in North-West Europe

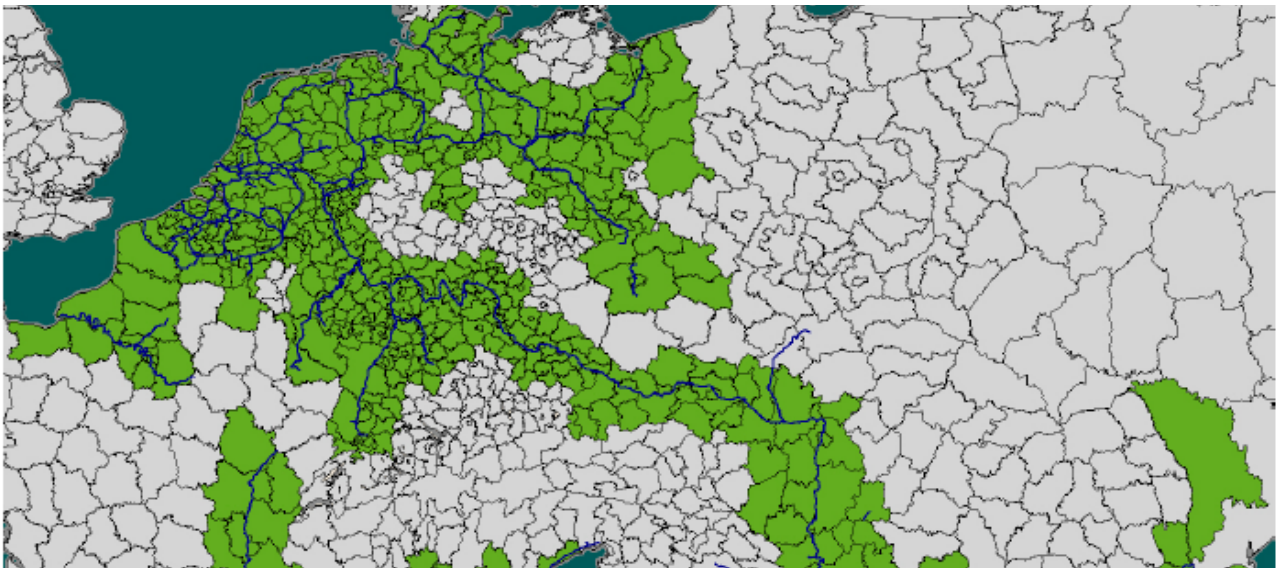
Paul Lambrechts, Promotie Binnenvaart Vlaanderen

Inland Waterway Transport (IWT) already has a large share in transport in North-West Europe. But if you check the numbers on continental transport, IWT is virtually non-existing even though there is potential and connections are getting better and better.

According to our analysis, the reason for the lack of uptake of IWT in continental transport lies in the limited offer of containers suitable for inland navigation. Most of the container transport goes from the sea ports to the hinterland, even though there is capacity and potential to use container transport also for continental transport. The demand never reached the supply.

Macro analysis potential

We investigated the market potential for the continental IWT market (NUTS-3 regions). We compared the Origin-Destination flows of the cargo on the road and by maritime containers between regions that are also serviced by IWT. We mapped the import/export flows and analysed the potential for continental containerised cargo to be transported by IWT.



Graph: regions between which IWT could play a role.

Regions / corridors	Road continental flows (in tonnes)
Antwerp (BE) / Rotterdam (NL) – Middle Danube (HU)	70,840,054
Antwerp (BE) / Rotterdam (NL) – Czech R. (including freight transported between these regions)[4]	31,599,014
Koblenz (DE) / Rotterdam (NL) – Moselle (FR/LU/DE)	27,053,125
Antwerp (BE) / Rotterdam (NL) – Poland	12,318,482
Rhône – Saône Bassin (FR)	16,049,483
Antwerp (BE) / Rotterdam (NL) – Basel (CH) (including freight transported between these regions) [5]	14,645,963
Antwerp (BE) / Rotterdam (NL) – Neckar	13,102,238
North-West France (FR) – Ruhr Area (DE)	25,883,996
Ruhr Area (DE) – Bremen (DE)	6,213,355
Antwerp (BE) – Rotterdam (NL) – Northern Netherlands (NL)	5,506,347
Middle Danube (HU) – Lower Danube (RO)	2,844,048
Ruhr Area (DE) – Northern Netherlands (NL)	2,722,914
Ruhr Area (DE) – Hamburg (DE)	2,086,098
Po River (IT)	2,052,215
Seine River Bassin (FR)	1,671,564

Table: cargo currently shipped by road.

We estimate that 67.5 million tonnes of the cargo currently transported by road is also suited for intermodal transport along to the existing waterway corridors.

Of course, we need to take into account certain scales such as load factors, empty sailings, etc. but this analysis gives a general overview of the potential.

Comparison modal shift studies

We analysed ELAN and existing case studies of modal shifts on an operational level and extracted the drivers that would generate a modal shift towards the use of IWT and the bottlenecks.

Success factors for shifting cargo

- Offering strategic (mid and long term) and immediate advantages (cost reduction) to the shipper thanks to the intermodal shift (less road taxes, less delay due to road congestion).
- Efficiency in the operational flows: enhancing the operational flow always offers a direct advantage on at least one of the determining factors. This reduces costs.
- Handling costs: the "vertical transport" is the preponderant element in the transport cost and the key to an efficient transport operation. All the KPIs need to come together for the shippers.
- Cooperation: both between the shippers and between the logistic operators. It offers the opportunity for bundling cargo streams and to enhance the operational flows. Bundling needs to be done by the logistics service provider – flows need to be big enough.

Bottlenecks identified preventing the modal shift

- Lack of fitting and competitive intermodal transport units. The 45' pallet wide high cube short sea shipping container seems the most appropriate intermodal unit for continental container transport. Currently it is not available for continental transport, it comes from short sea shipping (only available in hinterland shipment of short sea cargo).
- Handling operations (in cost and time), especially where there are no direct waterway connections to major production plants/distribution centres. More handling needed in intermodal transport. Containers are considerably faster to handle than bulk transport – but there need to be enough goods to be able to use IWT efficiently.
- Investments in superstructure and infrastructure are often required though making use of existing services sometimes offers an answer. Origin-Destination connections to industrial areas that are not directly connected to waterways need to be made.

