

Capital Markets Day

Profitable growth by focusing on decarbonisation and services

Roger Holm, President, Marine Power & Executive Vice President



November 18, 2021

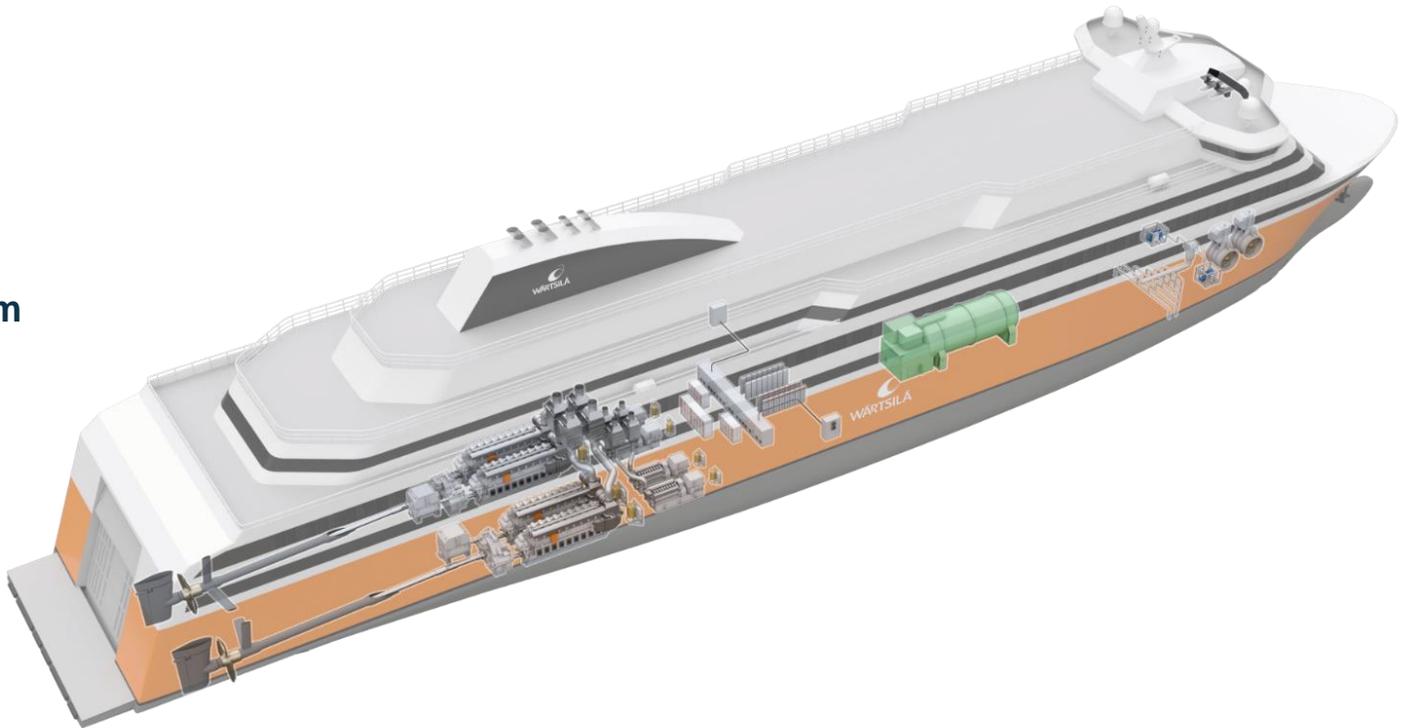
Well-positioned to lead the decarbonisation transformation

Decarbonisation will transform the marine industry during a single vessel's lifespan at unprecedented pace

Fuel flexible engine technology takes the industry on the only upgrade path that balances decarbonisation targets with financial viability

Our services business drives stability, profitability and growth. Increased opportunities thanks to decarbonisation of the existing fleet

Marine Power product portfolio provides upgradable solutions for a net-zero future



Propulsion equipment



4-stroke medium speed engines



NOx reducers (SCR)



Energy & power management systems



Hybrid systems (including batteries)



Fuel gas supply systems (storage)



