



WATERWEGEN EN ZEEKANAAL NV



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ILDE – Connecting Inland Shipping Networks

Presentation of the results

(Intermodal Links with the Danube Estuary)

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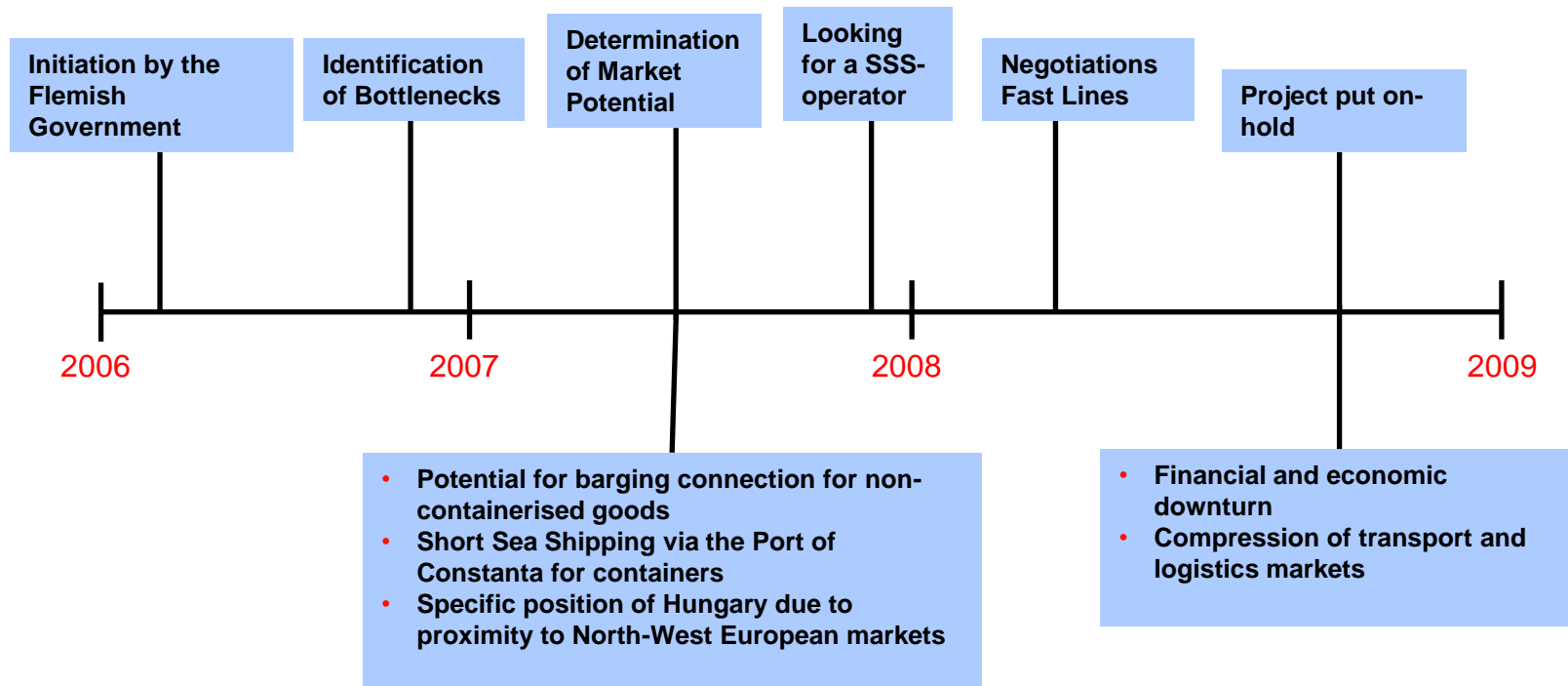
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1 Background of the meeting



Starting point: ILDE (2006-2009)

Aim: the development and enhancement of inland navigation between the Region of Flanders and Romania, Bulgaria, Serbia and Hungary in view of the growing importance of East-West trade in the EU





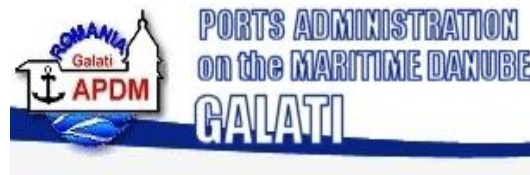
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ILDE Partners

