Mobilizing small waterway solutions

Interreg North Sea Region #IWTS 2.0
European Regional Development Fund

EUROPEAN UNION

#IWTS: Mobilising small waterway transport potentials

May 2021

FINAL NEWSLETTER

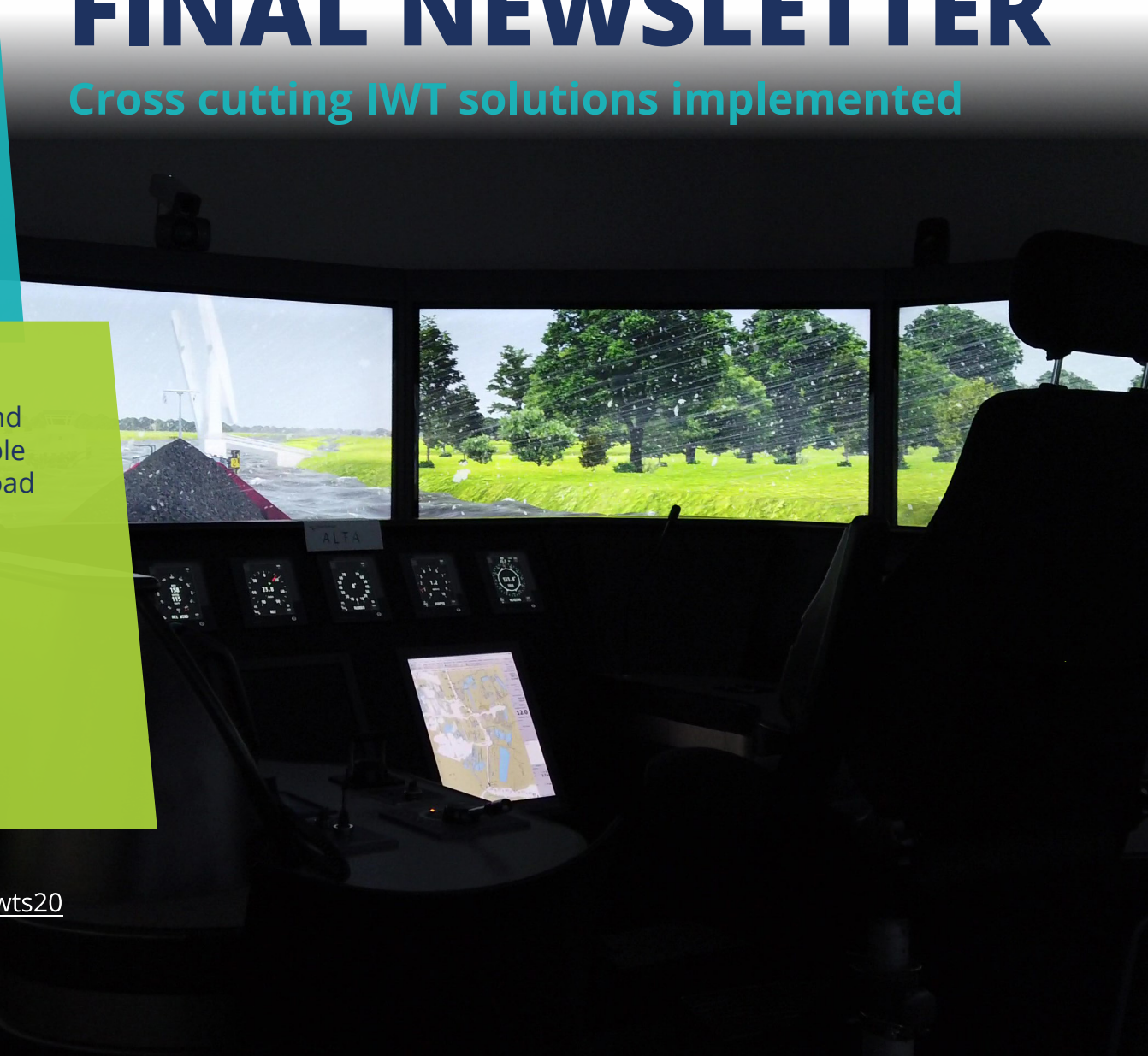
Cross cutting IWT solutions implemented

#IWTS 2.0 is an Interreg VB North Sea Region project. 10 partners from the region seek to enhance smaller waterway transport potentials in a transnational context.

New waterway-, barges- and training solutions will enable green modal shifts from road to water.

Total budget
€ 3.462.734

Project duration:
01/08/2017 to 30/06/2021



www.northsearegion.eu/iwts20

THE GREEN WAVE

The GreenWave is our IWTS flagship, it was developed with SSPA, electric propulsion; design was tested in the simulator of the Maritime Academy Harlingen, De Groote - Houtboerke acted as launching customer, Vlaamse Waterweg assessed legislation matters and afterall Shipwoner TESCO developed the final design and now the GreenWave is sailing in the city of Ghent. Testing small waterways opportunities.

Specification:

- Length: 14,95 m
- Width: 4 m
- Draft: 0,40m
- Draft fully loaded: 0,80 m
- Loading capacity: 20t
- Driven with an electrical engine and electrical bow- and stern thrusters

Tesco had several ideas to use more of the waterways - especially for inner-city distributions and the smallest canals for transporting goods and people.. The clogging of the streets, pollution and noise, increases the awareness of a serious problem in the cities. Also the weakness due to lack of maintenance of quays in the inner cities contributes to the urgency to make changes. Tesco is aware of the fact that most ideas – good or bad – were still on the drawing board.