Transactional services



Agreements



Performance-based agreements

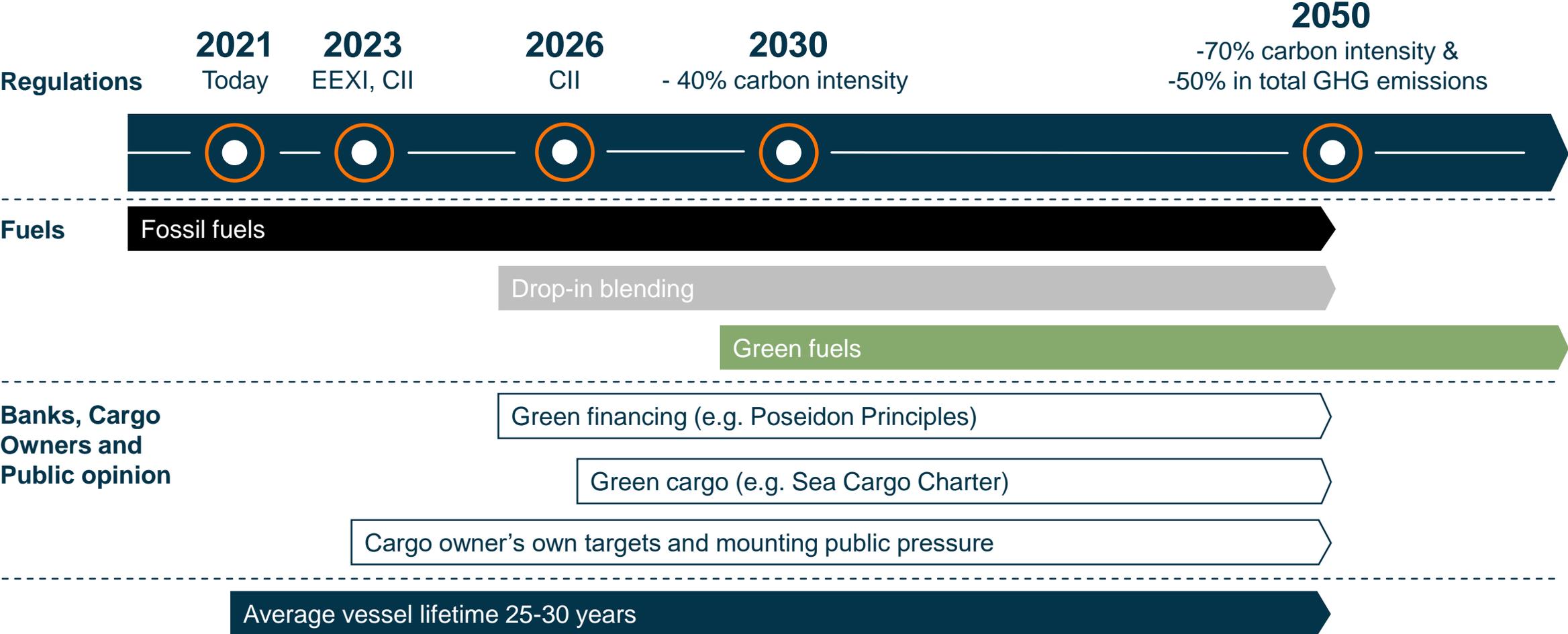


Project services

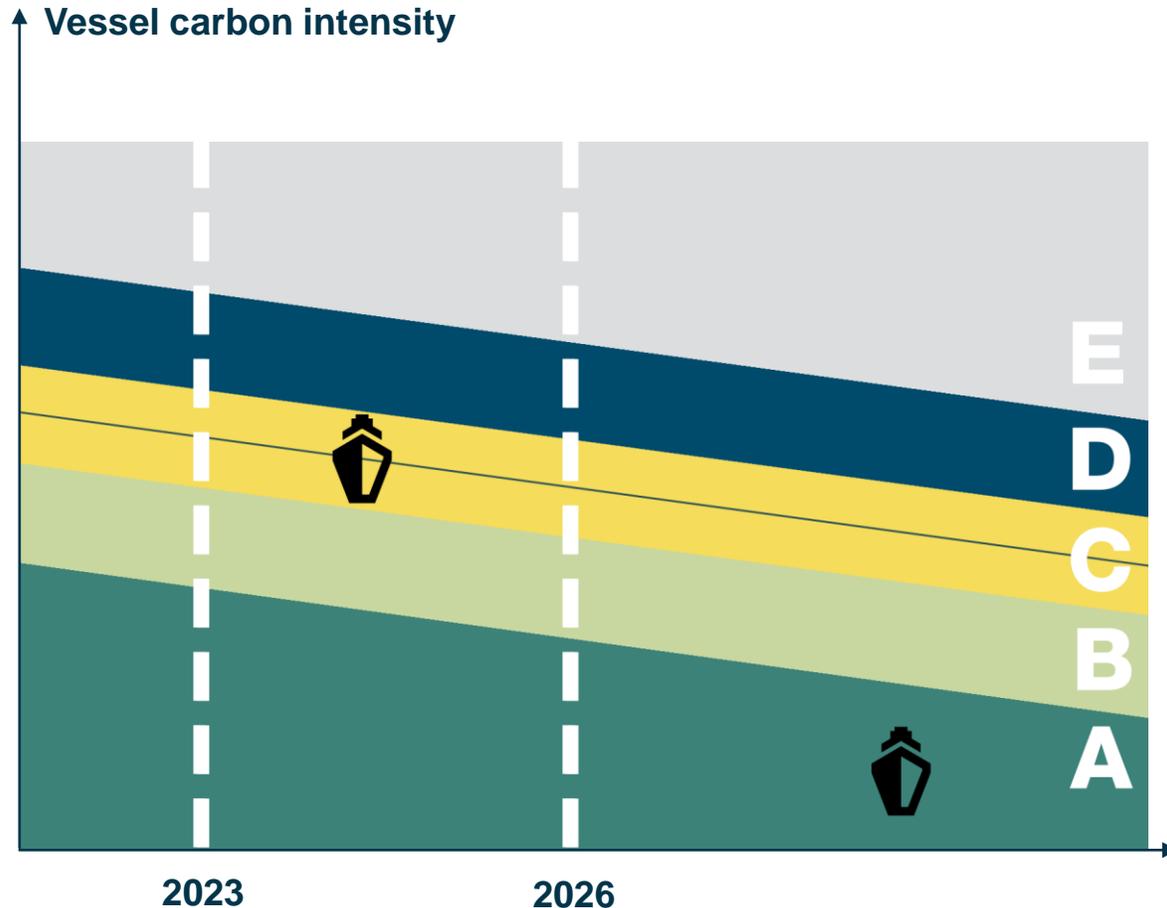
Transform – We play a central role in maritime decarbonisation



Decarbonisation targets are shaping the future of our industry. Banks, cargo owners and public opinion have increasing influence in the speed of change



CII introduces to the maritime industry a clear rating framework for differentiating vessels based on their GHG emissions performance



