



# Wärtsilä

Shaping the decarbonisation of marine and energy  
Roadshow presentation

May 2023

# Market fundamentals

## MARINE will move with unprecedented speed towards decarbonisation

### Policies & regulations

- IMO target
- Access to capital
- Cost of carbon
- Demand for green sea transport

### Technology

- Carbon neutral and zero carbon fuels
- Carbon fuels for many years, still
- Abatement technologies
- Battery systems, hybrids & energy saving devices
- Fuel efficiency & flexibility

### Connectivity & data

- Vessels as data pools
- Optimisation solutions
- Performance-based agreements
- Cyber security
- Autonomous operations



## ENERGY is moving towards a 100% renewables future

### Policies & regulations

- EU: Carbon neutral by 2050
- USA: carbon free electricity production by 2035, net zero emissions by 2050
- China: Carbon neutral by 2060
- RePower EU, Inflation Reduction Act

### Technology

- Wind and solar growing rapidly
- Intermittent sources requiring balancing power
- Sustainable fuels for thermal balancing
- Digitalisation and cyber security

### Growing ENERGY demand

- By 2050, electricity generation needs to grow by 3X, renewables by 8X to reach Net Zero targets <sup>1)</sup>
- Gradual replacement of coal
- Renewables expected to become the largest source of global electricity by early 2025 <sup>2)</sup>
- Power systems becoming increasingly complex





**Our value creation potential is based on two strategic themes**

# 1 TRANSFORM

Decarbonisation creates new business opportunities

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# 2 PERFORM

On a path to deliver the set targets

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# Transform

Decarbonisation creates new business opportunities

- Maritime is going through an unprecedented rate of change, which is accelerated by regulations and the demand for green transport.
- Also, the energy sector is undergoing a massive transformation as decarbonisation and renewables are fundamentally going to change the way energy is generated.
- We are set for performance and have significant value creation potential to drive this transformation as a technology leader.



**3** Launch of the new Wärtsilä 32 methanol engine



**1** Gas fuelled engines to provide balancing power for a new 100 MW power plant in Japan



**2** Supplying the world's largest solar-plus storage project portfolio in the US

**4** Digitalising 21 ports in the United Kingdom



**6** Successful hydrogen blending tests in a power plant



**7** Hybrid propulsion systems for world's largest hybrid vessels



**5** Wärtsilä builds major plant for the production of REEFUEL, climate-neutral Bio-LNG





# Perform

We are ready to leverage market recovery and growth

#1-3 in global markets

## FINANCIAL TARGETS:

- 5% annual organic growth
- 12% operating margin

"SET FOR 30"

## DECARBONISATION TARGETS:

- carbon neutral in our own operations by 2030
- a product portfolio ready for zero carbon fuels by 2030



Clear financial targets and strong commitment to realise them



Robust capital allocation principles and active portfolio management



Notable opportunity in retrofits and conversions



Extensive service network, positioned for growth both in transactional services and performance-based agreements

Focus on:

- High performing teams
- Performance excellence and robust execution
- Continuous improvement
- Cost structure – actions taken whenever and wherever necessary

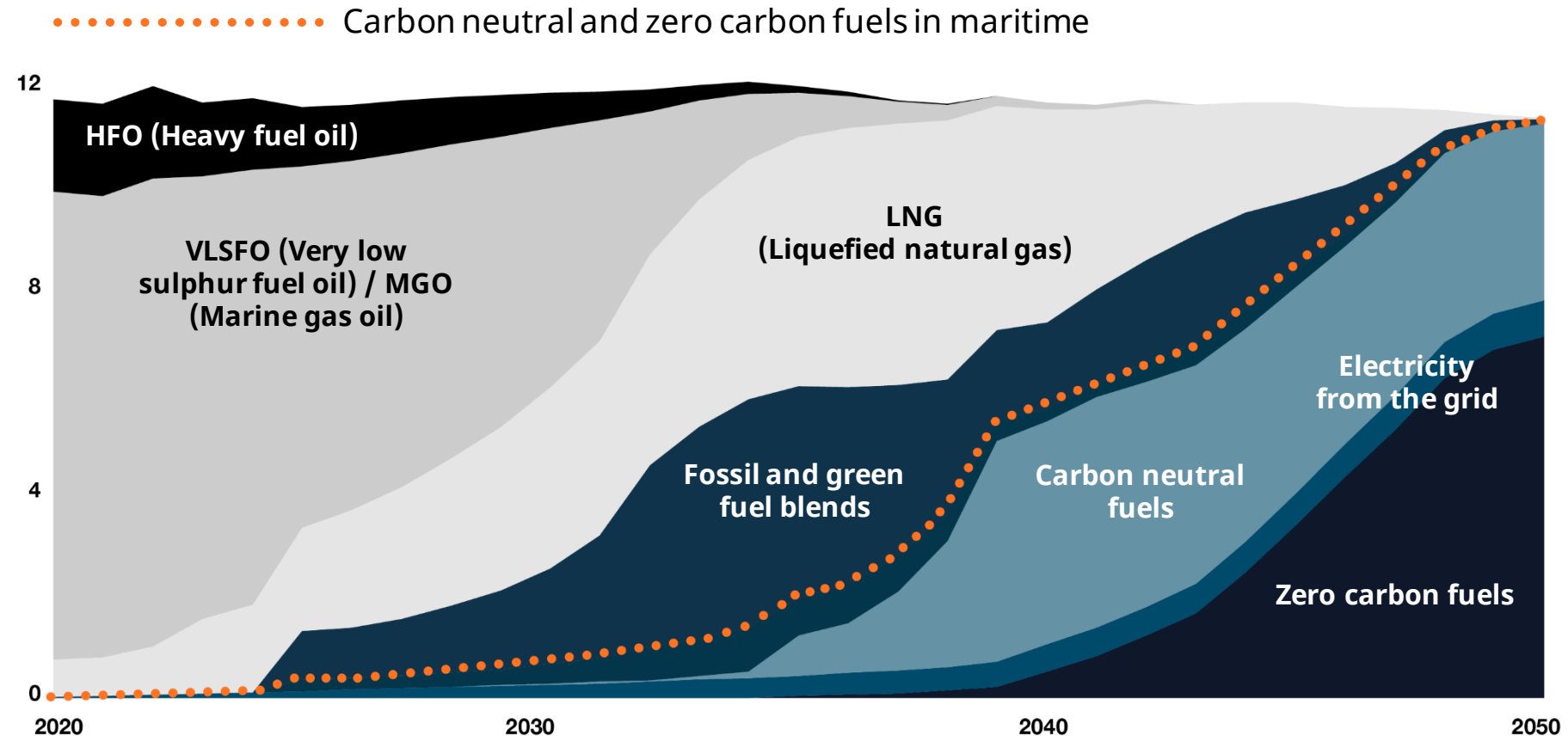
# Supporting decarbonisation in marine

## Owners will decide on technology partners now:

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


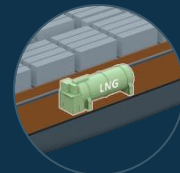
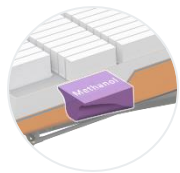
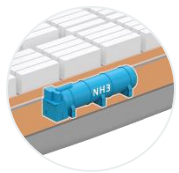
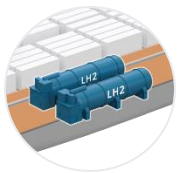


## Move from a single-fuel industry to a multi-fuel one

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



Source: DNV Maritime Forecast 2050 model, Wärtsilä internal estimates

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

## Wärtsilä Hybrid Market Position

We are maintaining our market leadership in Hybrid Systems

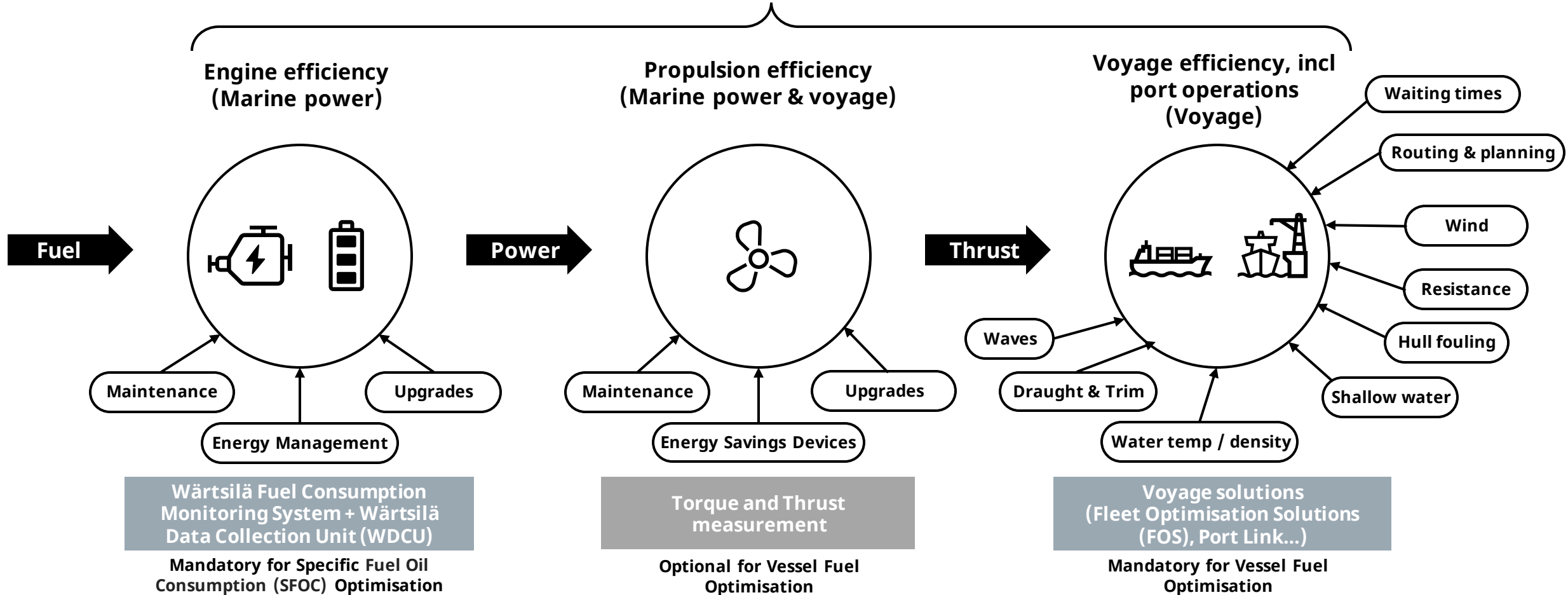
- Number of hybrid vessels on order and in operation is ~81 vessels with 115MWh batteries
- Our current market share is 25% for engine-battery hybrid marine projects
- Further growth expected in future years as hybridisation is seen as key enabler for marine decarbonisation
- One proof point of our ability to support our customers' environmental targets is the announced order for hybrid propulsion systems for four new heavy lift vessels.
  - The system will feature a variable-speed Wärtsilä 32 main engine capable of operating with methanol fuel. This will therefore make these ships among the first to be prepared to operate on methanol, a clean burning sulphur-free alternative to conventional fossil-based marine fuels.
  - They will also be the first methanol capable ships to employ a variable speed main engine in a hybrid installation.





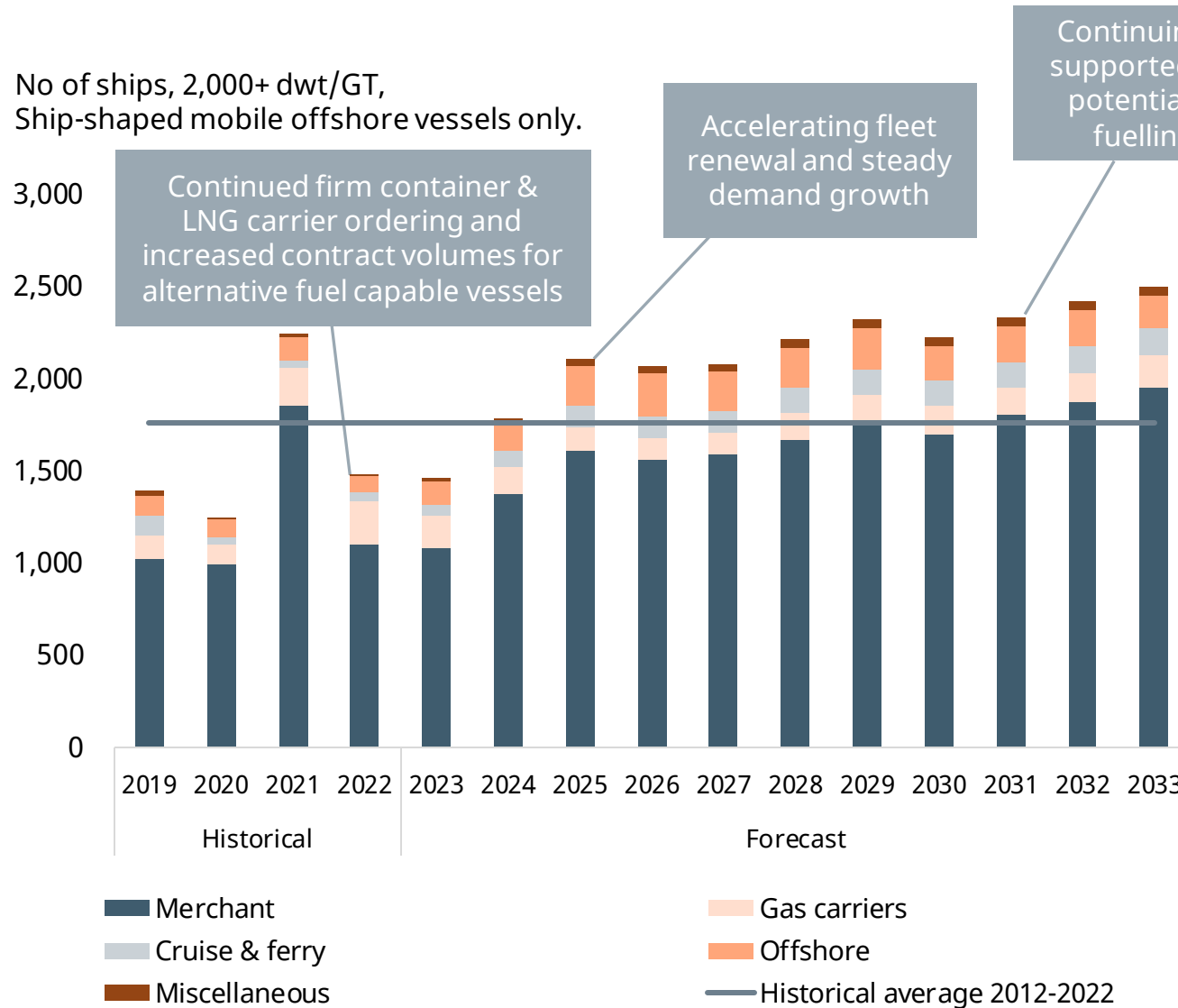
# Together we can create unique customer value and drive decarbonisation of marine

## VESSEL AND TRANSPORT EFFICIENCY

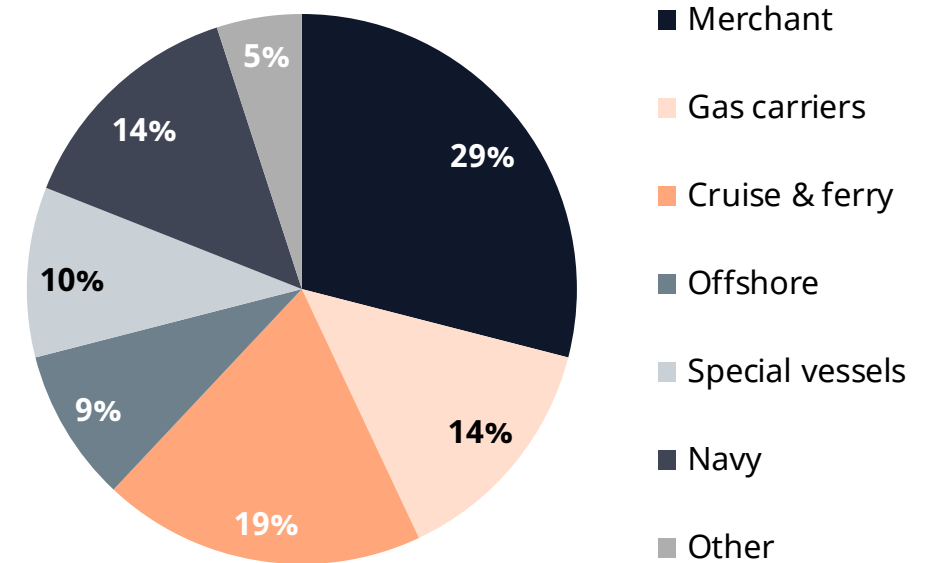


# Vessel contracting forecast

No of ships, 2,000+ dwt/GT,  
Ship-shaped mobile offshore vessels only.



