

Port of Antwerp

**Sustainable Investment
Projects:**

**Flemish Legal
Methodology for
Partnerships: ECA case**



**Port of
Antwerp**



Index

1. Importance of the port today and need for sustainable growth
2. Case ECA: Flemish (legal) methodology for big investment projects
3. Integration of sustainable aspects in this methodology



**Port of
Antwerp**



Situation of the Port of Antwerp



Port of
Antwerp

1. Importance of the port today and need for sustainable growth



Port of
Antwerp

Importance of the port

Belgium's biggest economic driver



235

Million tonnes
of freight



12.068

hectares



15

million TEU
capacity



143.058

jobs



900

companies



4,8%

GDP

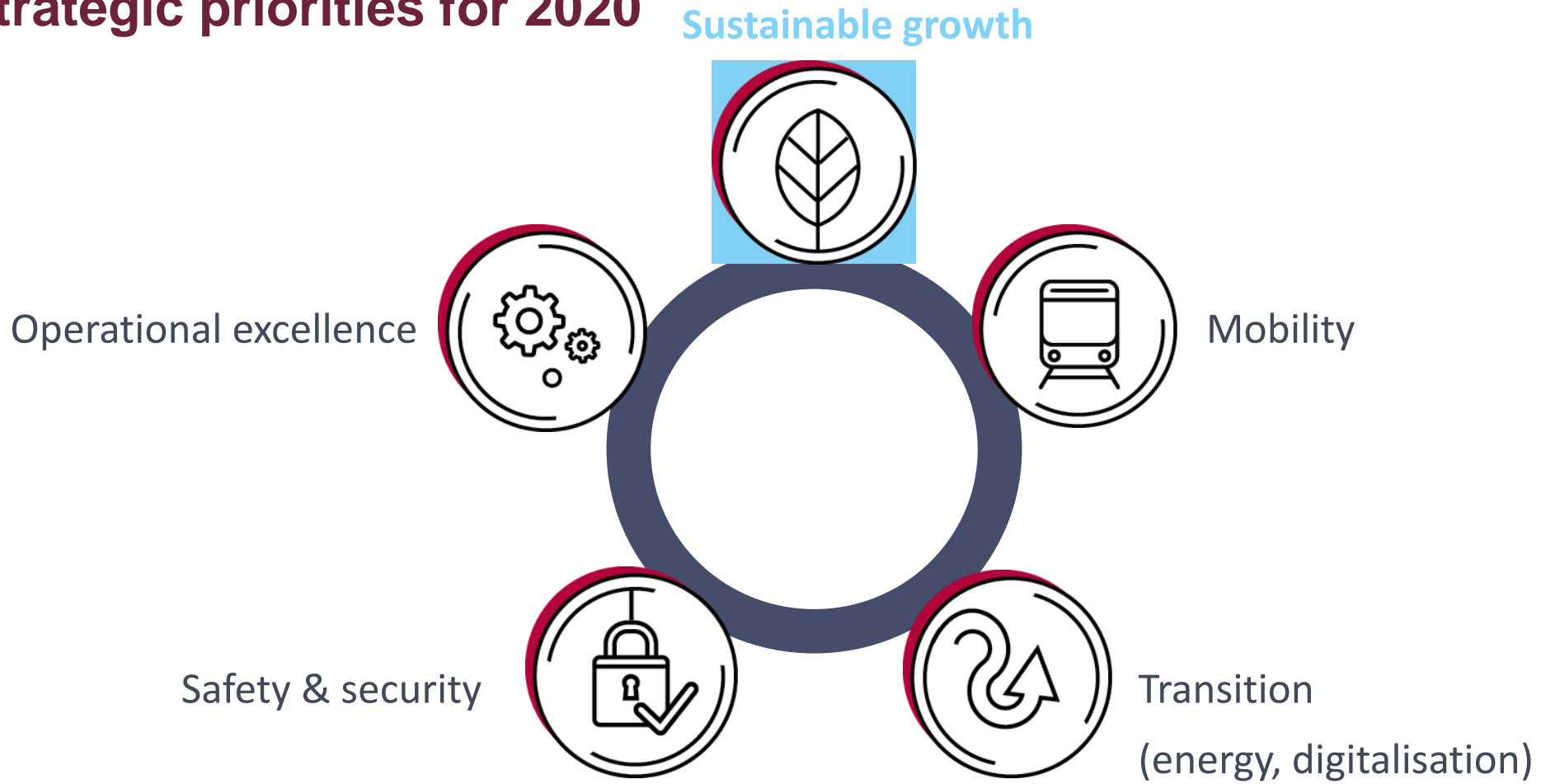


20,3

billion €
added value

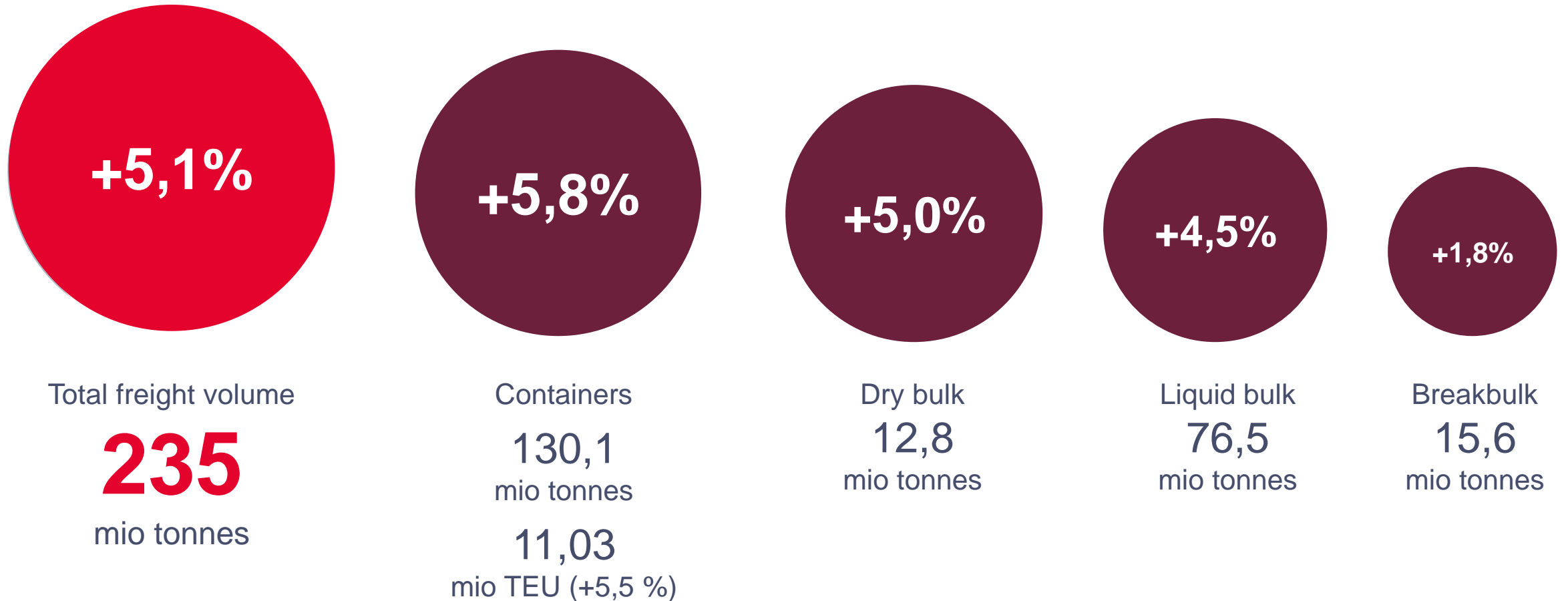
Importance of the port

5 strategic priorities for 2020



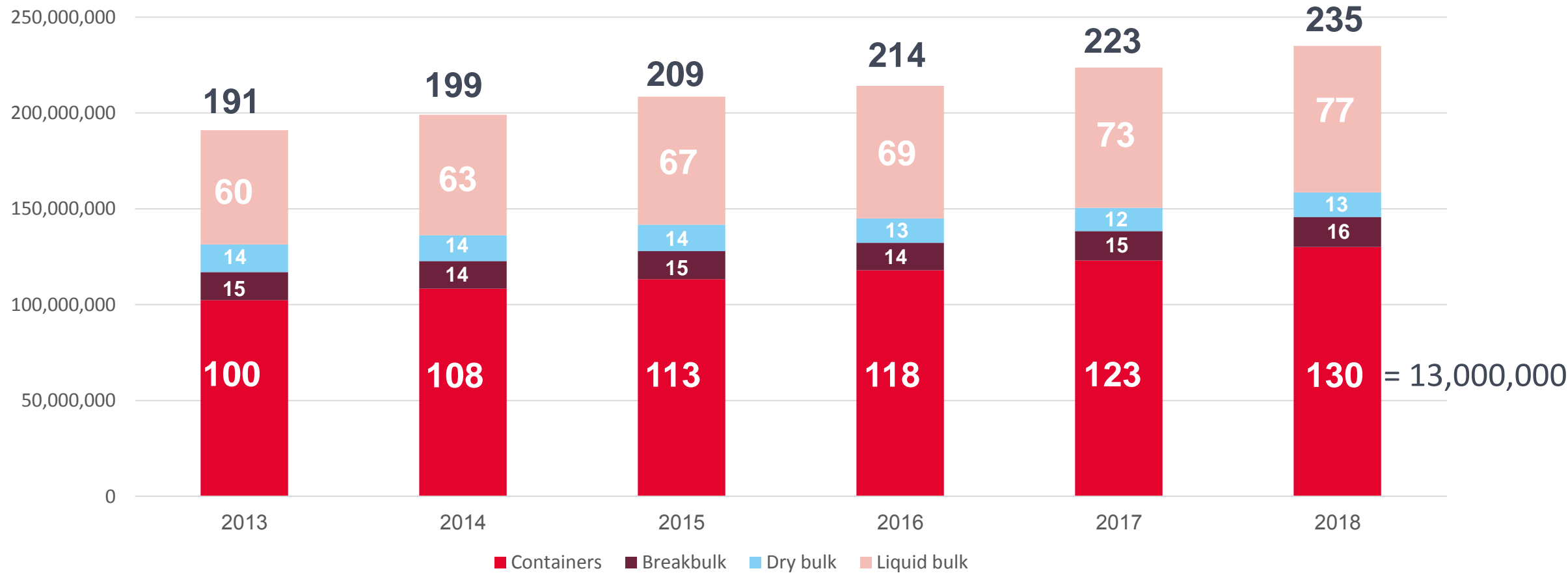
Sustainable growth (global)

Growth in all segments in 2018

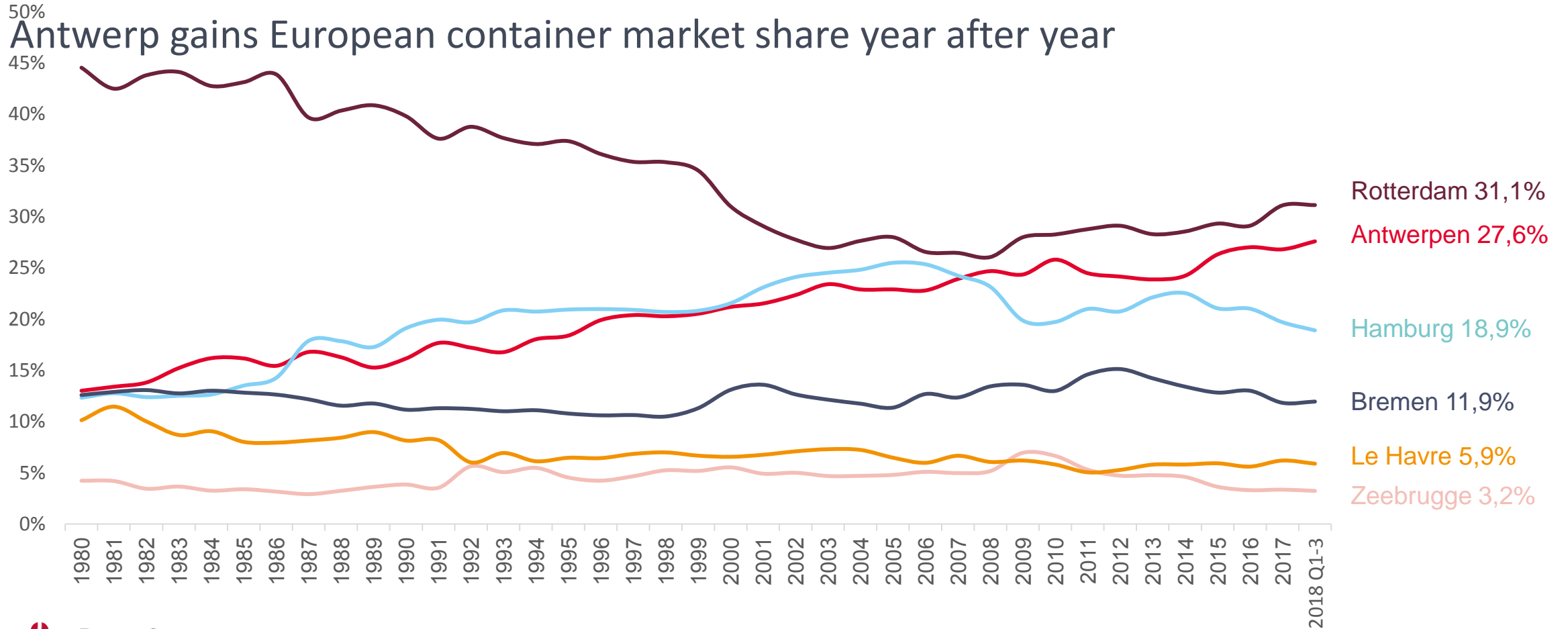


Sustainable growth (global)