Lead partner:



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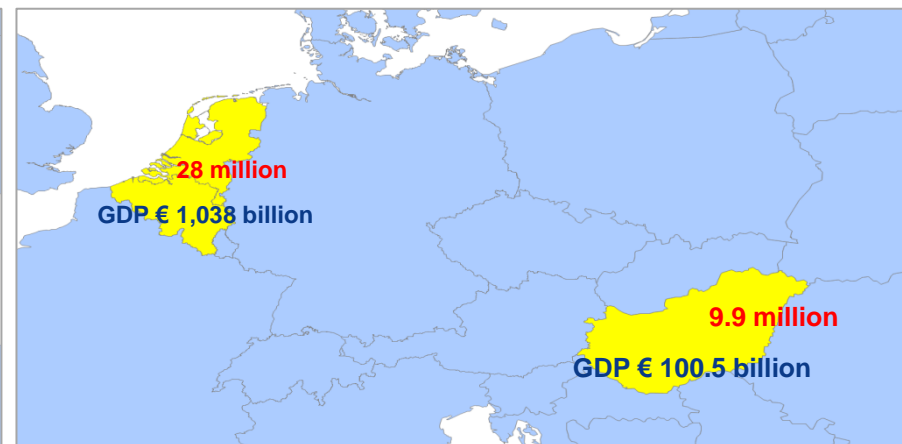
AGRO-MAAS



More info:

www.ildeproject.eu

- Private stakeholders requested the lead partner to re-activate ILDE and to provide an update regarding the market potential
- It was decided that two different market approaches would be launched – the first one would deal with Hungary while the second one would involve (especially) Romania
- The aim of today's meeting is to briefly present the initial results of the market analysis and to “sound out” if there is any interest in a follow-up



BCI's Mission

- What is the market potential of inland shipping on the shipping lane between Belgium/Netherlands and Hungary?
- Is there scope for the development of a positive business case?