## Wärtsilä's order intake in Marine businesses by customer segment in 2022



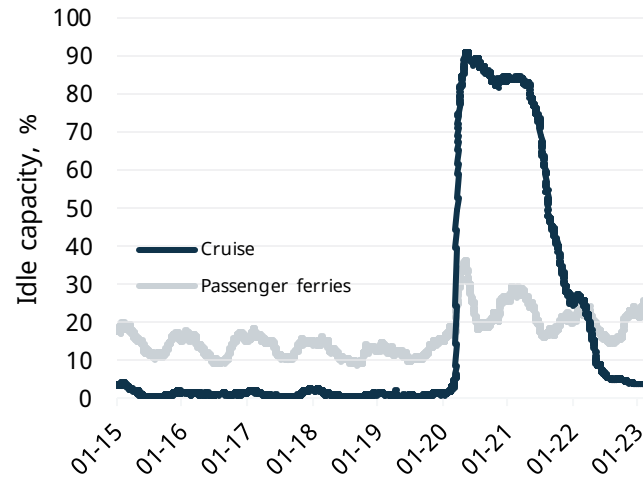
Includes both orders for equipment and services. The vessel types included in Merchant segment are bulk carriers, cargo-, container-, and RoRo vessels as well as tankers. The vessel types included in Special vessel segment are dredgers, fishing-, inland-, and service vessels as well as tugs.



# Vessel utilisation rates driving Wärtsilä's service business

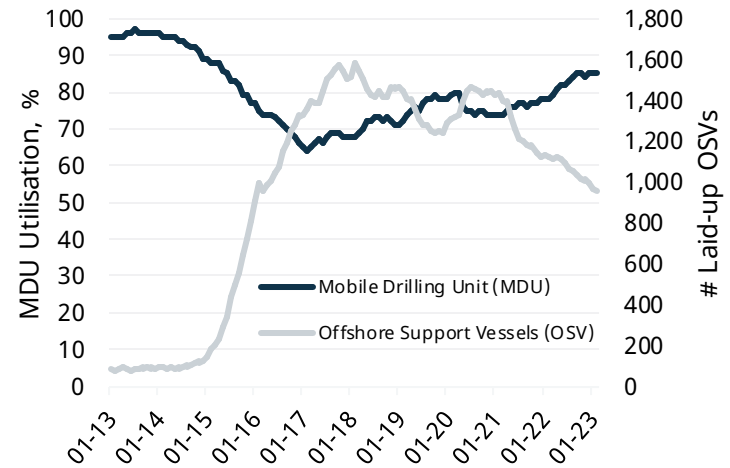
Typically there is some delay between changes in utilisation rate and Wärtsilä service net sales

## Cruise and passenger ferries



- Cruise capacity has almost recovered to pre-Covid, passenger volumes have increased heavily from H2/2022 onwards
- Passenger ferry capacity has not yet fully recovered to pre-Covid, but passenger volumes have increased heavily from H2/2022 onwards

## Offshore

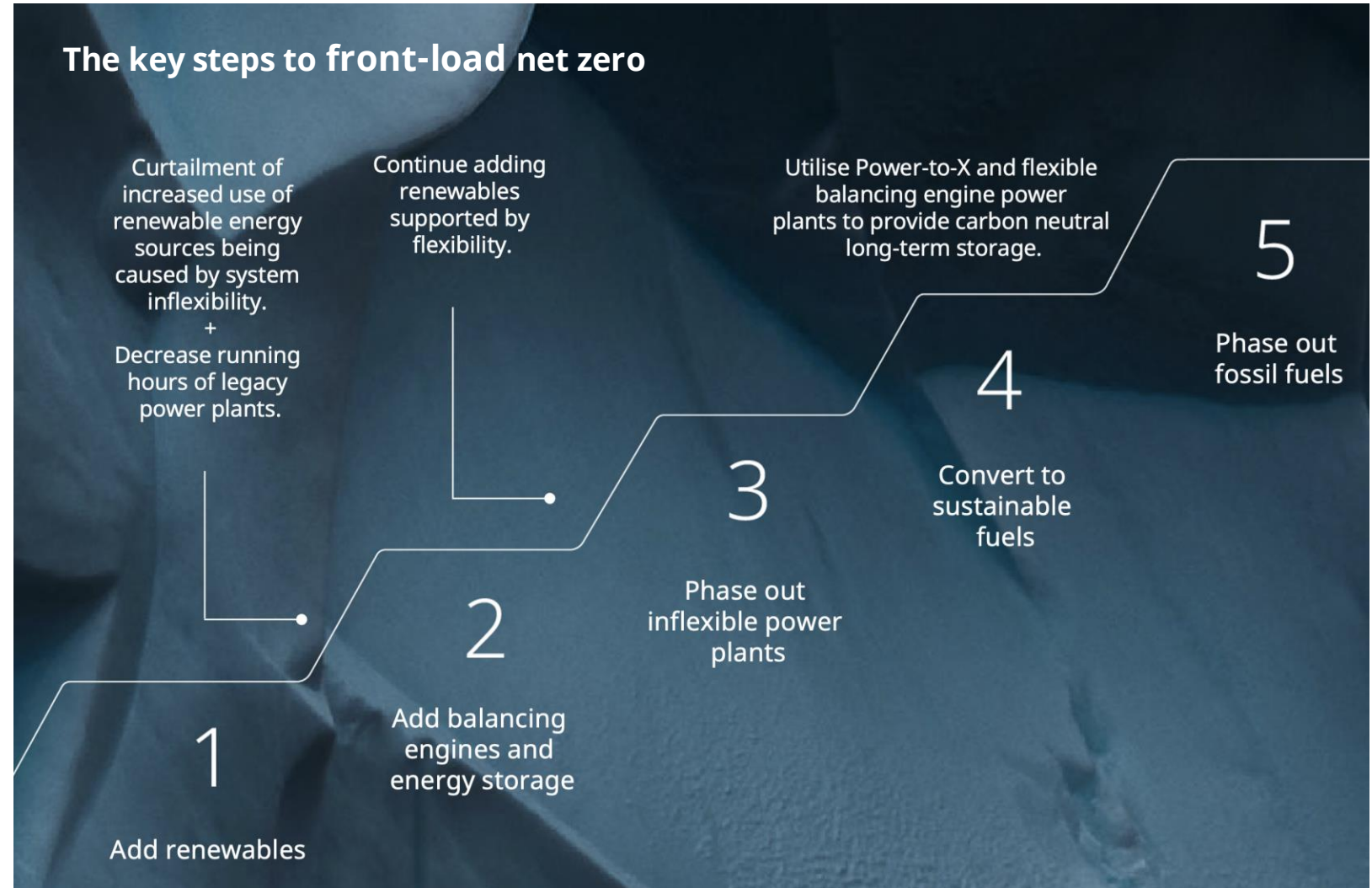


- Mobile drilling unit (MDU) utilisation rate expected to grow by 6.4% in 2023
- Number of active offshore support vessels expected to rise by 11% in 2023

Increasing slow steaming will require drive up the utilisation rate of existing fleet and eventually lead to demand for further vessel capacity, leading to higher demand for services

# Supporting decarbonisation in energy

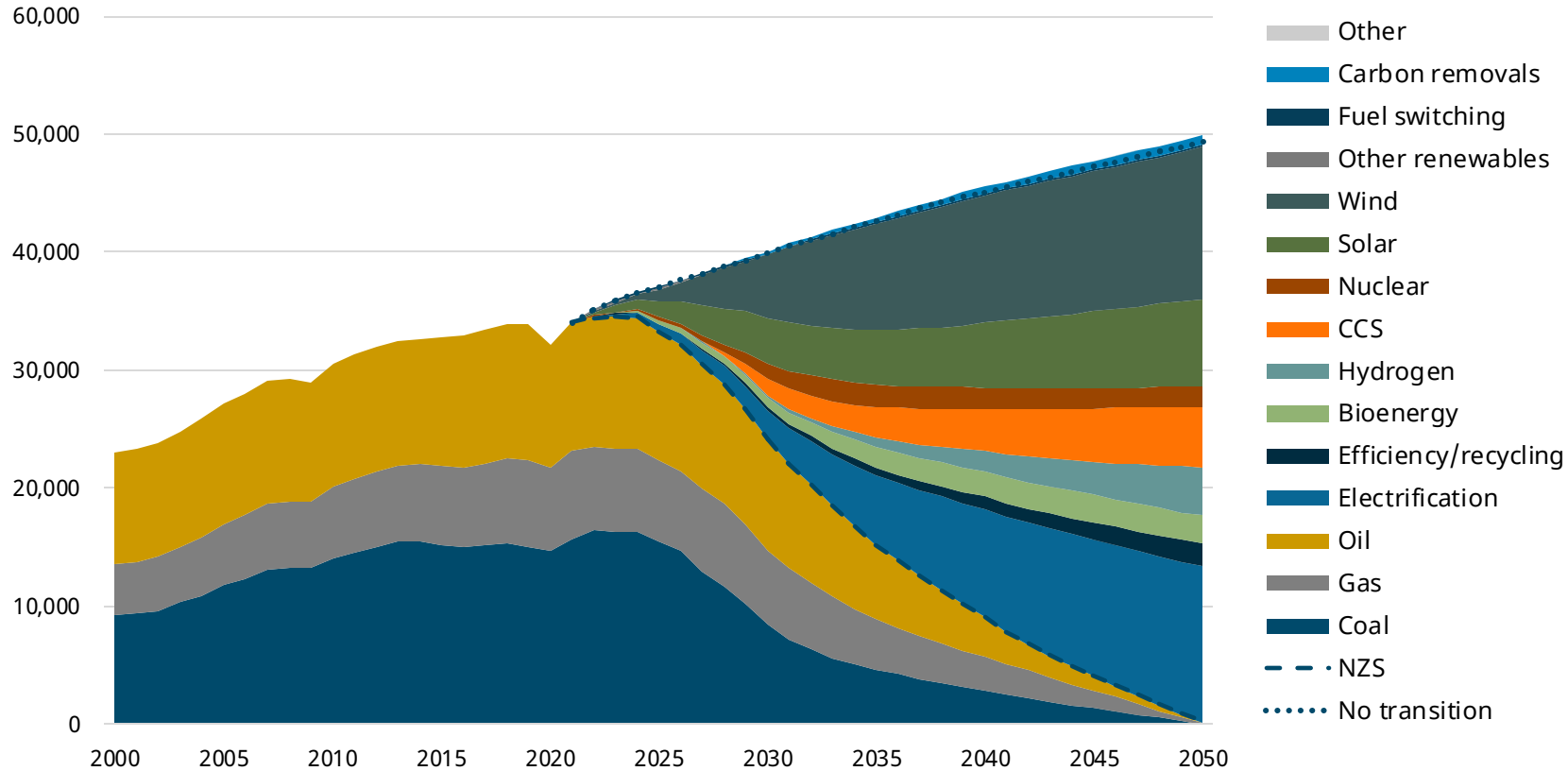
- Wind and solar are intermittent power sources
- Flexible balancing power needed to stabilize the power system: balancing power market expected to grow by 10X <sup>1)</sup>
- Reciprocating engines ideally suited to provide balancing power
  - Energy efficient
  - Fast ramp up/ramp down
  - Fuel flexible
- Today running on gas, tomorrow on green fuels



1) by 2030. Source: Bloomberg New Energy Outlook 2020, Wärtsilä estimates



# Renewable energy plays a key role in energy sector emissions abatement



Estimated growth of the addressable annual markets of thermal balancing (GW) and energy storage (GWh) 2020-2030: **+30% p.a.**

Source: BloombergNEF New Energy Outlook 2022

Source: BloombergNEF New Energy Outlook 2022, Wärtsilä estimates at Capital Markets Day 2021

## Wärtsilä to support integration of renewables into Japan's power mix by providing balancing power gas engines



- The new Japanese plant will operate with ten Wärtsilä 34SG gas engines. It will replace a 100 MW combined cycle gas turbine that was formerly located on the project site.
- The fast-starting engines will provide the grid balancing and peaking capabilities needed as Japan increases its share of energy from renewable sources.
- The main purpose of the utility-scale power plant is hedging market price fluctuations, and it will also enable participation in the recently launched cross-regional balancing market.
- Japan is committed to addressing climate change and has set a target to have its share of renewable energy within the power mix increased to 36 - 38 percent by 2030.



## Wärtsilä flexible generation will support the transition to renewable energy in Latin America



- The plant will operate with 18 Wärtsilä 50SG gas engines, which in simple cycle deliver an output of 339 MW
- Initially, the plant will provide baseload power to the grid, but the rapid start-up flexibility of the engines will enable it to take on a grid balancing role as the system's share of renewable energy increases.
- The high overall efficiency level of the plant will reduce emissions, while the ability of the Wärtsilä engines to accept future sustainable fuels as they become available, provides future-proof sustainability for the plant.
- Wärtsilä is dedicated to supporting the transition to renewable power throughout the whole of Latin America. To date Wärtsilä has approximately 10.6 GW of installed capacity in 254 power plants with 1,060 engines in seventeen Latin American countries. 2.7 GW of this capacity is covered by Wärtsilä long-term service agreements.

# Wärtsilä Energy Storage competitive advantages

## Our key differentiators

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- **Integration and scalability:** Wärtsilä's GridSolv Quantum is a fully-integrated energy storage solution. Its modular and scalable design enables ease of deployment and optimisation. It integrates storage to other energy assets and to the electricity grid to ensure full utilisation of storage benefits.
- **Reliability and maturity:** Wärtsilä combines 15+ years of proprietary software leadership, top-tier battery energy storage systems, and extensive power sector experience in project execution in all key markets. We are a leading player in storage integrator space globally, with a wide services network and +3.6 GW/+9.1 GWh of deployed and contracted projects to-date.
- **Safety:** Wärtsilä's ESS is designed to meet stringent safety and quality standards (including UL certification for fire safety)
- **GEMS and bankability:** With smart optimisation software and complex renewables and grid integration capabilities, our solution ensures the lowest lifecycle costs, the smallest system footprint and new revenue opportunities for our customers – to fully optimise on industry price volatility and demanding transitions in energy.