6th record in a row: 235 million tonnes of cargo in 2018



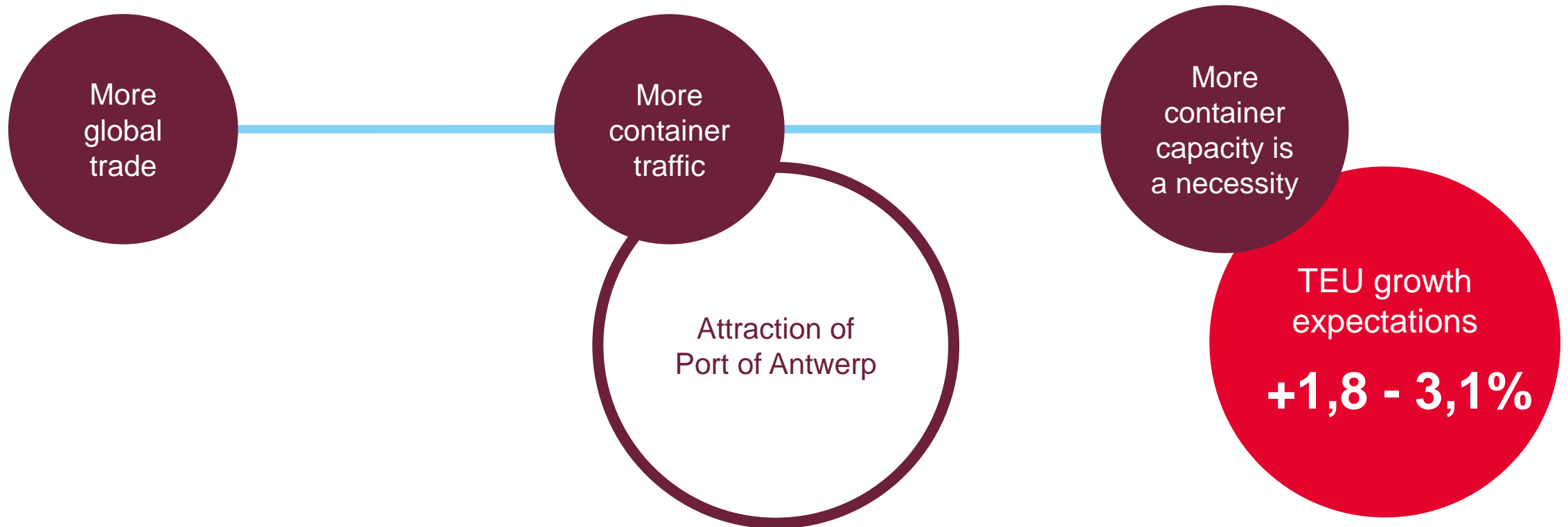
Sustainable growth (container market)



Sustainable growth (container market)

Container traffic will keep growing.

More global trade means more container traffic means more container capacity is a necessity.



Sustainable growth (container market)

Key role and growing importance of containers globally and in Antwerp

Containerization past 50 years



Well-balanced container trade



Top 5 container markets

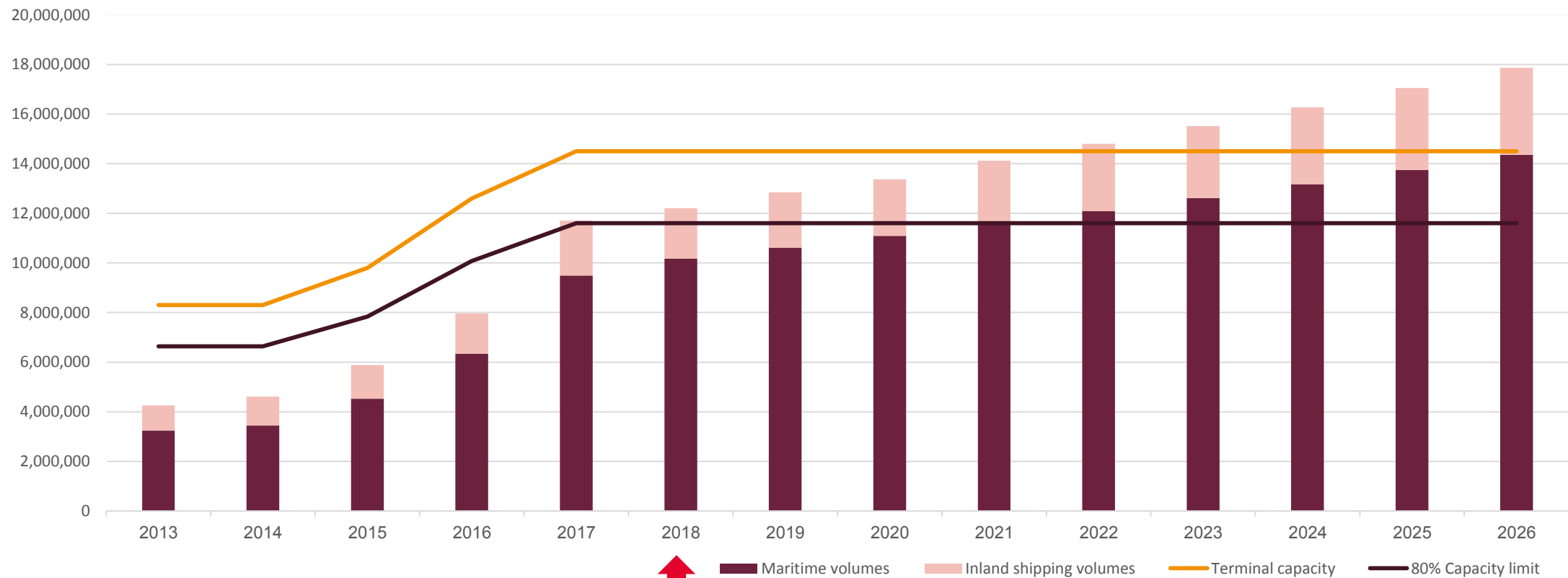
(import en export)

