Wärtsilä
Shaping the decarbonisation of marine and energy
Roadshow presentation

June 2023
Market fundamentals

**MARINE will move with unprecedented speed towards decarbonisation**

**Policies & regulations**
- IMO target
- Access to capital
- Cost of carbon
- Demand for green sea transport

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

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

**ENERGY is moving towards a 100% renewables future**

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

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

**Growing ENERGY demand**
- By 2050, electricity generation needs to grow by 3X, renewables by 8X to reach Net Zero targets
- Gradual replacement of coal
- Renewables expected to become the largest source of global electricity by early 2025
- 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

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

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

#1-3 in global markets

FINANCIAL TARGETS:
- 5% annual organic growth
- 12% operating margin

"SET FOR 30" DECARBONISATION TARGETS:
- carbon neutral in our own operations by 2030
- a product portfolio ready for zero carbon fuels by 2030

Clear financial targets and strong commitment to realise them

Robust capital allocation principles and active portfolio management

Notable opportunity in retrofits and conversions

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

Focus on:
- High performing teams
- Performance excellence and robust execution
- Continuous improvement
- Cost structure – actions taken whenever and wherever necessary
Supporting decarbonisation in marine

Owners will decide on technology partners now:

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

Move from a single-fuel industry to a multi-fuel one
Distribution of fuel types for Decarbonisation 2050 (1.5°C scenario), exajoule

Source: DNV Maritime Forecast 2050 model, Wärtsilä internal estimates
Fuel conversions will play a vital role in the fuel transition for both existing and new vessels built during this and next decade. Fuel selection impacts the vessel structure

<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>Ammonia @ -33°C</td>
<td>▪ Toxic</td>
<td>2.2X-4.5X 3)</td>
<td>3.9X</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>Compressed Hydrogen @350bar</td>
<td>▪ High pressure</td>
<td>1.6X-2.6X 3)</td>
<td>19.5X</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.
Together we can create unique customer value and drive decarbonisation of marine power and fuel efficiency. Wärtsilä's solutions include:

**VEssel AND TRANSPORT EFFICIENCY**

- **Engine efficiency**
  - Maintenance
  - Upgrades
  - Energy Management

- **Propulsion efficiency**
  - Maintenance
  - Upgrades
  - Energy Savings Devices
  - Torque and Thrust measurement

- **Voyage efficiency, incl. port operations**
  - Maintenance
  - Upgrades
  - Draught & Trim
  - Water temp / density
  - Waiting times
  - Routing & planning
  - Wind
  - Resistance
  - Shallow water
  - Hull fouling

Wärtsilä Fuel Consumption Monitoring System + Wärtsilä Data Collection Unit (WDCU) is mandatory for Specific Fuel Oil Consumption (SFOC) Optimisation. Torque and Thrust measurement is optional for Vessel Fuel Optimisation. Voyage solutions (Fleet Optimisation Solutions (FOS), Port Link...) is mandatory for Vessel Fuel Optimisation.
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

Vessel contracting forecast

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

Wärtsilä’s order intake in Marine businesses by customer segment in 2022

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

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 and passenger ferries

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

Offshore

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

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

Source: Clarksons Research
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

- 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

Source: BloombergNEF New Energy Outlook 2022

Estimated growth of the addressable annual markets of thermal balancing (GW) and energy storage (GWh)

Source: BloombergNEF New Energy Outlook 2022, Wärtsilä estimates at Capital Markets Day 2021
Wärtsilä to support integration of renewables into Japan’s power mix by providing balancing power gas engines

- The new Japanese plant will operate with ten Wärtsilä 34SG gas engines. It will replace a 100 MW combined cycle gas turbine that was formerly located on the project site.

- The fast-starting engines will provide the grid balancing and peaking capabilities needed as Japan increases its share of energy from renewable sources.

- The main purpose of the utility-scale power plant is hedging market price fluctuations, and it will also enable participation in the recently launched cross-regional balancing market.

