

# Wärtsilä

Shaping the decarbonisation of marine and energy  
Roadshow presentation

January 2024



WÄRTSILÄ

# Wärtsilä – Shaping the decarbonisation of marine and energy

Wärtsilä simplifies the Group structure from 1st January 2024 onwards with two main businesses:

## Marine

Our offering of engines, propulsion systems, hybrid technologies and integrated power transmission systems and related services support our customers in moving towards carbon neutrality.

## Energy

We support the change towards a future where electricity is produced with 100% renewable energy by offering grid-balancing power plants, hybrid solutions, energy storage and optimisation technology.

## Committed to financial targets

### Net sales

5% annual organic growth

### Profitability

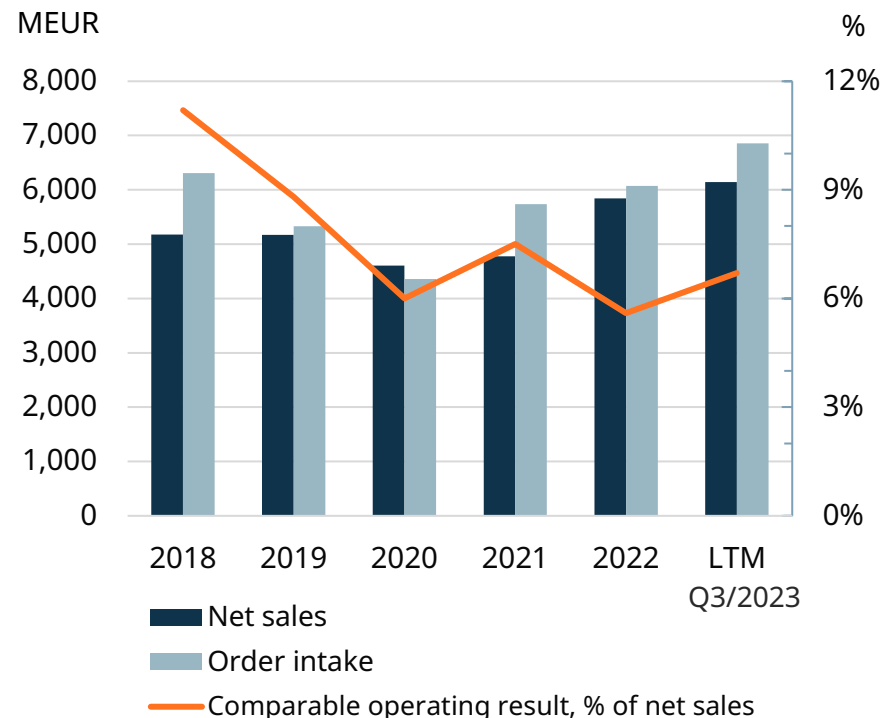
12% operating margin

### Capital structure

Gearing below 0.50

### Dividend

Distribute a dividend of at least 50% of earnings



## Key growth opportunities



**Energy Storage & Optimisation:** Fast growing demand for power system optimisation solutions



**Marine newbuild driven by decarbonisation:** Uptake of solutions ready for sustainable fuels and recovery in passenger and offshore segments



**Moving up the service value ladder in Marine and Energy:** Continuous growth in agreement coverage



**Energy Engine Power Plants new build driven by balancing and baseload:** Gradual shift to renewables



**Portfolio Business divestments**

## Strong track record in innovations

**Investing ~4% of net sales on R&D yearly**

**Today:** engines run on biofuels, methanol, up to 25% hydrogen blends, pure ammonia fuel engine concept

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





## 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 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

**Transform** –  
attractive growth opportunities at the center of the decarbonisation transformation

**Perform** –  
clear path for operational improvements and increased profitability

# Significant milestones reached in strategy execution

1) LTM Q3/2023 vs. 2021 net sales

## Transform

- **Market leader in:**
  - 4-stroke medium speed main engines
  - Engine power plants
  - Marine hybrid solutions
- **Technology leader** in green fuels
- **Pioneer** in marine carbon capture & storage
- **Significant growth** since 2021:
  - 25%<sup>1)</sup> in services
  - +17% in thermal balancing installed base
  - 3X<sup>1)</sup> in Energy Storage & Optimisation

## Perform

- **Good growth in service agreements** by leveraging digital solutions
- **Improved quality of new build order book margins**
- **Turned Energy Storage & Optimisation to profit**
- **Divested businesses and optimised footprint**
- **Revitalised team and organisation**

**Clear path to 12% operating margin**



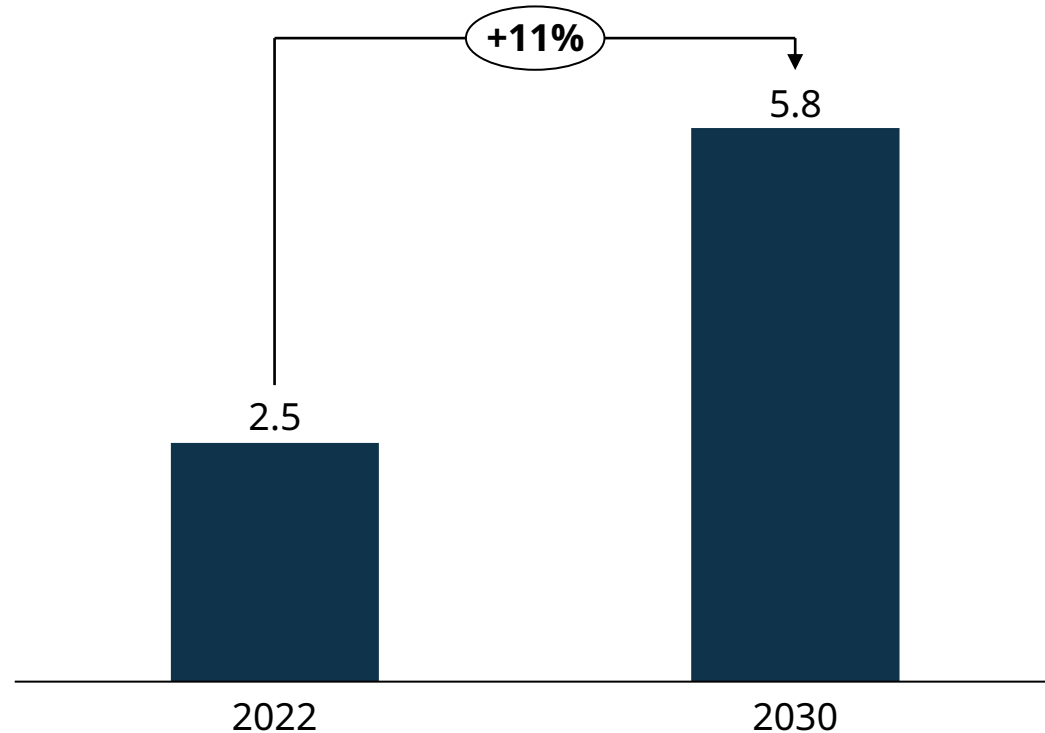


# Transform – attractive growth opportunities at the center of the decarbonisation transformation

# Strong market fundamentals and the decarbonisation transformation will support profitable growth in Marine business

## Key target segments

Annual newbuild contracting of 4-stroke medium speed main engine-powered units (GW)<sup>1</sup>; CAGR



- **IMO MEPC 80** has adopted a **revised strategy** to reduce GHG emissions by 20% by 2030, 70% by 2040 and to net-zero by 2050
- **In the EU**, regulatory landscape will **double fuel costs** up to 2030<sup>2</sup>)
- **Small but growing market for green transport** driven by corporate carbon reduction pledges
- Switch to **carbon neutral and zero carbon** fuels will be **progressive**
- **Drop-in fuels, hybrid solutions and abatement technologies** will be **key** to reach short-term reduction targets
- Long-term reduction targets will require a **fundamental shift towards sustainable fuels and abatement solutions**

Source: Clarksons 1) cruise, ferries, offshore, merchant, and other (incl. fishing, dredgers, support units, yachts, navy, tugs etc.) 2) assuming 5,000 tons/year VLSFO consumption subject to Fit for 55, VLSFO at 550 EUR/ton; EU allowances from 100 EUR/ton today to 230 EUR/ton in 2050



# Wärtsilä is a global technology and service leader in shaping the decarbonisation of marine

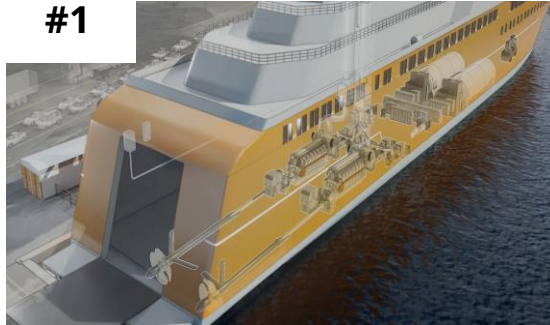
#1



## Industry leading medium speed engine offering

- Biofuels and methanol available already today
- Product industrialisation for ammonia ongoing
- Fuel conversion packages for both 4-stroke and 2-stroke engines available already today

#1



## Industry leading hybrid solutions

- Hybrid-electric to challenge 2-stroke engines as prime-mover for LNG carriers
- 6% more cargo space, 10% lower fuel consumption<sup>1)</sup>
- Lower maintenance costs compared to 2-stroke

Pioneer



## Pioneer in carbon capture & storage

- Complementary technology to engines
- EUR ~10bn market opportunity in the next 10 years<sup>2)</sup>
- Commercial release in 2025, CCS-ready scrubbers available already today

+60%  
of net sales<sup>3)</sup>



## Global services network to ensure maximum uptime & fuel efficiency

- Transactional: spare parts & field services
- Enhanced support & technical management agreements
- Optimised maintenance & guaranteed asset performance leveraging digital solutions

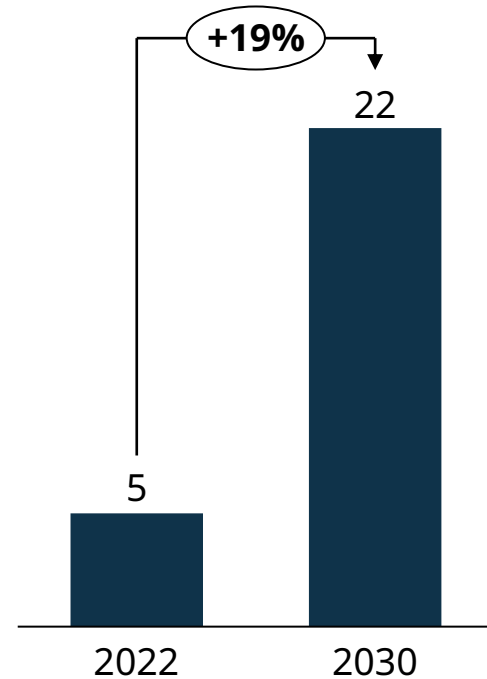
1) example on 174,000 cbm LNG carrier 2) estimated market size for newbuild and retrofit 3) LTM Q3/2023 (Marine Power)



# The increasing share of renewables and need for balancing power will support profitable growth in Energy business

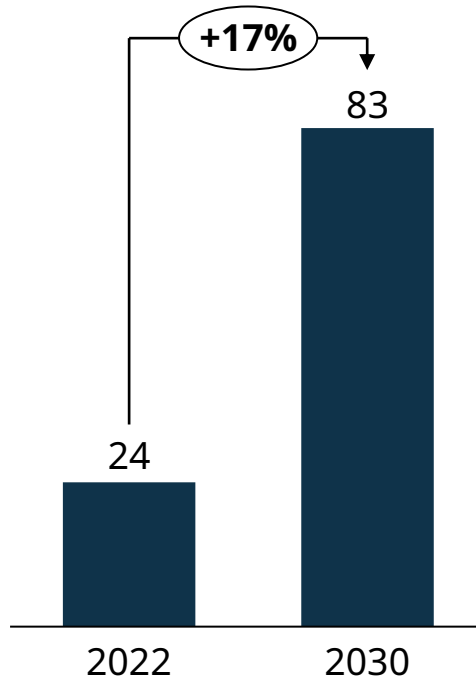
## Thermal balancing

Addressable market  
GW; CAGR



## Energy storage

Addressable market  
GWh; CAGR



- **Thermal balancing** market is **expected to grow +4X by 2030** driven by accelerating intermittent baseload. US is an important market for thermal balancing
- Power generation related **regulatory changes support uptake of thermal balancing** (US Federal and State bills, EU electricity market reform and China market reform)
- **Sustainable fuels together with flexible engine power plants balance grids in an affordable and sustainable way**, also for longer shortages in intermittent renewable generation
- **Energy storage incentives in the US** (IRA<sup>1</sup> investment and production tax credits) **support** the energy storage market **growth**. Local regulatory changes in general support the uptake of energy storage

# Wärtsilä is a global leader in engine power plants. Energy Storage & Optimisation has grown ~3X since 2021 and is now profitable

#1



## Industry leading engine power plants<sup>1)</sup>

- Superior operational flexibility through fast ramp-up/ramp-down compared to gas turbines
- Fuel conversion packages available already today
- Hydrogen 25 vol% in pilot operation, full hydrogen technology readiness in 2025

#1-5



## Top 5 in energy storage

- Focus on profitable growth
- Reliable partner with high bankability
- Highest safety standards (recent milestone in passing UL 9540A requirements)
- Leading software (GEMS) for power system optimisation

~40%  
of net sales<sup>2)</sup>



## Global services network to ensure maximum uptime & fuel efficiency

- Transactional: spare parts & field services
- Maintenance & operational support
- Guaranteed performance services
- Outcome-based agreements, including decarbonisation services, leveraging digital solutions



# To support accelerated profitable growth of Energy Storage & Optimisation, we have launched a strategic review of the business

- Energy storage market is expected to grow rapidly, **addressable market to grow +3X from 2022 to 2030**
- Wärtsilä Energy Storage & Optimisation has **grown +30X<sup>1)</sup> since the acquisition of the business and is now profitable**
- Strategic review has been launched to **accelerate profitable growth of the business in a way that benefits customers and creates value for Wärtsilä shareholders**
- **All potential alternatives will be considered.** Such alternatives could include different ownership options of the business from continued full ownership to potential full or partial divestment of the business or other possible strategic alternatives
- **No commitment to a particular timeline** is given. Wärtsilä will disclose the progress and conclusions of the review according to applicable disclosure laws and regulations
- **Wärtsilä continues to develop and invest** in Energy Storage & Optimisation and **remains fully committed to its customers** throughout the strategic review

1) LTM Q3/2023 vs. 2016 net sales





**Perform –**  
clear path for operational improvements and increased profitability



Services is 50% of our net sales with good future growth potential

**EUR ~3bn**

LTM Q3/2023 net sales

**~25%**

Growth in net sales since 2021<sup>1)</sup>

**>90%**

Renewal rate of service agreements

1) LTM Q3/2023 vs. 2021

# We continue to execute our services strategy on all steps of the service value ladder



- Our installed base of medium speed engines is increasing (~5% increase since 2021)
- ~25% growth<sup>2)</sup> in transactional services since 2021
- ~30% of installed base<sup>3)</sup> is under service agreements with further growth potential
- Moving up the service value ladder – agreements and performance-based agreements have 2-5X spend ratio (EUR/kW) relative to transactional services
- Retrofits and upgrades have the potential to grow +2X by 2030

1) customer spend ratio EUR/kW 2) LTM Q3/2023 vs. 2021 net sales 3) 4-stroke engine MW



# Going forward we will benefit from the implemented operational improvements and structural changes

## Quality of revenues

- **Improved quality of new build margins** in current order book
- Energy order book has **higher share of equipment and lower share of EPC deliveries**
- **Energy Storage & Optimisation is now profitable**
- **Voyage losses** have **significantly reduced**

## Footprint & divestments

- **Centralisation of the European engine manufacturing footprint** will gradually lead to **EUR ~35m yearly savings by 2025**
- **Divesting business units** in Portfolio Business which are **diluting Group profitability**



# Strong commitment and a clear path to reach our financial targets

**12%**

Operating margin

**5%**

Annual organic growth

**<0.5**

Gearing

**≥50%**

Dividend of earnings

# Energy transition and decarbonisation driving our >5% organic growth target

LTM Q3/2023 net sales EUR 6.1bn

## Drivers of net sales growth<sup>1)</sup>

Share of  
absolute growth

### ▪ Energy Storage & Optimisation

+++

- Fast growing demand for energy storage and power system optimisation solutions

### ▪ Marine newbuild driven by decarbonisation

++

- Uptake of solutions ready for sustainable fuels, and recovery in passenger and offshore segments

### ▪ Moving up the service value ladder in Marine and Energy

+

- Continuous growth in agreement coverage
- Decarbonisation-driven retrofits

### ▪ Energy Engine Power Plants new build driven by balancing and baseload

+

- Gradual shift to renewables
- The focus on offering equipment rather than EPC decreases revenue expectations but improves our risk profile

### ▪ Portfolio Business divestments

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- Gas Solutions, ANCS, Water & Waste, and Marine Electrical Systems

<sup>1)</sup> drivers' consideration includes the transfer of Shaft Line Solutions and Exhaust Treatment to Marine and Gas Solutions to Portfolio Business



# Services and decarbonisation key drivers towards 12% operating margin

LTM Q3/2023 operating margin 6.0%<sup>1)</sup>

## Drivers of improved profitability<sup>2)</sup>

## Share of absolute improvements

- Moving up the service value ladder in Marine and Energy
- Marine new build driven by decarbonisation
- Energy Engine Power Plants new build driven by balancing and baseload
- Energy Storage & Optimisation
- Portfolio Business divestments
- Continuous improvement
- Cost inflation & related price adjustments

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<sup>1)</sup> excluding EUR 40m provision related to Olkiluoto 1 and 2 nuclear projects taken in Q4/2022 (discontinued nuclear business) as well as EUR 19m provision taken for a single sizeable turnkey project in Gas Solutions in Q2/2023 (discontinued turnkey business) <sup>2)</sup> drivers' consideration includes the transfer of Shaft Line Solutions and Exhaust Treatment to Marine and Gas Solutions to Portfolio Business

# We continue to actively manage our business portfolio

## Marine Systems planned to be discontinued

Effective 1<sup>st</sup> of January 2024

- Further simplification of Group structure
- Gas Solutions has limited synergies with Wärtsilä's marine product portfolio, planned to be moved to Portfolio Business
- Exhaust Treatment and Shaft Line Solutions planned to be moved to Marine Power
- Improving quality of revenues

## Portfolio Business

Plan to divest. Timeline subject to internal separation & turnaround

- Water & Waste
- Marine Electrical Systems
- Automation, Navigation & Control Systems
- Gas Solutions

<b>LTM Q3/2023</b>	<b>Group total</b>	<b>Group total excl. Portfolio Business</b>
Net sales, EURm	6,142	5,480
Comparable operating margin <sup>1)</sup>	7.7%	8.7%
Operating margin <sup>1)</sup>	6.0%	8.2%

<sup>1)</sup> excluding EUR 40m provision related to Olkiluoto 1 and 2 nuclear projects taken in Q4/2022 (discontinued nuclear business) as well as EUR 19m provision taken for a single sizeable turnkey project in Gas Solutions in Q2/2023 (discontinued turnkey business)

# Marine & Energy Engine Power Plants combined have double digit profitability. Energy Storage & Optimisation is now profitable

Group simulation (LTM Q3/2023), net sales EURbn

**Comparable operating margin**  
LTM Q3/2023

10.5%

0.3%

8.7%

7.7%

**Operating margin**  
LTM Q3/2023

10.0%

0.1%

8.2%

6.0%

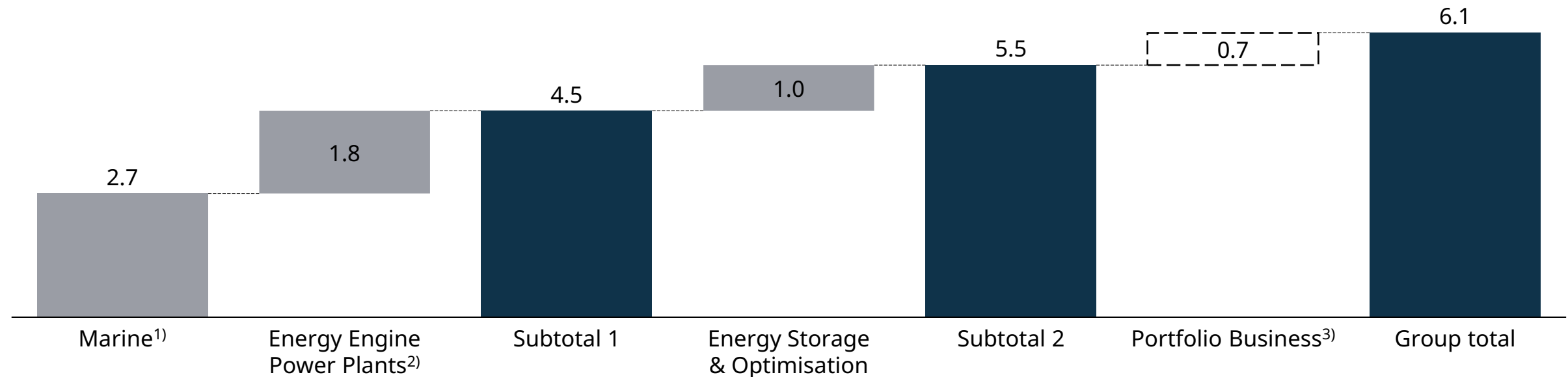
**Net sales CAGR**  
LTM Q3/2021 – LTM Q3/2023

11%

138%

20%

18%



1) former Marine Power business including Exhaust Treatment & Shaft Line Solutions 2) including services but excluding EUR 40m provision related to Olkiluoto 1 and 2 nuclear projects taken in Q4/2022 (discontinued nuclear business) 3) including Gas Solutions but excluding EUR 19m provision taken for a single sizeable turnkey project in Gas Solutions in Q2/2023 (discontinued turnkey business)



# Profitability drivers

## + 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

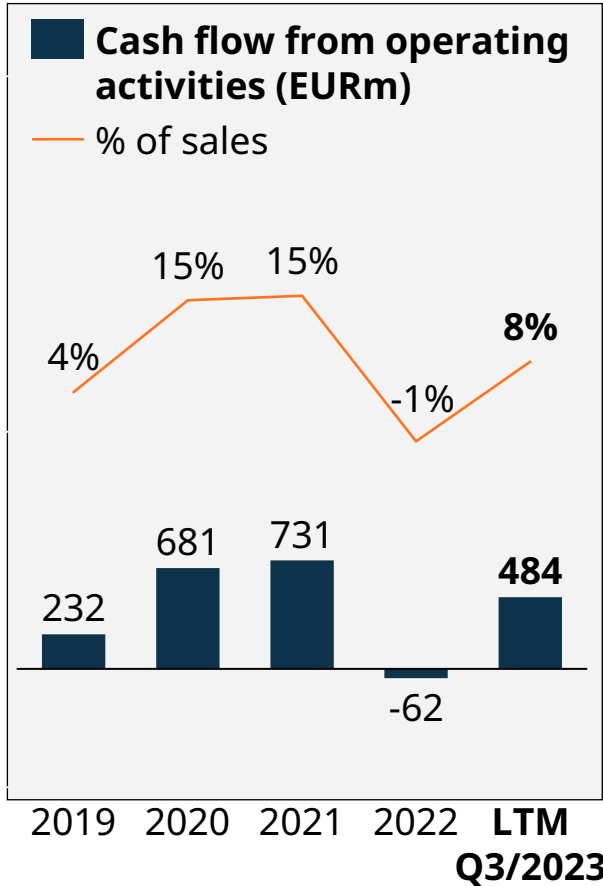
## + / - Uncertainties

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

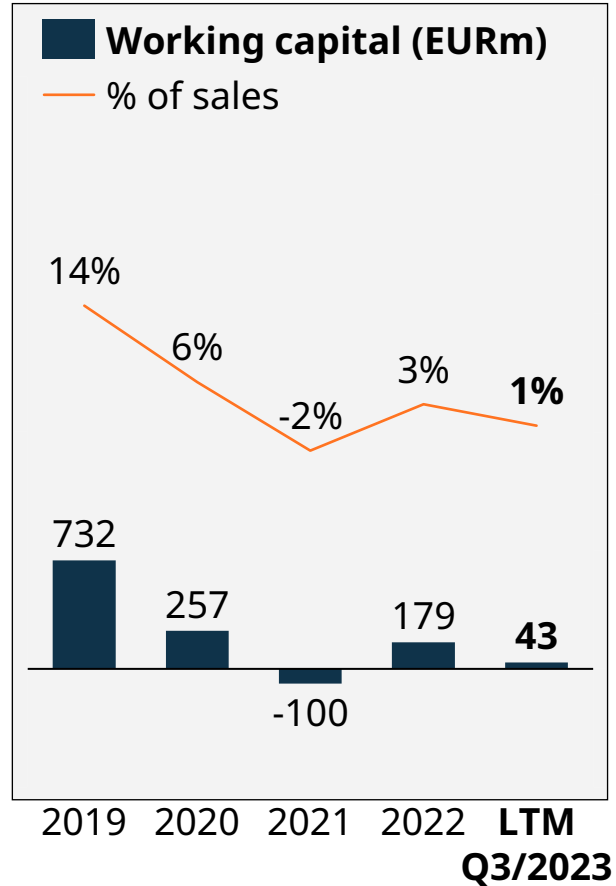
## - Negative factors

- Wage inflation
- Lower engine production volumes for Energy due to delays in order intake

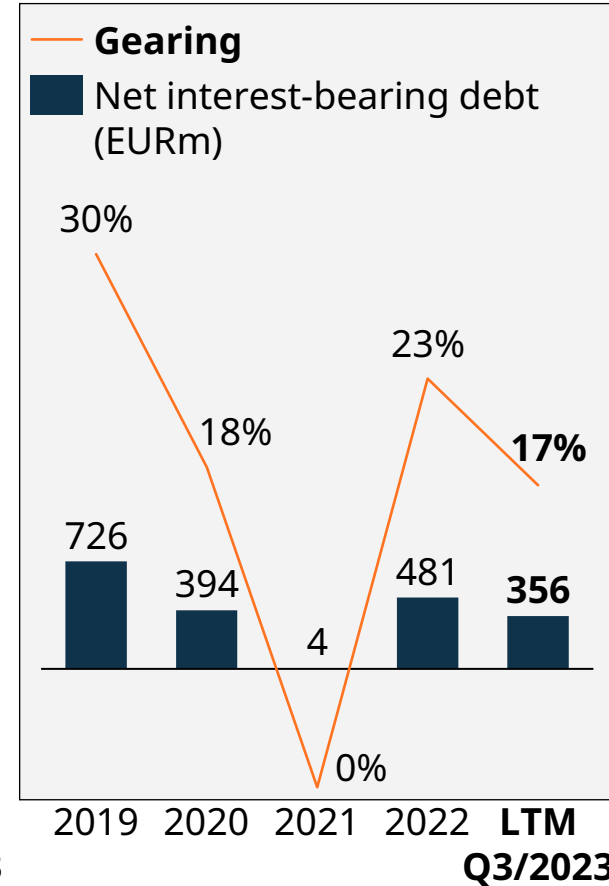
# Strong balance sheet and financial position to support strategy execution



