

The Port of Antwerp

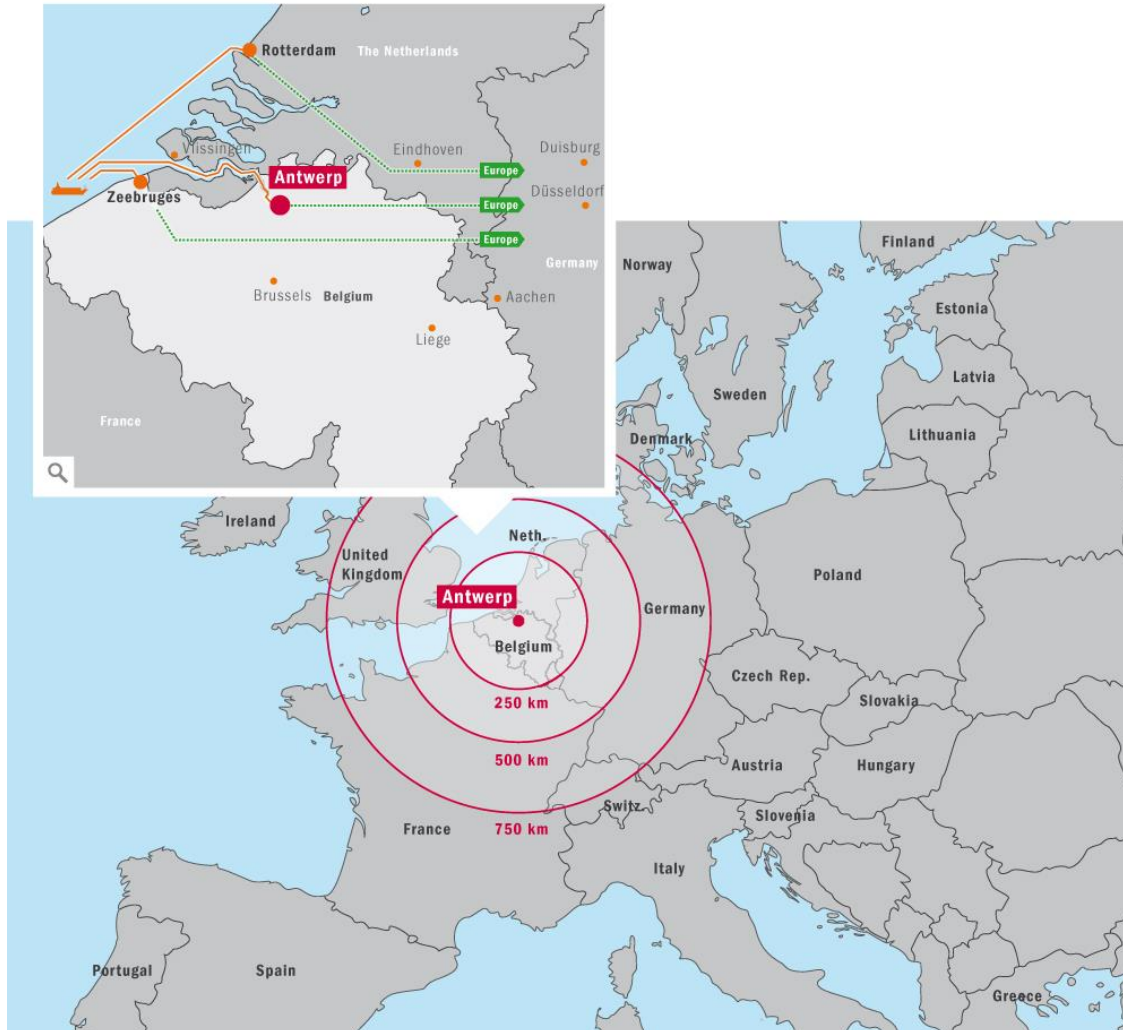
*A case of success for the management of
chemical maritime logistics*

July 1st 2015



DEEP INLAND LOCATION IN THE HEART OF EUROPE

Combining the advantages of an inland port ...



CUTTING COSTS AND REDUCING CARBON FOOTPRINT

- 60% of the European purchasing power is within 500 km from Antwerp
- Closer to point of departure and arrival

EXCELLENT NAUTICAL ACCESSIBILITY

... with the possibilities of a main sea port



ACCESSIBLE FOR WORLD'S LARGEST CONTAINER VESSELS

- Ultra large container vessels of 18.000 TEU (weekly calls)
- Capesize vessels for bulk cargo up to 160.000 tonnes