- Japan is committed to addressing climate change and has set a target to have its share of renewable energy within the power mix increased to 36 - 38 percent by 2030.
Wärtsilä flexible generation will support the transition to renewable energy in Latin America

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

Our key differentiators

- **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.

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

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

  3. Our **Service+ lifecycle solutions** include Expertise Center support, planned maintenance, performance guarantees and software maintenance.

  4. **Battery modules and cells** procured from supplier.

  5. **GridSolv Quantum** Wärtsilä-designed and assembly subcontracted.

  6. **ACC DCC Cabinet** Wärtsilä-designed.

  7. **Inverter** procured from supplier.

  8. **Transformer** procured from supplier.

  9. **Power Conversion System**.


  11. **Liquid chiller and HVAC** procured from supplier.
Good demand in energy storage – market expected to grow 30% annually in this decade

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

Key drivers towards higher profitability

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

1) FAME, HVO: biodiesel
Financial targets reflect growth opportunities and increased profitability

<table>
<thead>
<tr>
<th>Targets</th>
<th></th>
</tr>
</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

Limited additional CAPEX needed to facilitate the growth

Target: 5% annual organic growth
We will reach our profitability target while maintaining R&D investments at ~3% of net sales

**Key drivers**

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

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

**Target:**
12% operating margin

Limited additional CAPEX needed to facilitate the growth
Service net sales by business

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

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

Moving up the service value ladder
Positive development in both Marine and Energy service business

Marine Power net sales from installations under agreement

Energy service agreements

* Includes agreements covering both installed assets and assets to be installed in the future
Profitability drivers for 2023

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

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

**Negative factors**
- Wage inflation
- Costs of energy:
  - fuel costs (for testing)
  - gas prices and availability
Strong presence in sustainable development indices

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

Sustainability Yearbook
Member 2021
S&P Global

S&P Europe 350 ESG Index
Wärtsilä’s ESG Agenda in brief

**E**

Ambitious decarbonization targets for 2030
- Portfolio ready for zero carbon fuels
- Carbon neutrality in own operations

**S**

Good Corporate Citizen and Responsible Employer
- High ethical standards
- Diversity in focus
- Strive for safety

**G**

Effective Governance model
- Sustainability matters embedded
Sustainability is integrated into our strategy and purpose

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

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

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

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

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

- Efficient, profitable, and competitive company operations

**PURPOSE**
Enabling sustainable societies through innovation in technology and services

**Employee & Community value**
- Shaping the decarbonisation of marine and energy

**Customer & Community value**
- Partnering with and respecting stakeholders

**Customer & Shareholder value**
- Meeting customer and shareholder expectations and contributing towards the wellbeing of society
Decarbonising our own operations requires a wide range of actions “SET FOR 30”

<table>
<thead>
<tr>
<th>OUR MAIN DECARBONISATION INITIATIVES</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**
- **Electric Vehicle policy defined and being rolled out**
- **Heat pumps installed in server room in Norway**
- **Electric Forklift policy defined and being rolled out**
- **Variety of actions identified to reduce engine testing time**
- **Environmental standards for selecting new facilities in use**
- **Intelligent energy meters installed in Norway - leakages detected**

Set for 30
Wärtsilä’s focus on social responsibility

**Strong ethical culture**
- Fair competition
- Trade compliance
- Anti-corruption
- Human and Labour Rights
- Clear policies and instructions
- Ethical training programmes and transparent communication
- Effective compliance programmes

**A responsible employer**
- Equal opportunities and diversity
- Fair employment practices
- Well-being of our employees
- Talent and leadership development
- Global policies and processes
- Training programmes and effective communication
- Co-operation and consultation with our employees

**A Safe place to work**
- Strong safety culture
- Providing means for safe work
- Product design principles
- Employee and leadership engagement
- Consistent safety competencies
- High quality tools and protective equipment
- Robust risk assessment practices
- Incident reporting and investigation
- Emergency preparedness
- Clear supplier requirements
- Supplier assessment process
- Setting contractual obligations
- Monitoring the supplier performance
- Taking necessary actions in case of non-compliance

**Responsible value chain**
- Human and Labour Rights
- Compliance
- Anti-corruption
Wärtsilä’s Governance Model

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

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

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

Board of Management
The Board of Management supports the President & CEO.

