Capital Markets Day

Shaping the decarbonisation of Marine and Energy

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As a technology leader in the decarbonisation transformation, Wärtsilä has significant value creation potential

Decarbonisation will transform the world

- **Electricity generation** will **grow by 3X**, **renewables by 8X**
- By 2030 **balancing power** market will **grow by >10x**
- In Marine there will be an **unprecedented rate of change in new build and existing fleet**
- Regulations and **demand for green transport will accelerate the speed of change**

Pioneer and leading partner for decarbonisation

Leading Future fuels technologies - Flexibility - Efficiency	**Leading** Performance-based agreements
Leading position in - Thermal balancing - Energy storage	**Leading position in** Power system optimisation
Pioneer and **partner for** - Hybrids & Full electric - Fuel cells - Energy saving devices	**Pioneer in** Marine carbon capture

Set for performance

- **Well-positioned to leverage market recovery and growth**
- **Robust execution**
  - Well-aligned strategy – **The Wärtsilä Way**
  - Focus on **performance culture**
  - Clear **capital allocation & portfolio management**
- **Committed to targets**
  - **5%** annual organic growth
  - **12%** operating margin
- **Ambitious sustainability targets for 2030**
  - A **product portfolio** ready for zero carbon fuels
  - Carbon neutral in **own operations**

A new phase in Wärtsilä's development

2002-2010	2011-2015	2016-2020	2021-
LIFECYCLE POWER SOLUTIONS	**BECOMING TOTAL SOLUTIONS PROVIDER**	**SMART MARINE AND 100% RENEWABLE ENERGY**	**SHAPING THE DECARBONISATION OF MARINE AND ENERGY**
Expansion into propulsion, services acquisitions	**Expansion into environmental solutions, acquisitions in Electrical & Automation**	**Digital solutions, negative deviations, end-to-end value chains, divestments**	**Customer & services focus, technology partnering, organic growth, continuous improvement**

Our world

Marine will move with an unprecedented speed towards decarbonisation

Shipping generates approx. 2% of GHG emissions [1)]

Regulations & Markets

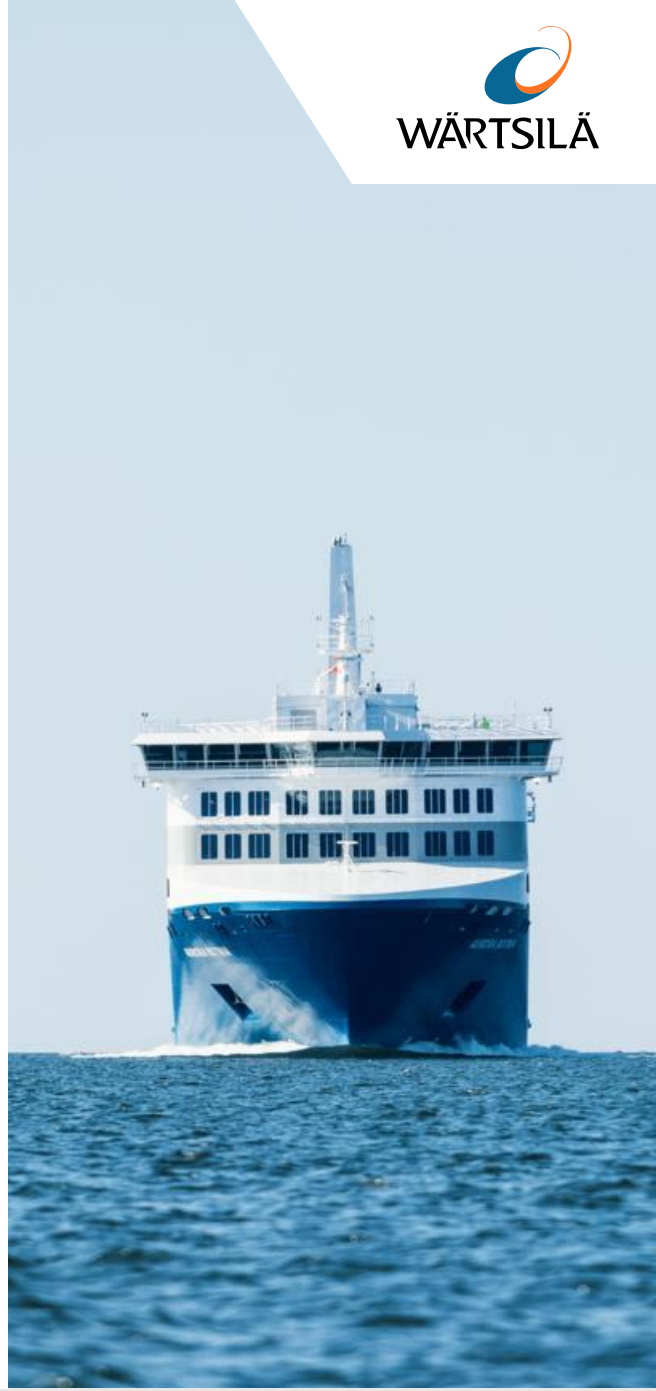
- **IMO target**: 50% lower GHG in shipping by 2050
- **Cost of compliance**: IMO design requirements, EEXI & CII
- **Access to capital**: EU taxonomy, Poseidon principles and ESG
- **Cost of carbon**: carbon certificates e.g. EU Fit for 55, IMO carbon levy and local green policies
- Green sea transport demand driven by **companies' green customer commitments and investors' push for sustainability targets**