- USA
- China
- Turkey
- United Kingdom
- Singapore

Sustainable growth

Capacity limit exceeded: urgent need for additional container capacity

Volumes and capacity of tidal terminals



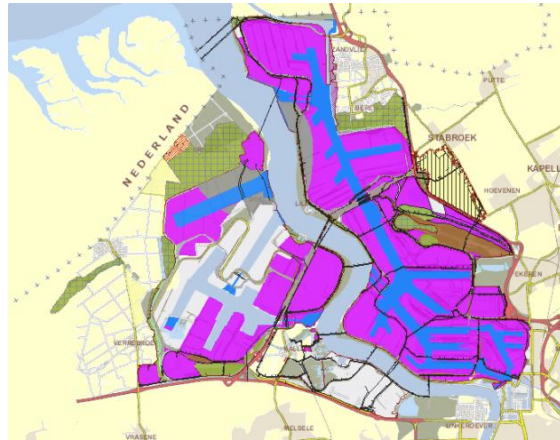
2. Case ECA: Flemish (legal) methodology for big investments projects



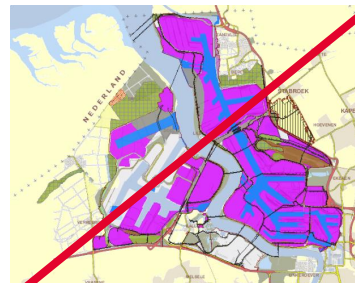
Port of
Antwerp

Why aren't we busy building extra capacity?

Classic approach went wrong...



Project preparation
Permits
Tendering
...



2016:
Annulment of Zoning plan for Port of Antwerp
by Council of State

New approach: new legislation for “Complex Projects”

Classic approach of large (infrastructure) projects:

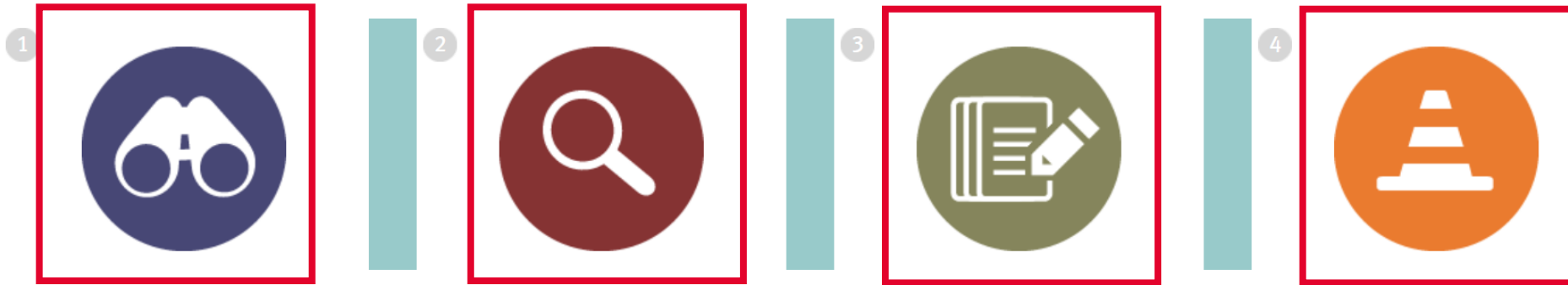
- More and more time consuming
- Inefficient procedures
- “Behind closed doors”
- Stakeholders only involved at some very specific moments in procedure
- Decisions on different government levels (Flemish – Province – City/township)

 New legislation for “Complex Projects”

Most important principles

- Open communication and transparency
- Stakeholder participation
- Customized approach
- Solution-oriented collaboration
- Integrated approach

New approach: new legislation for “Complex Projects”



**Scoping
phase**

“What is
the problem
to be solved?”

**Research
phase**

“What is
the best solution
for the problem?”

**Design
phase**

Detailed
Project
Preparation

**Execution
phase**

Construction



Start decision

Decision on
preferred alternative

Project
Decision

Preferred alternative

for ECA Extra Containercapacity Antwerp
Search for + 6 mio TEU

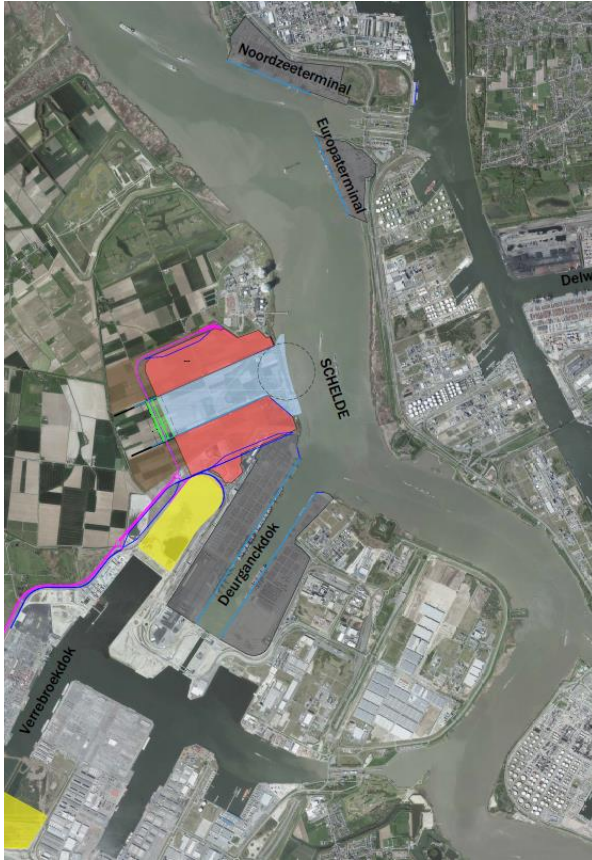
New tidal dock, developed at 1 side

Expansion of existing
Deurganckdokterminals
behind locks



Expansion of
Northsea terminal

Why wasn't the originally planned "Saeftinghedock" the preferred alternative?



