

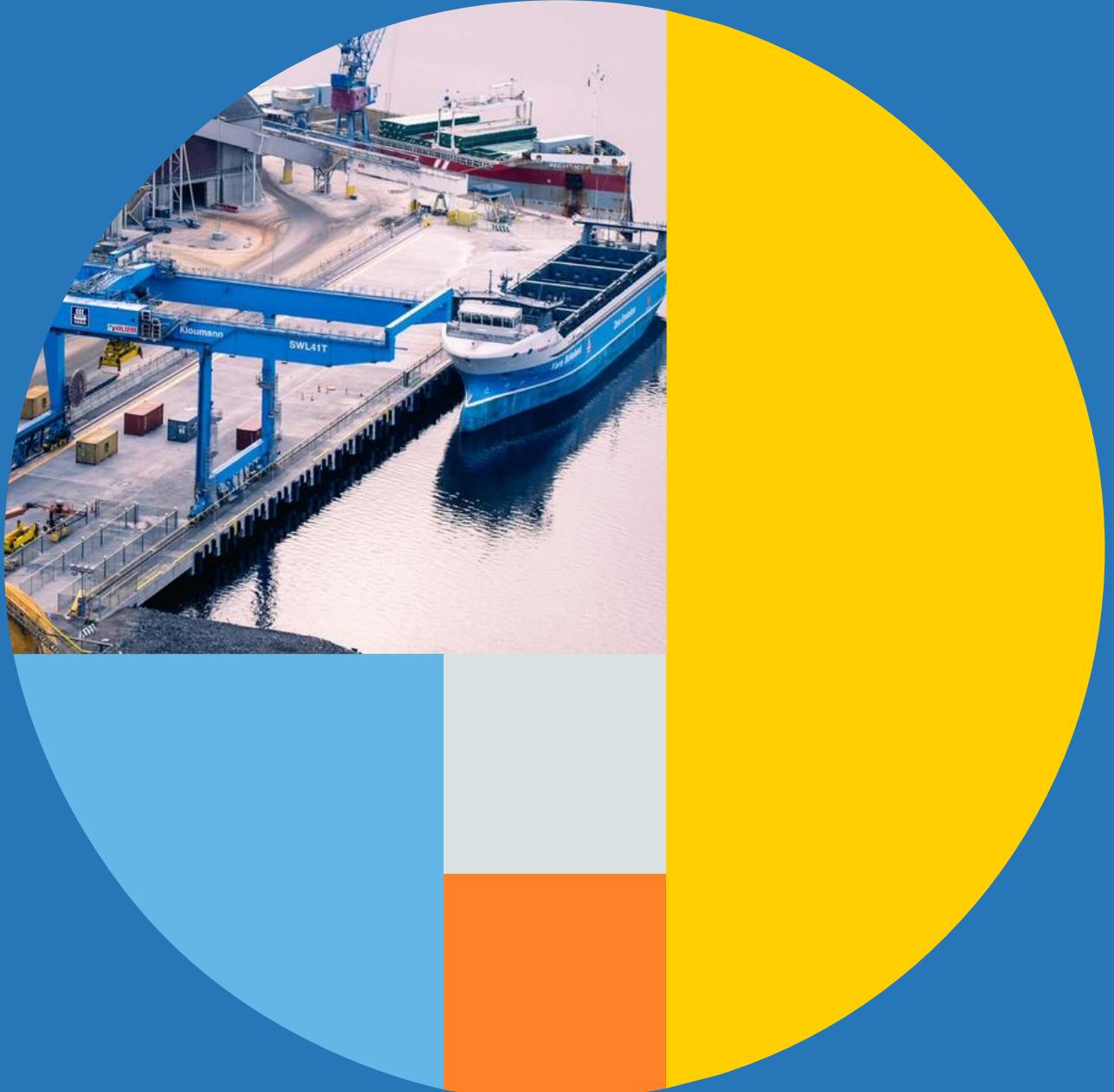


Knowledge grows

# Yara Birkeland

Fully electrical and autonomous  
container ship

Jon Sletten, 31.10.2023



# Yara: Global mission, global presence



- 1) More than 10,800 Yara-branded retail outlets around the world
- 2) Yara operated terminals and logistical production sites