Business models

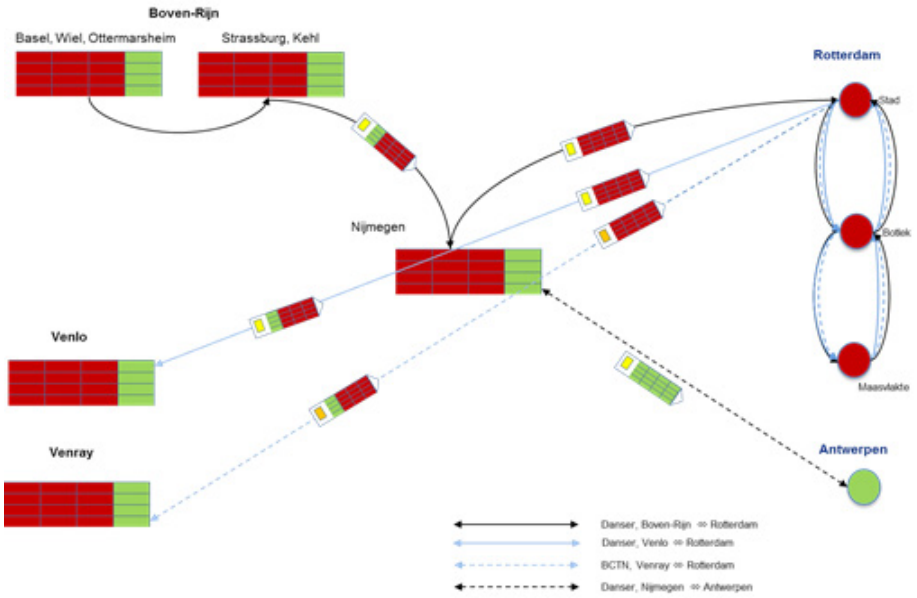
There are different perspectives towards using IWT for continental transport, which all have a different ownership structure, different types of services offered, a need for different access to shippers and consumers. Partnerships that meet the needs of these different perspectives are a determinant factor for a modal shift.

- **Shipping line perspective:** transition from port-to-port services towards door-to-door services, existing network of container terminals – handling import/export by maritime company or shipping line.
- **Deep-sea-terminal perspective:** Control in hinterland operations. Establish a hub in hinterland, terminal in the port – evoked by port authorities themselves. Exclusive connections to hinterland by terminal operator or port.
- **Hinterland operator perspective:** Efficient hinterland services following sufficient demand (mainly in port) - servicing hinterland of that port.
- **Service area perspective:** Terminal operators focus on regional accessibility combined with long-term commitment of shippers for terminal/barge services to sea ports, public cooperation (hinterland platform with providers and industry to serve ports and other areas).
- **Neutral service provider perspective:** Supply chain in control of logistics services providers/ freight forwarders who have partnerships/contractual agreements with specific inland terminals – open terminal where everybody can offer services: rail, road,…

Operational models

We need to create new kinds of operations between systems that go further than only directing services towards ports. Systems need to be consolidated in order to be successful.

The pilot project of BCTN / Danser according to a Hub, Hop and Consolidation model (spokes in 2 directions – see graph) services a lot of different terminals, which generates potential for IWT for continental transport.



Next steps to attract cargo to IWT for continental transport

According to the macro analysis, we need to tap into the continental market for IWT. We need to make a technical analysis of transport equipment needed and potential actors involved.

We need to implement the recommendations to solve the bottlenecks. For example offering more inland waterway container transport (not only to/from sea).

A further analysis of the commercial and operational relationships can help us shape the organisation and structure for continental transport chains, including inland waterways

Questions & Answers

Q: Who plays key role in all this?

A: Logistics service providers are key because they decide which transport modes they offer (IWT, containers, rail, etc.). They need to see how they can provide new services combining different types of transport. We need to make shippers aware once there is a new multimodal offer.

Money will remain the main factor in the choice of transport. Shippers will choose the cost model that is most advantageous for them. This is interlinked with the flow, operations, bundling,…

Logistics providers are key people in this shift, but also terminal operators and logistics container providers need to follow suit. They are aware there is a market, but there needs to be some uptake first. But if they don't offer adapted services, the uptake will be slower. It is a chicken-and-egg situation.

Comment: BCTN and Danser saw opportunities for the pilot to overcome such barriers. They bought 45" pallet-wide containers which seem to be most suitable for handling for continental transport.

Q: There is large economic potential for continental IWT? What effect will this modal shift have? Will megaships in sea ports lead to a congestion of the hinterland?

A: It is true that the infrastructure of inland waterway container terminals need to evolve along to be able to handle more containers. But currently the bottlenecks are not in hinterland terminals but rather in sea ports (in & out of ports). For the time being there is room enough in the inland terminals. So there is room to expand.

Q: How can IWT comply with industrial needs?

A: In our analysis we took the industrial flow into account. We only analysed the potential of transport between areas located around waterway corridors and compared the potential of IWT versus road. There are a lot of initiatives already to get more cargo to IWT e.g. in Flanders we are experimenting with pallet loads.

Comment: For shippers, the shipping cost is more than the price of IWT alone. They need to get information for door-to-door services. They need to see the full picture. In industrial areas, companies are interested in truckloads, not bulk. The IWT sector needs to provide the 'portions' that the industry needs. The way forward is increased cooperation and bundling. Bundling that should be done by the operator instead of the industry.

How to attract new markets in the Danube region

Milica Gvozdic, viadonau

Similarly to the analysis of the potential of IWT for continental transport in North-West-Europe, we made a summary of the unused potential of inland navigation in the Danube region. We also had a look at the supportive measures that could increase the use of inland waterway transport for specific promising cargo groups.

Market analysis for the Danube corridor

We analysed 7 cargo types and 28 products regarding the volumes that are shipped around the Danube region. We also checked what equipment would be needed along the river to make the shift to IWT for those goods. For example, if Germany ships lots of soy, we checked the potential need for soy in other regions along the Danube.

We used a traffic light system to indicate the potential: green indicates a very high potential, red a very low potential.

The only type of cargo that would not have potential to be shipped by IWT is sugar beet. The reason evoked by shippers for this is that sugar beets are mostly processed locally and the damage during transshipment to this natural product is very high.