European legislation

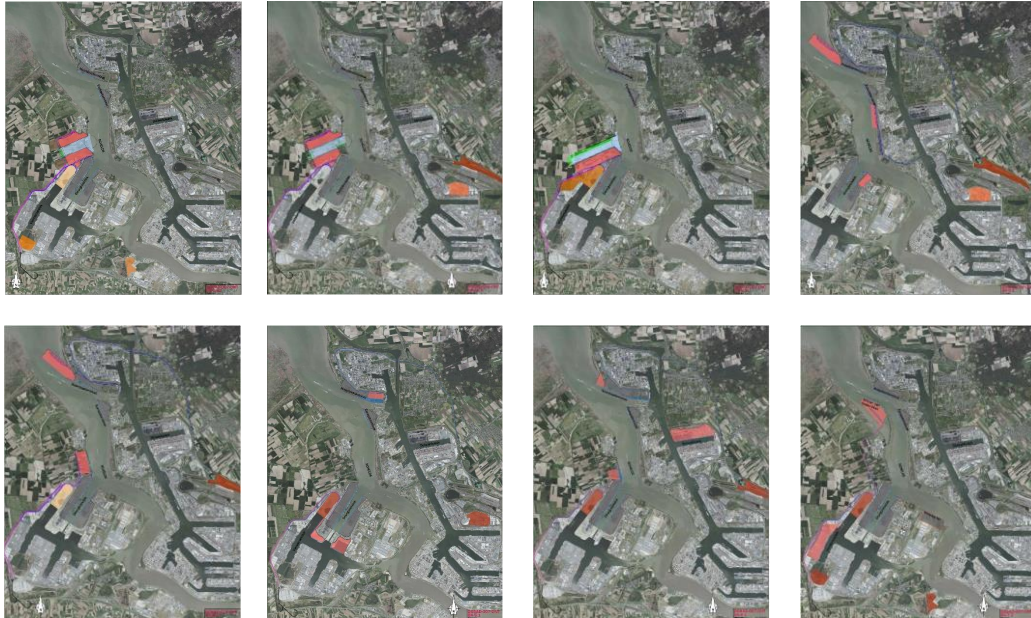


Stakeholder participation



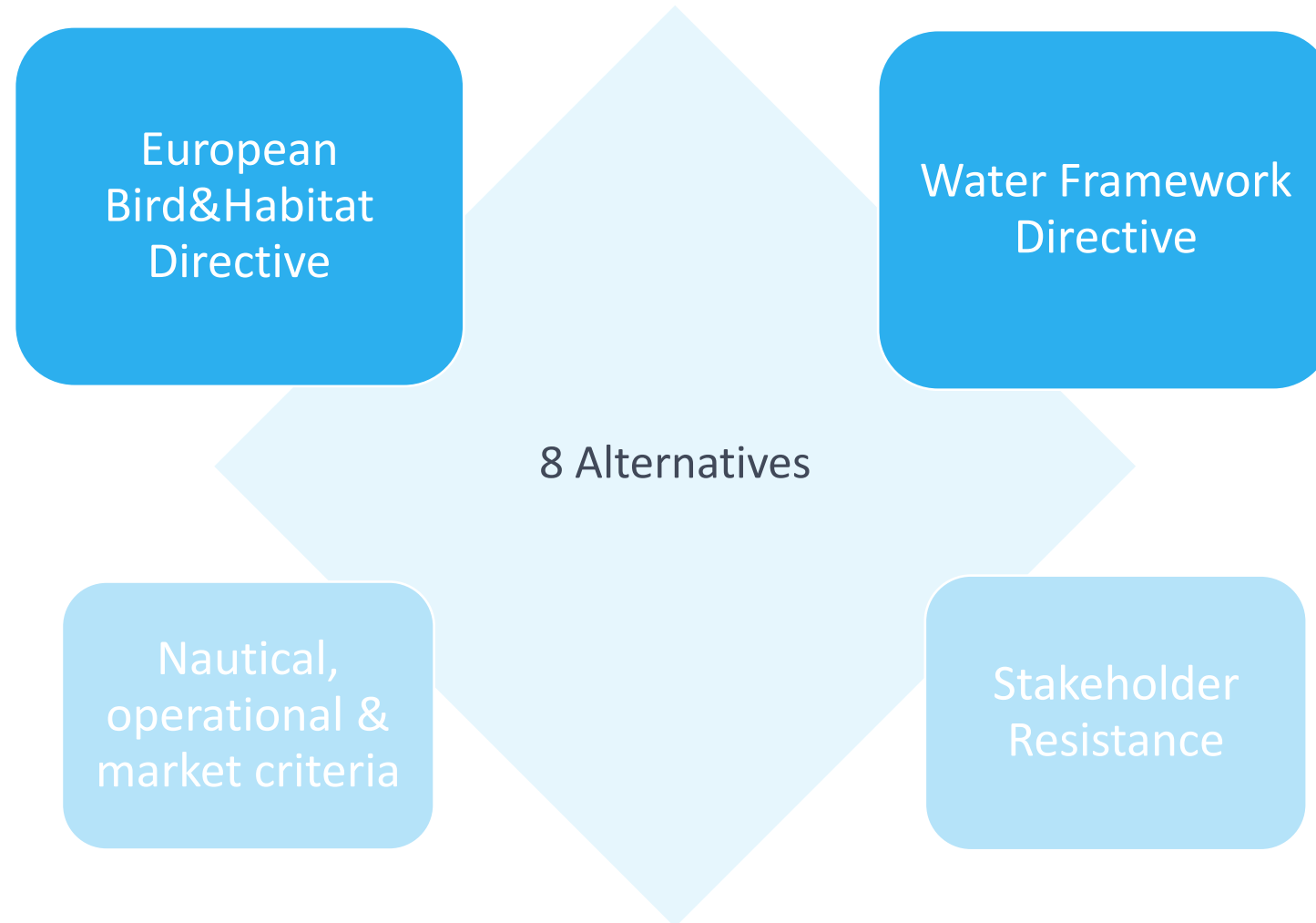
Research phase: “What is best solution for the problem”

8 alternatives



Environmental Impact Assessment
Safety (in relation to nuclear powerplant and industry)
Cost-Benefit Analysis
Nautical research
Operational research

Evaluation of alternatives



European legislation (impact on water & biodiversity)

