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WATERWAYS AND URBAN LOGISTICS: HOW CAN REGULATIONS BETTER INTERCONNECT THE MODES?

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Waterways and urban logistics: How can regulations better interconnect the modes?

Raffaele Vergnani, POLIS Network

Bruxelles, 4 July 2022

Peer-to-peer exchange

Policy & Advocacy

Research

Innovation

102 Cities, regions and related entities

SUSTAINABLE URBAN MOBILITY INNOVATION

POLIS

CITIES AND REGIONS FOR TRANSPORT INNOVATION

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WORLD
EUROPE
Our Members
Membership:
Full
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Global

Our working groups

Environment & Health

Active Travel & Health

Clean Vehicles & Air Quality

Traffic Efficiency

Traffic Efficiency (ITS, traffic management, automation, MaaS, data,...)

Access

Access (public transport, infrastructure, pricing...)

Parking

Safety & Security

Safety & Security (street and road safety, protecting vulnerable users, gender...)

Governance & Integration

Governance & Integration

Urban Freight

Small and medium sized cities platform

Regions Working Group

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Urban Freight Working Group

WG Coordinator:
Raffaele Vergnani, rvergnani@polisnetwork.eu

WG chair: Lola Ortiz Sánchez, Madrid

Priority topics in 2022

- **POLIS-ALICE joint position paper:** webinar series on the priorities identified by members
- **Zero-emission zones for freight:** update of How-to Guide, capitalize on SURF project
- **Rethink the space for urban logistics movements and operations:**
  - **Consolidation models**: micro-hubs, parcel lockers, procurement
  - **Dynamic street and curbside management** solutions for deliveries
  - **15-minutes concept**: implications on urban logistics
- **Geofencing & other tools to support enforcement** of access and illegal parking
- **Leveraging data** to improve urban freight planning

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WG Activities

- **POLIS – ALICE webinar series on urban freight**
  - 5 workshops between April and December 2022. Topics addressed:
    1. Passenger and freight mobility hubs
    2. Collaborative logistics
    3. Low and Zero Emission Zones – for Freight (ZEZ-Fs)
    4. Inland Waterway Transport in urban areas
    5. Topic to be defined
- **Meetings**
  - Madrid, 13/06/2022 Madrid
  - Autumn 2022 – tbc (back-to-back to another POLIS WG)

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ST4W and cities

- Local and national authorities are facing major challenges related to the freight transport sector, concerning the **increasing greenhouse gas emissions**
- Urban freight and delivery is complex because of the **multiple actors responsible for the supply chain**
- Inland waterway freight in most cases arrives to distribution centers in the outskirts – **sustainable infrastructure** needs to be in place for clean and efficient delivery
- **Open data sharing and innovative track&trace services are supporting better handling between waterway and urban logistical services -** only if local authorities are involved in the planning process!

Learnings from the past

The proximity to water means that waterways are already an available part of the infrastructure with the potential to be a solution for more sustainable city logistics.

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From traffic management to urban space management

Creation of multi-functional spaces in urban areas

POLIS

Combination of inland waterway transport and sustainable city logistics

- The main drivers of this alternative mode of transport in city logistics are the associated **sustainability and large capacity** for transporting goods.
- **Space management** in cities have a crucial role to enable sustainable city logistics (and the connection between inland waterways and urban logistics)
- A properly implemented system has the potential **to substantially reduce air emissions, congestion and noise by reducing the number of trucks** on highways and in urban areas.
- Challenges that must be overcome relate to the **difficulties in competing** with existing road transport solutions .
- **Intermodal transport system** integrating sustainable urban freight solutions into the local mobility mix

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THANK YOU FOR YOUR ATTENTION!

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European Commission

POLIS- IWT and urban logistics– 04 Juillet

NAIADES III
An inland waterway transport action plan for 2021 – 2027

Hugues Van Honacker

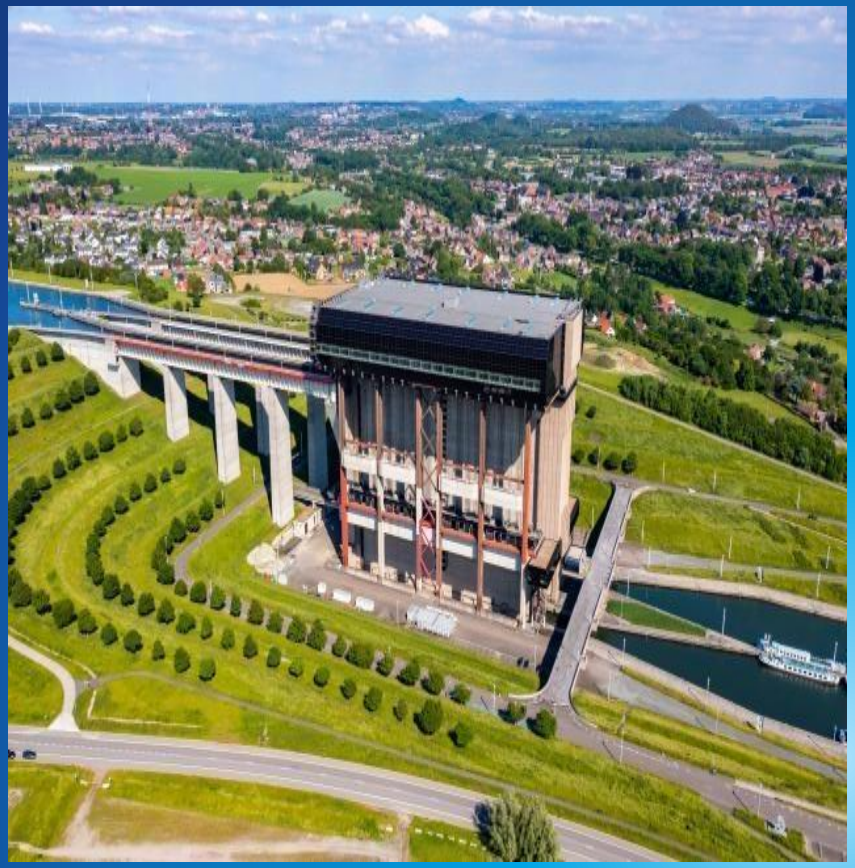
Senior Expert
Ports and Inland Navigation Unit
European Commission - DG MOVE

@Transport_EU

Mobility and Transport

CONNECTING EUROPE

European Commission



EUROPEAN COMMISSION

Brussels, 24.6.2021
COM(2021) 324 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

NAIADES III:

Boosting future-proof European inland waterway transport

Green Deal and the Sustainable and Smart Mobility Strategy

The European Green Deal called for decisive action to shift a substantial part of the freight transported by road (currently accounting for 75% of inland freight) to inland navigation and rail, namely through measures to increase the capacity of inland waterways from 2021.

The Sustainable and Smart Mobility Strategy adopted on 9 December 2020, indicated that inland waterway transport and short-sea shipping should increase by 25% by 2030 and by 50% by 2050

Background :a few facts

41,000 km of inland waterways flow through 25 EU MS

>15,000 km of TEN-T inland waterways

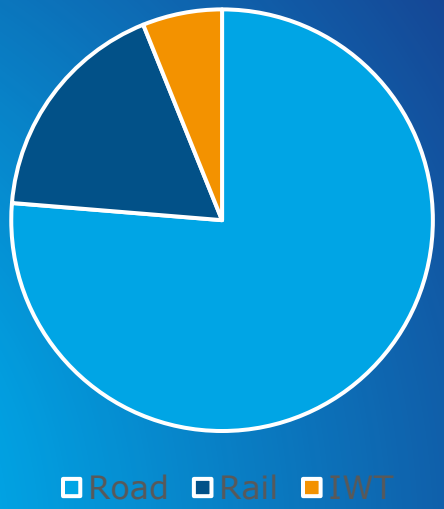
150 bn tkm of cargo every year

44,000 people work on inland vessels (60% goods, 40% passengers)

75% of inland waterway navigation takes place across borders

IWT modal share is 43% in NL, 28% in RO and 31% in BG

Modal split: only 6% across EU



Naiades III

- *This initiative aims to set an "Inland Navigation Action Plan 2021-2027", aligned to the new multi-annual financial framework to meet objectives of the green deal and strategy and will focused on:*

  (A) shifting more freight transport to inland waterways

  (B) a irreversible path towards zero emission inland vessels

- Both underpinned by a paradigm shift towards further digitalisation, as well as accompanying measures to support the current and future workforce.

So what's in Naiades III?

Relevant actions areas (1)

Shifting more freight to inland waterways

- COM will help inland waterway managers to ensure a high level of service (Good Navigation Status) along EU inland waterway corridors by 31 December 2030 (primary through TEN-T policies, CEF and Horizon Europe).
- A dedicated cooperation framework for IWT will be considered as part of the TEN-T Regulation revision.
- The revision of the Combined Transport Directive will fully integrate inland waterways as an essential component of intermodal transport.
- COM will also establish an EU framework for measuring and report emissions from logistics and transport. This could increase demand for more sustainable options, including inland waterways where feasible.
- EU rules on market access in IWT will be reviewed as needed to improve harmonisation, maintain a level playing field and high safety (review of Directive 2016/1629 on requirements for IWT vessels).

Relevant actions areas (2)

Transition to zero-emission inland waterway transport

- COM will propose measures to encourage investment in zero-emission and zero-waste technologies for inland vessels and inland ports and will support research and innovation (including the new Zero-Emission Waterborne Partnership, and upcoming technical guidance on climate-proofing investments in transport infrastructure).
- EU energy index methodology for reporting and montoring carbon intensity
- COM will assess how best to facilitate and speed up the safe testing and certification of innovative and low-emission vessels.
- The AFID revision should ensure that relevant infrastructure is available by 2030 for zero-emission vessels.
- Inclusion of inland waterway transport in the future revised railway guidelines

Relevant actions areas (2b)

Urban actions

- Finally, inland ports are often situated near city centres and are key for intermodal connectivity for urban logistics. Inland waterway transport also has the potential to be an integral part of urban public transport in many cities, supporting road congestion reduction. Both aspects will be tackled in the new EU urban mobility framework, an initiative planned for 2021 and aimed at, among other things, more sustainable urban mobility planning (SUMP), including in relation to urban logistics. TEU energy index methodology for reporting and montoring carbon intensity

- New EU urban mobility framework: Alternative delivery solutions, such as cargo bikes and inland waterways should also be considered and better utilised in urban logistics.

Relevant actions areas (3)

Smart inland waterway transport

- Digitalisation is key for improving the efficiency and reliability of navigation and traffic management, better integrating inland waterway transport in logistics processes and multimodal chains, and reducing the administrative burden and costs of regulatory compliance.

- Measures to help the inland waterway transport sector keep up with digital developments and improve competitiveness are included (including financing through CEF and Horizon Europe, and the revision of the River Information Services (RIS) Directive in 2022)

- Roadmap for digitalisation and automation of IWT

Relevant actions areas (4)

More attractive and sustainable jobs in inland waterway transport

- The inland waterways sector relies on a skilled workforce. The proposed actions will ensure smart and flexible EU crewing rules (need for legislation to be assessed) and provide inland vessel crews with the right skills to deal with the green and digital transitions, cyber-security, synchromodality and the automation of vessels and infrastructure.

- The new IWT Market Observatory will support the collection and dissemination of information on the labour market structure.

- CESNI will be requested to develop standards for skills for eco navigation (incl. alternative fuels operations, efficient vessel operation).

Relevant actions areas (5)

Financing

- In addition to the existing EU funding instruments such as CEF2 (EUR 21.8bn for transport), Horizon Europe, RRF (EUR 672.5bn), InvestEU (EUR 26.2bn guarantee, incl. the Sustainable Infrastructure Window), the LIFE programme, etc., COM will facilitate efforts by stakeholders and Member States to create a fund to complement EU and national financial instruments for the deployment of zero-emissions vessels.

- The key is to support that smaller vessel operators can combine their projects to receive attractive financing conditions.

Relevant actions areas (6)

Governance

- Work will continue with the Central Commission for Navigation on the Rhine (CCNR), the Danube Commission and the Permanent Secretariat of the Transport Community to coordinate policies and indicate the possibilities for support through CEF.

- COM will also continue supporting CESNI (European committee for drawing up standards in the field of inland navigation) through the CEF to develop harmonised EU technical standards for IWT.

ANNEX: ACTION PLAN

SHIFTING MORE FREIGHT TRANSPORT TO INLAND WATERWAYS	
1. Continued support for innovative infrastructure and deployment through Horizon Europe and CEF	From 2021
2. Revision of the TEN-T Regulation – Inland waterway transport requirements and role of coordinators	2021
3. Deployment of cross-disciplinary digital information and operation systems for water- and waterway management through CEF	From 2022
4. Transport crisis contingency plan(s)	2022
5. Review of the regulatory framework for intermodal transport, including the Combined Transport Directive	2022
6. Issue guidelines for operators and platforms on informing users about the carbon footprint of their deliveries and on offering sustainable delivery choices	2023
7. Review the inland waterway transport market access legislation	2022
8. Evaluation of the Directive (EU) 2016/1629 on technical requirements for inland vessels	2022
TOWARDS ZERO-EMISSION INLAND WATERWAY TRANSPORT	
9. Specific actions arising from the Mission on Healthy Oceans, Seas, Coastal and Inland Waters and from the Zero-Emission Waterborne Transport Partnership/Green Hydrogen partnership	From 2021
10. Support through CEF for the deployment of zero-emission inland vessels	From 2021
11. Facilitate through the H2020 Platina III project the elaboration of an EU energy index methodology for assessing carbon intensity levels of inland waterways vessels	2022
12. Evaluate the procedure for allowing derogations in the context of Directive (EU) 2016/1629 for encouraging the navigation of zero-emission vessels on EU waterways	2023
13. Analysis to assess the need for measures for promoting low carbon/zero-emission vessels.	2025
14. Revision of the railways State aid guidelines – possible inclusion of IWT and possible block exemption of aid for the coordination of transport	From 2021 to 2023
15. Revision of the State aid guidelines for environmental protection and energy, as well as the State aid Framework for research, development and innovation	2021
16. Technical Guidance document on climate proofing on infrastuctuture in the period 2021-2027	2021
17. Study to support the greening of inland ports	2021
18. Revision of the Alternative Fuels Infrastructure Directive and a roll-out plan with funding opportunities and requirements	2021
19. Request the European Standardisation Organisation for harmonised standards for alternative fuels infrastructure for inland waterways and ports	2021
20. Continous support for innovative and alternative fuels infrastucture and deployment through Horizon Europe and CEF	From 2021
21. An assessment of the needs of waste reception infrastructure and and degassing facilities	2024
22. Revision of the Delegated Regulation (EU) 2017/1926 on multimodal travel information services with inclusion of inland waterway transport	2022

European Commission

Thank you for your attention!

Courtesy of Vlaamse Waterweg

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Smart Track 4 Waterway

***Smart Track**ing Data Network*

for** Shipment by Inland **Waterway

Modal shift to waterway fostered by hierarchical tracking

Interreg North-West Europe
ST4W
European Regional Development Fund

An European consortium

Partners

Other participants

Pallets take the boat !

Palletized freight is generally carried by road:

⇨ In small volumes

⇨ Directly from point A to point B

Main impediments to modal shift from road to waterway:

⇨ **IWT** needs:

- additional transhipment operations
- adapted vehicles and infrastructures for pallet handling
- bundling of several small volumes
- more complex logistics engineering
- more administrative burden

ST4W breakthrough

Hierarchical tracking data exchange platform:

⇨ **linking tracking data from fragmented sources:**

- vessels & trucks geo-localization
- last known location of logistics units (pallets …)
- successive cargo tracking in multimodal environment:
  - what pallet in what vessel, in what truck?

⇨ **sharing standardized & secure information:**

- where everyone is master of his own data
- and shares it only with chosen partners

⇨ **proposing real time follow-up of shipment:**

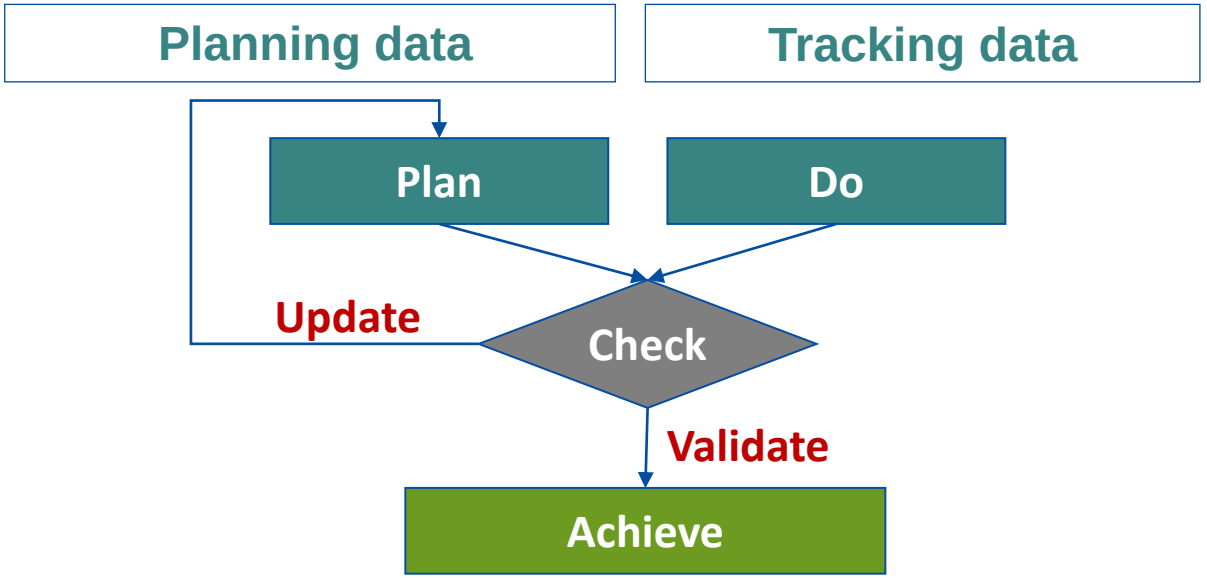
- end to end seamless visibility
- synchronization between logistics & IWT actors

⇨ **tackling modal shift impediments:**

- multi-stop & multi-client vessels

Proposing real-time follow-up of shipment

- ⇨ Automatic update of logistics unit status (pallet, container …)
- ⇨ Automatic alert in the case of delay or loading the wrong logistics unit
- ⇨ Real-time update of ETA (Estimated Time of Arrival) of each logistics unit, throughout the multimodal supply chain
- ⇨ Electronic proof of delivery at each step