2 Inland shipping from an EU perspective

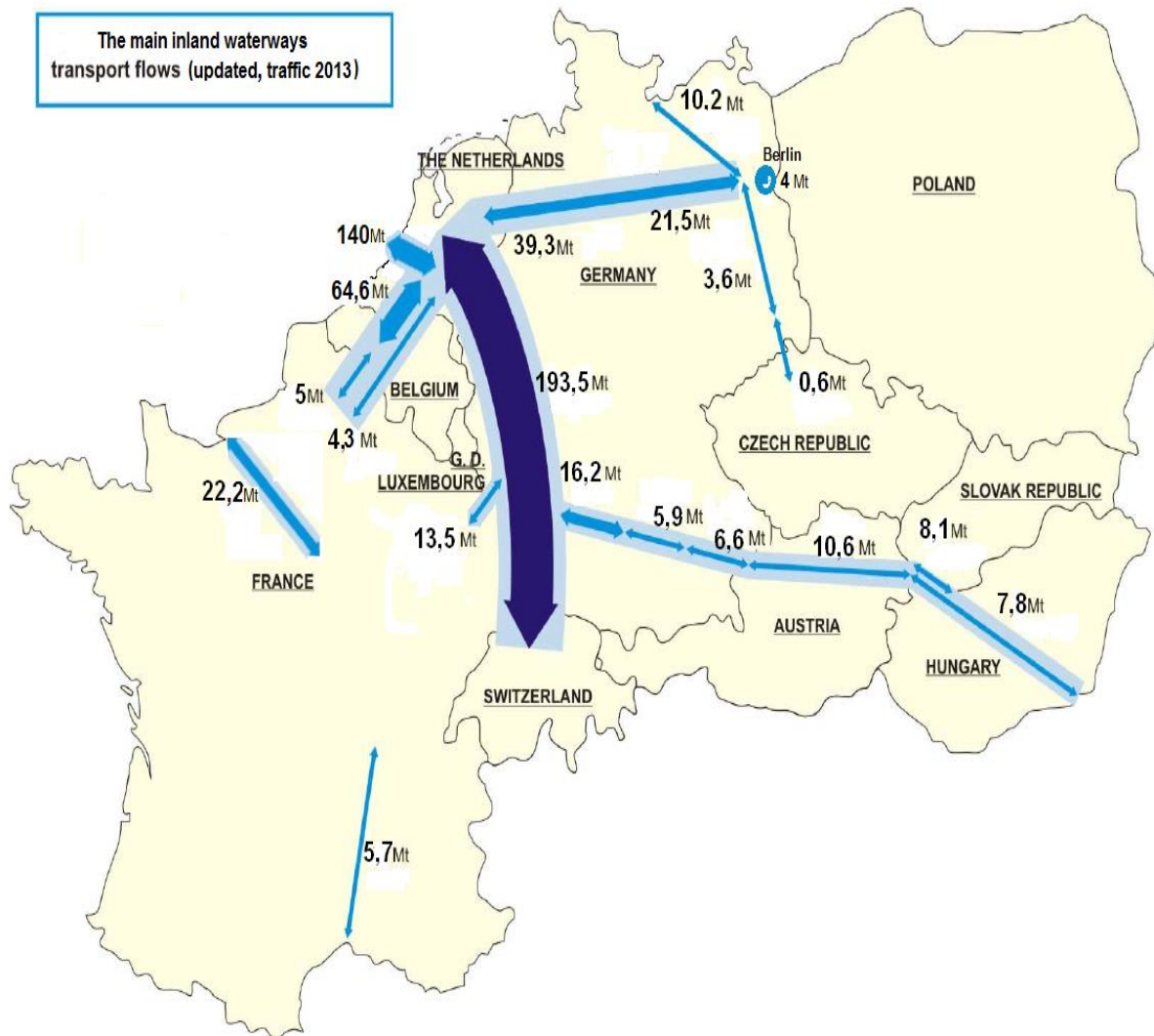
Country/%/Year	1996	2006	2007	2008	2009	2010	2011	2012
EU 28 countries	<i>n.a.</i>	5.7	5.8	5.9	5.9	6.7	6.1	6.9
EU 15 countries	7.6	6.7	6.8	6.9	6.7	7.5	7.2	7.9
BE	<i>n.a.</i>	<i>n.a.</i>	12.7	12.8	11.6	13.9	14.2	17.1
HR	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	5.8	6.1	6.2	6.5	7.3
NL	<i>n.a.</i>	<i>n.a.</i>	44.6	43.7	39.5	44.5	44.6	46.5

- The share of inland shipping at the EU level has increased due to the fact that it has sustained the economic and financial crisis better than the other two land modes

- There are no waterways in 10 Member States, and only 13 countries reported a sizeable activity. This explains the relatively “low” modal share

Country/Year In '000 tonnes	1996	2006	2008	2010	2012	2013
EU 28 countries	<i>n.a.</i>	<i>n.a.</i>	509 901	525 062	526 402	527 654
EU 15 countries	<i>n.a.</i>	<i>n.a.</i>	470 051	494 195	498 637	500 783
The Netherlands	289 332	317 853	344 797	346 901	350 069	356 062
Belgium	106 764	165 855	130 350	161 594	190 288	187 404
Hungary	2 172	7 327	8 829	9 952	8 135	7 857

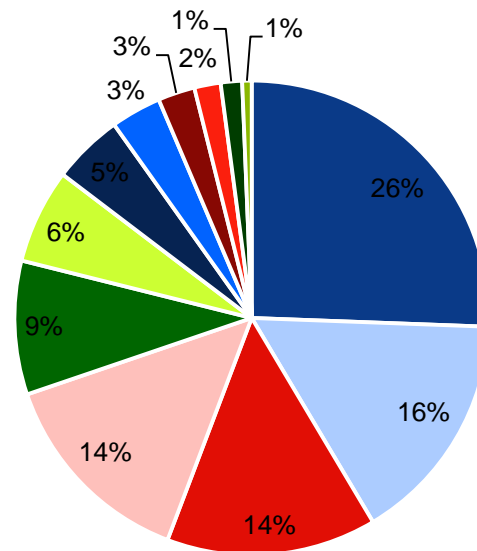
The main inland waterways
transport flows (updated, traffic 2013)