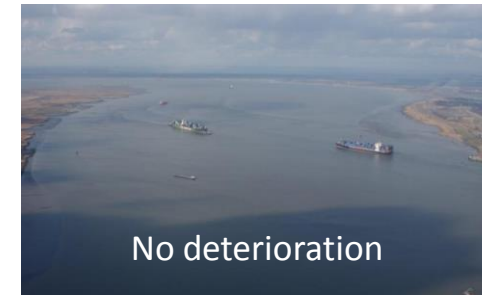
Bird Directive
Protected Area



Habitat Directive
Protected Area



Water Framework
Directive

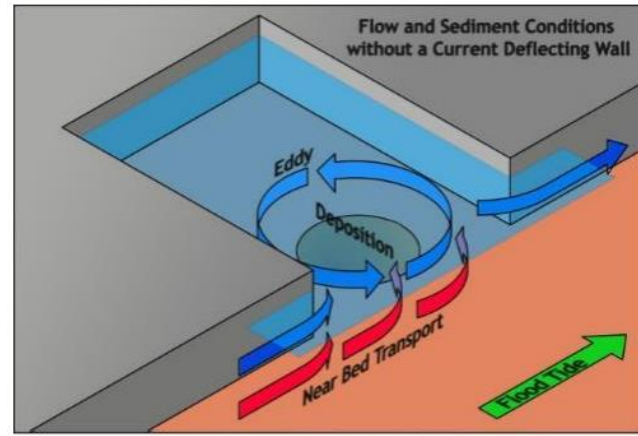


All alternatives have impact on protected areas

According to European legislation project only possible if:

- Overriding public interest is proven
- No alternative with less impact on protected areas

Evaluation of alternatives – Saeftinghedock alternatives



Sedimentation



Maintenance dredging



Impact on river ecology



Evaluation of alternatives – Saeftinghedock alternatives



European
Bird & Habitat
Directive

Nautical,
operational &
market criteria



Water Framework
Directive

Stakeholder
Resistance

9th Alternative



6th Alternative: +/- 3,5 mio TEU capacity (Maritime + Barge)

+ extra capacity

- With a minimal impact on protected areas and river
- With as little sedimentation as possible
- Meeting nautical, operational and market criteria as good as possible

9th Alternative



Village of Doel doesn't have to disappear

Possibly less resistance, higher public acceptance.

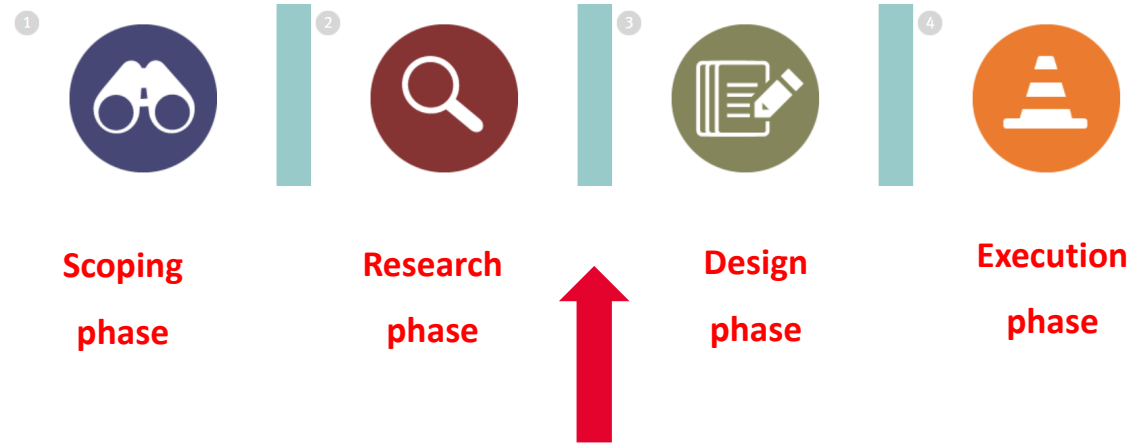
Less ecological impact due to shared dock entrance:

- Less sedimentation
- No extra loss of ecologic precious river marshes

Terminal has a high operational potential

Further nautical and operational optimization needed

Where are we now?



Integrated decision



+ Actions on mobility & environment

April 2019:
draught decision by Flemish Government

Public consultation

November 2019:
decision by Flemish Government

3. Integration of sustainable aspects in this methodology

Action plan with mitigating measures



Port of
Antwerp



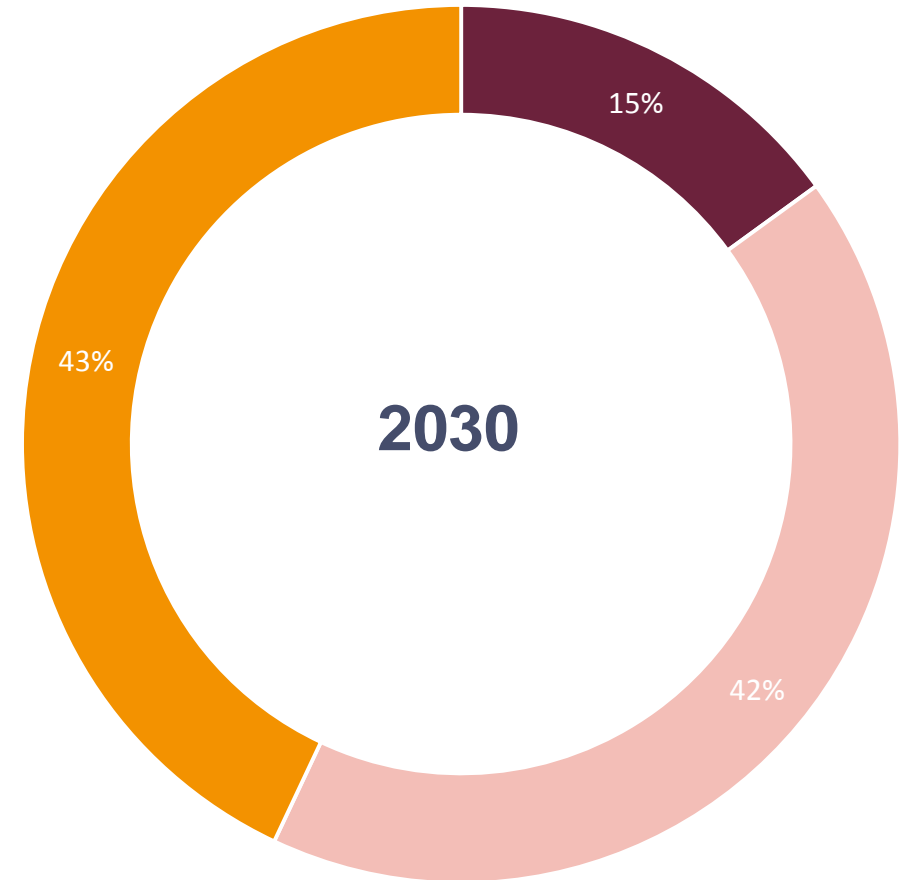
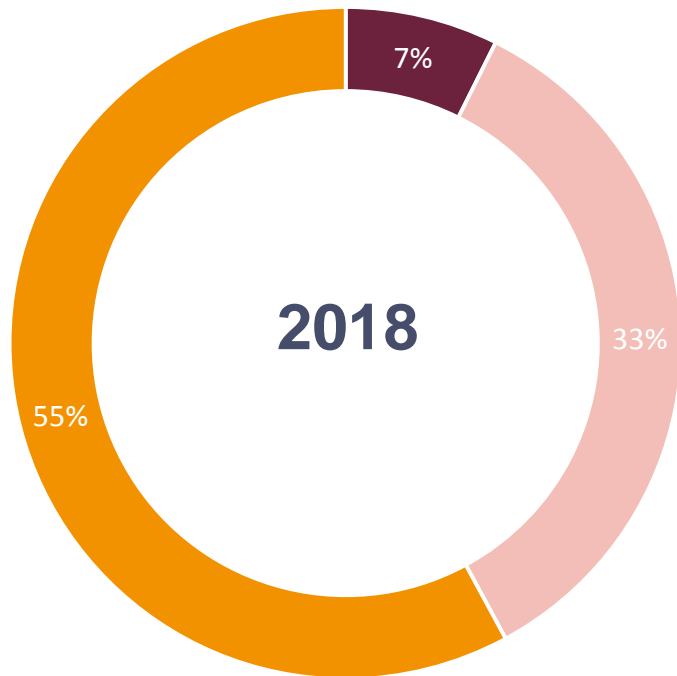
Mobility