Key takeaways

- CII will **categorise ships from A to E**
- Cargo owners can easily establish their own **requirements on ratings to match own decarbonisation targets**
- If a ship wishes to **remain in the same category it will have to progressively improve GHG performance**

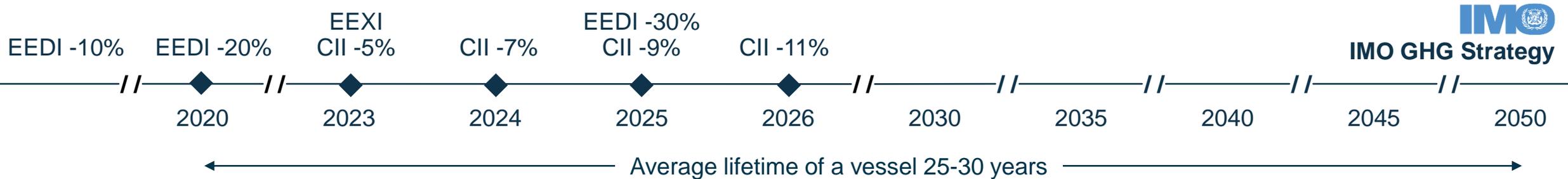
Ship owners need to plan their future fleet against moving targets and find trusted partners capable of future upgrades

New build

Invest in upgradable assets and a partner able to deliver upgrades throughout the asset's lifecycle

Build zero carbon ships

Build alternative fuel-ready assets



Existing fleet

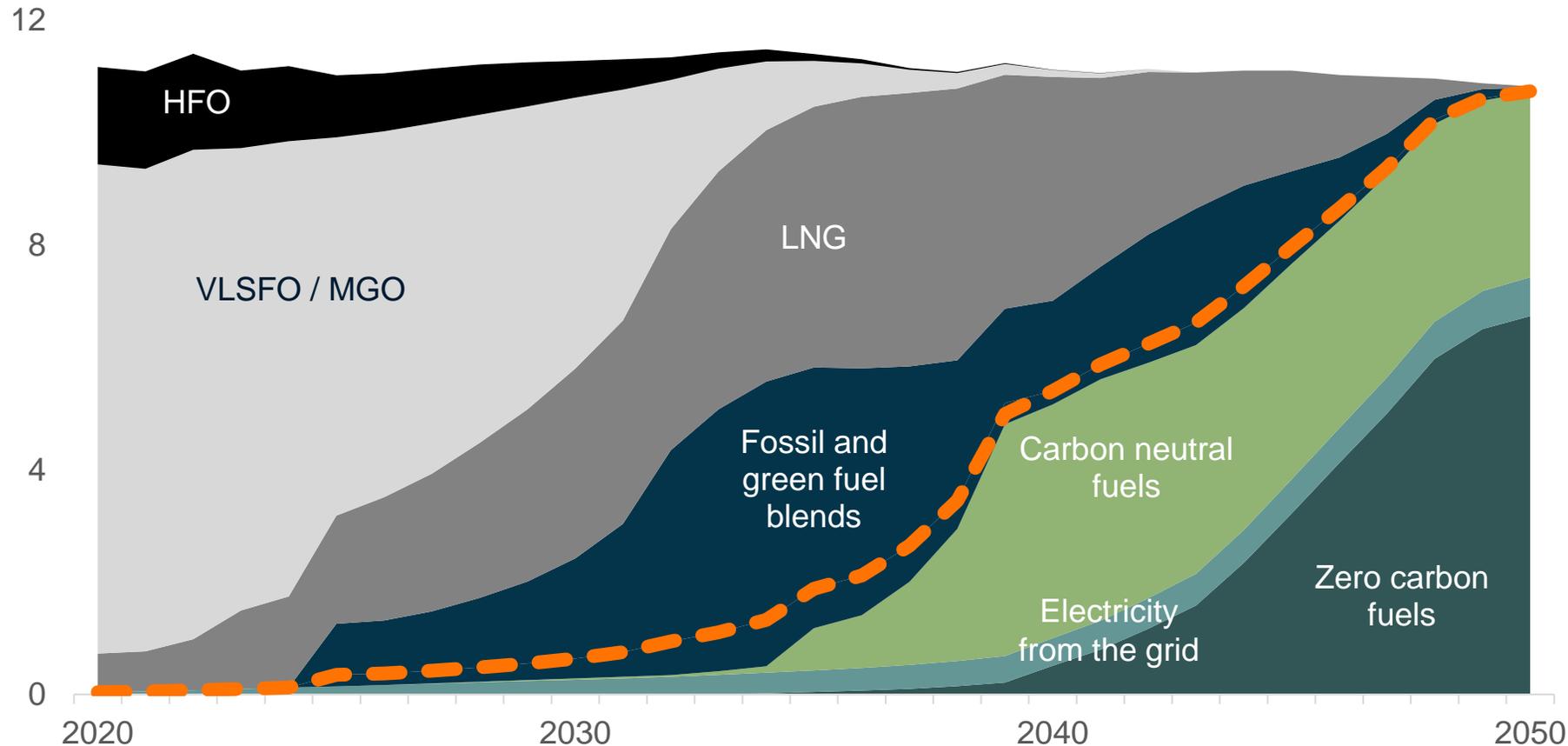
Install energy saving devices and power limiters

Convert to an alternative fuel or sell/scrap the asset

Transition to green fuels will be slow yet relentless. 2050 is a single vessel's lifespan away – customers need to invest in fuel flexibility to avoid risk of stranded assets

