

19th TPM Annual Conference

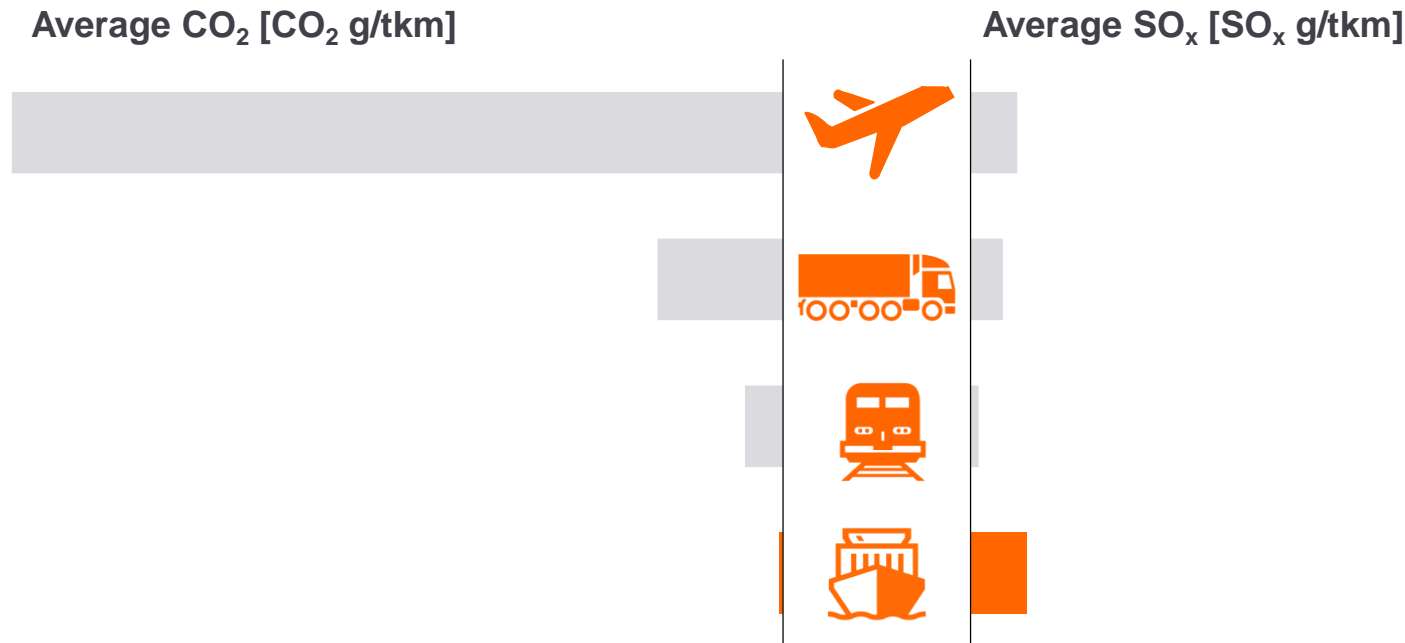
Rolf Habben Jansen, CEO

Long Beach, 3 – 6 March 2019



Is there a most ecological mode of transport?

illustrative



More than 90% of global traded goods are transported by sea, but only 10% of the transport sector's CO₂ emissions derive from shipping!

Regulatory challenges have always played a role in shipping and Hapag-Lloyd has successfully adopted new regulations in the past