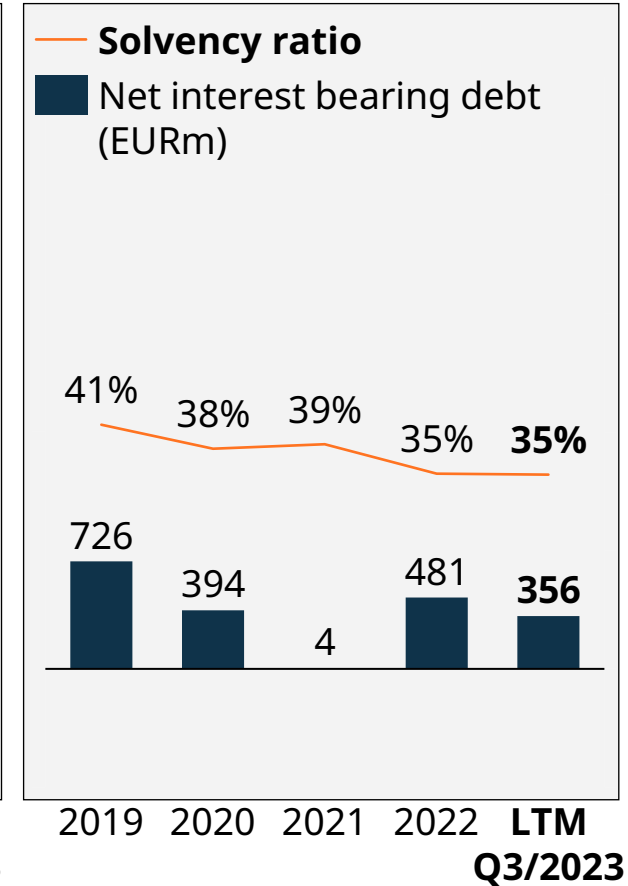
Strong cash flow development from 2022 level



Continued good working capital development



Strength to make strategic investments



The Wärtsilä Way sets the scene for profitable growth. We reconfirm our financial targets

# THE WÄRTSILÄ WAY

## ● Purpose

Enabling sustainable societies through innovation in technology and services

## ● Target position

Shaping the decarbonisation of marine and energy

- 5% annual growth
- 12% operating margin
- To become carbon neutral in own operations and to provide a product portfolio which will be ready for zero carbon fuels by 2030

## ● Strategic priorities

Roadmap to improve performance and reach Target position

## ● Execution plan

What to do – tactics & operations, updates yearly

## ● Values, leadership and continuous improvement

Customer success, Passion, Performance



# The strategic priorities are the key levers to improve our performance and reach our target position

1

## **Excel in creating customer value**

We continuously evolve our understanding of, and responsiveness to, our customers to make them successful

2

## **Develop high performing teams that make a difference**

We attract high performing people and excite diverse teams that excel in continuous learning and collaboration. Our leaders provide direction and support, empowering people to act

3

## **Drive decarbonisation in marine and energy**

We accelerate decarbonisation in marine and energy through innovation, focused investments and selective partnerships, while also decarbonising our own operations. We provide optimisation solutions and are a thought leader in our industries

4

## **Capture growth in services**

We excel in transactional and retrofit business. We move up the service value ladder by growing in performance-based agreements

5

## **Continuously improve our end-to-end value chain**

We continuously improve our end-to-end business to meet customer expectations on quality, lead time and delivery accuracy, while reducing complexity and improving competitiveness. We leverage digitalisation throughout our value chain

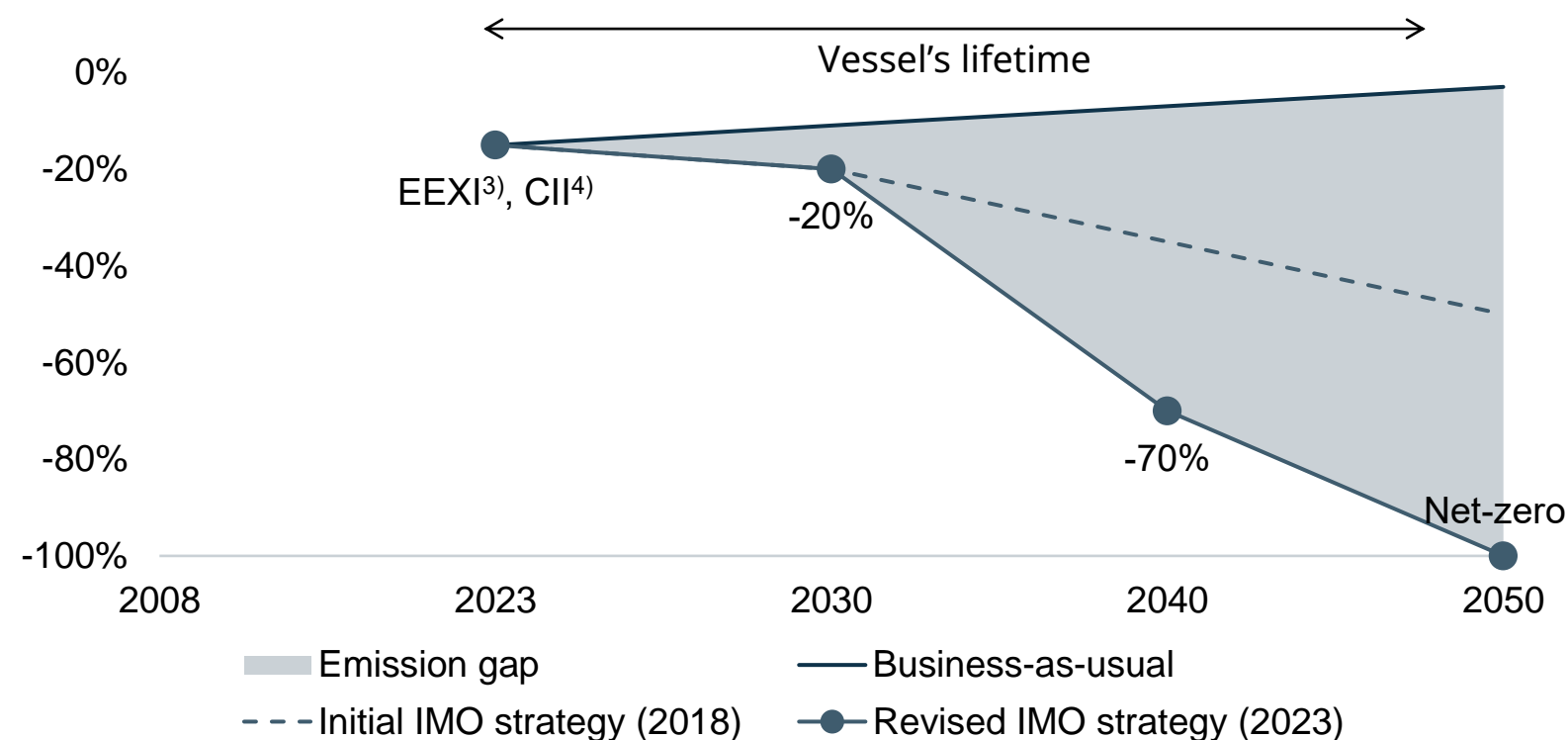
# Marine highlights



# Accelerated decarbonisation targets are shaping the shipping industry and reinforcing our strategy

## Ambitions and checkpoints in the revised IMO GHG strategy<sup>2)</sup>

GHG emission reduction % vs 2008



1) Source: Clarksons; total newbuilding and equipment upgrades investment for fleet renewal in 2023-2050; 2) Source: DNV Energy Transition Outlook 2023; well-to-wake GHG emission reduction compared to 2008; 3) Energy Efficiency eXisting ship Index; 4) Carbon Intensity Indicator

In 2023, IMO strengthened its GHG reduction targets, and now strives for **net-zero "by or around 2050"**

The total estimated investment in 2023-2050 is **USD ~5.0 trillion<sup>1)</sup>**

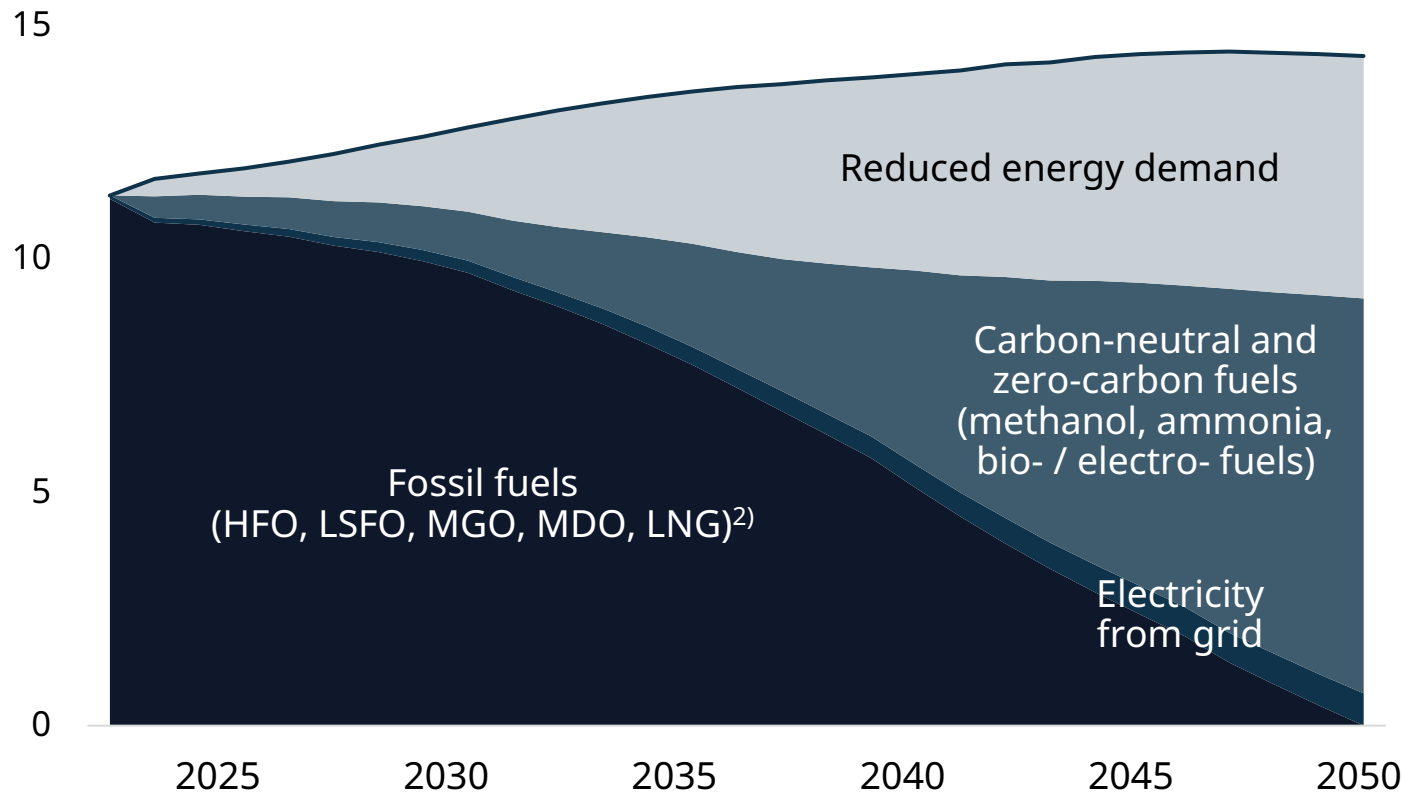
**We can enable customers to reach intermediate and 2050 targets with our existing portfolio**



# A progressive switch to sustainable fuels is already under way

## Sustainable fuel uptake scenario for net-zero in 2050<sup>1)</sup>

Total energy consumption, EJ

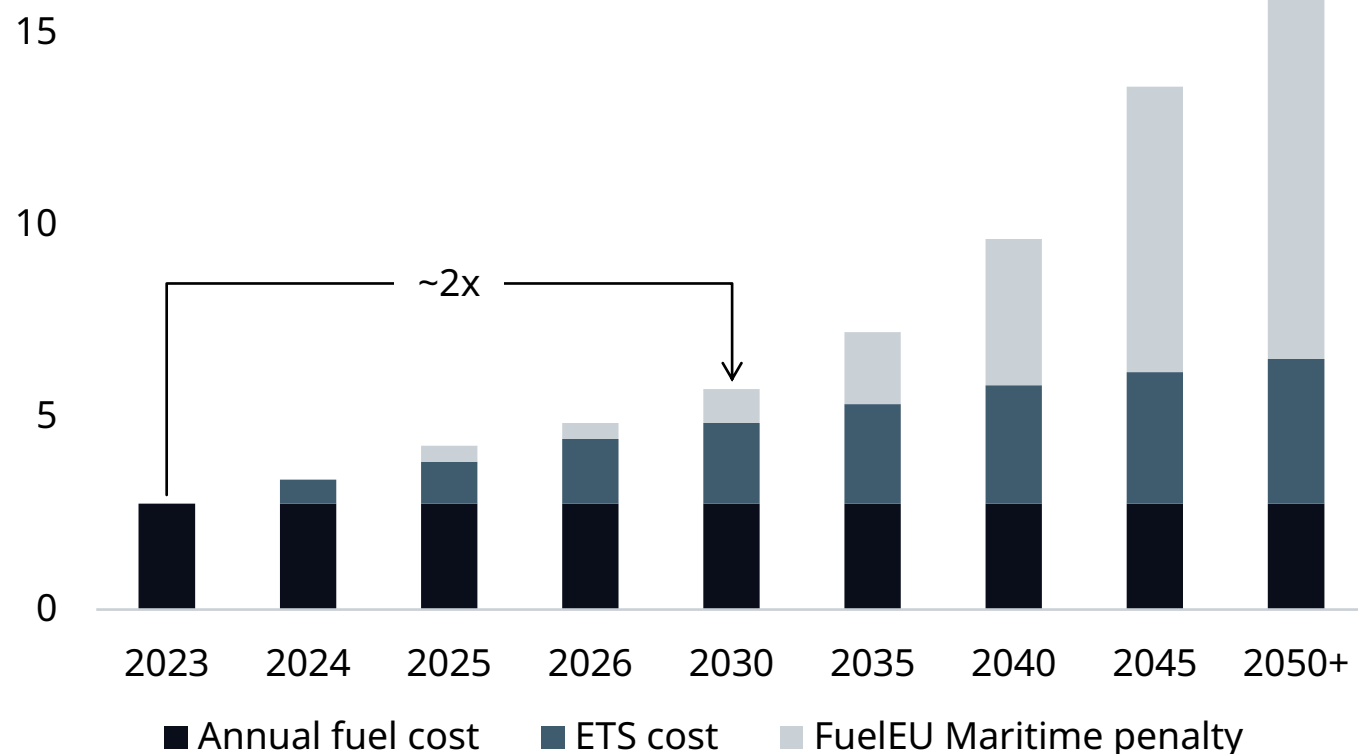


- ✓ **Fuel transition is under way:** 49% of tonnage on orderbook is set to use alternative fuels; long-term fuel mix is dependent on supply of different fuels
- ✓ **LNG is still #1 alternative fuel:** 25% of tonnage ordered in LTM is LNG fuelled
- ✓ **Methanol is gaining share:** 58% of containerships tonnage ordered in LTM are set to run on methanol
- ✓ **Ammonia will pick up in the longer run**
- ✓ **Hybrids, batteries, ESTs<sup>3)</sup> are growing:**
  - 37% of the tonnage on orderbook is fitted with at least 1 EST<sup>3)</sup>
  - 129 hybrid / full-electric 2 000+ GT vessels were ordered in LTM (compared to 99 in 2022 and 55 in 2019)

1) Source: DNV Maritime Forecast 2050; 2) HFO – Heavy Fuel Oil; LSFO – Low Sulphur Fuel Oil; MGO – Marine Gas Oil; MDO – Marine Diesel Oil; 3) Energy Saving Technology

# Up to 2030, fuel cost will double due to emission fees

Fuel-related costs for Handymax bulker operating in EU waters, EURm<sup>1)</sup>



1) Assuming 5 000 tons/year VLSFO (Very Low Sulphur Fuel Oil) consumption subject to EU Fit-for-55, VLSFO at EUR 550/ton; EU allowances from EUR 100/ton today to EUR 230/ton in 2050 (source: Transport & Environment NGO); 2) E.g., local regulations and emission fees (EU Fit-for-55), green financing (Poseidon Principles), climate-linked chartering (Sea Cargo Charter), companies' ESG targets

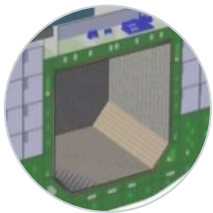
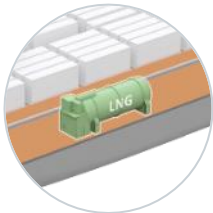

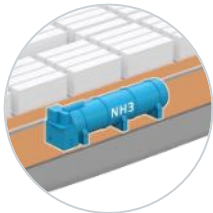
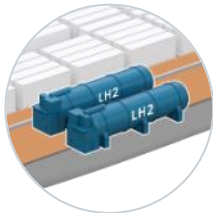


Multiple business drivers will add further pressure to decarbonise shipping<sup>2)</sup>

The transition will happen under the lifetime of a vessel

Upgradability is critical for new vessel orders

Being perceived as front-runners in technology and services strengthens our positioning already today

# Cost of emissions will close the price gap between fossil and sustainable fuels; fuel selection impacts the vessel structure

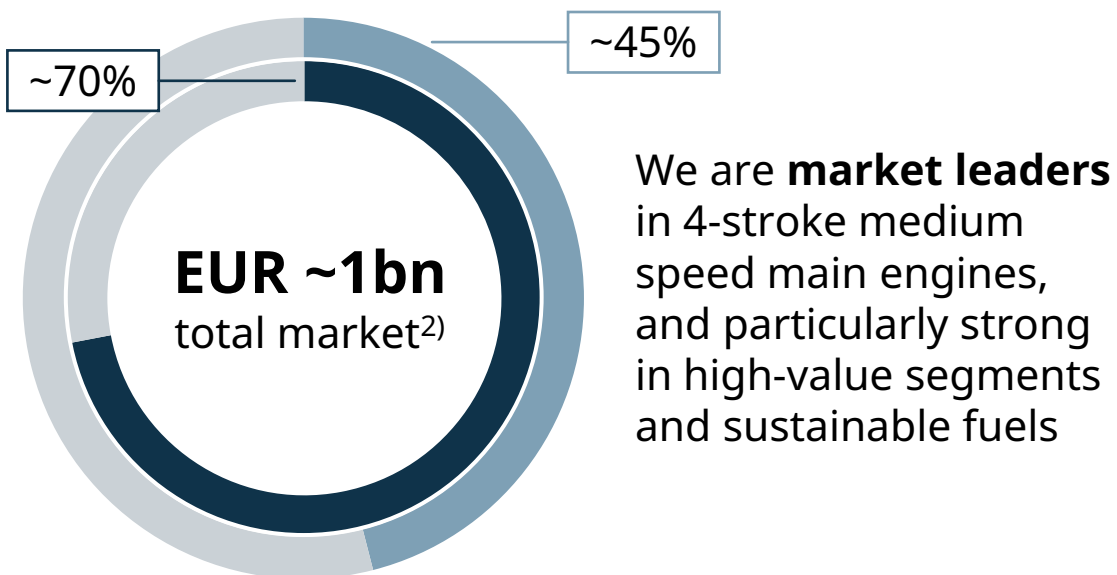
Fuel type							
	<b>Low Sulphur Fuel Oil</b> @ 20°C	<b>Liquefied Natural Gas</b> @ -162°C	<b>Methanol</b> @ 20°C	<b>Ammonia</b> @ -33°C	<b>Liquid Hydrogen</b> @ -253°C	<b>Compressed Hydrogen</b> @ 350bar	<b>Marine Battery Rack</b>
<b>Fuel price factor (per GJ)<sup>1)</sup></b>	1x	1.1x – 4.6x <sup>2)</sup>	2.6x – 5.5x <sup>3)</sup>	2.4x – 4.3x <sup>4)</sup>	3.6x – 4.6x <sup>4)</sup>	2.1x – 3.1x <sup>4)</sup>	2.0x – 5.3x <sup>8)</sup>
<b>Fuel price factor in 2035, incl. carbon tax<sup>1) 5)</sup></b>	1x	0.8x – 1.4 <sup>2)</sup>	0.8x – 1.6x <sup>3)</sup>	0.7x – 1.2x <sup>4)</sup>	1.2x – 1.5x <sup>4)</sup>	0.6x – 1.0x <sup>4)</sup>	0.8x – 2.0x <sup>8)</sup>
<b>Gross tank size factor<sup>6)</sup></b>	1x	1.7x – 2.4x <sup>7)</sup>	1.7x	3.9x	7.3x	19.5x	~40x (~20x potential)

1) Fuel production cost estimate for 2025 and 2035; source: Maersk Mc-Kinney Møller Center for Zero Carbon Shipping – NavigaTE 2023; 2) Price range spans between fossil & electro- methane; 3) Price range spans between bio- & electro- methanol; 4) Price range spans between blue- & electro- ammonia/hydrogen; 5) Assuming 100% consumption subject to EU Fit-for-55, EU allowances at EUR 159/ton (source: Transport & Environment NGO); 6) Gross tank estimations based on Wärtsilä experience; 7) 1.7x membrane tanks, 2.4x type C tanks; 8) Shore energy price EUR 10-27/kWh

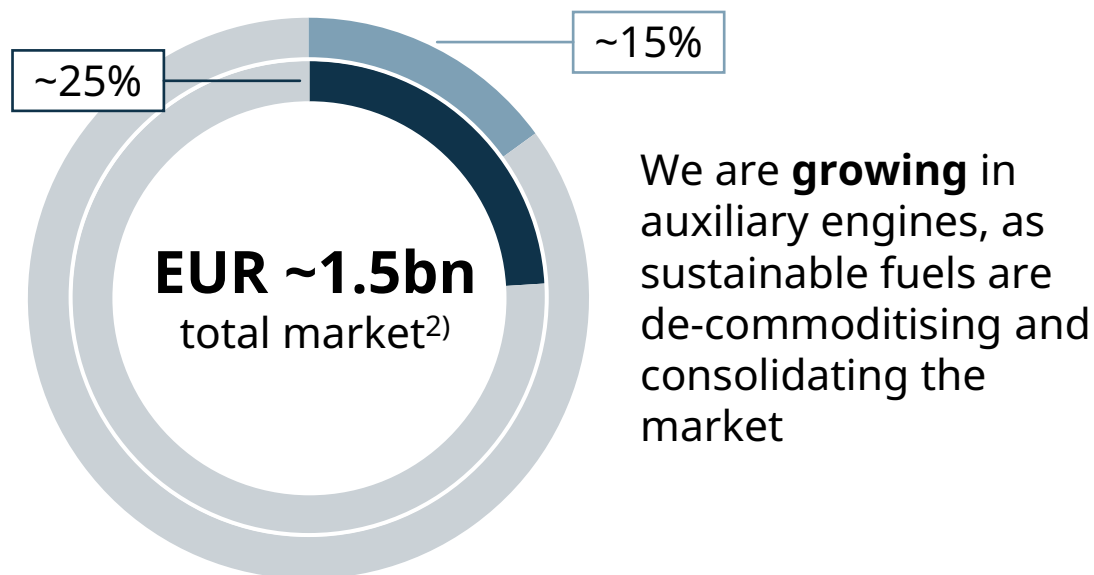


# We maintain a leading position in 4-stroke medium speed main engines and are increasing our share in auxiliary engines

## 4-stroke medium speed main engines market share<sup>1)</sup>



## Auxiliary engines market share<sup>1)</sup>

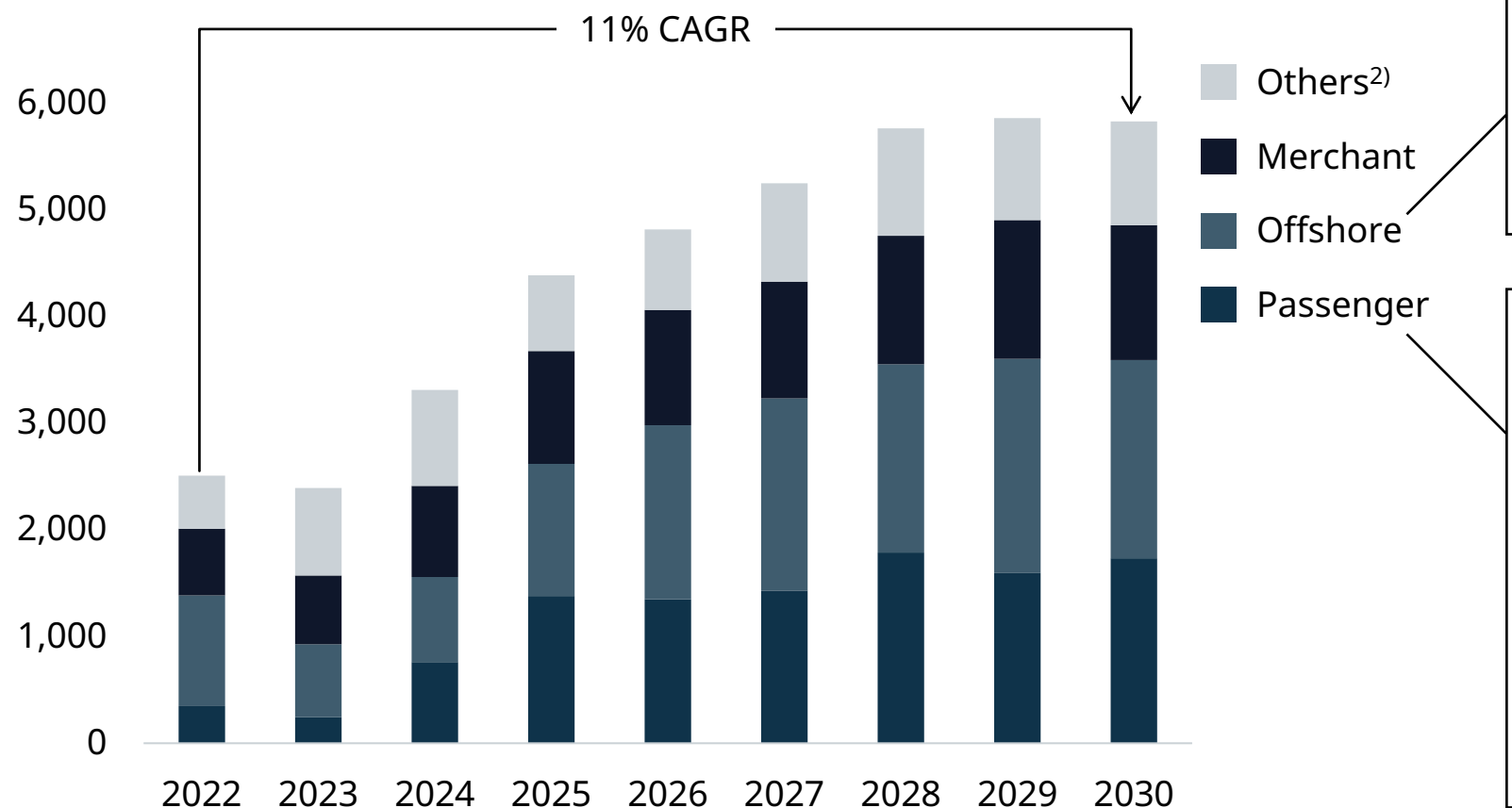


● Outer circle: Wärtsilä total market share
● Inner circle: Wärtsilä market share on alternative fuel engines