After a few years of research and development, Tesco collected all the old concepts and added a new Goal: simple and easy to use. This new goal came down in some key points in the design:

- Emission free
- Light
- Highly manoeuvrable
- Low draught & air draught
- Relatively small
- Acceptable load capacity
- Easy to maintain

Tesco decided to use Aluminium for the hull. The company opted for this material because the Green Wave needs to be as light as possible. Steel would have been cheaper but the latter needs more maintenance and is heavier.

After months of calculating and designing Tesco ordered the build of what was to become the 'Green Wave'. Her christening took place in October 2020. Until February 2021 the Green Wave was in the Netherlands and is now operating in the city of Ghent.

The Green Wave has been very well received by commercial enterprises as well as local authorities and the company foresees a bright future for this type of vessel.

The estimate is that over 140 people have visited the vessel at our premises or during the various tours in 3 of the most interested provinces (North Holland, South Holland and Utrecht).

The second quarter of 2021 shows significant developments;

From 140 people to a shortlist of 5 companies who are seriously interested to work together with each other to create a multi hub (food / waste / supplies) from where the city distribution will continue over water.

In September a feasibility study will be conducted by the University of Amsterdam. The main problem for now remains the lack of loading / unloading space in the city centre.

TESTING IN THE TESTBED OF A CITY ENVIRONMENT – TESTBED GHENT

De Groote-Houtboerke as a trader in building materials and wood situated in Ghent, and TESCO as a shipowner in Amsterdam have worked together within the project IWTS 2.0 in designing, building and testing of a electrical urban ship. De Groote-Houtboerke was a good Launching Customer helping TESCO to define what the design requirements must be for such a ship. After the ship was ready it moved to Ghent for testing and setting up pilotcases in the urban area.

The vessel design, adapted to the inland waterways of the city of Ghent, is a flatshipmodel with a capacity of 20 T and is made of aluminum. With a size of 14.95 m x 4 m and a draft of 0.4 m it is perfectly fit for the shallow watercourses in the medieval city. The propulsion with a fully electric engine with battery pack of 20 KW which make the ship CO2 neutral. The sailing capacity will be is 8 hours at a speed of 8 km per hour.

The ship will start sailing manned, but is to be sailing autonomous in future. The ship can transport small bulk goods (pallet goods), small building materials, small containers, big bags (20 tons).
Testing of the capacity of the urban vessel by De Groote-Houtboerke in Ghent with all kind of materials, has delivered some treads and opportunities.

Due to the preliminary investigation, the sizes and positions of the ship have been adapted to the testbed in Ghent. But due to the fact that bridges in the city center cannot open, more ballast was needed to let the ship lie deeper in the water. Because the quays differ so much, research is still needed for an applicable loading and unloading system. The loading- and unloading places in the city center are being mapped out together with the city of Ghent ,IWTS partner Vlaamse Waterweg and the Flemish water authority.

The emission-free city boat will be used for a period of 5 years in various tests on autonomous sailing, but also in scientific research, setting up pilots and demonstrations, for further development of a new logistic chain. In the economic life, goods flows can also be tested from sectors other than construction materials.

Many goods are now brought into the city through their own logistics chain. Further research into bringing together various flows of goods and organizing good return logistics can help to structure city distribution in a sustainable way. To this end, De Groote-Houtboerke is collaborating in a broader consortium consisting of other traders in building materials, manufacturers of building materials, companies from other sectors and logistics companies.

POM OOST-VLAANDEREN

Thanks to IWTS 2.0, POM Oost-Vlaanderen managed to produce a transshipment manual. This document contains an overview of available techniques to load and unload inland navigation vessels (bulk, palletized goods, project cargo and containers). The overview will support POM and all IWW ambassadors during the process of convincing potential users of inland navigation. Information is included about operational characteristics of the available solutions, but also indications about investment and/or operational costs.

Therefore, the need for an adapted grab has been identified. Trying to solve this problem, the POM Oost-Vlaanderen issued a public tender concerning the research and development to adapt an existing grab in order to avoid this littering. The trial concentrated on solutions for the transshipment of B-wood, PMD, paper & cardboard, and finally RDF/Fluff.

For practical (hygienical) reasons at the workplace, the test of designed solutions was only performed with B-wood and paper & cardboard bulk cargo. Unfortunately, the tests of the proposed concepts were not fully successful. Improvements to the existing grab were made, but it was not possible to fully close the existing grab.

Experiences will be shared with the international market, expecting to trigger the continuation of the research and the finetuning of the first version of the solution.

We believe paper & cardboard is the most challenging flow to focus on in future. The product is so tough that it bended a 1cm thick steel knife while closing the grab.

During the project period small, open containers were needed to test the volume grab. The containers should be big enough to test the adapted grab, but shouldn't be too big in order to be able to move the container in a cost efficient way between the parking outside and the workplace inside. Because of these characteristics, it was difficult to find a suited container and this process has led to a time delay. Luckily, the correct containers were found in the Netherlands.

Also don't underestimate the lead time you need to design concepts, get the parts build and get them assembled and tested. It took us three and a half times the estimated duration! So if you plan anything like this, start early in the project period!

Finally, convincing private companies to participate (indirectly) with sufficient engagement towards the project is also a time consuming task. Make sure you have at least 6 to 9 months available to set this up! As such, you have also additional time when stakeholders suddenly withdraw from the project.

Working in EU projects allowed us to identify similar, operational problems. Working together transnationally means that local expertise and solutions are transferred to other project partners, taking into account local rules and bottlenecks.