- The main inland shipping corridors are:
 - The Rhine (332 Mt in 2013 including traffic in the Netherlands)
 - The Scheldt-Rhine connection (69 Mt)
 - The Danube (52 Mt in 2012).
- Good practices:
 - Almost 40% of manufactured goods shipped at Benelux container ports use inland shipping
 - Two-thirds of all containers exchanged between Antwerp-Rotterdam and Germany are carried by IWT

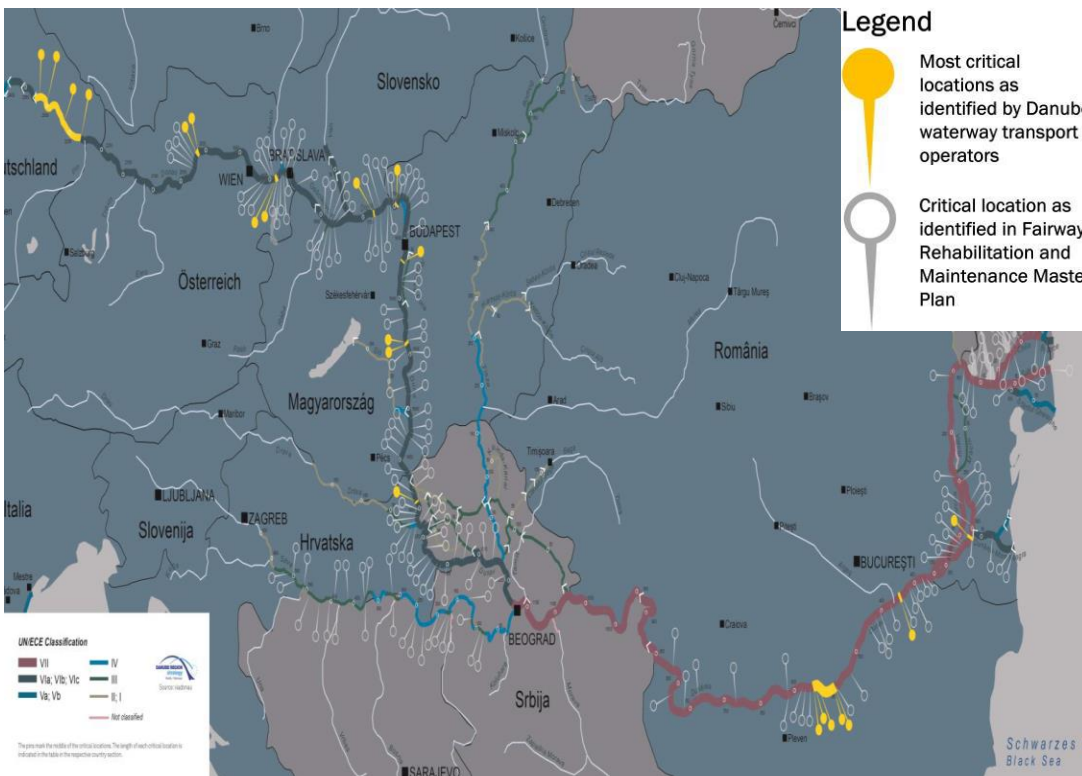
- Inland shipping mainly involves the transportation of liquid and dry bulk
- The five most important product groups account for almost 80% of the total tonnage
- Inland barges carry a large variety of cargoes: bulk (dry or liquid) goods, hazardous products, general cargo, etc.
- Inland shipping is also becoming increasingly involved in new business such as containers, palletised cargo, fresh products, etc.
- Main impediment: the price of pre and post-transport

Products transported by inland shipping, EU 28 (2013)



- Metal ores and other mining and quarrying products; peat; uranium and thorium 25%
- Unidentifiable goods: goods which for whatever reason cannot be identified and therefore cannot be assigned to groups 01-16. 16%
- Coke and refined petroleum products 14%
- Coal and lignite; crude petroleum and natural gas 14%
- Chemicals, chemical products and man-made fibres; rubber and plastic products; nuclear fuel 9%
- Products of agriculture, hunting, and forestry; fish and other fishing products 6%
- Basic metals; fabricated metal products, except machinery and equipment 5%
- Food products, beverages and tobacco 3%
- Secondary raw materials; municipal wastes and other wastes 2%
- Other non metallic mineral products 2%
- Wood and products of wood and cork (except furniture); articles of straw and plaiting materials; pulp, paper and paper products; printed matter and recorded media 1%
- Equipment and material utilized in the transport of goods 1%