Step 1 - planning

Transport Instruction

HEADER

Instance Identifier	TRINR100000224
Receiver	BLUELINE

Where

Ship from	Quai - Roosens Bétons
Ship to	Gobert Materiaux - Anderlecht

When

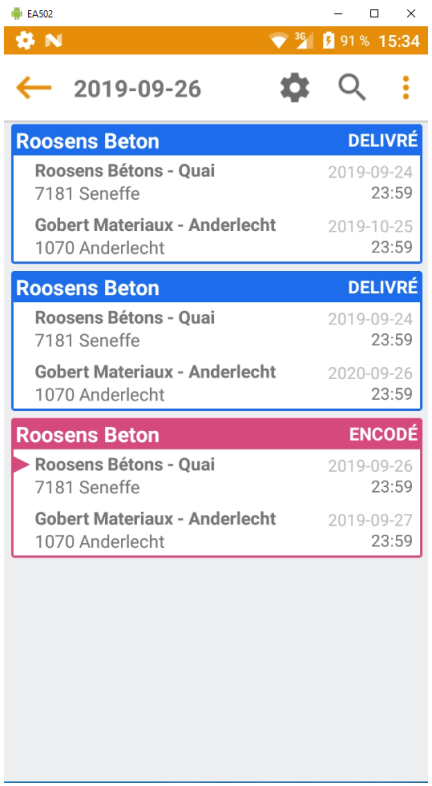
Requested time of departure	26/09/2019
Requested time of arrival	27/09/2019

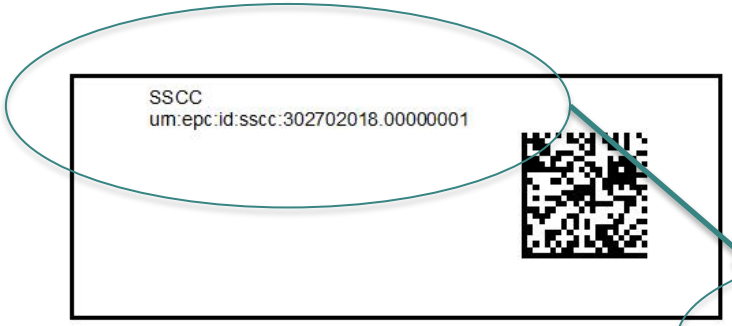
What

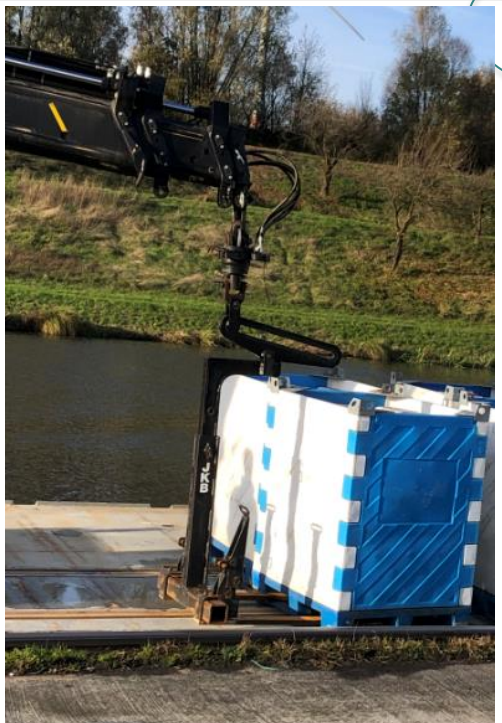
Type	General Cargo
Description	Big bags
Quantity	1
Volume	
Weight	kg

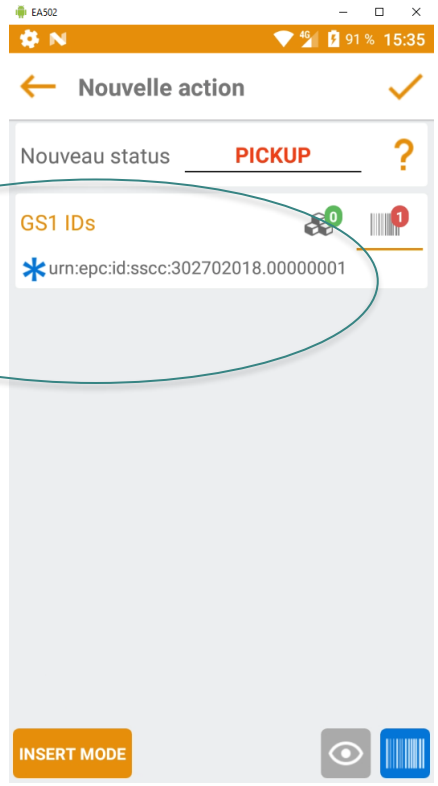
Sent Save Cancel

Step 2 – hierarchical tracking with on board smart-phone

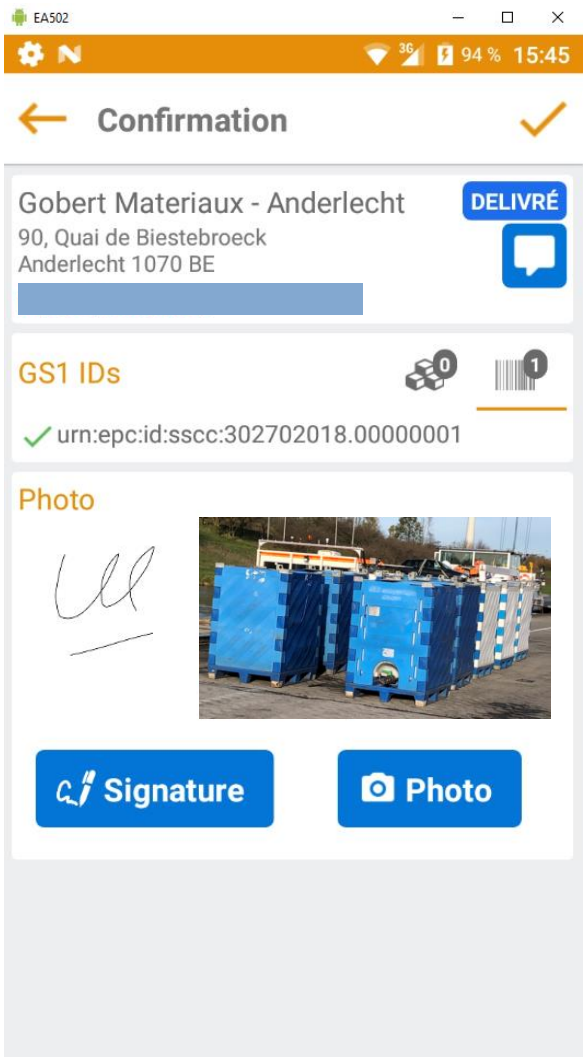








Step 3 – proof of delivery



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Online tracking of shipment status

Transports Instruction View

From ::

Rue Wauters 152
Seneffe - 7181
BE
urn:itop:sgln:L42501561.020

To ::

Quai de Biestebroeck, 90
Anderlecht - 1070
BE
urn:itop:sgln:L42501561.021

Date Create	Class Content	Direction	Edi Status
09/10/2019 18:11:48	TransportStatusNotificationMessageType	‹	DROPOFF
09/10/2019 18:11:17	TransportStatusNotificationMessageType	‹	ROUTING
09/10/2019 18:10:17	TransportStatusNotificationMessageType	‹	ROUTING
09/10/2019 18:09:53	TransportStatusNotificationMessageType	‹	PICKUP
09/10/2019 18:09:01	TransportInstructionResponseMessageType	‹	ACCEPTED
09/10/2019 18:08:43	TransportInstructionMessageType	›	SENT

Multimodal shipment status

Planing & Progress	Ship From	Waypoint 1	Ship To
	Grand-Couronne	Gennevilliers	Bonneuil sur Marne
	FR	FR	FR
	Normande de Manutention Bolloré	Paris Terminal	5 Route de Stains Bonneuil sur Marne
	76530	92230	94380
	Rue Henri de Rochebouet	6 Route du Bassin Numéro 1	5 Route de Stains
Planed Time		**Arrival** Mar 1, 2022	**Arrival** Mar 1, 2022
	Departure Mar 1, 2022	**Departure** Mar 1, 2022	
Estimated Time		**Arrival**	**Arrival**
	Departure	**Departure**	
Actual Time		**Arrival**	**Arrival**
	Departure Mar 1, 2022	**Departure**	

PICK-UP Normande de Manutention Bolloré

Multimodal shipment status

Planing & Progress	Ship From	Waypoint 1	Ship To
	Grand-Couronne FR Normande de Manutention Bolloré 76530 Rue Henri de Rochebouet	Gennevilliers FR Paris Terminal 92230 6 Route du Bassin Numéro 1	Bonneuil sur Marne FR 5 Route de Stains Bonneuil sur Marne 94380 5 Route de Stains
Planed Time	**Departure** Mar 1, 2022	**Arrival** Mar 1, 2022 **Departure** Mar 1, 2022	**Arrival** Mar 1, 2022
Estimated Time	**Departure**	**Arrival** **Departure**	**Arrival** Mar 2, 2022
Actual Time	**Departure** Mar 1, 2022	**Arrival** Mar 1, 2022 **Departure**	**Arrival**

PICK-UP Normande de Manutention Bolloré — ARRIVED AT PF Paris Terminal

Multimodal shipment status

Planing & Progress	Ship From	Waypoint 1	Ship To
	Grand-Couronne	Gennevilliers	Bonneuil sur Marne
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	Normande de Manutention Bolloré	Paris Terminal	5 Route de Stains Bonneuil sur Marne
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Planed Time	**Departure** Mar 1, 2022	**Arrival** Mar 1, 2022 **Departure** Mar 1, 2022	**Arrival** Mar 1, 2022
Estimated Time	**Departure**	**Arrival** **Departure**	**Arrival** Mar 2, 2022
Actual Time	**Departure** Mar 1, 2022	**Arrival** Mar 1, 2022 **Departure** Mar 1, 2022	**Arrival**

PICK-UP Normande de Manutention Bolloré | ARRIVED AT PF Paris Terminal | TRANSSHIPMENT Paris Terminal

Multimodal shipment status

Planing & Progress	Ship From	Waypoint 1	Ship To
	Grand-Couronne	Gennevilliers	Bonneuil sur Marne
	FR	FR	FR
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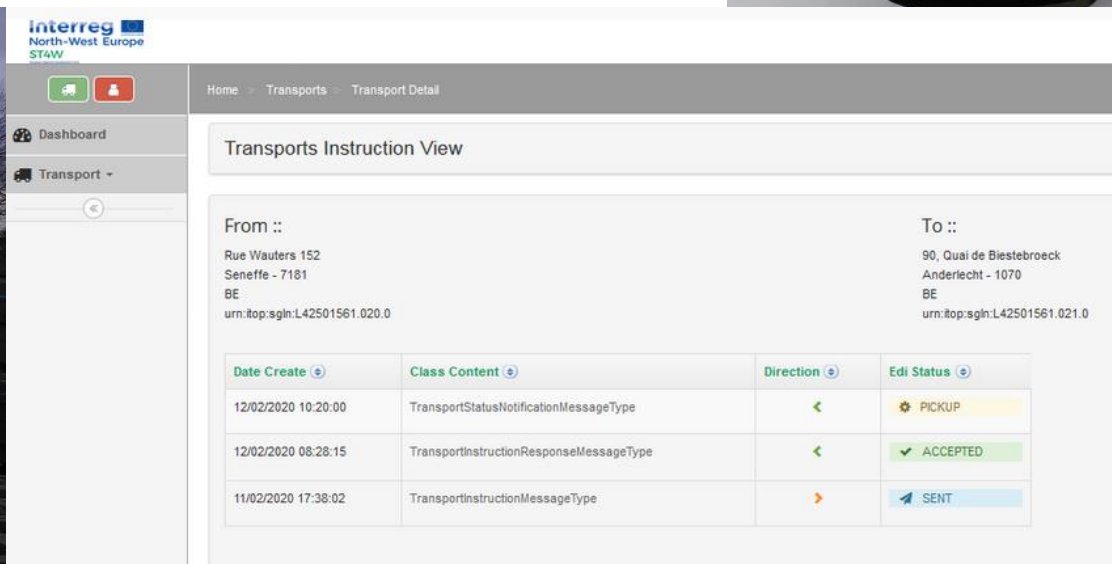
	Departure Mar 1, 2022	**Departure** Mar 1, 2022	
Estimated Time		**Arrival**	**Arrival** Mar 2, 2022
	Departure	**Departure**	
Actual Time		**Arrival** Mar 1, 2022	**Arrival** Mar 1, 2022
	Departure Mar 1, 2022	**Departure** Mar 1, 2022	

PICK-UP Normande de Manutention Bolloré | ARRIVED AT PF Paris Terminal | TRANSSHIPMENT Paris Terminal | DROP-OFF 5 Route de Stains Bonneuil sur Marne

Belgian pilot

- ⇨ Construction materials:
  - Tests with BLL & Roosens, Shipit & Knauf
    - 52 vessels voyages have been done
    - Including 5 multi-stop voyages
  - 148 other miscellaneous voyages



French pilot

Road
150 km

Rouen | Moulineaux | Gennevilliers | Bonneuil-sur-Marne | Noisy le Grand

Road 8 km | Waterways 225 km | Waterways 47 km | Road 18 km

Pick-up Empty | Factory - out | Drop-Off | Departure | Drop-Off | Departure | Drop-Off | Departure | Delivery

Moulineaux

Gennevilliers

Bonneuil

Noisy le Grand

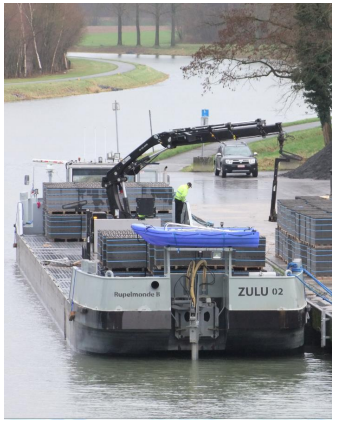
Capitalisation: better connect IWT with multimodal last-mile logistics

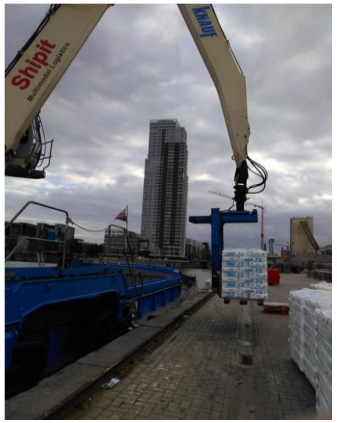
Digital interconnection: ST4W tool for synchronisation

- Data exchange between IWT and urban logistics tracking systems
- Resource booking shared planning
- Lead time monitoring

Physical interconnection: Innovative vessels and transhipment

- Flexi-malle
- GreenWave
- Zulu
- Oorderdam
- BCCC - Bruxelles
- CMDU - Lille





Key components

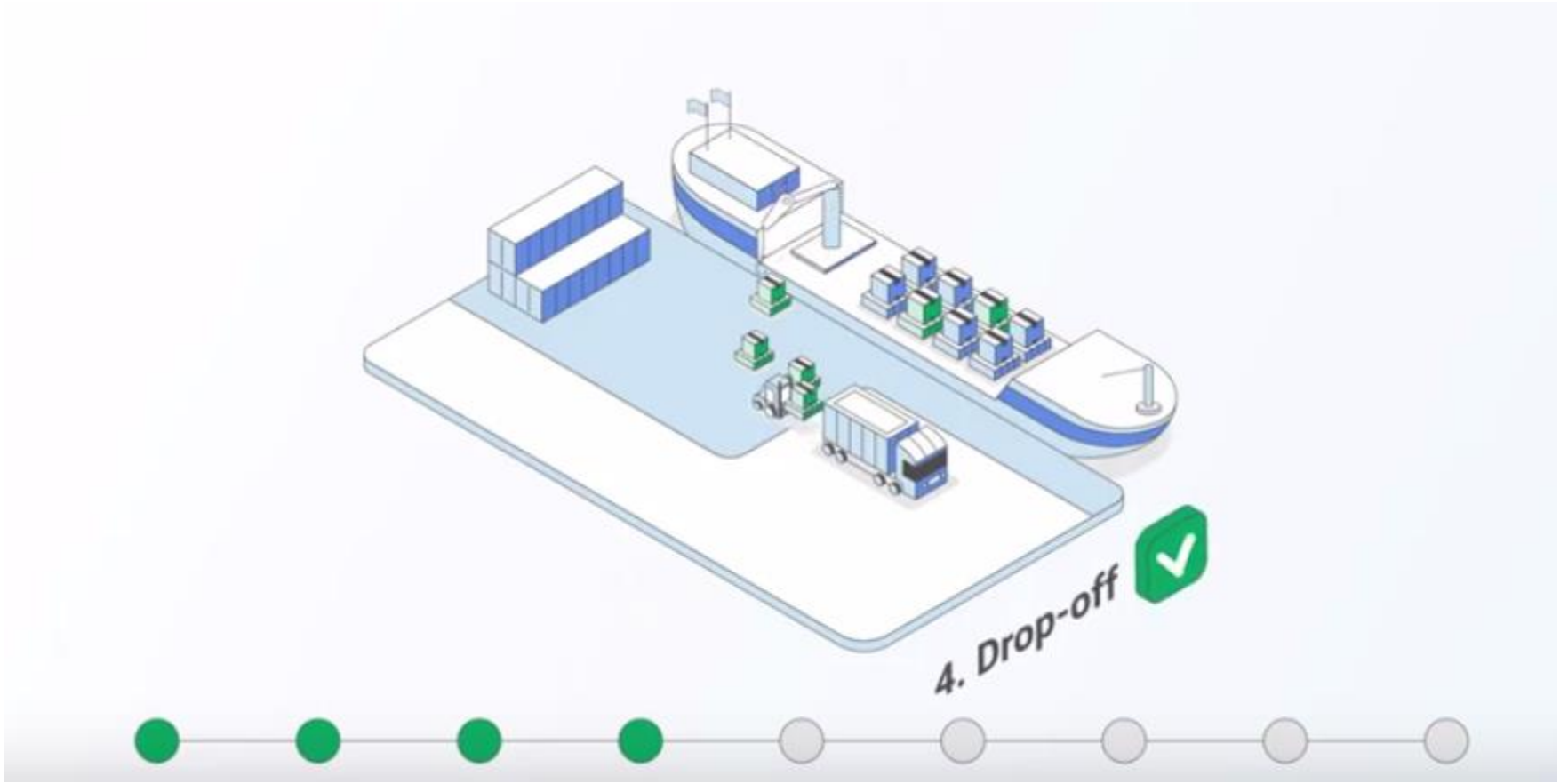
Last-mile thanks to eco-friendly cargo-bikes and vans

Circular IWT logistics

Test-beds will include Paris, Lille, Liège, Brussels and Ghent.