At this moment a shortage of skippers is identified. This could jeopardize the future potential of moving freight towards inland navigation. Therefore, a need for economic viable solutions of smaller ships and concepts is needed. Also, the opportunities of highly autonomous sailing (e.g. using a control tower) should be fully explored. To enable this, not only innovative concepts and products are needed, but there is also the need to start today with the adaptation of present legislation.

MUNICIPALITY OF SMALLINGER-LAND

Aim project:

- Prevent negative modal shift (if there's no investment to upgrade the waterways to class Va), by identifying & evaluating existing & new innovative transport concepts
- Detect opportunities for innovative transport concepts
- Combine different end products and cargo flows in push barges or regular ships, to create return flow
- Perform 2 pilots
- Integration of IT (simulation model, waterway simulation), as means to clarify policy choices, but also visualize return flows and to organise joint good flows

What did we achieved (GSL – Municipality of Smallingerland):

- Meetings with waterbounded companies Drachten (every 6 weeks)
- Process meetings: Process – Area – project group meetings, Councillor-meetings, Stake-holder meetings
- Frisian Ports: Cooperation between 8 municipalities. Frisian ports cooperation canceled, restart with the municipalities of Harlingen, Heerenveen en Smallingerland & the seaport of Harlingen is now being developted: approach is business, promotion, management & maintenance)
- Project Return flow: 1st pilot, Dec. 2018, 4 companies: Kijlstra, Sterk, Van der Wiel and Agrifirm. Route: Drachten – A'dam
- Connection with Top Dutch Logistics, waterway, Workinggroup – Van der wiel
- Memorandum on area development Hegewarren/Eastern gate of Frisian Lakes, Working with core team, Final decision Nov. 2021
- Plan of action Hegewarren area development (start purchase talks on farms, valuations), in cooperation with core team. Sketches of different scenarios

- Expanding cargo flow roundwood for Staatsbosbeheer (company Van der Wiel);
- Making contribution available of 15 mio area approach Hegewarren (10 mio Municipality & 5 mio waterbounded companies (now elaborate plan of action on port regulation and financing port dues with stakeholders)
- Visits businesses for modal shift to water: Renewi joined waterbounded companies
- Projectsheet Harbor-economy: economic action agenda for the coming 3 years
- Contributed to the inland port monitor NVB, Drachten one of the selected locations
- Follow-up appointments IWTS Drachten (6-weekly meetings with port-related entrepreneurs
- Meetings for waterway on logistic-agenda (finetuning, meetings, interviews)
- Prepare documents to convince stakeholders
  Policy document on area development
  Folder of the port, facts & figures Memorandum on port & waterbounded companies
  Articles in magazines Folders Frisian ports
- Looby activities with Harbor cluster: lobby-document, interviews different stakeholders, different meetings with local/regional councillors in the harbour;
- Joint activities (Province of Fryslan, Municipality of Smallingerland):
  Webinars NVB 2020 (1. digitalization & inland harbors, 2. sustainable & future-proof harbor)
  Top Dutch logistics: involving entrepreneurs in modal shift to water, netwerkconversations
  Meetings with FRY, GSL & Maritime Academy about Simulation for Drachten: money available, project starts june 2020
- Conversations Gert Schouwstra:interviews potential companies for model shift from road to water in the area of Fryslan
- Join activitities:
  Sweden: report on harbour cooperation
  Vlaamse waterwegen: exchange of information,advice on approach POM: exchange of technical & costs information to enterpreneurs

Bloopers, do's and dont's aiming at modal shifts from road to water.

Long term processes in IWTS in which politics play a decisive roles decision making is a challenge. Data about costs, impacts, logistics, modal shifts from road to water are a precondition here.

A look out to the future for your region, aiming at resilient NSR green Inland Waterway initiatives feeded by smart innovative tools.

- Sustainable port, discount port dues
- Co-creation, development area containing a route for the waterway
- Lobby harbor cluster
- Renewed port cooperation ports of Fryslan (from the business community)

SSPA SWEDEN

What did we achieve as partner in IWTS 2.0

The researchers at SSPA have been very active in collecting, analysing and disseminating material regarding an increased use of inland waterway transport. First and foremost, two Swedish initiatives to initiate IWT services for containers between the port of Gothenburg and its hinterland have been followed and supported. Several papers and reports have been issued by SSPA and numerous conference presentations delivered promoting and drawing the attention to the use of inland waterways. One achievement we are proud of is the full-day conference Inland and coastal shipping - What's on? in Sweden in 2019, featuring national and international speakers and providing excellent networking opportunities for participants. Specific results where SSPA have contributed include the development of a concept of an electric propelled container vessel.

Bloopers, do's and dont's aiming at modal shifts from road to water

SSPA researchers have written journal papers outlining challenges with realizing a modal shift and activities to take. As part of the final workpackage in IWTS 2.0, we have reflected on the process of modal shift and compared activities performed by the various partners to achieve modal shift. While challenges differ depending on the maturity of the market with regards to the use of inland waterway transport, there are also many similarities. In countries where inland waterway transport is less developed, restoring confidence in inland shipping is crucial, raising awareness among stakeholders of its benefits and upgrading waterways if needed. Another insight concerns the need for stakeholders to collaborate and pull in the same direction. In the IWTS 2.0 project we have seen that several types of actors need to be involved to realise shift to inland waterway transport, including authorities, ports, shipping operators, cargo owners, and freight forwarders. Cooperation is essential to have access to resources needed. Foremost, policy makers need to support shift of transport to water, simplifying regulation and redesigning fees.