Source: Eurostat; processed by BCI



- The Danube belongs to the EU Core network and is part of the Rhine-Danube corridor
- Critical bottlenecks still need to be resolved. Amongst others these include the Straubing-Vilshofen bottleneck in Germany

3 Analysis of the trade between Belgium-Netherlands and Hungary

Trade between Belgium and Hungary

	2013		2013	
	Export (tonnes)	Import (tonnes)	Export (%)	Import (%)
Agricultural	45,687	46,265	11%	17%
Food	32,264	56,717	8%	21%
Textile	7,027	4,531	2%	2%
Wood, paper, printing industry	6,801	19,115	2%	7%
Chemicals	221,477	54,710	56%	20%
Building and building materials	8,040	6,886	2%	3%
Steel, iron, non-ferro and processed	42,534	35,608	11%	13%
Machinery, automotive; Industrial electronics	11,674	24,342	3%	9%
Consumer electronics	7,153	10,629	2%	4%
Other	3,199	645	1%	0%
Public utilities and waste	12,256	12,882	3%	5%
Total	398,112	272,330	100%	100%

Source: Comtrade; Processed by BCI

- Exports are concentrated into three main product groups: agriculture, chemicals and steel, which together cover some 80% of exports
- Imports are less concentrated. Four main groups exist: agriculture, food, chemicals and steel, which together cover some 70% of imports
- All trade groups have an imbalance between exports and imports
- Chemicals is the most important group with some 40% of total trade volumes

Trade between the Netherlands and Hungary

	2013		2013	
	Export (tonnes)	Import (tonnes)	Export (%)	Import (%)
Agricultural	137,311	146,768	18%	14%
Food	72,833	515,010	9%	48%
Textile	10,525	7,570	1%	1%
Wood, paper, printing industry	22,843	10,829	3%	1%
Chemicals	167,089	55,500	22%	5%
Building and building materials	6,256	339	1%	0%
Steel, iron, non-ferro and processed	142,956	27,624	19%	3%
Machinery, automotive; Industrial electronics	78,820	201,755	10%	19%
Consumer electronics	30,068	17,409	4%	2%
Other	2,502	65	0%	0%
Public utilities and waste	101,434	79,533	13%	7%
Total	772,637	1,062 402	100%	100%

Source: Comtrade; Processed by BCI

- The trade volumes are three times higher than those with Belgium
- Exports are concentrated into four main product groups: agriculture, chemicals, steel and waste, which together cover some 70% of exports
- Imports are much more concentrated into three groups: agriculture, food and machinery, which together cover more than 80% of imports
- All trade groups have an imbalance, which is substantial for food.
- Food is the most important group, accounting for some 15% of total trade volumes

Aggregated trade between Belgium-Netherlands and Hungary

	2013		2013	
	Export (tonnes)	Import (tonnes)	Export (%)	Import (%)
Agricultural	182,998	193,033	16%	14%
Food	105,097	571,727	9%	43%
Textile	17,552	12,101	1%	1%
Wood, paper, printing industry	29,644	29,944	3%	2%
Chemicals	388,566	110,210	33%	8%
Building and building materials	14,296	7,225	1%	1%
Steel, iron, non-ferro and processed	185,490	63,232	16%	5%
Machinery, automotive; Industrial electronics	90,494	226,097	8%	17%
Consumer electronics	37,221	28,038	3%	2%
Other	5,701	710	0%	0%
Public utilities and waste	113,690	92,415	10%	7%
Total	1,170,749	1,334,732	100%	100%