© PSA

EUROPE'S LEADING INTEGRATED MARITIME AND LOGISTICS PLATFORM



Nr 1 Breakbulk port



Largest european oil & chemical cluster



Extensive value added logistics



Widely connected to the fore and hinterland

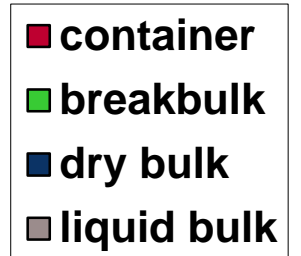
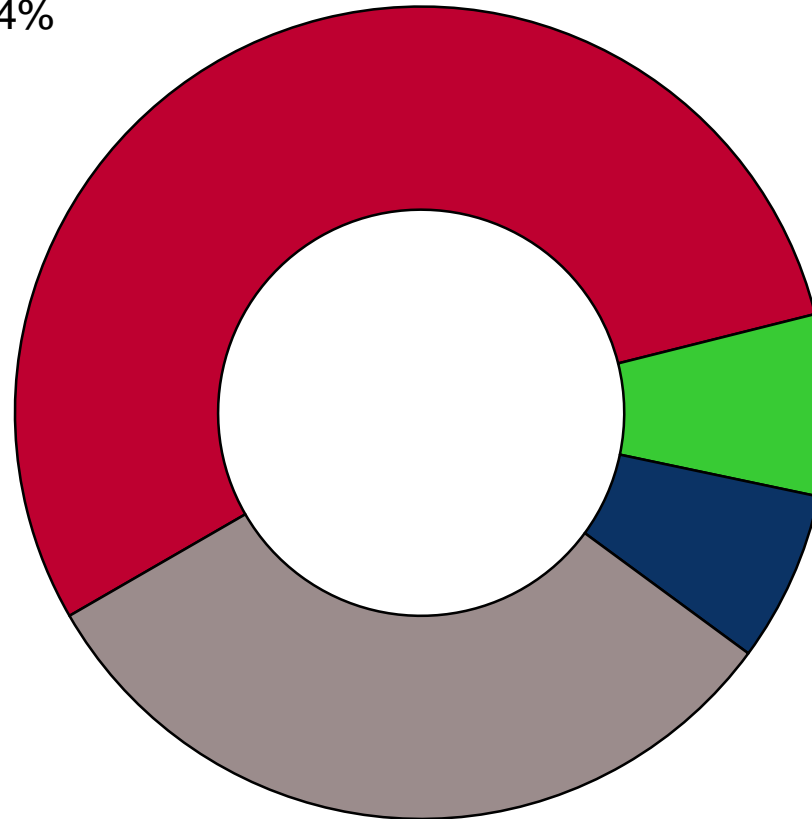


