Wärtsilä – Shaping the decarbonisation of marine and energy

Wärtsilä businesses: Marine Power, Marine Systems, Energy, and Portfolio Business

A global leader in innovative technologies and lifecycle solutions in marine and energy

Emphasise innovation in sustainable technology and services to help customers continuously improve their environmental and economic performance

Key growth opportunities

Storage: Fast growing demand for energy storage and power system optimisation solutions

Services: Increased share of wallet from existing customers, deeper penetration of installed base, decarbonisation retrofits, new business models

Thermal balancing: Increased demand due to coal shut-downs, thermal balancing power complementing energy storage

Marine new build market recovery: Cruise & Ferry and Special Vessel segments

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

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

Key figures

Net sales
Order intake
Comparable operating result, % of net sales

MEUR

2018 2019 2020 2021 2022 LTM

0% 3% 6% 9% 12%

0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000
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 1)
- Gradual replacement of coal
- Renewables expected to become the largest source of global electricity by early 2025 2)
- Power systems becoming increasingly complex

1) IEA World Energy Outlook 2022 (Net Zero Emissions Scenario)
2) IEA Renewables 2022 report
Our value creation potential is based on two strategic themes

1. TRANSFORM
   Decarbonisation creates new business opportunities

2. PERFORM
   On a path to deliver the set targets
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.

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
3. Launch of the new Wärtsilä 32 methanol engine
4. Digitalising 21 ports in the United Kingdom
5. Wärtsilä builds major plant for the production of REEFUEL, climate-neutral Bio-LNG
6. Successful hydrogen blending tests in a power plant
7. Hybrid propulsion systems for world’s largest hybrid vessels
Perform

On a path to deliver the set targets

#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

Focus on:
▪ High performing teams
▪ Performance excellence and robust execution
▪ Continuous improvement
▪ Cost structure – actions taken whenever and wherever necessary

Extensive service network, positioned for growth both in transactional services and performance-based agreements
Wärtsilä key figures by reporting segments

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

**Marine Systems**
We offer our customers high quality products and lifecycle services related to the gas value chain, exhaust treatment, shaft line, underwater repair and electrical integrations.

**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.
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%
Financial targets reflect growth opportunities and increased profitability

<table>
<thead>
<tr>
<th>Targets</th>
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</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>5% annual organic growth</td>
</tr>
<tr>
<td>Profitability</td>
<td>12% operating margin</td>
</tr>
<tr>
<td>Capital structure</td>
<td>Gearing below 0.50</td>
</tr>
<tr>
<td>Dividend</td>
<td>At least 50% of earnings</td>
</tr>
</tbody>
</table>
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)

Key drivers

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

Services
- Increased share of wallet from existing customers
- Deeper penetration of installed base
- Decarbonisation retrofits
- New business models

Thermal balancing
- Increased demand due to coal shut-downs
- Thermal balancing power complementing energy storage

Marine new build market recovery
- Cruise & Ferry and Special Vessel segments in particular

Target:
5% annual organic growth

Limited additional CAPEX needed to facilitate the growth

Source: CMD 2021
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

**Limited additional CAPEX needed to facilitate the growth**

**Target:**
12% operating margin

Source: CMD 2021
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
- Lower engine production volumes for Energy due to delays in order intake
Service net sales by business

<table>
<thead>
<tr>
<th>Year</th>
<th>MEUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>2,500</td>
</tr>
<tr>
<td>2018</td>
<td>2,500</td>
</tr>
<tr>
<td>2019</td>
<td>2,500</td>
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<tr>
<td>2020</td>
<td>2,500</td>
</tr>
<tr>
<td>2021</td>
<td>2,500</td>
</tr>
<tr>
<td>2022</td>
<td>2,500</td>
</tr>
</tbody>
</table>

Marine Power: +11%
Performance-based agreements have significant growth potential, both in Marine and Energy

Moving up the service value ladder

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

Baseline 1X

Transactional
- Spare parts
- Field services

Spend ratio
EUR/kW

2-5X

Agreements & Performance-based agreements

25% of installed base

Growth potential
Marine highlights
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 (1.5ºC scenario), exajoule

- Carbon neutral and zero carbon fuels in maritime

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.