Cargo	Main points of origin	Main points of destination	Potential
Round wood	DE, AT, HU, BG, UA	DE, AT, RO	
Sawn wood	DE, AT, BG, RO, UA,	DE, AT, HU	
Wood-based Panels	DE, AT, RO	All (except MD)	
Pellets	DE, AT, RO	DE, AT	
Wheat	DE, AT, HU, RS, BG, RO, UA,	DE, AT	
Maize	HU, RS, BG, RO, UA	DE, AT	
Bioethanol	Domestic		
Soybean	AT, HR, RS, RO, MD, UA	DE	
Rape	AT, HU	DE, AT	
Sunflower seeds	HU, BG, RO, UA	DE, AT, RO	
Biodiesel	DE, AT, BG, RO, UA	DE, AT, RO	
Sugar beet	Regional		
Cars	DE, SK, RO	DE, AT, HU, UA	
Chemical products	DE, AT, SK, HU	DE, AT, SK, HU, RO	
Cement	DE, SK, HR	DE, AT, HU, UA	
Salt	DE, AT, RO, UA	DE, HU	
Iron ore	UA	AT, SK, (RS), RO	
Steel	DE, UA	DE	
Crude oil	NON-EU	All	
Diesel & gas fuel	DE, SK, HU	SK, HU	
Gasoline	DE, AT, SK, HU, HR, BG, MD, UA	DE, AT, SK, HR, BG, MD, UA	
LNG	Non-EU		
Coal	DE, AT, HU,	AT, SK, HU, RO	
Metal scrap	DE, AT, RO	DE, AT	
Waste paper	DE, AT, HU	DE, AT	
Used glass	DE, AT	AT, DE	
High & Heavy	All	All	

Testing the market transfer conditions

In March 2014, we discussed the prerequisites for modal shift towards IWT at the Danube Business Talks within the Naiades Dialogue for a number of types of cargo (150 participants).

High & Heavy cargo

Advantages of IWT:

- Large loading capacity compared to trucks and railway wagons (weight and dimensions) > for the first time potential customers got an impression of vessel dimensions.
- No time restrictions during transport (no weekend driving ban, traffic jams, accidents, etc.).
- No costly transit permits in international transport.
- No complex route planning (traffic lights, tunnels, bridges).
- Unique status in terms of cost efficiency boosts inland vessels potential for multi-modal concepts.

Challenges for IWT:

- Need for improvement and modernisation of infrastructure and handling equipment along the entire Danube River (e.g. missing RoRo ramps in Serbia, storage areas in ports, permanent equipment for transshipment of high & heavy cargo).
- Creating a higher degree of predictability in planning for forwarding companies as well as for clients.

Renewable resources

Advantages of IWT:

- Cost efficient transport solution, esp. for bulk cargo.
- High volume of renewable resources along the Danube axis, vast agricultural areas in the vicinity of ports and terminals, especially in Middle and Lower Danube countries.
- High loading capacity of Danube vessels (tonnage, volume).
- Reliable partners in Danube navigation with many years of experience of establishing transport chains for these products.
- High density of Danube ports with efficient handling and storage facilities for agricultural and forestry products.

Challenges for IWT:

- Need for expansion of transshipment equipment (e.g. more cranes, suction pumps for bulk) and special equipment (e.g. cleaning plants for barges).
- Need for expansion of storage capacities.
- Bundling of transports in order to ensure sufficient capacity utilisation.

We also tested the market transfer conditions on regional level in April 2015 in Enns, Austria (36 participants) and will do so again at the matchmaking B2B conference in Linz, 27-28 June 2016.

Recycling products: low value (such as used plastics, scrap glass, cellulose-based recycling products e.g. waste paper & waste wood)

Advantages of IWT:

- Cost efficient transport solution, esp. for bulk cargo.
- High volume of recycling products in urban areas and industrial locations along the Danube axis.
- High loading capacity of Danube vessels.
- Reliable partners in Danube navigation with many years of experience in transport, transshipment and storage of these products.
- High density of Danube ports with efficient handling and storage facilities.

Challenges for IWT:

- IWT are suitable mainly for iron scrap (long collection periods for other metal-based products).
- Short-term availability of barges hinders quick reactions to the market and presents concrete challenges fwor logistic providers.
- Volatile markets of recycling products, market situation changes on monthly basis. Difficult to plan in the long run.

Recommendations to facilitate market transfer

Neutral platforms are needed for the cooperation between Danube ports, shipping companies, forwarders and industry:

Support of existing cooperation platforms on national and international level

- Initiation of new cooperation formats.
- Fostering targeted events on specific topics e.g. more specific cargo types.

Provision of information and awareness raising about inland navigation and promising markets – for business sector

- Show cost advantage.
- Create & publish freely accessible information.
- Create user friendly & up-to-date information on:
- Promising markets on national and international level.
- Supply of transport/transshipment/storage along the entire Danube (ports profiles, logistics companies).

Promoting industrial locations in the vicinity of ports and terminals

- Foster Danube logistics promotion centres as "one-stop-shops" in Danube countries (provision of consulting and assistance to the industry from the initial planning phase of business locations followed by regular know-how exchange regarding Danube navigation).
- Continuous holistic service provision.

Ensure good navigation status and remove bottlenecks

- Fairway Rehabilitation and Maintenance Master Plan & FAIRway.

Simplification and harmonisation of administrative processes for inland waterway transports (esp. customs clearance, controls of the border police and navigation surveillance)

- Foster transnational working initiatives on control procedures e.g. Serbian-Hungarian, etc.

Improvement of facilities in ports and transshipment sites along the Danube

- Extension of national and international funding opportunities for port development on national and international level (co-financed projects esp. for downstream Danube ports).

Question & answers

Q: How to solve the problem of the volatile market?

A: Business people try to adapt to market changes. Our data is based on data of statistical offices. Volumes change but it is still relevant to get a view on the potential.

Q: How did you deal with continental cargo transport in the region?

A: We limited ourselves to the analysis of the potential for each product for each of the Danube countries.

Q: Fairway conditions have a lot of impact. Improving waterway conditions however depends on political will.

A: The good quality of the inland waterways is a precondition for the modal shift. This is an issue that cannot be quickly solved, but it needs to be addressed sooner rather than later.

Q: what are the differences and similarities between the Danube region and North-West-Europe?

Lambrechts: There are big differences in the regions which lead to different opportunities. North-West-Europe is a more mature market. This area tends to get more support from policy makers. Cooperation within Platina will definitely enhance the potential in the Danube region, but lots of infrastructural developments are needed. The quality of the Danube and the IWT infrastructure needs to be further developed first. Secondly marketing & deployment of inland waterway support needs to be enhanced.

There is a lot of potential if we convince national administrations, for example to have more coherent and easier rules for transporting chemicals. More harmonisation is needed between the countries. We also need better knowledge of empty sailings, because we can attract new cargo to fill the empty trips. More cooperation and exchange is needed so that the right partners find each other (industry, shippers, IWT).

Greening toolkit, what´s next?

Erwin van der Linden, EICB

The greening toolkit shows robust greening technologies and their return on investment as well as potential emission reductions. This allows ship and vessel owners to explore how they can make their ship compliant with future emission regulations. At the same time, the tool allows producers to showcase their greening technologies and policy makers to gain insight about the cost of greening options for different vessel types and operations.