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

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

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

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

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

Internal Audit
Analyses the company’s operations and processes, as well as the effectiveness and quality of its supervision mechanisms. The function reports at regular intervals to the Audit Committee.
Wärtsilä has a significant role in decarbonisation transformation

COMMITTED TO TARGETS

Financial targets
- 5% annual organic growth
- 12% operating margin

Set for 30 - decarbonisation
- A product portfolio ready for zero carbon fuels
- Carbon neutral in our own operations

PURPOSE
Enabling sustainable societies through innovation in technology and services

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

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

TARGET POSITION
Shaping the decarbonisation of marine and energy

Leading offering to support our customers in decarbonisation

- Fuel-flexible engines enabling decarbonisation
- Hybrid and battery solutions for maritime
- Energy saving technology for improved vessel performance
- Emission abatement technologies including maritime carbon capture
- Grid balancing engine solutions and energy storage
- Power system modelling & optimisation
- Decarbonisation services
- The broadest service network for marine and energy industries
- Digital solutions enabling optimised operations and service
### Advantages of Wärtsilä power plants over combined cycle gas turbines

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

#### Advantages of modularity
- Combustion engine power plants are comprised of multiple generating units.

#### Better part-load efficiency and flexibility
- Unlike gas turbines, Wärtsilä engine power plants have near full range capability of emissions-compliant turndown.

#### Better pulse-load efficiency and profitability
- Combustion engine power plants are dispatchable and can adjust load daily, ramping up and down with demand.

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

#### Derating due to ambient temperature
- Combustion engines are less sensitive to temperature and humidity.

#### Fuel flexibility
- Gas turbines have reduced availability and output when running on fuel oils.

#### Lower water consumption
- A combined cycle gas turbine power plant (CCGT) with a recirculating system = 780 liters/MWh.
- Wärtsilä combustion engine power plant operating in simple cycle on natural gas = 3 liters/MWh.
Financial development in Q1
Profitability improved, good development in services

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

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

Equipment order intake increased by 31%

Service order intake increased by 21%
Strong order book, rolling book-to-bill continues above 1

Order book by business

Order book delivery schedule

- Marine Power
- Marine Systems
- Voyage
- Energy
- Portfolio Business

Book-to-bill, 12m rolling 1.06
First quarter highlights

**Net sales**

Net sales increased by 19%

**Comparable operating result**

Comparable operating result increased by 34%
Economic headwinds moderate growth in marine markets

Utilisation rates in Wärtsilä’s key segments improving

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

Source: Clarksons Research, 12m rolling contracting as per 4th of April 2023 (+100 gt, excluding late reporting of contracts)

Specialised vessels include LNG carriers, LPG carriers, cruise & ferry, offshore, and special vessels.
Energy market outlook – solid long-term opportunities

Fuel price pressure easing but not over

- The last quarter has brought some relief in fuel and raw material prices whereas rising interest rates have come to cause further uncertainty.

- Although natural gas prices decreased from the extreme levels of last year, they remain high compared to historical levels.

- Global energy transition investment reached a new high in 2022, and supportive policy regarding battery energy storage and clean hydrogen has continued to develop in the first quarter of this year.

- Demand for energy storage solutions continued to grow.

- Wärtsilä’s market share in gas and liquid fuelled power plants decreased to 6% (8).