<table>
<thead>
<tr>
<th>Fuel type</th>
<th>Key considerations</th>
<th>Fuel price factor (per GJ)</th>
<th>Gross tank size factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy Fuel Oil @ 20°C</td>
<td>▪ Standard tank arrangement</td>
<td>1X</td>
<td>1X 4)</td>
</tr>
<tr>
<td>Liquified Natural Gas @ -162°C</td>
<td>▪ Cryogenic system</td>
<td>0.7X</td>
<td>2.4X</td>
</tr>
<tr>
<td>Methanol @ 20°C</td>
<td>▪ Mildly toxic</td>
<td>2.2X-5.4X 2)</td>
<td>1.7X</td>
</tr>
<tr>
<td></td>
<td>▪ Flexible tank arrangement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonia @ -33°C</td>
<td>▪ Toxic</td>
<td>2.2X-4.5X 3)</td>
<td>3.9X</td>
</tr>
<tr>
<td></td>
<td>▪ Corrosive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid Hydrogen @ -253°C</td>
<td>▪ Highly reactive</td>
<td>2.7X-4.5X 3)</td>
<td>7.3X</td>
</tr>
<tr>
<td></td>
<td>▪ Cryo system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compressed Hydrogen @350bar</td>
<td>▪ High pressure</td>
<td>1.6X-2.6X 3)</td>
<td>19.5X</td>
</tr>
<tr>
<td></td>
<td>▪ Multiple tanks arrangement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marine Battery Rack</td>
<td>▪ Marine adaptation reduces density</td>
<td>1.3X-2.3X</td>
<td>~40X (future potential ~20X)</td>
</tr>
</tbody>
</table>

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.
Wärtsila 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.
Vessel contracting forecast

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

Continued firm container & LNG carrier ordering and increased contract volumes for alternative fuel capable vessels

Accelerating fleet renewal and steady demand growth

Continuing accelerated fleet renewal supported by the fleet age profile and potential increased consensus over fuelling and technology choices

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

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

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.

Source:Clarksons Research, March 2023
Vessel utilisation rates driving Wärtsilä’s service business

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

- 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

- 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

Source: Clarksons Research

Increasing slow steaming will require driving up the utilisation rate of existing fleet and eventually lead to demand for further vessel capacity, leading to higher demand for services.
The share of installations under agreement is expanding faster than the installed base organic growth rate

Key considerations

- 29% of our engine installed base is under agreement
- Sales to agreement installations grew by 10% compared to pre-Covid levels
- 27% of sales to installations under agreement in 2022 were linked to guaranteed asset performance agreements
- Agreements are signed across multiple segments; LNG carriers fleet under agreement grew by 28% in past 4 years, while cruise slightly declined due to Covid-driven scrapping and ownership changes

1) Only 4-stroke service sales to engines under agreement considered, including field services and spare parts out of the agreement scope; ESA = Enhanced support agreement, TMA = Technical management agreement, OMA = Optimised maintenance agreement, GAP = Guaranteed Asset Performance agreement; 2) Defined as Wärtsilä 4-stroke engine MW under agreement
Together we can create unique customer value and drive decarbonisation of marine

**VESSEL AND TRANSPORT EFFICIENCY**

**Engine efficiency**
- Fuel
- Power
- Thrust
- Maintenance
- Upgrades
- Energy Management

**Propulsion efficiency**
- Energy Savings Devices
- Torque and Thrust measurement
- Optional for Vessel Fuel Optimisation

**Voyage efficiency, incl port operations**
- Waiting times
- Routing & planning
- Wind
- Resistance
- Hull fouling
- Water temp / density
- Shallow water
- Waves
- Draught & Trim
- Energy Savings Devices

**Wärtsilä Fuel Consumption Monitoring System + Wärtsilä Data Collection Unit (WDCU)**
- Mandatory for Specific Fuel Oil Consumption (SFOC) Optimisation

**Voyage solutions (Fleet Optimisation Solutions (FOS), Port Link...)**
- Mandatory for Vessel Fuel Optimisation

**Maintenance Upgrades**
- Energy Management
- Torque and Thrust measurement
- Waiting times
- Routing & planning
- Wind
- Resistance
- Hull fouling
- Water temp / density
- Shallow water
- Waves
- Draught & Trim
- Energy Savings Devices

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Energy highlights
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 \(^1\)
- 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 Energy Storage competitive advantages

Our key differentiators

▪ **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:

  **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.

  Our project execution team manages **full installation and integration** at the customer’s site(s).