**17,000**

Employees worldwide

**11.6**

Billion USD  
revenue

**28**

Production  
plants

**160**

Countries  
with sales

**10,800**

Yara-branded retail outlets globally

# Yara Porsgrunn in numbers

**500**

Employees in production

**730**

Yara employees in total at  
Herøya

**Production**

**3,7  
mill ton**

**Deliver  
products to  
90  
countries**

**Turnover  
9,0 mrd  
NOK in 2022**

Export share: 95%

Most important markets: USA, China, Brazil, Thailand

# Delivery chain from Porsgrunn

Total production: 3.700 kton/yr



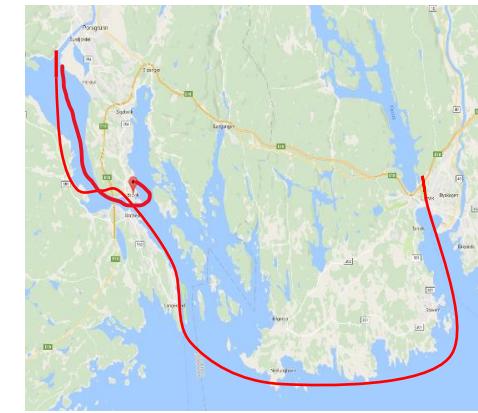
~3.000 kton /yr - bulk



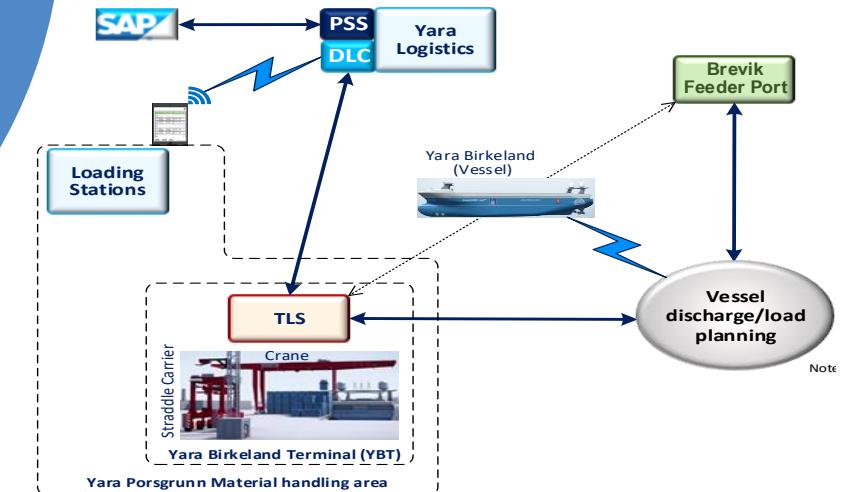
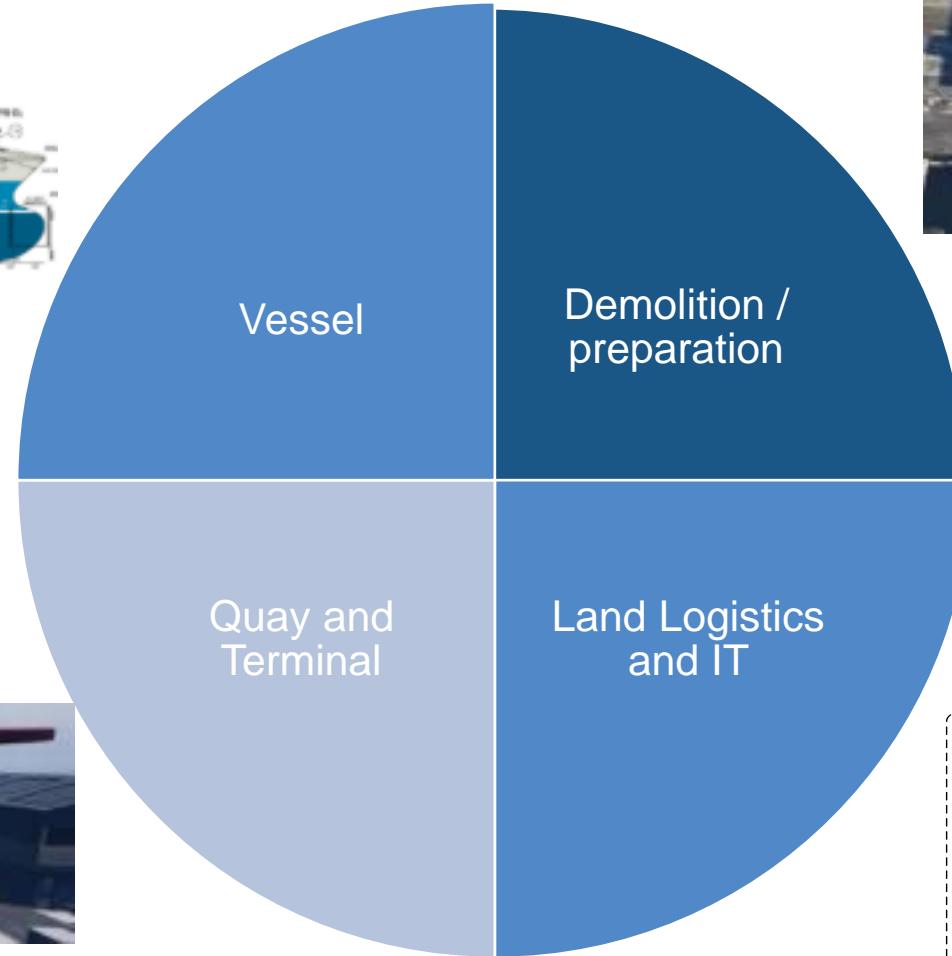
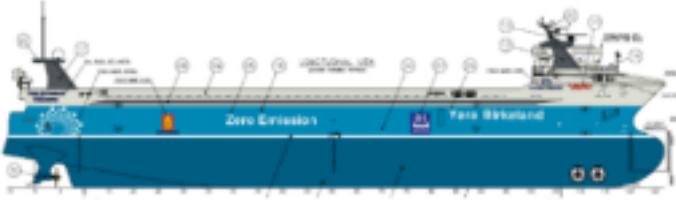
~500 kton /yr - container