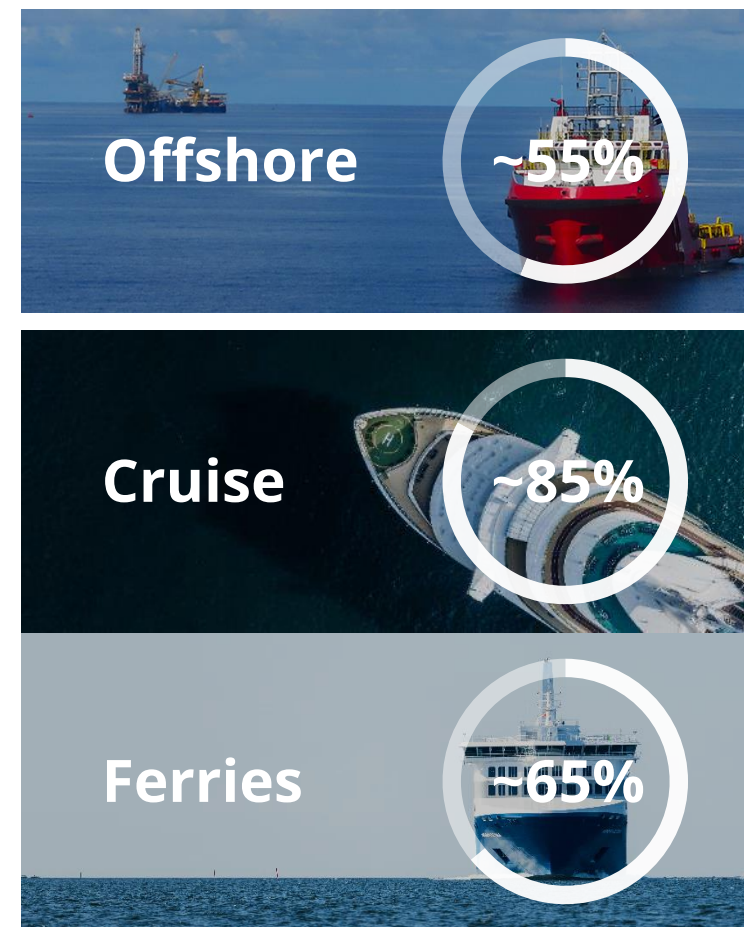
1) Wärtsilä estimates, MW; 2) Average 2023-2027, based on Clarksons September 2023 forecasts and internal models

# Recovery in our key target segments will grow our addressable market for equipment sales

Newbuild ordering of 4-stroke medium speed main engine-powered ships, MW<sup>1)</sup>



Wärtsilä market share, MW<sup>3)</sup>



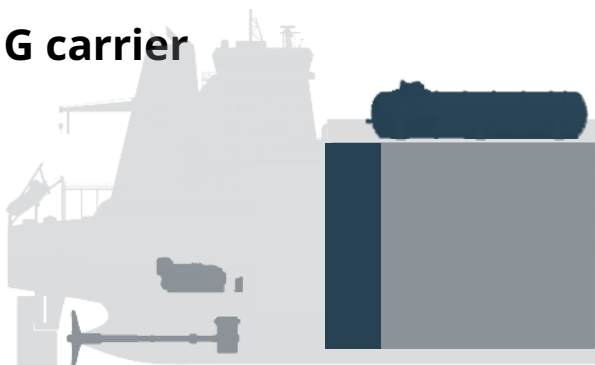
1) Source: Clarksons September 2023 forecasts; 2) Fishing, dredgers, support units, yachts, navy, tugs, etc.; 3) Market share on 4-stroke medium speed main engines, Wärtsilä estimates, MW

# Hybrid-Electric will challenge 2-stroke as prime-mover for LNG carriers, enabling higher efficiency and increased cargo capacity

## Wärtsilä Hybrid-Electric LNG carrier

### 185k cbm capacity

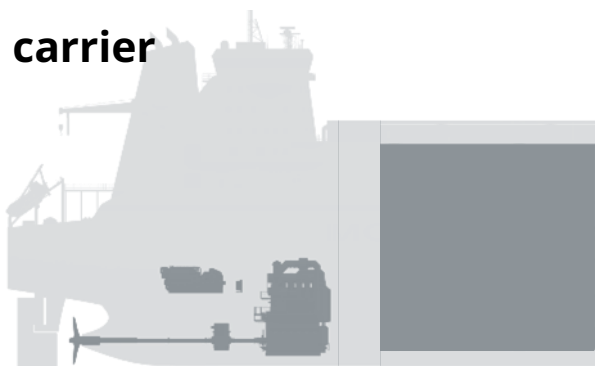
- 3x 4-stroke spark-gas gensets
- 2x 4-stroke dual fuel gensets
- 2 MWh batteries
- Extra cargo capacity



## Conventional 2-stroke LNG carrier

### 174k cbm capacity

- 2x 2-stroke main engines
- 4x 4-stroke aux engines



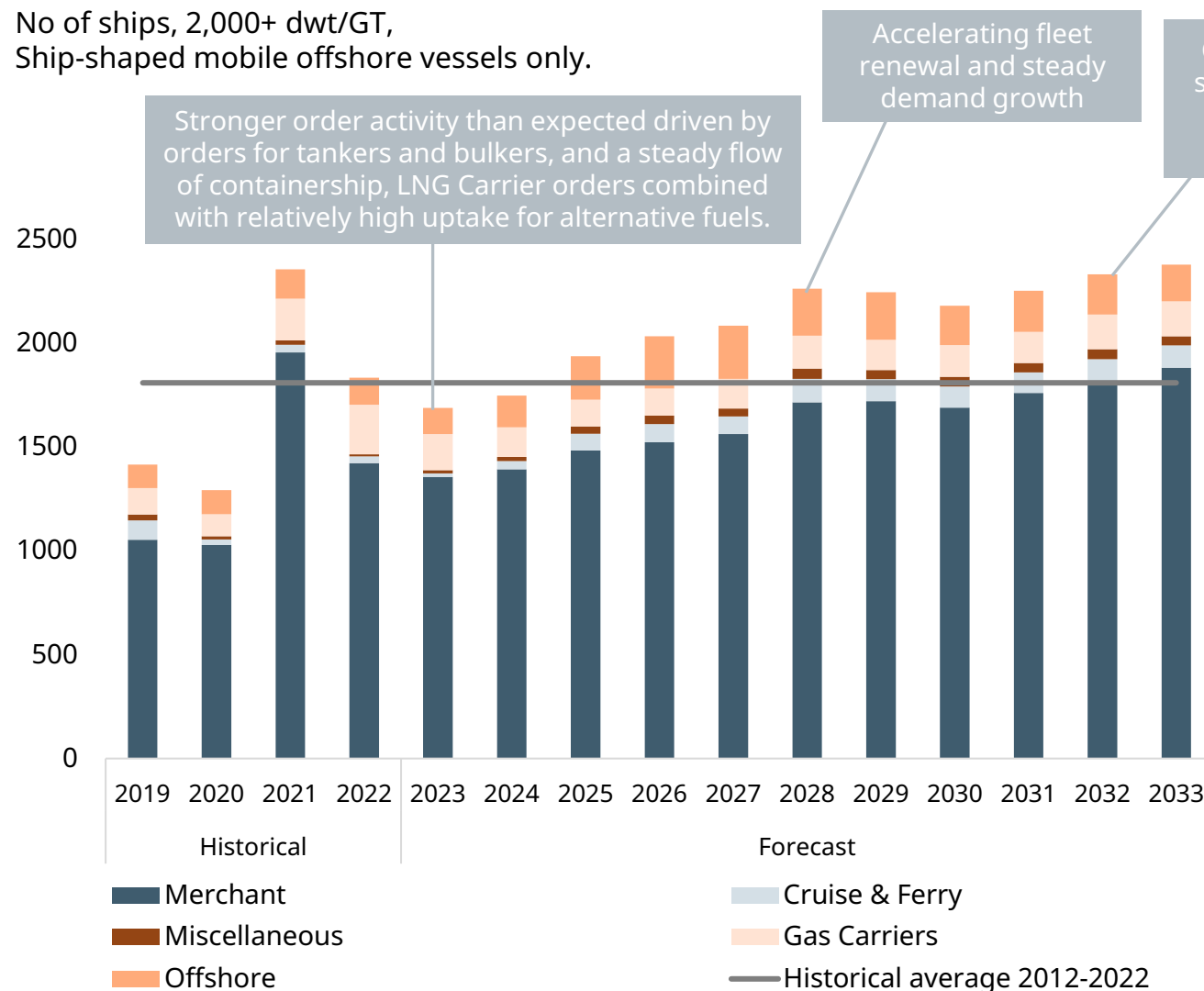
- ✓ **Launched at Gastech in 2023**  
with Shell and Hudong-Zhonghua Shipbuilding
- ✓ **6% extra cargo capacity**  
with same ship dimensions
- ✓ **>10% lower fuel consumption and emissions**  
with optimal efficiency across all speeds
- ✓ **20% lower maintenance costs**  
with fewer engine running hours
- ✓ **Superior redundancy, uptime, flexibility**  
as it can operate with fewer engines
- ✓ **Future proof**  
as it can integrate alternative power sources

Values refer to a comparison with a conventional 174k cbm LNGC (2x 2-stroke low pressure DF main engines, 4x 34DF 4-stroke aux engines), calculated on full year cycle real operating profile with average speed of 15 knots in laden and 13.5 knots in ballast; cargo increase confirmed by Hudong-Zhonghua Shipbuilding in their general arrangements and outline specifications



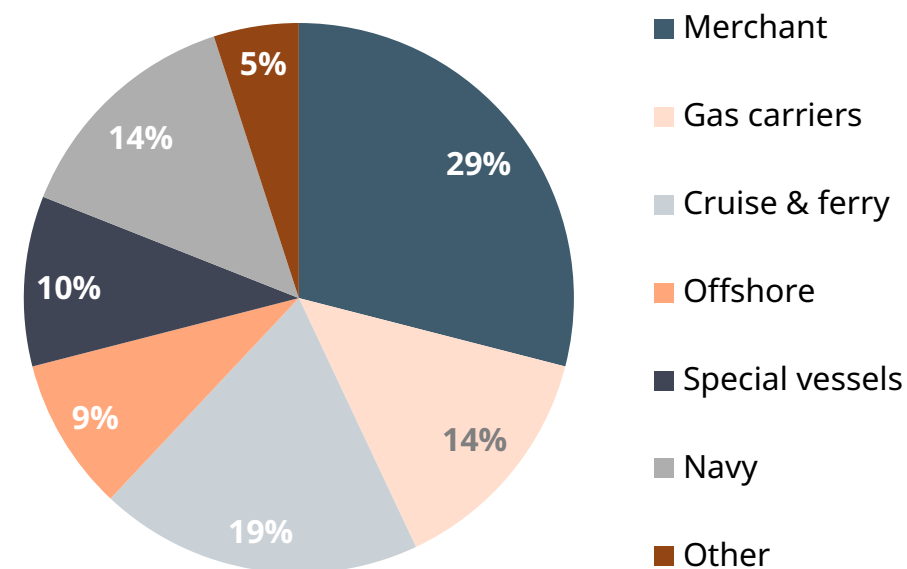
# Vessel contracting forecast

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



Source: Clarksons Research, September 2023




## 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.

# Services is more than 60% of Marine Power sales.

## We have 3 distinct revenue streams covering customer maintenance

% services sales <sup>1)</sup>	Transactional	Agreements	Retrofit Projects
	 ~60%	 ~30%	 ~10%
	<b>Growth drivers</b> Installed base growth	Increasing ship complexity Increasing cost of emissions Increasing cost of fuel	New regulations Increasing cost of emissions Increasing cost of fuel
<b>Focus areas</b>	Customer service Service offering Long-tail customers	New outcome-based models Service level differentiation Digital tools and services	New retrofit solutions Consultative sales through Decarbonisation Services

1) LTM Q3/2023; split between Transactional and Agreements based on services net sales to vessels not covered / covered by agreement

# We increase sales and profits by moving up our service value ladder

From 1x<sup>1)</sup>

Up to 2-3x<sup>1)</sup>

## Enhanced support agreement

- ✓ Data visibility
- ✓ Operational support
- ✓ Frame agreement for supply of parts and labour

## Technical management agreement

- ✓ AI-based Expert Insight
- ✓ Operational support
- ✓ Data-driven dynamic maintenance planning
- ✓ Parts and labour invoiced as orders are received

## Optimised maintenance agreement

- ✓ AI-based Expert Insight
- ✓ Operational support
- ✓ Data-driven dynamic maintenance planning
- ✓ Execution with parts and labour included

## Guaranteed asset performance agreement

- ✓ AI-based Expert Insight
- ✓ Operational support
- ✓ Data-driven dynamic maintenance planning
- ✓ Execution with parts and labour included
- ✓ Profit sharing, guaranteed performance

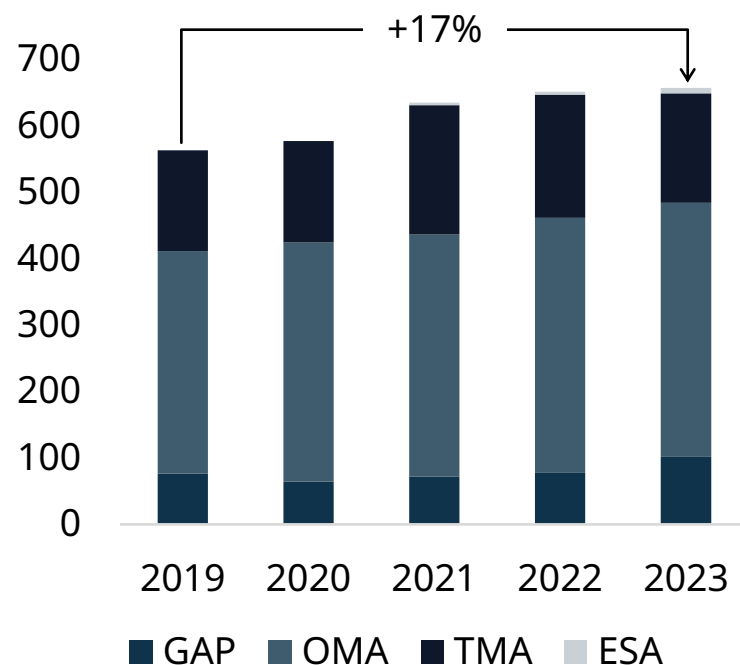
1) Sales EUR/kW relative to transactional



# We expand the installed base under agreement while climbing the service value ladder

## Key facts

Number of vessels under agreement<sup>1)</sup>



Key metrics

**~90%**  
renewal rate<sup>2)</sup>

**26%**  
growth in sales to  
agreement vessels  
vs pre-Covid

**29%**  
of our engine  
installed base is  
under agreement<sup>3)</sup>

Customer benefits

**~90%**  
issues resolved remotely

**29%**  
average reduction  
of unscheduled  
maintenance

**EUR >60m**  
fuel savings on a  
cruise fleet over a  
6-year contract period

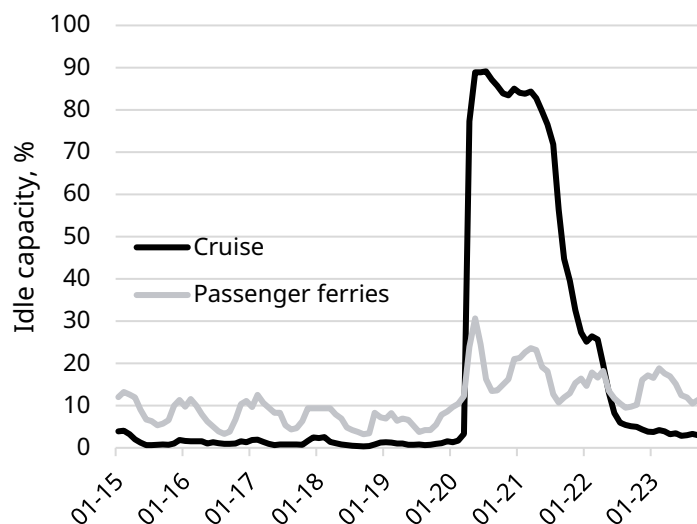
By combining AI and data analytics with product know-how, we can increase customer value and improve our own service operations

1) GAP = Guaranteed asset performance agreement, OMA = Optimised maintenance agreement, TMA = Technical management agreement, ESA = Enhanced support agreement; 2) 4-stroke renewal rate; 3) Excluding QuantiParts

# Vessel utilisation rates driving Wärtsilä's service business

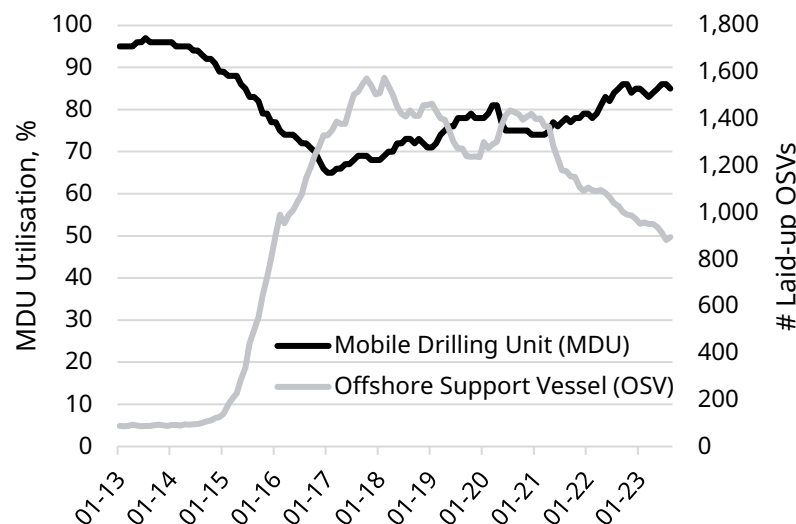
Typically, there is some delay between changes in utilisation rate and Wärtsilä service net sales

## Cruise and passenger ferries



- Active cruise capacity continues to recover, the total cruise fleet capacity is expected to be up by 4,5% in FY2023 y-o-y
- The active passenger ferry capacity has not yet recovered to pre-Covid levels but operator profitability continues to improve due to increasing passenger traffic volumes

## Offshore



- Marginal increase in utilisation rates for Mobile Drilling Units this year, utilisation rate is projected to increase to 93% by end of 2024
- The number of laid-up OSVs is down by ~6% since start of 2023. The number of active OSVs is expected to grow by 5% in 2024

Using slow steaming to manage active fleet capacity and/or to limit emissions will require more active capacity on the water, driving up the utilisation rate of existing fleet and eventually lead to demand for further vessel capacity, leading to higher demand for services

# Tightening regulations and increasing fuel and emission cost boost demand for retrofits; we are well positioned to grow this business



**48%**

of the fleet is not CII compliant in 2023<sup>1)</sup>

**72%**

of the existing fleet will not be CII compliant in 2027 if no action is taken<sup>1)</sup>

## We enable fleet decarbonisation with the most comprehensive retrofit portfolio in the industry

**4-stroke and 2-stroke<sup>2)</sup> engine retrofits:**  
fuel conversions, engine power limitation, engine efficiency upgrades, methane slip reduction packages

### Other retrofits:

carbon capture systems, hybrids, shaft generators, energy saving technologies

## Success stories in 2023

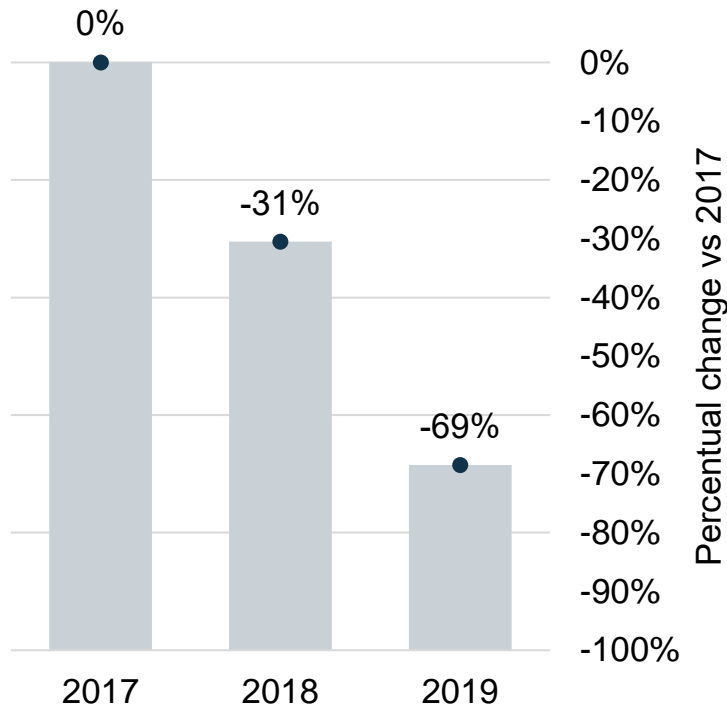
- ✓ First 4-stroke methanol conversion contracted
- ✓ First 2-stroke LNG fuel conversion contracted
- ✓ First 2-stroke derating delivered, with >10% fuel saving achieved
- ✓ Multiple hybrid retrofits
- ✓ Increasing demand for Decarbonisation Services

1) CII (Carbon Intensity Indicator) applies to all cargo, RoPax, cruise ships above 5 000 GT (with some exceptions); source: Wärtsilä CII tool, correction factors excluded, ships with D or E rating considered as non-compliant; 2) 2-stroke applicable to WinGD or Sulzer 2-stroke engines



# Wärtsilä Expert Insights: combining data analytics capabilities with product know-how and OEM expertise

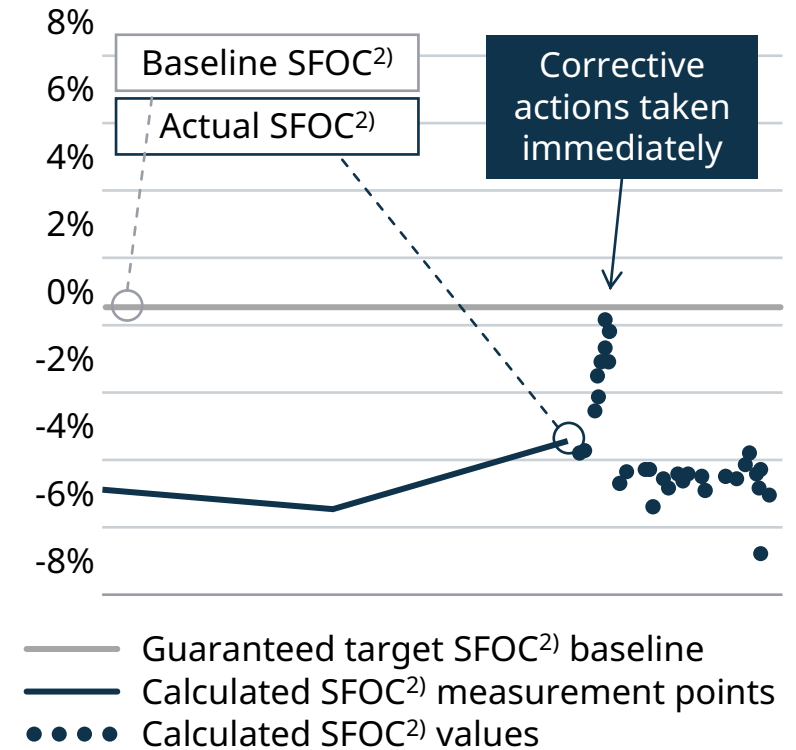
## Decreased customer's costs of unscheduled maintenance with Wärtsilä Expert Insight<sup>1)</sup>



## Advanced analytics combined with OEM expertise enhance customer value

- 11** Expertise Centres worldwide serving only agreement customers
- +350** vessels with Expert Insight installed or planned
- 93%** of customers renew their agreement
- 25%** average reduction of unscheduled maintenance
- 90%** of issues solved remotely

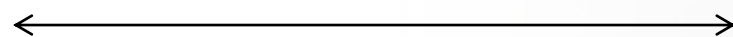
## Continuous measurement enables prediction and fast and proactive actions



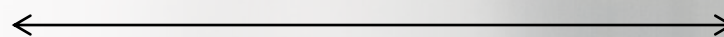
1) Based on data from 54 LNG Carriers with Expert Insight; 2) SFOC = Specific Fuel Oil Consumption

# Performance will be driven by continuous improvement and higher sales volumes; we will mitigate inflation with price and cost management

<b>Equipment sales</b> <ul style="list-style-type: none"> <li>✓ Favorable vessel contracting mix</li> <li>✓ Uptake of sustainable fuels</li> <li>✓ Higher focus on fuel flexibility, efficiency, upgradability</li> </ul>	<b>Structural changes and continuous improvement</b> <ul style="list-style-type: none"> <li>✓ Structural cost optimisation</li> <li>✓ Flow efficiency</li> </ul>
<b>Services sales</b> <ul style="list-style-type: none"> <li>✓ Growing installed base</li> <li>✓ Increasing agreement coverage</li> <li>✓ Climbing of the service value ladder</li> <li>✓ Decarbonisation-driven retrofits</li> </ul>	<b>Price management</b> <ul style="list-style-type: none"> <li>✓ Value-based pricing</li> <li>✓ Price realisation for sustainable fuel engines</li> <li>✓ Agreement price indexation</li> </ul>



**Growth**



**Profitability**

## Recent examples:

- ✓ **Manufacturing footprint optimisation:**  
ramp-down of manufacturing in Trieste, exit of Santander and Zhenjiang factories
- ✓ **Voyage Services turnaround:**  
new setup and operating model, fixed costs reduction, stricter sales and pricing policy
- ✓ **Billable vs non-billable Field Service resources:**  
20% better non-billable vs billable resource ratio in Field Service since 2020

# Energy highlights





# Significant value creation opportunity – improving performance and capturing growth

## Perform – on track to deliver our targets

- Driving performance in new build through **improved risk / reward**
- Continued **strong profitability in services** with a solid foundation for growth – Moving up the service value ladder
- Driving profitability in Energy Storage & Optimisation through **increasing value add in our products**
- Achieving **positive comparable operating result in Energy Storage & Optimisation**

## Transform – growth opportunity in Engine Power Plants

- **Thermal balancing** addressable market is expected to **grow 19% p.a.** between 2022-2030
- Wärtsilä is the **global market leader in engine power plants** with superior balancing capabilities vs. gas turbines
- **Capability to convert to future fuels** key for customers to avoid risk of stranded assets

## Transform – growth opportunity in Energy Storage & Optimisation

- **Energy storage addressable market** is expected to **grow 17% p.a.** between 2022-2030
- Wärtsilä is a **top 5 global leader** in energy storage
- **Differentiated** by project execution excellence, safety, reliability, and a fully integrated design
- **Strategic review** now started