  **Wärtsilä’s GEMS Digital Energy Platform** monitors, controls and optimises storage and other energy assets in the system

  Our **Service+ lifecycle solutions** include Expertise Center support, planned maintenance, performance guarantees and software maintenance
Good development in energy storage

Quarterly development

Rolling 12 months development
Wärtsilä Energy Storage’s direction

Key drivers towards higher profitability

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
Strategic focus in energy long-term service agreements is resulting in strong agreement coverage growth

Significant growth in agreement coverage during 2021 and 2022

- Converting non-agreement customers to agreement customers resulted in an agreement coverage addition of >2 GW during 2020-2022
- High customer satisfaction shown in increasing agreement renewal rates (>90%)
- Increased agreement coverage rate on newbuild projects

* Includes agreements covering both installed assets and assets to be installed in the future
Operating installed base is growing and operating hours are anticipated to remain stable driven by growth in certain customer segments.
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
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

<table>
<thead>
<tr>
<th>Engines</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
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<tbody>
<tr>
<td>Diesel</td>
<td></td>
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<tr>
<td>FAME/HVO(^1)</td>
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<tr>
<td>LNG</td>
<td></td>
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<tr>
<td>Bio-methane</td>
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<tr>
<td>Synthetic methane</td>
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<td>LPG</td>
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<td>Hydrogen blends</td>
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<td></td>
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<tr>
<td>Hydrogen 100%</td>
<td></td>
<td></td>
<td></td>
<td>Technical concept</td>
<td></td>
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<tr>
<td>Ammonia</td>
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<td></td>
<td>Technical concept</td>
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<tr>
<td>Methanol</td>
<td></td>
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</table>

1) FAME, HVO: biodiesel
Q2 development
Improved profitability and continued growth in services

- Order intake increased by 17%
- Net sales increased by 3%
- Good progress in services continued:
  - Service order intake increased by 13%
  - Service net sales increased by 16%
- The comparable operating result increased by 26%
  - Supported by good development in services and energy storage
  - In Marine Systems, a 19 MEUR provision was taken for a single sizable turnkey project in Gas Solutions that suffered from combination of supplier quality issues and cost inflation
- Cash flow from operating activities improved
## Good development in key figures

<table>
<thead>
<tr>
<th></th>
<th>4-6/2023</th>
<th>4-6/2022</th>
<th>CHANGE</th>
<th>1-6/2023</th>
<th>1-6/2022</th>
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<tbody>
<tr>
<td><strong>Order intake</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,687</td>
<td>1,440</td>
<td>17%</td>
<td>3,427</td>
<td>2,820</td>
<td>22%</td>
</tr>
<tr>
<td>of which services</td>
<td>913</td>
<td>811</td>
<td>13%</td>
<td>1,802</td>
<td>1,543</td>
<td>17%</td>
</tr>
<tr>
<td>of which equipment</td>
<td>774</td>
<td>629</td>
<td>23%</td>
<td>1,625</td>
<td>1,277</td>
<td>27%</td>
</tr>
<tr>
<td><strong>Order book</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>6,249</td>
<td>5,936</td>
<td>5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of which current year deliveries</td>
<td>2,589</td>
<td>2,732</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net sales</strong></td>
<td>1,454</td>
<td>1,407</td>
<td>3%</td>
<td>2,919</td>
<td>2,639</td>
<td>11%</td>
</tr>
<tr>
<td>of which services</td>
<td>807</td>
<td>696</td>
<td>16%</td>
<td>1,543</td>
<td>1,327</td>
<td>16%</td>
</tr>
<tr>
<td>of which equipment</td>
<td>647</td>
<td>712</td>
<td>-9%</td>
<td>1,376</td>
<td>1,312</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Book-to-bill</strong></td>
<td>1.16</td>
<td>1.02</td>
<td>1.17</td>
<td>1.07</td>
<td></td>
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<tr>
<td><strong>Operating result</strong></td>
<td>66</td>
<td>75</td>
<td>-12%</td>
<td>158</td>
<td>-72</td>
<td>320%</td>
</tr>
<tr>
<td>% of net sales</td>
<td>4.5</td>
<td>5.3</td>
<td>5.4</td>
<td>-2.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Comparable operating result</strong></td>
<td>108</td>
<td>85</td>
<td>26%</td>
<td>196</td>
<td>151</td>
<td>30%</td>
</tr>
<tr>
<td>% of net sales</td>
<td>7.4</td>
<td>6.1</td>
<td>6.7</td>
<td>5.7</td>
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</tr>
</tbody>
</table>
Market sentiment remained positive for Wärtsilä’s key segments