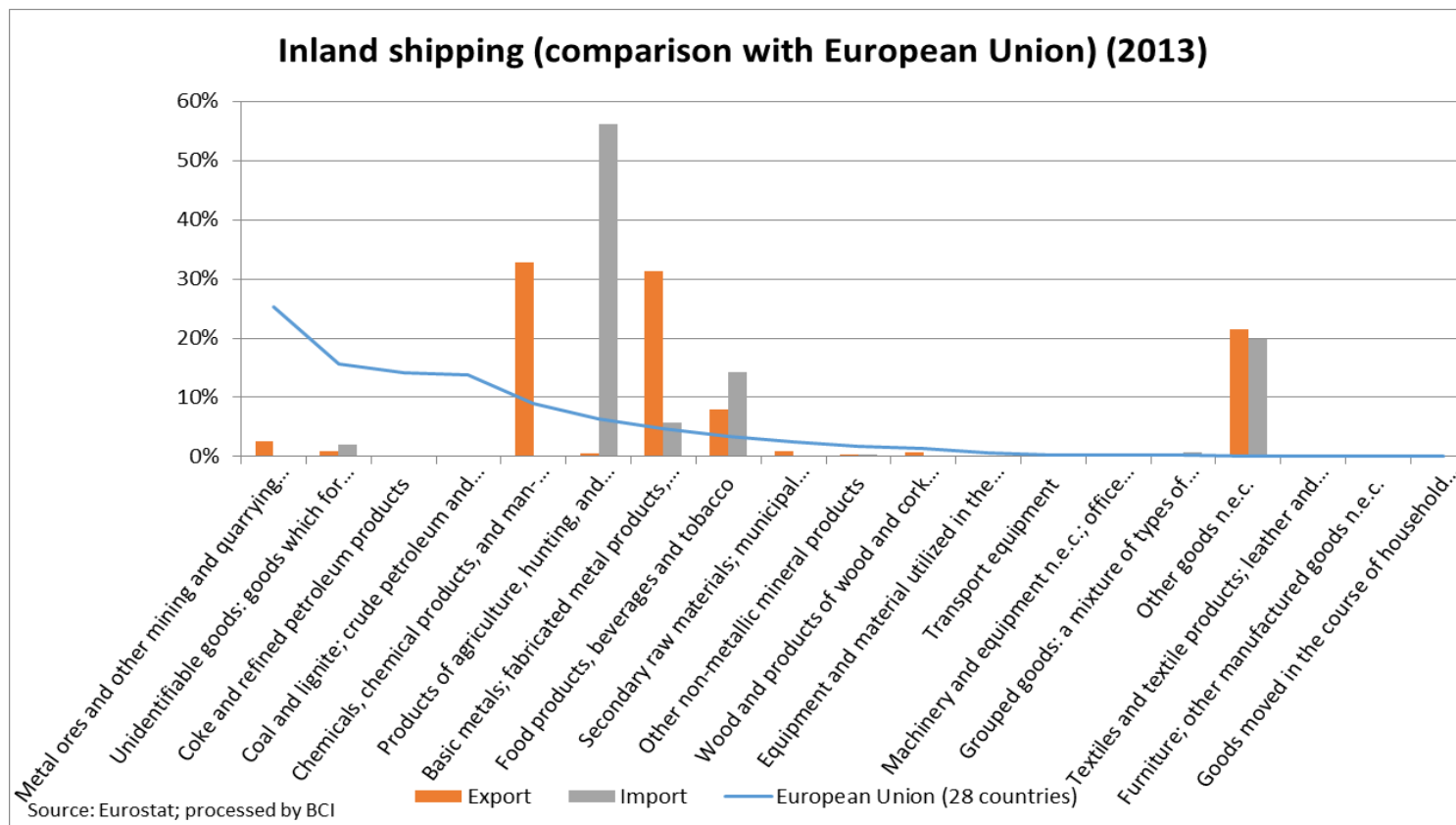
Source: Comtrade; Processed by BCI

- Chemicals is the most important export group. It accounts for one-third of all of the export volumes
- On the import side food accounts for more than 40% of the trade volumes
- Volumes are practically balanced

Trade volumes compared with the EU product mix of inland shipping



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4 Potential for Inland Shipping

- To calculate the real inland shipping potential we firstly took the modal split per country into account:
- Secondly, we only looked at the potential for international inland shipping:
- Thirdly, we did not take into account container transport in view of the distances involved and the remaining bottlenecks on the Danube impeding on speed of rotation:

Modal Split 2012 (%)

	Belgium	The Netherlands	Hungary
Road	70.6%	47.5%	63.6%
Rail	12.3%	6.0%	30.0%
Inland Waterways	17.1%	46.5%	6.4%

Source: Eurostat

Share of national and international transport in total inland shipping (2012)

	Belgium	The Netherlands	Hungary
National	44%	31%	0%
International	56%	69%	100%

Source: Eurostat

Share of containers in international inland shipping (2012)