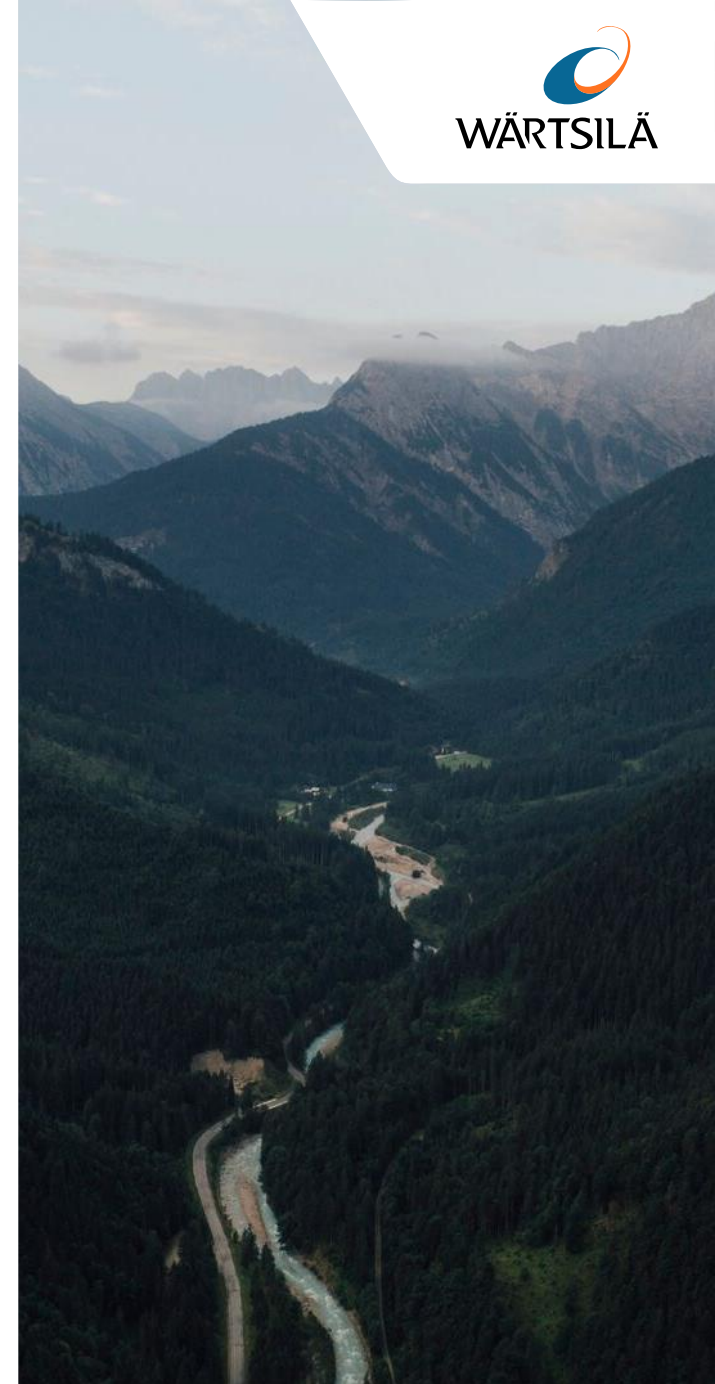
# Actions taken to improve new build profitability and achieve better risk / reward

## Organisation, team & governance

- **New organisation structure** with three global Business Units with P&L responsibility
- Significant changes in **Energy management & leadership**
- Energy has implemented **new governance**:
  - Updated sales-to-order processes to focus on **profitability** and a less volatile business
  - **Sales and operations planning** is regularly executed to improve productivity

## Offering & risk management

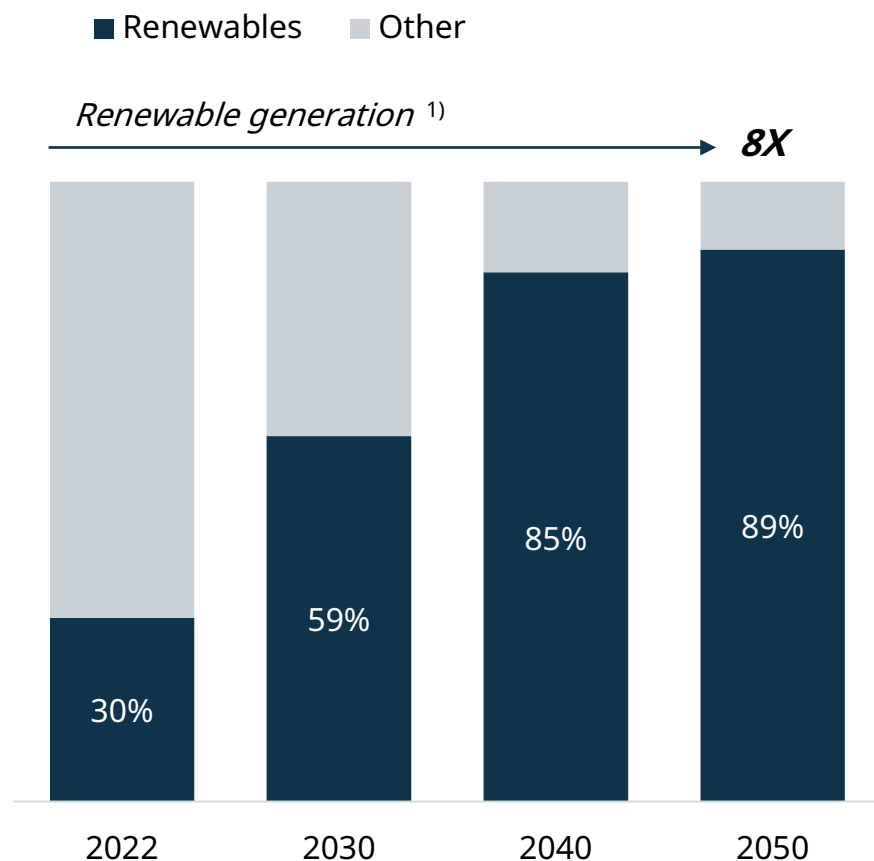
- Energy has **EEQ** (extended equipment supply) as **the preferred offering**, EPC (engineering, procurement and construction) is only considered in selected markets
- Going into 2024 **more than 80% of the order book is equipment orders**, compared to 40% going into 2022
- Rebalance in risk appetite leads to **stronger order book risk/reward profile for 2024 and onwards**



# As the renewable energy transition accelerates, balancing solutions are key enablers for the transition

## Share of renewables in global energy generation

## Technology disruption in the energy sector



**Renewables becoming main source of power**



**Gradual replacement of coal**



**Increased need for balancing solutions**



**Development and increasing use of sustainable fuels –  
Being enabled for future fuels avoids stranded assets**



**Power systems becoming increasingly more complex**

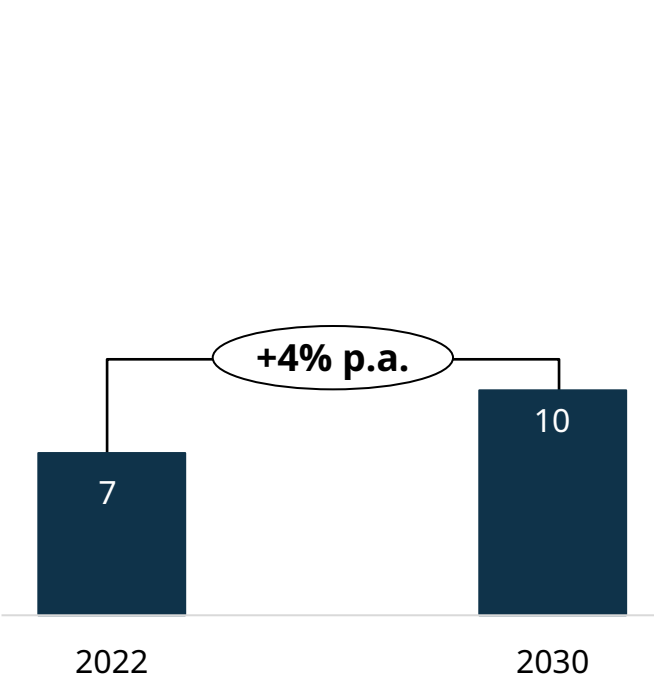
1) IEA World Energy Outlook 2023 (Net Zero Emissions scenario)



# Thermal balancer market expected to grow ~20% per year – the baseload market outlook remains stable

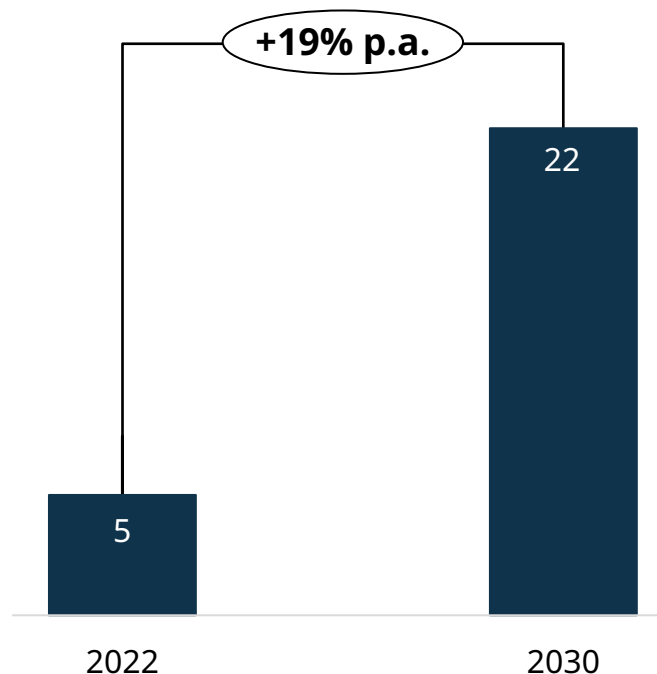
## Engine power plant - baseload

Addressable annual market (GW)



## Engine power plant - balancers

Addressable annual market (GW) <sup>1)</sup>



## Outlook

- The transition towards renewables is the driving force behind demand for thermal balancing
- We see large balancing market potential e.g. in North America and Europe
- The role of gas as a transition fuel is essential for a secure transition, as highlighted by the IEA
- Future fuels will play an important role, a credible roadmap is essential

<sup>1)</sup> Forecast based on BloombergNEF forecast on wind and solar capacity additions, and estimated share of balancing capacity compared to renewables growth

# Engine power plants are in a strong position as the balancing market grows.

## Power system knowledge makes Wärtsilä the go-to partner for capacity planning

### Engines superior to Gas Turbines for balancing

- **Faster start up** and continuous **ramping** for renewables
- **Cycling** several times per day with **no cost impact**
- **High efficiency** due to multiple modular units
- **Catching price spikes** and avoiding negative prices

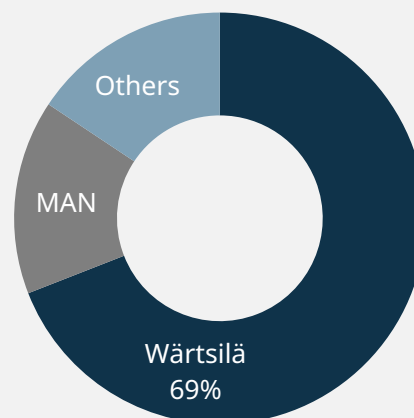
### Modelling supports Wärtsilä go to market approach

- We have modelled >190 countries and systems worldwide
- Transparent modelling shows value of balancing with engines
- Shift to net zero energy feasible with existing technology

### Wärtsilä is clear market leader in engine power plants

- Clear market lead in engine power plants with 50-70% market share
- **Technology leader** in new green fuels and performance-based services
- **Proactively develops** new engine markets, competing with gas turbines

### Engine market shares <sup>1)</sup>



1) >5MW units, LTM Q2/2023. Based on public and Wärtsilä data

### Wärtsilä in strong position as thermal balancing market grows

- Balancing market expected to grow in key regions <sup>2)</sup>

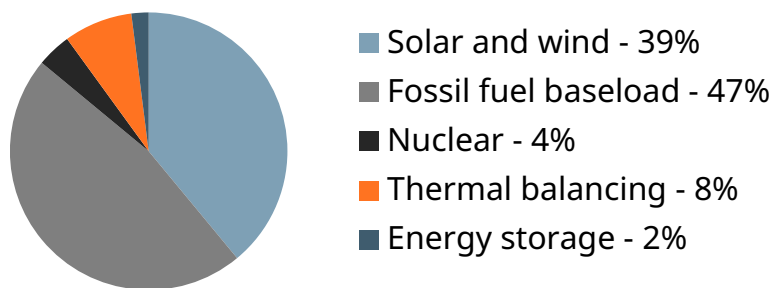
	2027 (GW)	5-year CAGR
US	3.6	19%
Australia	0.7	
Europe	5.0	
India	1.7	

- Additional potential in markets like Brazil, Argentina, China, Japan and Vietnam

2) Based on BloombergNEF ETS and Wärtsilä data

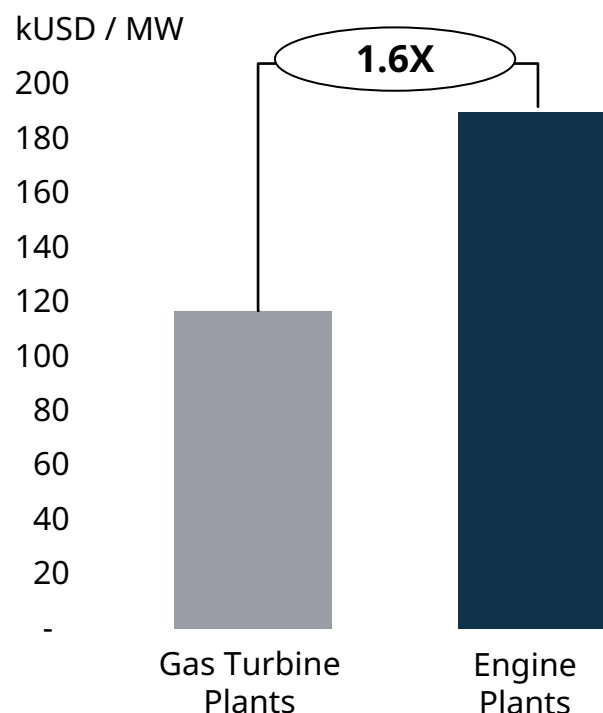
## Case Texas shows future trends. Increasing renewables creates need for balancing with engines outperforming competing technologies

**30 million population** with **133 GW** of installed power (system size equal to France)



- 7% in annual growth of thermal balancing the last 5 years with expected continued growth
- Growing regulatory support for balancing in Texas
- Wärtsilä installed based (and growing):
  - 1 GW of thermal balancing
  - 1.2 GWh of energy storage

**1.6X higher<sup>1</sup> real time market revenue potential for engines** vs. gas turbines



### Texas as a proofpoint for thermal balancing

- High amount of renewables
- Granular price signals
- Policy support for balancing

Similar conditions forming in:

- Midwestern USA (SPP and MISO)\*,
- Australia
- Europe

Source: S&P Capital IQ Pro, ERCOT (September 2023 data), 1) ERCOT's Security Constrained Economic Dispatch (SCED) data – Wärtsilä study. Data based on average of 2 Aero-derivative gas turbine plants and 2 Wärtsilä engine plants for the full year 2022

\*SPP = Southwest Power Pool

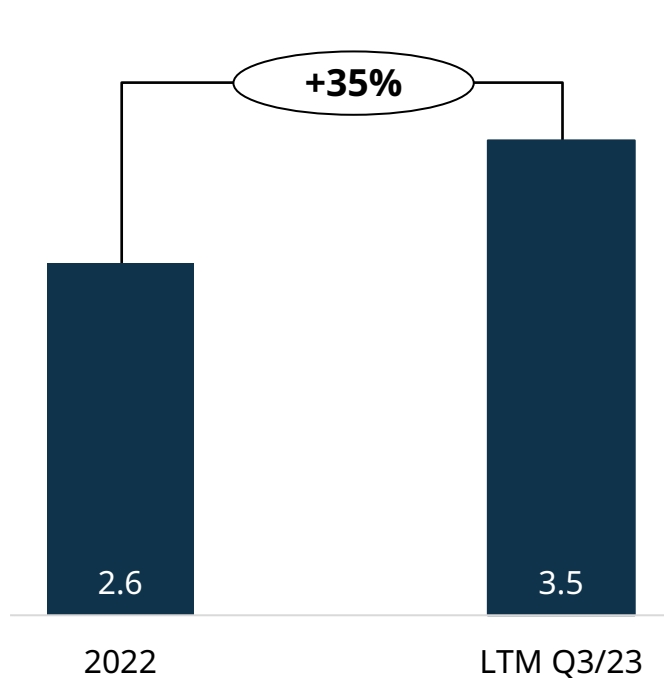
\*MISO = Midcontinent Independent System Operator



# Energy storage growth outlook remains strong

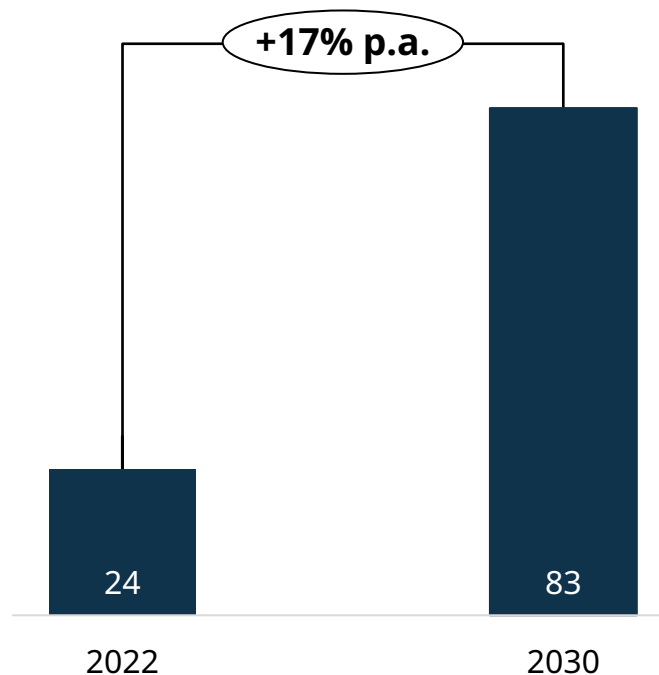
## Order intake

Order intake (GWh)



## Market outlook

Addressable annual market (GWh) <sup>1)</sup>



## Outlook

- Focus on profitable growth. Maintain **top 5** market position
- **Strong new build sales growth** expected, driven by market demand
- **>11 GWh** energy storage capacity delivered, awarded, contracted or in deployment
- **Complexity drives demand** for advanced energy management systems

1) Adapted from BloombergNEF Energy storage market outlook 1H2023. Addressable market excluding certain geographical markets and residential and commercial storage

# Energy Storage has grown 3X<sup>1)</sup> since 2021 and is now profitable – key focus on commercial approach and differentiated offering

## Selective commercial approach

- Focusing on growth of utility scale storage in selected geographies
- Systematic project selection to drive profitability

## Differentiated offering & approach

- Excellence in project execution, a reliable and leading storage player globally
- Industry leading design and safety record with outstanding performance in fire safety
- Fully integrated energy storage solution with modular and scalable design
- Leading GEMS energy management system with optimisation and grid integration capabilities

## Cost competitiveness

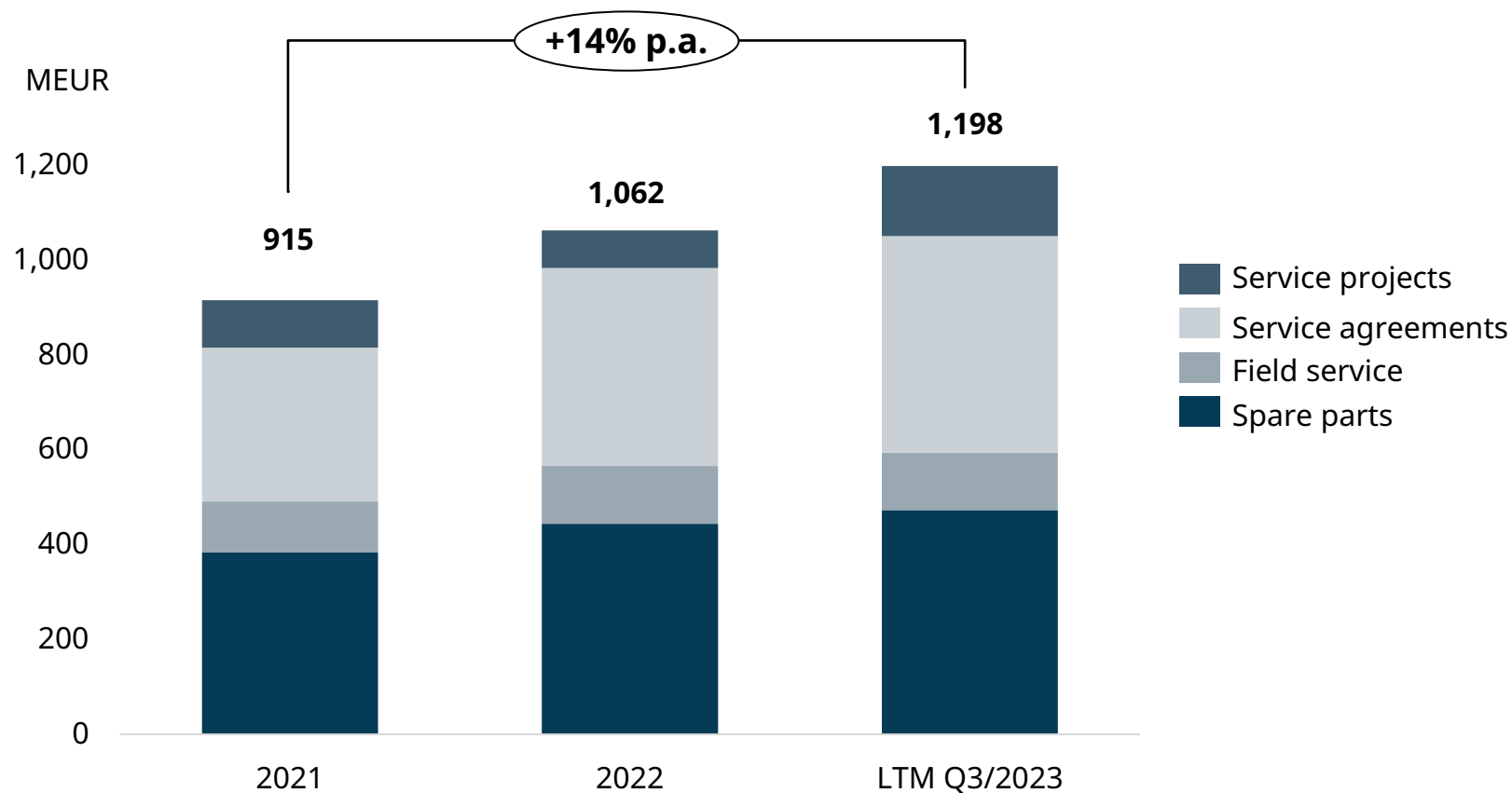
- Hardware and software development for competitive product cost
- Multi-sourcing and active supply chain management to meet regional requirements

1) Net Sales LTM Q3 2023 vs. 2021



# Continued good profitability in services with a solid foundation for future growth

## Service order intake, MEUR



## Energy services – growth drivers

- Growing installed base over time
- Stable total operating hours
- Increasing agreement coverage
- Upgrades & fuel conversion demand
- Future growth potential in decarbonisation services and outcome-based agreements

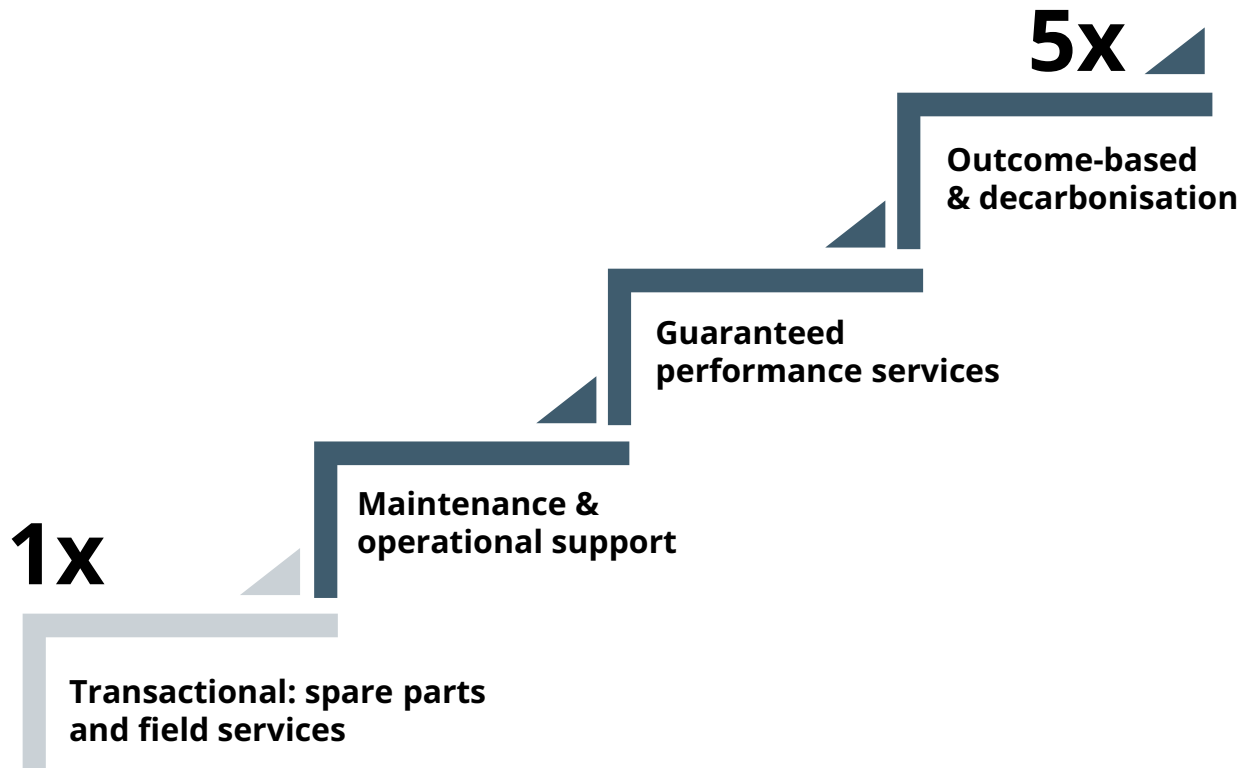
LTM = Last twelve months, Q422-Q323



# We increase sales, profitability and customer satisfaction by moving up the service value ladder

## Wärtsilä service value ladder

Sales EUR/kW relative to transactional



## Continuous growth in agreement coverage

- Securing service agreements for **new power plants**
- Maintaining **high renewal rate** for existing agreements: >90% renewal rate shows high customer satisfaction
- Increasing the **share of agreement customers** in our installed base: 29% agreement coverage and ~18GW under agreement<sup>1)</sup>, 3,4GW added since 2021

## Moving customers up the service value ladder

- Local presence, global operations, and investments in data & digital solutions enable us to meet high customer expectations
- Higher satisfaction scores for agreement customers that are higher up the value ladder
- Portfolio of **agreements with performance guarantees** is growing: Total 7GW with ~2GW added since 2021

1) Includes agreements covering both installed assets and assets to be installed in the future

# Future performance will be driven by strong sales growth and service volumes, continuous improvement, and a future-proof solution portfolio

## Recent actions:

- ✓ **New organisational structure and processes:** Updated sales-to-order processes and Business Units with P&L responsibility
- ✓ **Rebalance in risk appetite:** EEQ as the preferred offering, EPC only considered in selected markets
- ✓ **Stronger risk / reward profile:** Legacy projects have been concluded

### New build margins

- ✓ New organisation & governance
- ✓ Stronger risk management
- ✓ Operational leverage from growth

### Continuous improvement

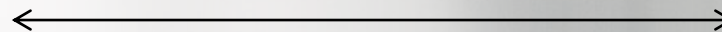
- ✓ Lean operations and flow efficiency
- ✓ Predictive and autonomous operations
- ✓ Cost indexation & active pricing

### New build sales

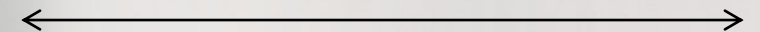
- ✓ Strong thermal balancing growth
- ✓ Strong energy storage growth
- ✓ Future-proofed portfolio for sustainable fuels and optimisation

### Service sales

- ✓ Growing installed base
- ✓ Increasing agreement coverage
- ✓ Climbing the service value ladder