Yara Birkeland to replace trucks delivering containers  
from Yara Porsgrunn to Feeder Ports



# Project scope



# Vessel FACTS & FIGURES

## Open Hatch Container Feeder - fully battery powered solution

### Main particulars

LOA	80 m
Beam (width)	15 m
Depth – main deck	8,0 m
Depth – Shelter Deck	10,8 m
Draught (full)	6,3 m

### Speed

Eco speed	7-9 knots
Max speed	13 knots

### Capacity

Cargo capacity	120 TEU
Deadweight	3150 mt

### Propulsion

Azipull pods	2 x 900 KW
Tunnel thrusters	2 x 700 KW

### Batteries (LeClanche)

Capacity	6,9 MWh
8 battery rooms	



\*TEU = Twenty-foot equivalent unit

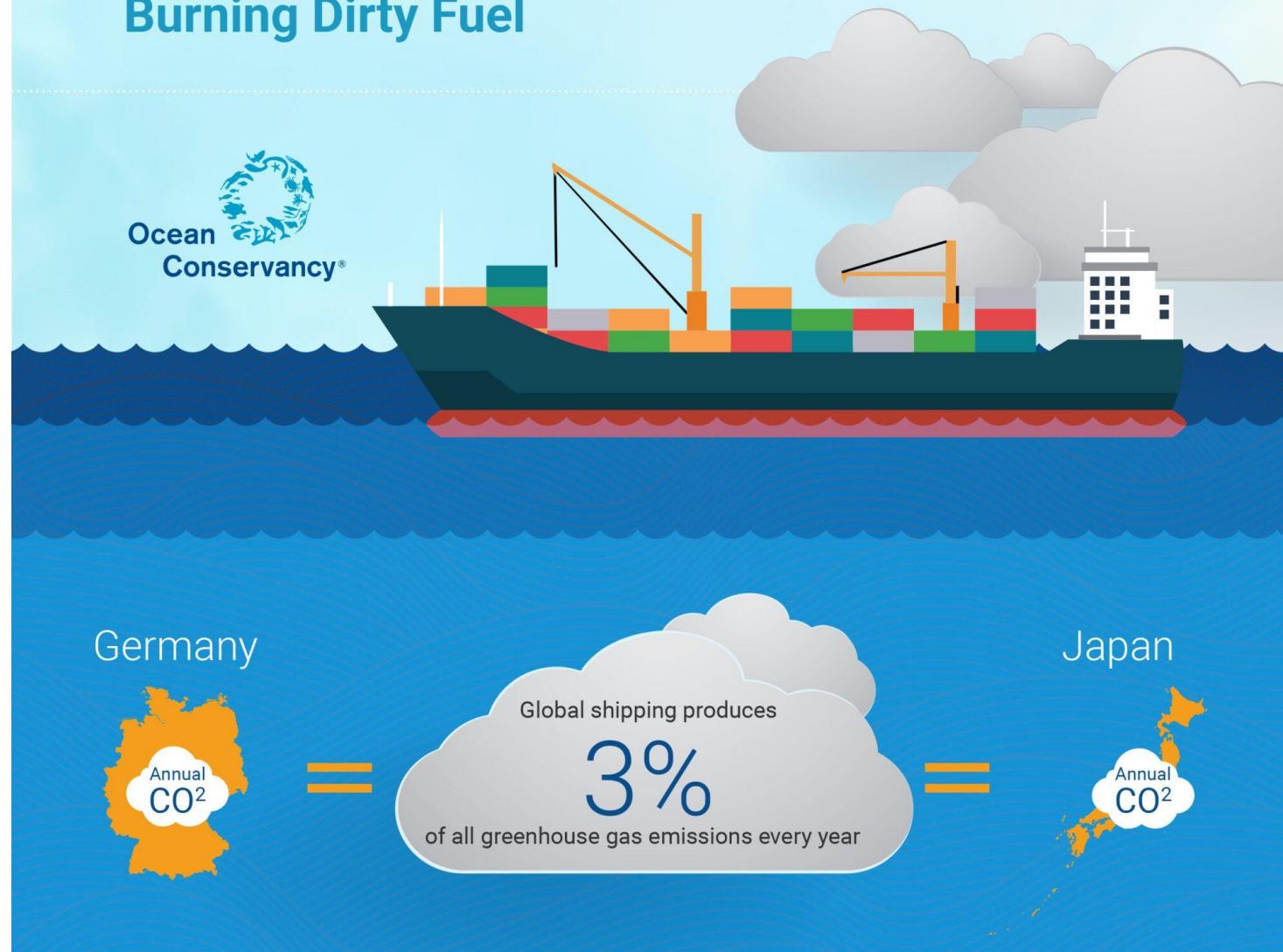


# Why Yara Birkeland?

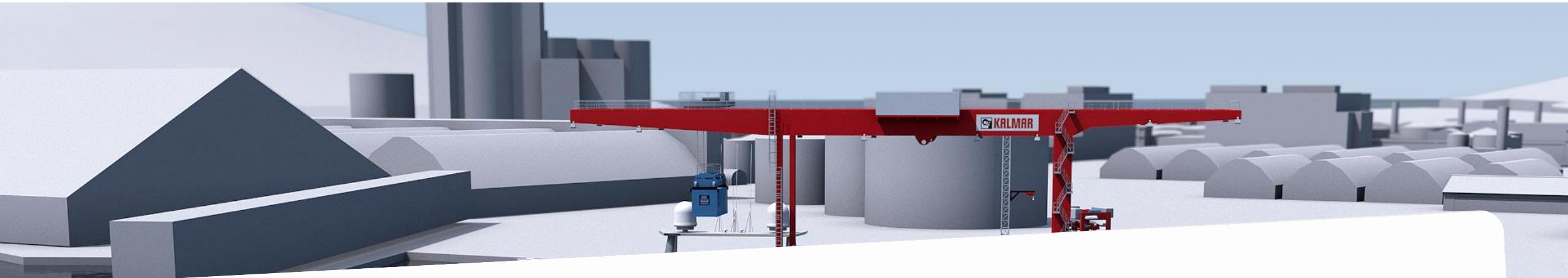
- 3% of global GHG emissions is from shipping
- Catalyst for other «green» projects within shipping
- Move from road transport to sea transport
- Ambitious environmental project
- Status
  - Commercial operation since April 2022
  - Crew is reduced (5->3->2)
  - 1<sup>st</sup> autonomous test voyage is done
  - Good progress on regulatory
  - Fully autonomous in 202?

## Global Shipping is a Dirty Industry

### Burning Dirty Fuel



# Yara Birkeland, a global celebrity



Hello

I am publishing a children's information book about robotics in industry and would like to feature the Yara Birkeland in the book. The book will be published in North America and then elsewhere in the world. It will appear in school libraries. If you would be happy to provide one photos for the publication I would be very grateful.



# Is Yara Birkeland a success?