	Belgium	The Netherlands	Hungary
Goods in containers	11%	8%	0%

Source: Eurostat



- A total theoretical potential of almost 270,000 tonnes was identified
- This potential can only be fully realised in the mid-term (5 to 10 years) once some of the bottlenecks on the Danube are solved
- This potential cannot be attributed to one port but concerns the combined inland waterways capacity of the three countries
- The location of sender/receiver in the proximity of a loading infrastructure also plays a role
- The imbalance between export and import is substantial. To reduce empty returns, trade flows from Austria (and Germany) could be taken into account

Potential for inland shipping Mid-term (5-10 years)	Belgium-Hungary		The Netherlands-Hungary		Belgium and the Netherlands - Hungary	
	Exports (tonne)	Imports (tonne)	Exports (tonne)	Imports (tonne)	Exports (tonne)	Imports (tonne)
Agricultural	3,713	2,629	34,688	8,210	38,401	10,839
Food	898	1,788	9,349	28,816	10,247	30,605
Textile	0	0	0	0	0	0
Wood, paper, printing industry	0	0	0	0	0	0
Chemicals	14,795	2,057	40,919	1,603	55,714	3,660
Building and building materials	0	0	0	0	0	0
Steel, iron, non-ferro and processed	3,445	2,016	39,774	1,541	43,218	3,557
Machinery, automotive; Industrial electronics	978	1,375	22,547	11,209	23,525	12,584
Consumer electronics	0	0	0	0	0	0
Other	0	0	0	0	0	0
Public utilities and waste	1,048	726	29,384	4,556	30,432	5,283
Total	24,877	10,593	176,661	55,935	201,538	66,528



- To get a better idea on the existing potential the main categories are split up in sub-groups

Mid-term potential for inland shipping	Belgium-Hungary		The Netherlands-Hungary		Belgium and the Netherlands - Hungary	
	Exports (tonne)	Imports (tonne)	Exports (tonne)	Imports (tonne)	Exports (tonne)	Imports (tonne)
01 - Live animals	2	1	7,871	232	7,873	234
02 - Meat and edible meat offal	574	222	10,039	661	10,613	883
07 - Edible vegetables and certain roots and tubers	447	448	8,016	86	8,463	534
08 - Edible fruit and nuts; peel of citrus fruits or melons	2,539	69	2,978	24	5,517	93
12 - Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medical plants; straw and fodder	151	1,889	5,784	7,207	5,935	9,096
10 - Cereals	147	821	116	16,618	264	17,439
15 - Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	751	967	6,335	9,150	7,085	10,117
22 - Beverages, spirits and vinegar	0	0	2,898	3,048	2,898	3,048
72 - Iron and steel	1,913	1,255	12,862	811	14,775	2,066
73 - Articles of iron or steel	525	360	2,469	451	2,993	811
76 - Aluminium and articles thereof	987	260	16,620	266	17,606	525
83 - Miscellaneous articles of base metal	20	142	7,823	13	7,843	156
27 - Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	1,261	93	1,157	633	2,418	727
29 - Organic chemicals	2,854	619	7,968	465	10,823	1,085
31 - Fertilizers	3,203	7	11,353	0	14,555	7
39 - Plastics and plastic products	7,478	1,337	20,440	504	27,918	1,842
84 - Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	761	575	7,905	10,522	8,665	11,097
87 - Vehicles other than railway or tramway rolling-stock, and parts and accessories thereof	218	799	14,642	687	14,860	1,486
23 - Residues and waste from the food industries; prepared animal fodder	1,048	726	29,384	4,556	30,432	5,283
Total	24,877	10,593	176,661	55,935	201,538	66,528



- Looking at the short run a potential more than 170,000 tonnes has been identified taking into account that some sub-categories, such as perishables, are less suited for inland shipping on the trade lane