Contracting for gas and liquid fuelled power plants <500 MW

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

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

Order intake

- +11%

Comparable operating result

- + Good service performance
- + Voyage optimisation
- - Inefficient factory capacity utilisation

Net sales

- +24%

The 2022 figures have been restated to reflect the redefined organisational change of integrating Voyage into Marine Power.
Marine Systems: order intake increased
Net sales and comparable operating result declined

**Order intake**
- MEUR 12m rolling MEUR 696
  - Q121: 153
  - Q321: 198
  - Q122: 239
  - Q322: 200
  - Q123: 163

**Comparable operating result**
- MEUR 12m rolling 6.5%
  - Q121: 30
  - Q321: 25
  - Q122: 20
  - Q322: 15
  - Q123: 10

**Net sales**
- MEUR 12m rolling MEUR 760
  - Q121: 142
  - Q321: 163
  - Q122: 158
  - Q322: 158
  - Q123: 158

**Comparable operating result**
- MEUR 12m rolling 6.5%
  - Q121: 8
  - Q321: 12
  - Q122: 12
  - Q322: 6
  - Q123: 6

- + Good development in services
- - Cost inflation burdening equipment business profitability

Good development in services
- Cost inflation burdening equipment business profitability
Energy: all key figures improved

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

Order intake

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Q121</th>
<th>Q321</th>
<th>Q122</th>
<th>Q322</th>
<th>Q123</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEUR</td>
<td>493</td>
<td>507</td>
<td>744</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12m rolling MEUR</td>
<td>2,849</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comparable operating result

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Q122</th>
<th>Q123</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEUR</td>
<td>24</td>
<td>33</td>
</tr>
<tr>
<td>12m rolling MEUR</td>
<td>2,831</td>
<td></td>
</tr>
</tbody>
</table>

Net sales

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Q121</th>
<th>Q321</th>
<th>Q122</th>
<th>Q322</th>
<th>Q123</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEUR</td>
<td>288</td>
<td>535</td>
<td>645</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12m rolling MEUR</td>
<td>2,831</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comparable operating result

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Q121</th>
<th>Q321</th>
<th>Q122</th>
<th>Q322</th>
<th>Q123</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEUR</td>
<td>24</td>
<td>24</td>
<td>33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12m rolling MEUR</td>
<td>3.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Prospects

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

Energy
- Wärtsilä expects the demand environment for the next 12 months (Q2/2023-Q1/2024) to be similar to that of the comparison period.
# January–March order intake by customer segment

<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>11% (9)</td>
<td>29% (22)</td>
<td>4% (6)</td>
<td>18%  (4)</td>
<td>3% (22)</td>
<td>31% (32)</td>
<td>4% (4)</td>
</tr>
<tr>
<td>Services</td>
<td>19% (14)</td>
<td>21% (26)</td>
<td>18% (12)</td>
<td>7%   (7)</td>
<td>10% (10)</td>
<td>22% (27)</td>
<td>3% (4)</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>76% (7)</td>
<td>1% (3)</td>
<td>2% (1)</td>
<td>4% (60)</td>
<td>0% (0)</td>
<td>12% (8)</td>
<td>5% (22)</td>
</tr>
<tr>
<td>Services</td>
<td>3% (4)</td>
<td>9% (8)</td>
<td>4% (4)</td>
<td>24% (23)</td>
<td>7% (7)</td>
<td>50% (48)</td>
<td>4% (6)</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>26% (11)</td>
<td>19% (20)</td>
<td>10% (8)</td>
<td>10% (16)</td>
<td>6% (12)</td>
<td>24% (27)</td>
<td>4% (7)</td>
</tr>
<tr>
<td>Services</td>
<td>37% (8)</td>
<td>17% (16)</td>
<td>3% (4)</td>
<td>12% (23)</td>
<td>2% (14)</td>
<td>23% (24)</td>
<td>5% (10)</td>
</tr>
<tr>
<td><strong>Energy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>55% (45)</td>
<td>44% (15)</td>
<td>1% (39)</td>
<td></td>
<td></td>
<td>0% (0)</td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td>39% (33)</td>
<td>30% (27)</td>
<td>18% (28)</td>
<td></td>
<td></td>
<td>3% (18)</td>
<td></td>
</tr>
</tbody>
</table>
Order intake
First quarter development