Transnational value of working together

From a Swedish perspective it has been good to share experiences from other countries in their use of inland waterways. We have during IWTS 2.0 worked across nationalities to discover quite a few similarities with regards to challenges but also possible solutions. The cooperation has taken the form of collecting experiences from partners and their network of contacts, applying experiences from partners, and comparing the Swedish situation and work with other partners. In the earlier part of the project (2018) SSPA involved Chalmers' master thesis students in the project, who studied the cases in Netherlands and Belgium to learn from experiences and compare with the Swedish setting. These students were welcomed by the partners: Mariet Tefi-Dontje of the Municipality of Smallingerland, Klaas Rozendal from the Provincie of Friesland and Lynn Eyckmans of De Vlaamse Waterweg.

We have also compared with experiences in the UK and co-written a conference paper, entitled "Increasing the use of inland waterways – evaluating approaches for identifying goods flows for modal shift" with the British partners Nick Riley and Mahsa Zolfaghari from University of Hull. In February 2018 a workshop was conducted where the partners listened to the challenges of one of our Swedish cases and contributed with suggestions for moving forward. In addition, we have jointly discussed strengths, weaknesses, threats and opportunities in our various regions. Insights regarding the other regions and similarities and differences have been presented to stakeholders in Sweden.

A look out to the future for your region, aiming at resilient NSR green Inland Waterway initiatives feeded by smart innovative tools.

The situation in Sweden is quite interesting at the moment. A lot has happened during the period of the IWTS 2.0 project. One of the most important issues is that a national coordinator for use of waterways has been appointed, that can coordinate and support industry initiatives. While the introduction of container transport on the river Göta Älv and lake Vänern still has proved too challenging, there are new initiatives on the east-coast of Sweden. Thus all the work increasing the knowledge and understanding as well as promoting inland waterways is paying off. However, this is not the time to rest, there are still practicalities that need to be solved, and goals regarding the use of inland waterways need to be monitored and supporting actions taken. Particularly important in Sweden is to attract sufficient goods volumes, get all actors collaborating and that regulations are adapted to make inland waterway transport a competitive offer. Finally, of international interest is the quest towards emission-free vessels, an argument that is increasingly important.

DE VLAAMSE WATERWEG

De Vlaamse Waterweg nv is one of the partners in IWTS 2.0. project. We have conducted the potential of the small waterways (CEMT I and II) in Flanders. De Vlaamse Waterweg nv also researched the existing good flows by heat mapping (GIS study).

Through this work we have identified 2 concrete cases to realize a modal shift from road to water. This concerns Wienerberger and De Brabandere.

In work package 4 we facilitated the conduct of the Green Wave and shared information and knowledge off the Watertruck+ project within the possibilities of smart shipping.

Studies on potential for freight transport via small waterways and GIS study

Specifically in work package 3 De Vlaamse Waterweg nv has conducted the potential of the small waterways (CEMT I and II) in Flanders. De Vlaamse Waterweg nv also researched the existing good flows by heat mapping (GIS study).

The GIS study maps industrial sites that are located along a navigable waterway and are being considered for access. Existing public quays were also inventoried. With the obtained information, De Vlaamse Waterweg nv can further optimize its policy on quays and industrial estates.

Through this work 2 concrete cases are identified to realize a modal shift from road to water. This concerns Wienerberger and De Brabandere.

WIENERBERGER

Wienerberger is a leading international supplier of building materials and infrastructure solutions. Wienerberger opted for a modal shift and chose to transport goods by inland shipping via the canal Dessel-Turnout-Schoten via the route Beerse-Brussels and Brussels-UK. A new quay wall was also conducted.

Their route by the small waterway CEMT II, canal Dessel-Turnhout-Schoten, is a succes story.
In 2018 and 2019 almost 161,000 tons were transported and in 2020 77,000 tons of goods were transported nevertheless the Brexit and COVID-19 pandemic. The forecast for 2021 will be even more. So far 238.000 tonnes or 34,5 mio tonkm are transported by inland navigation since 2018.

DE BRABANDERE

Due to the study work performed in work package 3, a number of potential goods flows were encountered. 2 Swedish students and the Flemish Waterway visited De Brabandere on 4 October 2018. The following flows were detected from these conversations and the work performed in work package 3:

- tar-containing asphalt 30,000 tons to the Netherlands
- ground - 10,000 in Belgium
- concrete base 25,200 tons Belgium-France

The question was to map the flows of goods and especially the transnational flows of goods through the Swedish thesis research.
Because of the work done by the Swedish students The Brabandere was convinced to make a further analysis of the good flows and bottlenecks. That's the reason why a cost model tool for tar-containing asphalt was developed in the summer of 2020.

The cost model tool has definitely convinced the Brabandere to use the small waterways (CEMT I). Pieter De Brabandere strongly believes in making the modal shift from road to water and will realize his first pilot in the autumn of 2021.

QUOTE

of the Flemish Minister for Mobility and Pubic Works, Lydia Peeters:

"Inland shipping can play an important role in improving the mobility, accessibility and liveability of a city. With innovative concepts such as Green Wave, it is even possible to make deliveries via (small) waterways right into the city centre. "

"By focusing on innovation and sustainability, this type of vessel can increase the share of inland navigation. This not only directly contributes to the modal shift from road to waterway, but also makes cities safer for cyclists and pedestrians."