Worldclass container port



Maritime cargo transport 2014: 199 million ton

Container
54%

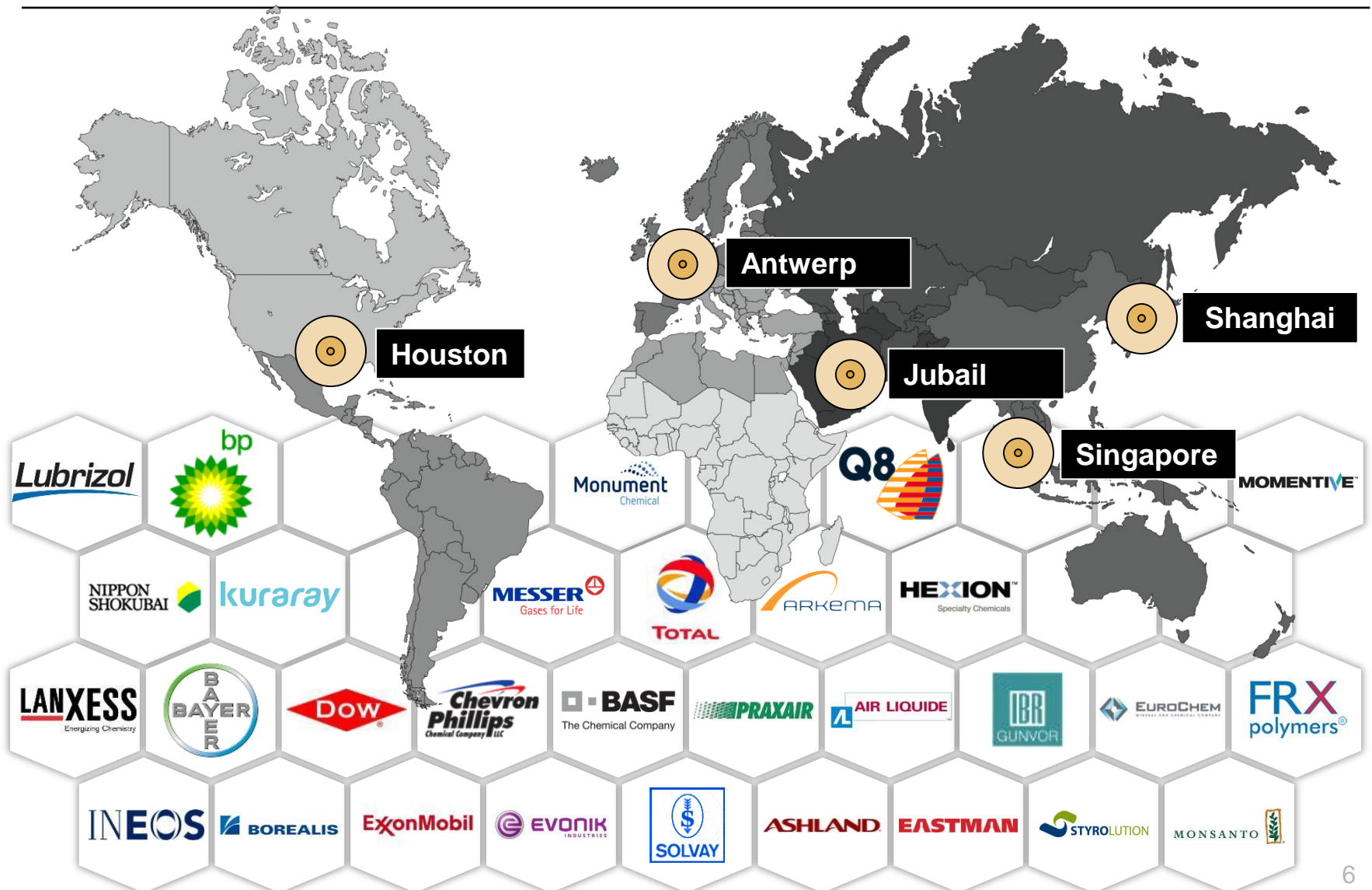


Breakbulk
8%

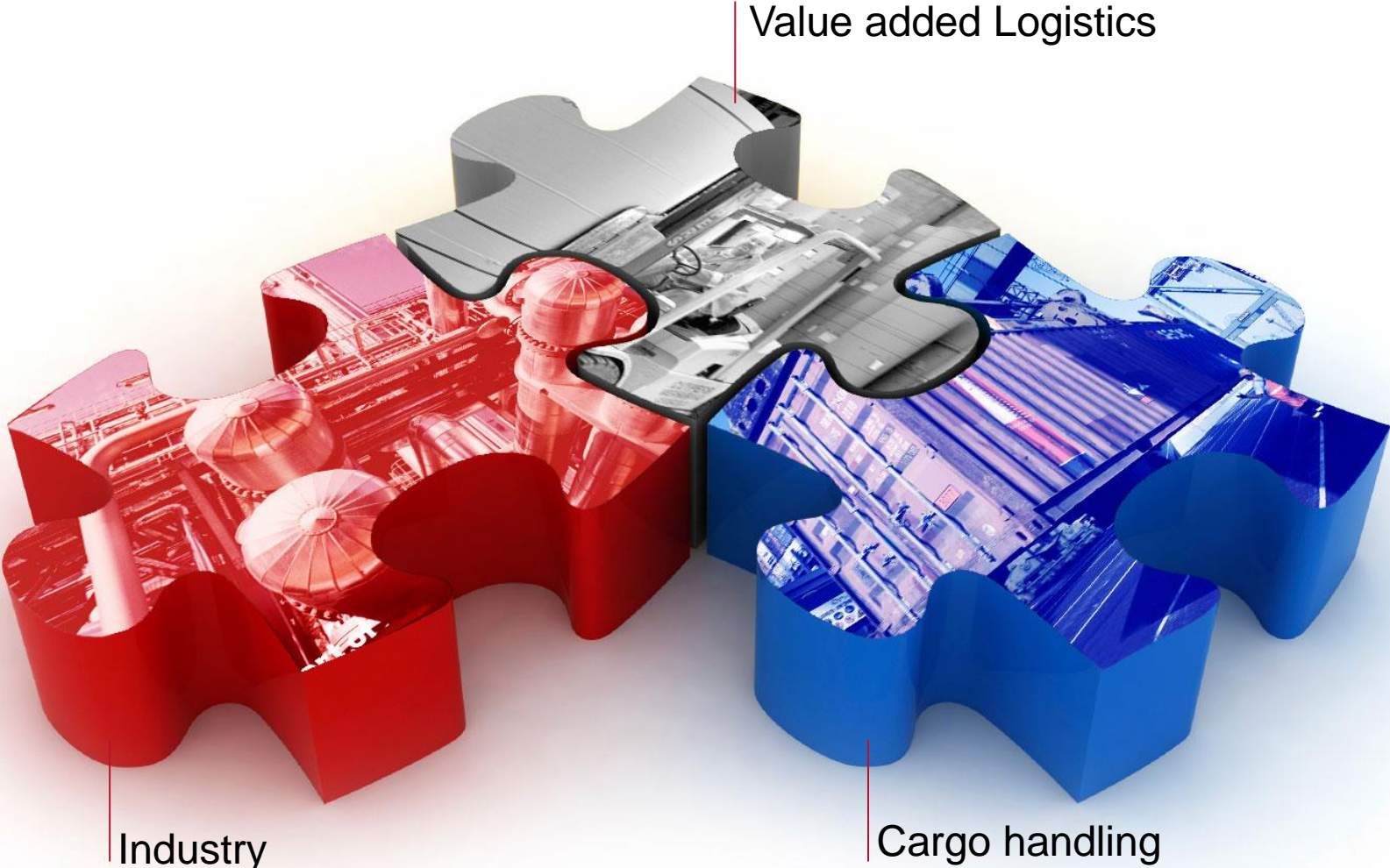
dry bulk
7%

liquid bulk
31%

The continent's largest integrated chemical cluster



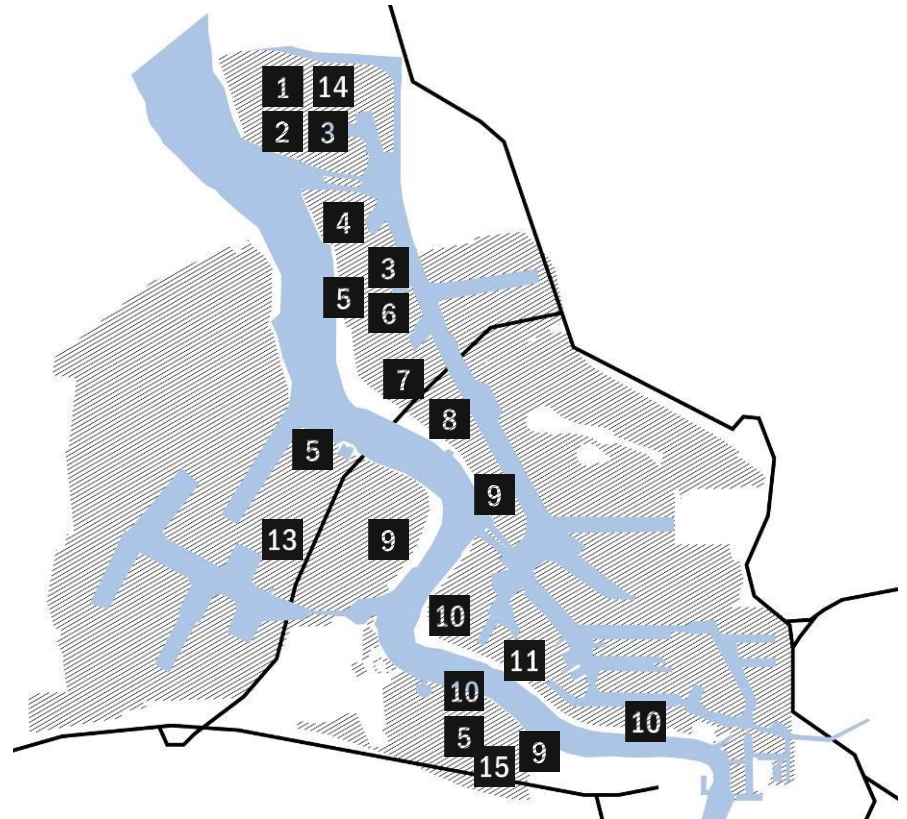
Realising unique synergies



Antwerp: Europe's largest integrated chemical cluster