Development of the database with greening info

This tool was further developed by CRUP in the fourth quarter of 2015 and the first quarter of 2016. It allows for easy adaptations via the back-end (no need for hard coding) which makes it easy to maintain the data efficiently and react to rapid changes, so that the information remains accurate. We can easily edit parameters (such as pricing) without specialist IT support and also add new greening options when they become available. Currently, we are also translating the tool into different languages. This is a crucial step for bringing actual developments closer to end users

Dissemination

- The Greening Tool is available at http://greeningtool.eicb.eu.
- We promote the Greening Tool through social media.
- We developed a multilingual tutorial (subtitles French, German) to understand how the tool works.
- We are embedding the tutorial on a variety of websites.
- We position it among other useful tools provided by EICB:
- Total Costs of Ownership (TCO) of LNG and suitability test to sail on LNG
- Econaut (CO2 calculator)
- i-Steer app (Prominent, forthcoming)
- Promotion campaign in newsletters, EIBIP regional deployment.

Monitoring

- The tool is hosted by EICB which gives us options for monitoring (how is it used, which greening options are most popular in which countries, etc.).
- Google Analytics
- Identify the origin of the visits
- The insights about how visitors use the tool can be used for fact based policy making.
- For further improvement, i-Steer application
- Possibility to see quantitative conversion e.g. most popular greening options per vessel type.

Next steps

- We need to update the parameters periodically – together with CRUP.
  - We will use expertise from Prominent to evaluate certain parameters.
  - We collect information from European Inland Barging Innovation Platform (EIBIP) – and use it as a dissemination channel.
  - A link with the EIBIP funding database is possible.
- Community building and awareness.
- Demonstrate the tool at EICB events (April, May 2016).

Question & Answers

Q: Did you discuss with banks? The tool shows information on the return on Investment. Does that help entrepreneurs to get loans?

A: There is a disclaimer. The tool is for awareness-raising and we cannot be held responsible for any inaccuracies. But for LNG we have the Total Cost of Ownership and that might help to get more buy-in from banks. The accuracy has not been the main aim of the tool, because that would require a more robust validation of the data. So the tool is a mix between user-friendly awareness-raising tool and an argument to convince banks to give you loans (to a certain extent).

Q: The greening tool is useful but how can we use it to address financial issues but also regulatory issues?

A: It is possible to download the results of a specific greening option for your vessel. You can use this in negotiations with banks. You can also get updates (e.g. when specific situation changes).

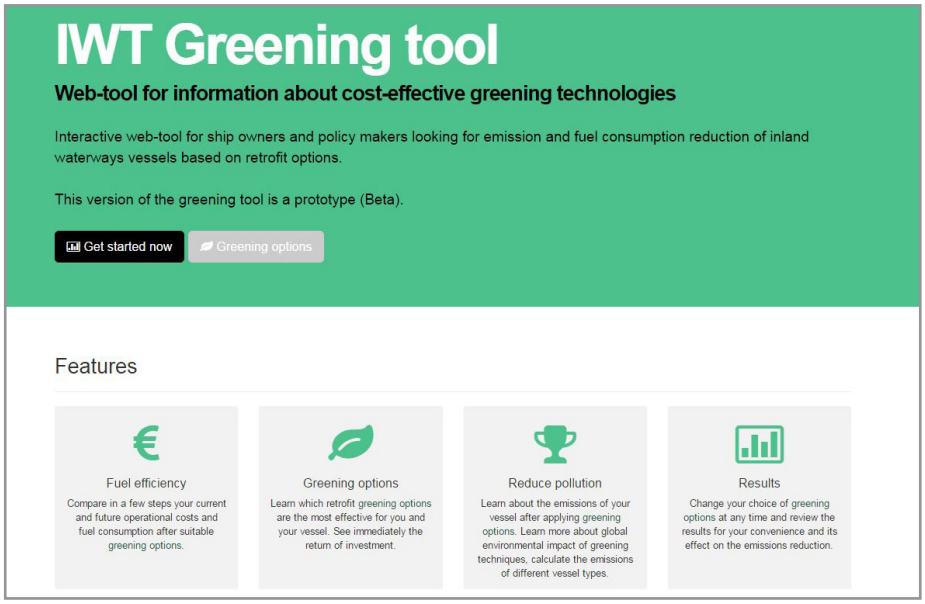
A: Henk Eric Sierink (Ministry NL): We did the best we could with limited means to promote innovation take-up. A practical tool was considered as a priority to stimulate industry to make better use of innovations in the market. It gives information for specific business cases. The tool is flexible and can be fed with better data as soon as new data is available. Operators can also put their own data into the tool to obtain more specific results.

The tool is also useful for regulators. It helps them to consciously plan greening policies for the next 20 years based on existing greening options. Regulations should create a stable investment climate as that co-determines the return on investment for vessel owners. We need to scale up (also on European level) and create a sense of urgency. This toolkit should go further than Platina and continue to be developed in Innovation Labs.

Q: Energy prices go up and down. Just have a look at the oil prices at the moment. How does the greening tool take this into account?

A: It is indeed difficult to make business decisions due to changing market prices. However, it is possible to create worst and best case scenarios and consider the greening options against that background. This helps you to make the right decisions.

Website link : http://greeningtool.naiades.info/



Promotion of IWT in logistics education and simulator standards

Rob van Reem, STC

Education is very important. We need people capable to run the inland waterway transport. This poses challenges to Human Resources in the sector. How do we guarantee sufficient workers for the future of IWT? How can we train and prepare them for the sector and to work on the ever more modern fleet.

Our work focused on three subjects.

Elaboration of technical standards for full mission ship-handling simulators

The Commission prepares a new directive to harmonise education and training in the inland navigation sector in Europe. We investigated how modern tools such as simulators could be used as part of training. But what are the criteria for a simulator to be recognized as a near to real life environment?

We used the following steps to develop these criteria:

1. We used the list of functionalities (CCNR) as a starting point.
2. We studied existing documents regarding simulators.
3. We analysed how we could extend the CCNR-list with regard to the features in the field of using SH simulator as a tool for examination purposes.
4. We scrutinised the parameters (performance features) needed for each functionality.
5. Next, we defined the quality levels (high, middle, low).
6. At workshops with experts of simulator suppliers, we collected their input and feedback.
7. Next, we drafted technical requirements that could be useful for assessments and examinations.

This led to a report that serves as an input for further discussions and decisions. It contains:

- Technical descriptions of every functionality and feature.
- Relevant criteria and parameters for a performance description per technical area.
- Performance levels and application of performance levels per parameter.
- Per field of use the estimated minimum range of needed functionalities and performance level per concerned parameter.