The Green Wave - First electric ship for Flanders

De Vlaamse Waterweg nv supports the development of new types of vessels such as Green Wave, which was developed within the IWTS 2.0 project. De Groote-Houtboerke had a big challenge in developing a zero emission vessel named "Green Wave". Green Wave is a good example of a new type of vessel: it is a compact vessel for urban distribution that meets the latest environmental standards. The first electrically powered urban distribution vessel was developed thanks to close cooperation between Tesco and De Groote-Houtboerke NV. The compact vessel is 14.95 metres long and 4 metres wide. The Green Wave has a capacity of 20 tonnes and is designed to carry all kinds of loads across small waterways, right into the city centre. The Green Wave is currently carrying out a number of test runs.

As a waterway manager, we are strongly committed to innovation, sustainability and increasing the modal shift for the future. That is why we already started research into alternative fuels and propulsion systems in inland shipping last year. In 2019, De Vlaamse Waterweg nv drew up a vision note in which alternative fuels are included as an action point. Since the spring of 2020, De Vlaamse Waterweg nv has been actively researching the added value of alternative fuels for inland shipping.

The research currently focuses on 3 pillars:

- achieving greening in the inland shipping fleet in order to be emission-free by 2050 (CCNR) and greening of our own fleet by 2030.
- creating possibilities for refueling with alternative fuels (bunkering) and other possibilities in terms of greening by means of multipurpose filling stations, shore power cabinets, possibly fast chargers, ... for inland vessels
- adapting the legislative framework to be able to adapt inland vessels to alternative propulsion/ fuels and also the possibility to certify these vessels.

In the future we believes strongly in projects like Watertruck+, #IWTS 2.0 and smart shipping.

MARITIME ACADEMY OF HARLINGEN

Now, that our beloved project #IWTS 2.0 is rushing towards its final stage and will soon be over and done, it s time to look back at a challenging, thrilling, sometimes stressful but always enjoyable time with our Partners in the project. We reached a lot while co-operating with each other. Bottlenecks were identified, ships were build, Modal shifts were planned and implemented, new transhipment methods were invented – the potential of IWT was brought onto the map of the logistics community. But more than that: it was awesome!
As the Lead Beneficiary of #IWTS 2.0 the Maritime Academy of Harlingen had to deal with challenging times on the last leg of #IWTS 2.0. The Brexit will prevent further cooperation with our UK partners Canal River Trust and University of Hull in the future in the framework of the INTERREG NSR programme. We sincerely regret this situation, but we already agreed, that we will always keep a channel open for a -for the time being- more informal exchange.

The current situation with the global Covid pandemic had, of course, tremendous impact on the cooperation between the partners and the project as a whole. We learned to make due with the things we could not change and tried to make the best out of the things that were still possible. Our regularly planned online meetings and events were quite successful and, as a side effect, we were able to reduce our travels to almost zero ,which surely saved lots of emissions – but still... we are looking forward to see each other again face to face!

of the Flemish Minister for Mobility and Pubic Works, Lydia Peeters:

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"By focusing on innovation and sustainability, this type of vessel can increase the share of inland navigation. This not only directly contributes to the modal shift from road to waterway, but also makes cities safer for cyclists and pedestrians."

Coordinating cooperation in the IWTS partnership was an outstanding experience; having NSR managing authorities, naval architects, shipowners, potential new customers, universities, port authorities, educational players on board, we realized functional steps. When working on our potential inland waterway solutions, we could include all relevant perspectives. By designing and building the Green Wave, the future shipowner and #IWTS 2.0 partner TESCO B.V. cooperated with knowledge centres, launching customers and managing authorities. In Sweden, #IWTS 2.0 was able to bring out the inland waterway transportation more into the focus. New logistical concepts and dedicated vessel designs showcased best practices amongst other IWTS partners. With the full mission simulator in Harlingen we were able to asses waterways, ships, locks, bridges and modal shifts that gave IWT perspectives in how to use small inland waterways best. The best ship design for Ghent was assessed, a modal shift in Leeuwarden was tested. Due to COVID our school was basically closed, thus it was difficult to implement and assess curricula for smaller waterways, however we managed to test some online training courses.

QUOTE

"We learned online cooperation can be quite effective, we also learned we miss some pleasure, inspiration if communication is only online!"

The IPCC sixth assessment report stresses out the extreme urgency to save emissions, inland waterway transport with green propulsion and intelligent logistics definitely contributes to the sustainable development goals. The Maritime Academy of Harlingen feels a strong commitment and is open to be a playground for new developments and projects where inland waterway solutions and machine-learning, artificial intelligence meet.