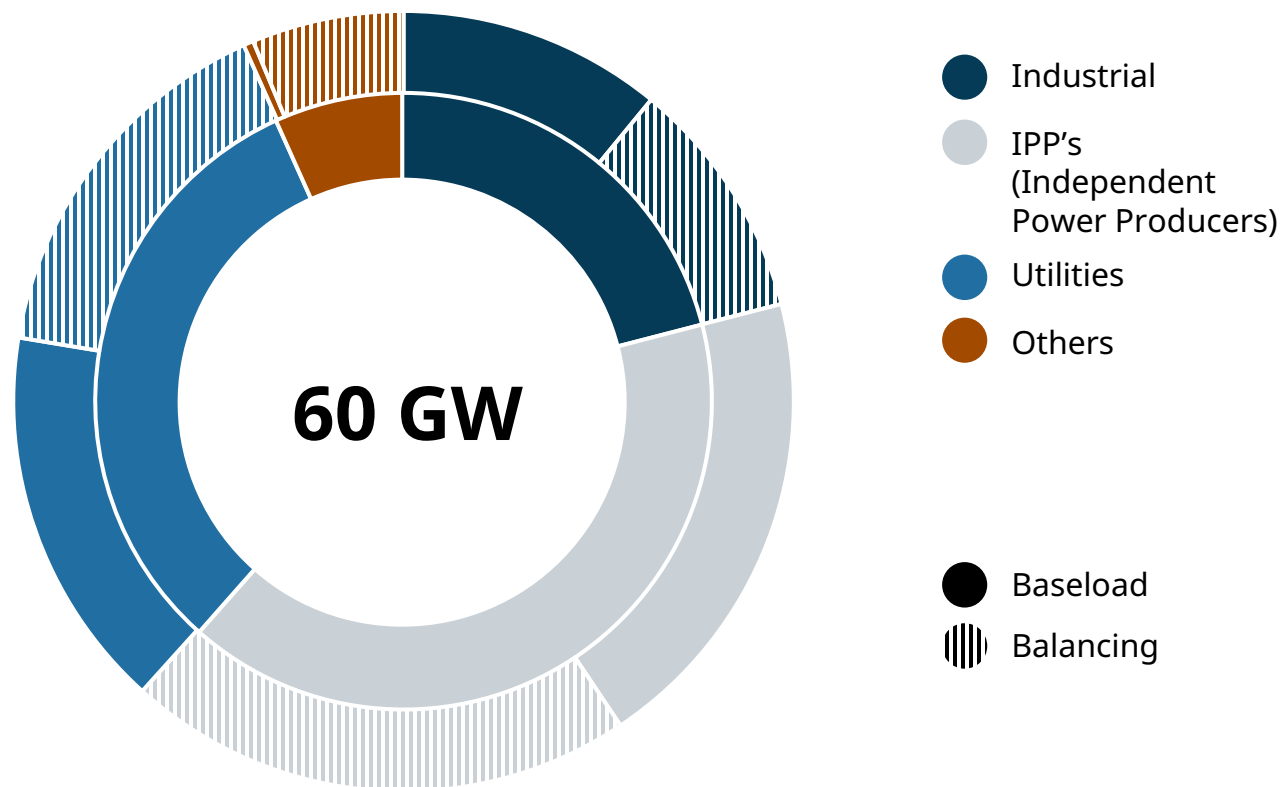
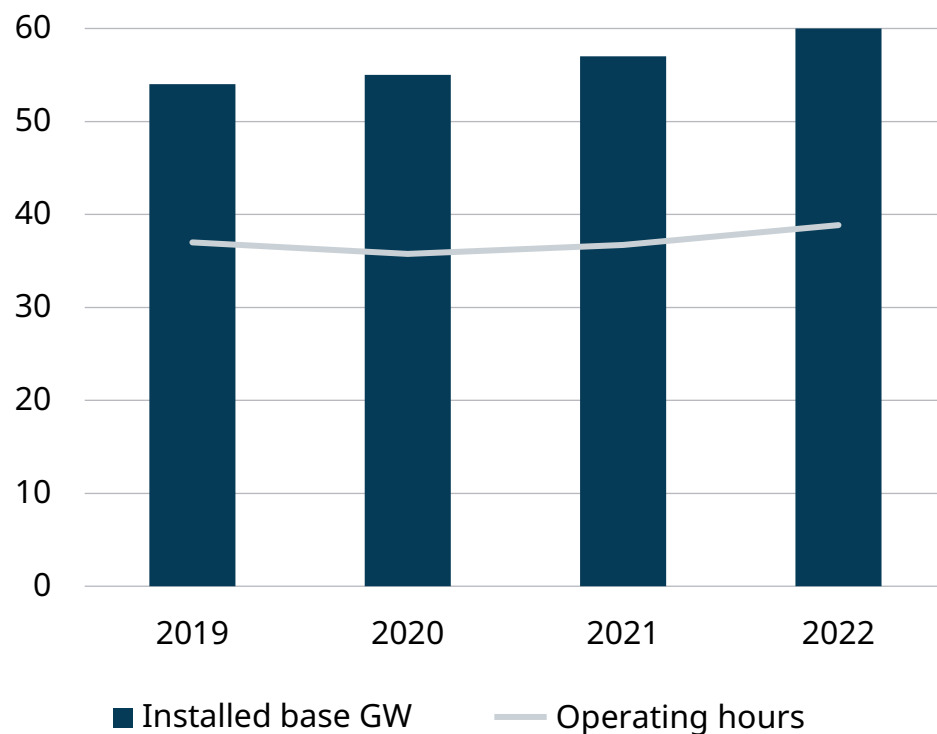
**Profitability**



**Growth**

## Operating installed base is growing and operating hours are anticipated to remain stable driven by growth in certain customer segments

### Current running profile of installed base



Inner circle: division by customer segments  
Outer circle: division by baseload and balancing power within each customer segment



# 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.

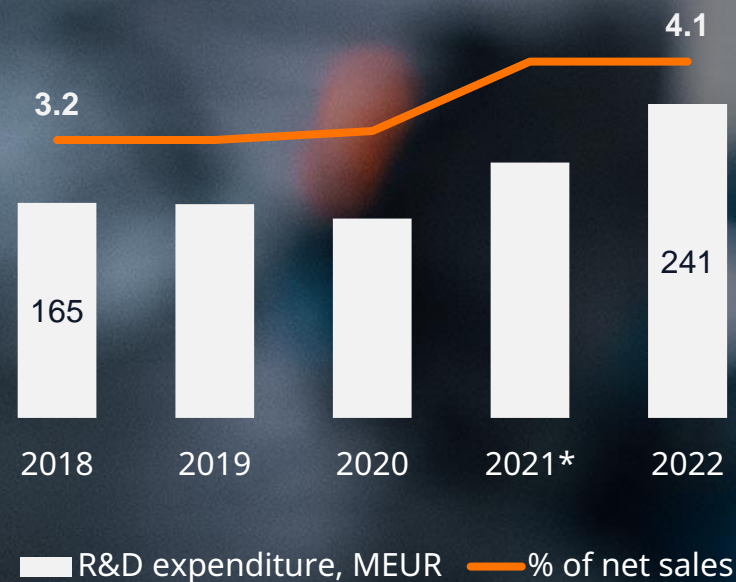
# R&D





AMMONIA  $\text{NH}_3$  WÄRTSILÄ

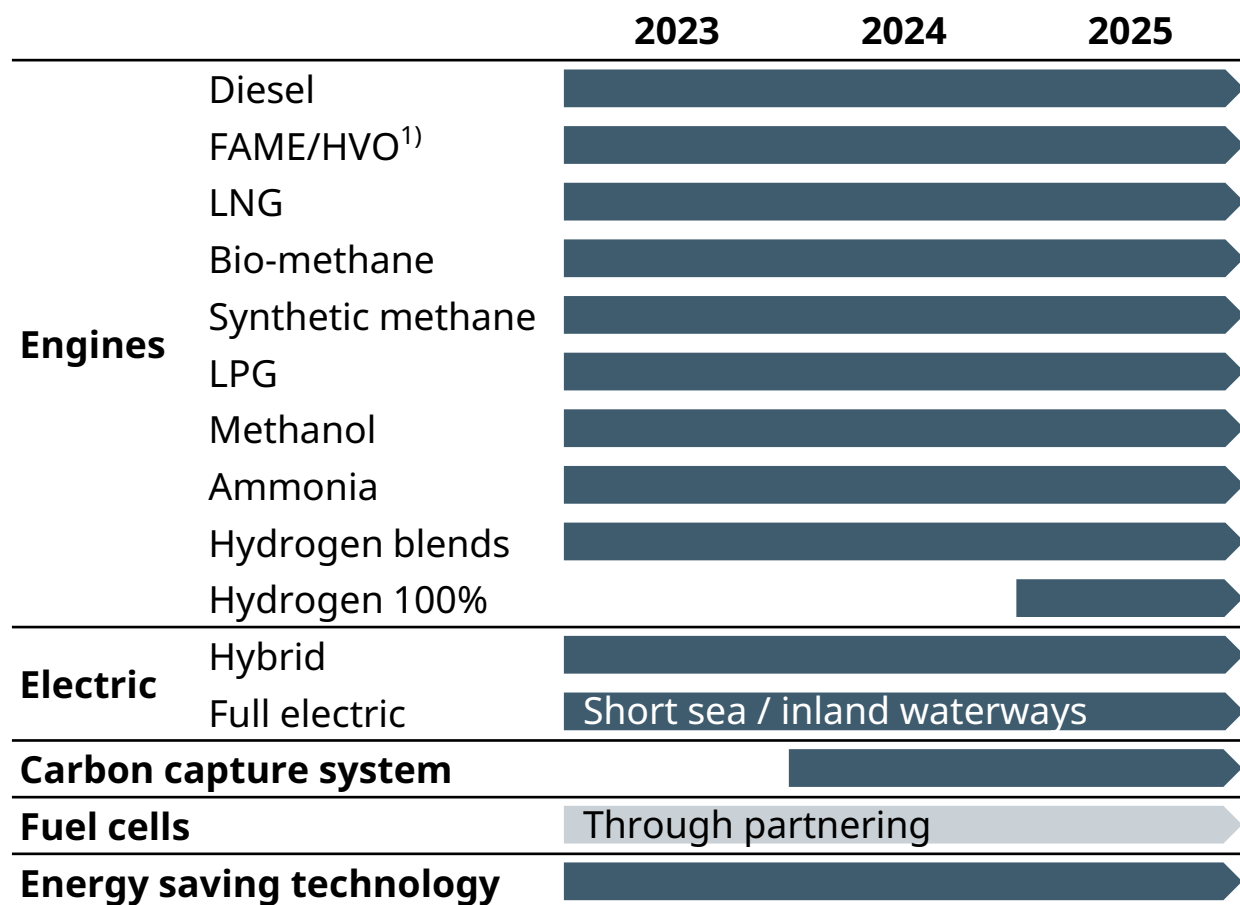
We continue investing in innovation to ensure a broad, industry-leading solution offering



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



# Industry's most comprehensive offering for decarbonisation



- ✓ Industry's fastest and broadest future fuel roadmap
  - ✓ Market leaders in 4-stroke medium-speed main engines
  - ✓ Market leaders in hybrids with 26% market share<sup>2)</sup>
  - ✓ Pioneer with the world's first full scale carbon capture plant in 2024 and full commercial release in 2025
  
- ✓ Methanol engine types available today<sup>3)</sup>, ammonia engine in Q4 2023, full hydrogen technology in 2025
  - ✓ In 2022 Wärtsilä & US partner WEC succeeded with world's first-of-a-kind engine power plant fuel tests using 25% hydrogen blend

1) Biodiesels: FAME – Fatty Acid Methyl Esters, HVO – Hydrogenated Vegetable Oil; 2) Battery MWh on 2000+ GT hybrid vessels; 3) Newbuild and retrofits

# Q3 development





## Improved profitability, strong cash flow and good development in services

- Order intake increased by 11%
- Good progress in services continued:
  - Service order intake increased by 15%
  - Service net sales increased by 15%
- The comparable operating result increased by 53%
  - Supported by good development in services
  - Energy storage business profitable\*
- Cash flow from operating activities improved

\*LTM comparable operating profit



## Good development in key figures

MEUR	7-9/2023	7-9/2022	CHANGE	1-9/2023	1-9/2022	CHANGE
<b>Order intake</b>	<b>1,787</b>	1,616	11%	5,214	4,436	18%
of which services	<b>842</b>	732	15%	2,644	2,275	16%
of which equipment	<b>946</b>	884	7%	2,570	2,161	19%
<b>Order book</b>				6,594	6,229	6%
of which current year deliveries				1,570	1,651	
<b>Net sales</b>	<b>1,452</b>	1,433	1%	4,371	4,072	7%
of which services	<b>762</b>	664	15%	2,305	1,991	16%
of which equipment	<b>690</b>	769	-10%	2,066	2,080	-1%
<b>Book-to-bill</b>	<b>1.23</b>	1.13		1.19	1.09	
<b>Operating result</b>	<b>117</b>	10	1123%	274	-62	
% of net sales	<b>8.0</b>	0.7		6.3	-1.5	
<b>Comparable operating result</b>	<b>125</b>	82	53%	320	232	38%
% of net sales	<b>8.6</b>	5.7		7.3	5.7	

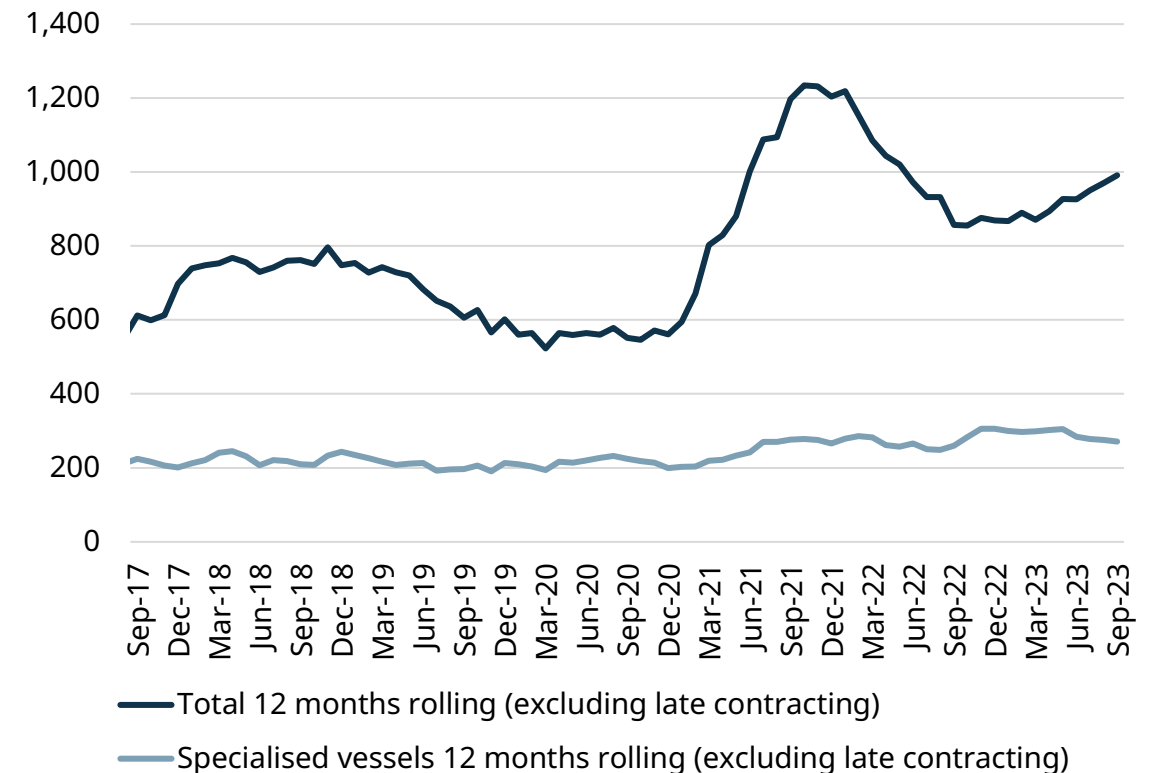
# Marine market sentiment remained positive for Wärtsilä's key segments

Low capacity available at shipyards combined with further escalation of newbuild prices have limited investments

- The number of vessels ordered in the review period increased to 1 356 (1 095 in the corresponding period in 2022, excluding late reporting of contracts).
- Mostly driven by the changed mix of contracted vessels. The uptake of alternative fuels remained more limited with 316 orders reported, representing 23% (30%) of all contracted vessels and 44% (58%) of vessel capacity.
- Demand for new cruise ship capacity remained limited as cruise lines are focused on managing the current orderbook and deleveraging their business.
- In July, the International Maritime Organisation (IMO) revised its strategy on greenhouse gas emission reduction from ships which puts pressure on shipping companies to increase their investments to decarbonise their operations.

## Total and specialised vessel contracting

Number of vessels



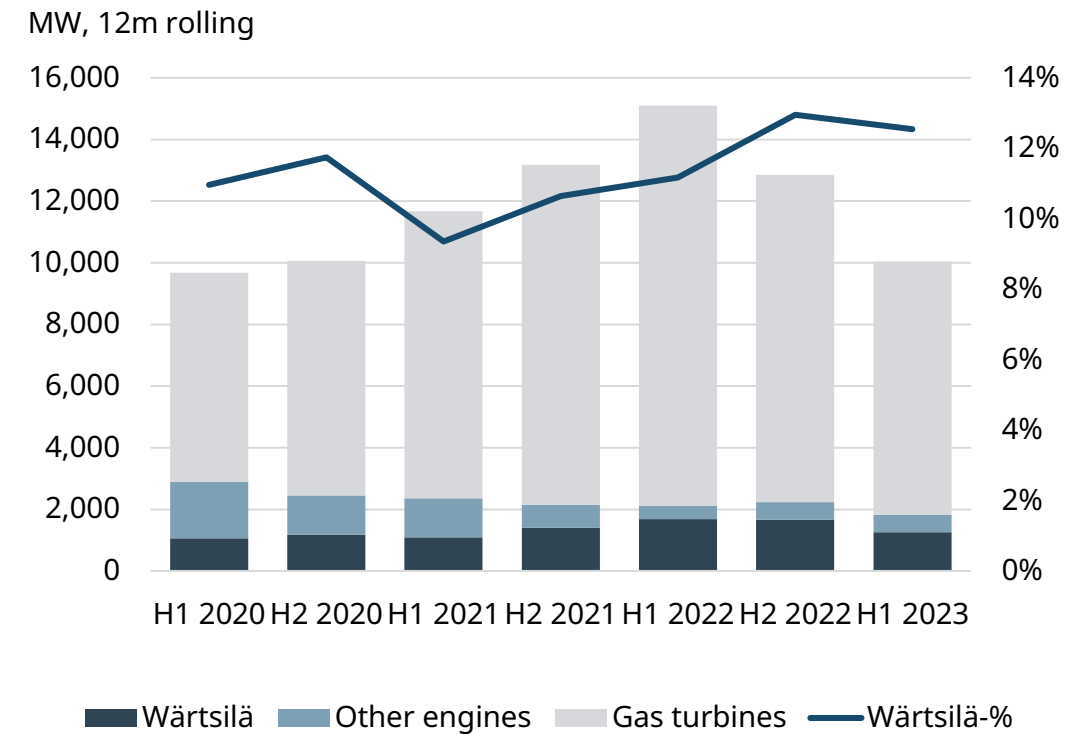
Source: Clarksons Research, 12m rolling contracting as per 6th of October 2023 (+100 gt, excluding late reporting of contracts)  
Specialised vessels include LNG carriers, LPG carriers, cruise & ferry, offshore, and special vessels.

# Solid long-term opportunities in energy market

Energy transition outlook improving amid fragile global economy

- Market share stayed at 13% (13%), as global orders for natural gas and liquid-fuelled power plants decreased by 22% to 10.0 GW during the twelve-month period ending in June 2023.
- Market decrease from the high levels of 2022 was driven by Europe and Asia.
- Global natural gas prices witnessed significant price volatility in Q3, showcasing the market's remaining sensitivity to disruptions in supply and demand.
- The trend in transition to renewable energy sources continues globally, being a key driver in the development of battery energy storage and thermal balancing technologies.
- The energy transition outlook in the mid-term remains strong.

## Contracting for gas and liquid fuelled power plants 5-400 MW

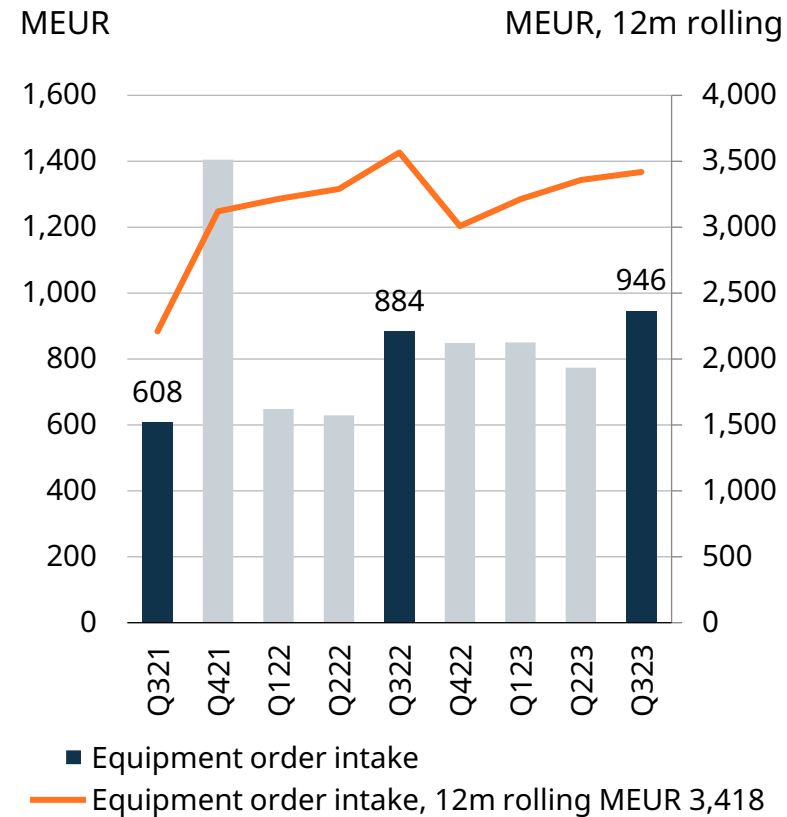


The market data includes prime movers over 5 MW in size in up to 400 MW gas and liquid-fuelled gas turbine plants and engine plants of all sizes. The gas turbine data is gathered from the McCoy Power Report, reported with a one quarter delay due to data availability. Engine data is collected from press releases and Wärtsilä sales teams. Output of steam turbines for combined cycles is estimated. Power plant market share reporting was updated this quarter to reflect our most relevant markets more accurately. Previously, market shares included gas turbine plants up to 500 MW but did not include non-Wärtsilä engine plants.

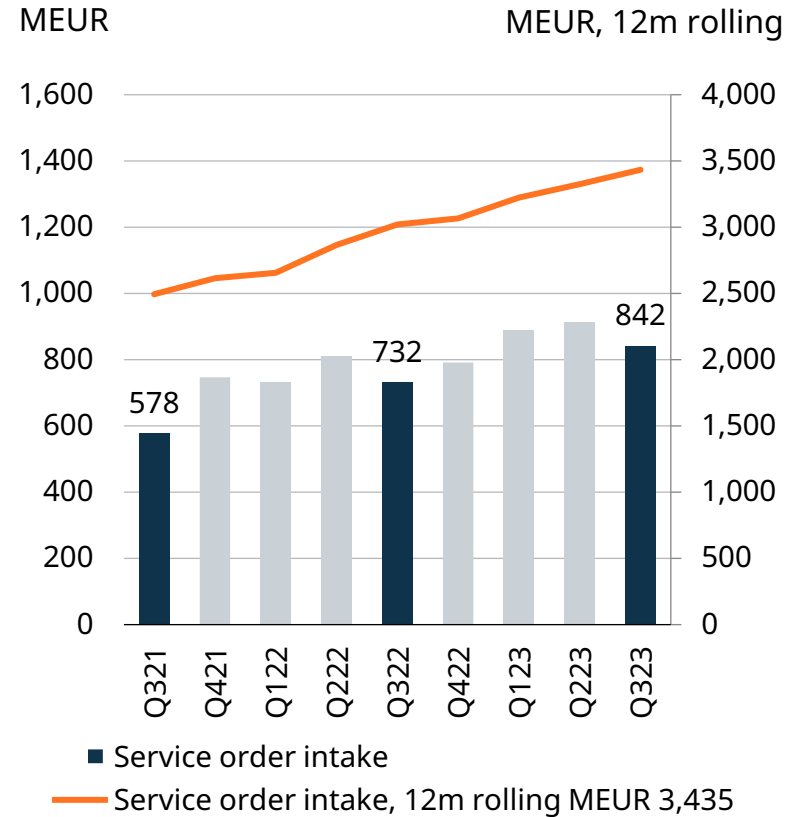


# Order intake increased by 11%

## Equipment



## Services



Equipment order intake increased by 7%

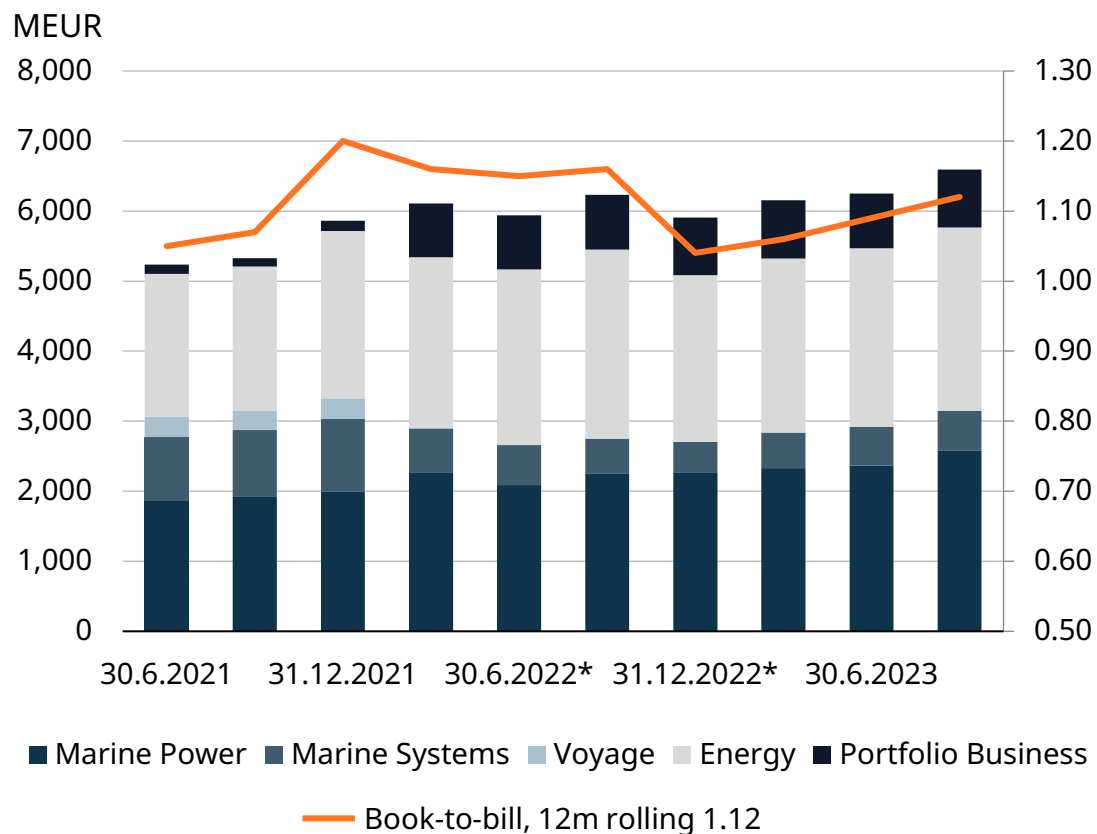
Service order intake increased by 15%

Organic order intake growth 18%

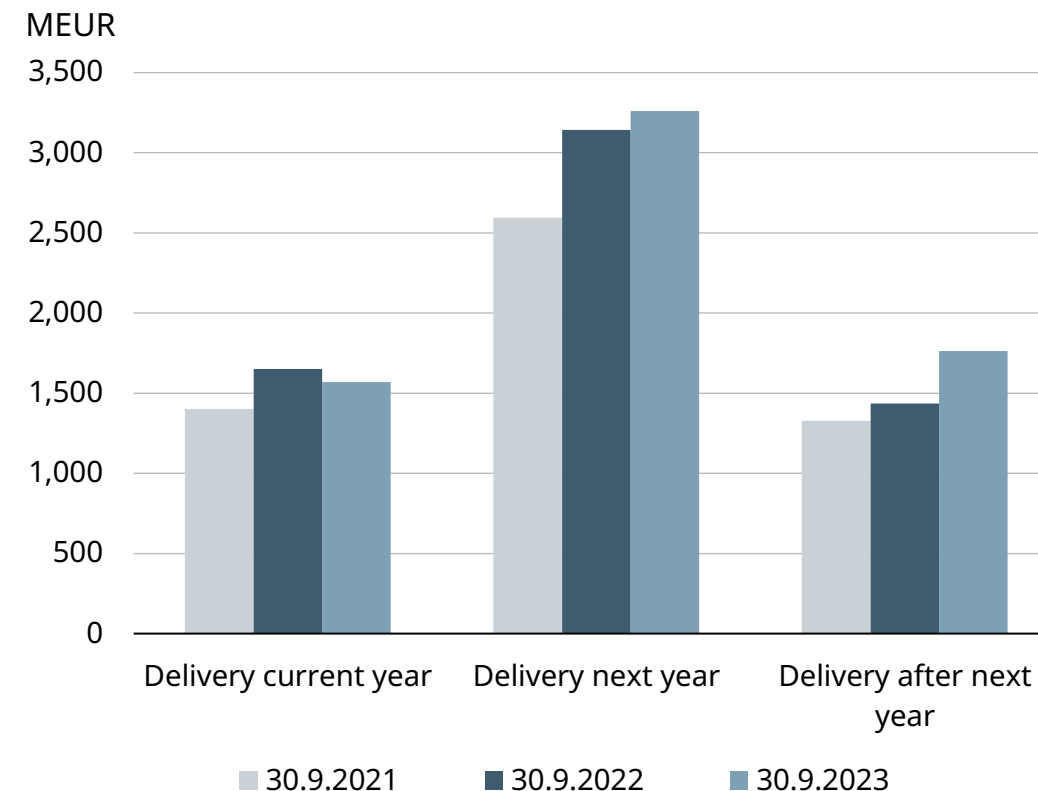
# Strong order book, rolling book-to-bill continues to trend up