Video : project overview

Video : project overview



https://www.youtube.com/watch?v=LJZn39kqOh0

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- WORKSHOP –
WATERWAYS AND URBAN LOGISTICS: HOW CAN REGULATIONS BETTER INTERCONNECT THE MODES?

IDIT
Institut du Droit International des Transports et de la Logistique

ST4W Cap Call

"Multimodal last mile" Legal aspects report

Background
Part 1 Urban Waterway Delivery
- 1. Public Domain
- 2. Urban Planning
- 3. Traffic Management

Part 2 Last Mile Delivery
- Case Studies to illustrate

Overall Conclusions

INSTITUT DU DROIT INTERNATIONAL DES TRANSPORTS ET DE LA LOGISTIQUE

BACKGROUND

- **PART.1 URBAN WATERWAY DELIVERY: BRAKES AND LEVERS AVAILABLE TO LOCAL AUTHORITIES**

Urban planning rules, powers of local authorities etc..

These aspects are governed by Public Law, which differs in each country of the EU as well as between different regions, municipalities and ports authorities.

- **PART.2 LAST MILE DELIVERY: THE DIFFERENT LIABILITY REGIMES**

This is governed by contract law (contracts between private operators/stakeholders)

PART 1. URBAN WATERWAY DELIVERY:

BARRIERS AND OPPORTUNITIES AVAILABLE TO LOCAL AUTHORITIES

- Availability of land for development and appropriate infrastructure for operations

- Integration of the policy and strategies to create a seamless interface between the port and the city that surrounds it

- Role of the public authorities (port, municipality, waterway) must be clearly defined and accepted

1. Public Domain : Conditions of use of the public domain

- **FRANCE**

Goods in the public domain are used in accordance with their assignment to the public utility.

→The different types of occupation of the river public port domain :

- ✓ **Authorizations for private tools with public service obligations**
- ✓ **Port concessions**

→ Infringements of the integrity of the public domain are sanctioned by a CGV

→ The Procedure is under the jurisdiction of the administrative judge.

1. Public Domain: Conditions of use of the public domain

- **BELGIUM**

In Belgium, the public domain is made up of property owned by legal entities governed by public law and which are affected by an act of will (legal assignment) for the use of all (material assignment).

2. Urban Planning

- **FRANCE**

Urban planning documents :

- ✓ Regional planning, sustainable development and territorial equality plan (SRADDET)
- ✓ Territorial coherence scheme (SCoT)
- ✓ Local urban plan & Local intermunicipal urban plan
- ✓ Mobility plan

2. Urban Planning

- **BELGIQUE**

Belgian federal structure (responsibility of the regional entities):

- ✓ Development schemes
- ✓ Development plan
- ✓ Municipal Mobility Plan

The three regions of the country each have a major urban planning code

3. Traffic: action by local authorities on traffic conditions

FRANCE: The mobility orientation law has created low mobility emission zones (ZFE) allowing local authorities to limit the circulation of the most polluting vehicles on their territory.

BELGIUM: A Low Emission Zone (Lage Emissie Zone or LEZ) is a demarcated area where certain vehicles are not allowed to drive, or under certain conditions, because they emit too many harmful substances.

PART 2 LAST MILE DELIVERY: THE TRANSFER OF LIABILITY

Case Study n°1: Passage by mobile river warehouse then delivery by an employee of the same carrier

→ Break of load

→ The contractual carrier remains responsible towards the principal and the consignee for everything, until delivery (material and legal) to the consignee mentioned on the consignment note.

Case n°2: Delivers the goods to the platform for delivery

- **Change of charge with transfer of custody of the goods**

- **Platform:**
  - takes delivery of the goods from the main carrier
  - unbundling operations
  - makes the final delivery itself to the recipient in town

Case n°2: Delivers the goods to the platform for delivery

- **Qualification of the platform contract:**

  - if warehousing is the dominant service,
  - if the main service is the final trip to deliver to the recipient,
  - if it is difficult to determine the dominant service because all are, more or less, of equal importance

- **Liabilities**

  - Liability of the main carrier with regard to its principal (consignor)
  - Liability of the platform with regard to the main carrier

Case n°3: Passage by barge/platform then delivery by another carrier

→ Plurality of contracts

- ❖ Liability of the main carrier towards the principal
- ❖ Liability of the platform with respect to the main carrier
- ❖ Liability of the delivering carrier

OVERALL CONCLUSIONS

Barriers to Development

- Complexity of actors involved
- Public and Private Law are mixed
- Lack of Harmonisation at European level

Opportunities for Development

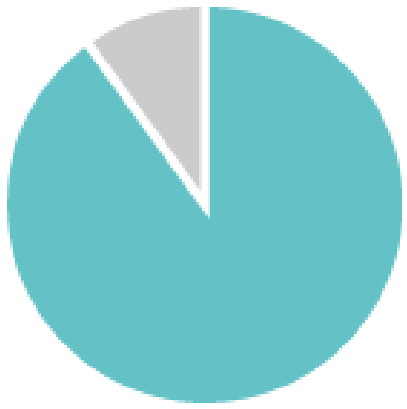
- Strengthened Environmental Regulations
- Low (or Zero) Emissions Zones
- Sustainable Urban Mobility (inc Logistics) Plans
- New contract models for shared or collaborative services between actors in the supply chain (change in power balance)

Regional policies towards low emission logistics in Brussels

Waterways and urban logistics workshop, 4 July 2022

Louise Duprez: lduprez@environnement.brussels

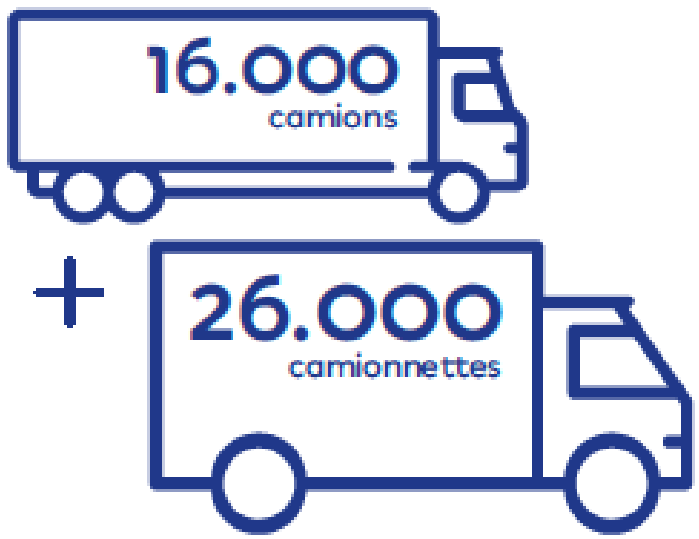
TRANSPORT OF GOODS IN THE BRUSSELS CAPITAL REGION



90%

du transport de marchandises
passe par la route

Cela représente **chaque jour**



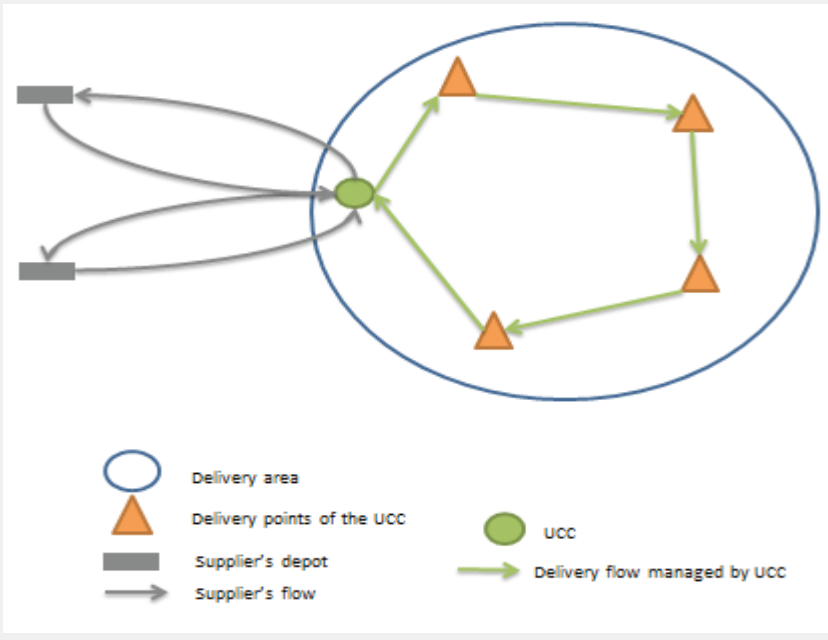
Cela représente

30%

de la pollution
atmosphérique
due au trafic

HOW TO CUT EMISSIONS

Less km driven

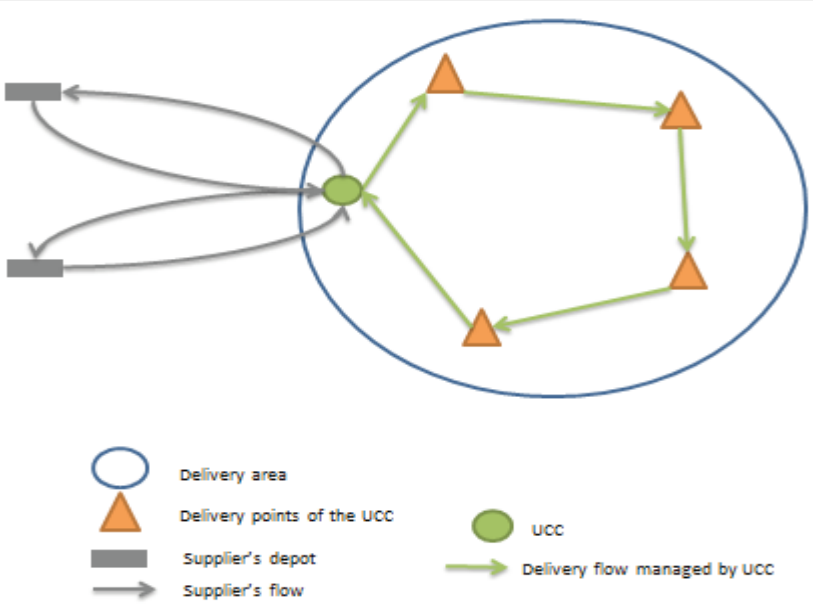


Shift modes

Shift motor

HOW TO CUT EMISSIONS

Less km driven



Shift modes

good move

be.brussels

GOOD MOVE ACTIONS RELATED TO URBAN LOGISTICS

- Optimise deliveries by developing local logistics real estate and more intelligent urban distribution (A.5)
- Facilitate access for heavy goods vehicles to logistics zones by creating dedicated and adapted routes (B.7)
- Strengthen and create regional logistic hubs (C.12)
- Implement a road pricing system based on usage (D.4)
- Implement the phasing out of combustion engines (D.5)
- Companies to rationalise their orders and deliveries (D.8)
- Change logistic practices in construction sector (D.9)
- Set up a labelling system - FORS model (E.6)

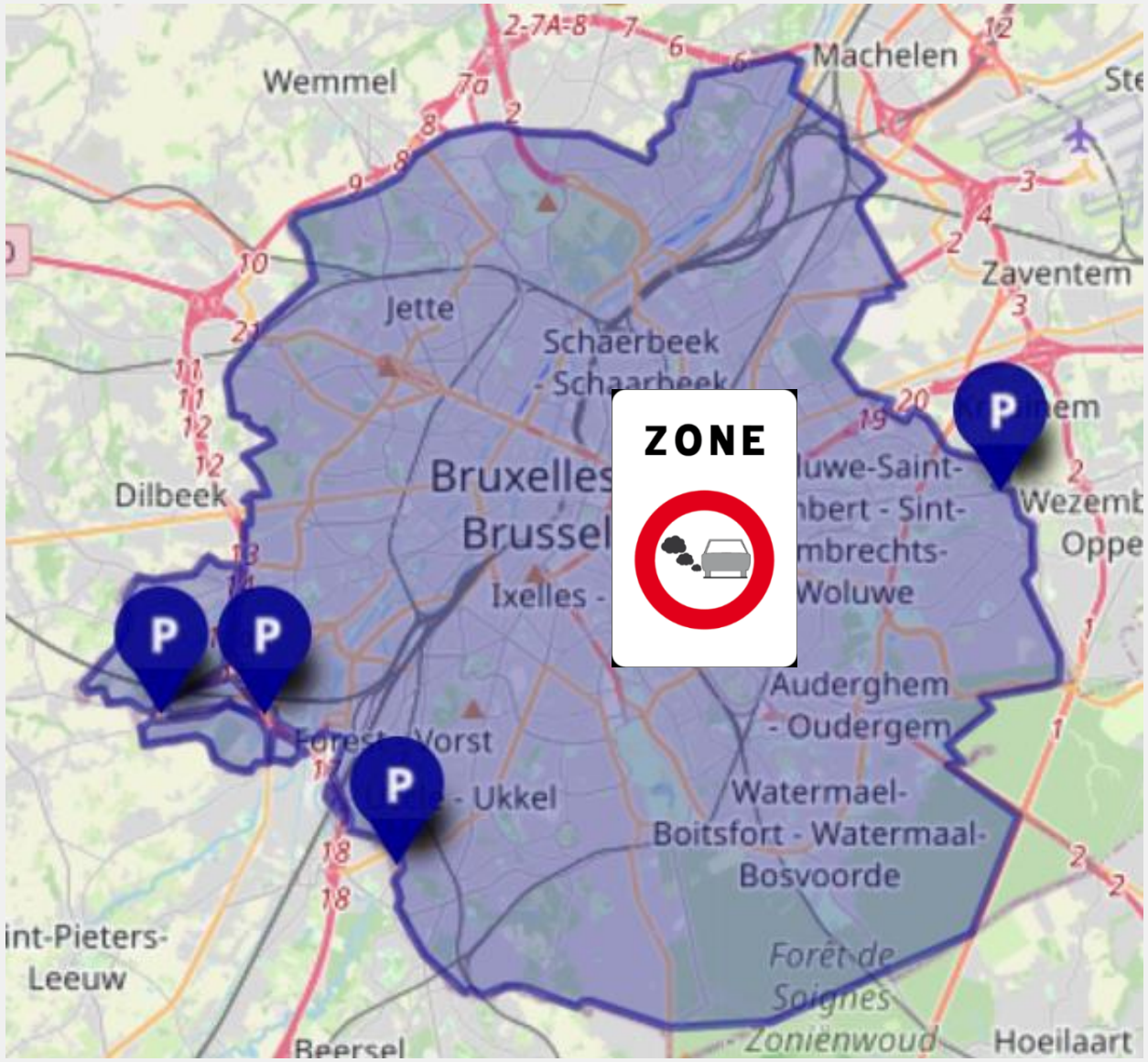
HOW TO CUT EMISSIONS

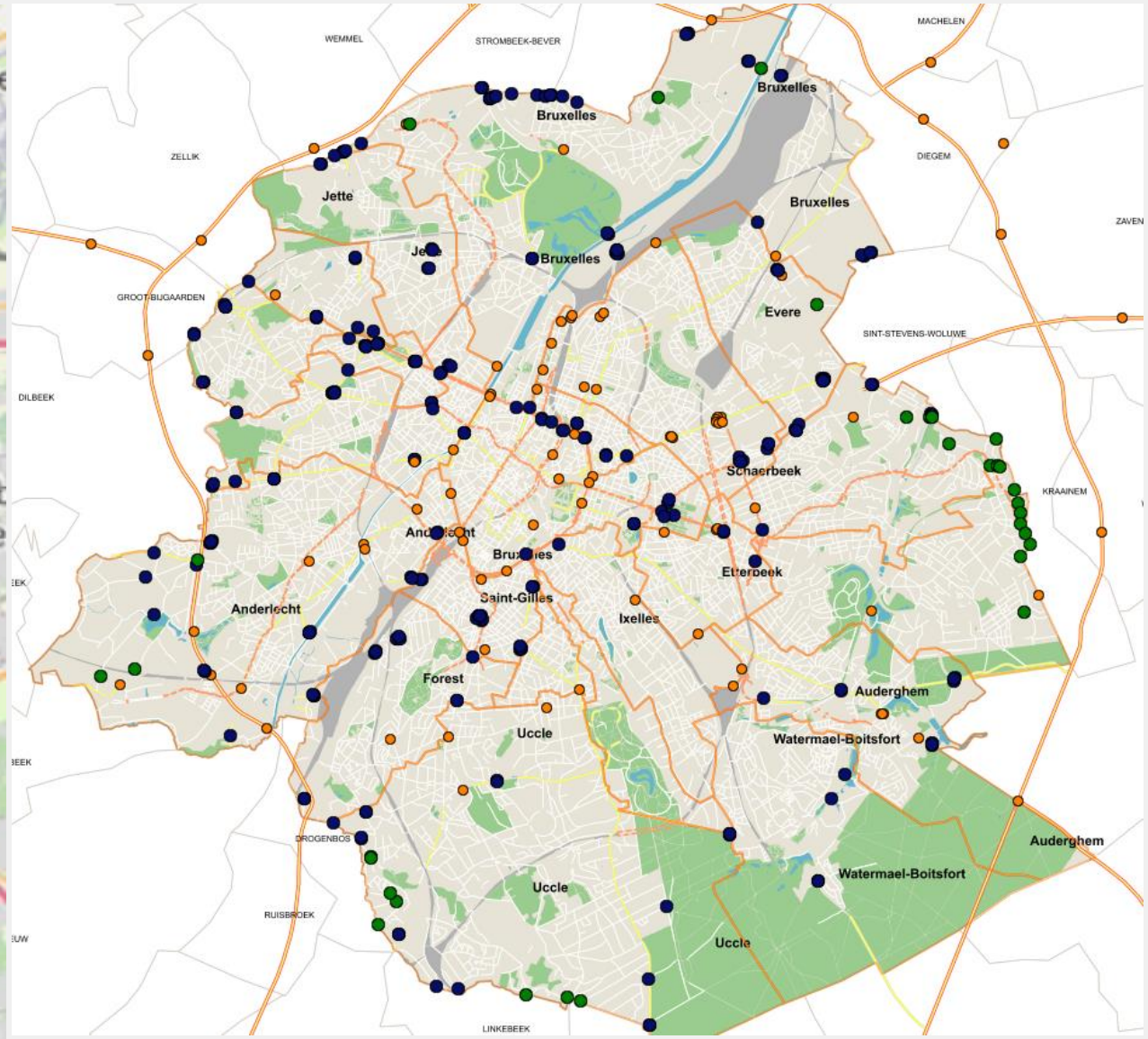
Shift motor

LOW EMISSION ZONE

Since 1/1/2018, Brussels is a low emission zone (LEZ)