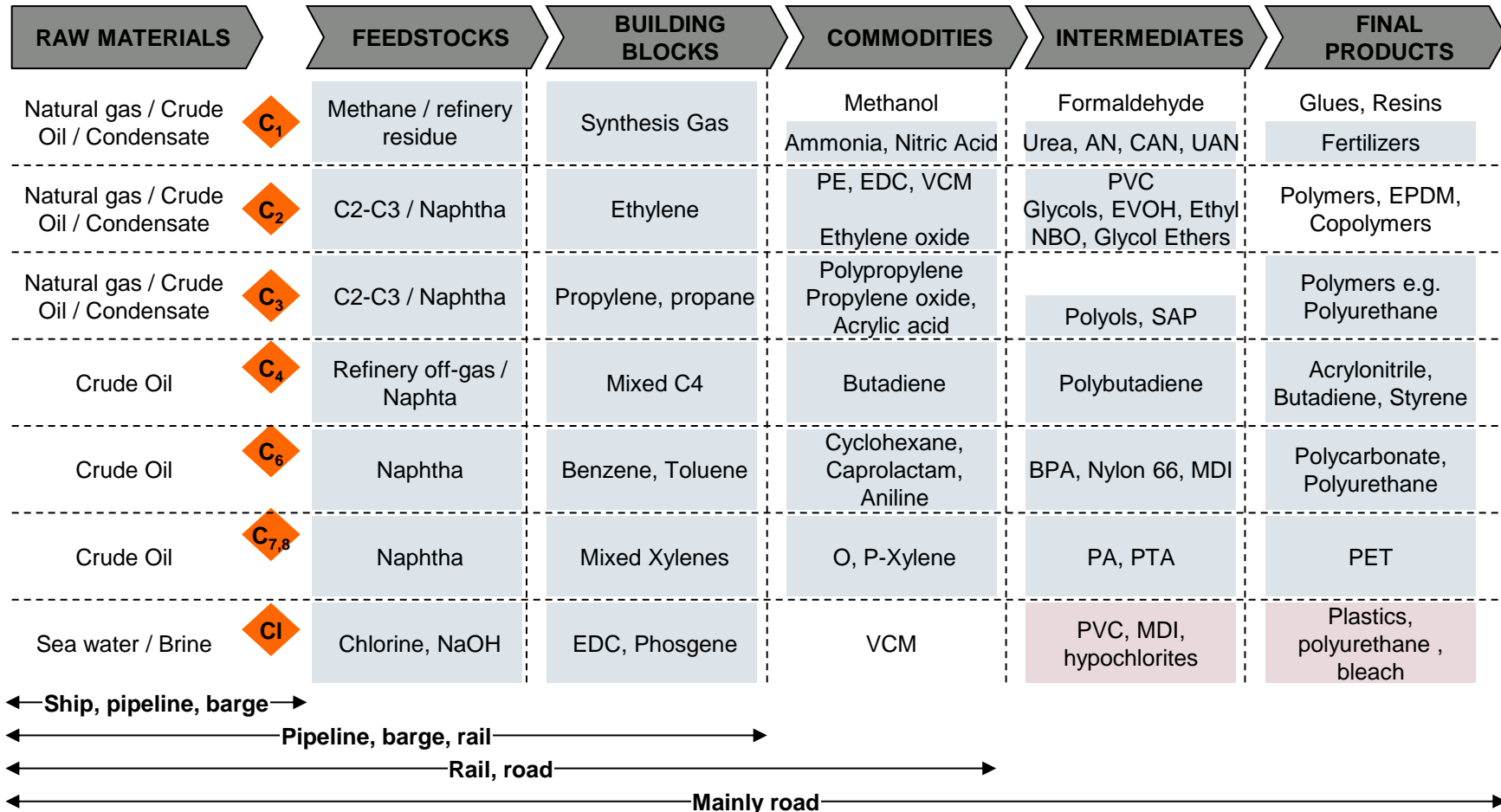
- 1 BASF
- 2 Air Liquide
- 3 Solvay
- 4 IBR (Gunvor Group)
- 5 Ineos
- 6 Monsanto
- 7 Evonik Degussa Antwerp
- 8 Bayer
- 9 Lanxess
- 10 Total (Refinery + Petrochemicals)
- 11 ExxonMobil (Refinery + Petrochemicals)
- 12 Total Antwerp Olefins
- 13 Borealis
- 14 Eurochem
- 15 Praxair



The high level of integration and diversity across the value chain is unique in the world