Remaining order book for the current year lower than last year

## Order book by business



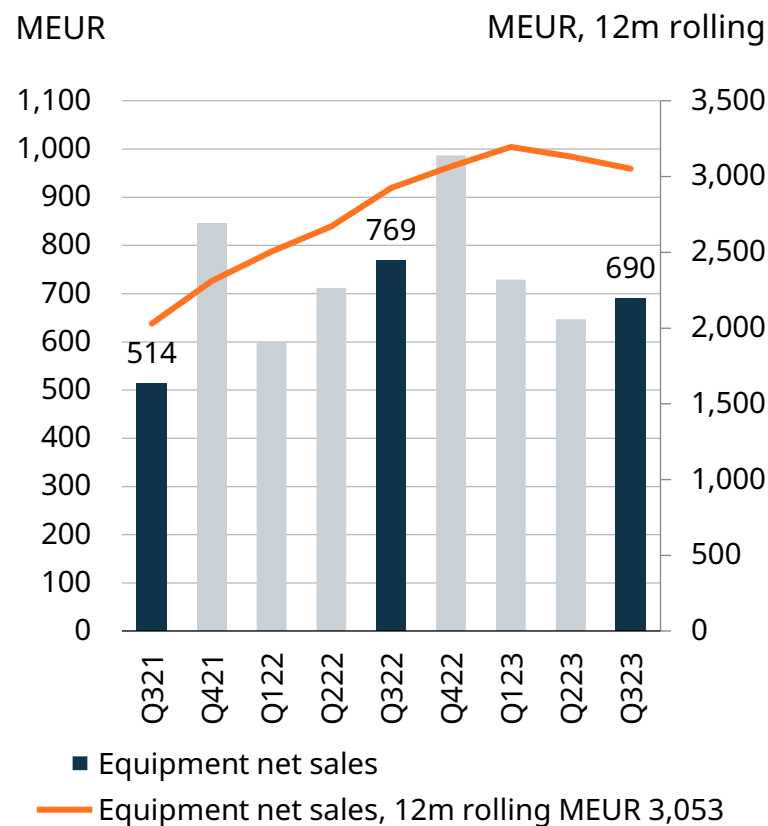
## Order book delivery schedule



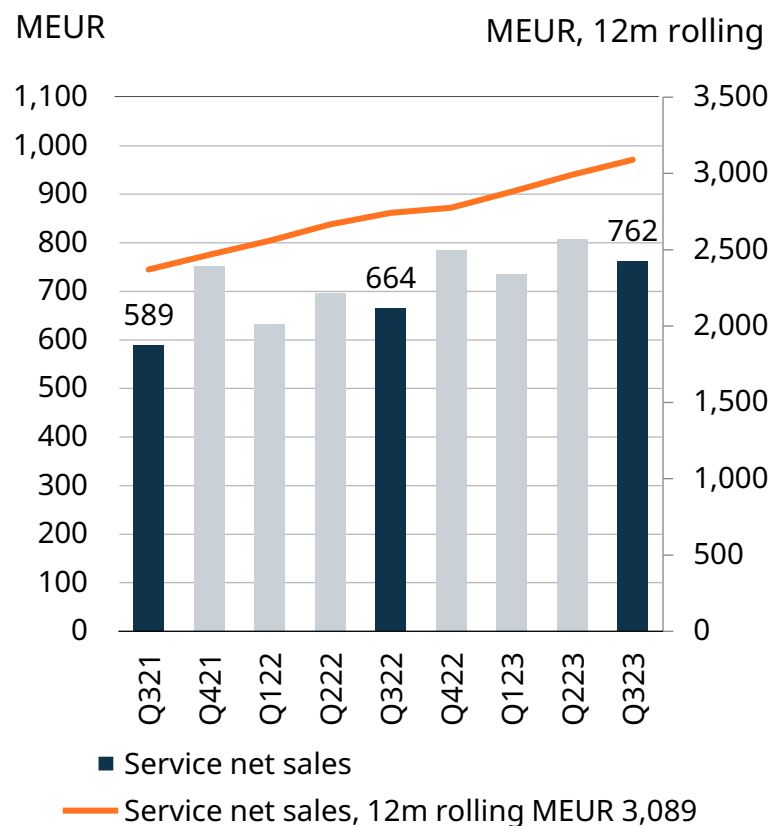
\*As of 1 January 2023, Voyage has been integrated with Marine Power. During the second quarter of 2023, further organisational changes have been implemented: a part of Marine Power, as well as a part of Marine Systems, have been moved to Portfolio Business. The segment related comparison figures for 1-3/2023 and 2022 have been restated to reflect the current organisational structure. The segment related comparison figures for 2021 have not been restated accordingly.

# Net sales increased by 1%

## Equipment



## Services



Equipment net sales decreased by 10%

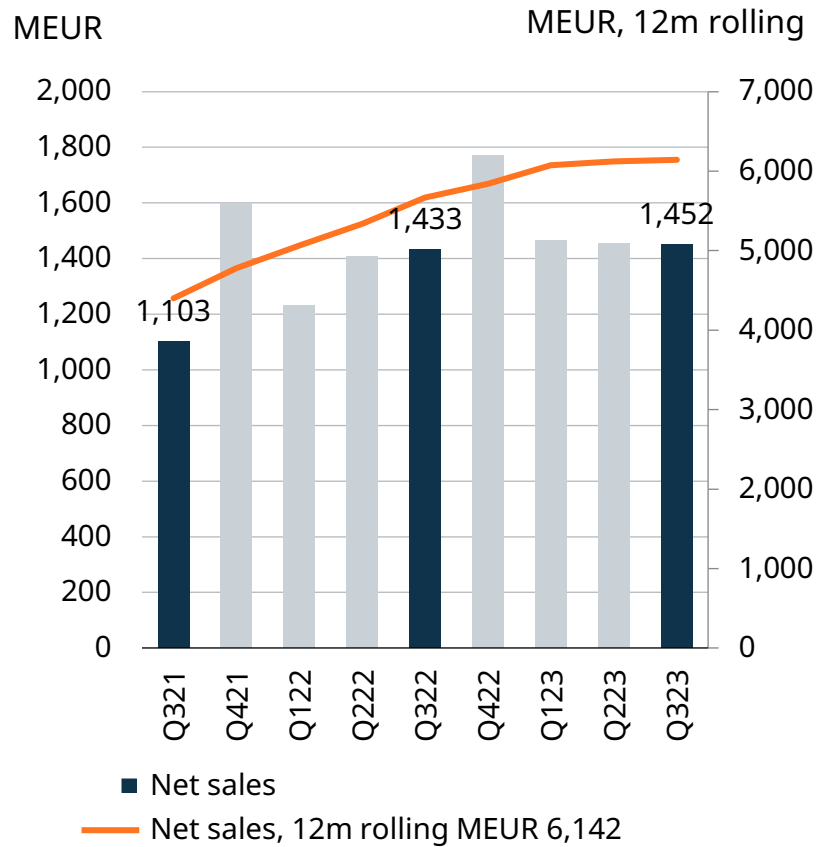
Service net sales increased by 15%

Organic net sales growth 7%

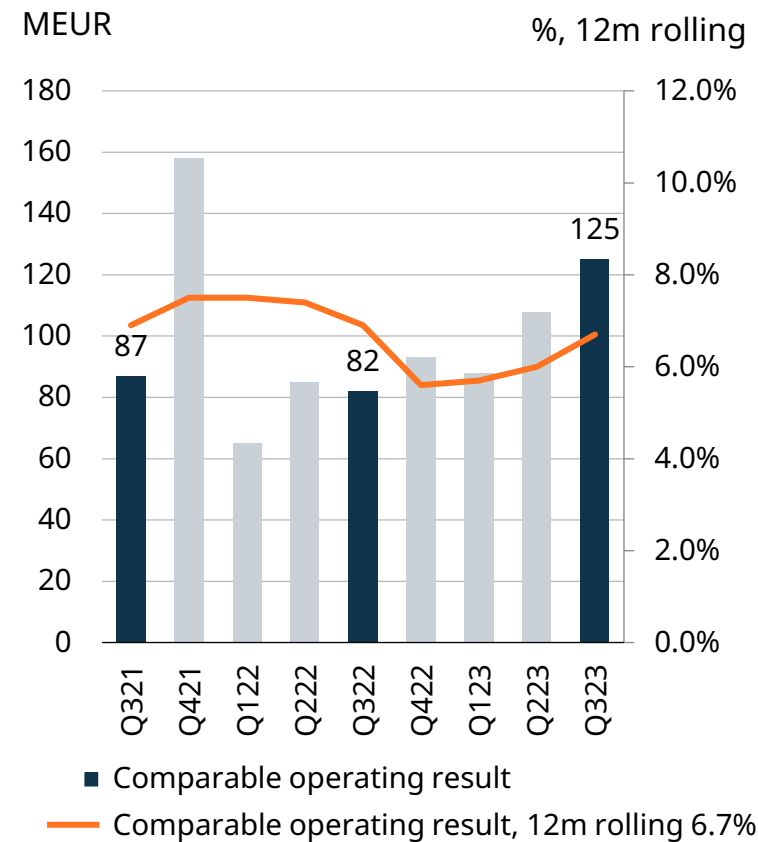


# Profitability continued to improve

## Net sales



## Comparable operating result



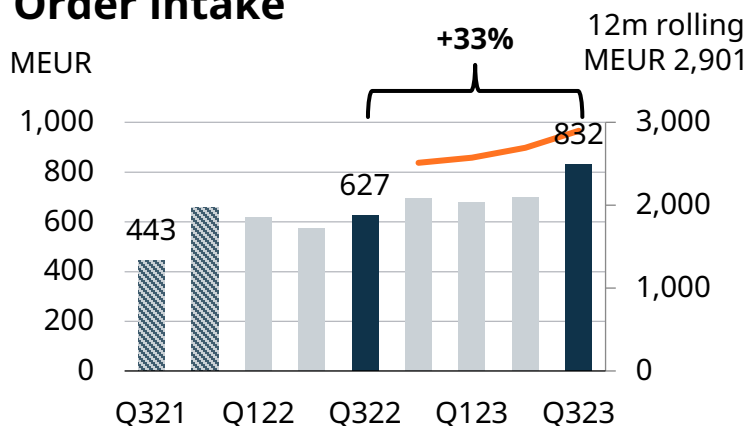
Net sales increased by 1%

Comparable operating result increased by 53%

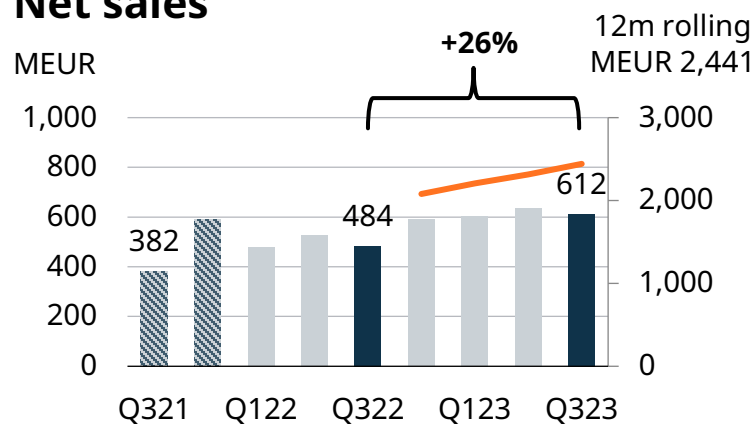
# Marine Power: Strong development in order intake and profitability

Good development in service continued

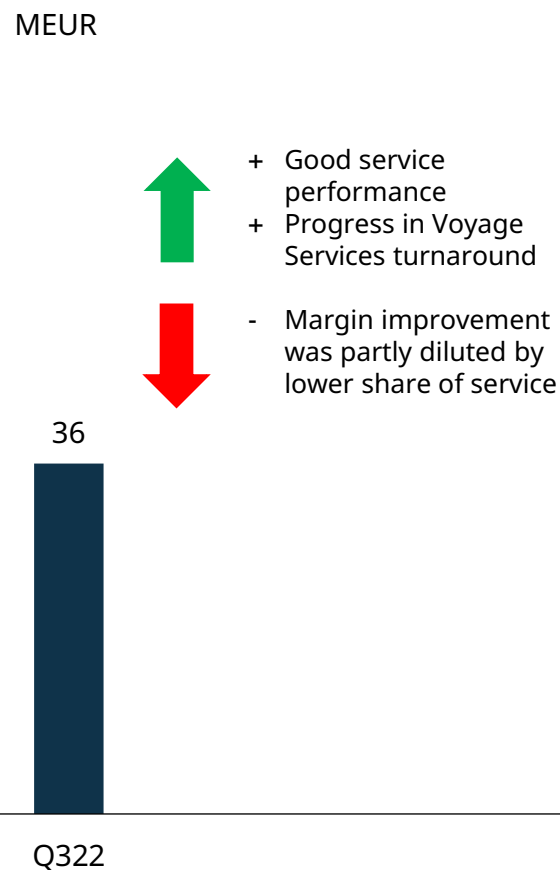
## Order intake



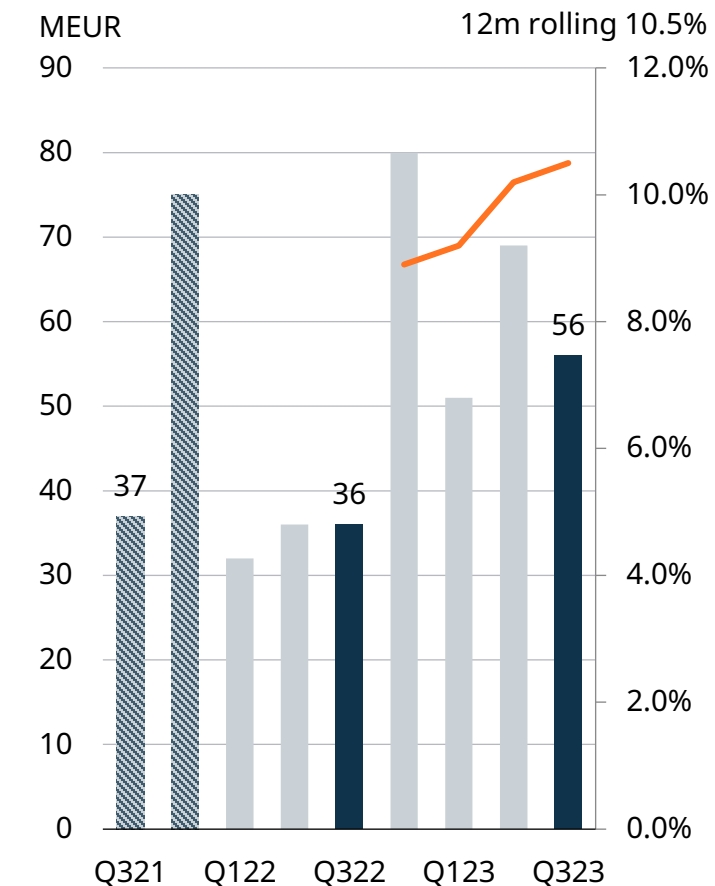
## Net sales



## Comparable operating result



## Comparable operating result

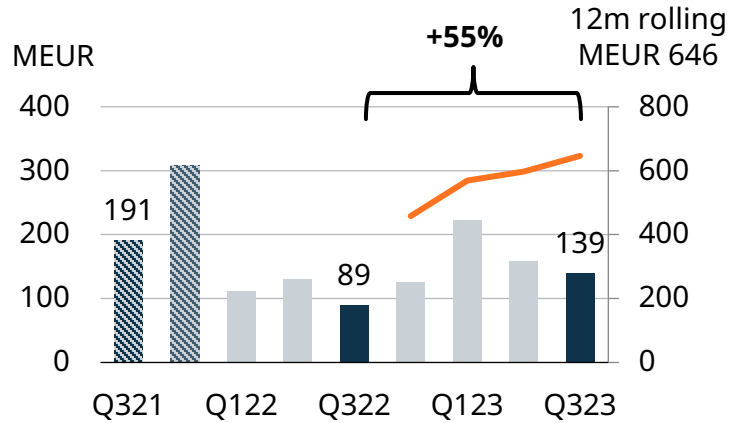


The 2022 and Q1 2023 figures have been restated to reflect the redefined organisational change considering integration of Voyage to Marine Power and moving part of the Voyage business to Portfolio Business (after integration into a new business unit).

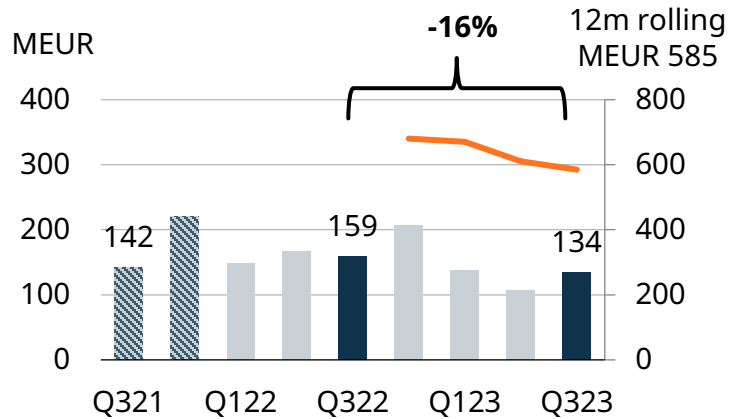
# Marine Systems: Equipment order intake increased

Lower equipment net sales

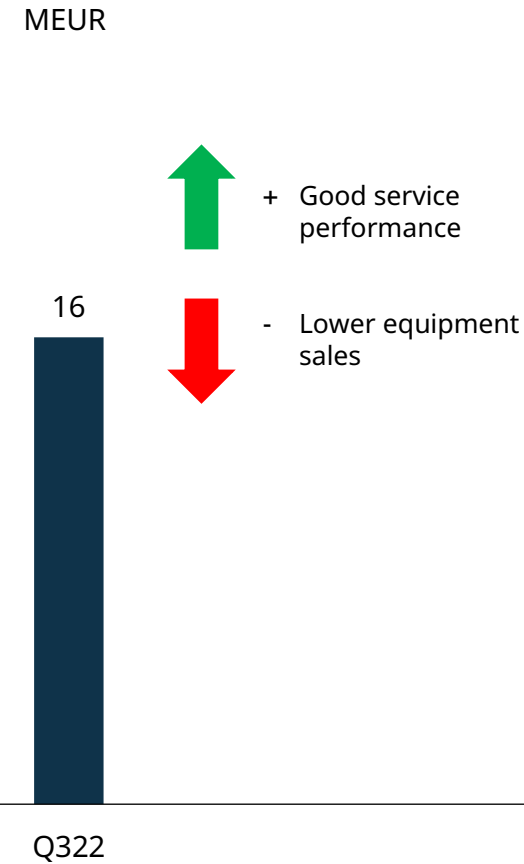
## Order intake



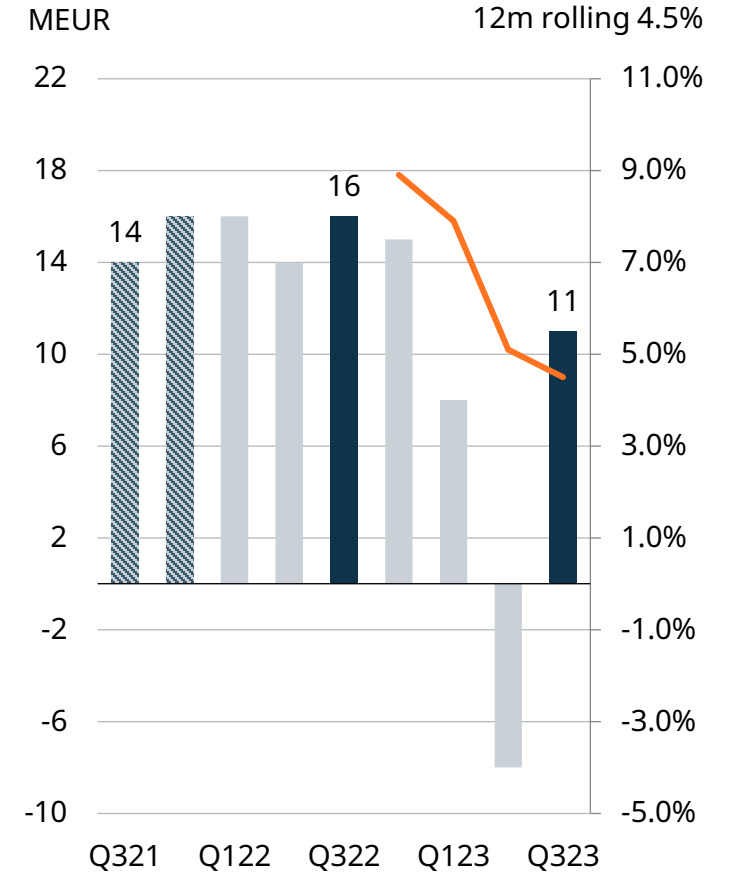
## Net sales



## Comparable operating result



## Comparable operating result

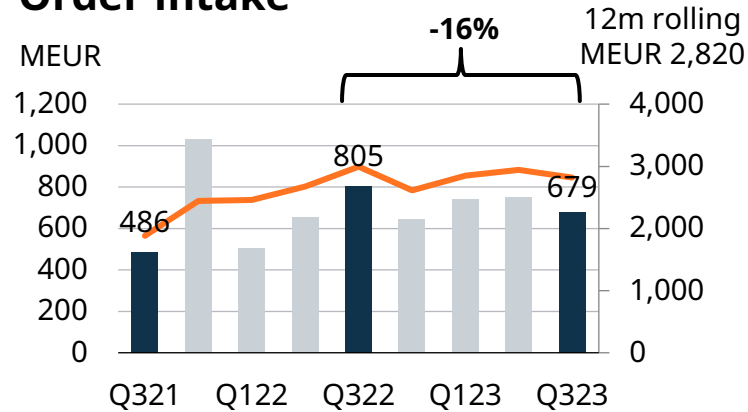


The 2022 and Q1 2023 figures have been restated to reflect the move of Marine Electrical Systems business unit to Portfolio Business.