LOW EMISSION ZONE



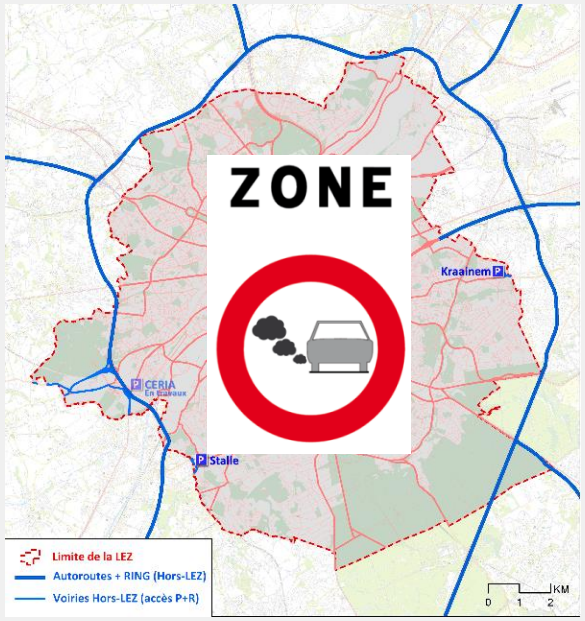


7d/7 & 24h/24

Concerns passengers cars, vans and busses (heavy duty excluded for the moment)

LOW EMISSION ZONE: AGENDA 2018-2025

Diesel	2018	2019	2020	2022	2025
EURO 6	Autorisé	Autorisé	Autorisé	Autorisé	Autorisé
EURO 5 Immatriculé avant le 1/9/15	Autorisé	Autorisé	Autorisé	Autorisé	Non autorisé
EURO 4 Immatriculé avant le 01/01/11	Autorisé	Autorisé	Autorisé	Non autorisé	Non autorisé
EURO 3 Immatriculé avant le 01/01/06	Autorisé	Autorisé	Non autorisé	Non autorisé	Non autorisé
EURO 2 Immatriculé avant le 01/01/01	Autorisé	Non autorisé	Non autorisé	N	
EURO 1 Immatriculé avant 01/01/97	Non autorisé	Non autorisé	Non autorisé	N	
Sans EURO Immatriculé avant le 01/07/92	Non autorisé	Non autorisé	Non autorisé	N	



Essence	2018	2019	2020	2022	2025
EURO 6	Autorisé	Autorisé	Autorisé	Autorisé	Autorisé
EURO 5 Immatriculé avant le 01/09/15	Autorisé	Autorisé	Autorisé	Autorisé	Autorisé
EURO 4 Immatriculé avant le 01/01/11	Autorisé	Autorisé	Autorisé	Autorisé	Autorisé
EURO 3 Immatriculé avant le 01/01/06	Autorisé	Autorisé	Autorisé	Autorisé	Autorisé
EURO 2 Immatriculé avant le 01/01/01	Autorisé	Autorisé	Autorisé	Autorisé	Non autorisé
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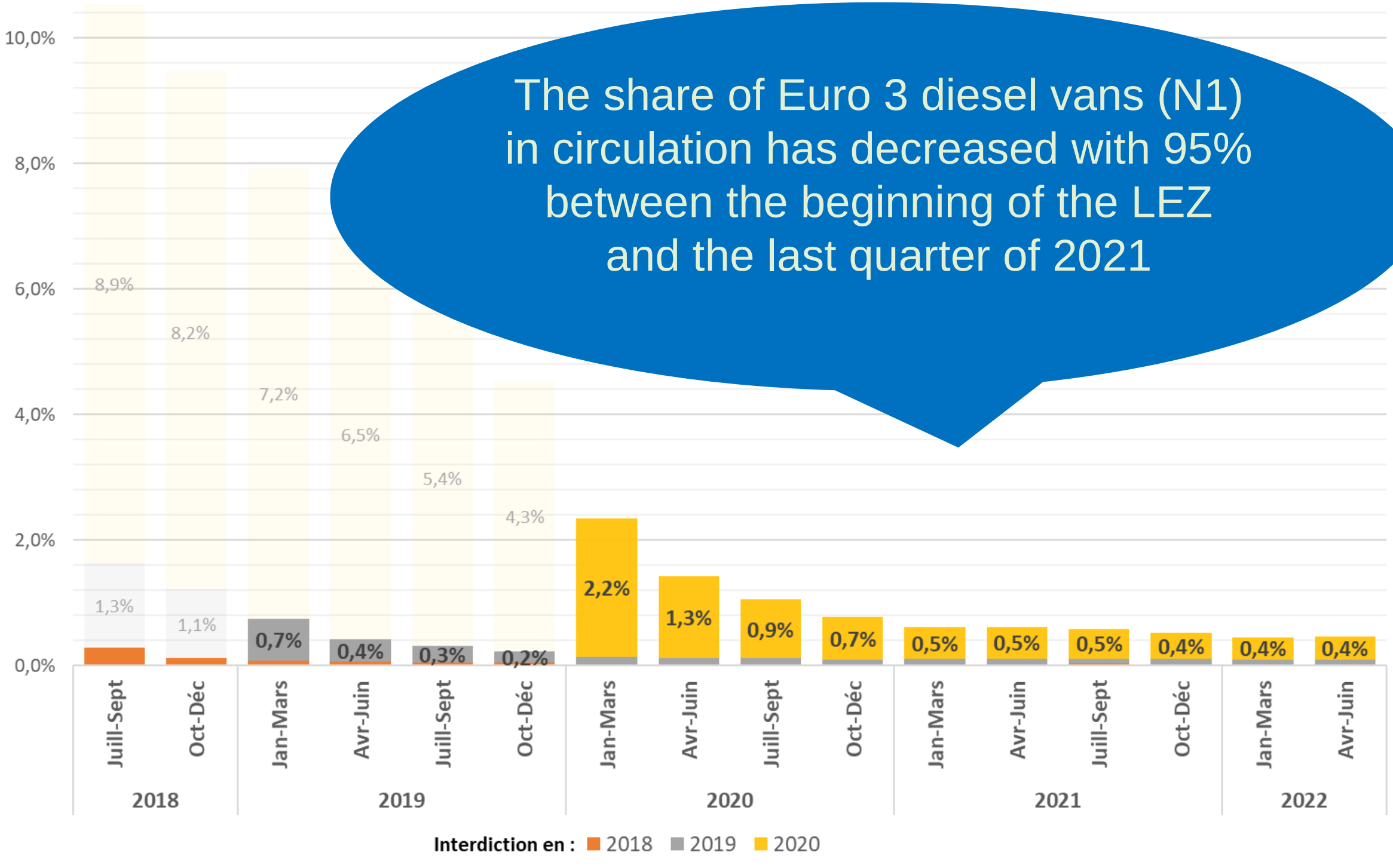
All detailed information:
www.lez.brussels

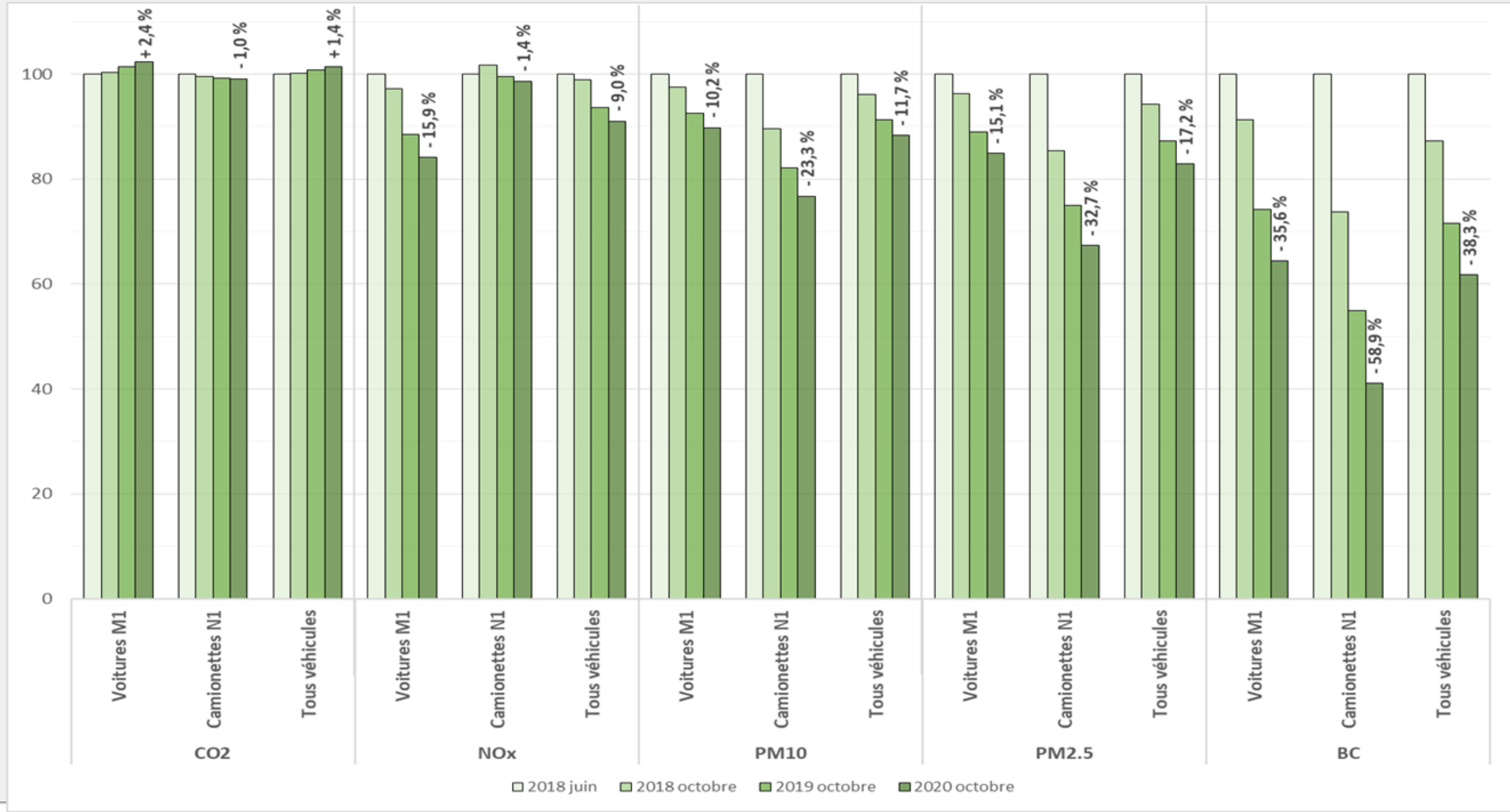
LEZ IMPACTS - FLEET COMPOSITION: VANS

The share of Euro 3 diesel vans (N1) in circulation has decreased with 95% between the beginning of the LEZ and the last quarter of 2021



LEZ IMPACTS – AIR POLLUTION

Between June 2018 and October 2020, in a situation of constant mobility (driven km), the change in fleet composition is estimated to have led to emission reductions of 9% for NO_x, 17% for $PM_{2.5}$ and 38% for BC. (In reality the emission reductions have been much larger due to the decrease in COVID-related traffic.)



STRATEGY TO PHASE OUT THERMIC VEHICLES

Low Emission Mobility Roadmap

Deployment of charging infrastructure

LOW EMISSION ZONE: 2025-2036

- ✓ New scope: heavy duty included a.o.
- ✓ Currently no ban for combustion engines for trucks (>3.5t) - only Euro VI-e from 2035
- ✓ Diesel ban for passenger cars and vans in 2030 (2035 for vans class II & III)
- ✓ Petrol/CNG ban from 2035 for all cars and vans

	Carburant	2025	2028	2030	2035	2036
Voiture (M1) Camionnette N1, Classe I	Diesel/hybride	Euro 6	Euro 6d	⊘	⊘	⊘
	Essence/LPG/CNG	Euro 3	Euro 4	Euro 6d	⊘	⊘
Minibus (M2) Camionnette N1 Classe II, III	Diesel/hybride	Euro 6	Euro 6d-TEMP	Euro 6d	⊘	⊘
	Essence/LPG/CNG	Euro 3	Euro 4	Euro 6d	⊘	⊘
Bus M3 Classe I, II, A	Diesel/hybride	Euro VI	Euro VI	Euro VI	Euro VId	⊘
	Essence/LPG/CNG	Euro III	Euro IV	Euro VI	Euro VId	⊘
Autocar (M3 Classe III,B)	Diesel/hybride	Euro VI	Euro VI	Euro VI	Euro VId	Euro VIe
	Essence/LPG/CNG	Euro III	Euro IV	Euro VI	Euro VId	Euro VIe
Mobylette (L1-L2)	Diesel/hybride	⊘	⊘	⊘	⊘	⊘
	Essence/LPG/CNG	Euro 5	⊘	⊘	⊘	⊘
Moto (L3- L7)	Diesel/hybride	⊘	⊘	⊘	⊘	⊘
	Essence/LPG/CNG	Euro 3*	Euro 4	Euro 5	⊘	⊘
Poid-lourd (N2-N3)	Diesel/hybride	Euro VI	Euro VI	Euro VId	Euro VIe**	Euro VIe**
	Essence/LPG/CNG	Euro III	Euro IV	Euro VId	Euro VIe**	Euro VIe**

Politique existante Nouvelle politique ⊘ Les véhicules fonctionnant avec ce carburant ne sont plus autorisés

* Uniquement pour L3, L4, L5

** Uniquement pour N2 dont la masse de référence est supérieur à 2.610 kg bedraagt et pour les N3

LOW EMISSION MOBILITY ROADMAP – URBAN LOGISTICS MEASURES

Existing

- LEZ subsidy
- Cargo bike subsidy
- Infrastructure charging facilitator
- Project call for municipalities
- Be Circular projet call

New & upcoming

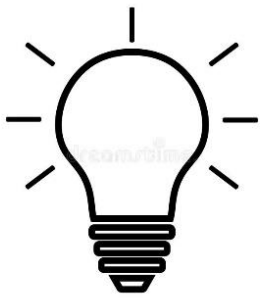
- Green Deal
- Low emission mobility project call
- Delivery plans for companies
- Construction Facilitator
- Logistics facilitator
- Good Move actions e.g. FORS label

VIA PASS

- Heavy goods vehicles over 3.5 tonnes
- Entire urban road network in Belgium
- Aims to reduce the number of kilometres travelled and stimulate the renewal of the fleet, through tariffs modulated according to the Euro standard

GREEN DEAL FOR LOW EMISSION URBAN LOGISTICS

GREEN DEAL



Inspire through the exchange of good practices/success stories to reduce driven km, shift modes, shift motorisations

Support implementation of commitments and projects
=> Region's commitments: project calls, subsidies, labelling scheme

Valorise actions through the signature of a convention and public visibility

CALL FOR INTEREST: NOW!

ACTION DE LA RÉGION ⌄ AGIR AU QUOTIDIEN ⌄ DOCUMENTATION ET CARTES ACTUALITÉS

Appel à toutes les organisations actives dans le transport de marchandises à Bruxelles : rejoignez le Green Deal logistique basses émissions de la Région !

27/06/2022

© BE - LB

Vous êtes transporteur, fournisseur ou receveur de marchandises à Bruxelles ? Vous souhaitez vous engager pour une logistique plus durable au sein de la Région ? Participez au Green Deal logistique basses émissions à travers des

Next steps

- ✓ **Sept - Nov 2022:** bilateral meetings to define members' commitments
- ✓ **7 December 2022**: meeting and networking between all future Green Deal members at Tour et Taxis
- ✓ **First quarter of 2023**: signature of the Green Deal agreement by all members

CONCLUSION

- **Motor shift policies have strong positive impact on fleet composition, in particular LEZ**
- Thermic ban will help improve air quality further as well as addressing climate crisis - but only planned for vans: trucks >3,5t still allowed to run on diesel in 2035
- **Reducing km driven and shifting modes is key and has great potential:**
  - ⇒ Km charge for vans through implementation of Smart Move
  - ⇒ Lighter vehicles and cargo bikes
  - ⇒ Waterway transport
  - ⇒ Implementation of Good Move actions

Thank you!