Port of
Antwerp

Mobility: freight transport

Ambitious modal shift targets 2030: more rail and inland shipping



Mobility: freight transport

Optimal use capacity in short term

- Action plan **container barges** and resources
- Cross-terminal planning
- Bundling cargo and minimum call sizes
- Digitalisation
- Night logistics as solution for traffic jams during the day



Mobility: freight transport

Night logistics as solution for traffic jams during the day

Start night logistics July 2019

- Necessary **infrastructure present**
- Only successful if all parties involved are committed
- **Night logistics action plan** and workshops



Transition to less environmental
impact
on ...



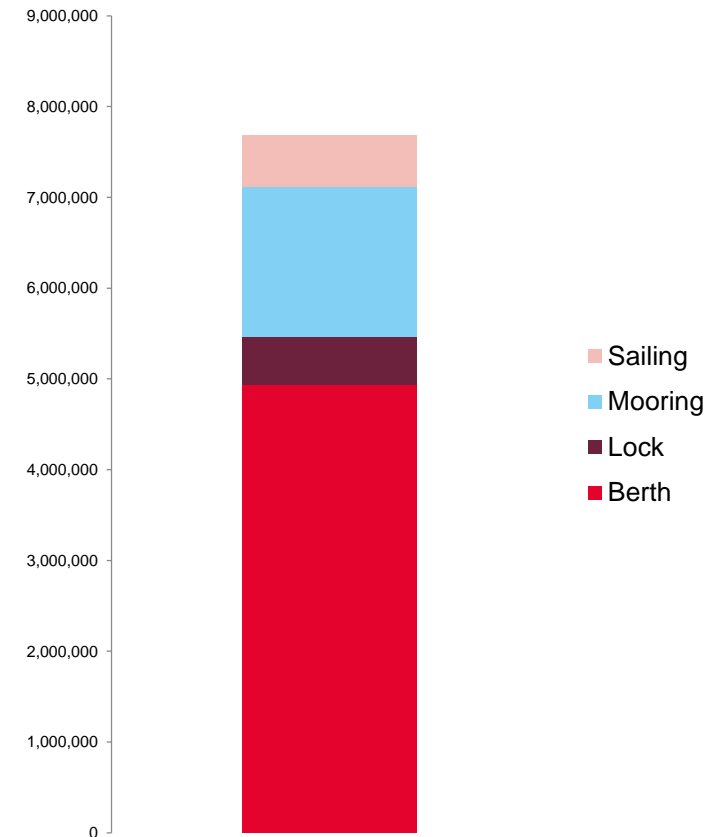
Port of
Antwerp

... on AIR & CLIMATE

Port of Antwerp first in Europe with on-shore power supply

- 70% of vessel emissions occurs at **berth** (CO₂, Sox, Nox, PM)
- **Up to 36% reduction potential**
- Need for pre-equipped vessels
- First focus on high-potential cases: **port-wide roadmap** for future roll-out in development

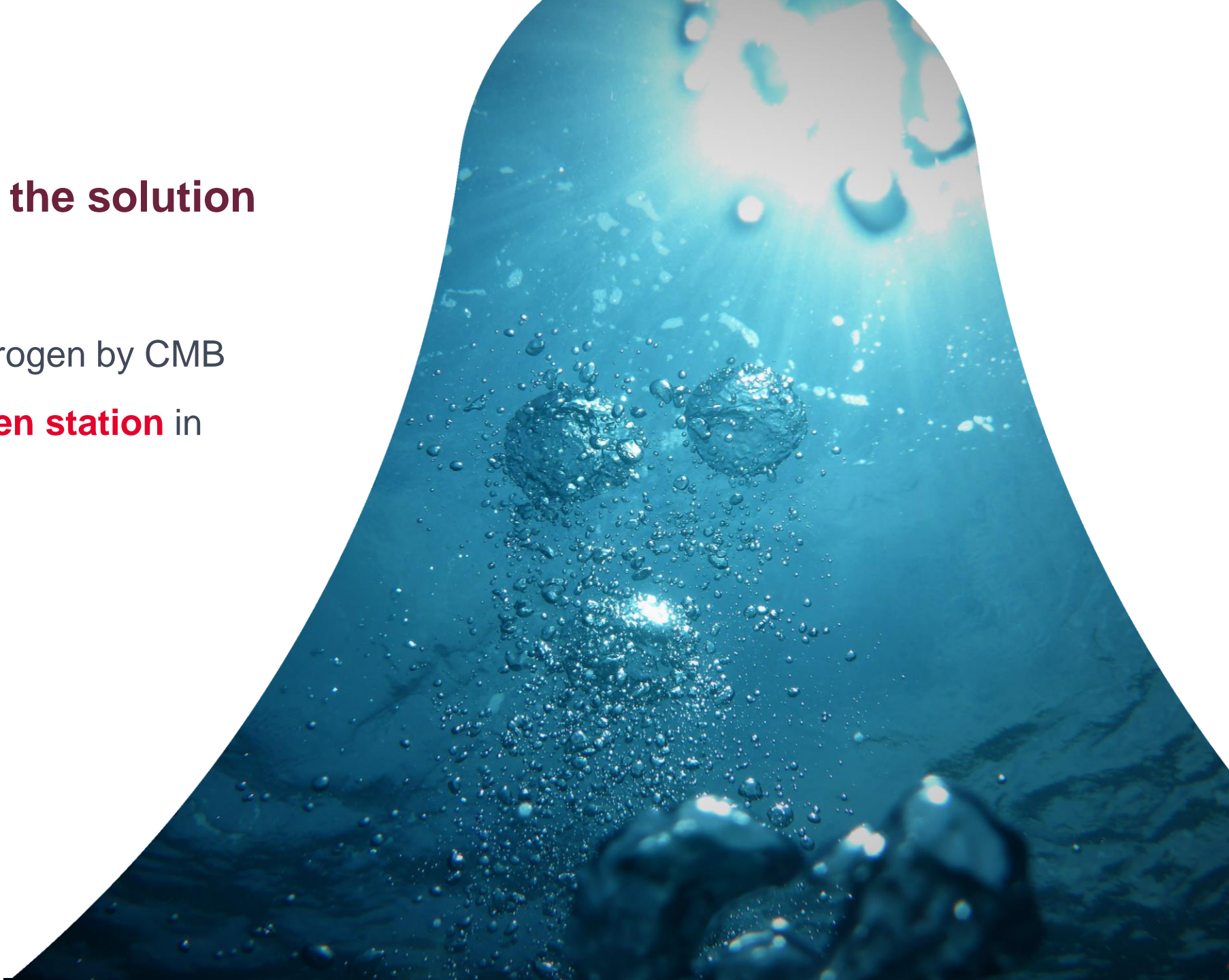
Vessel NOx emissions (kg)