Synergies in energy, process integration and logistics offer world class cost effectiveness



items are produced in the cluster

Source: EPCA, Results of the Think Tank Sessions, Aug 07

The European Refinery Scene

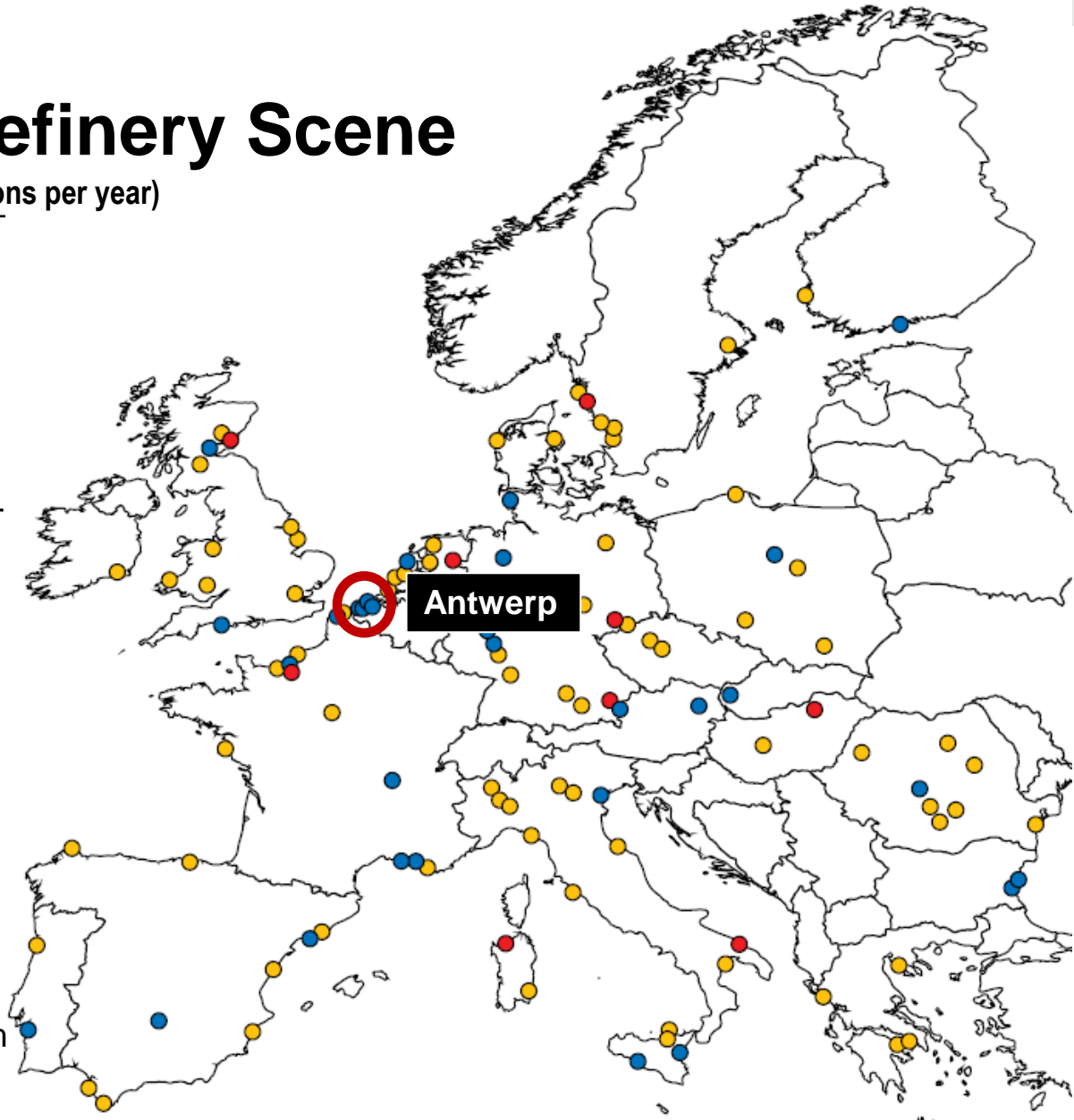
(14,6 million barrels per day / 728 million tons per year)

Europe:

- Refinery location
(110 refineries in total)
- Steam cracker location
(58 steam cracker in total)
- Integrated refinery / steam cracker location
(41 directly integrated refinery steam crackers in total)

Antwerp:

- 4 refineries
(825,000 barrels per day / 41 million tons per year)
- 4 steam crackers
(incl. Europe's largest single train steam cracker)
- 3 directly integrated refinery steam crackers



