

ST4W Multimodal Urban Day Brussels : 28th October 2021

## Program

14:00: Welcome by Port of Brussels

14:10: Introduction ST4W by Multitel

14:30: "A journey towards sustainable business management" by BDO

**14:50:** "Cities on board: solutions to integrate inland waterway and urban freight transport" by **POLIS** 

**15:10:** Q&A

**15:20:** Presentation "Brussels Construction Consolidation Center" by **Shipit Multimodal Logistics** 

15:40: Presentation "Cycle Logistics" by Urbike



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## **Program** 14:00: Welcome by Port of Brussels



Rainier Reekmans Deputy director general a.i.

#### **MULTIMODAL URBAN DAY BRUSSELS**



28/10/2021

#### **ST4W – MULTIMODAL URBAN DAYS**

#### GOAL

Better connect inland waterway transport with last-mile urban logistics through innovative solutions.









#### Port de Bruxelles - Haven van Brussel



- North-Sea-Baltic
- North-Sea-Mediterranean
- Rhine-Alpine



# URBAN TRANSHIPMENT CENTRES AND POINTS NETWORK - PROJECT

GOAL: Create a network of transshipment hubs along the waterway to serve the Brussels region in a sustainable and economically viable manner.

2 kind of transshipment points:





Port de Bruxelles - Haven van Brussel

#### SUPPLY – CONSTRUCTION MATERIALS, FINISHING & EQUIPMENTS BCCC (BRUSSELS CONSTRUCTION CONSOLIDATION CENTRE



#### **TRAFICS FIRST HALF 2021**

January – June	2021	2020	Δ21-20	
Brussels transshipment	2.720.189	2.400.811	+13%	
Transit	926.951	878.806	+5%	
Total	3.647.140	3.279.617	+11%	

- 340.000 lorries less on the roads of Brussels
- 53.000 tonnes CO<sub>2</sub> less
- 13 million euros saved in external costs

#### **TRAFFIC BY CATEGORY OF GOODS - JANUARY/JUNE 2021**

Traffic goods evolution (in thousands of tons)			
	2021	2020	Δ21-20
Building materials	1.698.628	1.471.496	+15%
Oil products	547.348	536.125	+2%
Diverse (containers)	273.814	207.487	+32%
Agricultural products	90.294	94.677	-5%
Ores & scrap metal	65.794	34.491	+91%
Food-industry products	26.490	44.132	-40%
Metal-industry products	12.424	10.885	+14%
Chemicals	5.397	1.518	+256%
Brussels transhipments	2.720.189	2.400.811	+13%

75% of the increase in building materials is due to the import of sand



#### **PALLETS TRANSSHIPMENTS IN BRUSSELS**

#### A great increase in traffic diversification

Pallets traffic and racks*			
	2020	2019	∆ 20-19
Volume (x 1.000 t)	24,8	18,7	33%
Quantity (# units)	16.563	15.045	10%

\* New type of container used in 2020 for the transport of concrete slabs used as noise protection panels



#### **THANK YOU FOR YOUR ATTENTION**

#### Follow us on:





Port de Bruxelles Place des Armateurs, 6 B- 1000 Bruxelles



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# **Smart Track 4 Waterway**

Smart Tracking Data Network for Shipment by Inland Waterway

Modal shift to waterway fostered by hierarchical tracking North-West Europe ST4W

European Regional Development Fund

Interreg

#### An European consortium





#### **Initial observations**

#### IWT predominantly used by large companies for bulk & big volumes:

- $\Rightarrow$  Used to a small extend by SMEs
- ⇒ Used to a very small extend for palletized freight.







#### Pallets take the boat !

#### Palletized freight is generally carried by road:

- $\Rightarrow$  In small volumes
- ⇒ Directly from point A to point B

#### Main impediments to modal shift

#### from road to waterway:

- ⇒ **IWT** needs:
  - $\circ\,$  additional transhipment operations
  - $\,\circ\,$  bundling of several small volumes
  - $\circ\,$  more complex logistics engineering
  - $\circ$  more administrative burden
  - adapted vehicles and infrastructures for pallet handling





#### ST4W breakthrough

#### Hierarchical tracking data exchange platform:

- ⇒ linking tracking data from fragmented sources:
  - $\,\circ\,$  vessels & trucks geo-localization
  - last known location of logistics units (pallets ...)
  - $\circ$  successive cargo tracking in multimodal environment:
    - $\,\circ\,$  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
- $\Rightarrow$  proposing real time follow-up of shipment:
  - $\,\circ\,$  end to end seamless visibility
  - $\,\circ\,$  synchronization between logistics & IWT actors
- tackling modal shift impediments:
  multi-stop & multi-client vessels