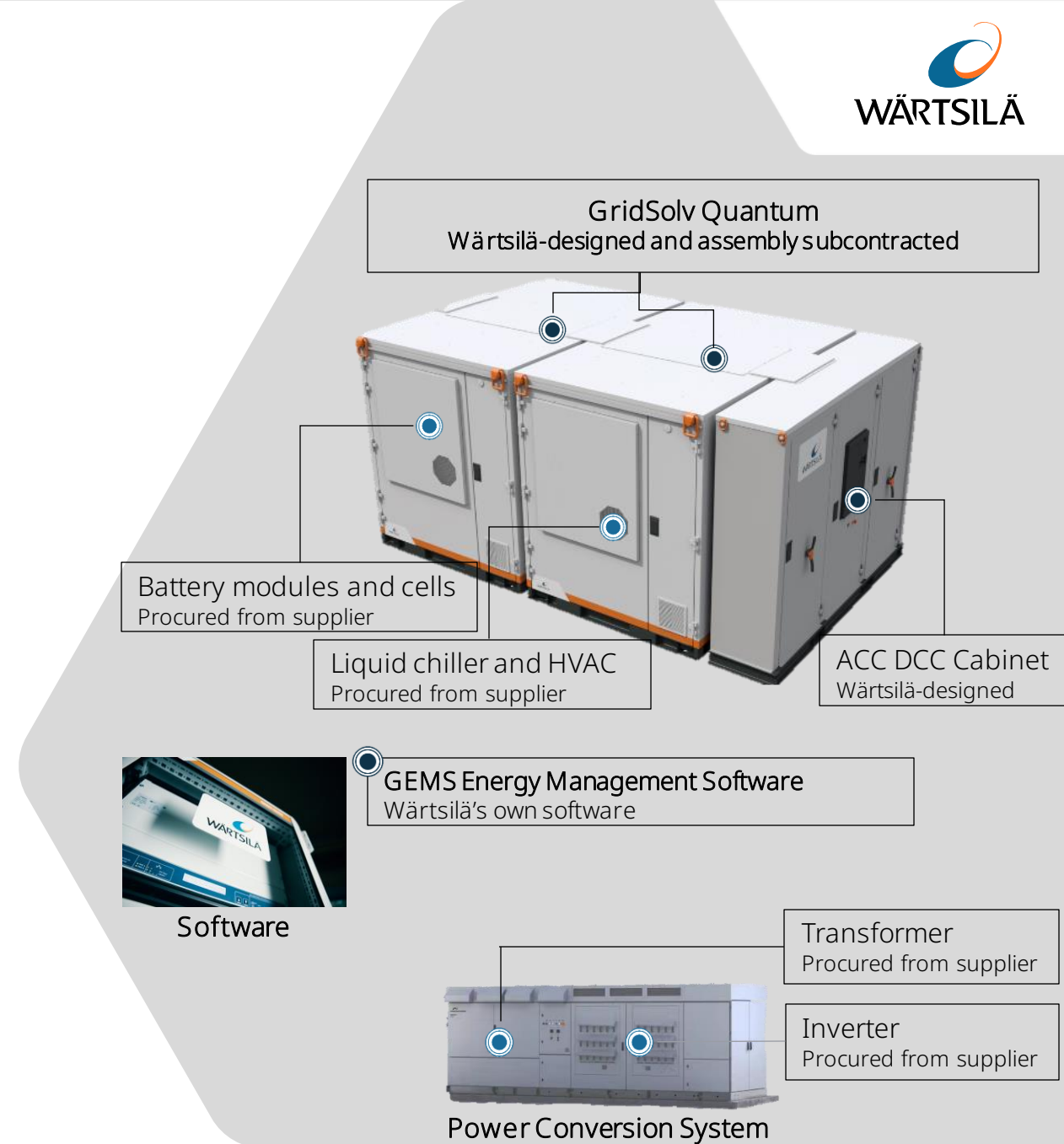


# Wärtsilä Energy Storage offering

## Our role in the value chain

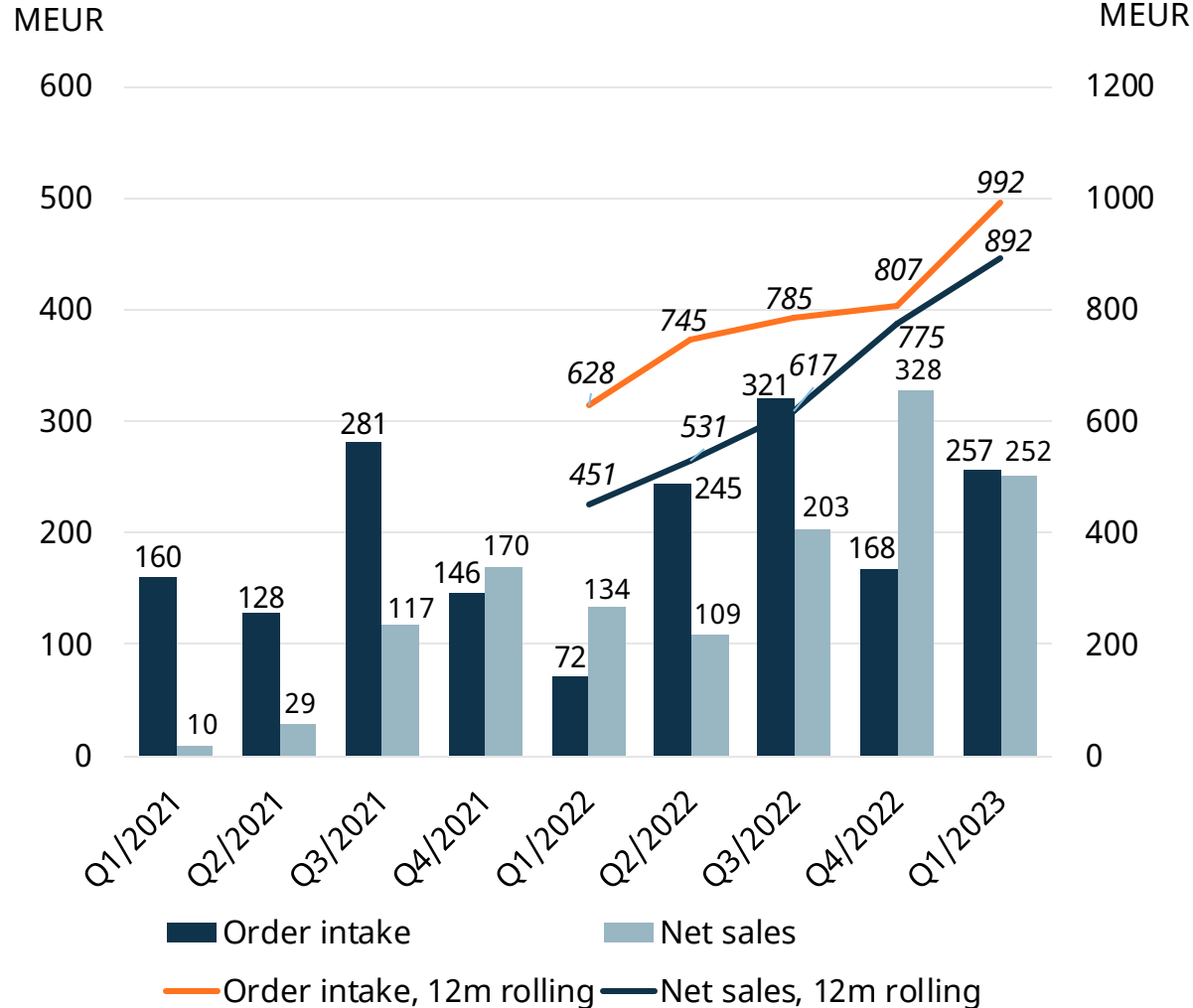
- Our **core offering** consists of 1) battery energy storage hardware, 2) GEMS Digital Energy Platform, and 3) lifecycle services,
- We are an energy storage **system integrator**, adding value to our customers by providing fully-engineered, end-to-end storage solutions:

- 1 **Wärtsilä's energy storage hardware** integrates battery modules, Battery Management System and Power Conversion System to a Wärtsilä-designed GridSolv enclosure to offer a complete energy storage system (ESS) to our customers.
- 2 Our project execution team manages **full installation and integration** at the customer's site(s).
- 3 Wärtsilä's **GEMS Digital Energy Platform** monitors, controls and optimises storage and other energy assets in the system
- 4 Our **Service+ lifecycle solutions** include Expertise Center support, planned maintenance, performance guarantees and software maintenance





# Good demand in energy storage – market expected to grow 30% annually in this decade



## Wärtsilä Energy storage

- Long-proven track record of grid scale system installations globally, integrated with wind, solar, hydro & thermal generation.
- Powered by the advanced GEMS Digital Energy Platform, designed to **optimise energy system lifetime and energy system economics**.
- Thermal balancing and energy storage are **complementary technologies**: energy storage solutions for shorter firming periods and dispatchable engines for unlimited periods (with high flexibility).
- Business currently loss making, but we aim to turn it profitable within a few years
- Profitability has been improving and the 12m rolling comparable operating result margin was approximately -3% in Q1/2023

## Wärtsilä Energy Storage's direction

Key drivers towards higher profitability

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1. Selective approach in project acceptance
2. Value differentiation
3. Volume growth supporting better cost leverage and better economics of scale in procurement and assembly
4. Continuous R&D to secure latest technology and competitive product cost
5. Software monetisation
6. Synergies with thermal energy business



# Wärtsilä is very well-positioned for the decarbonisation transformation

## Leader in

- **Carbon neutral & zero carbon fuels**
  - Available today: biofuels, methanol, up to 25% hydrogen blends
  - 2023: ammonia concept
  - 2025: 100% hydrogen concept
- **Hybrid marine installations**
- **Energy efficient fossil fuels**
- **Power system optimisation**
  - Energy storage
  - Thermal balancing power

## Pioneer in

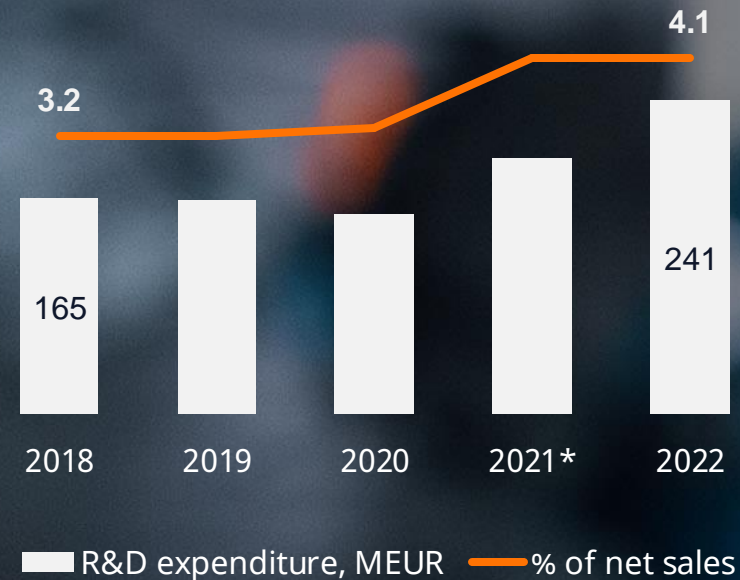
- **Marine electric drivetrain**
- **Marine carbon capture**
- **Marine optimisation and autonomous solutions**
- **Partnering for complementary technologies**
  - Fuel cells
  - Air lubrication
  - Flettner rotors








We continue investing in innovation to ensure a broad, industry-leading solution offering



\* Figure in the comparison period 2021 has been restated to reflect a change in the definition of research and development expenditure.

# Front-runner in alternative fuel engine technology



		2021	2022	2023	2024	2025	
 <b>Engines</b>	Diesel	[Progress bar from 2021 to 2025]					
	FAME/HVO <sup>1)</sup>	[Progress bar from 2021 to 2025]					
	LNG	[Progress bar from 2021 to 2025]					
	Bio-methane	[Progress bar from 2021 to 2025]					
	Synthetic methane	[Progress bar from 2021 to 2025]					
	LPG	[Progress bar from 2021 to 2025]					
	Hydrogen blends	[Progress bar from 2021 to 2025]					
	Hydrogen 100%					Technical concept	[Progress bar from 2025 to 2025]
	Ammonia				Technical concept	[Progress bar from 2023 to 2025]	
	Methanol	[Progress bar from 2021 to 2025]					

1) FAME, HVO: biodiesel

# New financial targets reflect growth opportunities and increased profitability

## New targets

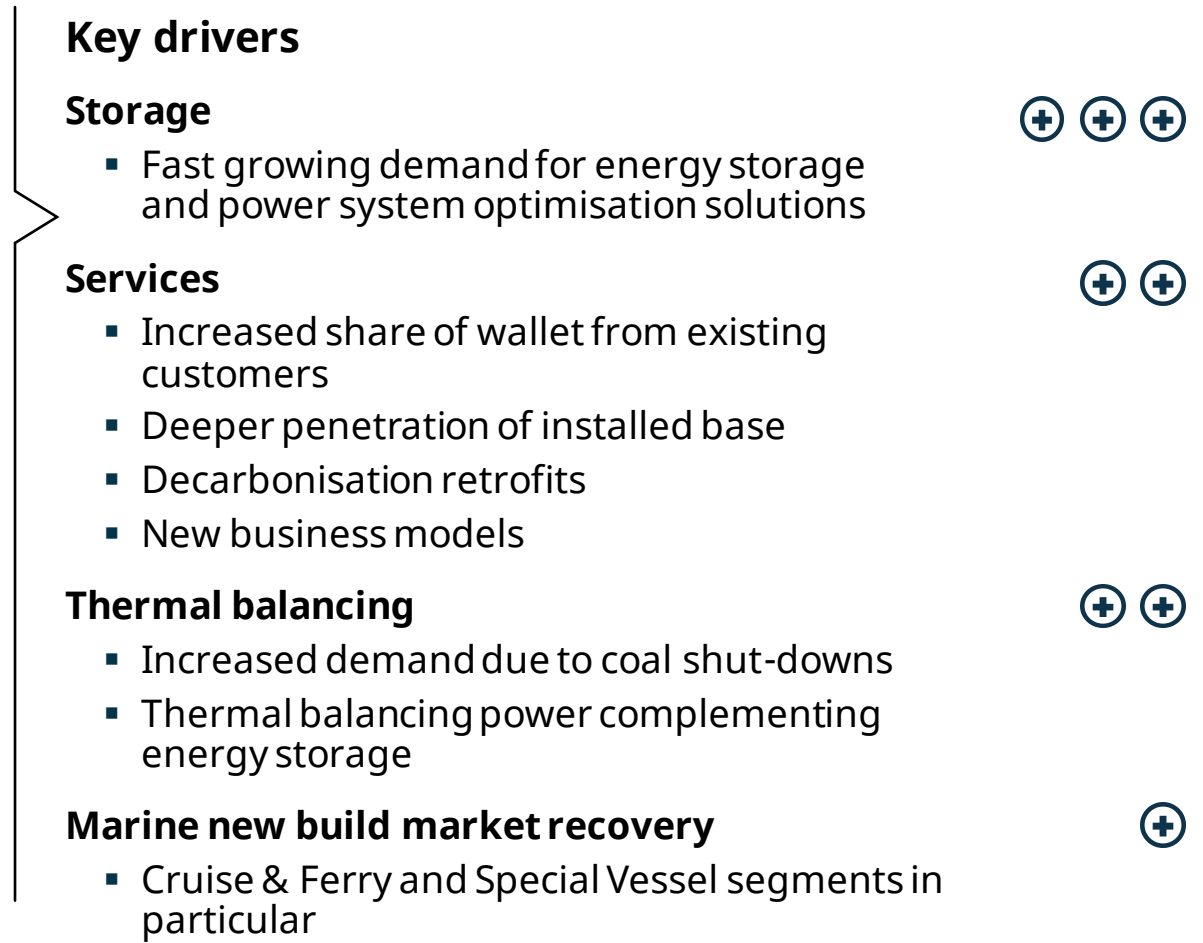
<b>Net sales</b>	<b>5%</b> annual organic growth
<b>Profitability</b>	<b>12%</b> operating margin
<b>Capital structure</b>	Gearing <b>below 0.50</b>
<b>Dividend</b>	<b>At least 50%</b> of earnings





# Good growth opportunities in services, energy, and marine new build recovery. Our installed base provides a strong foundation for services growth

Starting point:  
Net sales 4,401 MEUR  
(LTM Q3/2021)



**Target:  
5% annual organic  
growth**

Limited additional CAPEX needed to facilitate the growth

# We will reach our profitability target while maintaining R&D investments at ~3% of net sales

Starting point:  
Operating margin 5.9%  
(LTM Q3/2021)

## Key drivers

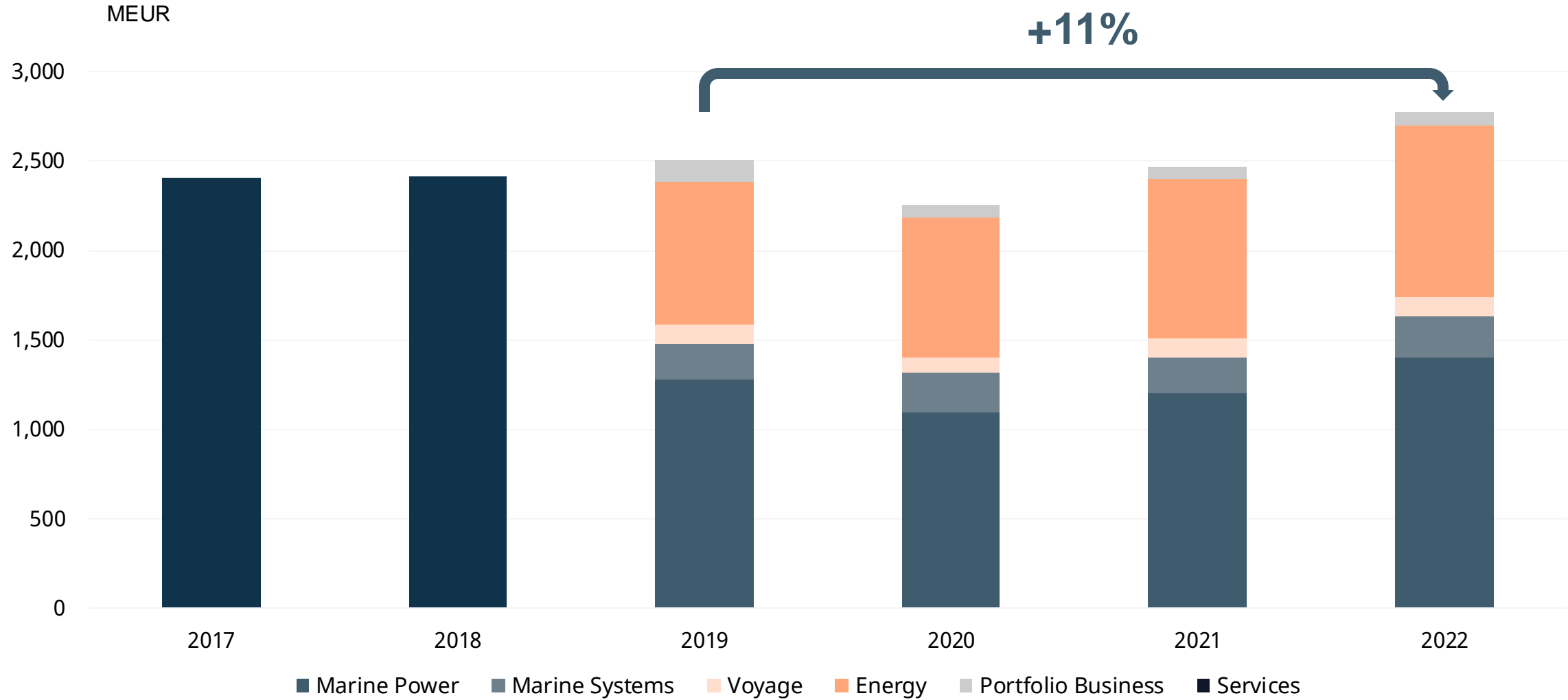
- Marine and Energy Services growth ⊕ ⊕ ⊕
- Thermal balancing power growth ⊕ ⊕
- Storage growth ⊕
- Voyage turnaround and digital growth ⊕
- Pricing ⊕
- Continuous improvement ⊕
- Cost inflation ⊖