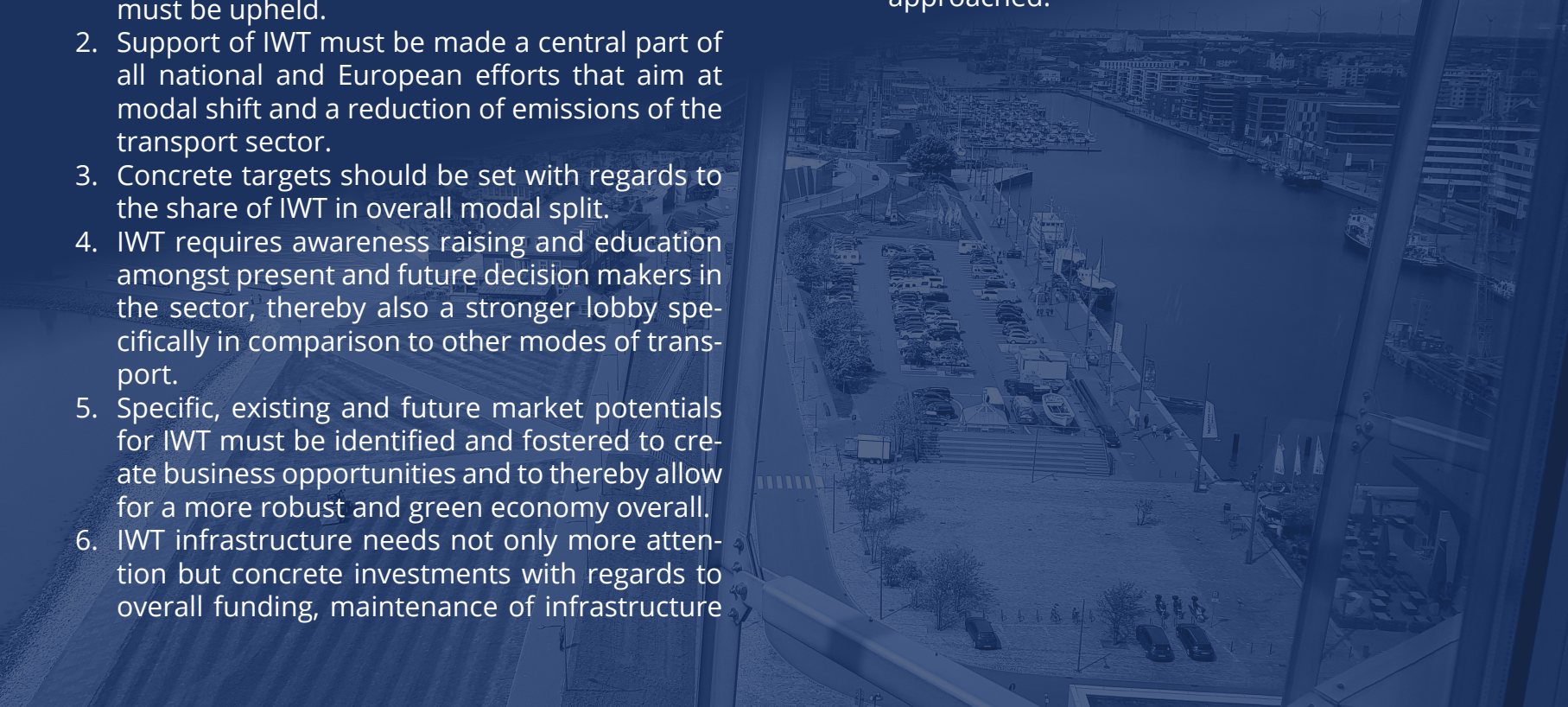
BREMENPORTS

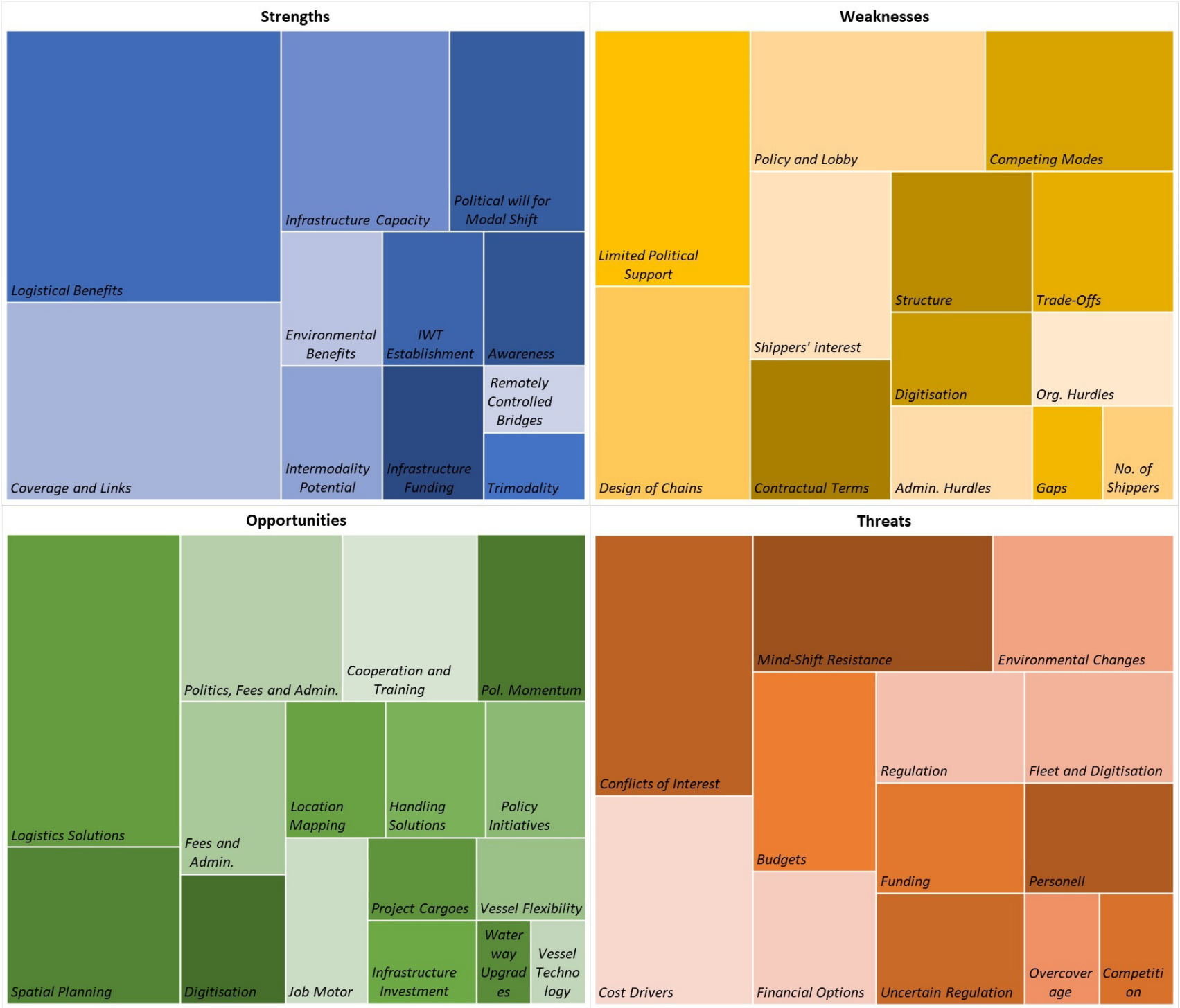
SWOT analysis

Inland shipping is far more capable than their current image might suggest. Core strengths underpin existing logistics benefits of IWT, focussing on available capacity of vessels and waterways, logistics services and geographical coverage of regional IW-networks. Those networks link regions to European and global markets, tapping into established supply chains with IWT-usage. This is supported by favourable topo-/geography that might facilitate waterway expansion and construction over a longer time horizon.

#IWTS 2.0 presents ten key policy recommendations of how IWT in Europe can be supported:

1. The current momentum of a stronger political will for a support of a modal shift towards IWT must be upheld.
2. Support of IWT must be made a central part of all national and European efforts that aim at modal shift and a reduction of emissions of the transport sector.
3. Concrete targets should be set with regards to the share of IWT in overall modal split.
4. IWT requires awareness raising and education amongst present and future decision makers in the sector, thereby also a stronger lobby specifically in comparison to other modes of transport.
5. Specific, existing and future market potentials for IWT must be identified and fostered to create business opportunities and to thereby allow for a more robust and green economy overall.
6. IWT infrastructure needs not only more attention but concrete investments with regards to overall funding, maintenance of infrastructure to inhibit further decline, an expansion of waterways, specifically with regards to ports/ quays, wharf facilities and bottlenecks such as bridges and locks.