Order intake by business:
- Marine Power: 43% (37)
- Marine Systems: 14% (14)
- Energy: 42% (48)
- Portfolio Business: 1% (1)

Order intake by business type:
- Services: 49% (47)
- Equipment: 51% (53)
Net sales
First quarter development

Net sales by business
- Marine Power: 44% (43)
- Marine Systems: 1% (1)
- Energy: 44% (42)
- Portfolio Business: 11% (13)

Net sales by business type
- Services: 50% (49)
- Equipment: 50% (51)
First quarter development by business type

Order intake

Marine Businesses
EUR 977 million (863)
- 44% (44) Spare parts
- 24% (29) Field service
- 14% (16) Service agreements
- 12% (8) Service projects
- 6% (4) Equipment

Energy
EUR 744 million (507)
- 55% (52) Spare parts
- 18% (21) Field service
- 16% (19) Service agreements
- 6% (2) Service projects
- 4% (6) Equipment

Net sales

Marine Businesses
EUR 799 million (678)
- 42% (41) Spare parts
- 29% (31) Field service
- 15% (15) Service agreements
- 5% (5) Service projects
- 8% (8) Equipment

Energy
EUR 645 million (535)
- 60% (59) Spare parts
- 18% (18) Field service
- 15% (16) Service agreements
- 4% (4) Service projects
- 3% (4) Equipment
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
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 June 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>14,791,503</td>
<td>2.50%</td>
</tr>
<tr>
<td>4</td>
<td>Keskinäinen Työeläkevakuutusyhtiö Elo</td>
<td>6,934,000</td>
<td>1.17%</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>201,565,195</td>
<td>34.06%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>591,723,390</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>
Wärtsilä in brief
Wärtsilä Marine Power – Leading the path towards decarbonisation by developing state of the art technology and enabling adoption of clean fuels

Key figures in 2022

Order intake
2,707 MEUR

Net sales
2,247 MEUR

Comparable operating profit
179 MEUR
8.0% of net sales

Share of total net sales in 2022

- 38% Marine Power
- 62% Other businesses

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

- 67% Equipment
- 33% Services

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

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

Net sales by business type in 2022

- Services: 30%
- Equipment: 70%

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

- Energy: 53%
- Other businesses: 47%

Net sales by business type in 2022

- Services: 78%
- Equipment: 22%

Offering

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

Key customer segments

- Utilities
- Independent Power Producers (IPPs)
- Industrial customers
KEY FIGURES 2022

Order intake
6,074 MEUR

Net sales
5,842 MEUR

Comparable operating result
325 MEUR
5.6% of net sales

Operating result
-26 MEUR
-0.4% of net sales

Cash flow from operating activities
-62 MEUR

Personnel
17,500

2022
Net sales, geographical

Europe 35%
Asia 30%
Americas 10%
Other 25%
Clear financial targets and strong commitment to realise them

Robust capital allocation principles and active portfolio management

Notable opportunity in retrofits and conversions

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

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

Strong track record in innovations

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

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

By 2023: pure ammonia fuel engine concept ready

By 2025: pure hydrogen fuel engine concept ready

Dividend

Financial targets

Net sales
5% annual organic growth

Profitability
12% operating margin

Capital structure
Gearing below 0.50

Dividend
Distribute a dividend of at least 50% of earnings

Solid balance sheet

Capturing opportunities arising from decarbonisation

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

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

Notable opportunity in retrofits and conversions
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
- 14 June, Pre-silent call with CFO Arjen Berends
- 19 September, Site visit to Vaasa, Finland

Wärtsilä Investor Relations

Hanna-Maria Heikkinen, Vice President, Investor Relations
tel. +358 10 709 1461, email: hanna-maria.heikkinen@wartsila.com

Maija Hongas, Senior Manager, Investor Relations
tel. +358 10 709 3178, email: maija.hongas@wartsila.com

Tiia Tikkanen, Investor Relations Specialist
tel. +358 10 709 1630, email: tiia.tikkanen@wartsila.com

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