>0% {

## Target: 12% operating margin

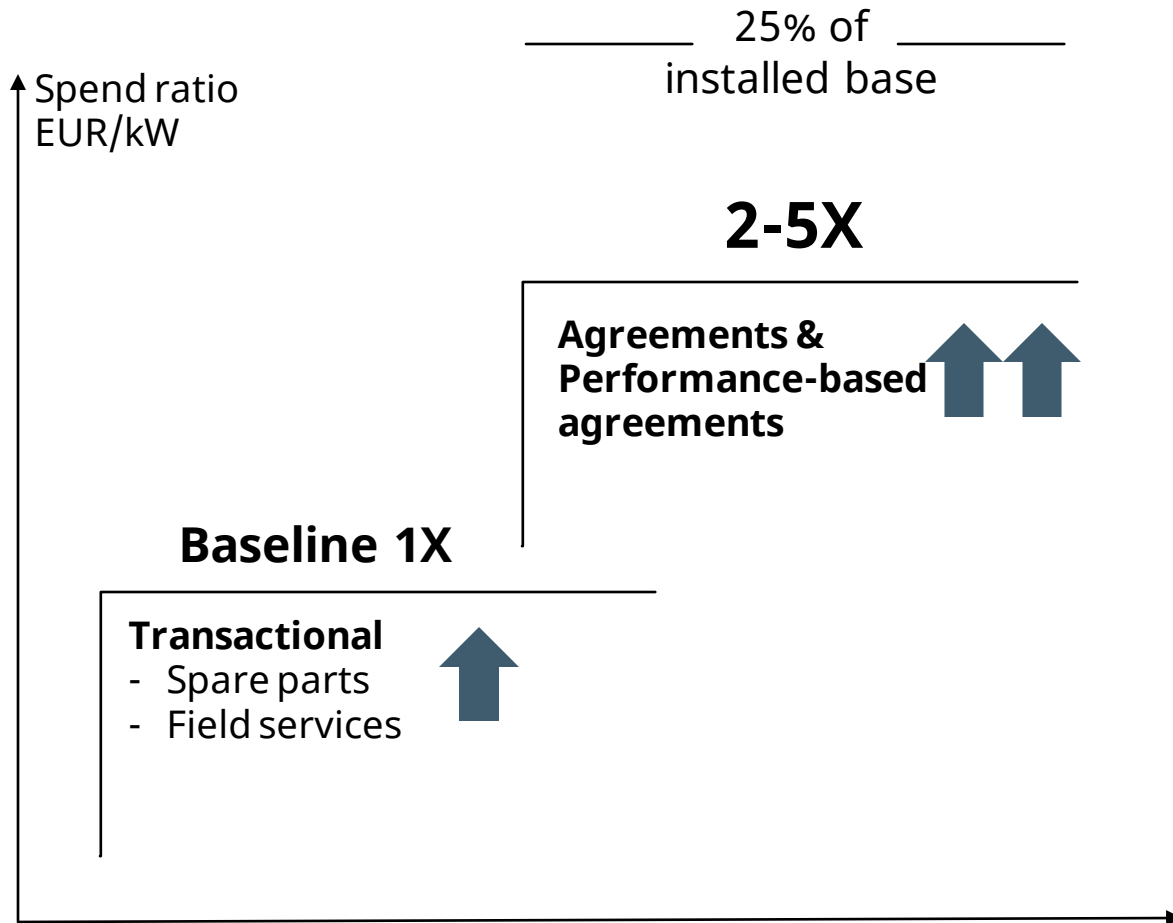
Limited additional CAPEX needed to facilitate the growth

# Service net sales by business





# Performance-based agreements have significant growth potential, both in Marine and Energy



Moving up the service value ladder

 Growth potential

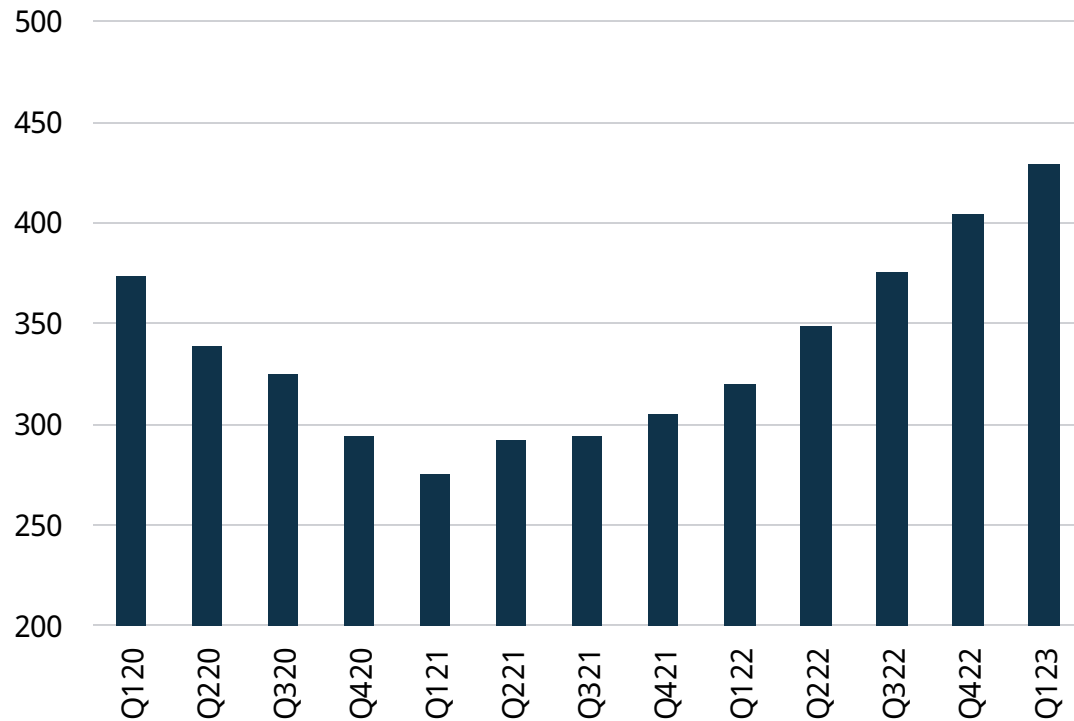
## Enablers for growth

- Optimised asset performance for our customers
- Leveraging connectivity, big data, machine learning and extensive service network
- Successful experience from several projects in Marine and Energy

# Positive development in both Marine and Energy service business

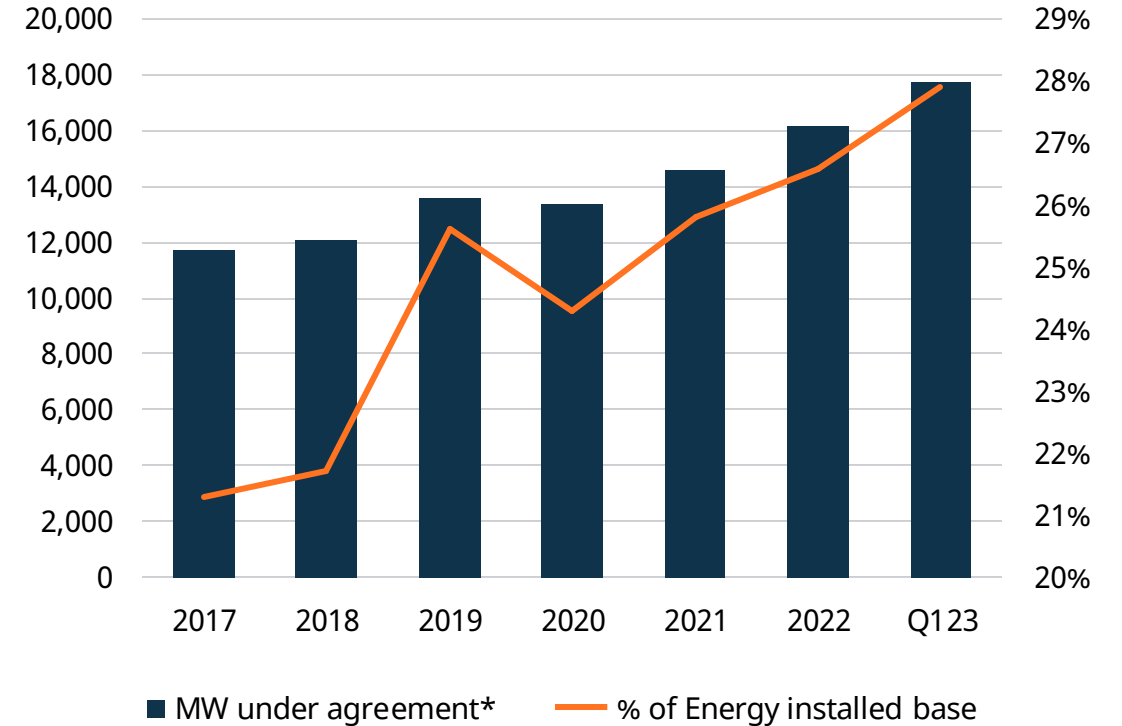
## Marine Power net sales from installations under agreement

MEUR, 12m rolling



## Energy service agreements

MW



\* Includes agreements covering both installed assets and assets to be installed in the future

# Profitability drivers for 2023

## + Supporting drivers

- Growth of service business
- Continued decarbonisation push in both the energy and marine markets
- Profitability improvements in Energy Storage and Voyage Business
- Continued cost optimisation
- Strong order book both in new equipment and services
- Lower value of new equipment orders sold with "pre-war" prices

## + / - Uncertainties

- Geopolitical tensions
- Potential trade restrictions / trade wars
- Recession risk

## - Negative factors

- Wage inflation
- Costs of energy:
  - fuel costs (for testing)
  - gas prices and availability

# Strong presence in sustainable development indices

Member of  
**Dow Jones  
Sustainability Indices**  
Powered by the S&P Global CSA



**Sustainability Yearbook**  
Member 2021  
**S&P Global**



FTSE4Good



S&P Europe 350 ESG Index



# Wärtsilä's ESG Agenda in brief

# E

## **Ambitious decarbonization targets for 2030**

- Portfolio ready for zero carbon fuels
- Carbon neutrality in own operations

# S

## **Good Corporate Citizen and Responsible Employer**

- High ethical standards
- Diversity in focus
- Strive for safety

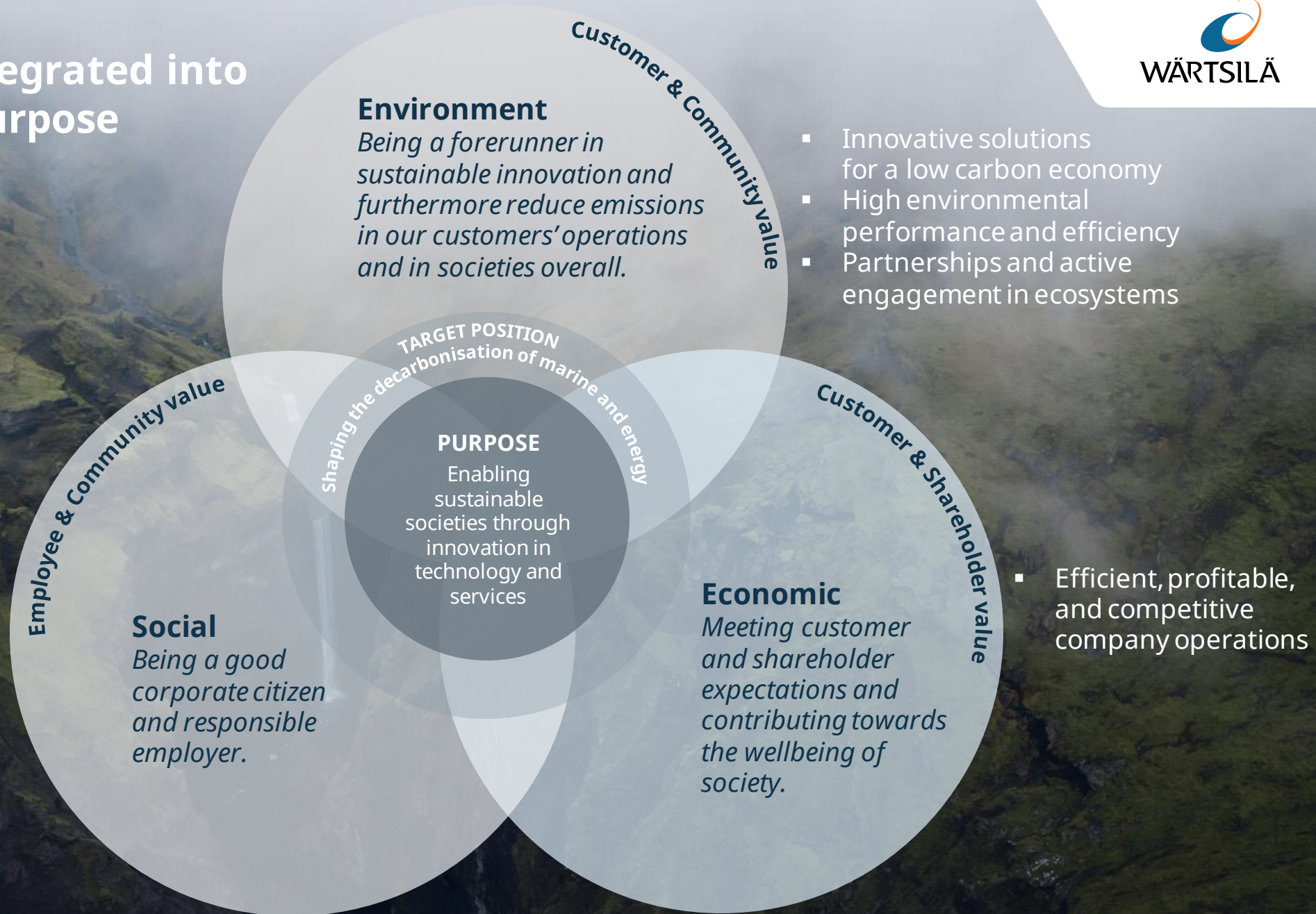
# G

## **Effective Governance model**

- Sustainability matters embedded



# Sustainability is integrated into our strategy and purpose



- Innovative solutions for a low carbon economy
- High environmental performance and efficiency
- Partnerships and active engagement in ecosystems

- High ethical standards
- Responsible employer offering, interesting and exciting workplace
- Equal opportunities and diversity
- Hazard free working environment

- Efficient, profitable, and competitive company operations










# Decarbonising our own operations requires a wide range of actions "SET FOR 30"

## OUR MAIN DECARBONISATION INITIATIVES

2021

2030

-  Energy efficiency measures +/-€
-  Low emission company vehicles +/-€
-  Heat pumps in heating +/-€€
-  R&D and factory engine testings - reduced time +/-€
-  Self-generation and green electricity +++/€€€
-  Simulations and other technologies +/-€
-  Replacing fossil fuels with alternative fuels +++/€€€



+ GHG reduction potential € Cost to reduce

# Wärtsilä “Set for 30” is progressing well

Variety of concrete actions have been taken – some examples



Green electricity purchasing fully in use in Finland



Solar panel investment in Bermeo Spain



Environmental standards for selecting new facilities in use



Electric Vehicle policy defined and being rolled out



Heat pumps installed in server room in Norway



Intelligent energy meters installed in Norway - leakages detected



Electric Forklift policy defined and being rolled out



Variety of actions identified to reduce engine testing time

# Set for 30



# Wärtsilä's focus on social responsibility

## Strong ethical culture



Fair competition  
Trade compliance  
Anti-corruption  
Human and Labour Rights

- Clear policies and instructions
- Ethical training programmes and transparent communication
- Effective compliance programmes

## A responsible employer



Equal opportunities and diversity  
Fair employment practices  
Well-being of our employees  
Talent and leadership development

- Global policies and processes
- Training programmes and effective communication
- Co-operation and consultation with our employees

## A Safe place to work



Strong safety culture  
Providing means for safe work  
Product design principles

- Employee and leadership engagement
- Consistent safety competencies
- High quality tools and protective equipment
- Robust risk assessment practices
- Incident reporting and investigation
- Emergency preparedness
- Clear supplier requirements
- Supplier assessment process
- Setting contractual obligations
- Monitoring the supplier performance
- Taking necessary actions in case of non-compliance

## Responsible value chain



Human and Labour Rights  
Compliance  
Anti-corruption



# Wärtsilä's Governance Model

## External Audit

Elected by the Annual General Meeting to audit the consolidated and parent company financial statements and accounting records, and the administration of the parent company.

## Internal Audit

Analyses the company's operations and processes, as well as the effectiveness and quality of its supervision mechanisms. The function reports at regular intervals to the Audit Committee.

## Annual General Meeting

The Annual General Meeting is Wärtsilä's ultimate decision-making body.

## Board of Directors

The Board of Directors consists of eight members elected by the Annual General Meeting. They are responsible for the strategic management of the company.

## President & CEO

The Board of Directors appoints the President & CEO, who is in charge of the operative, day-to-day management of the company

## Board of Management

The Board of Management supports the President & CEO.

## Thematic Boards

Thematic Boards preparing and aligning for Board of Management decision on topical matters like strategy, sustainability, cyber, etc

## Shareholders' Nomination Board

The Nomination Board prepares matters pertaining to the appointment and remuneration of the Board of Directors.

## Audit Committee

The committee's responsibilities include monitoring the financial reporting process and the efficiency of the internal control, internal audit, and risk management systems.

## People Committee

The committee's responsibilities include preparing matters concerning the nomination and remuneration of the President & CEO, the CEO's deputy, if any and the members of the Board of Management.



# Wärtsilä has a significant role in decarbonisation transformation



## PURPOSE

Enabling sustainable societies through innovation in technology and services



## COMMITTED TO TARGETS

### Financial targets

- 5% annual organic growth
- 12% operating margin

### Set for 30 – decarbonisation

- A product portfolio ready for zero carbon fuels
- Carbon neutral in our own operations

## ENERGY

Intermittent sources of energy require balancing solutions. By 2030, the balancing power market is expected to grow >10X.

## MARINE

An unprecedented rate of change is being driven by regulations and the demand for green transport. The aim is for shipping to achieve a 50% GHG reduction by 2050.