Higher prices of new ships and available capacity at shipyards limited growth in newbuild investments.

- The number of vessels ordered in the review period increased to 773 (701 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 187 orders reported, representing 24% (34%) of all contracted vessels and 43% (61%) of vessel capacity.

- Further investments into LNG liquefaction capacity continued to drive demand for LNG carriers, despite activity easing off from the record levels seen in 2022.

- Demand for new cruise ship capacity remained limited as cruise lines are focused on managing the current order book and deleveraging their debt levels.

- Service demand was supported by increased active capacity in the key vessel sectors.

Source: Clarksons Research, 12m rolling contracting as per 5th of July 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

Commodity markets ease while interest rates rise

- H1/2023 has brought relief in some commodity prices, especially in battery raw materials, while rising interest rates increased uncertainty.

- Global natural gas prices continued declining despite a slight price rebound in June, but prices are still above historical levels.

- The trend in transition to renewable energy sources continues, being a key driver in the development of battery energy storage and thermal balancing technologies.

- There is good market activity and outlook in leading energy storage and thermal balancing markets, such as the U.S., U.K., and Australia.

Contracting for gas and liquid fuelled power plants <500 MW

The total market, including also power plants with prime movers above 500 MW, increased by 5% to 68.3 GW during the twelve-month period ending in March 2023 (65.2 at the end of December). 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.
Order intake increased by 17%

Equipment order intake increased by 23%
Service order intake increased by 13%
Strong order book, rolling book-to-bill continues above 1

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.
Second quarter highlights

Net sales increased by 3%
Comparable operating result increased by 26%
Marine Power: good development in comparable operating result

Good service performance continued

Order intake

Comparable operating result

Net sales

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: order intake increased

Comparable operating result declined due a provision taken for a single sizable turnkey project in Gas Solutions

The 2022 and Q1 2023 figures have been restated to reflect the move of Marine Electrical Systems business unit to Portfolio Business
Energy: order intake and comparable operating result increased

Good development in service continued

**Order intake**

- MEUR
- Q221: 433
- Q421: 654
- Q222: 750
- Q422: 0
- Q223: 1,000

**Comparable operating result**

- MEUR
- Q221: 433
- Q421: 654
- Q222: 750
- Q422: 0
- Q223: 1,000

**Net sales**

- MEUR
- Q221: 416
- Q421: 633
- Q222: 633
- Q422: 0
- Q223: 1,000

**Comparable operating result**

- MEUR
- Q221: 41
- Q421: 41
- Q222: 45
- Q422: 0
- Q223: 45

- MEUR (12m rolling)
- Q222: 41
- Q223: 45

- MEUR (12m rolling)
- Q222: 2,946
- Q223: 3,000

- MEUR (12m rolling)
- Q222: 2,830
- Q223: 3,000

- MEUR (12m rolling)
- Q222: 2,830
- Q223: 3,000

+15% order intake and comparable operating result increased

- Good service performance
- Improved profitability of the energy storage business
- Inefficient factory capacity utilisation
Prospects

Marine
- Wärtsilä expects the demand environment for the next 12 months (Q3/2023-Q2/2024) to be similar to that of the comparison period.