7. Efforts in the realm of digitisation, automation and artificial intelligence must be increased to allow for a technological catch-up of the sector, to assure a robust and green economy and to serve as interim solutions are to the aforementioned, infrastructural deficits.
8. Financial support is required to foster the development and usage emission-free vessels, to further help local authorities achieve air improvement targets.
9. Especially road, but party also train based transport must be made comparatively less attractive than IWT, such as through fees on road and train transport, by reducing piloting and port fees for IWT and by limiting the number of road permits for odd-sized loads.
10. Uncertainty about regulations that limit and slow down private incentives to invest has to be approached.




Strengths
Logistical Benefits
Infrastructure Capacity
Political will for Modal Shift
Environmental Benefits
IWT Establishment
Awareness
Coverage and Links
Intermodality Potential
Infrastructure Funding
Remotely Controlled Bridges
Trimodality
Weaknesses
Limited Political Support
Policy and Lobby
Competing Modes
Structure
Trade-Offs
Shippers' interest
Digitisation
Org. Hurdles
Design of Chains
Contractual Terms
Admin. Hurdles
Gaps
No. of Shippers
Opportunities
Logistics Solutions
Politics, Fees and Admin.
Cooperation and Training
Pol. Momentum
Fees and Admin.
Location Mapping
Handling Solutions
Policy Initiatives
Spatial Planning
Digitisation
Job Motor
Project Cargoes
Vessel Flexibility
Infrastructure Investment
Water way Upgrades
Vessel Technology
Threats
Conflicts of Interest
Mind-Shift Resistance
Environmental Changes
Regulation
Fleet and Digitisation
Budgets
Funding
Personell
Cost Drivers
Financial Options
Uncertain Regulation
Overcoverage
Competition

Complementing the online learning inventory is the "IWTS Innovation Challenge". This one-day event targeted students and apprentices encouraging them to present their ideas on how IWTS can be made more attractive.