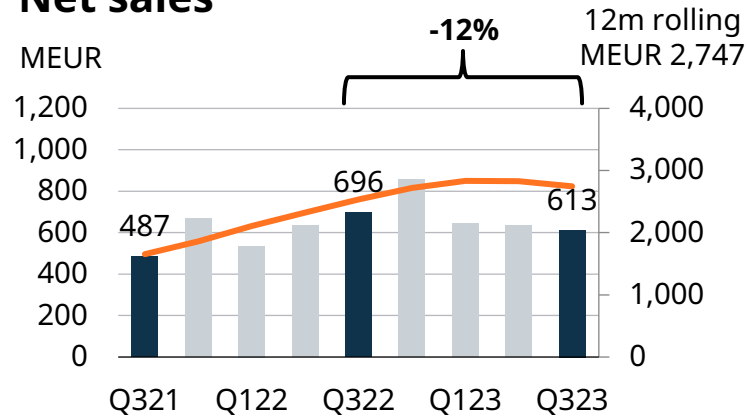
# Energy: Comparable operating result increased

Good development in service continued

## Order intake

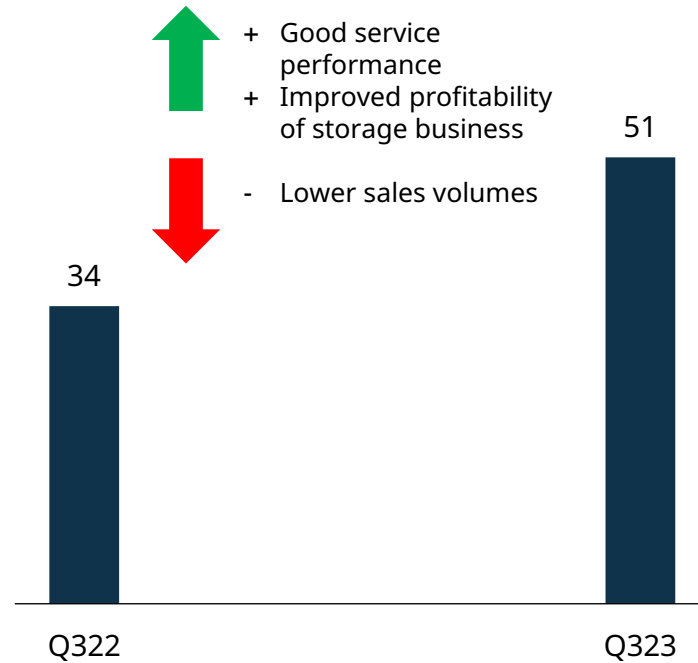


## Net sales



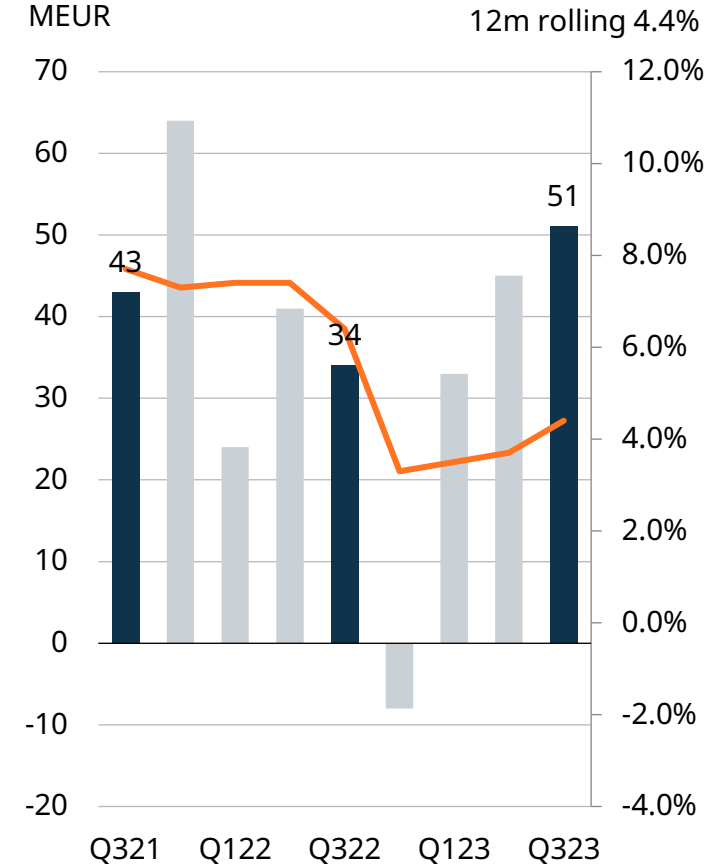
## Comparable operating result

MEUR



## Comparable operating result

MEUR

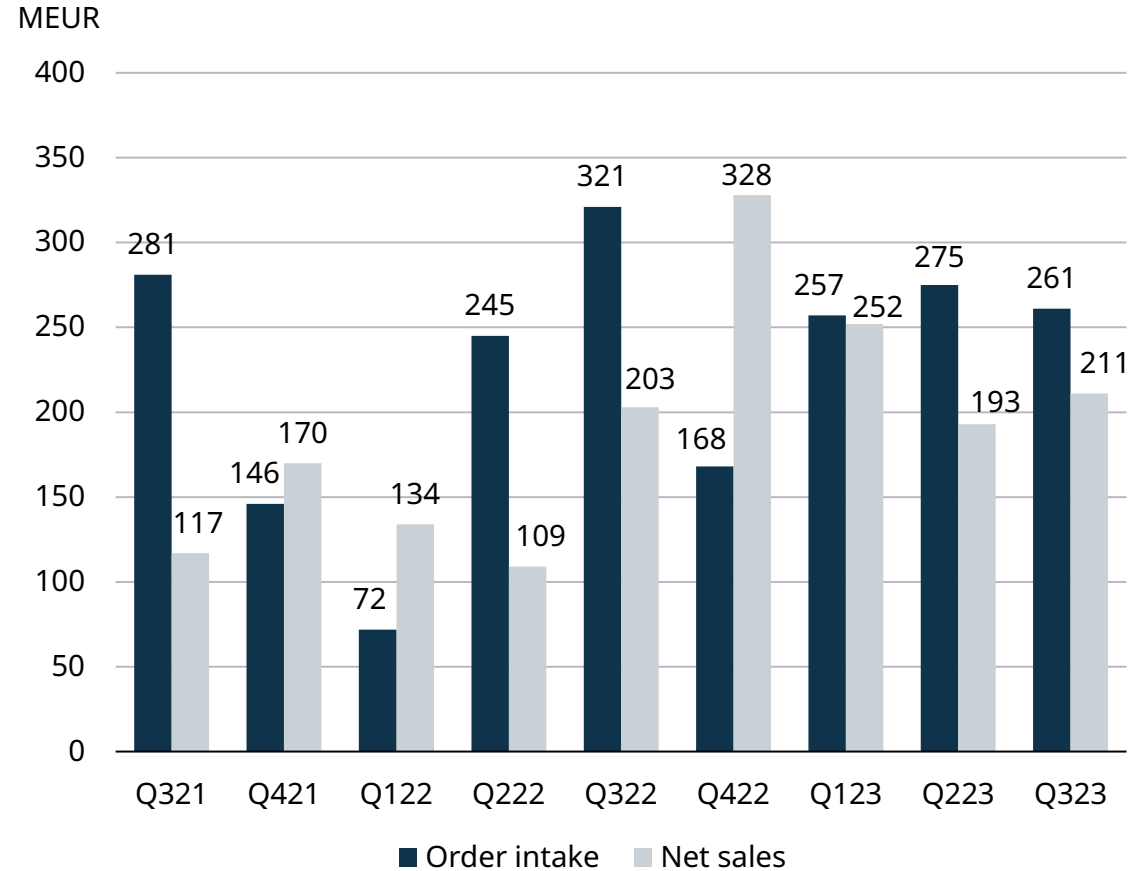




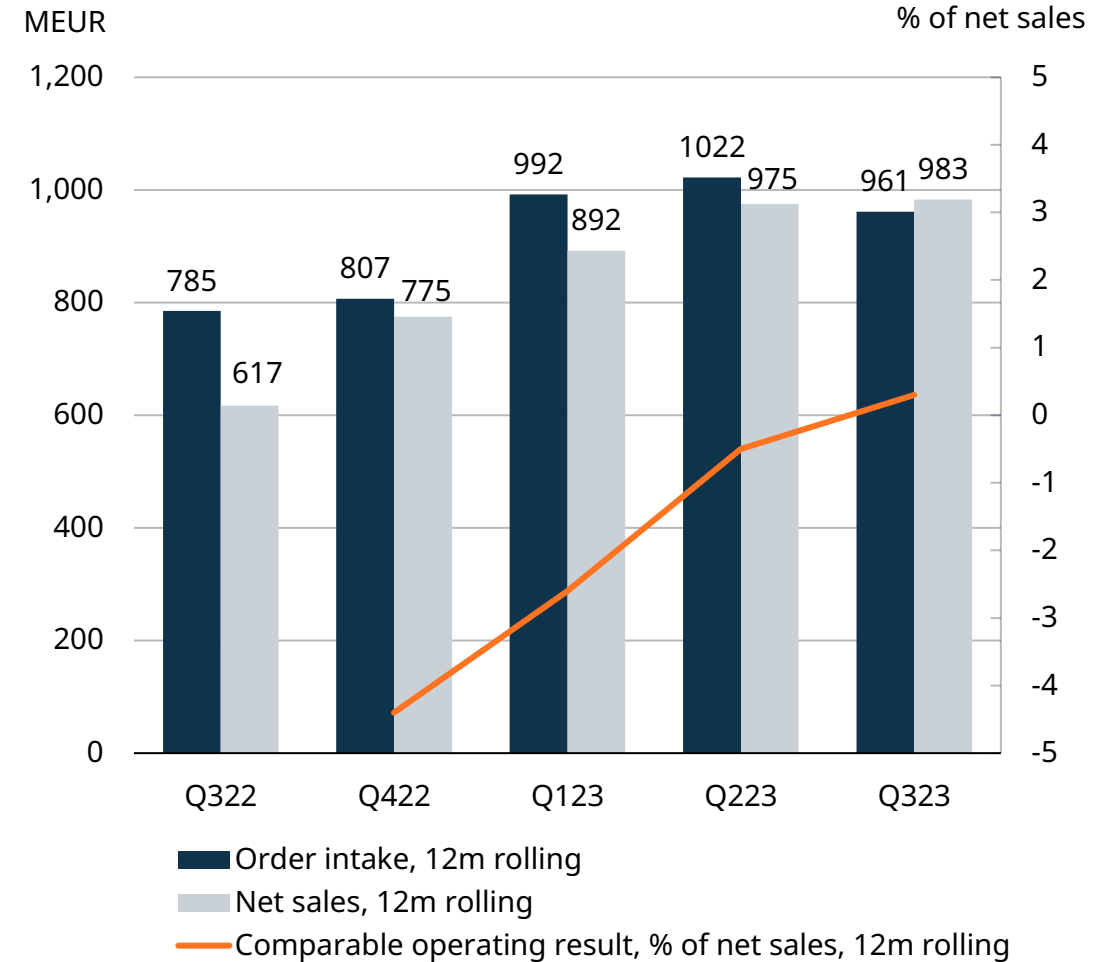
# Energy storage: Comparable operating result margin (12m rolling) positive

Profitability improving

## Quarterly development

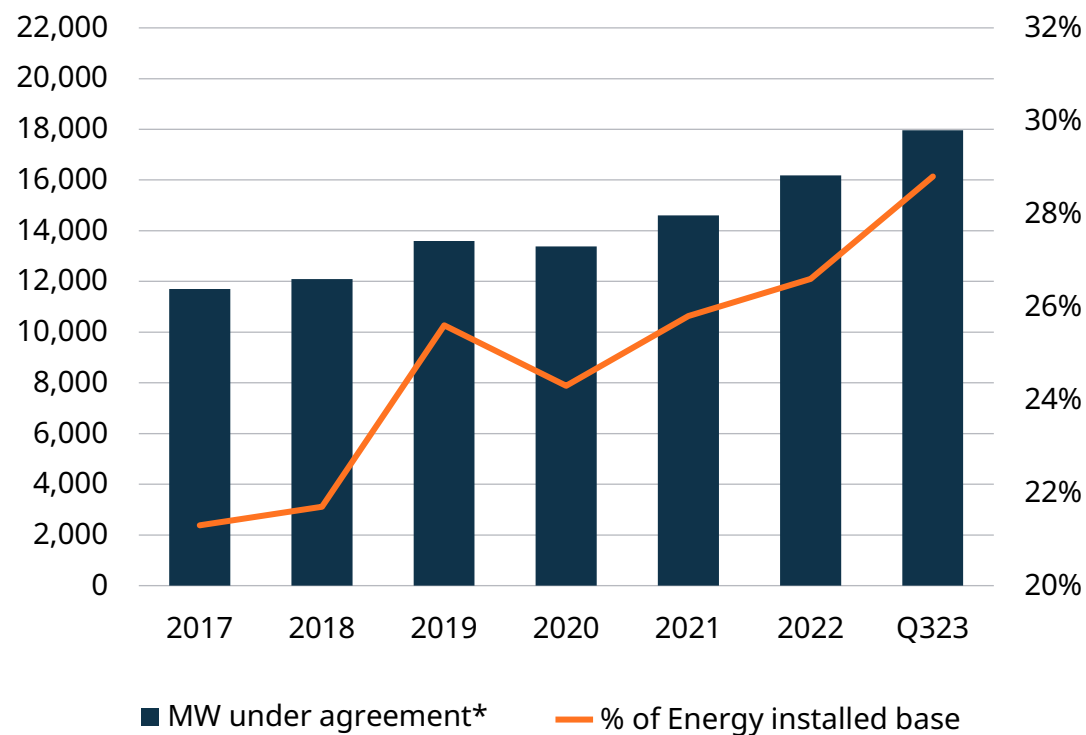


## Rolling 12 months development



# Service agreements

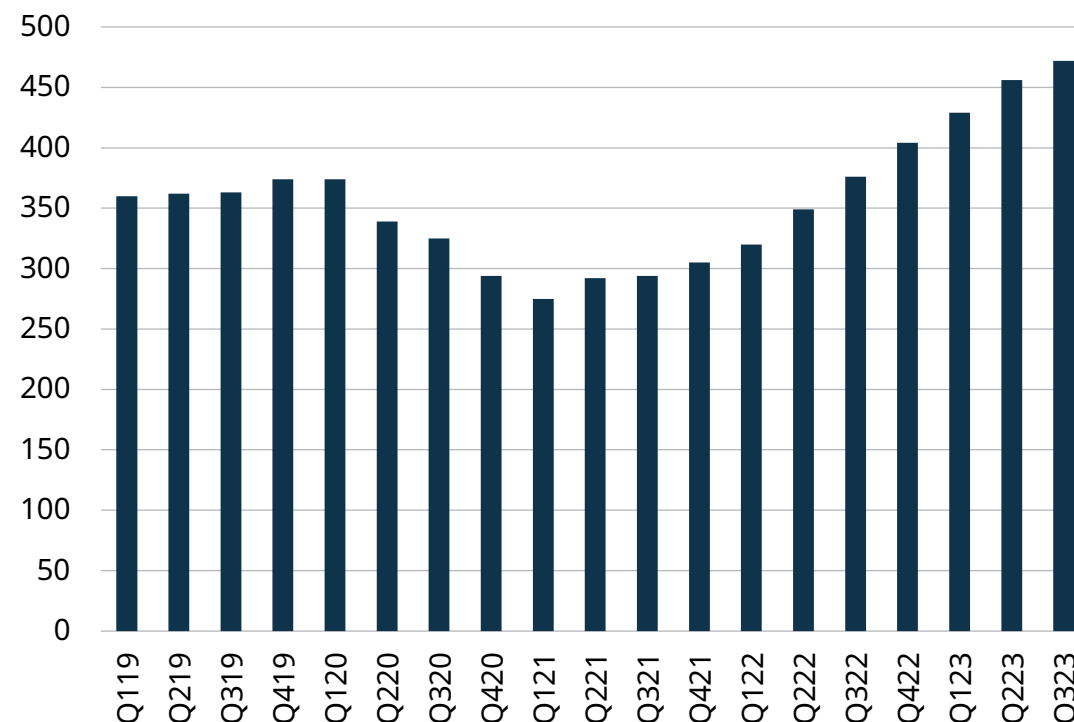
## Continuous growth in Energy agreement coverage



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

## Marine Power net sales to agreement installations

MEUR, 12m rolling





## Prospects

### Marine

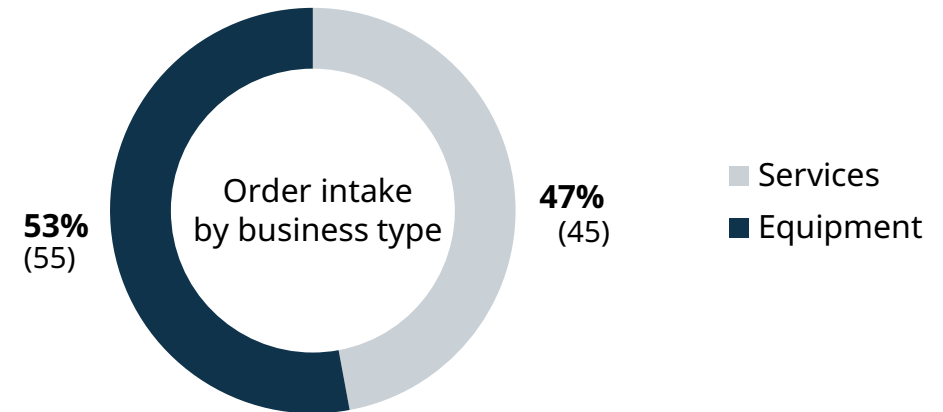
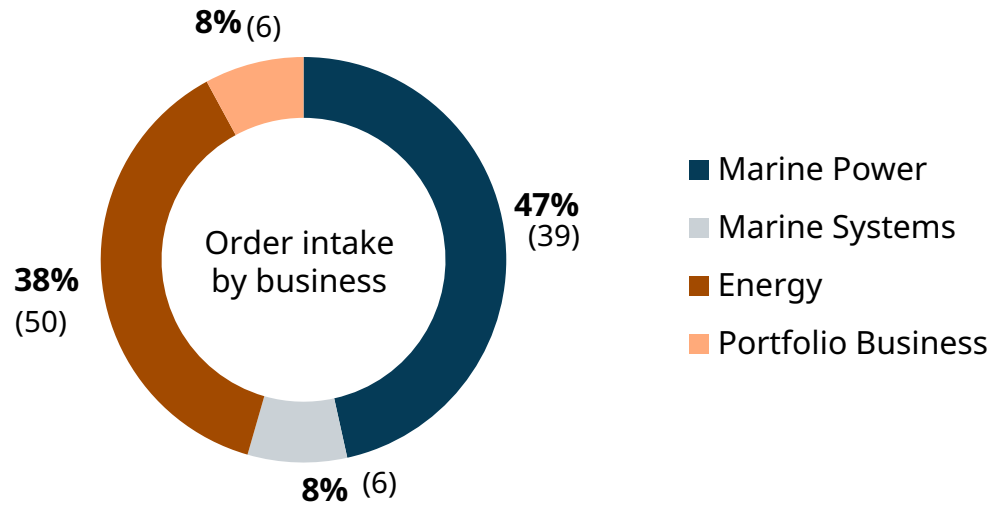
- Wärtsilä expects the demand environment for the next 12 months (Q4/2023-Q3/2024) to be similar to that of the comparison period.

### Energy

- Wärtsilä expects the demand environment for the next 12 months (Q4/2023-Q3/2024) to be better to that of the comparison period.

# Order intake

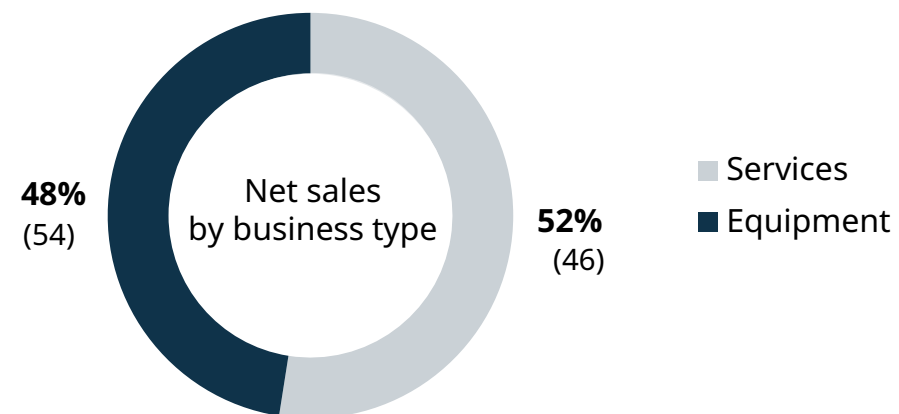
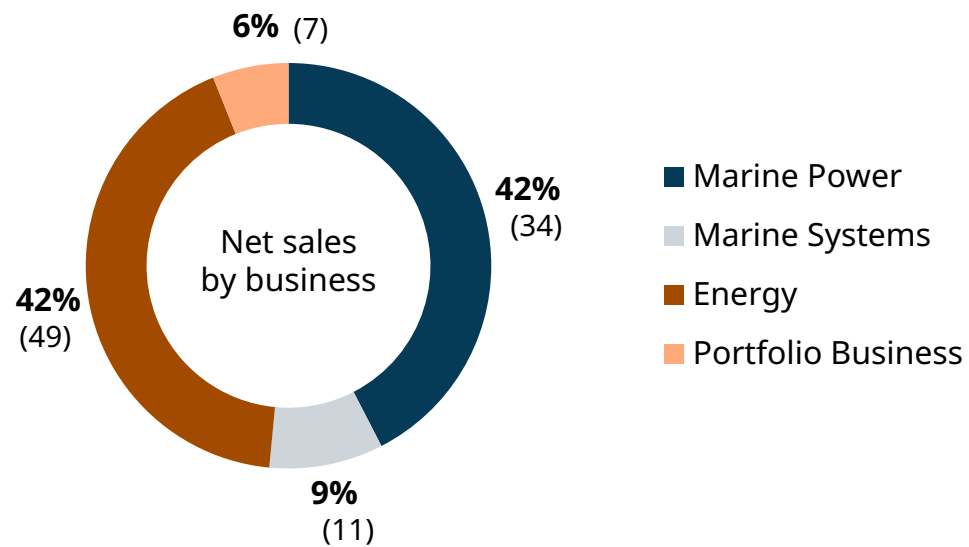
Third quarter development





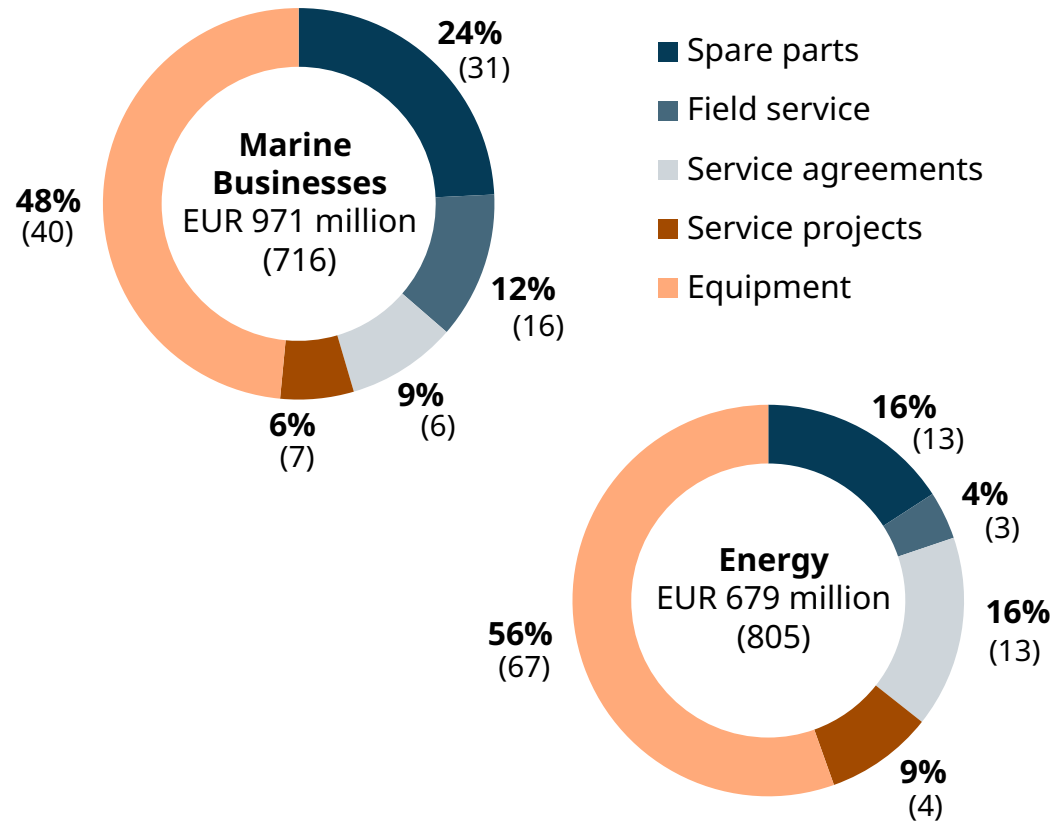
# Net sales

Third quarter development

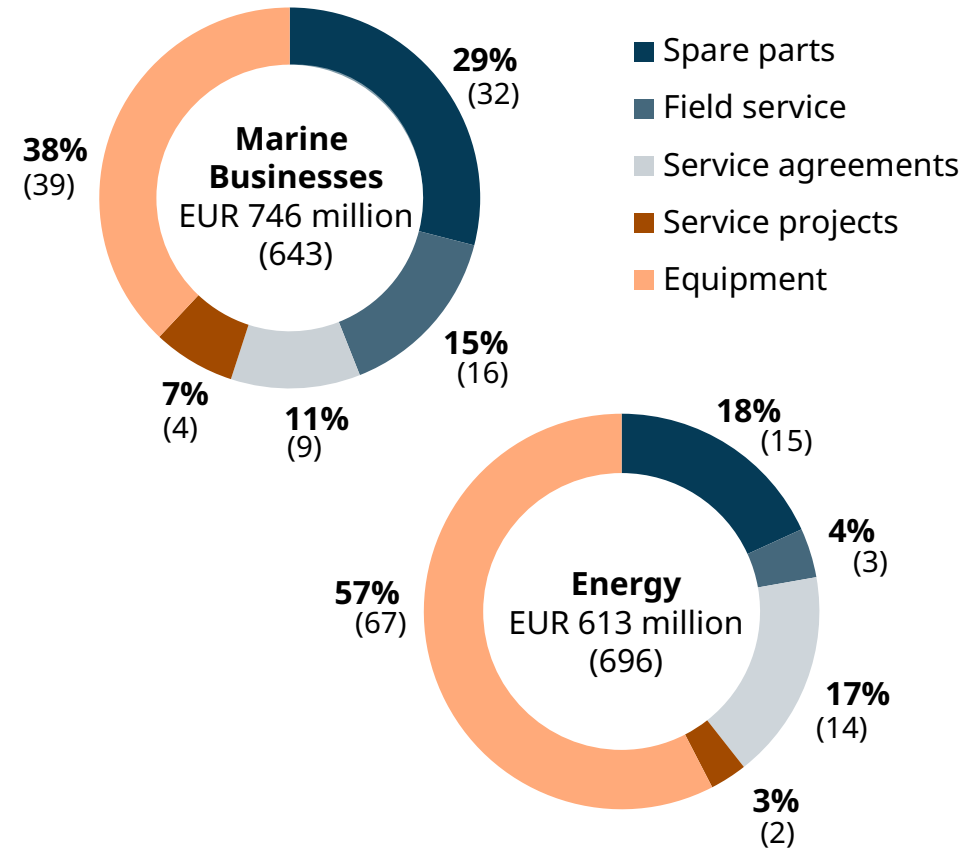


# Third quarter development by business type

## Order intake



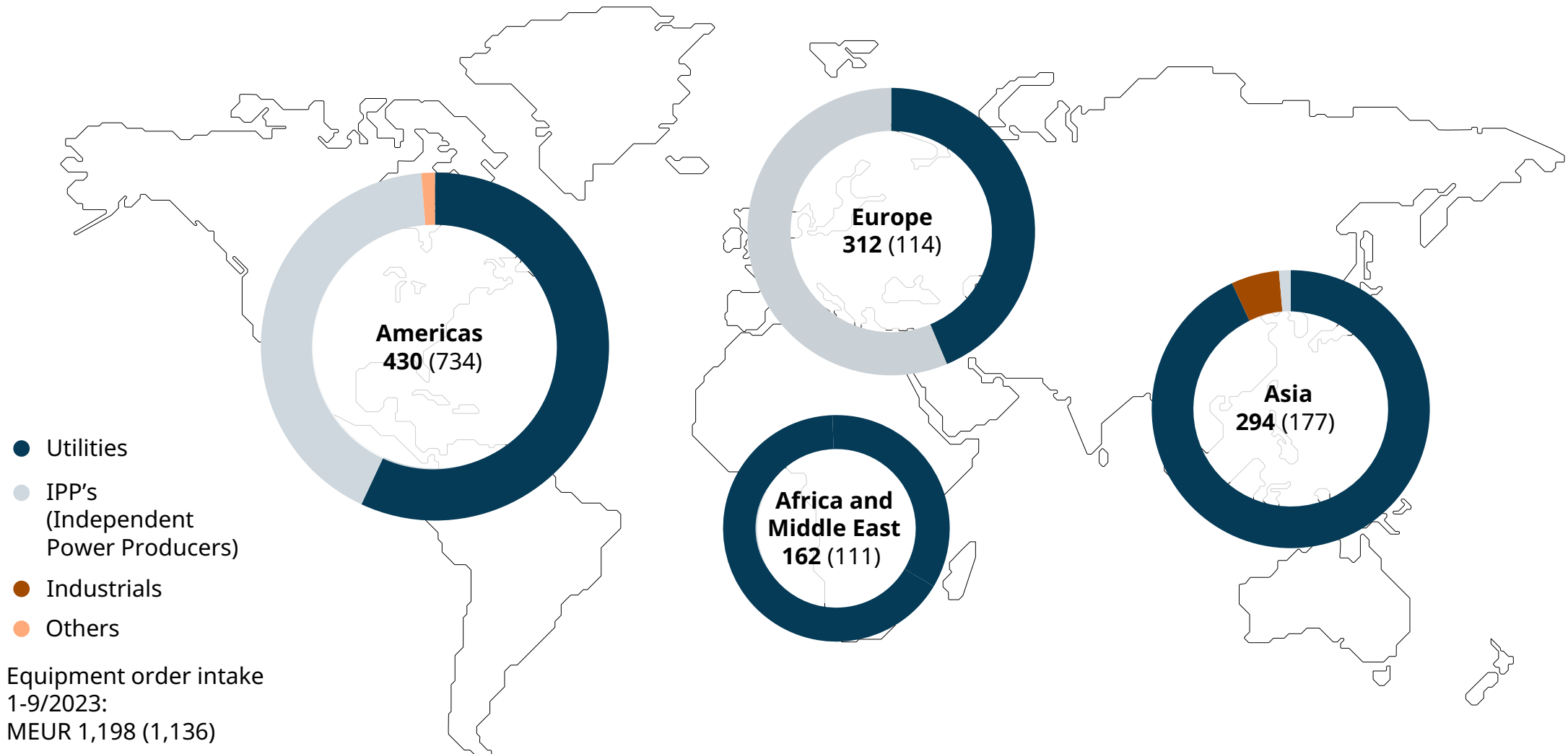
## Net sales



# January–September order intake by customer segment

Marine Businesses	Gas carriers	Cruise & ferry	Offshore	Navy	Special vessels	Merchant	Other
<b>Marine Power</b>							
Equipment	9% (15)	29% (21)	7% (2)	9% (3)	3% (17)	38% (35)	5% (7)
Services	16% (15)	23% (22)	19% (14)	6% (7)	11% (12)	23% (29)	2% (2)
<b>Marine Systems</b>							
Equipment	57% (47)	1% (4)	14% (1)	2% (4)	0% (1)	20% (16)	6% (27)
Services	4% (3)	8% (8)	4% (6)	24% (23)	7% (7)	49% (49)	4% (3)
<b>Marine businesses, in total</b>	18% (17)	22% (19)	13% (9)	8% (7)	7% (12)	29% (31)	3% (5)
Equipment	23% (22)	21% (18)	9% (2)	7% (4)	2% (13)	33% (31)	5% (11)
Services	14% (14)	22% (20)	17% (13)	8% (9)	11% (11)	26% (31)	2% (2)
Energy	Utilities		Independent Power Producers		Industrials		Other
Equipment	59% (35)		30% (52)		10% (13)		1% (0)
Services	33% (40)		32% (28)		22% (23)		13% (9)