Energy
- Wärtsilä expects the demand environment for the next 12 months (Q3/2023-Q2/2024) to be similar to that of the comparison period.
# January–June order intake by customer segment

<table>
<thead>
<tr>
<th>Marine Businesses</th>
<th>Gas carriers</th>
<th>Cruise &amp; ferry</th>
<th>Offshore</th>
<th>Navy</th>
<th>Special vessels</th>
<th>Merchant</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marine Power</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>9% (18)</td>
<td>24% (22)</td>
<td>5% (3)</td>
<td>13% (1)</td>
<td>5% (15)</td>
<td>41% (36)</td>
<td>3% (4)</td>
</tr>
<tr>
<td>Services</td>
<td>16% (17)</td>
<td>23% (22)</td>
<td>18% (14)</td>
<td>6% (7)</td>
<td>11% (11)</td>
<td>24% (27)</td>
<td>1% (2)</td>
</tr>
<tr>
<td><strong>Marine Systems</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>63% (54)</td>
<td>1% (4)</td>
<td>14% (1)</td>
<td>1% (3)</td>
<td>0% (0)</td>
<td>21% (13)</td>
<td>0% (24)</td>
</tr>
<tr>
<td>Services</td>
<td>4% (2)</td>
<td>9% (8)</td>
<td>5% (8)</td>
<td>18% (22)</td>
<td>8% (8)</td>
<td>51% (50)</td>
<td>6% (3)</td>
</tr>
<tr>
<td><strong>Marine businesses, in total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>21% (6)</td>
<td>19% (9)</td>
<td>13% (7)</td>
<td>8% (8)</td>
<td>8% (57)</td>
<td>30% (9)</td>
<td>2% (3)</td>
</tr>
<tr>
<td>Services</td>
<td>28% (11)</td>
<td>16% (11)</td>
<td>8% (1)</td>
<td>8% (11)</td>
<td>3% (53)</td>
<td>34% (4)</td>
<td>2% (8)</td>
</tr>
<tr>
<td><strong>Energy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Independent Power Producers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>74% (41)</td>
<td>24% (40)</td>
<td></td>
<td></td>
<td>2% (18)</td>
<td>0% (0)</td>
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</tr>
<tr>
<td>Services</td>
<td>33% (34)</td>
<td>33% (29)</td>
<td></td>
<td></td>
<td>22% (28)</td>
<td>13% (10)</td>
<td></td>
</tr>
</tbody>
</table>
Order intake
Second quarter development

Order intake by business:
- Marine Power: 44% (45)
- Marine Systems: 9% (9)
- Energy: 5% (6)
- Portfolio Business: 5% (6)

Order intake by business type:
- Services: 46% (44)
- Equipment: 54% (56)
Net sales
Second quarter development

Net sales by business
- Marine Power: 44% (37)
- Marine Systems: 7% (12)
- Energy: 44% (45)
- Portfolio Business: 5% (6)

Net sales by business type
- Services: 45% (51)
- Equipment: 55% (49)
Second quarter development by business type

**Order intake**
- **Marine Businesses**
  - EUR 856 million (705)
  - Spare parts: 38% (37)
  - Field service: 28% (27)
  - Service agreements: 14% (16)
  - Service projects: 9% (7)
  - Equipment: 10% (13)

- **Energy**
  - EUR 750 million (654)
  - Spare parts: 54% (51)
  - Field service: 23% (21)
  - Service agreements: 4% (6)
  - Service projects: 16% (18)
  - Equipment: 3% (3)

**Net sales**
- **Marine Businesses**
  - EUR 742 million (693)
  - Spare parts: 34% (43)
  - Field service: 17% (28)
  - Service agreements: 11% (9)
  - Service projects: 7% (5)
  - Equipment: 16% (21)

- **Energy**
  - EUR 633 million (633)
  - Spare parts: 56% (59)
  - Field service: 19% (15)
  - Service agreements: 4% (4)
  - Service projects: 5% (6)
  - Equipment: 16% (17)
Orders received for Energy equipment globally

Equipment order intake 1-6/2023:
MEUR 818 (599)

- **Americas**: 219 (365)
- **Europe**: 257 (114)
- **Africa and Middle East**: 48 (71)
- **Asia**: 294 (50)

- Utilities
- IPP’s (Independent Power Producers)
- Industrials
- Others

© WÄRTSILÄ
Sustainability
Ambitious decarbonisation targets for 2030

Provide a product portfolio which will be ready for zero carbon fuels

Become carbon neutral in our own operations
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
Decarbonising our own operations requires a wide range of actions "SET FOR 30"

## OUR MAIN DECARBONISATION INITIATIVES

<table>
<thead>
<tr>
<th>Initiative</th>
<th>2021</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy efficiency measures +/€</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low emission company vehicles +/€</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heat pumps in heating +/€€</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D and factory engine testings – reduced time +/€</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-generation and green electricity +++/€€</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simulations and other technologies +/€€</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replacing fossil fuels with alternative fuels +++/€€€</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

+ 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
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

**Environment**
- Being a forerunner in sustainable innovation and furthermore reduce emissions in our customers’ operations and in societies overall.