24-hour rule ✓

Ballast water ✓

SOX max 3.5% ✓

ISPS ✓

Shiprecycling ✓

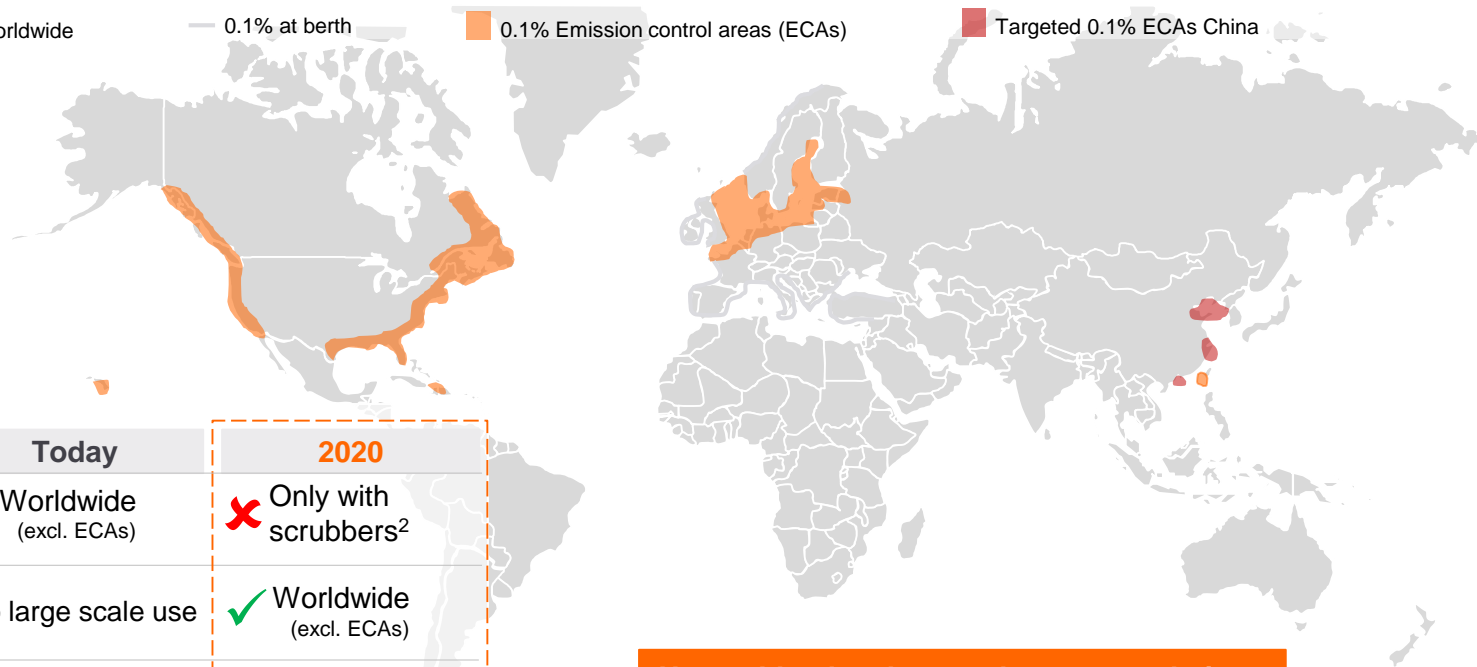
Tier 3 ✓

IMO2020

...

As of 2020, all ships will be required to use fuel with 0.5% sulphur content or less on all the world's oceans

 0.5% worldwide
 — 0.1% at berth
 0.1% Emission control areas (ECAs)
 Targeted 0.1% ECAs China

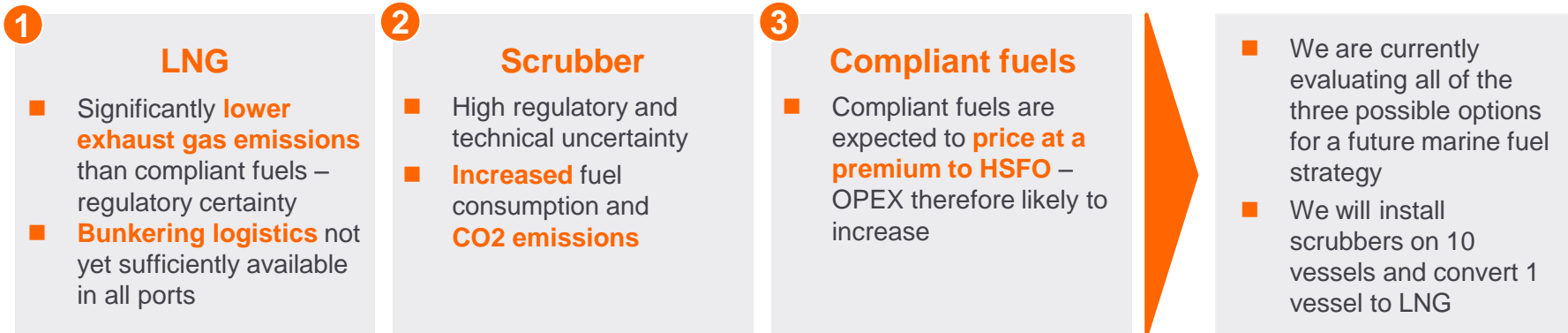


Fuel type	Today	2020
HSFO 3.5%	✓ Worldwide (excl. ECAs)	✗ Only with scrubbers ²
LSFO 0.5%	No large scale use	✓ Worldwide (excl. ECAs)
MDO 0.1%	ECAs ³ + EU Ports	ECAs ³ + EU Ports + New ECAs China

Hapag-Lloyd embraces the new regulation as industry is becoming greener!