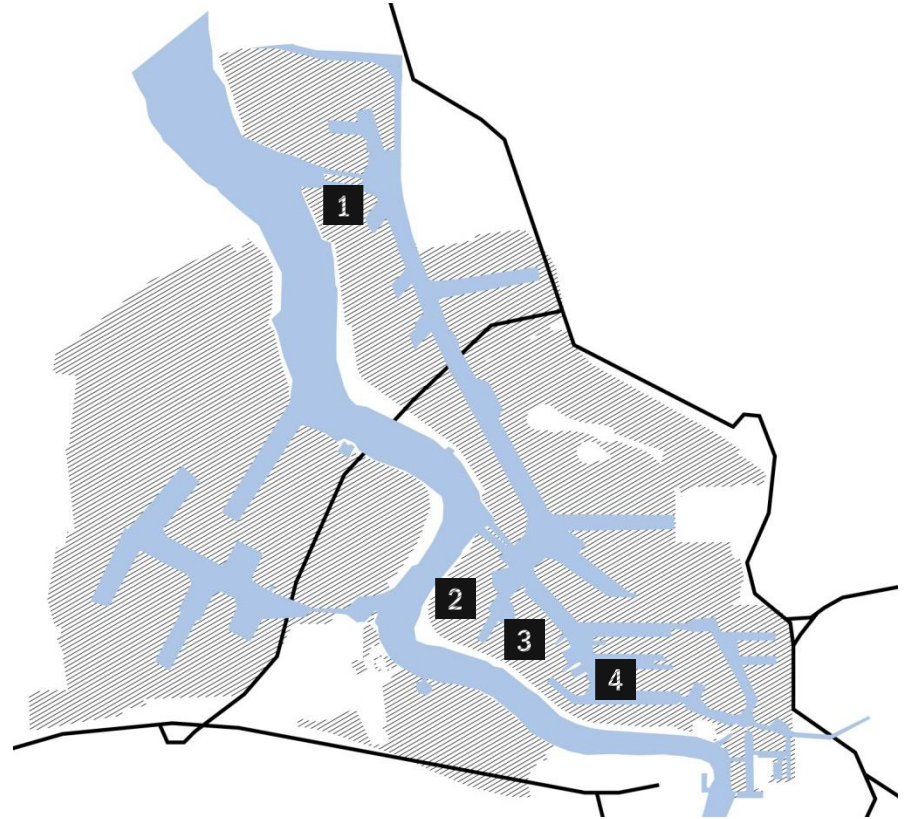
Antwerp: a main refinery centre

1 Independent Belgian Refinery, part of Gunvor
(110,000 barrels per day/5,5 million tons per year)

2 Total
(360,000 barrels per day / 18 million tons per year – the largest and most complex refinery of the Total Group, and Europe's second largest refinery by size)

3 ExxonMobil
(300,000 barrels per day / 15 million tons per year – Europe's largest ExxonMobil refinery)

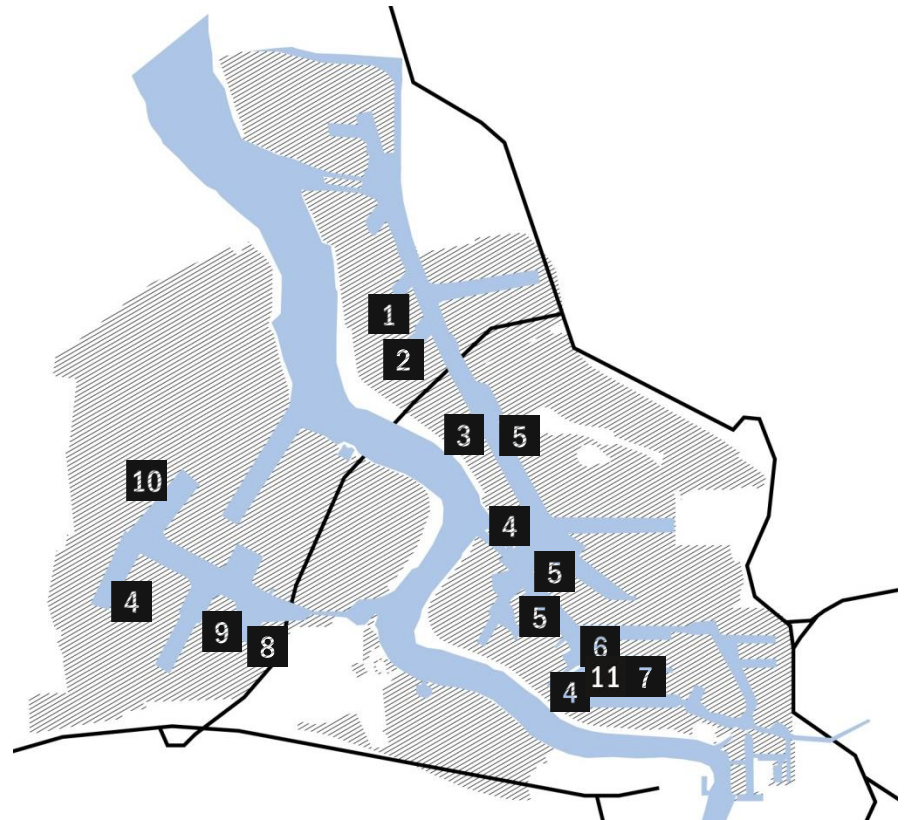
4 ATPC, part of VTTI
(55,000 barrels per day / 2,5 million tons per year – bitumen production)



Liquid bulk: 11 tank storage operators spread over 15 terminals



- 1 Vesta
- 2 Oiltanking Stolthaven Antwerp
- 3 LBC Cepsa Antwerp
- 4 Vopak
- 5 SeaTank Terminal
- 6 Noord Natie Odfjell Terminals
- 7 LBC
- 8 ADPO
- 9 Antwerp Gas Terminal
- 10 ITC Rubis Terminal Antwerp
- 11 ATPC (part of VTTI)