Contact

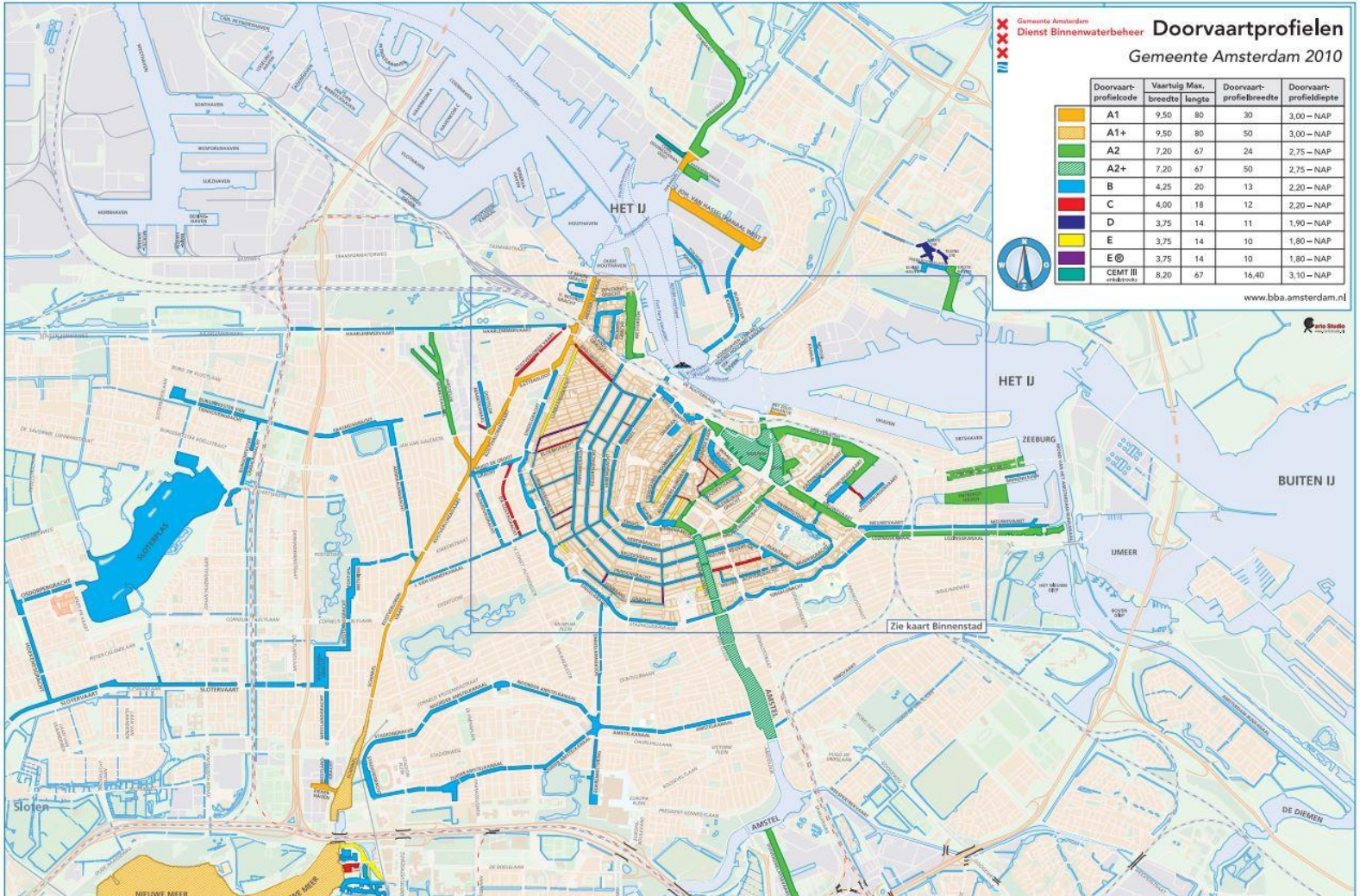
Louise Duprez: lduprez@environnement.brussels

Gemeente
Amsterdam

Waterways and urban logistics

Thomas Vernooy , policy advisor transport waterways, 4 July 2022

Dit is een titeldia met afbeelding. Lees de instructie hiernaast



Policy IWT Amsterdam

- Fully take the water into account as a mobility solution in 2025 is the goal.
- Expanding the network of transhipment locaties and related amenities
- Focus on facilitating building logistics, disposal of household and commercial waste, provision and supplying of hotels, restaurants and supermarkets
- Future policy is based on monitoring the use of the water (by pleasure craft, canal boats and transport etc). The city uses sensors to monitor the use of the water.

Lessons learnt

- Make sure that the importance of urban logistics is being discussed when priorities / long term decisions are made about restoring quays that are in bad condition.
- Be on time: area development (housing need) is often designed when transport over waterways was not on the agenda.
- Public interest is to create a white label operation and a level playing field, but you need private initiatives to a certain extent. There is not an easy ‘one click’ solution to organize public-private collaboration.

Challenges

- Not every transport is suitable for the waterways. A framework is needed to decide to use road or waterways. What criteria to apply? We can expect to have discussion about what the weight of criteria.

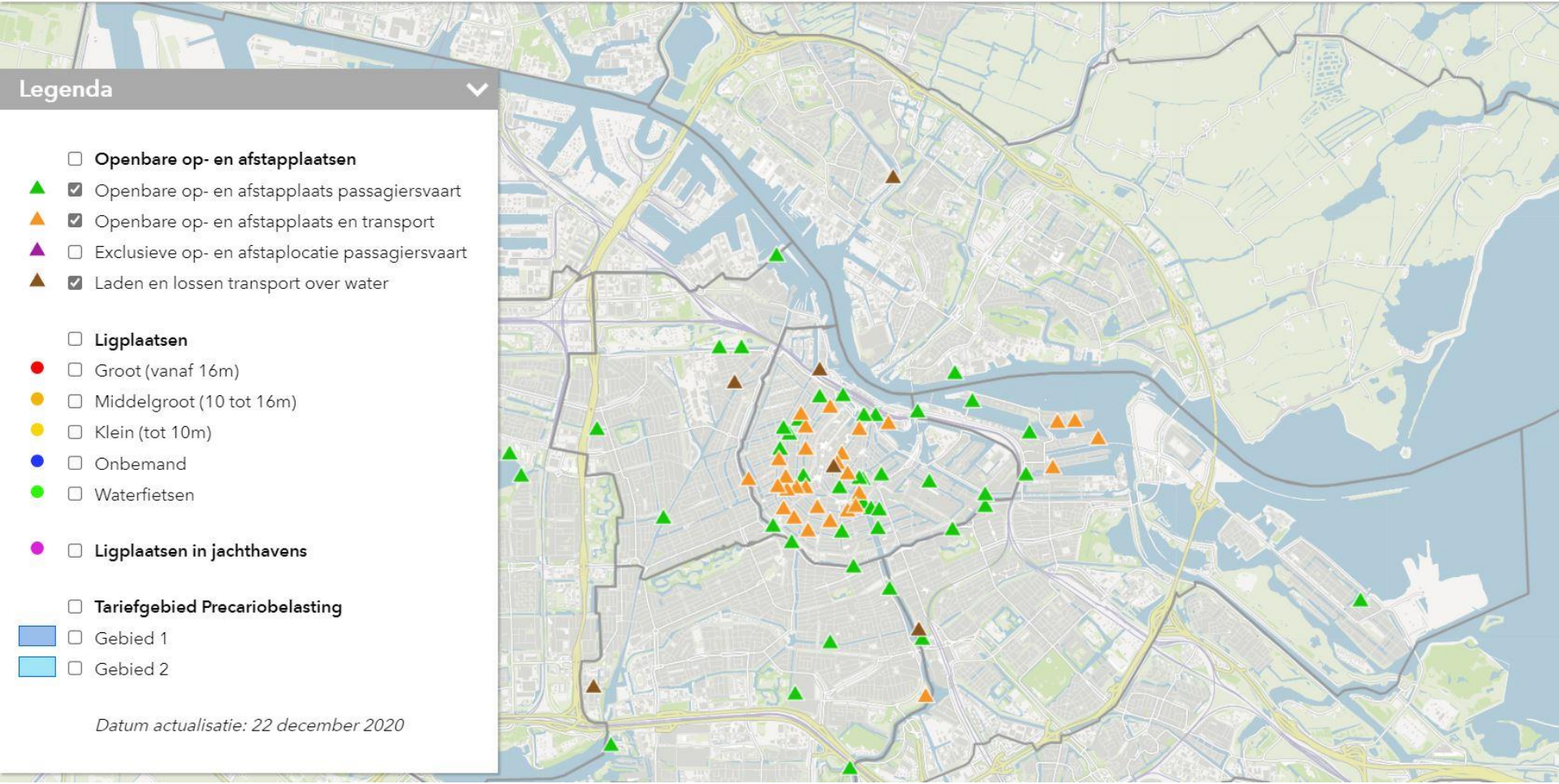
- The abolishment of delivery hours on the water and the elimination of the permitted maximum size limit of the vessels does not compare well with the municipality's responsability for safe and fast traffic.

- Public space is hard to find, especially in the historic city centre. Mooring the vessel on waterways is one thing, but finding the space on the quay to unload the goods is another challenge.

- Focus on local needs and demand is key. How to create spirit and animo?

Gemeente Amsterdam

Op- en afstapplaatsen & ligplaatsen passagiersvaartuigen



Waterways & urban logistics

Setting the stage for multi-modal logistics

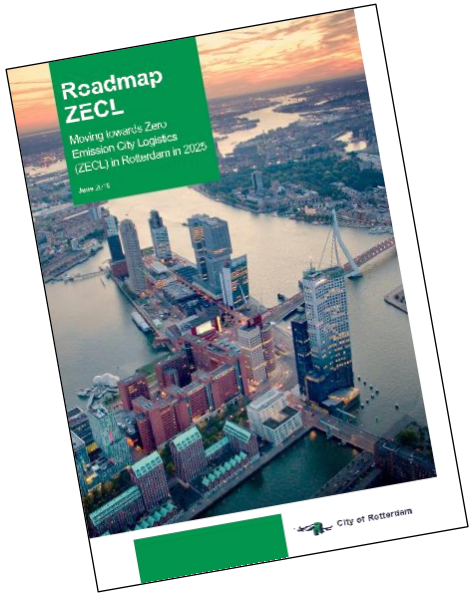
Tim Sjouke
tbj.sjouke@rotterdam.nl

City of Rotterdam

Objective: Clean & efficient city logistics

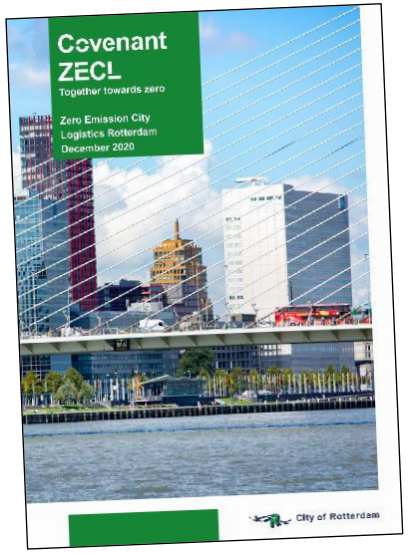
"If opportunities were to arise for sustainable city logistics by water, these could be adopted as part of the strategy."

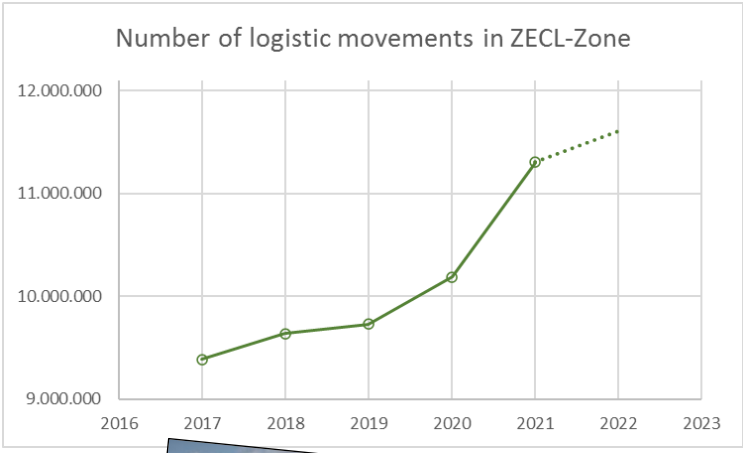
Roadmap ZECL (2019)

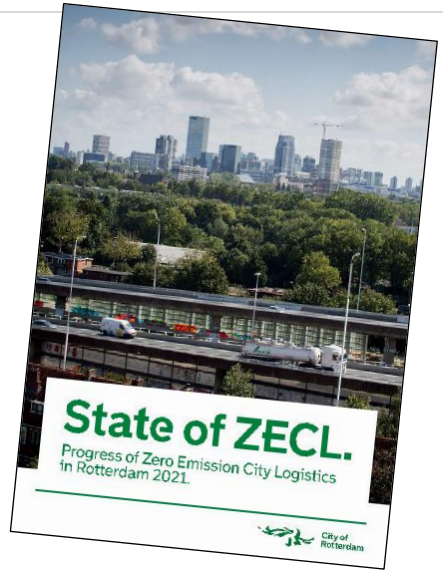


"Reduction potential across all logistic segments."

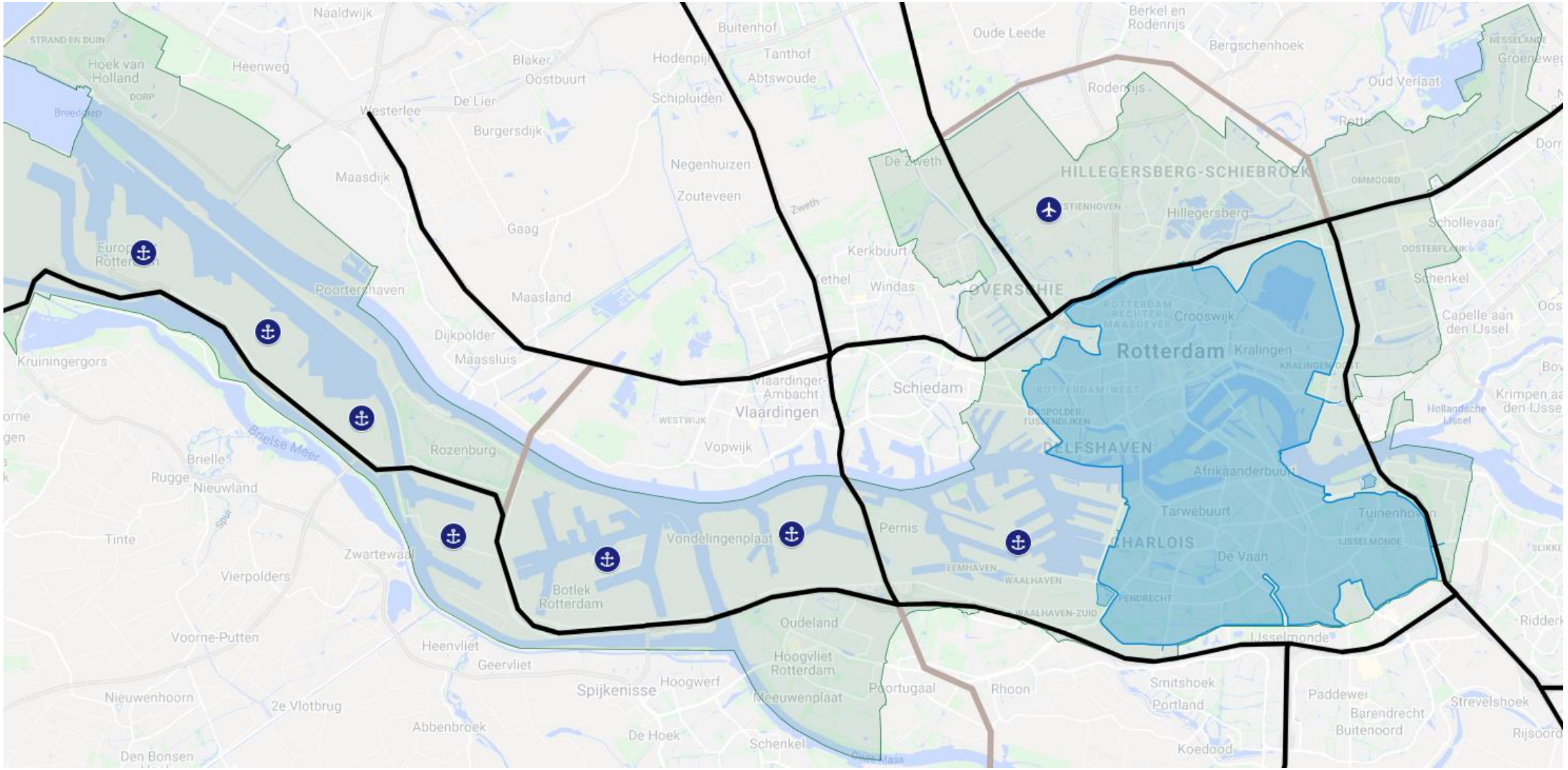
Covenant ZECL (2020)