# Orders received for Energy equipment globally





# Sustainability





# We are delivering towards our sustainability targets

## On track for our 2030 decarbonisation targets

- ✓ To become **carbon neutral in own operations**
- ✓ To provide a **product portfolio ready for zero carbon fuels**

## Improving safety, wellbeing and employee engagement

- ✓ **Positive trend in safety indicators**
- ✓ **Wellbeing behaviours & toolkit launched** to support teams
- ✓ **Improving trend in employee engagement**

## Strengthening thought leadership and being a responsible company

- ✓ Developing **industry ecosystems** and **co-operation with academia**
- ✓ Continued focus on **ethical compliance**
- ✓ Listed by TIME magazine as **TIME100 most influential companies in 2023**



# 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**

S&P Europe 350 ESG Index

Corporate  
Responsibility

RATED BY  
**ISS ESG**

Prime

**STOXX**

Member 2020/2021  
**ESG Leaders  
Indices**

**ECPI**  Sense in  
sustainability



**FTSE4Good**

**2021** MSCI ESG Leaders  
Indexes Constituent

**OMXSUSTAIN**  
**NASDAQ OMX**  
OMX GES SUSTAINABILITY FINLAND










# 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

	 <p>Green electricity purchasing fully in use in Finland</p>		 <p>Solar panel investment in Bermeo Spain</p>		 <p>Environmental standards for selecting new facilities in use</p>
	 <p>Electric Vehicle policy defined and being rolled out</p>		 <p>Heat pumps installed in server room in Norway</p>		 <p>Intelligent energy meters installed in Norway - leakages detected</p>
	 <p>Electric Forklift policy defined and being rolled out</p>		 <p>Variety of actions identified to reduce engine testing time</p>	<h1>Set for 30</h1>	



## Wärtsilä's ESG Agenda in brief

# E

### **Ambitious decarbonisation 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

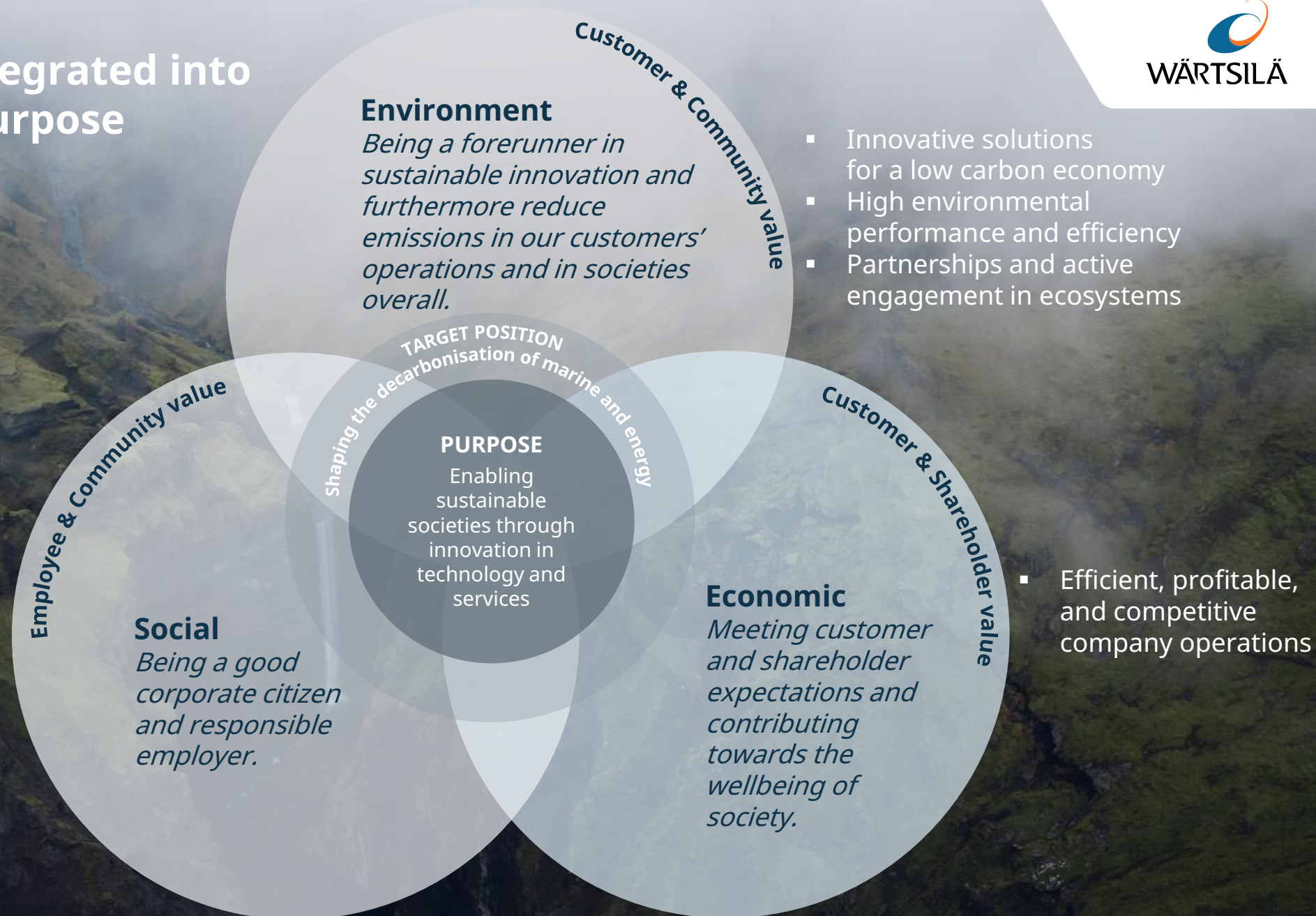
### **Effective Governance model**

- Sustainability matters embedded



# Sustainability is integrated into our strategy and purpose

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



## 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



# 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



**Anders Lindberg,** President,  
Wärtsilä Energy



**Teija Sarajärvi,**  
Human Resources



**Saara Tahvanainen,**  
Marketing and Communications

## Board of Directors



**Tom Johnstone CBE**, Chair of the Board, President and CEO of AB SKF 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, Fortum Corporation

## Largest shareholders October 2023 (CMi2i quarterly update)

#	Name	Shares	Share %
1	Invaw Invest AB	104,711,363	17.70%
2	Varma Mutual Pension Insurance Company	31,768,252	5.37%
3	BlackRock Fund Advisors	18,364,207	3.10%
4	The Vanguard Group, Inc.	17,436,479	2.95%
5	Ilmarinen Mutual Pension Insurance Company	13,541,503	2.29%
6	Norges Bank Investment Management	10,939,602	1.85%
7	Amundi Asset Management SA (Investment Management)	8,807,538	1.49%
8	Keskinäinen Työeläkevakuutusyhtiö Elo	7,692,000	1.30%
9	Legal & General Investment Management Ltd.	7,260,981	1.23%
10	SSgA Funds Management, Inc	6,596,074	1.11%
11	BlackRock Advisors (UK) Ltd.	6,112,802	1.03%
12	The Social Insurance Institution of Finland (Invt Port)	5,517,730	0.93%
13	Marathon Asset Management LLP	5,329,977	0.90%
14	BlackRock Investment Management (UK) Ltd	4,963,198	0.84%
15	Valtion Eläkerahasto - The State Pension Fund	4,700,000	0.79%
<b>Total Top 15</b>		<b>253,741,706</b>	<b>42.88%</b>





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

### Next upcoming IR events

- 4 January, Pre-silent call with CFO
- 8 January, SEB Nordic Seminar
- 31 January, Financial Statement Bulletin 2023

### Wärtsilä Investor Relations

**Hanna-Maria Heikkinen, Vice President, Investor Relations**

tel. +358 10 709 1461, email: [hanna-maria.heikkinen@wartsila.com](mailto:hanna-maria.heikkinen@wartsila.com)

**Samu Heikkilä, Senior Manager, Investor Relations**

tel. +358 44 5817979, email: [samu.heikkila@wartsila.com](mailto:samu.heikkila@wartsila.com)

### Meeting requests

**Janine Tourneur, Executive Assistant**

tel. +358 10 709 5645, e-mail: [janine.tourneur@wartsila.com](mailto:janine.tourneur@wartsila.com)

# Appendix

# Main competitors

## Engines

MAN  
Himssen  
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

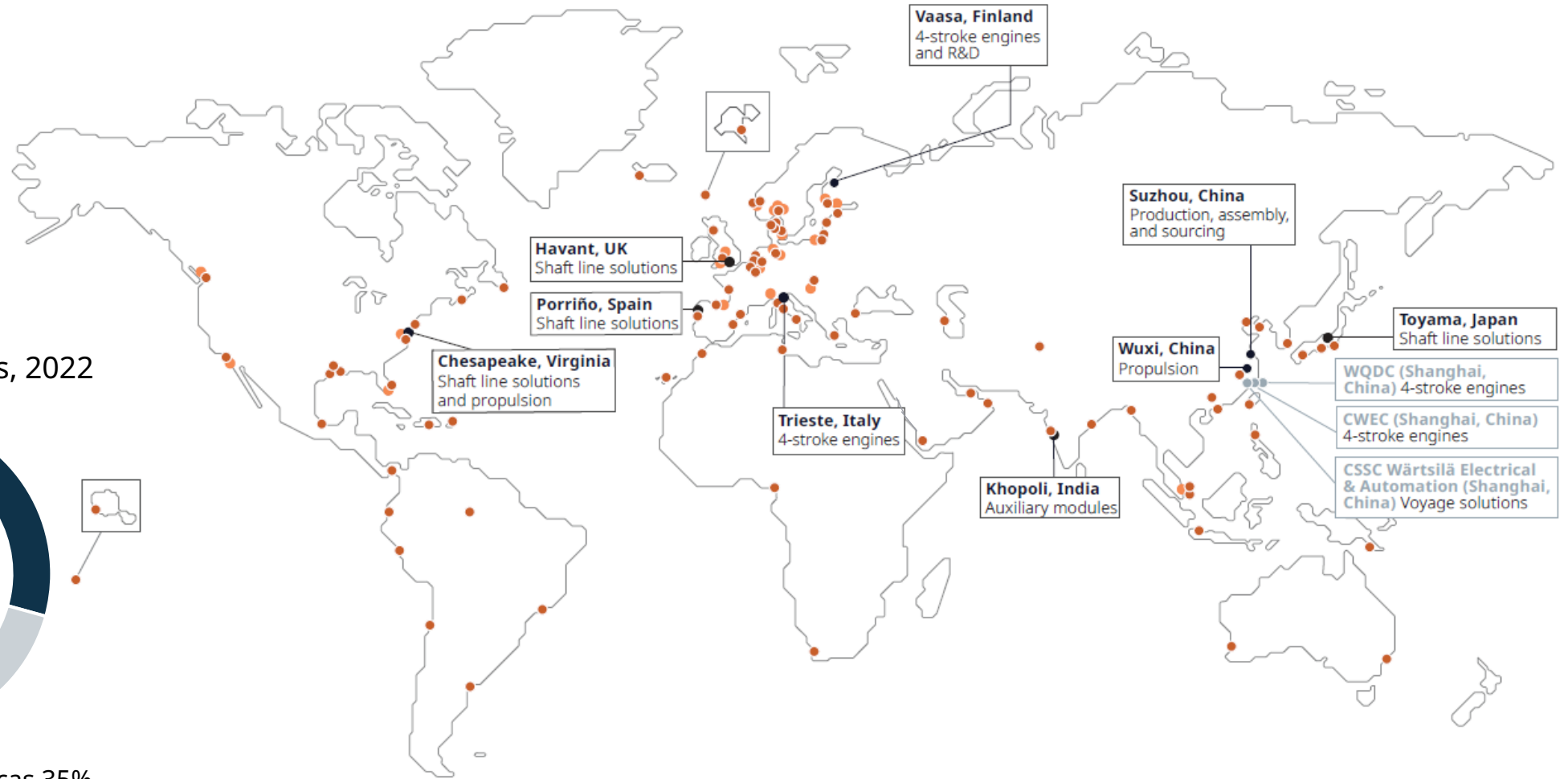
Utilities  
Independent Power Producers  
(IPPs)  
Industrial customers

# Wärtsilä's position as a global company is reflected in the geographical breakdown of our net sales

Geographical net sales, 2022



■ Europe 29% ■ Americas 35%  
■ Asia 25% ■ Other 10%



● Sites with engineering, R&D (fully owned) ● Sites with sizeable manufacturing (fully owned) ● Joint venture sites ● Service locations

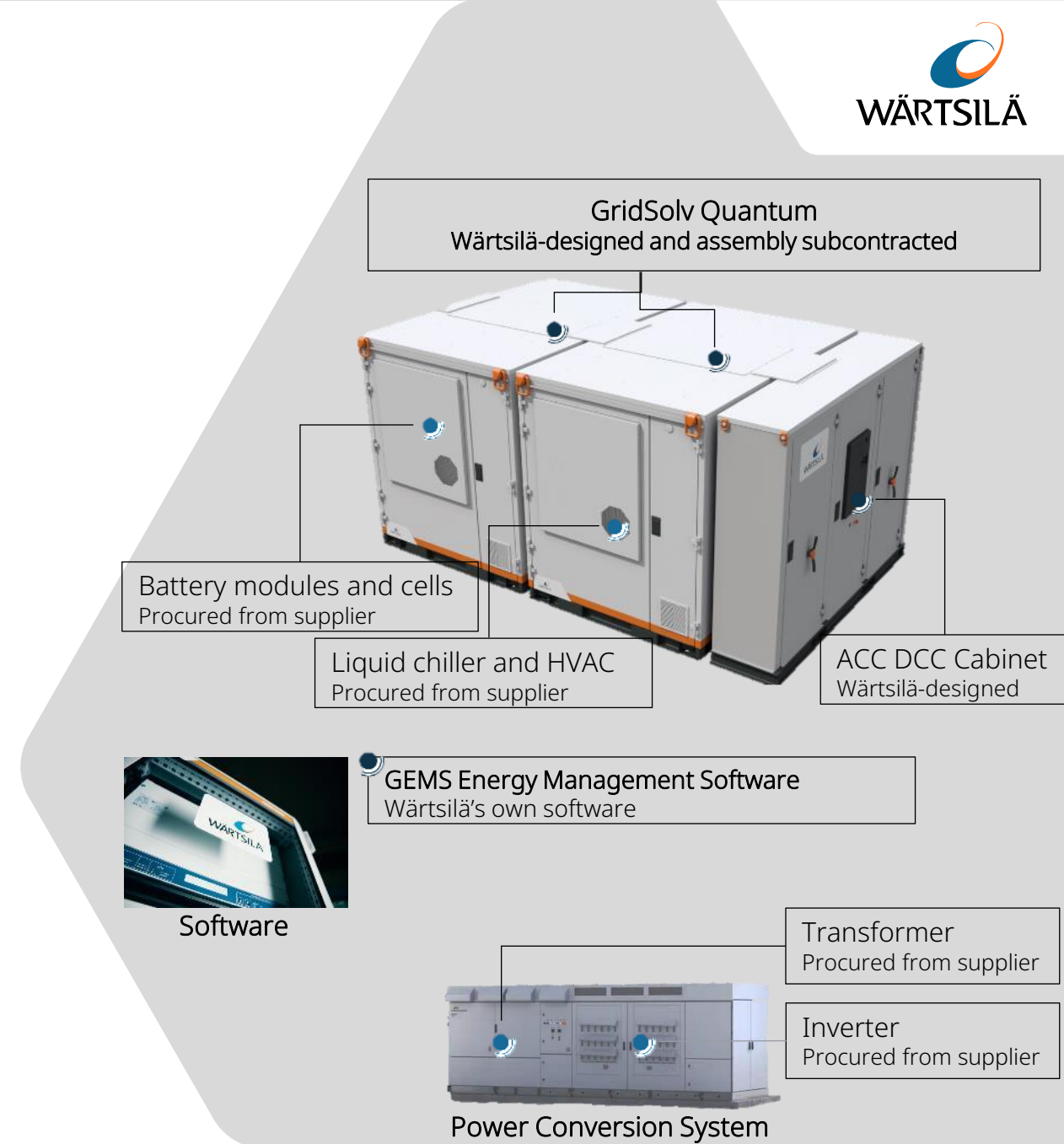


# Wärtsilä Energy Storage offering

## 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



# Key figures in 2022



# KEY FIGURES 2022

Order intake  
**6,074 MEUR**

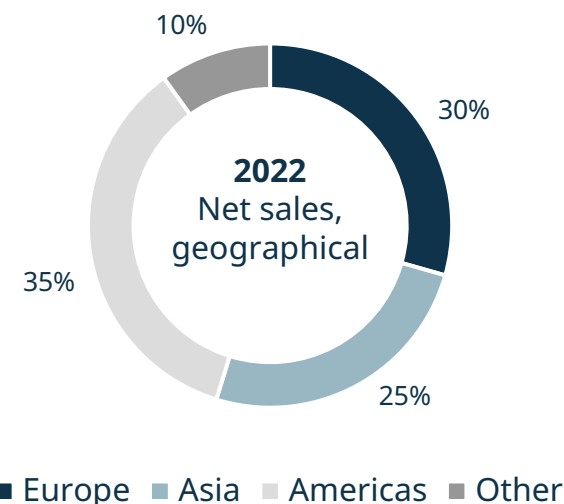
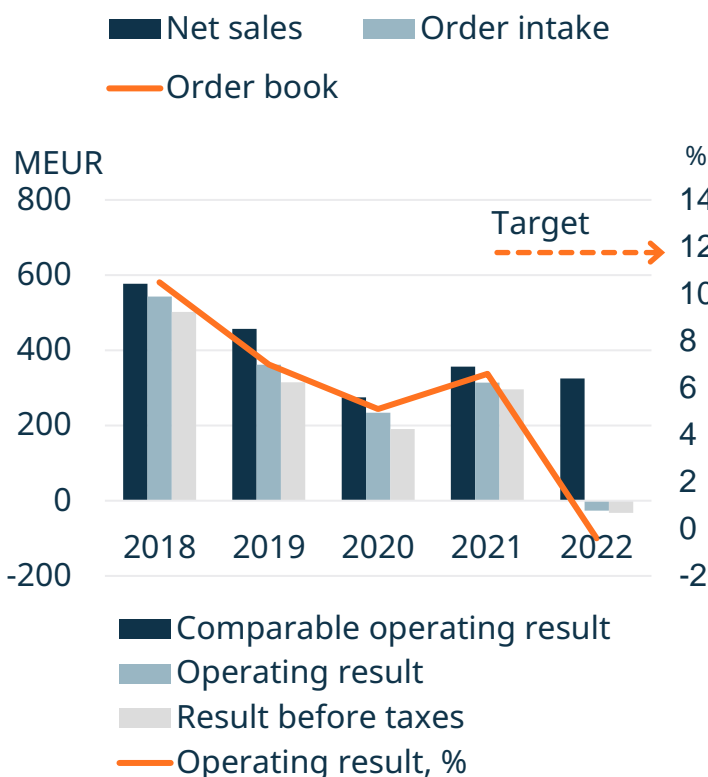
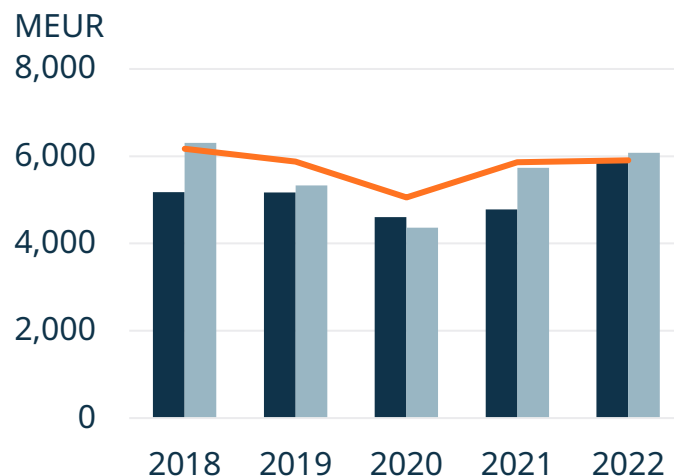
Net sales  
**5,842 MEUR**

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

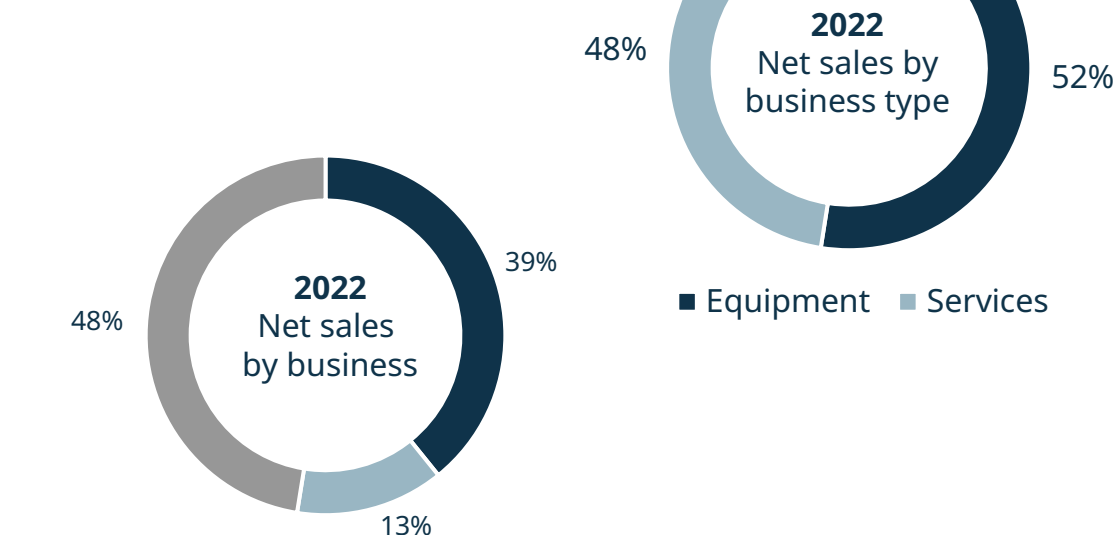
Operating result  
**-26 MEUR**  
**-0.4% of net sales**

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

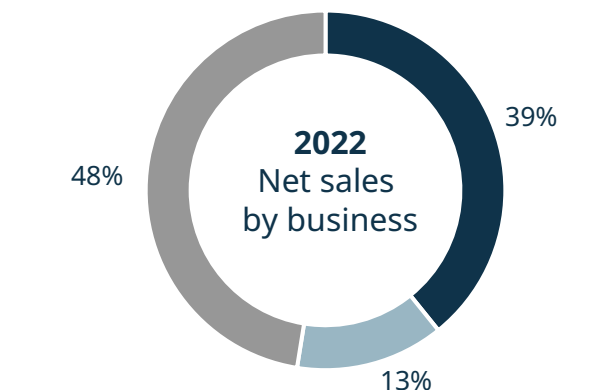
Personnel  
**17,500**



Legend: Europe (dark blue), Asia (light blue), Americas (grey), Other (dark grey)



Legend: Marine Power (dark blue), Marine Systems (light blue), Energy (grey)



# 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**

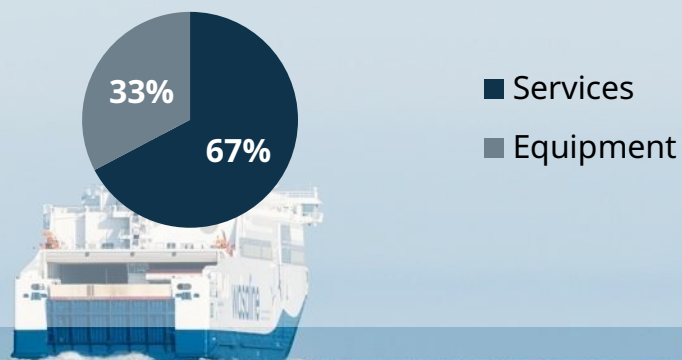
Net sales  
**2,247 MEUR**

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**

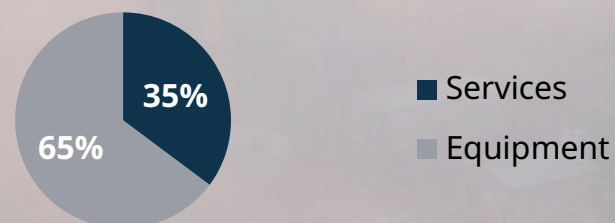
Net sales  
**2,721 MEUR**

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



**WÄRTSILÄ**