#### Sharing standardized & secure information



18



#### **Sharing standardized & secure information**



Tagged Units Moving Through the Supply Chain





#### **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





#### **Online tracking of shipment status**

Transports Instruction View

From ::	То ::
Rue Wauters 152	Quai de Biestebroeck, 90
Seneffe - 7181	Anderlecht - 1070
BE	BE
urn:itop:sgln:L42501561.020	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	<	
09/10/2019 18:10:17	TransportStatusNotificationMessageType	<	
09/10/2019 18:09:53	TransportStatusNotificationMessageType	<	PICKUP
09/10/2019 18:09:01	TransportInstructionResponseMessageType	<	✓ ACCEPTED
09/10/2019 18:08:43	TransportInstructionMessageType	>	SENT



- ⇒ Construction materials:
  - Tests with Shipit & Knauf, BLL & Roosens,
    - 29 vessels voyages have been done
    - Including 2 multi-stop voyages
  - 49 other miscellaneous voyages (figures as of 30/06/21)



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## Belgian pilot





#### **French pilot - Scenario**







# Opportunity to go beyond terminals and ports up to the inner-city

#### centres

IWT is an easy way to enter dense urban areas

⇒ <u>Almost all major NWE urban areas are on the waterways</u>





# 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
- Management of multi-products & multi-clients operations

#### **Physical interconnection: Innovative vessels and**

## transhipment

- FlexiMalle
- GreenWave
- Zulu
- Oorderdam











#### **Key components**







#### **Video : project overview**



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



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## SUSTAINABILITY TRENDS

10/2021, Tessy Martens - BDO Belgium









\*In millions



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<u>ک</u>

## Sustainability





<sup>ଓଓ</sup> Development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.୨୨

Brundlandt, 1987



### I. Sustainabilty - a growing imperative



BDO

to BDC

#### I. Sustainabilty - a growing imperative



co BDO



#### Non financial reporting



#### Environmental

R

- Carbon and other greenhouse gas emissions
- Production and office waste management and recycling systems
- Natural resource use, such as water and paper
- Pollution (noise, dust, particles)

#### Social

all'

- Diversity, equity and inclusivity policies and practices
- Employee wellbeing and mental health support programs
- Flexible working opportunities and arrangements
- ► Talent retention and attraction strategies
- Digital upskilling of employees

#### Governance

- Board structure, ESG knowledge and diversity criteria
- Risk management practices including material environmental and social issues
- Tax strategy
- Execute remuneration policy including any ESG based KPI's
- Supply chain management, including consideration of ESG


### II. Sustainability value creation





## **III. REWIRING THE ECONOMY**





#### POLICY APPROACHES & INSTRUMENTS

MARKET BASED INSTRUMENTS

COMMAND AND CONTROL



ETS (the EU emissions Trading Scheme) China, US (regional greenhouse ga initiative California's carbon cap-and-trade program)





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#### NON-FINANCIAL DISCLOSURE







KBC sends a clear signal: 'Companies without a sustainability strategy will find it more difficult to find financing' (1)

' Green is the new digital'. It is a statement that Johan Thijs likes to use. If it is up to on the KBC boss, all parts and levels of the Flemish bank-insurer must be permeated with the idea of sustainability. Consequently, KBC will be addressing all its corporate customers about their sustainability strategy. In this way, the bank wants to map the climate and ecological risks in its loan portfolio and help Belgian SMEs make the transition to an environmentally friendly economy.

"The largest bank in Norway recently

terminated their business contract

with one of the most respected law firms because they could not document nor prove a positive change in gender equality amongst their equity

partners."



Blackrock Stakes Claim on Sustainable Investing Revolution (4) "BlackRock intends to become a global leader in "sustainable investing", says Larry Fink. The world's largest asset manager launched a range of exchange traded funds in the US and Europe that incorporate environmental, social and governance criteria. "Sustainable investing will be a core component for how everyone invests in the future"."



The Documentation of Gender Equality is a Prequisite For Further Collaboration (6)

CO BDO







#### **Tessy Martens**

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## BDO

Let's build a sustainable future... <u>Together</u>.





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## Cities on board –solutions to integrate inland waterway and urban freight transport

Balazs Nemeth, POLIS Network

Urban Multimodal Days – 28 October 2021



www.polisnetwork.eu

#### **POLIS** members



Full members

Associated members





#### Activities







#### Working Groups

Research projects Policy & Advocacy







- **POLIS-ALICE joint position paper**: webinar series on the priorities identified by members (see recommendations to be published in Dec 2022)
- **Zero-emission zones for freight**: update of How-to Guide, capitalize on SURF project (e-course, instant projects)
- **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







- 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.