As a parallel activity and with various Edinna members, a Train-the-Trainer manual about the use of the Ship Handling simulator has been developed. This will be presented to the Edinna network and all others interested on 17 March 2016. Within Prominent, we also foresee a follow-up on how we can use simulators for the purpose of education, assessment and examination in comparison to real-life experience. This will give us an idea of the effectiveness of these tools compared to real life experience.

Concept for electronic service record books and logbook

Service Record books and logbooks are an administrative burden. When we make these digital, this would considerably cut paperwork and lessen the administrative burden.

To take steps forward, we had lots of interviews with skippers about the potential move from paper to digital. We asked them about any ongoing digitalisation systems and what they see could be the future. This was the process we followed:

1. Research of existing initiatives.
2. Research of possible demands of the users.
3. Research of possible demands of other involved stakeholders from the IWT sector.
4. Research of possible future system and tools.
5. Research of possible future system and database.
6. Interviews and workshops with all stakeholders.
7. Research of impacts.
8. Drafting and submit this deliverable.

Most skippers see the advantage of it. If the service record book would be connected to a central database, this would

create a level playing field for the whole sector. It would become impossible to have several service record books.

This report will feed further discussions and decisions. It can be used as a roadmap for further developments towards the introduction of a European electronic service record book (e-SRB) and electronic logbook. There are already some pilot projects running that explore the possibilities. They are documented in the final report that contains recommendations for the future.

As a follow up the Prominent project and together with the Joint Research Centre, we are in the process of a research to determine the requirements to get these tools operational at a later stage. We are working towards a design and develop a European electronic service record book (e-SRB) and a European electronic logbook that will be tested during a pilot for real life experience.

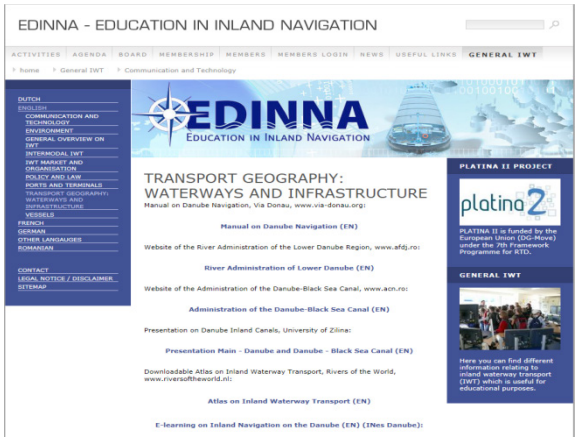
Learning material for future logistics decision makers

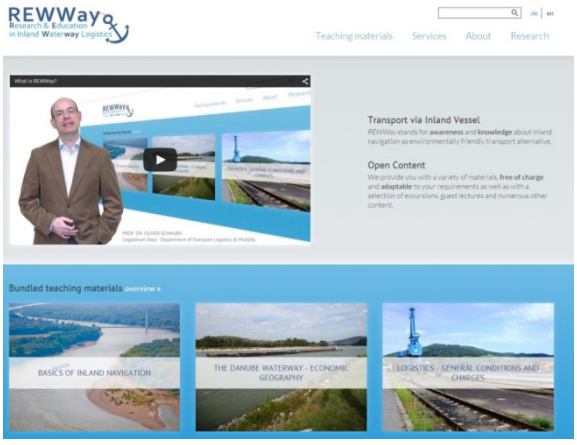
Many institutes for logistics education do not teach about the potential role of IWT for door-to-door transport. This is a clear missing link in education. Some logistics educational institutes don't even mention IWT at all. They only focus on road and rail. Since there was room for improvement, we gathered all existing information and connected it in a coherent way.

This resulted in:

- Learning material for future logistics decision makers.
- Updated, extended and restructured databases with IWT data.
- A clear dissemination plan.
- Dissemination activities to support the uptake of IWT knowledge, e.g. at River Shows where we present in interactive way how IWT can be part of door-to-door services.
- Cooperation with European Logistics Association. More focus on IWT in logistics examinations.

The material we developed is already available on the EDINNA website. And also the REWWay website contains useful information about IWT in interactive ways (questions, movies).





We organised dissemination activities to support the uptake of IWT knowledge, for example at River Shows with ± 250 participants in total:

- In cooperation with REWway in Enns, Austria
- In cooperation with Ceronav in Constanta, Romania
- In cooperation with CRUP and Via Donau in Zagreb, Croatia
- In Rotterdam the Netherlands

As for the integration of inland navigation in general logistics education, the Prominent project will extend the activities and future possibilities for exchange of knowledge by developing:

- A web-based community of practice, including learning materials and modules.
- Dissemination activities and embedding it in different curricula of logistics studies .

Good practice manual on inland waterway maintenance

Gudrun Maierbrugger, viadonau

Continuous maintenance is key for competitive waterway infrastructure. In many countries however, the small "everyday" maintenance work does not get the attention it needs. This situation has even been acknowledged by the European Court of Auditors. However, there is a lot of potential to increase the efficiency and effectiveness of waterway maintenance.

Platina 2 fosters knowledge exchange on inland waterway maintenance on a European scale. It set up a European expert platform for waterway maintenance and prepared a "Good Practice Manual on Inland Waterway Maintenance" for waterway administrations.

Good Practice Manual on Inland Waterway Maintenance

The focus of this manual is on fairway maintenance (navigational) of free-flowing rivers. Its target group is European waterway administrations. What does the manual contain?

- It illustrates an improved fairway maintenance cycle.
- It exchanges dedicated knowledge across countries and corridors.
- It analyses examples from practice and identifies "lessons learned".
- It develops recommendations for efficient fairway maintenance.

This work was supervised by the Platina 2 European expert platform. They proofread the draft and contributed examples. This Good Practice Manual and documentation provided by the expert platform will be available to download on www.naiades.info > infrastructure.