Potential for inland shipping (taking into account current modal share of inland shipping in respective countries)	Belgium-Hungary		The Netherlands-Hungary		Belgium and the Netherlands - Hungary	
	Exports (tonne)	Imports (tonne)	Exports (tonne)	Imports (tonne)	Exports (tonne)	Imports (tonne)
10 - Cereals	147	821	116	16 618	264	17 439
15 - Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	751	967	6 335	9 150	7 085	10 117
72 - Iron and steel	1 913	1 255	12 862	811	14 775	2 066
73 - Articles of iron or steel	525	360	2 469	451	2 993	811
76 - Aluminium and articles thereof	987	260	16 620	266	17 606	525
83 - Miscellaneous articles of base metal	20	142	7 823	13	7 843	156
27 - Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	1 261	93	1 157	633	2 418	727
29 - Organic chemicals	2 854	619	7 968	465	10 823	1 085
31 - Fertilizers	3 203	7	11 353	0	14 555	7
39 - Plastics and plastic products	7 478	1 337	20 440	504	27 918	1 842
23 - Residues and waste from the food industries; prepared animal fodder	1 048	726	29 384	4 556	30 432	5 283
Total	20 186	6 588	116 527	33 468	136 713	40 057

Source: Comtrade, Eurostat; Processed by BCI

5 Input from Companies

Critical factors for changing to intermodal transport: an aggregation of survey results from Belgian, Dutch and Hungarian companies

	Average score Belgian/Dutch (1=not important, 5=very important)	Average score Hungarian (1=not important, 5=very important)	Aggregated (1=not important, 5=very important)
Price structure	3.6	4.0	3.8
Lead time	3.4	4.3	3.9
Environmental issues	2.2	2.3	2.3
Congestion	1.4	2.8	2.2
Safety reasons	1.6	2.0	1.8
Not applicable for the type of goods transported	1.0	2.2	1.6

Source: Port of Bija and BCI

- The most important obstacles to change regarding inland shipping are price and lead times
- The price of waterway transport depends on the price of the first mile and the last mile (20-40% of total cost). In most cases the reconfiguration of logistics chains will provide a profitable solution with short payback times
- Lead time is a more “intuitive” indicator and is in many cases based on perception

Bottlenecks of intermodal transport

	Average score Belgian/Dutch (1=not important, 5=very important)	Average score Hungarian (1=not important, 5=very important)	Aggregated (1=not important, 5=very important)
Lack of intermodal capacities	1.6	1.8	1.7
Lack of adequate transport infrastructure	2.2	3.0	2.6
Lack of distribution and warehousing capacities	1.4	1.8	1.6
Lack of interest of customers/shippers to participate in intermodal transport	1.8	2.6	2.2
Suppliers' geographical distance	2.0	3.5	2.8
Lack of sophisticated IT for information sharing	1.4	3.2	2.3
Competition from other means of transport (road)	2.8	4.7	3.8
Underperforming business links within the intermodal chain	1.0	3.7	2.6

Source: Port of Baja and BCI

- The most important bottleneck is the competition from road transport. This indicator is related to convenience and to price.
- Lack of infrastructure, geographical distance and the inclusion of waterways in supply chains seem to be more important in Hungary than in Belgium and the Netherlands

6 Conclusions and next steps

Market Potential	+++
• Dry Bulk	+++
• Liquid Bulk	+++
• Break Bulk	+ / ++
Main Obstacles	+ / ++
• Competition from Road Transport	+++
• Lack of awareness	++
Main Critical Factors	+++
• Price	+++
Business Case	+++

Next steps

- Project co-financed by EU (Interreg or others)
 - Aim: the development of a business case for inland shipping including a pilot project between North-West Europe and Central Europe to demonstrate its competitiveness vis-à-vis road transport
 - Geographic scope:
 - Northern France, Belgium, The Netherlands and the Ruhr area
 - Hungary and Austria





Scope of the project

- Development of a value proposition for inland shipping and the promotion of modal shift
- Development of a financial tool
- Identification of actual product flows and the determination of bundling (groupage) potential to avoid empty returns
- Determining impediments
- Contacting skippers/ship owning companies
- Setting up pilot schemes
- Monitoring and operational feedback
- Market take-up and roll out

7 Themes for Discussion

- Experience with waterway transport?
- Why are shippers not making more use of waterways in Hungary?
- Is a lead time for bulk products of an average of 10 days acceptable?
- What is the price flexibility?
- What about infrastructure? Are there sufficient loading and unloading locations?
- What about the role of Hungarian ports? How could they facilitate a modal shift away from road transport?

Interested in finding out more?



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