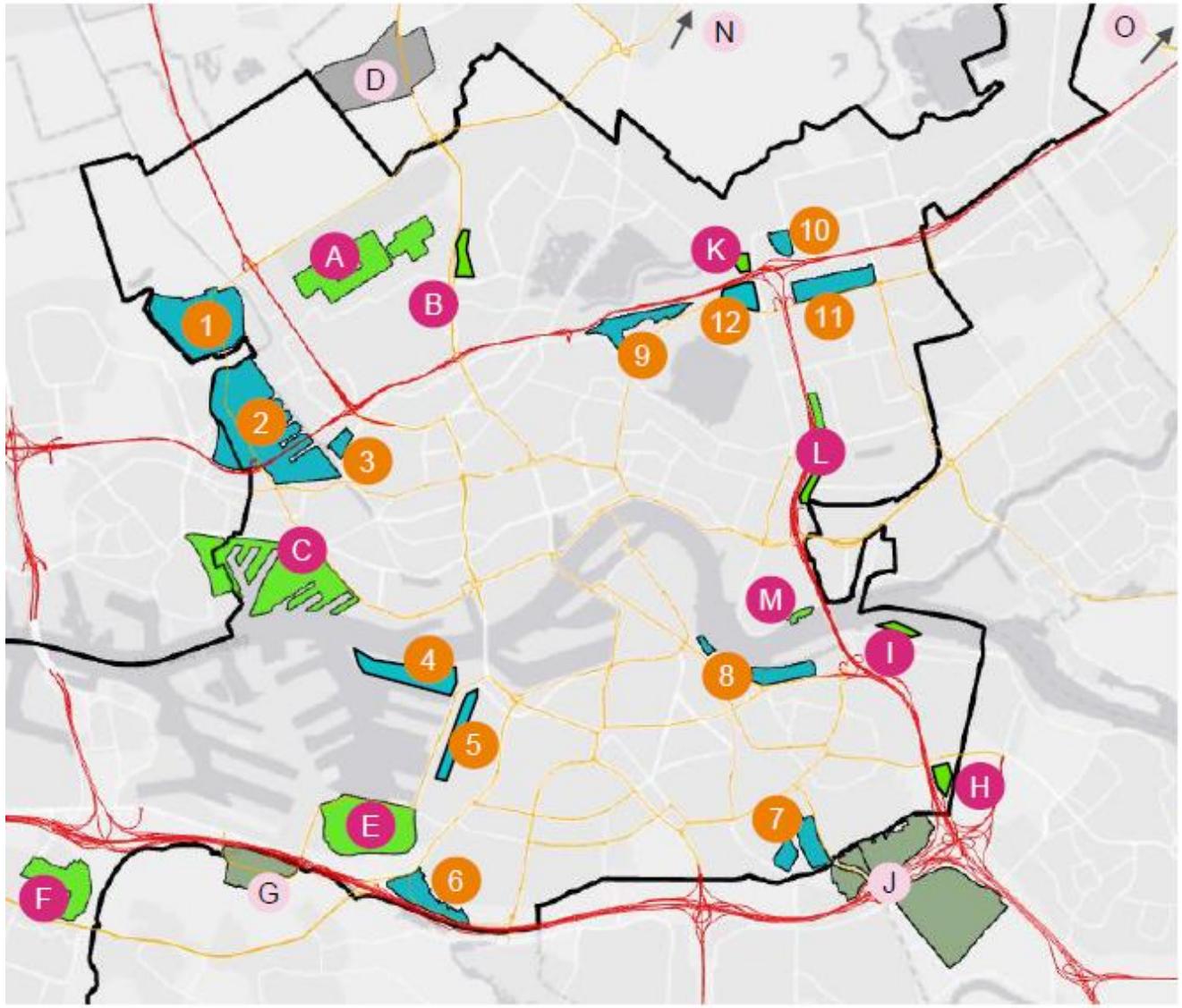




ZECL Zone 2025



Logistic process



Areas appointed for logistics activities

Anchored in the environmental vision

Existing industrials area's & business parks

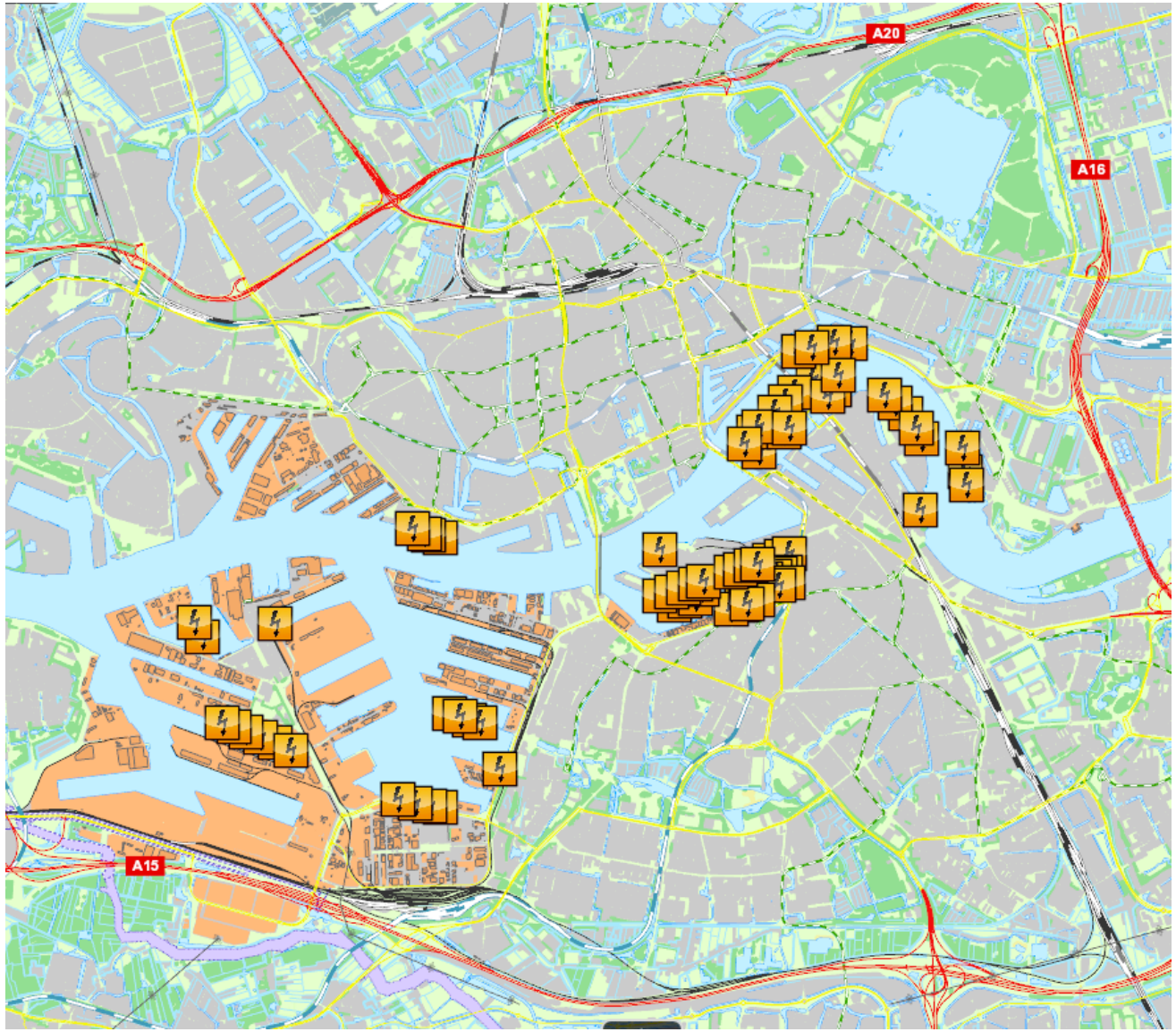
Near the edges of the ZECL-zone

Along the highway ring

Waterside locations:

- Northern corridor (1,2,3)
- East-West corridor (4,8,E,C,M,I)

Logistic process



Quayside power supply

Included in charging strategy

Auxiliary power supply when moored

Charging infrastructure for water taxi's (2021)

Charging infrastructure for inland shipping (2025)

Opportunities per logistic segment

Segment	Suitability	Case studies
Fresh	Partially suitable, needs more research	-
General freight Express & parcels Service	Suitable, needs more research	Amsterdam / Utrecht
Waste Construction	Suitable	Leiden / Amsterdam

Key factors to success

Hub location	*The quay must be strategically located in relation to the destination(s).*
(Creating) urgency to switch	*Transport by water (except for transport directly to construction sites) leads to an extra transfer point in the logistics process. Therefore, it is often not very cost-effective. Introduction of a ZECL-zone and other measures help to create urgency.*
Loading and unloading locations	*There must be sufficient and suitable loading and unloading locations. On the quay, it must be spatially and environmentally possible to carry out a loading and unloading activity, both within the city and outside the city.*
Availability of quays	*There must be certainty that the quay can be used at the times needed. Possibly with the help of a reservation system.*
Permits and permission	*It must be clear and simple whether, how and where permission or permit must be requested.*
Waterway congestion	*Waterways must have sufficient capacity to also accommodate other uses, such as passenger transport and leisure.*
ZE ships	*To prevent a negative impact on air quality, ships also need to be zero-emissions..*
Charging infrastructure	*In the transition to zero emissions, sufficient charging and refueling infrastructure is needed.*
Supply chain planning	*Transport over water has an impact on logistics planning of the entire chain and therefore it is necessary to involve parties at an early stage to organize the necessities (for example, the design of the construction site regarding the installation of construction cranes).*

Challenges

Business model concerns:

- Hub profitability is already an issue;
- High cost of commercial real estate;
- Superior accessibility via road infrastructure.

Urban area accessible by water is limited;

Construction logistics are usually project based.

Next steps

Develop riverbanks program

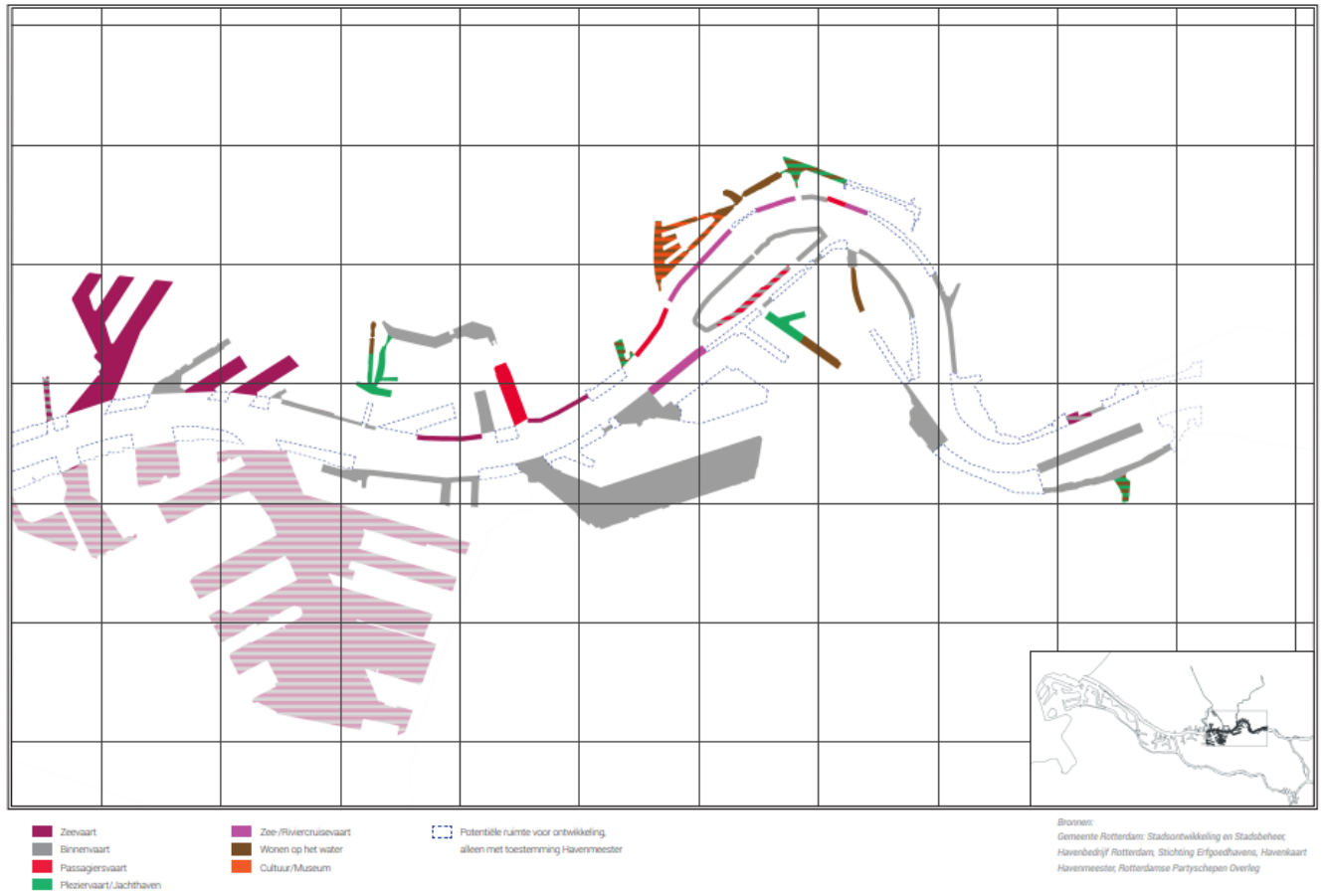
Connection to other riverside programs

Include:

Logistic areas from the environmental vision

Quays on the northern corridor

Refinement of destinations in the grey area's



Next steps

Dialogues

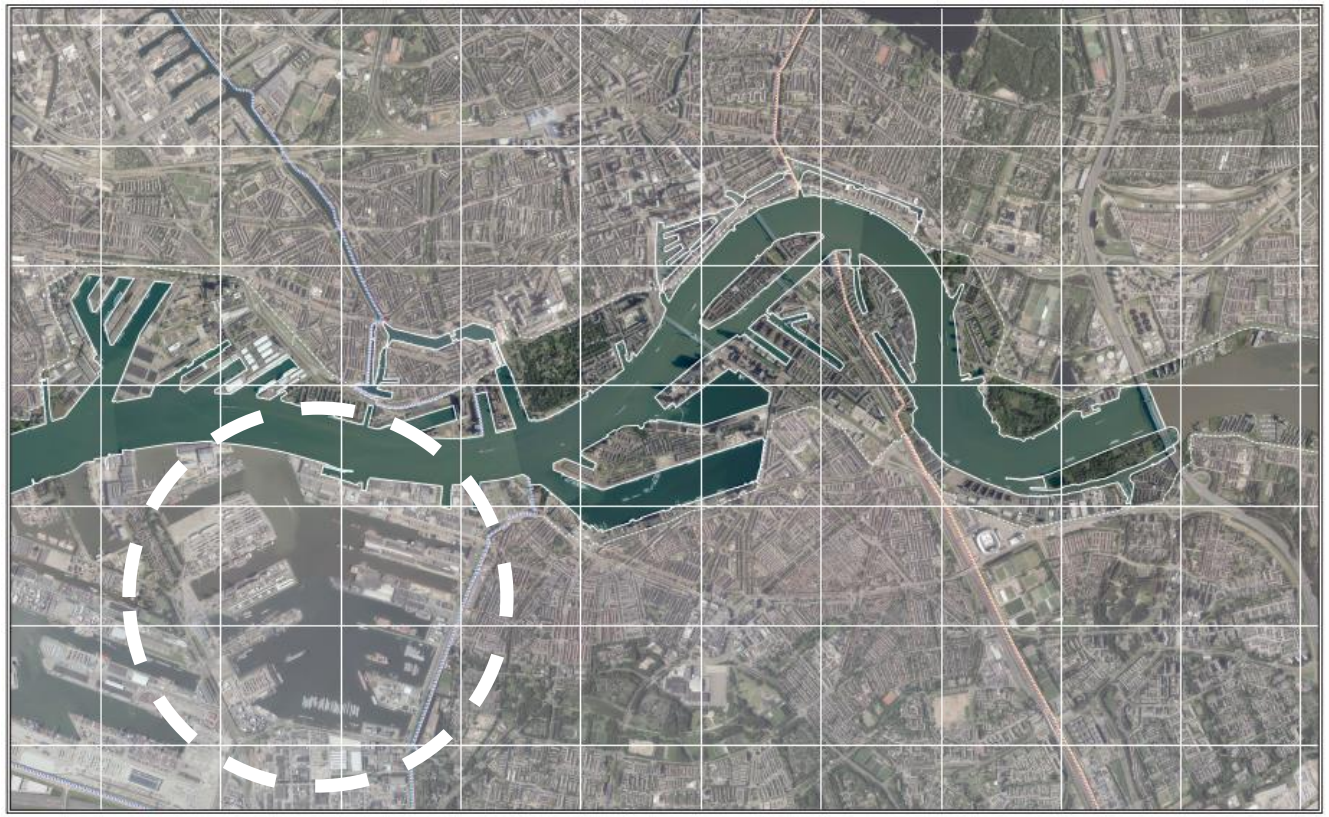
Connection with:

- Neighboring municipalities
- The port authority
- Private quay owners

Possible clients:

- Hub operators
- Waste sector
- Construction sector

logistiek 010



Further readings

Logistiek010.nl

Roadmap ZECL

Moving towards Zero Emission City Logistics (ZECL) in Rotterdam in 2025
City of Rotterdam (2019)

Covenant ZECL

Together towards zero
City of Rotterdam (2020)

State of ZECL

Progress of Zero Emission City Logistics in Rotterdam 2021.
City of Rotterdam (2021)

Cities-Regions and Companies working together

Guide for advancing towards zero-emission urban logistics by 2030
ALICE-ETP & POLIS (2021)

Tim Sjouke
tbj.sjouke@rotterdam.nl

City of Rotterdam

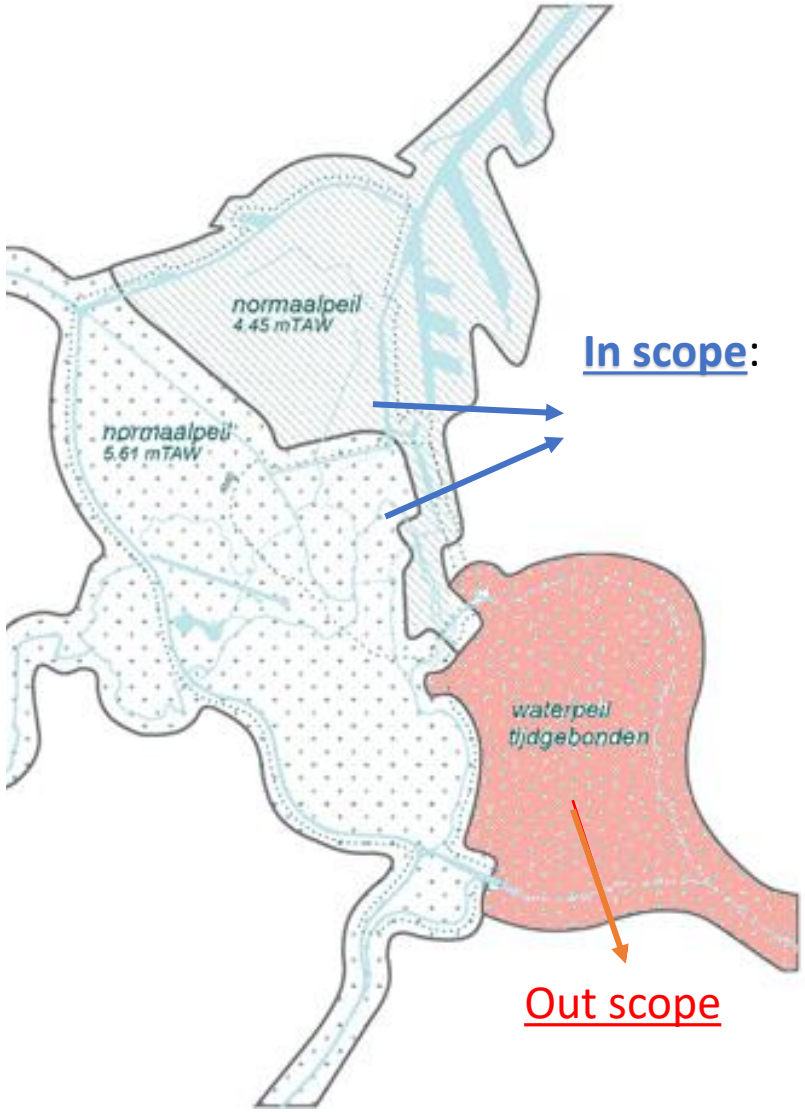
Urban freight on inland waterways, Ghent

Brussels, Polis, 4/7/2022

Ghent

WATER
IN DE
STAD
GENT

+/- 300.000 inhabitants
Rivers Schelde (Scheldt) and Leie (Lysse)
History of freight ove water
Car-restricted zone of 2 km²



In scope:

Out scope

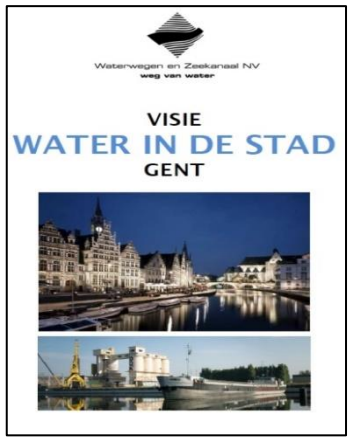
Policy strategy on inland waterway transport