Move from a single-fuel industry to a multi-fuel one

Distribution of fuel types for Decarbonisation 2050 (1.5°C scenario), EJ

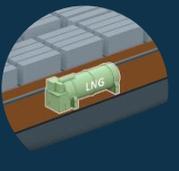
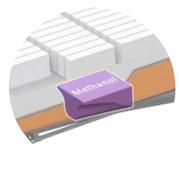
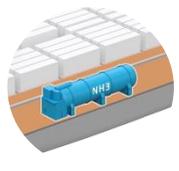
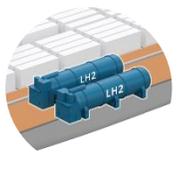


Owners will decide on technology partners now:

- Vessel life is 25-30 years
- Critical decision criteria:
 - i) Multifuel capabilities for blending with green fuels
 - ii) Conversion capabilities for future fuels

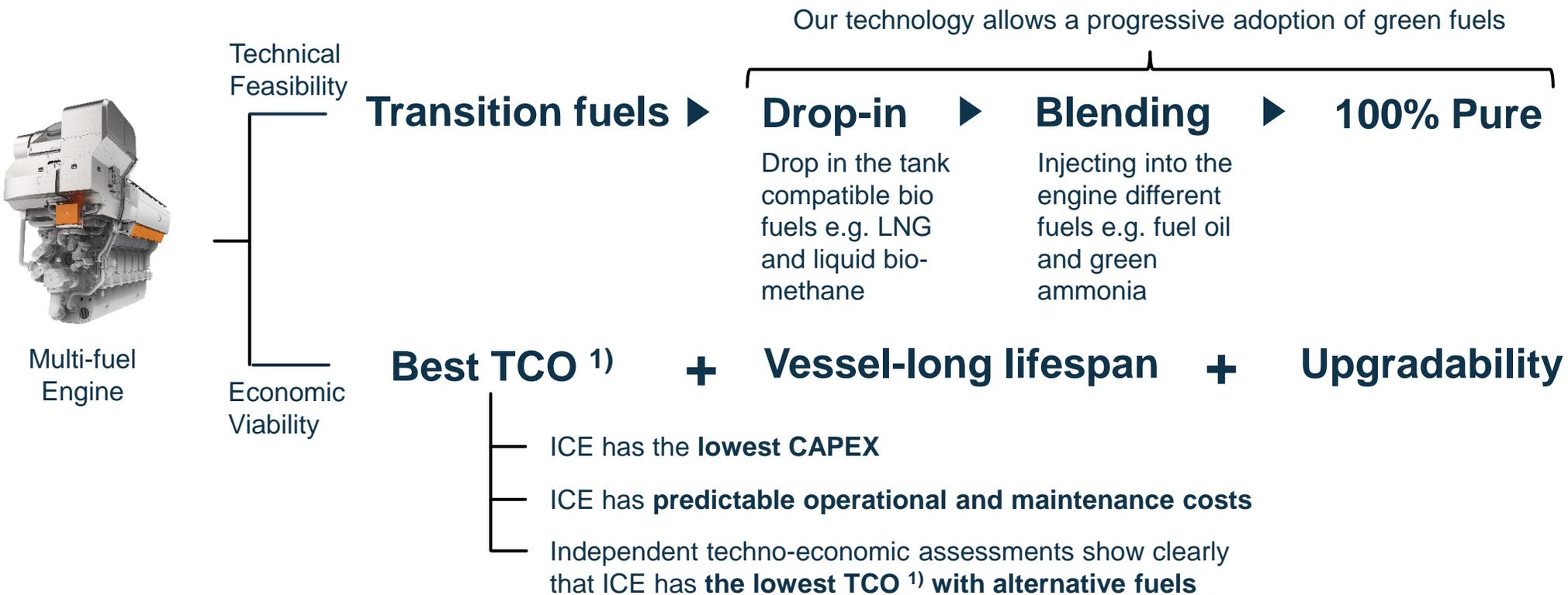
 Carbon neutral and zero carbon fuels in maritime

Fuel conversions will play a vital role in the fuel transition for both existing and new vessels built during this and next decade. Fuel selection impacts the vessel structure

Fuel type	 Heavy Fuel Oil @ 20°C	 Liquified Natural Gas @ -162°C	 Methanol @ 20°C	 Ammonia @ -33°C	 Liquid Hydrogen @ -253°C	 Compressed Hydrogen @ 350bar	 Marine Battery Rack
Key considerations	<ul style="list-style-type: none"> Standard tank arrangement 	<ul style="list-style-type: none"> Cryogenic system 	<ul style="list-style-type: none"> Mildly toxic Flexible tank arrangement 	<ul style="list-style-type: none"> Toxic Corrosive 	<ul style="list-style-type: none"> Highly reactive Cryo system 	<ul style="list-style-type: none"> High pressure Multiple tanks arrangement 	<ul style="list-style-type: none"> Marine adaptation reduces density
Fuel price factor (per GJ)	1X	0.7X ²⁾	2.2X-5.4X ³⁾	2.2X-4.5X ³⁾	2.7X-4.5X ³⁾	1.6X-2.6X ³⁾	1.3X-2.3X
<i>Production cost estimate 2025 ¹⁾</i>							
Gross tank size factor	1X ⁴⁾	2.4X	1.7X	3.9X	7.3X	19.5X	~40X (future potential ~20X)