## TARGET POSITION

Shaping the decarbonisation of marine and energy



## Leading offering to support our customers in decarbonisation

Fuel-flexible engines enabling decarbonisation

Hybrid and battery solutions for maritime

Energy saving technology for improved vessel performance

Emission abatement technologies including maritime carbon capture

Grid balancing engine solutions and energy storage

Power system modelling & optimisation

Decarbonisation services

The broadest service network for marine and energy industries

Digital solutions enabling optimised operations and service



# Advantages of Wärtsilä power plants over combined cycle gas turbines

## Faster startup time

- Combined cycle gas turbines can take over 30 minutes to start, whereas combustion engine power plants can start and reach full load in less than 5 minutes

## Advantages of modularity

- Combustion engine power plants are comprised of multiple generating units

## Better part-load efficiency and flexibility

- Unlike gas turbines, Wärtsilä engine power plants have near full range capability of emissions-compliant turndown

## Better pulse-load efficiency and profitability

- Combustion engine power plants are dispatchable and can adjust load daily, ramping up and down with demand

## Higher ramp rate

- Ramp rate = the rate at which a power plant can increase or decrease output
- Wärtsilä engines can ramp at over 100%/minute. For combined cycle gas turbines, typical ramp rates are around 10%/minute.

## Derating due to ambient temperature

- Combustion engines are less sensible to temperature and humidity

## Fuel flexibility

- Gas turbines have reduced availability and output when running on fuel oils

## Lower water consumption

- A combined cycle gas turbine power plant (CCGT) with a recirculating system = 780 liters/MWh.
- Wärtsilä combustion engine power plant operating in simple cycle on natural gas = 3 liters/MWh.



# Financial development in Q1



## Profitability improved, good development in services

- Order intake increased by 26%
- Net sales increased by 19%
- Good progress in services:
  - Service order intake increased by 21%
  - Service net sales increased by 17%
- The comparable operating result increased by 34%
  - Supported by good development in services
  - Burdened by cost inflation
- Cash flow from operating activities improved

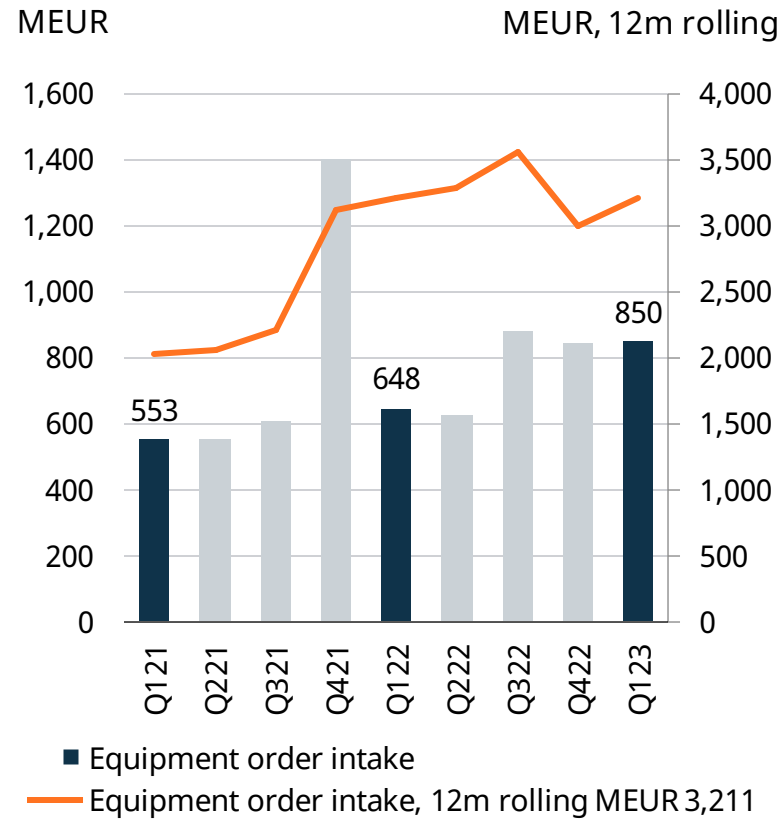


# Key figures

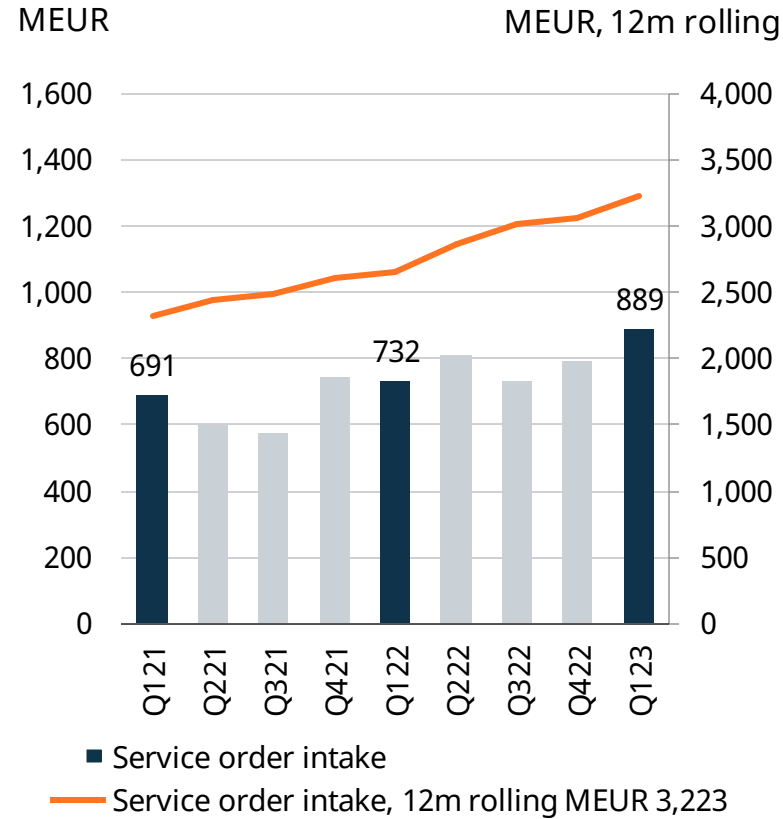
MEUR	1-3/2023	1-3/2022	CHANGE
<b>Order intake</b>	<b>1,739</b>	1,380	26%
of which services	<b>889</b>	732	21%
of which equipment	<b>850</b>	648	31%
<b>Order book</b>	<b>6,153</b>	6,107	1%
of which current year deliveries	<b>3,325</b>	3,334	
<b>Net sales</b>	<b>1,465</b>	1,231	19%
of which services	<b>736</b>	631	17%
of which equipment	<b>729</b>	600	22%
<b>Book-to-bill</b>	<b>1.19</b>	1.12	
<b>Operating result</b>	<b>92</b>	-147	
% of net sales	<b>6.3</b>	-11.9	
<b>Comparable operating result</b>	<b>88</b>	65	34%
% of net sales	<b>6.0</b>	5.3	

# Order intake increased by 26%

## Equipment



## Services



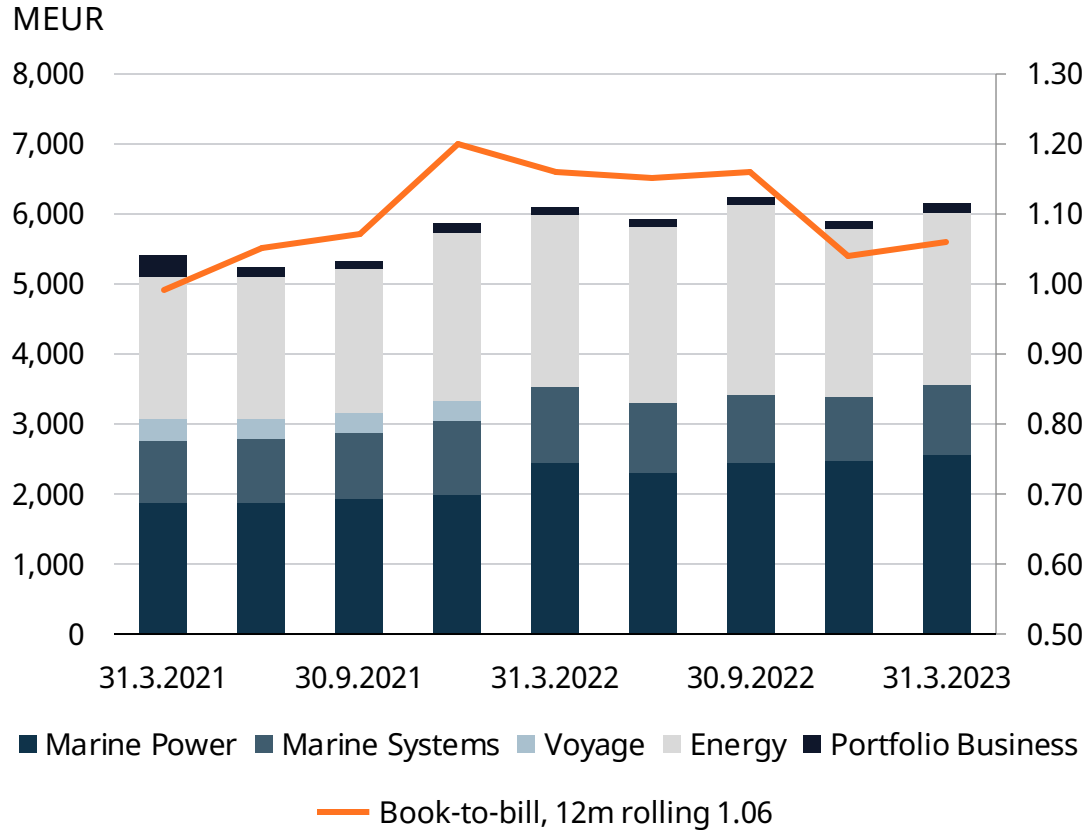
Equipment order intake increased by 31%

Service order intake increased by 21%

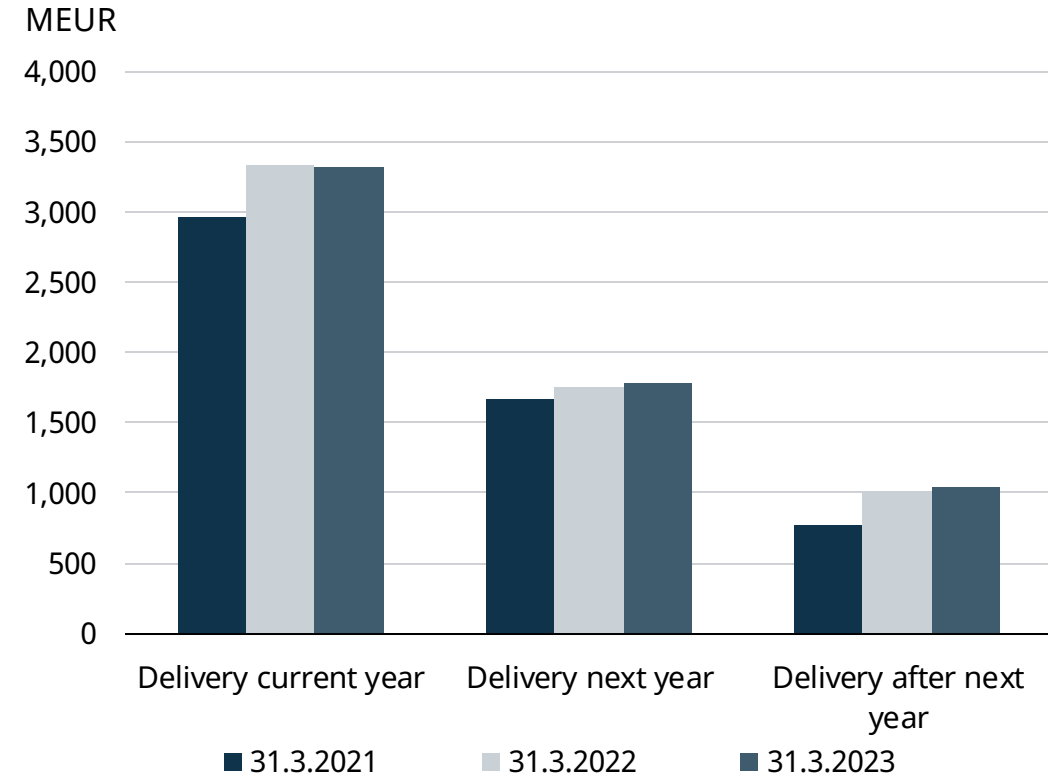


# Strong order book, rolling book-to-bill continues above 1

## Order book by business

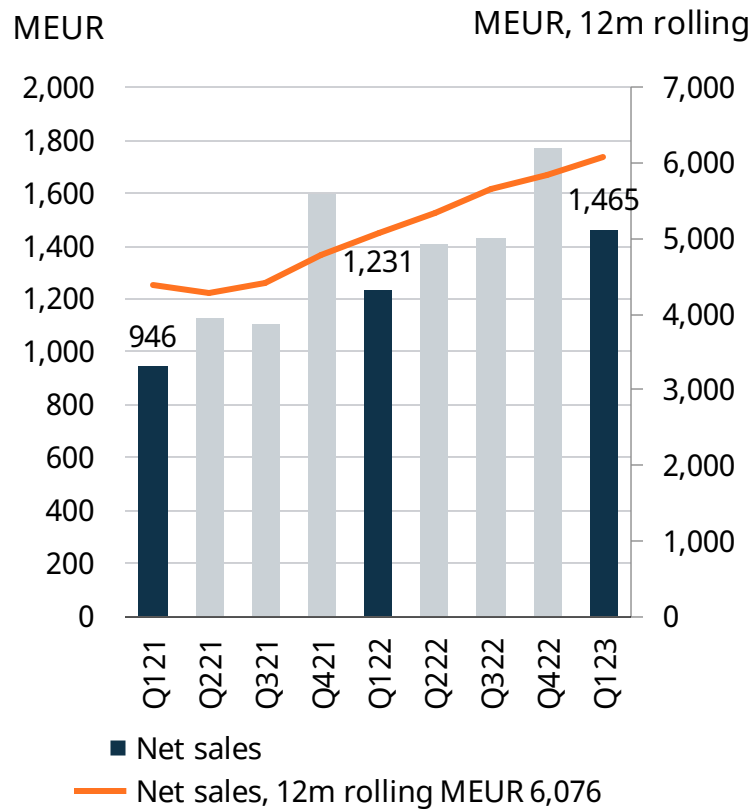


## Order book delivery schedule

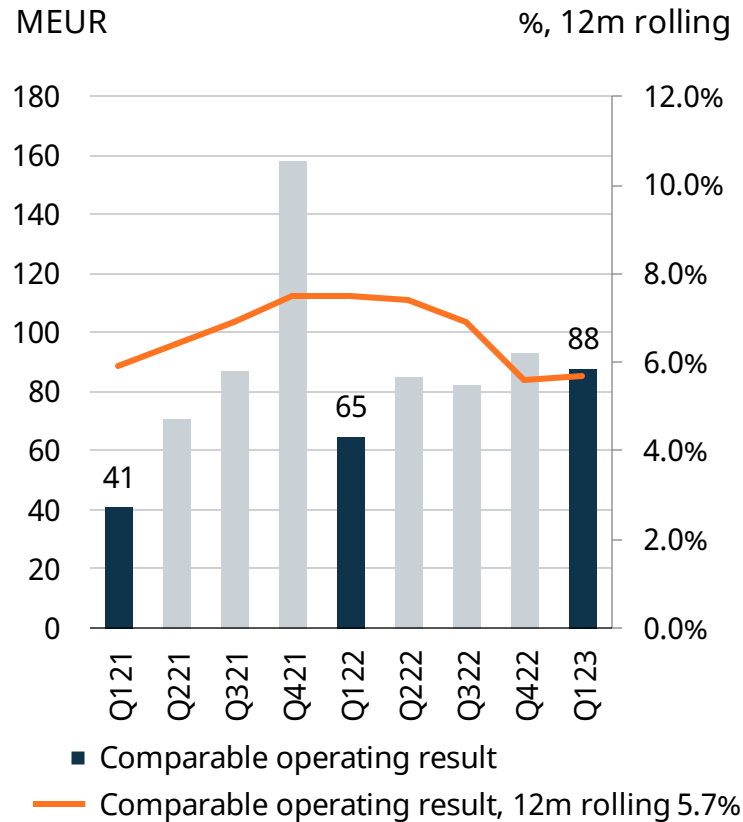


# First quarter highlights

## Net sales



## Comparable operating result



Net sales increased by 19%

Comparable operating result increased by 34%

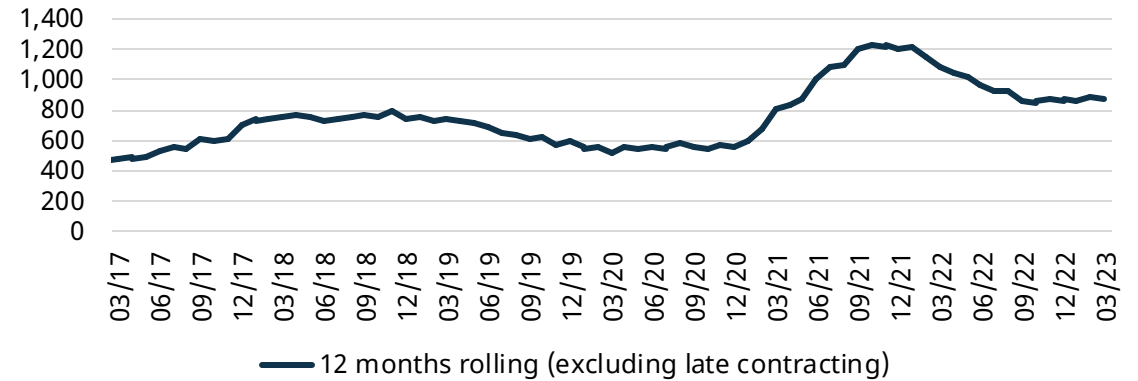
# Economic headwinds moderate growth in marine markets

Utilisation rates in Wärtsilä's key segments improving

- The number of vessels ordered in the review period decreased to 255 (274 in Q1/2022, excluding late reporting of contracts).
- Continued demand for LNG vessels, improving fleet utilisation in the passenger travel segment, and the growing demand for offshore assets supported market sentiment.
- Decarbonisation remains the main underlying trend in shipbuilding and methanol fuel is gaining traction.
- The interest in alternative fuelled vessels remained relatively stable, with 73 (107) reported orders, representing 29% (39) of all contracted vessels.
- Cruise newbuild contracting remained limited with cruise operators continuing to focus on managing their current and upcoming fleet capacity.
- The market sentiment in cruise remained strong and cruise lines report record demand.