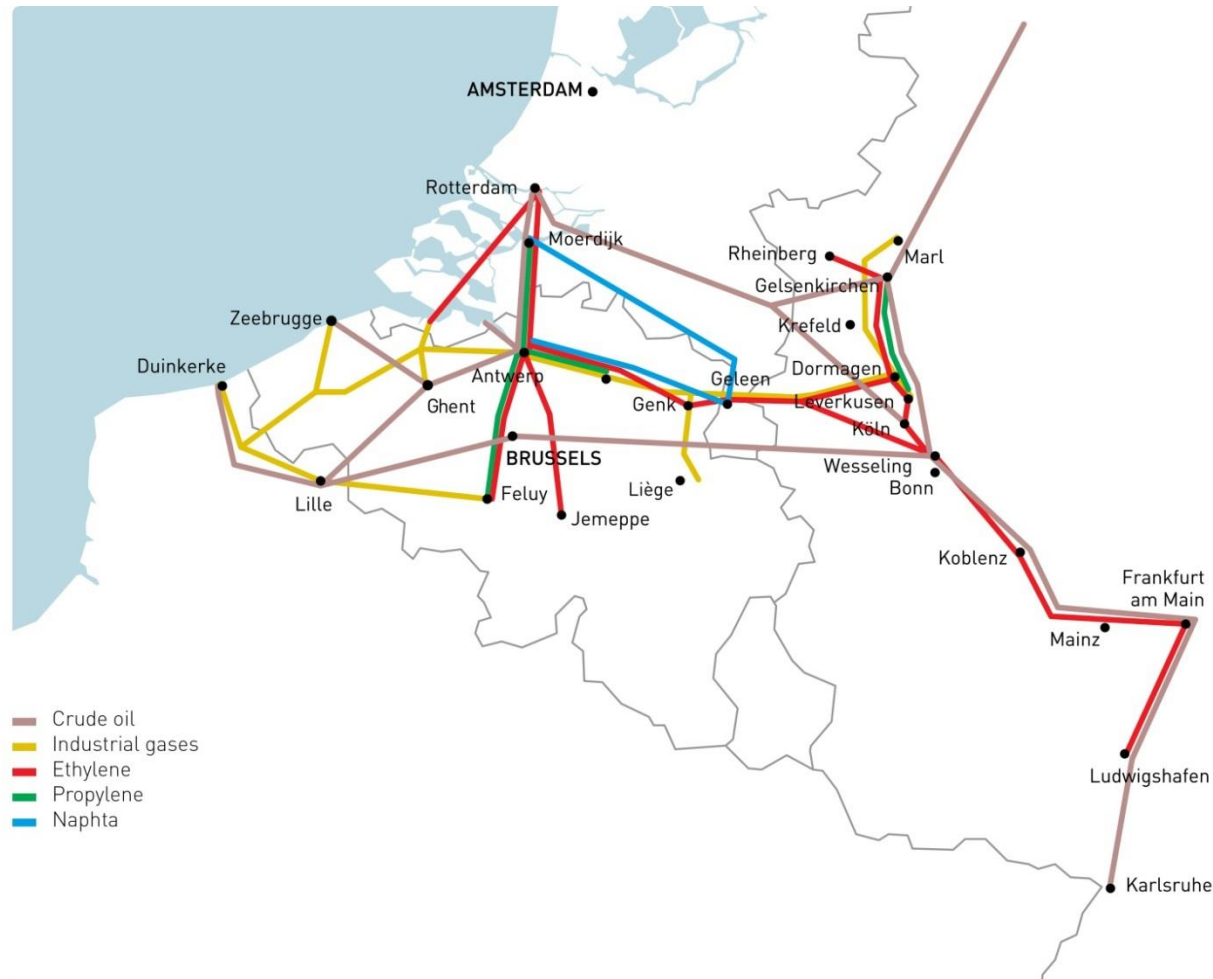


Biggest concentration of stainless steel tanks worldwide

**Liquid bulk terminals:
6,3 mio m³ storage capacity**

First class availability of raw materials thanks to the central location in the Western European pipeline network

Pipelines offer a fast, efficient, cheap and ecological supply chain



Success factors

- 1 Widely connected to the worldwide foreland
- 2 Location in the heart of Europe
- 3 Appropriate storage solutions for each product
- 4 Excellent hinterland connections
- 5 Collaboration with hinterland hubs



Antwerp's key strength as a petrochemical cluster is combination of 4 critical aspects:



1. Production

- a) (petro)chemical
- b) Oil refineries
- c) Biochem
- d) New technologies

2. Value Added Logistics

Storage, labelling, distribution, drumming, heating, cooling, blending, distribution, etc of chemicals and oil products – e.g. Tank Storage