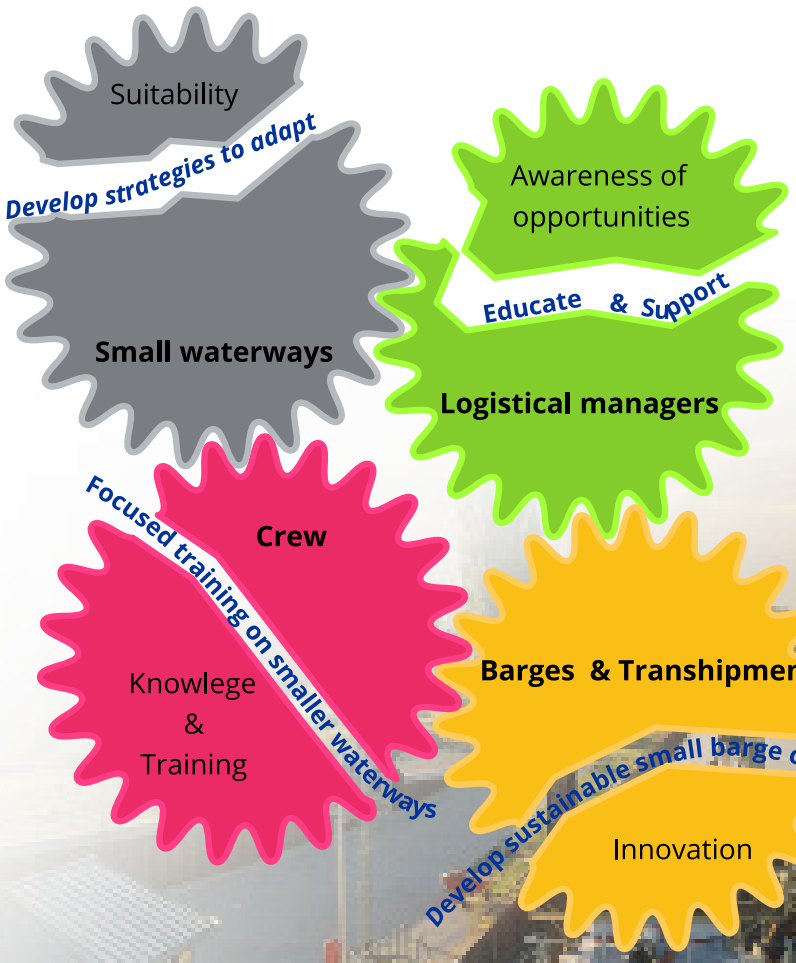
Six future industrial engineers presented their ideas for more innovation in inland shipping to around 70 participants. The topics ranged from the use of anticipatory logistics on rivers and waterways right through to suggestions for barge-assisted urban logistics. In anticipatory logistics, inventory management and shipments are organised on the basis of intelligent forecasts. In this case, the students adapted the model used by US American online trading platform Amazon to match the requirements of the inland shipping business. They presented practical examples, for instance from Utrecht and Amsterdam in the Netherlands, to show how barge transports could be integrated into urban logistics.

As there are plenty comparable events, bremenports teamed up with three regional universities which offered to award ECTS-credits to all contributors of the event. Close collaboration was also paramount for defining the content for the website. #IWTS 2.0-partners delivered facts and figures for a number of case studies that have been exclusively for project-iwts20.eu. "Interreg provides an established platform for transnational co-operation", Lars explains. "In IWTS 2.0, we looked at common problems from multiple perspectives, which made the project so valuable."

For the future, training and education for IWT will continue to form a key part of bremenports´ consultancy portfolio. The company will use its expertise acquired through #IWTS 2.0 to further enhance the competitiveness of the Ports of Bremen and Bremerhaven.

#IWTS 2.0

Inland navigation provides an environmentally friendly way to serve transport needs in a growing, and increasingly digital logistics industry across Central Europe. The project #IWTS 2.0 – IWTS for Inland Waterway Transport – brings together public infrastructure managers, private barge operators and training institutions to offer a fresh perspective on inland shipping.



#IWTS 2.0

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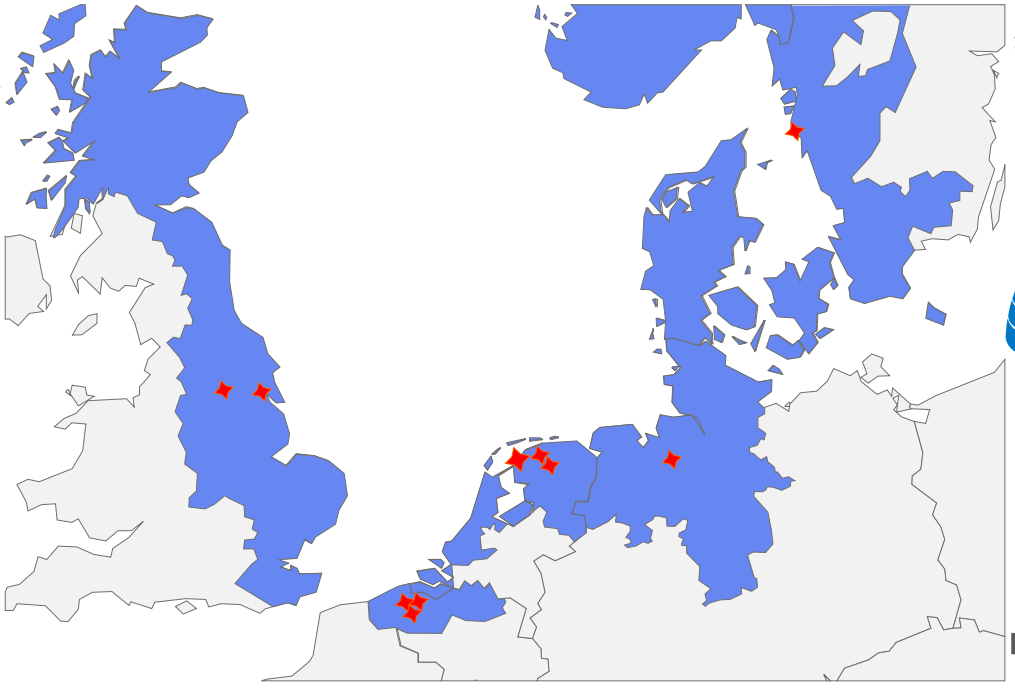

Canal & River Trust
Making life better by water

UNIVERSITY OF HULL

Gedimat De Groote

HOUTBOERKE

POM Oost-Vlaanderen

De Vlaamse Waterweg nv

Your Maritime Solution Partner SSPA

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