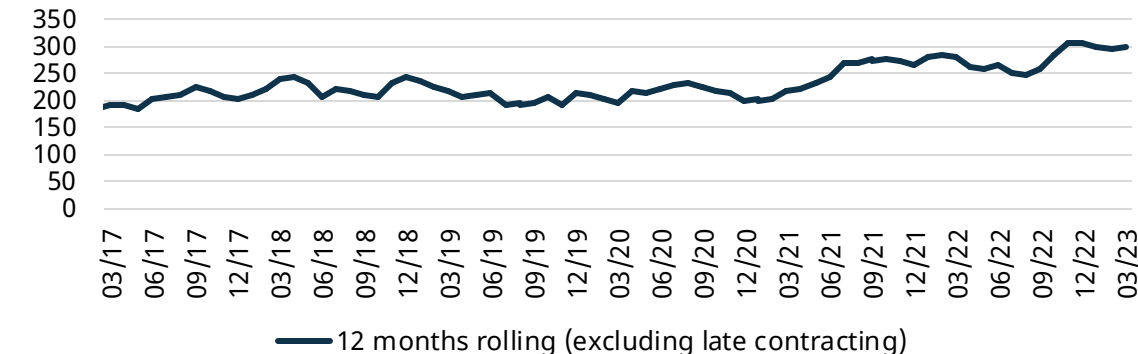
## Total vessel contracting

Number of vessels



## Specialised vessels

Number of vessels



Source: Clarksons Research, 12m rolling contracting as per 4th of April 2023 (+100 gt, excluding late reporting of contracts)  
 Specialised vessels include LNG carriers, LPG carriers, cruise & ferry, offshore, and special vessels.



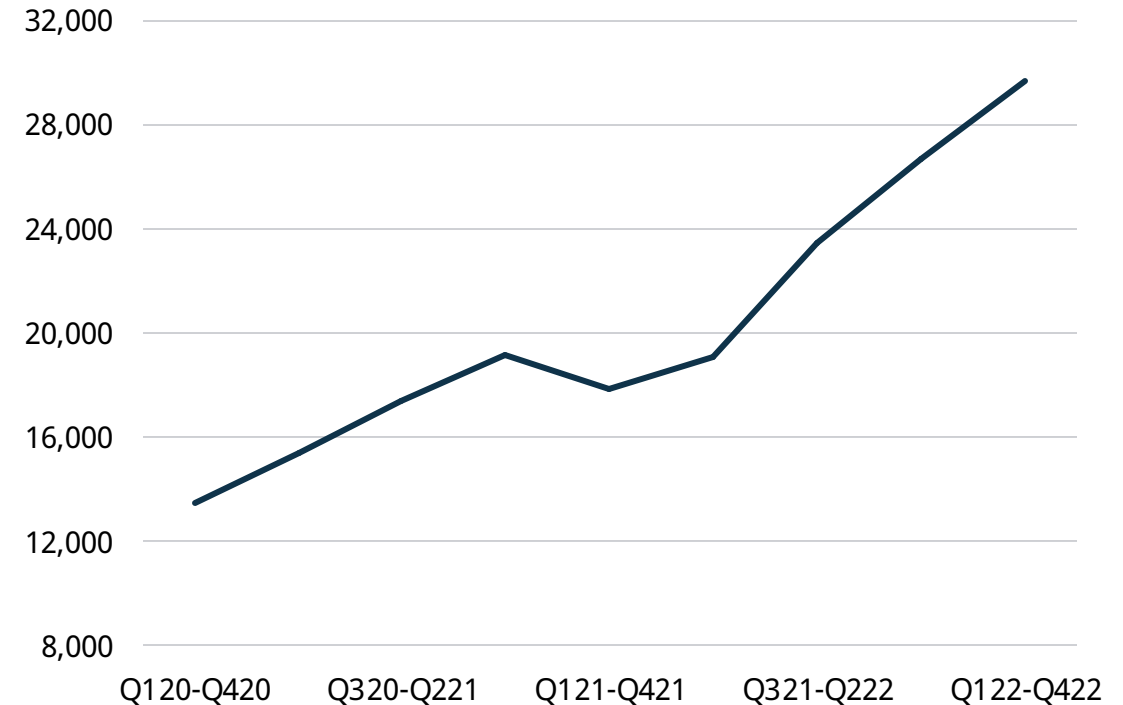
# Energy market outlook – solid long-term opportunities

Fuel price pressure easing but not over

- The last quarter has brought some relief in fuel and raw material prices whereas rising interest rates have come to cause further uncertainty.
- Although natural gas prices decreased from the extreme levels of last year, they remain high compared to historical levels.
- Global energy transition investment reached a new high in 2022, and supportive policy regarding battery energy storage and clean hydrogen has continued to develop in the first quarter of this year.
- Demand for energy storage solutions continued to grow.
- Wärtsilä’s market share in gas and liquid fuelled power plants decreased to 6% (8).

## Contracting for gas and liquid fuelled power plants <500 MW

MW, 12m rolling

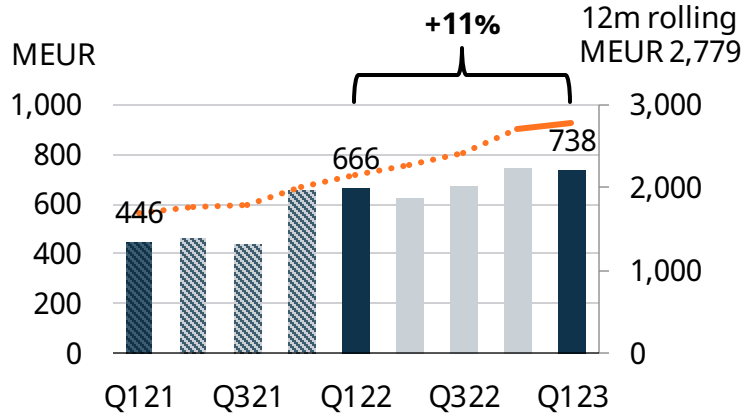


The total market, including also power plants with prime movers above 500 MW, increased by 6% to 65.2 GW during the twelve-month period ending in December 2022 (61.7 at the end of September). The market data includes all Wärtsilä power plants and other manufacturers’ gas and liquid fuelled gas turbine based power plants with prime movers below 500 MW, as well as the estimated output of steam turbines for combined cycles. The data is gathered from the McCoy Power Report. The main gas turbine competitors are GE, Siemens, Mitsubishi, and Ansaldo. Other combustion engines are not included.

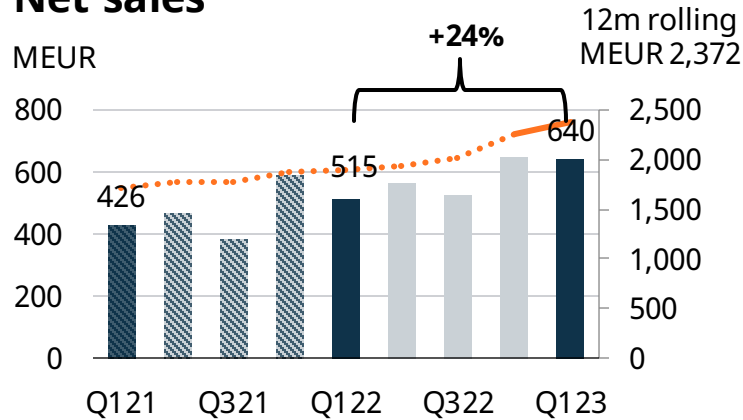
# Marine Power: good development in services

Service order intake increased by 15% and service net sales increased by 18%

## Order intake



## Net sales



## Comparable operating result

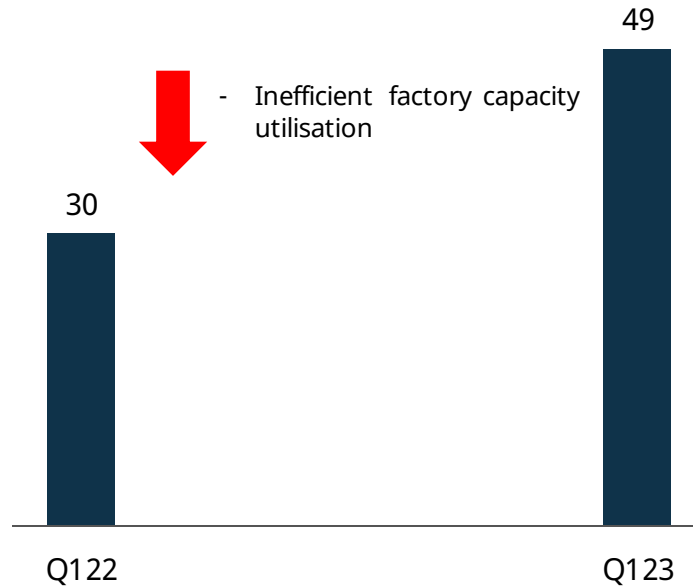
MEUR



- + Good service performance
- + Voyage optimisation

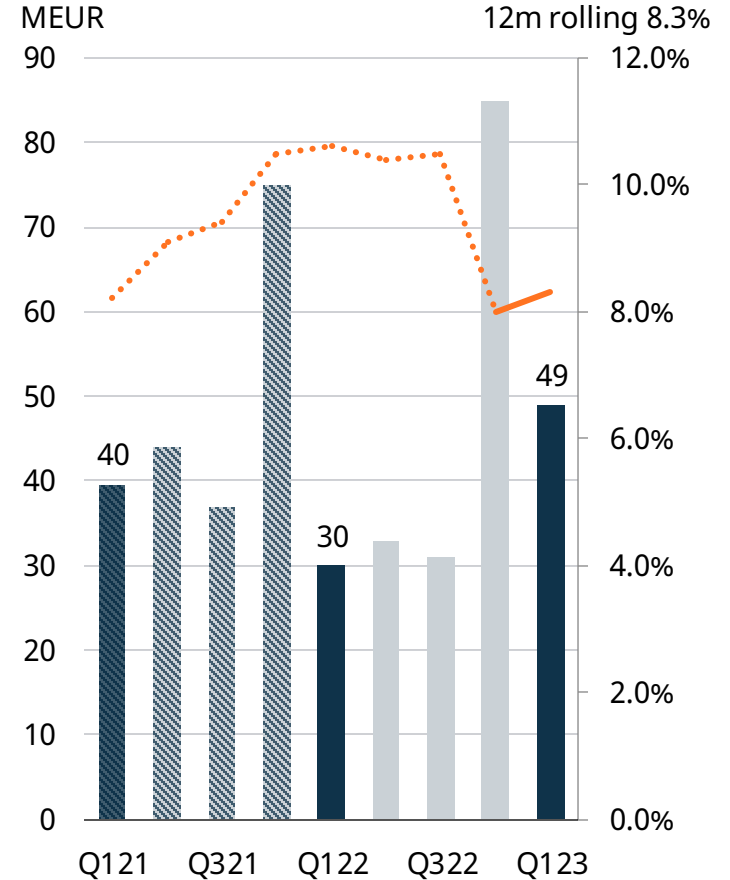


- Inefficient factory capacity utilisation



## Comparable operating result

MEUR

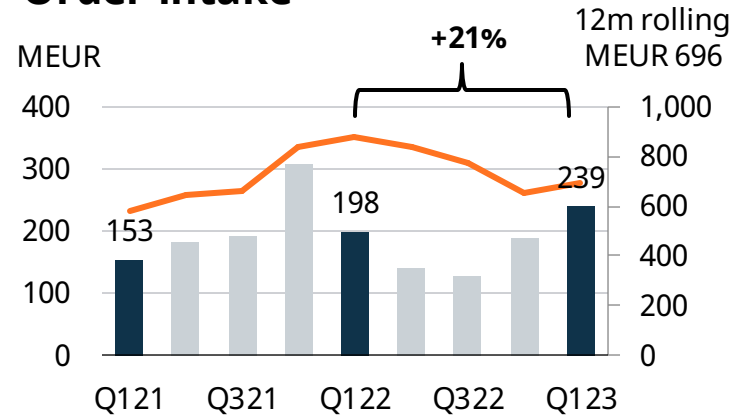


The 2022 figures have been restated to reflect the redefined organisational change of integrating Voyage into Marine Power.

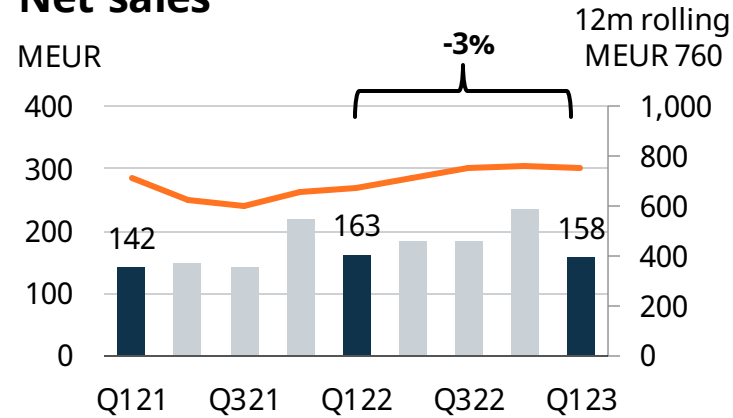
# Marine Systems: order intake increased