**Social**
- Being a good corporate citizen and responsible employer.

**Economic**
- Meeting customer and shareholder expectations and contributing towards the wellbeing of society.

**Customer & Community value**
- Innovative solutions for a low carbon economy
- High environmental performance and efficiency
- Partnerships and active engagement in ecosystems

**Employee & Community value**
- High ethical standards
- Responsible employer offering, interesting and exciting workplace
- Equal opportunities and diversity
- Hazard free working environment

**Customer & Shareholder value**
- Efficient, profitable, and competitive company operations
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

**Responsible value chain**
- Human and Labour Rights
- Compliance
- Anti-corruption
- Clear supplier requirements
- Supplier assessment process
- Setting contractual obligations
- Monitoring the supplier performance
- Taking necessary actions in case of non-compliance
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 Tahanainen, 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


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 1 August 2023 (Euroclear)

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>Shares</th>
<th>Share %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Invaw Invest AB</td>
<td>104,711,363</td>
<td>17.70%</td>
</tr>
<tr>
<td>2</td>
<td>Varma Mutual Pension Insurance Company</td>
<td>31,768,252</td>
<td>5.37%</td>
</tr>
<tr>
<td>3</td>
<td>Ilmarinen Mutual Pension Insurance Company</td>
<td>13,841,503</td>
<td>2.34%</td>
</tr>
<tr>
<td>4</td>
<td>Keskinäinen Työeläkevakuutusyhtiö Elo</td>
<td>7,508,000</td>
<td>1.27%</td>
</tr>
<tr>
<td>5</td>
<td>The Social Insurance Institution of Finland</td>
<td>5,517,730</td>
<td>0.93%</td>
</tr>
<tr>
<td>6</td>
<td>State Pension Fund</td>
<td>4,700,000</td>
<td>0.79%</td>
</tr>
<tr>
<td>7</td>
<td>Svenska Litteratur-sällskapet i Finland Rf</td>
<td>4,671,277</td>
<td>0.79%</td>
</tr>
<tr>
<td>8</td>
<td>Holdix Oy Ab</td>
<td>4,139,400</td>
<td>0.70%</td>
</tr>
<tr>
<td>9</td>
<td>Jenny and Antti Wihuri Foundation</td>
<td>2,700,000</td>
<td>0.46%</td>
</tr>
<tr>
<td>10</td>
<td>Samfundet Folkhälsan i Svenska Finland rf</td>
<td>2,458,200</td>
<td>0.42%</td>
</tr>
<tr>
<td></td>
<td>Nominee registered</td>
<td>202,954,085</td>
<td>34.30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>591,723,390</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>
Appendix
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
- 4 September, IR Theme call: R&D
- 4 September, Q4 Investor lunch
- 12 September, CEO Call

Wärtsilä Investor Relations
Hanna-Maria Heikkinen, Vice President, Investor Relations
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Lotta Martikainen, Manager, Investor Relations
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Maija Hongas, Senior Manager, Investor Relations (on parental leave)
tel. +358 10 709 3178, email: maija.hongas@wartsilacom

Meeting requests
Janine Tourneur, Executive Assistant
tel. +358 10 709 5645, e-mail: janine.tourneur@wartsilacom
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
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**

- Marine Power: 38%
- Other businesses: 62%

**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

**Net sales by business type in 2022**

- Services: 33%
- Equipment: 67%

**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

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

Share of total net sales in 2022

- Marine Systems: 13%
- Other businesses: 87%

Net sales by business type in 2022

- Services: 30%
- Equipment: 70%
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

- Energy 53%
- Other businesses 47%

Net sales by business type in 2022

- Services 65%
- Equipment 35%

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