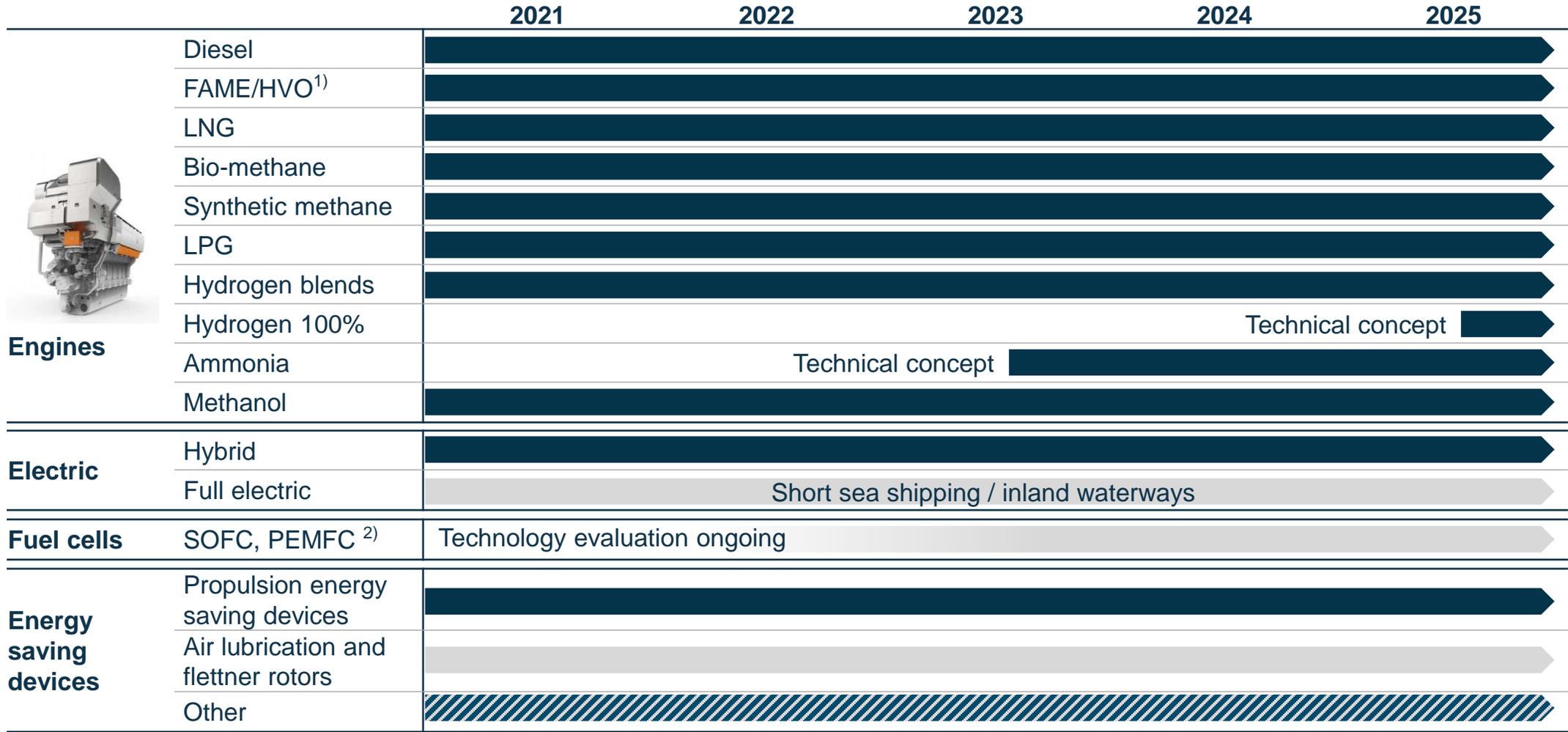
1) Sources: Maersk Mc-Kinney Møller Center for Zero Carbon Shipping – Industry transition strategy 2021, Wärtsilä-DNV collaboration; 2) fuel price for e-methane is expected to be in a range similar to e-methanol; 3) fuel price range spans across blue, bio and green-electro equivalent; 4) gross tank estimations based on Wärtsilä experience

Infrastructure and availability of green fuels need time to mature. Our multi-fuel technology is the only viable upgrade path