- 2019: **Shared vision** on use of inland waterways by
  - City of Ghent (land)
  - De Vlaamse Waterweg (water)

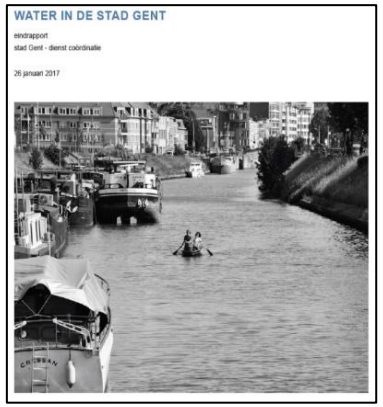
1. Towards a shared vision: Water in de stad Gent

WATER IN DE STAD GENT

Vision De Vlaamse Waterweg (2016)



Vision City of Ghent (2017)



Shared vision (2017 – 2019)

2019: action plan

2020: execution

Vaarkaart

Ligplaatsenkaart

Toeristische kaart

Policy strategy on inland waterway transport

- 2019: **Shared vision** on use of inland waterways by
  - City of Ghent (land)
  - De Vlaamse Waterweg (water)
- **→ Last mile logistics, 2 tasks**:
  1. "make it possible"
     → 2022: Study to clarify:
     - Required investments
     - Supply chain analyses
     - Business & governance models
  2. Invite the market to do → currently pilot projects
     e.g.: Green Wave, Large construction sites, charter werftransport

Lessons learnt (so far) & challenges

- **Infrastructure** is a major requirement (€)
  - Departure point → Example UCB
  - Fixed loading/unloading bays (intra city)
  - Policy for flexible unloading
- Strong, long term commitment from authorities are required + bold measures
- Search for supply chain improvements (e.g. construction hub)
- Size (of the city) matters
  - E.g. comparison Amsterdam/Ghent
- Tailor made solutions: niche markets
- Do not create other disadvantages (noise/emission)


Eiland Zwijnaarde
W&Z
sluis Merelbeke
site E3 sluis / UCB gronden
RUP nr 260 GROENAS 4
E40
Ringvaart
Ghelamco site
Kortrijk
E17
Gent-centrum
Antwerpen

Lessons learnt (so far) & challenges

- **Infrastructure** is a major requirement (€)
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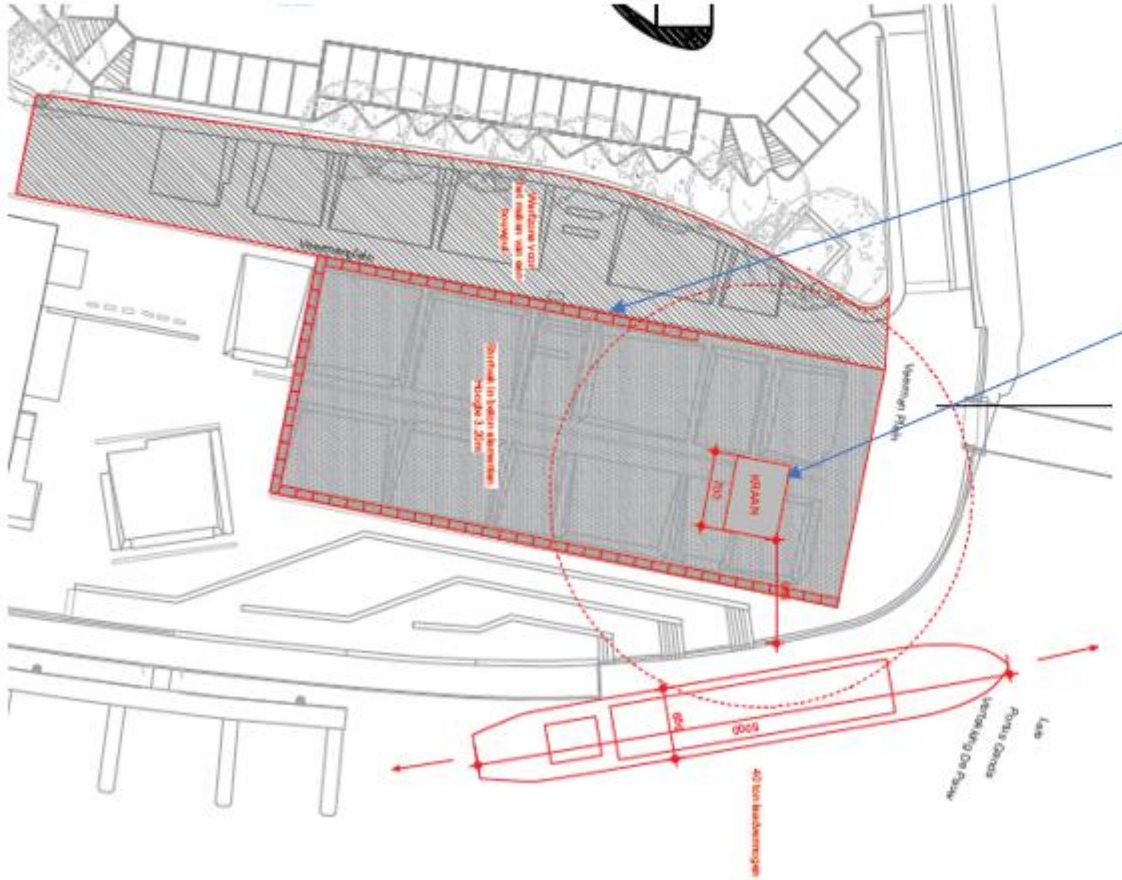
  - Policy for flexible unloading
- Strong, long term commitment from authorities are required + bold measures
- Search for supply chain improvements (e.g. construction hub)
- Size (of the city) matters
  - E.g. comparison Amsterdam/Ghent
- Tailor made solutions: niche markets
- **Do not create other disadvantages** (noise/emission)

Case: Belgacomtoren: Avoid 12.500 truck movements → landside/emission/noise

Inname Veermanplein fase 1



Met moduloblokken wordt een 3 meter hoge keermuur gebouwd als bufferzone voor steen/betonpuin. Dit puin wordt met een kraan met poliepgrijper in het schip gestort.

Lessons learnt (so far) & challenges

- Infrastructure is a major requirement (€)
  - Departure point → Example UCB
  - Fixed loading/unloading bays (intra city)
  - Policy for flexible unloading
- Strong, long term commitment from authorities are required + bold measures
- Involve LSP/construction companies
- Search for supply chain improvements
- Size (of the city) matters
  - E.g. comparison Amsterdam/Ghent
- Tailor made solutions: niche markets
- Do not create other disadvantages (noise/emission)

WATERWAYS AND URBAN LOGISTICS IN BERLIN

Marvin Gehrke
Brussels, 04.07.2022

Senate Department for the Environment, Urban Mobility, Consumer Protection and Climate Action

BERLIN

01

INFRASTRUCTURE

- Inland and inner-city port with combined transport

„Westhafen“

01

INFRASTRUCTURE

- Transshipment points

  f.e. „Hafen Neukölln“

01

INFRASTRUCTURE

- Ro-Ro ramp

  for transport of Siemens gas turbines

02

VEHICLE

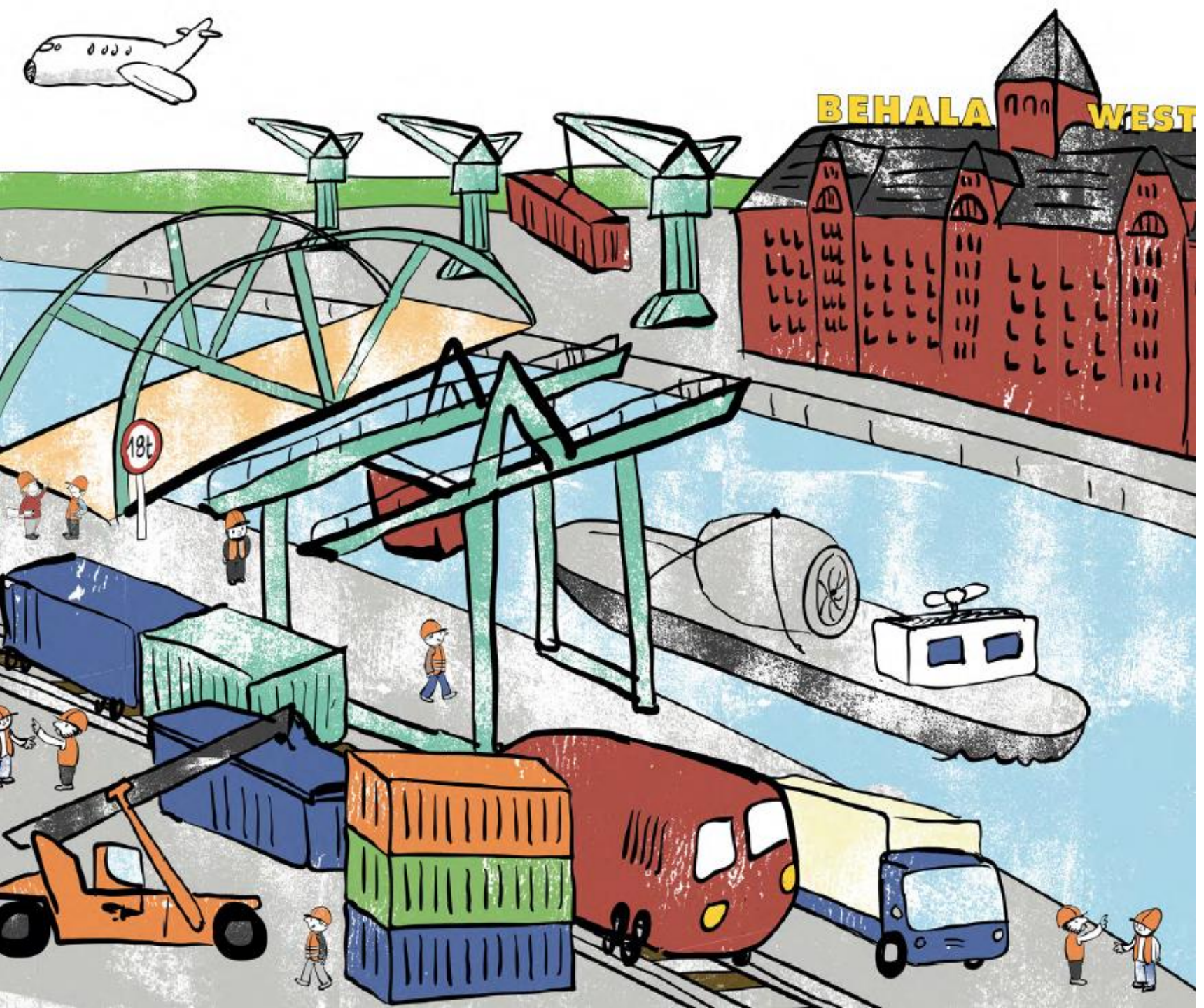
- A – SWARM
  Autonomous Driving

02

VEHICLE

- Flagship project: ELEKTRA

  Emission-free hybrid - electrically driven canal push boat



03

PLANS AND CONCEPTS

- Integrated Commercial Transport Concept

  f.e. “Heavy and duty Transports”

Thank you!

Senate Department for the Environment, Urban Mobility, Consumer Protection and Climate Action

BERLIN

zeabuz

Scalable autonomy for waterborne mobility

Our story: urban waterborne mobility pioneers

The world's first autonomous urban ferry prototypes

- Developed, designed and built by Zeabuz founders
- Owned by NTNU, starting commercial operations pilot summer 2022

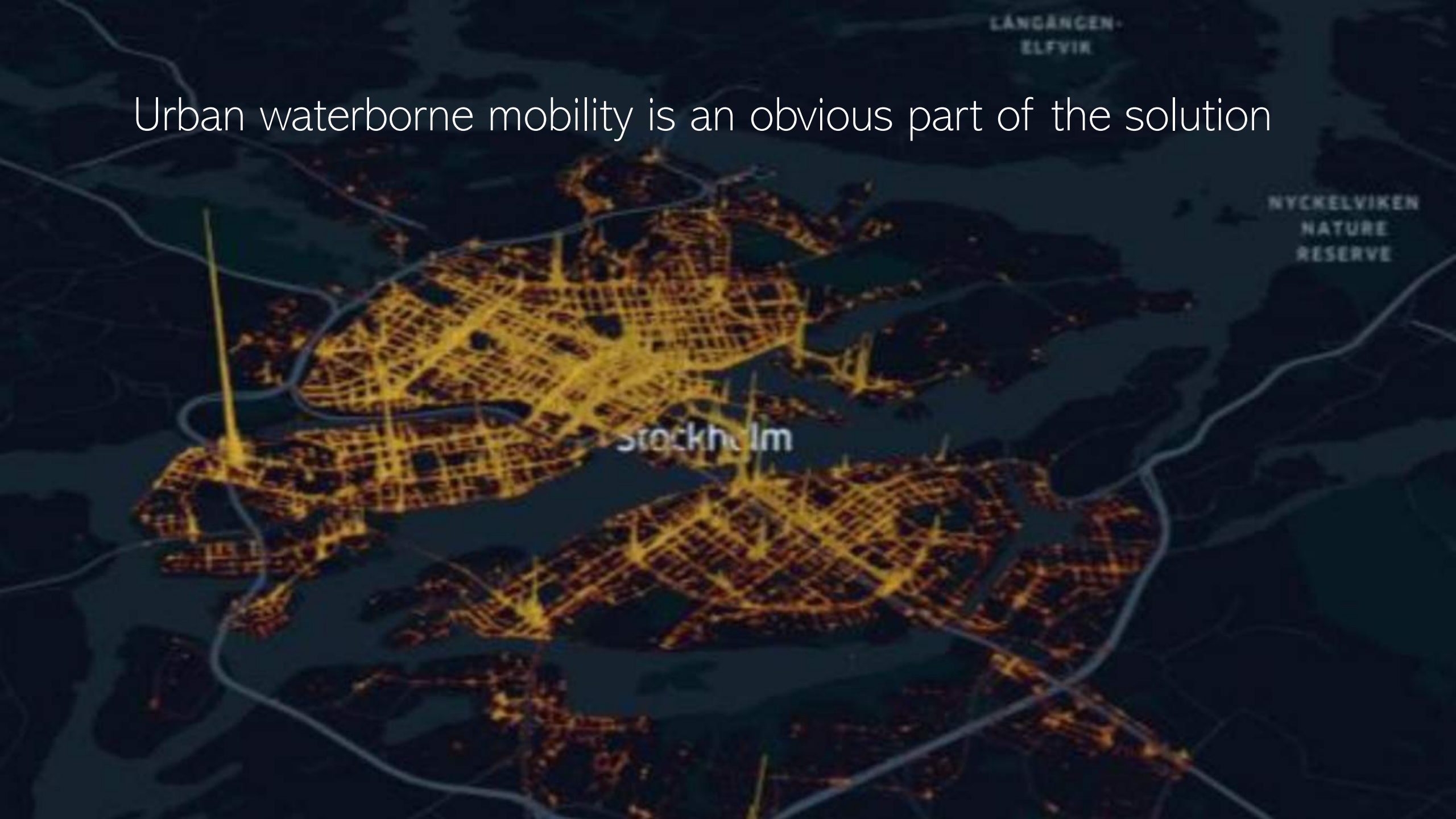
2016 *"milliAmpere1"* NTNU

2019-2022 *"milliAmpere2"* NTNU

zeabuz

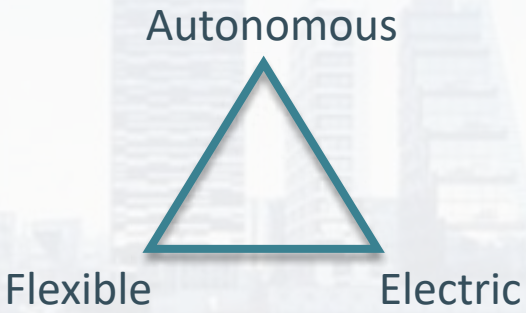
Mobility infrastructure is already at its breaking point

Urban waterborne mobility is an obvious part of the solution



Autonomous operation is about to unlock a huge potential

MARKET
PULL



TECHNOLOGY
READINESS

POLICY AND REGULATORY
DEVELOPMENT

zeabuz


Urban mobility networks

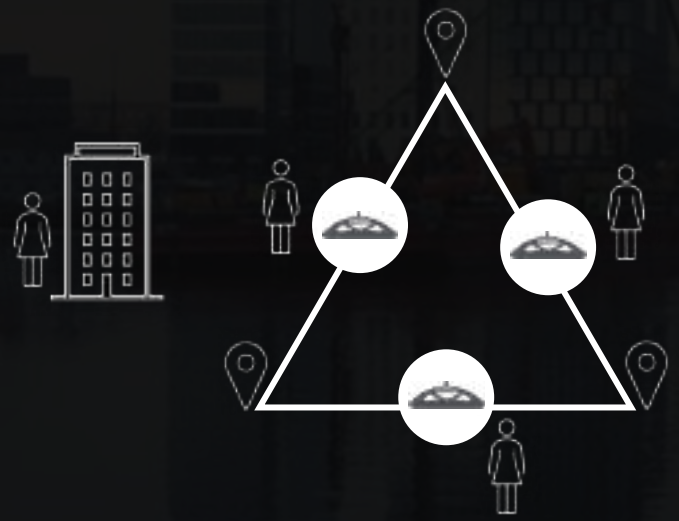
Water shuttles

Modern car ferries

Zeabuz value proposition for urban mobility

Onboard supervised autonomy

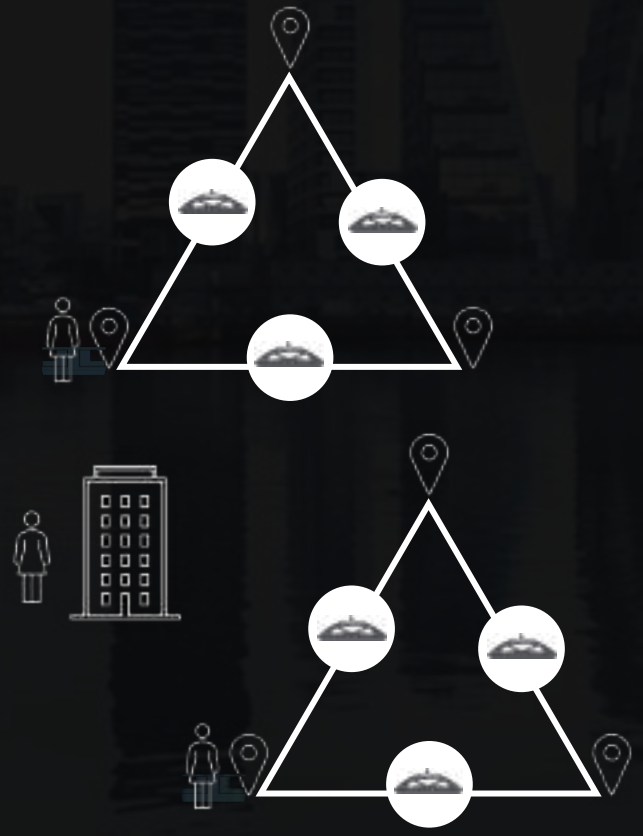
- One crew per vessel
- One Zeabuz remote support staff can handle several networks