Fairway maintenance cycle – a simple but efficient concept

These are the main elements of the Good Practice "Fairway Maintenance Cycle":

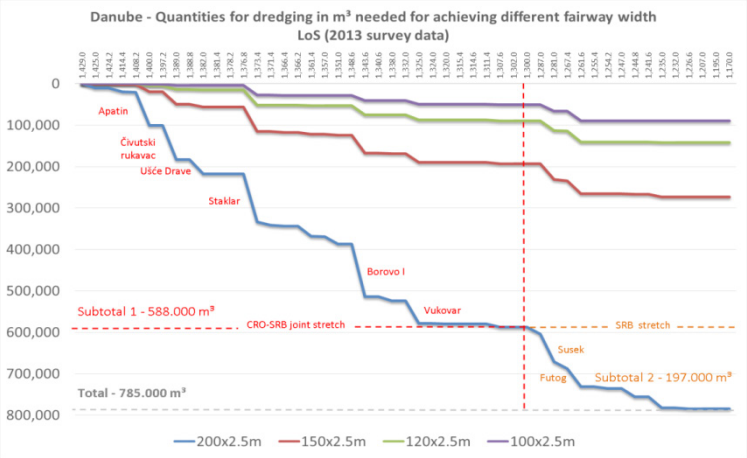
- The single elements of maintenance shall be structured in a recurring cycle.
- This cycle enables a continuous improvement process.
- A multidisciplinary horizon ensures that further uses of rivers are taken into account.
- A pro-active strategy calls to act before the situation gets critical, based on good information basis.
- Minimum levels of service (targets) shall be defined as well as Performance Indicators to measure their degree of achievement.
- Based on the defined targets, available resources and maintenance strategy, critical sections and activities are prioritised.

Three examples of the selected Good Practices are described below.

Good practice Serbia - Planning

PLOVPUT (Directorate for Inland Waterways, Serbia) developed a support tool for management decisions within waterway maintenance. It consists of:

- An integrated database (hydrographic & hydrological data, defined targeted levels of service for specific stretches – fairway width, depth).
- An optimisation algorithm that identifies the most efficient and effective measure to reach defined targets against the background of restricted resources.
- A number of options such as fairway realignment, traffic regulations, dredging (m^3),…
- Parallel provision of integrated information on fairway availability to users.



Source: PLOVPUT

Good Practice: DE/NL - Stabilisation of the Rhine riverbed along the state border

The riverbed on the Lower Rhine along the German/Dutch border had shown strong degradation. This led to a cooperative cross-border project with mutual benefits and equally shared cost (start 2012) between the riparian countries Germany and The Netherlands.

- The German "Wasser- und Schifffahrtsamt" stabilised the Rhine riverbed on Dutch territory (Spijk area) (completed).
  - ~430.000 t of material (limestone, basalt) was built in.
  - "Catherina 6": a vessel equipped with a harrow levelled the riverbed.
  - Constant surveying for impact assessment and activity planning.
  - The project also reduced flood risks.
- Rijkswaterstaat (NL) is to start bed load supply (gravel and sand) on German territory (Lobith area) to balance the bed load deficit in 2016.

Good Practice Austria: Navigability Analysis of the Danube

viadonau (Austrian Waterway Management Company) carried out a long-term analysis of daily water level ranges at two critical reference gauges - Pfelling (DE) and Wildungsmauer (AT) since 1981. This data was the basis for an advice tool for industry and logistics to support transport planning in line with the statistically most probable fairway conditions. On waterways with highly fluctuating water levels, the full potential of the possible draught of a vessel is often not used. Safety margins are kept due to uncertainties on the available fairway depth.

- The tool indicates the probability of high or low water levels throughout the year.
- It indicates the probability of available fairway depth and draught for each month in relation to vessel and cargo type.
- It is an easy-to-handle decision support tool for the industry and provides solid economic arguments to integrate inland waterway transport into logistic chains.
- viadonau has received very good feedback form the users of this tool.

Next steps

We also identified further topics that need to be discussed, e.g. lock maintenance, long-term analysis of measures, interplay of structural & maintenance measures…; these are listed in the manual as well.

Parts of the manual will be further developed within a study on the "Specification of Good Navigation Status" (1/2016 – 12/2017).

Questions and Answers

Comment: An integrated approach bears fruit. Waterway maintenance goes further than only dredging. There are lots of stakeholders involved. If you cooperate, you can have better results.

Q: We suggest to take up the topic of lock maintenance in particular, as this is a key topic in the future. Furthermore, we suggest to take up the topic of financing of maintenance. In France, VNF is in cooperation with the regions regarding co-financing.

A: We are open for suggestions, as we want to provide a manual that is of practical use for the waterway administrations.

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 CO2 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

Parallel interactive session 1: Infrastructure and New Markets

Pim Bonne, Flemish Ministry of Mobility and Public Works (moderator)
Theresia Hacksteiner, EBU - Alexander van den Bosch, EFIP - Willem Buitenkamp, ESC

State of play

Pim Bonne briefly introduces two activities launched by the Commission to support infrastructure and markets. Programme support action "Assessment of market potential for inland ports and inland waterway transport business' (LOT1) aims at assessing the current potential and future flows including the waterborne industrial and circular economy development, while Programme support action "Good Navigation Status" (LOT3) will follow-up the work of Platina 2 activity on waterway maintenance and substantiate the concept of good navigation status referred to in the TEN-T Guidelines in order to develop a broadly accepted concept. In addition, Programme support action "Towards the Digital Inland Navigation Area and digital multimodal nodes' (LOT2) has been launched help develop strategies for inland waterways and ports as part of the Digital Single Market Strategy.

Key statements

European Barge Union

The examples of Nutricia, Mars, Heinz, Heineken, Bavaria prove that inland waterway transport is capable of taking new markets in an innovative way. Not only long distances and bulk, but short distances and continental transport. In the field of passenger transport, ferry services offer important congestion-free connection in the secondary road net; in the Netherlands alone they contribute to annually save 333 million detour kilometres and € 5,6 mln environmental cost to society. Not to forget the important role of cruises for tourism, a booming market in Europe, that requires the necessary facilities in cities that are often forgotten. However, the way how inland waterway transport can increase its actual share and explore new markets strongly depends on the state of the infrastructure. The new TEN-T policy must guarantee, as explicitly stated in the latest report of Court of Auditors, a strong role of waterways in its multimodal corridor approach.

European Shippers Council

Infrastructure and new markets can have a close relationship. Certain infrastructure improvements could well have the consequence that inland waterway transport comes into the picture of shippers. Whether the new market is a shift of a suitable product from road to water or even a new type product; the shipper is keen on opportunities in the infrastructural segment. The cost factor plays of course a dominant role.

For shippers, container terminals and inland ports are part of the required infrastructure and a co-deciding factor to use inland waterway transport. Modal shift depends heavily on that. Infrastructural quality of waterways is paramount for quite a range of products, because allowing the use of larger vessels and thus a better control of costs.

European Federation of Inland Ports

Inland ports are an integral part of the overall transport and logistics system. Inland ports are multi-modal hubs bringing all transport modes together. For an efficient system, transport infrastructure capacity in the hinterland must be matched seamlessly to the development of ports. In order to facilitate new markets and create value creation in the logistic chain, port development depends heavily on the availability of good infrastructure. The reach of the port, and its competitive position to facilitate new markets (e.g. bio-economy, circular economy), is determined largely by the quality of its connections with road, rail and inland waterway networks. The inland port is therefore a crucial crossing point and intermediary that facilitates the market with the best infrastructural options.