Net sales and comparable operating result declined

## Order intake

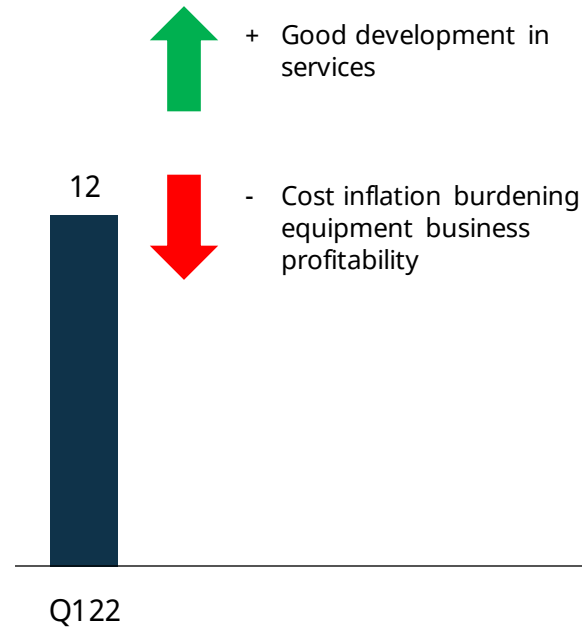


## Net sales



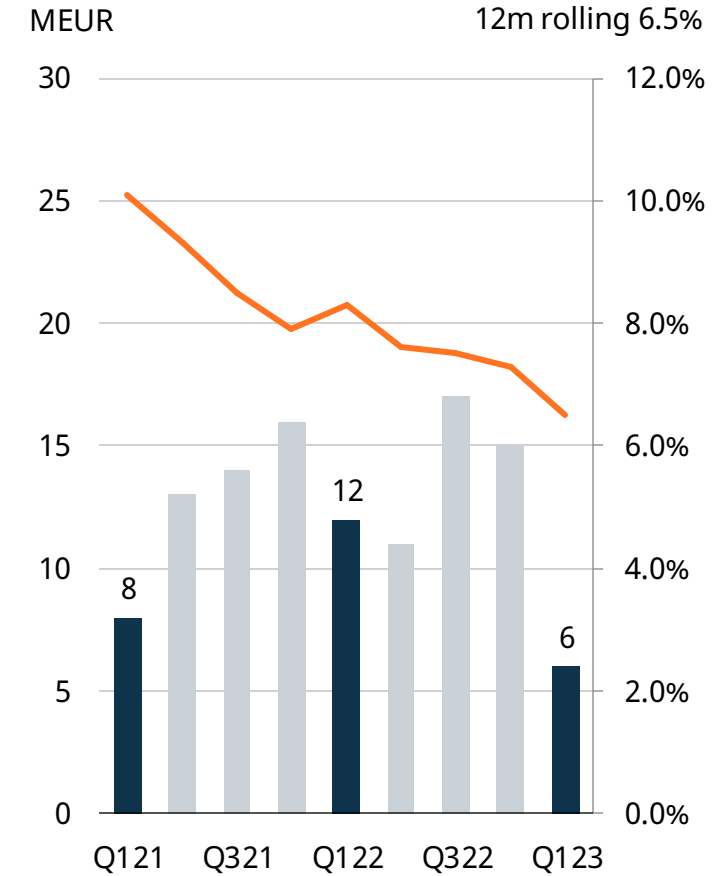
## Comparable operating result

MEUR



## Comparable operating result

MEUR

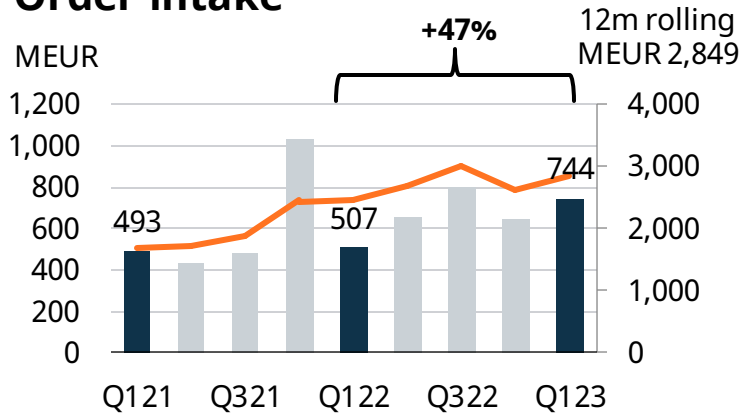




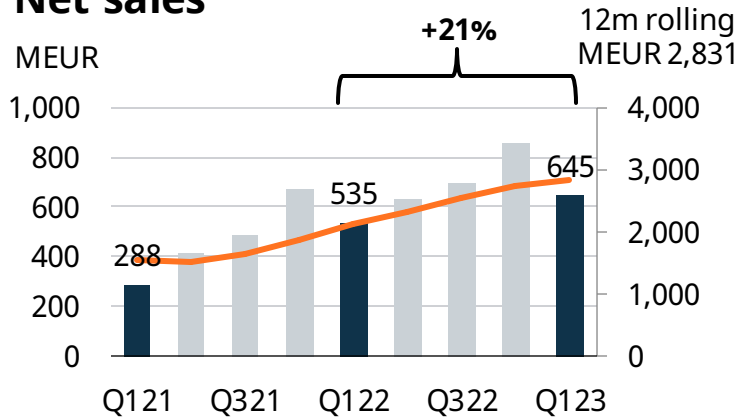
# Energy: all key figures improved

Service order intake increased by 38%, service net sales increased by 17%

## Order intake

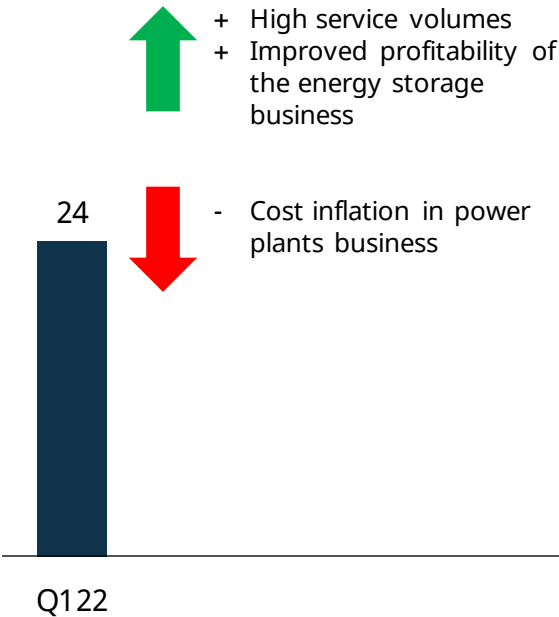


## Net sales



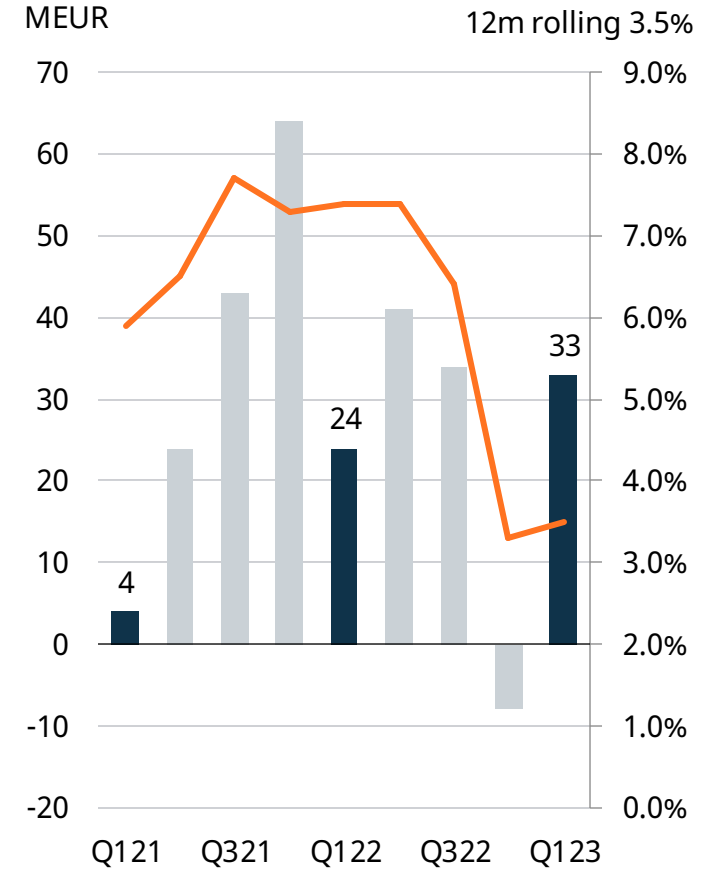
## Comparable operating result

MEUR



## Comparable operating result

MEUR





## Prospects

### Marine

- Wärtsilä expects the demand environment for the next 12 months (Q2/2023-Q1/2024) to be similar to that of the comparison period.

### Energy

- Wärtsilä expects the demand environment for the next 12 months (Q2/2023-Q1/2024) to be similar to that of the comparison period.

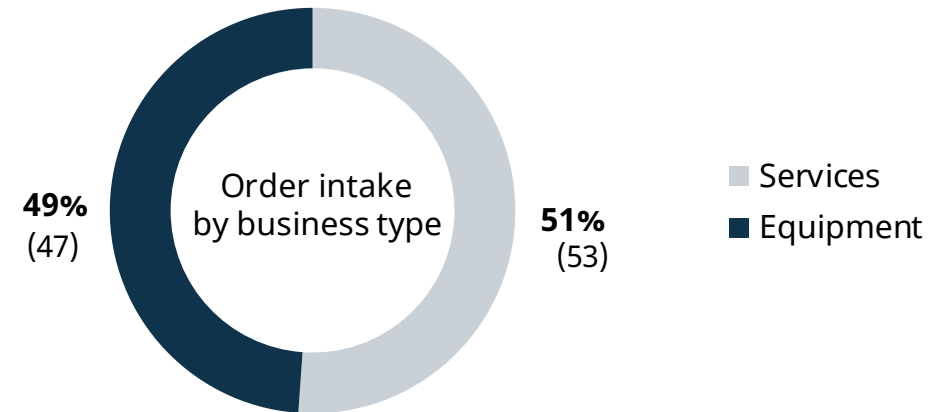
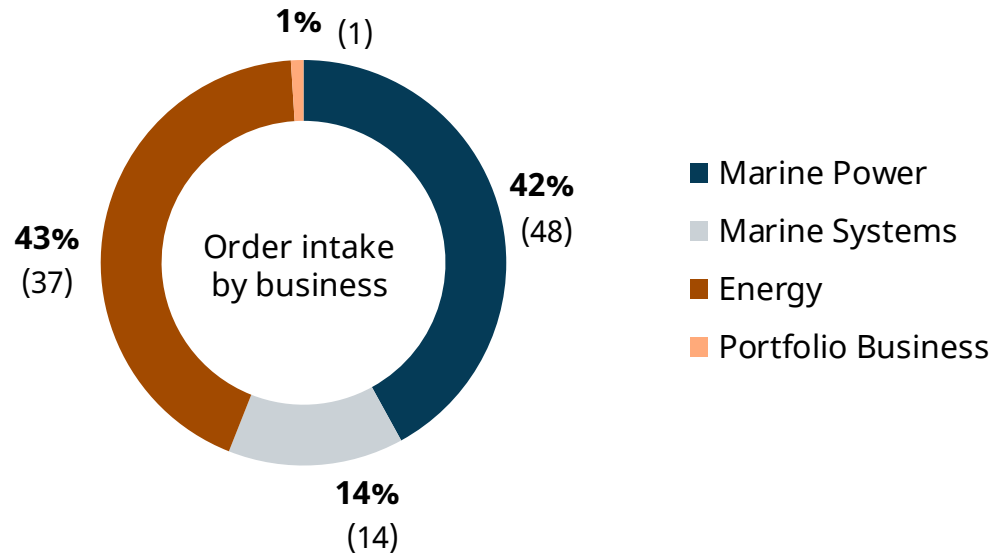
# January–March order intake by customer segment

<b>Marine Businesses</b>	<b>Gas carriers</b>	<b>Cruise &amp; ferry</b>	<b>Offshore</b>	<b>Navy</b>	<b>Special vessels</b>	<b>Merchant</b>	<b>Other</b>
<b>Marine Power</b>							
Equipment	11% (9)	29% (22)	4% (6)	18% (4)	3% (22)	31% (32)	4% (4)
Services	19% (14)	21% (26)	18% (12)	7% (7)	10% (10)	22% (27)	3% (4)
<b>Marine Systems</b>							
Equipment	76% (7)	1% (3)	2% (1)	4% (60)	0% (0)	12% (8)	5% (22)
Services	3% (4)	9% (8)	4% (4)	24% (23)	7% (7)	50% (48)	4% (6)
<b>Marine businesses, in total</b>	26% (11)	19% (20)	10% (8)	10% (16)	6% (12)	24% (27)	4% (7)
Equipment	37% (8)	17% (16)	3% (4)	12% (23)	2% (14)	23% (24)	5% (10)
Services	17% (12)	20% (23)	16% (11)	9% (9)	10% (10)	25% (30)	3% (4)
<b>Energy</b>							
		<b>Utilities</b>	<b>Independent Power Producers</b>		<b>Industrials</b>	<b>Other</b>	
Equipment		55% (45)	44% (15)		1% (39)	0% (0)	
Services		39% (33)	30% (27)		18% (28)	3% (18)	



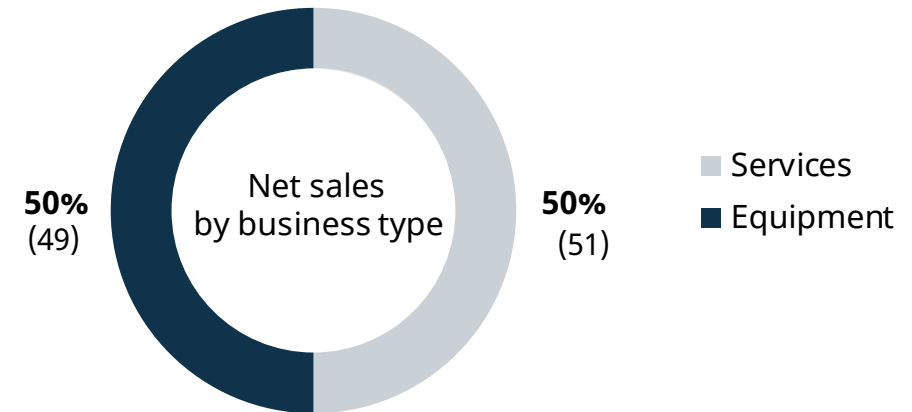
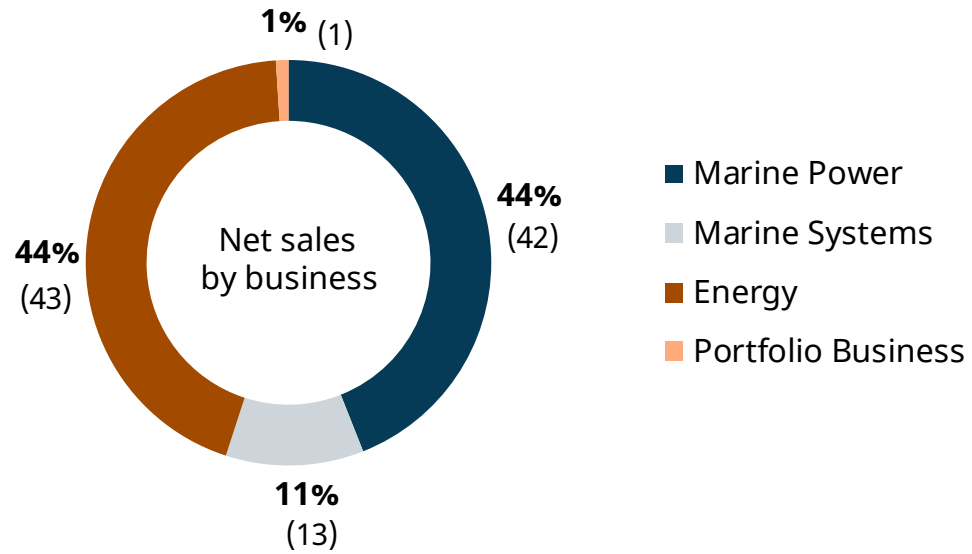
# Order intake