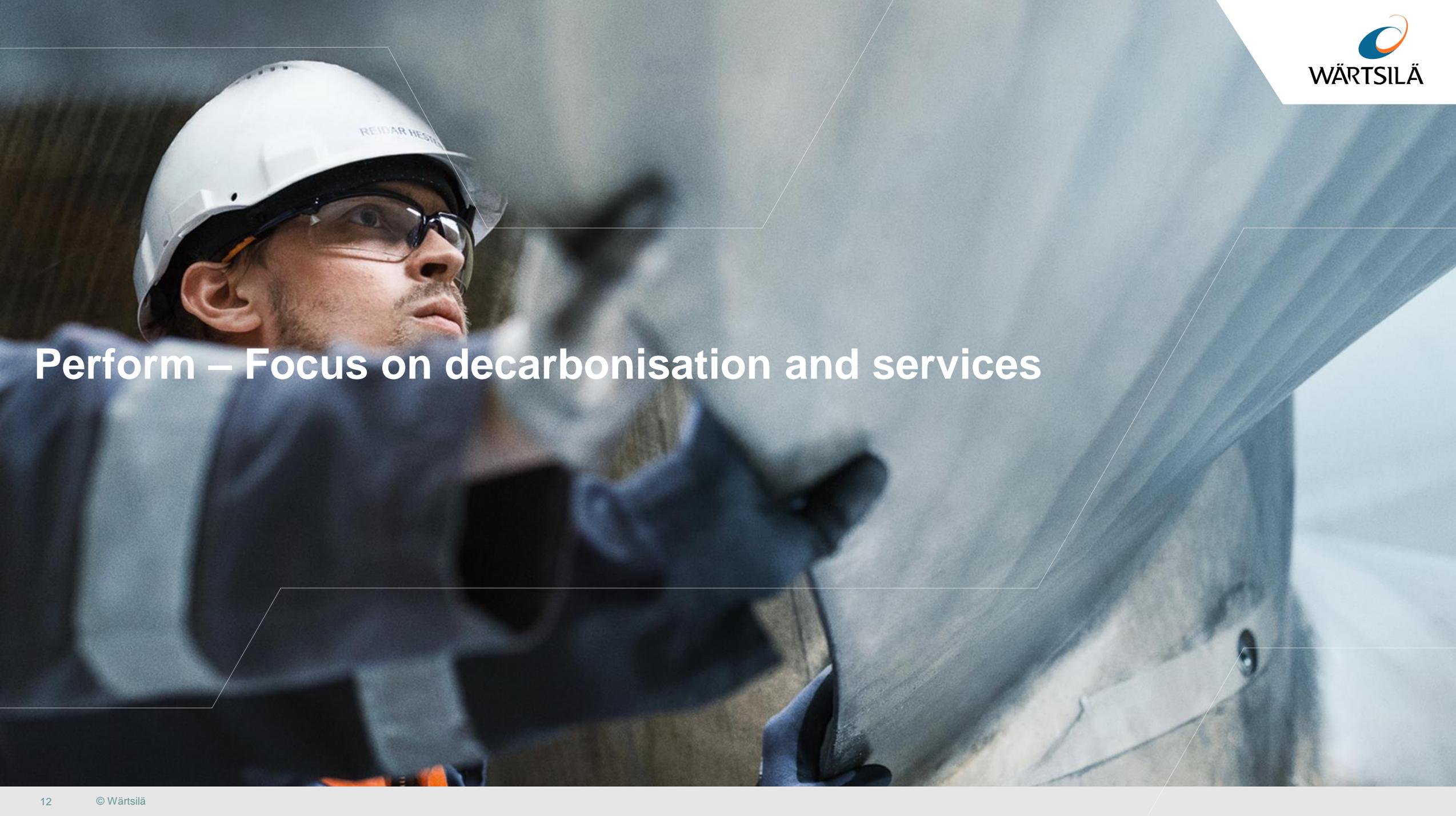
Source: 1) DNVGL Maritime Forecast ed. 2020 and Lloyd's Register Techno-Economic Assessment of Zero Carbon Fuels ed. 2020

Front-runner in alternative fuel engine technology. Our portfolio goes beyond – we power vessels throughout the path towards decarbonisation



Own technology
 Through partnering
 Both in house development and partnering

1) FAME, HVO: biodiesel 2) SOFC: solid oxide fuel cell, PEMFC: proton exchange membrane fuel cell



Perform – Focus on decarbonisation and services

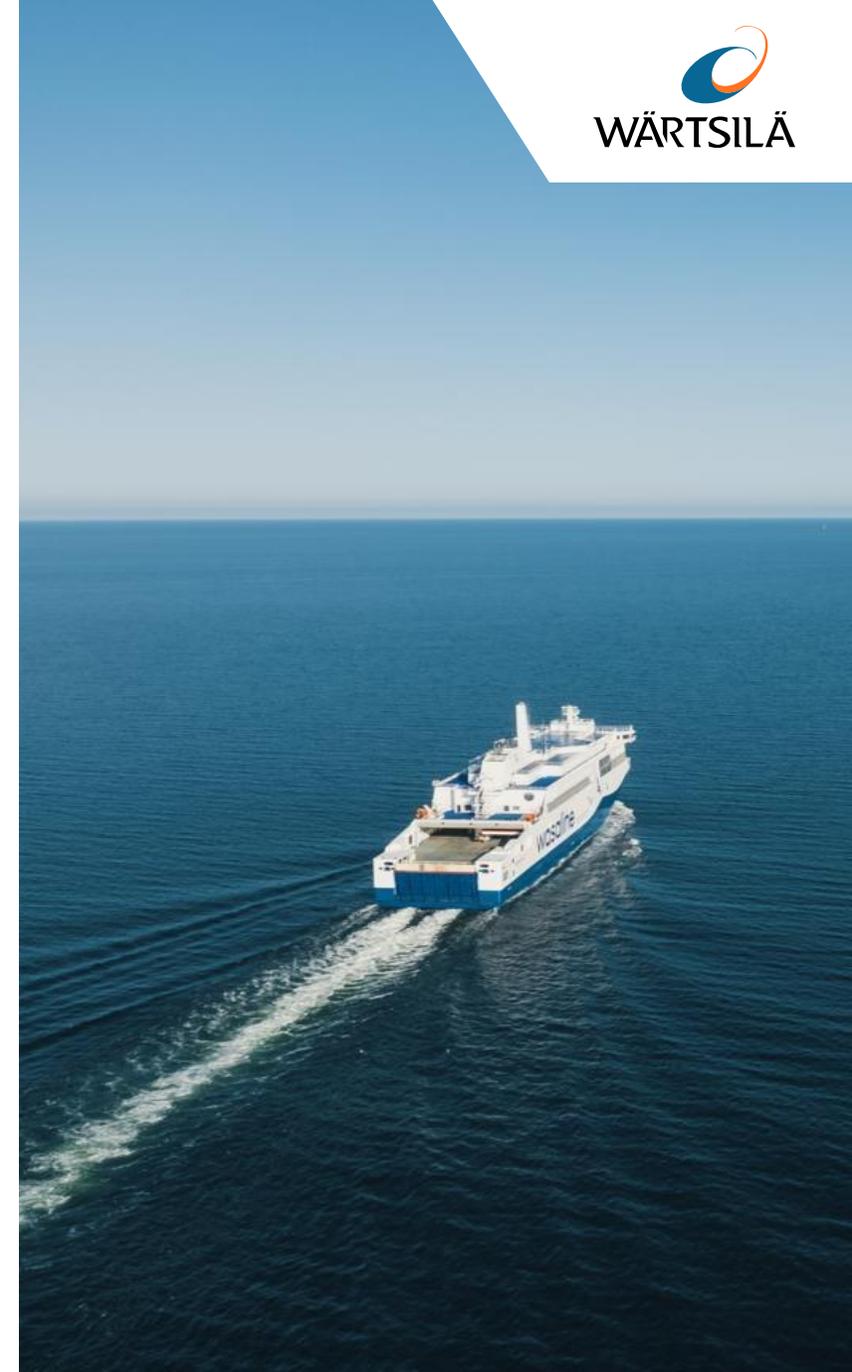
Our strategy focuses on decarbonisation and services