Market potential

The audience sees new potential, new markets can be tapped (even in NL where already 40% goes over water). Remember that IWT is competitive for distances under 300 km. Shippers underline the need for a door-to-door approach. Inland ports are at the crossroads supporting an integrated approach. In addition to traditional bulk segments and consumer goods, the emerging circular economy creates new opportunities for the EU economy and sustainable transport

when it happens without silo thinking, as it covers the chemical, health, agro and energy industry.

Other opportunities cover city logistics and passenger transport to contribute to sustainable transport and regional development. Handling processes in seaports need to streamlined logistically to avoid delays and lack of space because it has a knock-on effect on the entire logistics chain and increase emissions.

New promising markets require a stable investment climate in terms of land use planning, legal interpretations of waste, taxation and environmental regulations. We need to gather critical mass for activity clustering, public incentives for smaller players as well as anticipation to the NIMBY syndrome. All these elements point to the need for public coordination to steer such developments and industrial frontrunners who act as ambassadors to increase visibility and rally unfamiliar and small shippers who together handle the majority of the volumes.

To convince shippers, it is important to run through the entire decision procedure and address the correct decision levels with smart negotiation (e.g. use buy days) and offer solutions. Next to logistics managers, procurement managers and board members have to be lobbied because currently cost, reliability and lead times remain the most important decision factors. Counselling for shippers is time-consuming but crucial and requires public support.

Infrastructure

The good navigation status of the waterways, maintenance and upgrades, adequate loading and unloading facilities in ports, access roads to waterways are paramount for a cost-efficient door-to-door approach. Lack of reliability kills the business case and destroys all efforts to a modal shift. A full overview of infrastructure needs across Europe has to be created. Sufficient mooring and berthing places should not be overlooked so that we can we accommodate all the vessels if the sector grows.

Governmental representatives regret that quality connections are under pressure due to budget restrictions. Locks and weirs are ageing, expert staff is reduced. User charges could be a logical next step. For users, charging should be addressed with utmost care, it should not undermine the primary goal of shifting cargo to waterways & innovation and it should be fully transparent.

Next to the physical infrastructure, shippers underline the importance of digitalisation.

Conclusions and recommendations

Public decision makers need to steer sustainable and promising market developments more effectively with better coordination, infrastructure investment and they need to create of a stable investment climate through a supportive, integrated and transparent legal environment.

Logistics players need to address all relevant decision makers in companies.

Infrastructure

- Reliability of infrastructure. In order to be competitive, we need investments in infrastructure and maintenance (and legal rules).
- We should not focus on IWT alone, but the whole chain: terminals, roads going there, etc.
- Sufficient mooring and berthing places so that we can we accommodate all the vessels if the sector grows.

New markets

- There is a lot of potential (even in NL where already 40% goes over water). However, tapping new markets will take some time. We need to invest time and effort in that. Cost (and time) remains decisive factor for shippers.
- Not only address shippers, but also sales and logistics procurement managers. They co-decide on how they ship goods.
- Not only focus on frontrunners but also on smaller shippers (not only big brands – majority cargo is transported via small shippers).
- Remember that IWT is competitive for distances under 300 km.

Parallel interactive session 2: Jobs and skills, Innovation and fleet

Katrin Moosbrugger, CCNR - Dimitrios Theologitis, European Commission (co-moderators)
Han van Roozendaal, ESO - Nick Bramley, ETF - Rob van Reem, STC

Key statements

European Skippers Organisation

How to organise for all groups lifelong learning and how can the EU support this?

European Federation of Transport Workers

Ships and crew are ageing. How can we ensure that new vessels and people enter the market with EU support?

STC

Introduction of simulators facilitates the professional upgrade of IWT crew and allows shortening of real live experience time.

Next to establishment of a new legal framework, the IWT education and training system needs supporting tools to upgrade skills of people working in the sector.

Uptake of IWT in logistics door-to-door services demands continuation of supporting tools at EU level.

State of play

Dimitris Theologitis gave an overview of the current European actions undertaken by the European Commission regarding the topic of this session.

As regards to **jobs and skills**, it is important to attract new and young people into the profession. Inland navigation is ageing. We need fresh blood. So this makes it an issue of certification and career options. The regulator wants to facilitate access to profession in 3 ways:

- We need to enable mobility across the member states.
- We need to provide young people with a clear career path and opportunities.
- We need to allow people from others professions to enter inland navigation (e.g. sea men).

The European Commission will soon make new proposals for professional qualifications for inland navigation. These professional qualifications worked well for truck drivers previously. They had the effect of attracting more professionals and mobility into the profession. This qualification framework moves away from an experience based model towards a competence based model (there are different ways to acquire the needed competences). The instrument is ready and will be presented to the Council in a few weeks under the Dutch presidency.

When speaking about **innovation and fleet**, vessels are ageing too. The majority of fleet is aged and cannot be easily integrated in new ways of thinking and adapted the latest electronics and IT tools, so that they would be able to play their part in the logistics change. Innovation and greening needs to be supported. We are developing new ambitious standards for new engines. This will make green engines more attractive for European users and manufacturers. As for electronics, we are moving away from RIS as a safety system and move towards Smart Waterways. We are at the stage of concept papers and consultations. Similar to EICB, we would like to create innovation centres around Europe to assist ships owners, logistics providers, etc. to get practical information and make correct choices.

Of course **money** is also important. We currently have 2 funding instruments. There is the Connecting Europe Facility (26 Billion euro – half spent already) and the Juncker Fund for Strategic Investments. This can help member states to attract private funding (with a bank guarantee). Transport is an excellent domain of investment. These funding mechanisms could be used by ship owners to invest in innovation and greening their fleet.

The audience welcomed the modernisation of professional qualifications for the IWT sector. This process has been going on for 10 years and there is a need for a competence focus rather than 'disconnected knowledge'. The European committee for educational standards for inland navigation has done a lot of pre-regulatory work.

Development of competences

Q: Would it be possible 10% of any technical grant fosters training & development? That would immediately upskill a big part of the sector.

A: Obviously, the Commission's work does not end with a new directive. We need to keep up with developments in the sector. There are a lot of opportunities for training institutes in the sector: training in knowledge and skills e.g. simulators, training vessels, etc. This will also require resources.