15 hours daily operation, 365 days a year
-> 4 FTE per ferry or support station

Onshore supervised autonomy

- One local supervisor per network
- One Zeabuz remote support staff can handle several networks



Full autonomy w/remote support

- No local crew or onshore support
- One Zeabuz remote support staff can handle a number of networks

oyvind.smogeli@zeabuz.com

Urban Logistics & Small Vessels Navigation

Initiatives of the Walloon Authorities

Small Vessels Navigation
Initiatives of the Walloon Authorities

General Context : Walloon Region Policy for Mobility

- Vision FAST 2030
- Regional Policy Statement
- Regional Strategy for Mobility – Part Goods

→ Greenhouse gases decrease : Level 2030 = Level 2005 – 35 %

→ Modal Shift (2030)

→ Road Part : - 7 % (compared with 2017)
→ IWW Part : 18 %
→ Rail Part : 7 %

Small Vessels Navigation
Initiatives of the Walloon Authorities

- **<u>Small Vessels Navigation : Definition</u>**

  - Navigation with Class I (max. 300 t) or Class II (max. 600 t) Vessels
  - Auto-propelled Vessels or Pushed Barges
  - Future : Automated Navigation

Small Vessels Navigation
Initiatives of the Walloon Authorities

- **Launch of a public tender in 2020**

- **Objectives** :
  - To examine the potential of Small Vessels Navigation in Wallonia
  - To assess the role the regional authorities may have

- **Context/Topics**
  - Logistics of construction materials and waste
  - Urban logistics
  - Possible use for industry logistics

Small Vessels Navigation
Walloon public tender

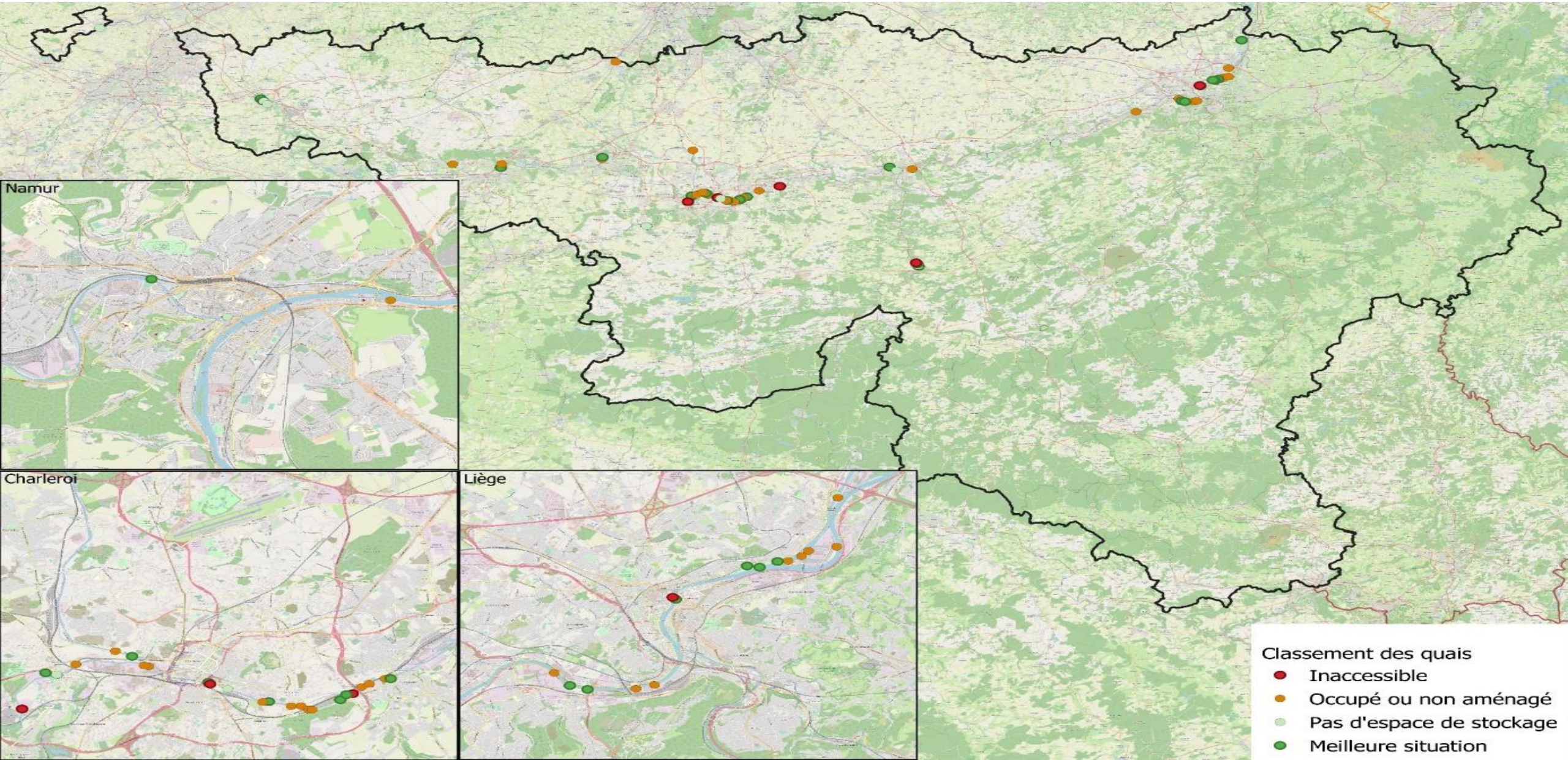
- **Planning/Actions**

  - Inventory and assessment of the existing infrastructure (wharves and quays)
    → Basis for further actions on infrastructure
  - Navigation tests and assessment
    → Basis for concrete solutions
  - Proposal for public initiatives
    → Role of the Authorities : Financing ? Infrastructure/Equipment ?
  - Promotion/Communication
    → Create awareness from stakeholders (Cities, Logistics companies, Shippers,…)

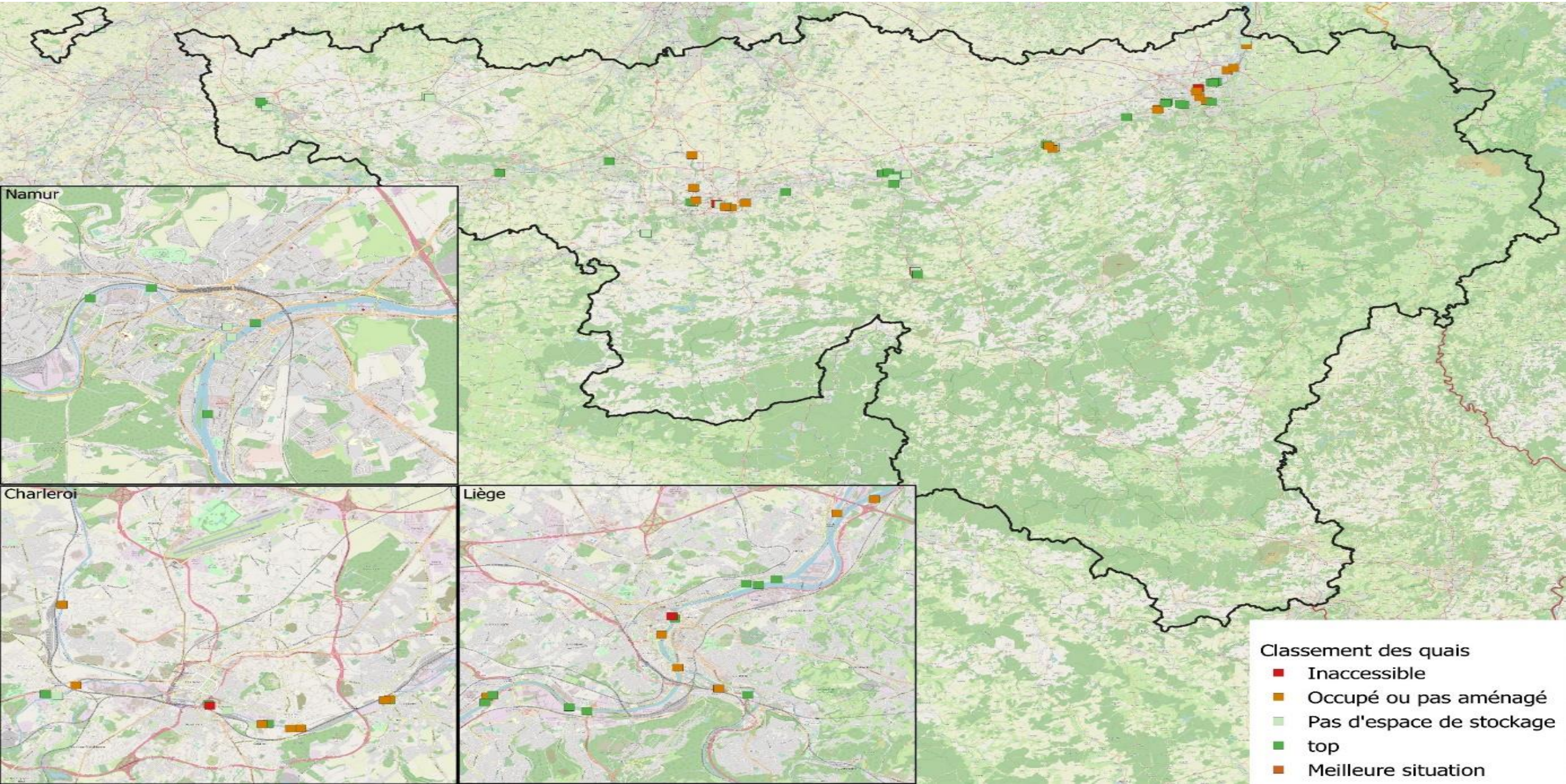
Small Vessels Navigation
Walloon public tender

- **<u>Infrastructure Inventory and Assessment</u>** :
  - 341 existing infrastructures were assessed
    - Focused on cities
    - Only public or granted infrastructure
    - Use of 3 levels criteria (e.g. Density : shops, population – Presence of urban projects – …)
    - 2 approaches : construction materials and waste – urban logistics (shops – e-commerce)
  - 108 were pre-selected – 31 fully met the criteria
  - The analysis was completed by :
    - Discussions with local authorities (cities, ports)
    - Specific assessment

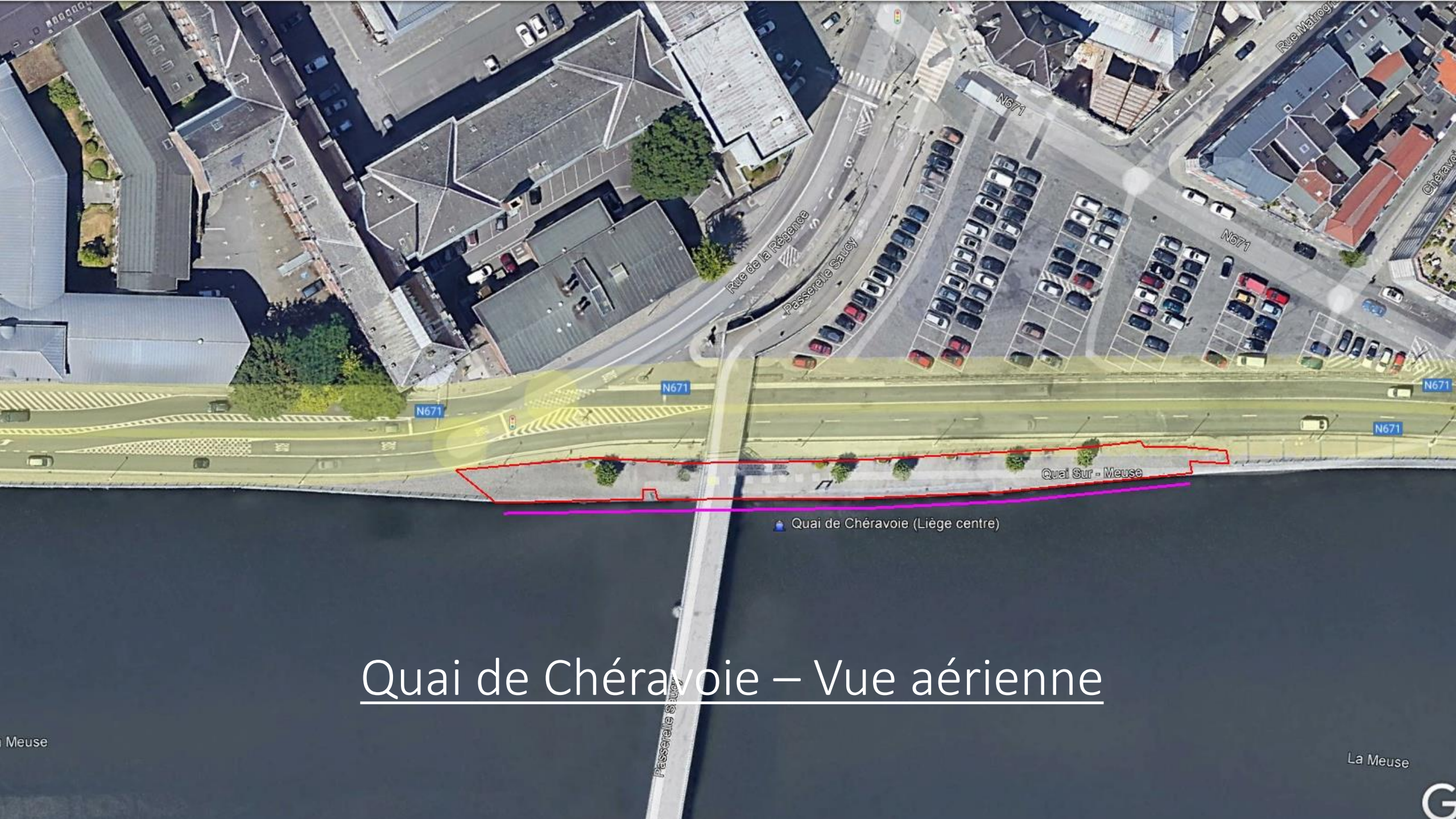
Classement des quais favorables aux développement d'activités de logistique des déchets et chantiers.



Classement des quais favorables aux développement d'activités de logistique des commerces.



Quai de Chéravoie - Situation



Quai de Chéravoie – Vue aérienne

Small Vessels Navigation
Walloon public tender

- **<u>Navigation Test #1</u>** :

  - Mainly industry targeted
  - Use of 2 Watertruck barges (pushed convoy)
  - Test done from 14.9 till 6.10.2021
  - 824 km Trip with only 102 km (12 %) without load
  - Assessment done → Foundation for improvements and further actions

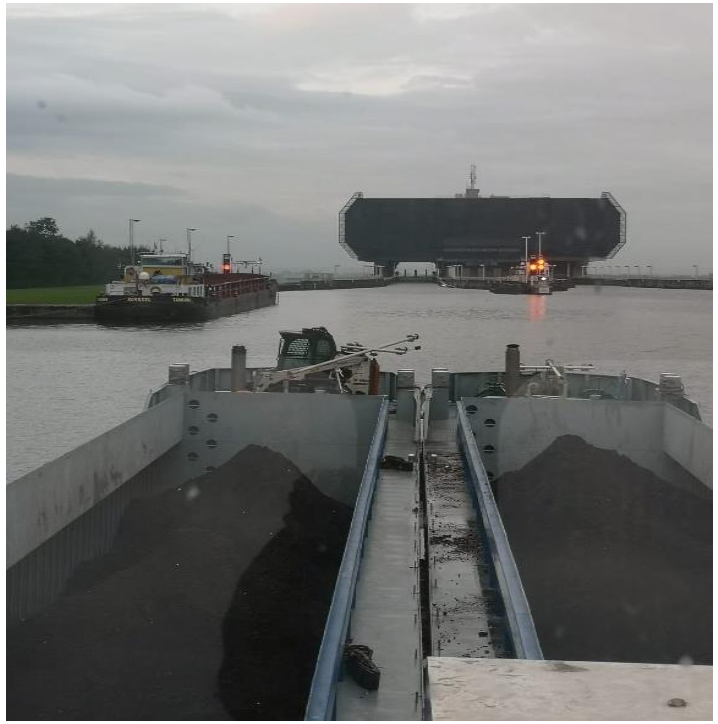

Loskade Jaeghe
Vaulx
Ghlin Mosselman
Canal du Centre (Wallonie)
Pont route de Farciennes
Viaduc de Chatelet
Seraing
Clabecq
Antwerpen
Gent
Bruxelles
Brussel
Leuven
Mons
Lille
Maastricht
Aachen
Liège
Data CC-By-SA by OpenStreetMap
lon/lat: 2.70, 51.33

Small Vessels Navigation
Walloon public tender

- Test #1 :
  - Ronquières inclined plane
  - Port of Ghent

Small Vessels Navigation
Walloon public tender

- Test #1 :
  - Boat lifts of Strépy-Thieu
  - Waste unloading in Liège



Small Vessels Navigation
Initiatives of the Walloon Authorities

- **<u>What next ? Action Plan</u>**

  - Choice of 4 cities : Charleroi, Liège, Namur, Tournai
    - Further awareness and co-operation
    - Link with local actions/projects : urban planning, traffic rules,…
    - Choice of the quays + Model of urban logistics
    - In collaboration with the local Ports authorities

  - Enlarged tests (still to be confirmed)
    - Call for proposals
    - Tender with 5 partial lots : Urban logistics (4 lots) – Regional transfer (1 lot)
    - Based on the chosen infrastructure : 10/12 quays (hubs)
    - Financial support from the Region
    - Target planning : 2023-24

Thank you for your attention !

Any question ??