Four clear growth drivers

- **Maintain leading position** in 4S medium speed engines and grow market share in auxiliary engines
- **Increase sales for transactional business**
- Tap into **fuel conversions, energy saving devices, efficiency upgrades and hybridisation of existing fleet**
- **Expand agreements penetration and fuel/emission savings based agreements**

66% Services ¹⁾ **34%** Equipment ¹⁾

1) Net sales LTM Q321



We are strengthening the focus on customers with small transaction amounts and are seeing a positive trend in order intake

Categorisation per customer type

Spend ratio EUR/kW



% of installed base



Turning volume into value

Optimised lead management process: opportunities are identified 18-36 months in advance

Results show order intake for customers that typically buy a smaller amount per annum is **developing favourably:**

+12% LTM/Q3 2021 vs LTM/Q3 2020

+4% LTM/Q3 2021 vs LTM/Q3 2019

1) 1X refers to average EUR/kW for all transactional business customers 2) % of installed base in GW excluding QuantiParts

Our retrofit business has the potential to grow by 3X by 2030 ¹⁾



CII requires continuous improvement of vessel GHG performance



Vessels built 2010-2030 will need to evaluate options for use of alternative fuels

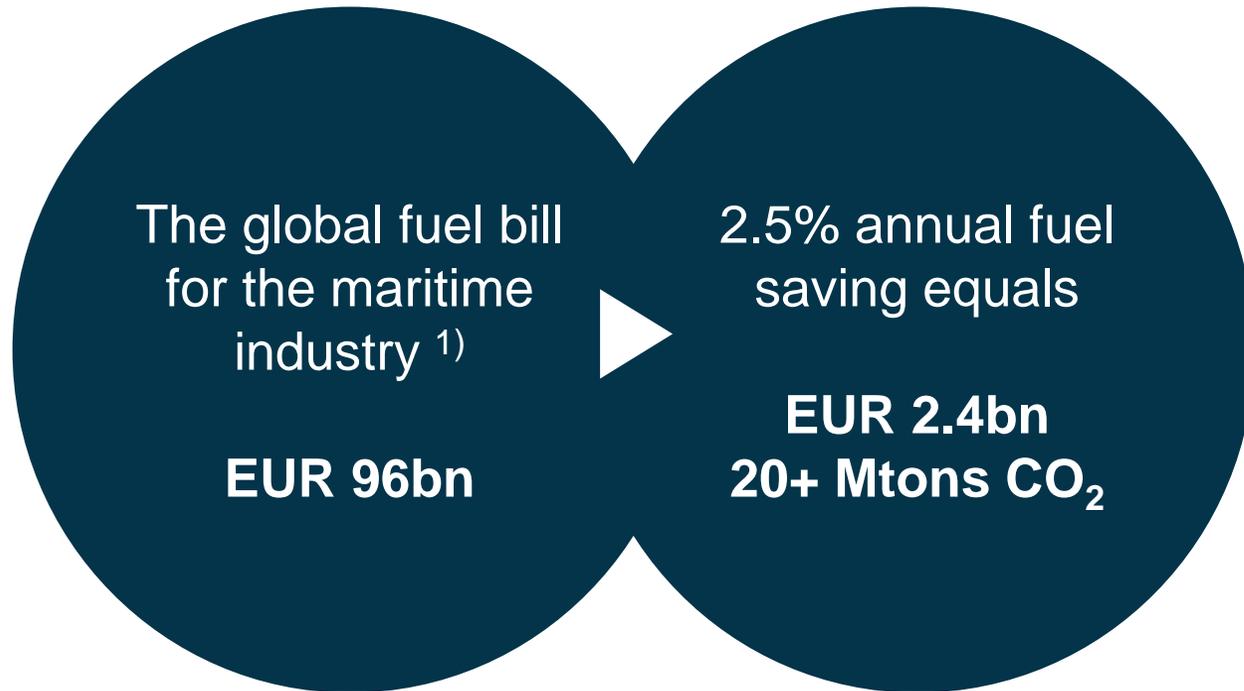
Our offering

- 4-stroke**
 - Methane slip reduction
 - Fuel blending and full fuel conversion packages
- 2-stroke**
 - Technology for conversion to gas operations and methane slip reduction

1) subject to green fuels availability



We have proved to our agreement customers that 2.5% fuel consumption savings are achievable. Global fuel bill of the maritime industry is EUR 96bn



Fuels will be more expensive in the future: maximising fuel efficiency will be of paramount importance