From traffic management to urban space management





#### We have solutions, if we cooperate

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## 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





- **Define a vision** (including freight)
- Understand interests and concerns of different stakeholders
- Enable collaboration to devise effective rules and incentives
- Develop innovative methods and incentives for data & information sharing
- **Rewards vs restrictions** (but regulation needed)
- Avoid shift improve
- Align policies across different levels of government and neighbours





V ZONES FOR FREIGHT WEBINAR SERIES

#### sitioning to Zero Emission 2 Zero Emission Freight in Lo



SUSTAINABLE URBAN LOGISTICS PLANNING



EcoLogistics

ZLC # IL



I.C.L.EI

ICLEI EcoLogistics Self-Monitoring Tool User Guide Short Version

For urban freight transport emissions accounting Vesion 200



Siturt Preigi

Don't Wait to Start with Freight!

Zero-Emission Zones in the City:



## **Community is growing!**

## **Cooperation is key!**



## Thanks for your attention!

**Balázs Németh** 

Project Manager | Coordinator <u>SMC</u> <u>Platform</u>

POLIS | CITIES AND REGIONS FOR TRANSPORT INNOVATION www.polisnetwork.eu | Follow Polis on Twitter and LinkedIn





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## Contributing to a "better" Brussels















### **Since 2003**

600 meter own quays

**10 own ships** 

20 chartered ships

MULTIMODAL LOGISTICS Bulk & Pallets: ca. 3 MIL TON/YR







<u>Bulk & project :</u> National International

Palletized cargo: Craneships Building materials & paper <u>Last mile:</u> Urban logistics also for construction sites





## Most important weekly flows towards Brussels

Aantai bestolwagens en vrachtwagens Construction 20,000 large trucks 100,000 vans **E-commerce** Other 40,000 small trucks

📖 Bestelwagens 💷 Vrachtwagens (och bussen en autorars). 💷 Vrachtwagens met ausbaugwagen. 💷 Trekkers met oplegger. 🔘 Personenvagens





## BEST MILE = NON DRIVEN MILE

Plan

That's why we created:

the

brussels construction consolidation center













## Brussel <u>N</u> 12,000 m2



MULTIMODAL LOGISTICS





Monthly delivery of some **1200 pallets** by Inland Water Way, **avoiding 60 trucks** entering Brussels **each month** 





### 1000 ton street tiles loaded in Ghent, two days later unloaded where we are NOW



via water Into the very heart of the city





the **inside Walls** for a large Brussels site were loaded in Wielsbeke & unloaded on the BCCC...

# also the Outside walls, loaded in Burcht were delivered with our craneship MS Oorderdam at the BCCC









a well prepared

supported by a robust

CLID

MULTIMODAL LOGISTICS
Out of the Brussels consolidation center we deliver consolidated and JIT **COMPLETE buildings** in the city center







Some figures					
Operational	27 months				
Pallets delivered	25,000				
Ships unloaded	30				
Trucks & vans loaded	+ 2,500				
Sites delivered	90				
customers	13				
trucks & vans, loaded for	+90%				
Last mile with	26 ton trailers, vans & small vans				













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Google

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Biestebroek Urban Logistic hub:

```
A OGISTICS SITE with water & road access
An answer to current and future mobility challenges in the South of Brussels
A"smart city" approach
A well balanced Social, economic and ecologic symbiosis
Job
Sustainable transport through consolidation and use of waterways
short term Solutions & long term Vision
```





Phased and pragmatic deployment according to logistic needs of the Biestebroeck district







#### 1700 ton ! Carbon savings

North-West Europe

ST4W

the star of the star of the star of the star









#### Connection Vergote - Biestebroek Via water







#### Imagine ....









### Last year November 23, Shipit was elected as most "baanbrekende" logistics service provider

We love to design sustainable solutions, WITH YOU

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## urbille

### ST4W CAP CALL Multimodal Urban Day Brussels

Brussels – 28.10.2021

### urbi 🖾 e

#### Imagine the city of tomorrow... sustainable and human

World Cities Summit 2018 Livable and Sustainable Cities: Embracing the Future through Innovation and Collaboration









In this context of transition, last-mile logistics must deal with two opposing effects...



2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

#### In most major European cities - including Brussels, 1 in 4 deliveries could be made by bike



35℃

Result from the European CycleLogistics study (2017)



BicyLift: a range of last-mile bicycle solutions (FlexiModal) -

-

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### Our mission : transforming urban logistics to accelerate the transition to sustainable and humane cities

urbi⊠e

TODOCTOR!



#### **Pillar 1 – The containerization of goods**



98

#### Pillar 1 – Trailers and modules



urbi 🖾 e | 🧿

#### Pillar 2 – Optimized process & ICT



#### Pillar 3 – A cooperative economic model of social economy



UI DILLEO

approach ige of services and expertise to meet the challenges of city logistics

### DELIVERY

urbille

### CONSULTAN

### SHOP

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urbi⊠e













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# Multi modality

#### The containerization of goods





1



2



(3)



4













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