We are currently exploring and evaluating all possible options

3 possible options for the industry



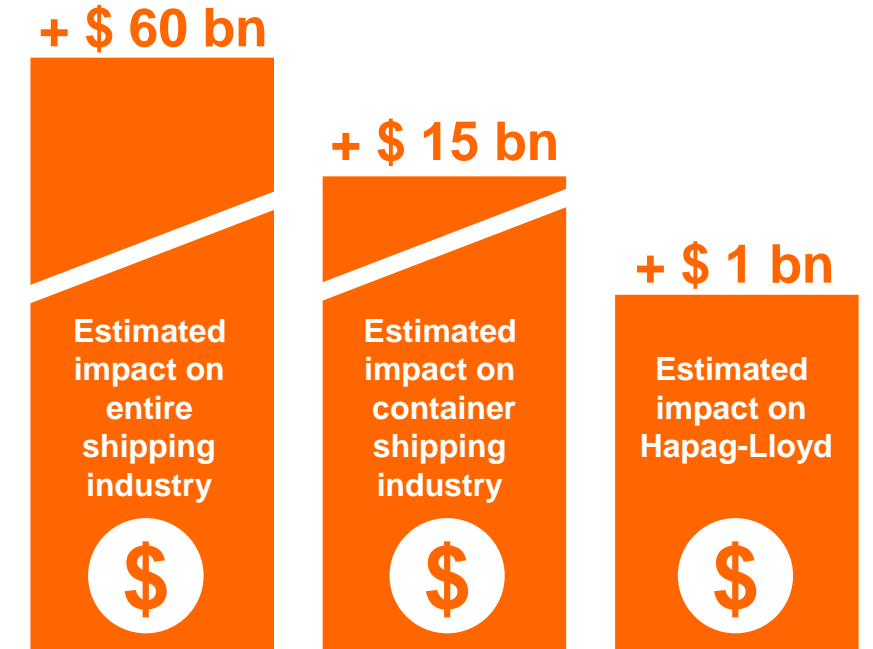
Estimated fleet as at 2020E

[in # of vessels]



The IMO2020 regulation will make the industry greener but this will come with a price...

Costs will go up as both compliant fuels and investments into new technologies will be expensive

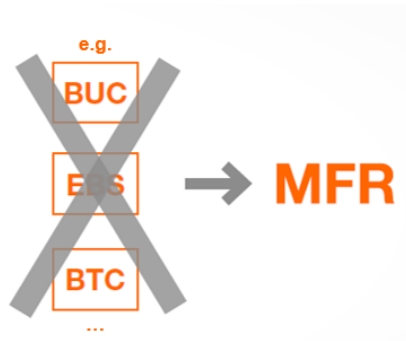


On the assumption that the spread between HSFO and LSFO 0.5% will be
~250 USD/mt by 2020

...and to recover fuel related costs caused by the IMO2020 regulation, we have developed a Marine Fuel Recovery mechanism (MFR)

The MFR replaces all existing fuel charges

- Marine Fuel Recovery Mechanism will be **gradually implemented from 1 February 2019**
- It is **causal**, **transparent** and **easy-to-understand**
- It helps our customers **predict** and **plan** the price increases for their trade routes
- The calculation is based on **average market data**



$$\text{MFR}_{\text{[per TEU]}} = \text{Fuel price}_{\text{[per TO]}} \times \frac{\text{Fuel consumption}_{\text{[TO]}}}{\text{Carried TEU}}$$

Next steps

- We have to **prepare our vessels** and make sure that there is **enough compliant fuel available**
- It **will take some time to change the world fleet** by installing scrubbers and converting vessels to LNG as well as to setup a sufficient LNG bunkering infrastructure
- **LNG** is a step into the right direction but will most likely **not be the ultimate future solution**
- **Uncertainty about future regulations**
- We have to come up with **CO₂ neutral technologies...**



**50% less CO₂
by 2050**



**emission free
by 2100**

IMO 2020 regulation

...and **transform the world's fleet**
to reach the vision of being emission free by 2100

Thank you
for your attention!