- Alternative fuels (ammonia, hydrogen, methanol) are expected to be **2-4x more expensive than fossil fuels**
- Introduction of taxes for carbon based fuels and adoption of ETS will significantly increase the price of fossil fuels

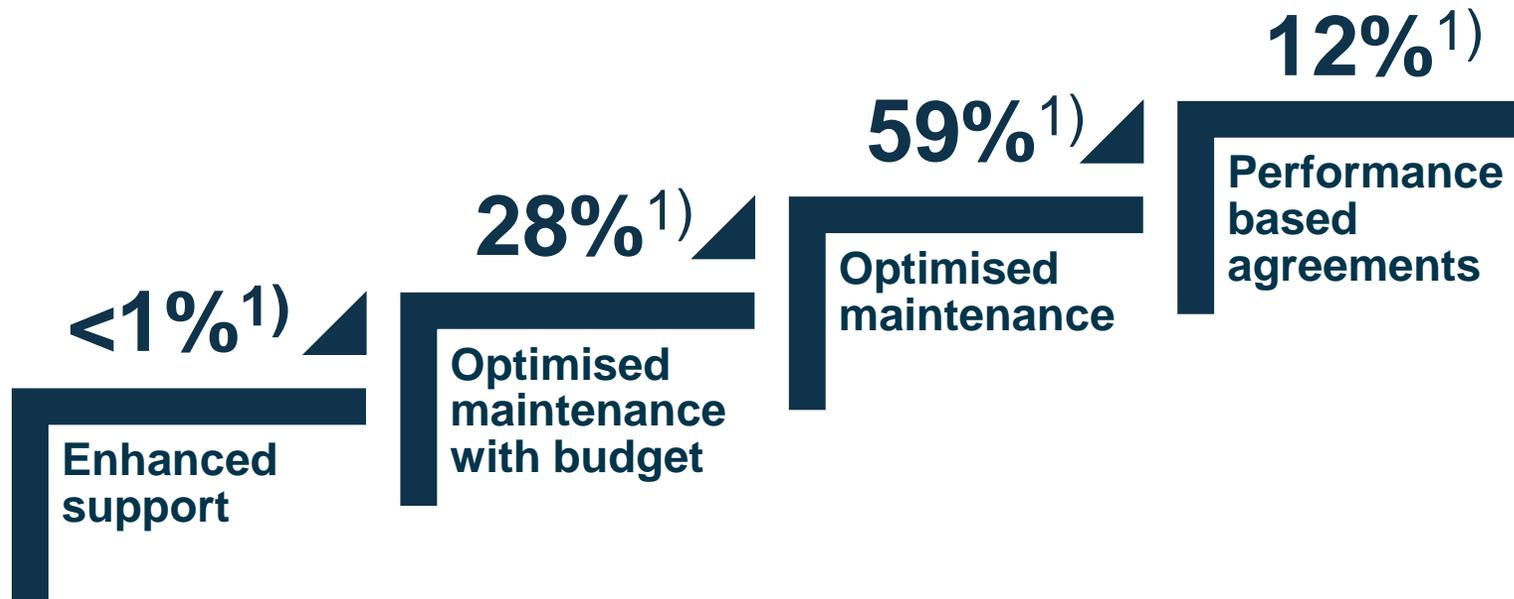
Delivering guaranteed performance is a journey with our customers

- 1. Becoming a partner:** resolving complexity and setting joint targets based on needs
- 2. Developing and executing an extensive upgrade plan**
- 3. Dynamic maintenance planning** followed-up and executed in real time

1) estimation based on current fuel prices, not considering carbon taxation or ETS

We aim to double the number of vessels covered by agreements

From 1X ²⁾ → Up to 2X-3X ²⁾



94%

Renewal rate

Confirms that **long term agreements create value for our customers**

- Major overhauls represent a considerable **spike in cash flow for customers**
- With agreements, **customers pay a monthly fee which flattens the peaks of major overhauls**
- Our strength in **combining software, analytics and data driven solutions with technology expertise** allows us to manage operational risks

1) % of number of vessels under agreement; 2) €/kW multiple compared to pure transactional sales

Guaranteeing performance and sharing risk results in stronger partnerships and unprecedented value

Savings for fuel expenses per annum

2.5%

For a fleet of Cruise ships

Reduction of unscheduled maintenance costs over a 2-year period

-69%

For a fleet of LNG carriers

Savings by increasing time between overhauls, and minimising interruptions and downtime in operations

~14M€

For a fleet of LNG carriers

Well-positioned to lead the decarbonisation transformation

Decarbonisation will transform the marine industry during a single vessel's lifespan at unprecedented pace

Fuel flexible engine technology takes the industry on the only upgrade path that balances decarbonisation targets with financial viability

Our services business drives stability, profitability and growth. Increased opportunities thanks to decarbonisation of the existing fleet

Disclaimer

The information and conclusions in this presentation are based upon calculations, observations, assumptions, publicly available competitor information, and other information obtained by Wärtsilä or provided to Wärtsilä by its customers, prospective customers or other third parties (the "information") and is not intended to substitute independent evaluation.

No representation or warranty of any kind is made in respect of any such information. Wärtsilä expressly disclaims any responsibility for, and does not guarantee, the correctness or the completeness of the information. The calculations and assumptions included in the information do not necessarily take into account all the factors that could be relevant.

Nothing in this presentation shall be construed as a guarantee or warranty of the performance of any Wärtsilä equipment or installation or the savings or other benefits that could be achieved by using Wärtsilä technology, equipment or installations instead of any or other technology.



WÄRTSILÄ