3. Transshipment

Loading and unloading of ships

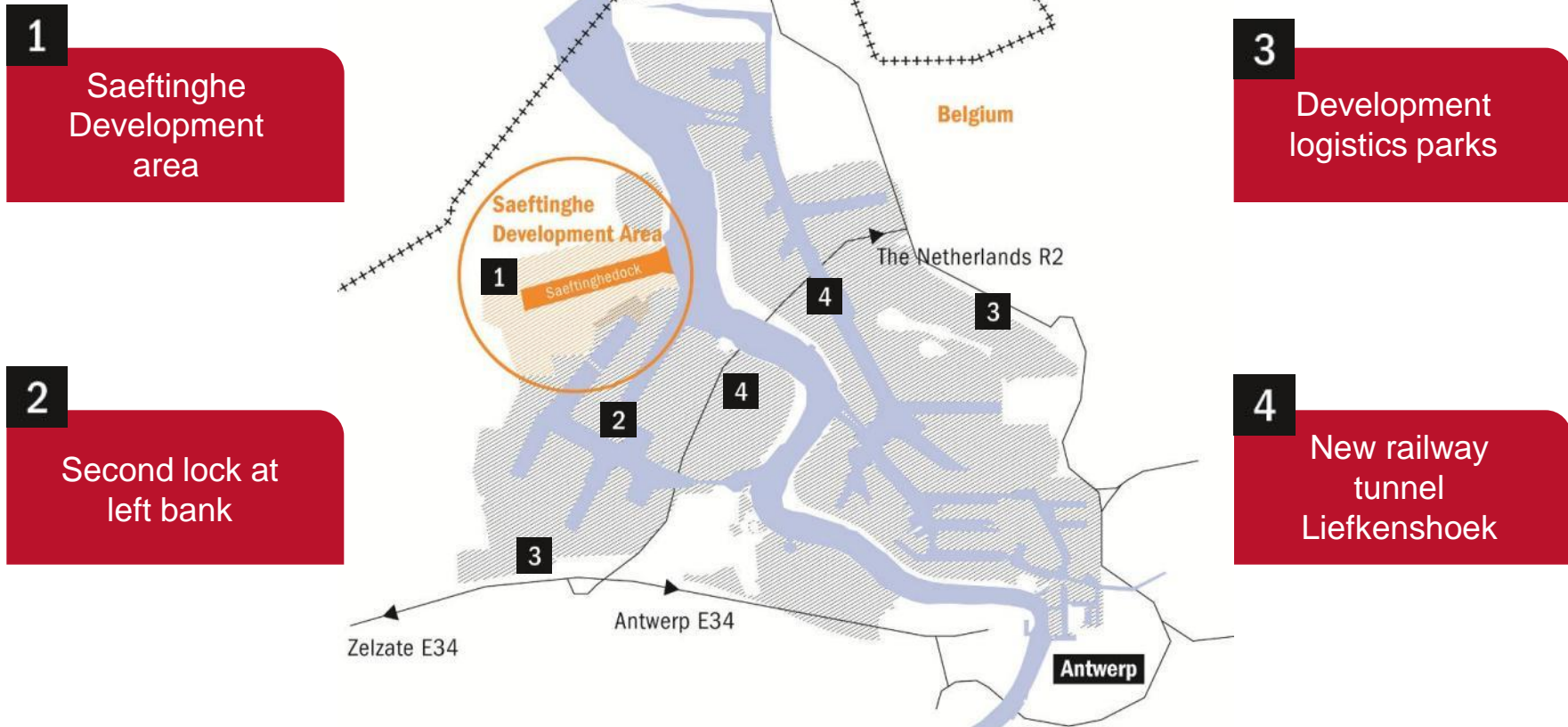
4. Presence of Contractors

Mechanical & Process Equipment, EPC's, E&I, MRO, specialized consultants,...

Oil & Chemical div focuses on all 4 aspects (Stakeholders) to reinforce the (petro)chemical cluster

Ambitious long term investment plan

Public investments 8 billion euro up to 2025

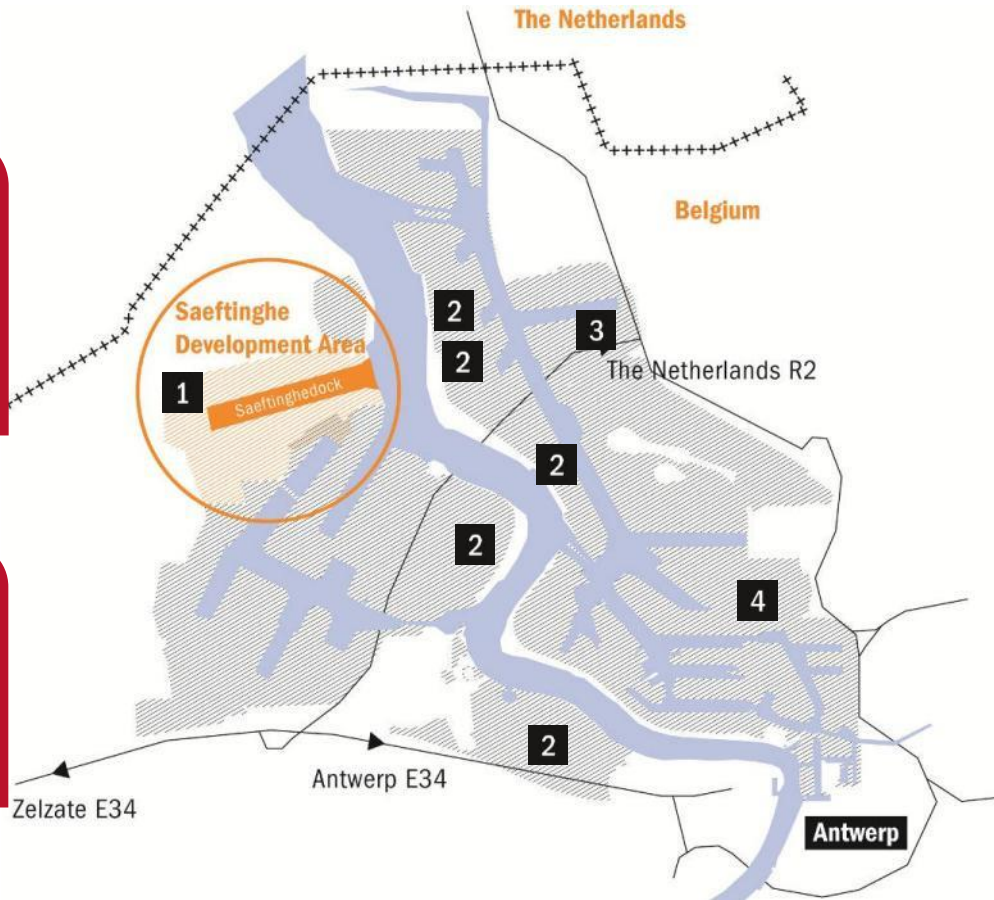


Private investments New industrial, cargo handling and logistics equipment

Antwerp has ample room to invest for private companies

1
Saeftinghe Development area:
Long term expansion area of 1070 ha

2
Chemical Parks for co-siting and maximum integration



3
Delwaide Dock:
Consolidation of terminals makes 180 ha of prime waterfront land available

4
Churchill Industrial Zone:
88 ha for industrial activities

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