Commission answer: It is nice to hear that there is a request for a 'human element' in the funding and that we should not only focus on technical developments. But when the European Commission gives grants, they tend to have an ever wider scope. This allows applicants to put also the Human Resources element in their project proposals. In 2017, there will be a call for proposals within the research programme Horizon 2020. We can see how the human aspect of the innovation can be more taken into account.

CCNR: lifelong learning (e.g. renewing certificates etc.) is already happening, but it could be more structured. We need to go further and give people in the sector a future perspective, and allow them to grow their potential and diversify.

Perspective of member state: If we need education, we need to find the resources for it. There are funds in the sector (Reserve Fund) that can be used for that. It could be transferred into an education fund.

Q: We should not only be renewing skills, but also growth, broadening the skills, for example social and digital skills. But in IWT sector there is not so much scope for social development because boatmen mostly work alone. Not like in bigger organisations where many management tools, communication and social training are available. It is difficult for skippers to have the same training. Working alone is a big barrier to develop more social skills etc. *What can we do to develop human capital for skippers (not only technical skills)*?

A: E-learning and distance education can be an important tool for future. It is more easily accessible. Skippers can easily access it e.g. on ship, but e-learning is also compatible with the system of 14 days on and off the ship. However, it needs to be complemented with real life teaching/competence building (social).

Comment: The system today is that you move up in your career by navigating. There needs to be more competence based developments that allows people to progress. We need to focus more on lifelong learning. Besides social skills, entrepreneurial skills are also important. How do we support skippers for their job as self-employed IWT providers?

A: Everyone should be doing lifelong learning. We also need smart human capital to deal with smart waterways. Human capital has to follow the technical developments.

Innovation of the fleet

When we are thinking of greening transport, we often think of IWT. Maybe a label for 'green transport' would help. Shippers might revert more to IWT if the public is aware that their products are sustainably transported. Along the same lines, maybe we also want to promote a label 'fair transport' (e.g. no child labour, green alternatives, transparency on how the work is done).

There are innovation centres popping up everywhere. In 2017, there will be a call for smart ports (also inland terminals). However, we now speak of digital multimodal nodes (because the port often is not central to the nodes anymore).

Skippers want to green their ships, but measurement of their external costs is very costly. Public institutions can support that, maybe with money from the Reserve Fund?

Member states have different opinion on how to improve the business case for IWT. Maybe we need a regulation to force the greening of the fleet. We need to internalise external costs in the medium term. That would improve the business case for IWT. But before we can do that, it is important to know what skippers can expect over the next 15-20 years. Once there is a clear future perspective and a stable investment climate, then we can start to prepare the future.

The European Commission is reluctant to regulate the existing fleet. It should not be done one-sidedly. We need to coordinate this with other modes of transport. Internalisation of external costs needs to be introduced at same time for the whole transport sector. Maybe we also need to move to modular emission standards. Old engines could get different criteria than new engines. Incentives to green the fleet could come from the European Investment Bank or CEF.

Voies Navigables de France is setting up a 5 year subsidy programme with 5 targets:

- Investment to improve the environmental performance of vessels.
- Support the introduction of new vessels.

- Support inland waterway transport to city needs.
- Enable inland waterway boats to serve sea ports.
- Make it easier for new skippers to enter the business (buy first ship, upscale etc.).

In France, we are looking for co-financing from regions because in the end more IWT means less road traffic for them. There is readiness to co-finance.

Access to financing for innovation and greening + funding from European budget?

We had a working group on financial instruments who sent a questionnaire to different players in the IWT industry. At present it seems to be difficult for IWT to benefit from financial aids. There are a lot of criteria to adhere to before you can get any support. To get financial support of the European Investment Bank, the projects are of a size that largely surpasses the average project skippers need. The way forward would be to consolidate and cooperate under one umbrella to get financial support. We need to be clever to work with the European instruments (e.g. societal gains, NOx, PM,…) Governments can accommodate for that.

We could foresee access to financing in 2 ways:

- Criteria should become more adapted to the IWT sector so that it becomes easier to access the financial support.
- How can we marry the heavy sledge hammer with a small nail in the wall? We could bundle requirements of sector and apply as a consortium for support. That would give IWT access to large instruments that are a priori not adapted to the sector.

Conclusions

Jobs and skills

- Human element and professional qualifications should be in heart of the discussion (e.g. 10% of all grants could be earmarked for training and upskilling people)
- Lifelong learning: we need to have a closer look and make careers more attractive. Digital skills and entrepreneurial skills are needed.

Innovation & greening

- A part of the discussion revolved around financing. 80% of owner operators don't have access to finances. That makes it difficult for them to access innovation and the big grants for innovation.
- Innovation grant criteria should be more adapted to the IWT sector (e.g. regarding environmental performance and equipment).
- To mobilise mega instruments (European Investment Bank) we need to create consortia of smaller partners so that we can access them anyway. Complete the financing needs with other funding.

CONCLUDING STATEMENT

Dimitrios Theologitis, European Commission

Today we had a look at the 'day after'. It felt like a normal meeting, not a final conference. But sadly it is the final event of Platina 2. There will be no Platina 3 'for the moment'. We will have to try to bridge the gaps using other European instruments such as Connecting Europe Facilities.

We have already taken some follow-up actions:

- Platina 2 looked at the potential of inland navigation and multimodal nodes in the logistics chain. Studies analysed the network, where there is untapped potential and it documented best practice. The next step is to make the network more efficient and take future action.
- Digitalisation and multimodal nodes are the future challenge. We need to further fine-tune what the function of IT instruments can be and develop common standards and systems.
- IWT depends on good navigation status. In the Trans-European Network regulation, we built a whole policy and strategy around it. We need to make it easier to invest in maintenance and rehabilitation of waterways.
- We are developing 4 Innovation Centres – like the EICB – in strategic locations (near different waterways/corridors). They can stimulate to roll out innovative features.
- Last but not least, Prominent looks at environmental aspects and human elements related to navigation.

But also these programmes will come to an end. So we need to prepare the next step already now for in 2 or 3 years' time. So why not start to prepare Platina 3 as from now?

How can we make this happen?

- The European Commission needs to receive a clear indication from the sector on what is needed after the current programmes and show the need for coordination action (like Platina).
- Next, we can prepare a proposal that needs to go to the programme committee of Horizon 2020, which basically is composed of the member states. Some Member States did not support the idea of having Platina 3. To avoid their rejection, we need to lobby already now to influence your research authorities. This will increase our chances that Platina 3 will be adopted.
- In the meantime, an expert board from the sector can continue to meet with support of the Commission. This board can keep an overview of the processes in place and coordinate actions. They should work together with the Naiades committee.

Last but not least, I would like to thank Andreas Bäck for coordinating the Platina 2 project.