First quarter development



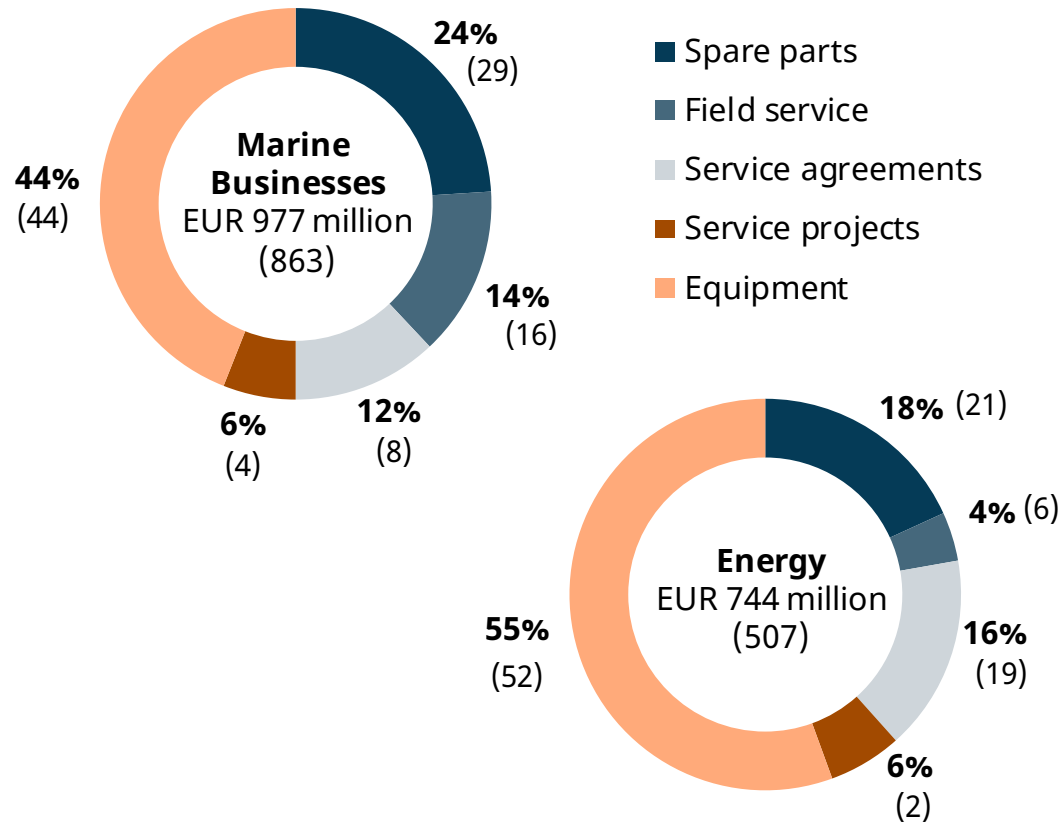
# Net sales

First quarter development

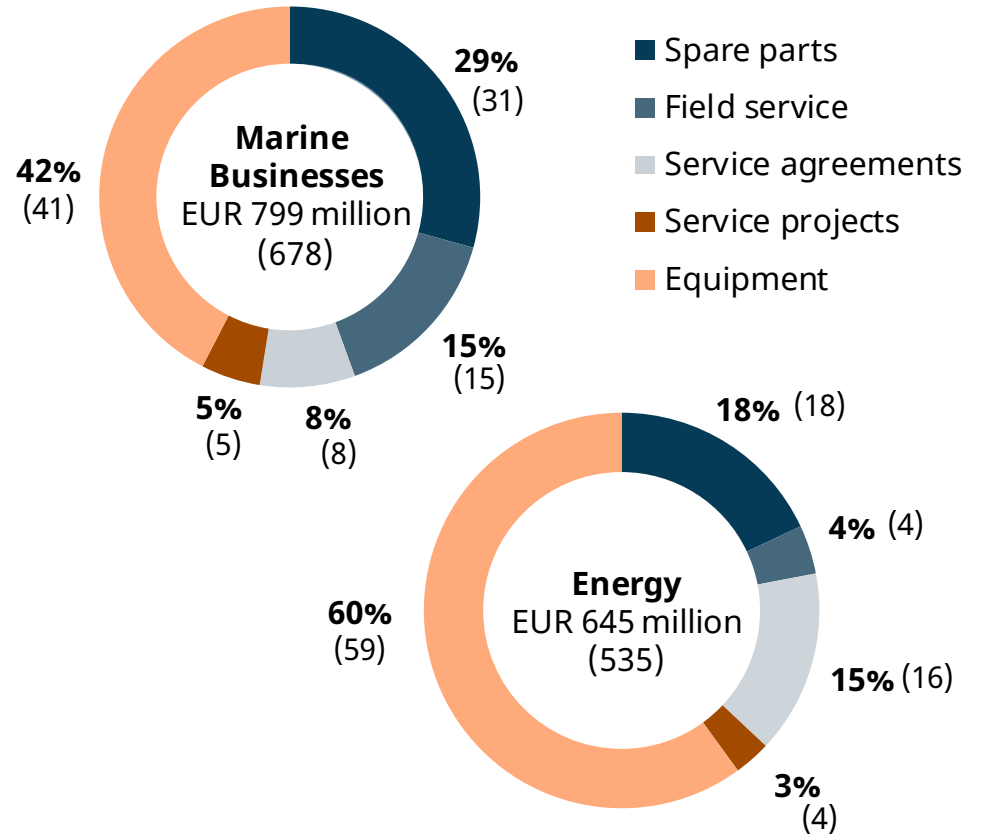


# First quarter development by business type

## Order intake



## Net sales







# Governance

# Board of Management



**Håkan Agnevall,**  
President & CEO



**Arjen Berends,**  
Chief Financial Officer



**Tamara de Gruyter,** President,  
Wärtsilä Marine Systems



**Kari Hietanen,** Corporate  
Relations and Legal Affairs



**Roger Holm,** President,  
Wärtsilä Marine Power



**Teija Sarajärvi,**  
Human Resources

# Board of Directors



**Tom Johnstone CBE**, Chair of the Board, President and CEO of ABSKF 2003–2014



**Mika Vehviläinen**, Deputy Chair of the Board, President & CEO of Cargotec Oyj 2013-2023



**Karen Bomba**, President of Smiths Interconnect 2017–2020



**Morten H. Engelstoft**, CEO & EVP of A.P. Møller - Mærsk A/S, APM Terminals 2016–2022



**Karin Falk**, President, Husqvarna Construction Division



**Johan Forssell**, President and CEO of Investor AB



**Mats Rahmström**, President & CEO of Atlas Copco AB



**Tiina Tuomela**, CFO, Uniper SE



## Largest shareholders 2 May 2023 (Euroclear)

#	Name	Shares	Share %
1	Invaw Invest AB	104,711,363	17.70%
2	Varma Mutual Pension Insurance Company	31,768,252	5.37%
3	Ilmarinen Mutual Pension Insurance Company	16,116,503	2.72%
4	Keskinäinen Työeläkevakuutusyhtiö Elo	6,835,000	1.16%
5	The Social Insurance Institution of Finland	5,517,730	0.93%
6	Svenska Litteratur-sällskapet i Finland Rf	5,171,277	0.87%
7	State Pension Fund	4,700,000	0.79%
8	Holdix Oy Ab	4,139,400	0.70%
9	Jenny and Antti Wihuri Foundation	2,700,000	0.46%
10	Samfundet Folkhälsan i Svenska Finland rf	2,458,200	0.42%
	Nominee registered	200,162,912	33.83%
	<b>Total</b>	<b>591,723,390</b>	<b>100.00%</b>



# Wärtsilä in brief

# Wärtsilä Marine Power – Leading the path towards decarbonisation by developing state of the art technology and enabling adoption of clean fuels

## Key figures in 2022

Order intake  
**2,707 MEUR**

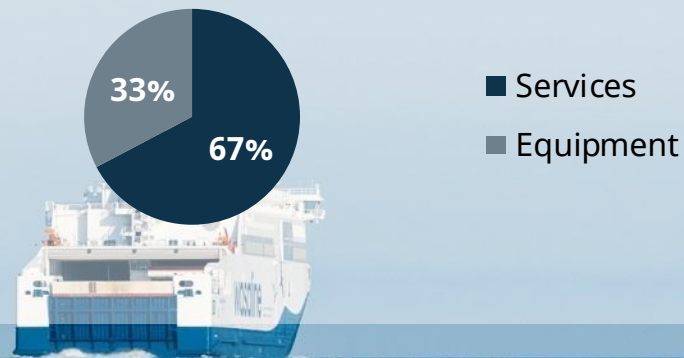
Net sales  
**2,247 MEUR**

Comparable operating profit  
**179 MEUR**  
**8.0% of net sales**

## Share of total net sales in 2022



## Net sales by business type in 2022



## Offering

- Multi-fuel 4-stroke engines
- Propulsion systems
- Catalyst systems
- Fuel gas supply systems
- Hybrid and electrification solutions
- Voyage and fleet optimisation
- Services
  - Spare parts and maintenance services
  - Performance based agreements
  - Retrofits and upgrades

## Key customer segments

- Gas carriers
- Cruise & ferry
- Offshore
- Navy
- Special vessels
- Merchant



# Wärtsilä Marine Systems – Solutions for our customers decarbonisation and optimisation journey

## Key figures in 2022

Order intake

**654 MEUR**

Net sales

**765 MEUR**

Comparable operating profit

**56 MEUR**

**7.3% of net sales**

## Share of total net sales in 2022



## Net sales by business type in 2022



## Offering

- Gas solutions
  - Cargo handling systems for gas carriers
  - Liquefaction and gasification systems for various applications
  - Fuel systems and biogas solutions
- Exhaust treatment
- Shaft line solutions

## Key customer segments

- Cruise & ferry
- Gas carriers
- Offshore
- Merchant
- Navy
- Special vessels

# Wärtsilä Energy – Towards a 100% renewable energy future

## Key figures in 2022

Order intake  
**2,612 MEUR**

Net sales  
**2,721 MEUR**

Comparable operating profit  
**91 MEUR**  
**3.3% of net sales**

## Share of total net sales in 2022



## Net sales by business type in 2022



## Offering

- Future-fuel enabled grid balancing power plants
- Hybrid solutions
- Energy storage and optimisation technology, including the GEMS Digital Energy Platform
- Lifecycle services

## Key customer segments

- Utilities
- Independent Power Producers (IPPs)
- Industrial customers

# KEY FIGURES 2022

Order intake  
**6,074 MEUR**

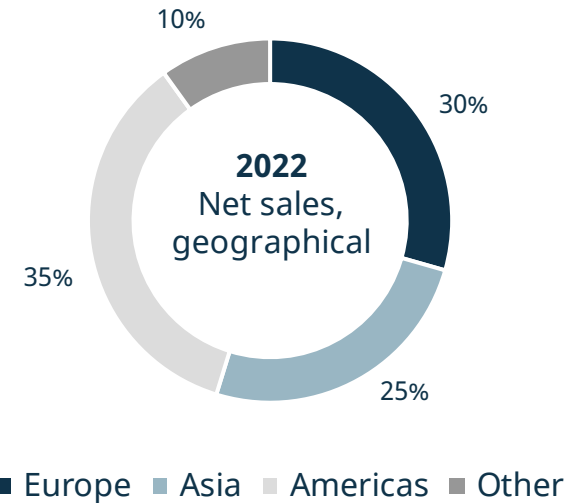
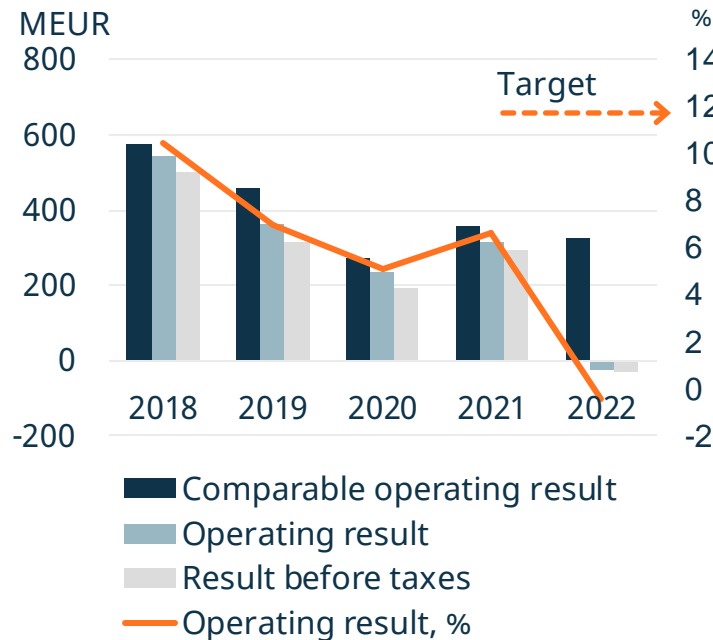
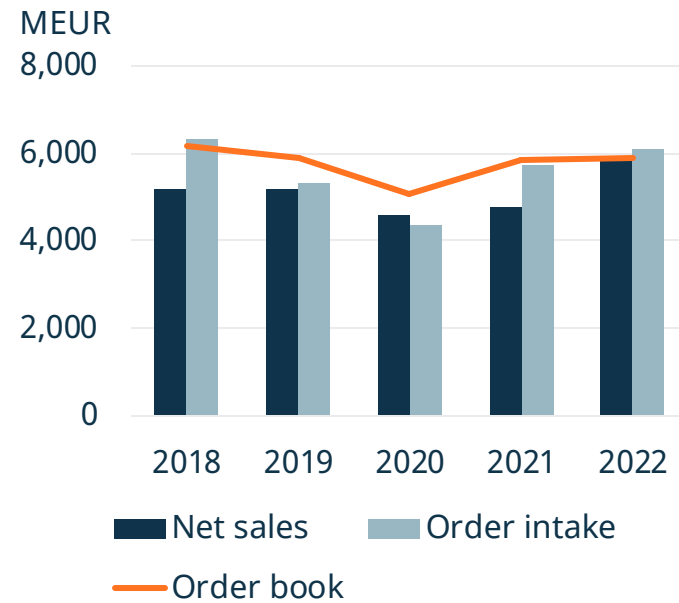
Net sales  
**5,842 MEUR**

Comparable operating result  
**325 MEUR**  
**5.6% of net sales**

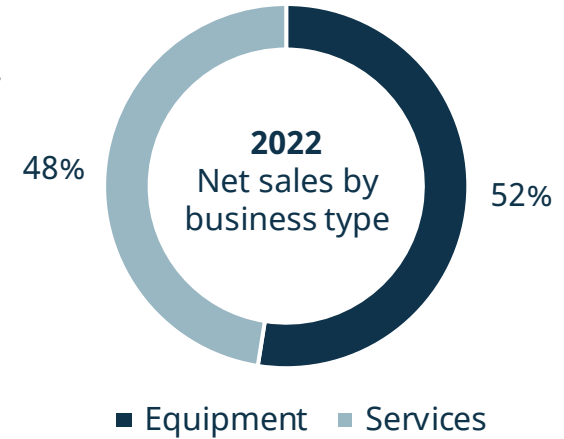
Operating result  
**-26 MEUR**  
**-0.4% of net sales**

Cash flow from operating activities  
**-62 MEUR**

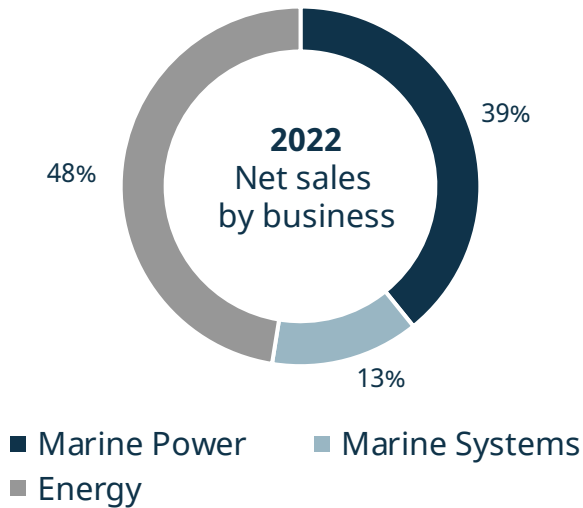
Personnel  
**17,500**



■ Europe ■ Asia ■ Americas ■ Other



■ Equipment ■ Services



■ Marine Power ■ Marine Systems ■ Energy

Investor relations

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Clear financial targets and strong commitment to realise them



Robust capital allocation principles and active portfolio management



Notable opportunity in retrofits and conversions



Extensive service network, positioned for growth both in transactional services and performance-based agreements

- High performing teams
- Performance excellence and robust execution
- Continuous improvement
- Cost structure – actions taken when necessary

## Strong track record in innovations

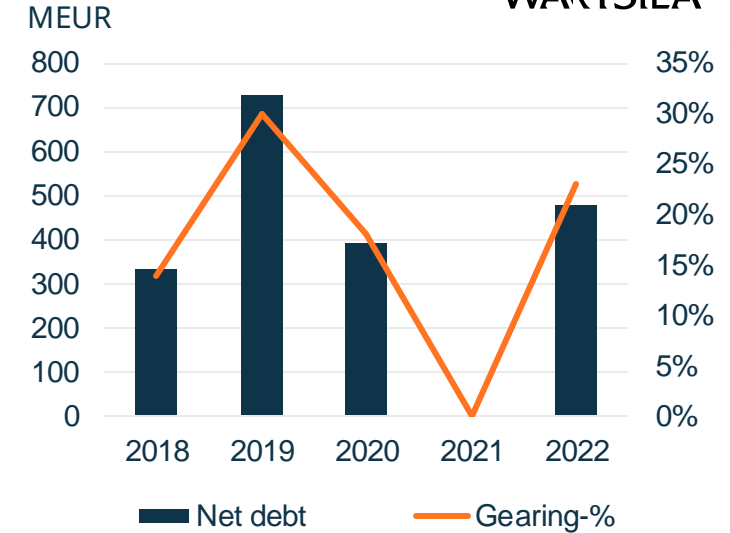
Investing ~3% of net sales on R&D yearly

**Today:** engines run on biofuels, methanol, up to 25% hydrogen blends

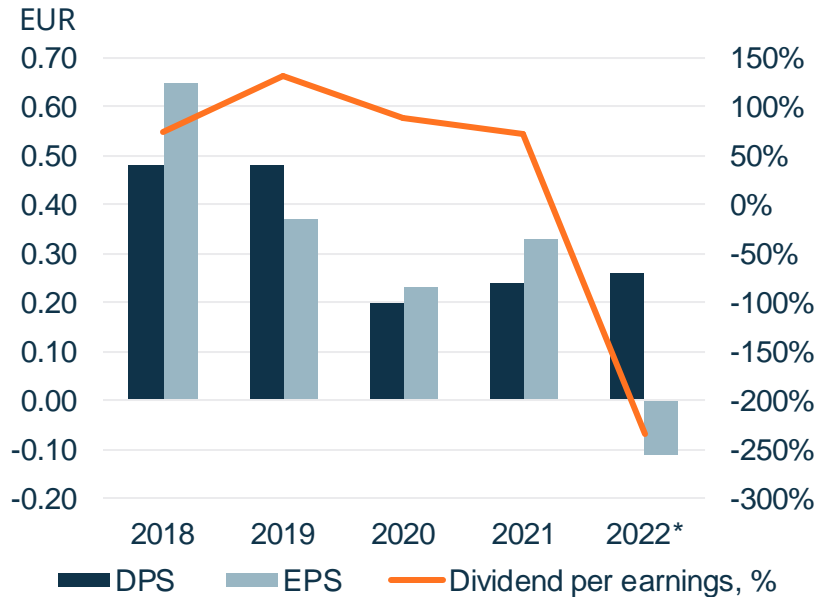
**By 2023:** pure ammonia fuel engine concept ready

**By 2025:** pure hydrogen fuel engine concept ready

## Solid balance sheet



## Dividend



## Financial targets

**Net sales**  
5% annual organic growth

**Profitability**  
12% operating margin

**Capital structure**  
Gearing below 0.50

**Dividend**  
Distribute a dividend of at least 50% of earnings

## Capturing opportunities arising from decarbonisation

### Marine

- Increasing environmental regulations
- Demand for green sea transport, driven by companies' environmental commitments to their customers
- Need for fuel flexible engines

### Energy

- Country climate pledges
- Coal phase-out
- Renewables growth and the consequent need for balancing power and energy storage
- Need for fuel flexible engines

# Main competitors

## Engines

MAN  
Himsen  
Rolls-Royce

## Other marine solutions

Kongsberg  
Alfa Laval  
GE  
Siemens  
Schottel

## Other energy solutions

GE  
Siemens  
Tesla  
Fluence

# Customer base

## Marine businesses

Ship owners  
Ship operators  
Ship management  
companies  
Charterers  
Shipyards  
Port authorities

## Energy

Utilities  
Independent Power Producers  
(IPPs)  
Industrial customers

## For more information, call us or visit our [Investors page](#)

### Next upcoming IR events

- 8 May – 11 May 2023, US Roadshow
- 5 June 2023, IR theme call: Service
- 6 June 2023, Site visit to Schiedam, Netherlands
- 8 June 2023, JP Morgan CEO conference
- 29 June 2023, Silent period begins

### Wärtsilä Investor Relations

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**WÄRTSILÄ**