... on **AIR & CLIMATE**

Hydrogen as part of the solution

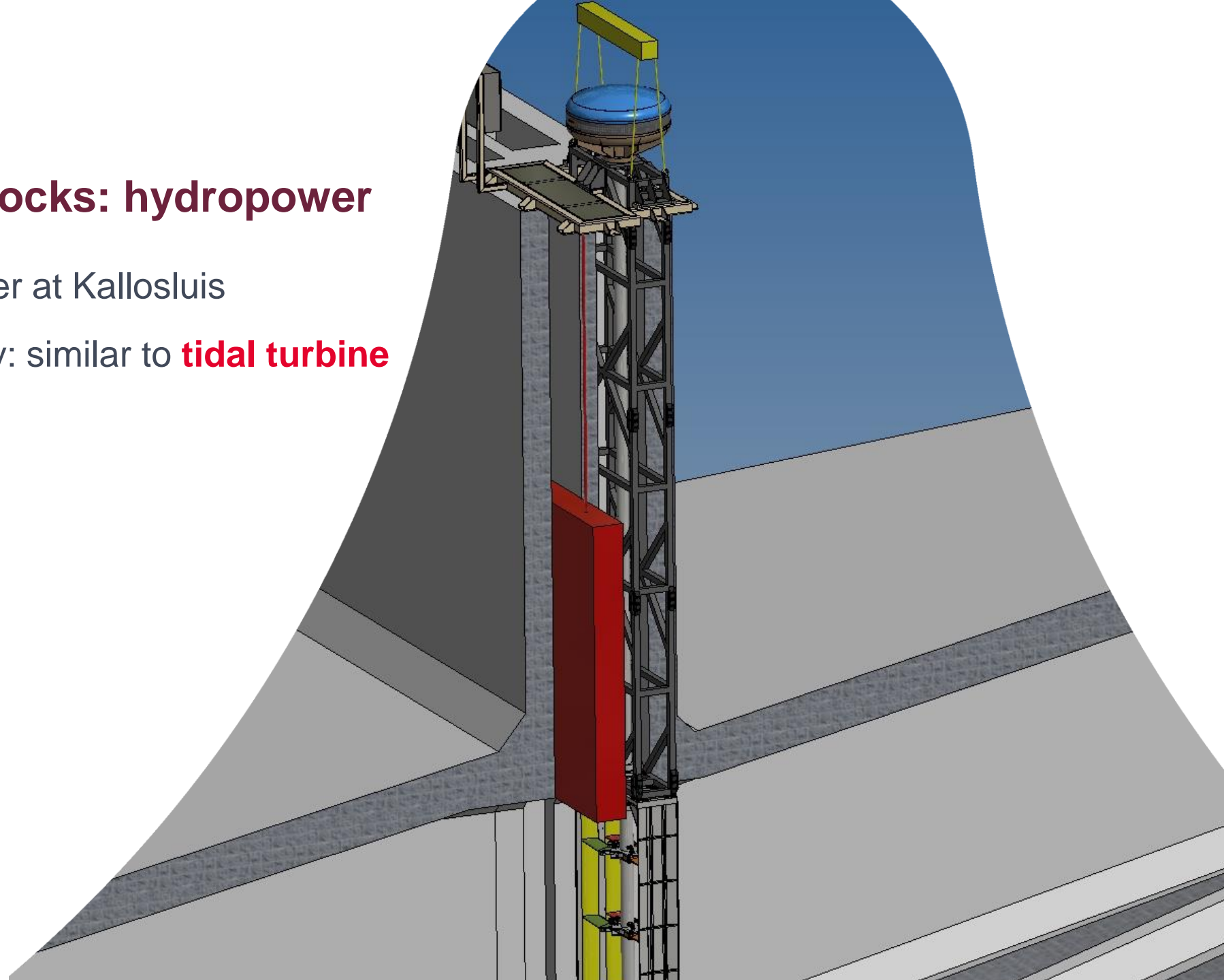
- Multifuel port
- **Hydroville** boat on hydrogen by CMB
- Next step: **first hydrogen station** in the Port of Antwerp



... on AIR & CLIMATE

Energy-neutral sea locks: hydropower

- **Pilot project** hydropower at Kallosluis
- Hydroturbine technology: similar to **tidal turbine**



... on **AIR & CLIMATE**

Other innovations and projects

- **Waste heat** is captured and used as a source of energy in chemical and industrial processes: Ecluse1
- **CCS/CCU** (carbon capture & storage/utilisation): potential for using CO₂ as a raw material
- **Power to Methanol** demo plant under development
- **Concentrated Solar Power Pilot** ongoing with potential for upscaling



Thank you



Port of
Antwerp