Technology

- Focus on **carbon neutral and zero carbon fuels**. Carbon fuels still used for many years
- Increase in **hybrid and battery systems**
- Development of **energy saving devices**
- **Next steps in abatement technologies** e.g. carbon capture and storage
- **Focus on fuel efficiency**
- **Focus on fuel flexibility and upgrades**

Connectivity and Data

- **Vessels as data pools** - system complexity increasing
- **Optimisation solutions** taking an holistic view of the entire transport system
- **Performance-based agreements** with focus on uptime, reliability and fuel efficiency
- **Cyber security** growing in importance
- Different degrees of **autonomous operations**



1) Source: Climate Watch, total 49.4 GtCO2e

Energy is moving towards a 100% renewable future

Electricity and heat generate approx. 30% of GHG emissions [1)]

Growing electricity demand

- **Electricity generation is expected to grow by 3X, renewables by 8X** [2)]
- Gradual **replacement of coal and other fossil fuelled energy generation**
- **Power systems becoming increasingly complex** with different generation assets

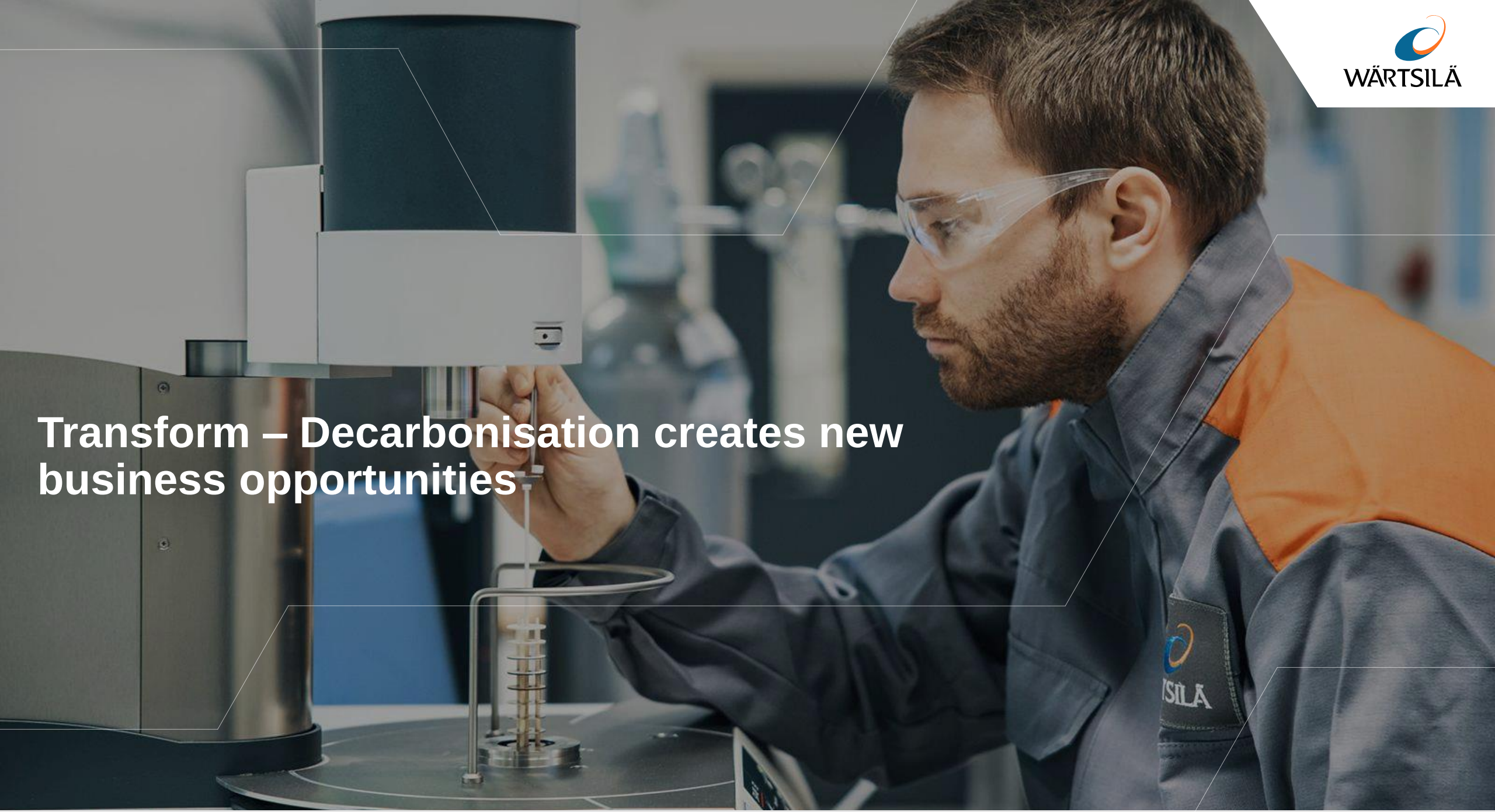
Policies & Regulations

- EU: Carbon neutral by **2050**
- USA: carbon free electricity production by **2035**, net zero emissions by **2050**
- China: Carbon neutral by **2060**
- Country **climate pledges likely to become more progressive**

Technology disruption

- **Wind and solar growing rapidly** for baseload generation
- **Intermittent sources requiring balancing power**
- **Green fuels** for thermal balancing
- **Digitalisation will create opportunities** for optimising energy costs
- **Cyber security** growing in importance

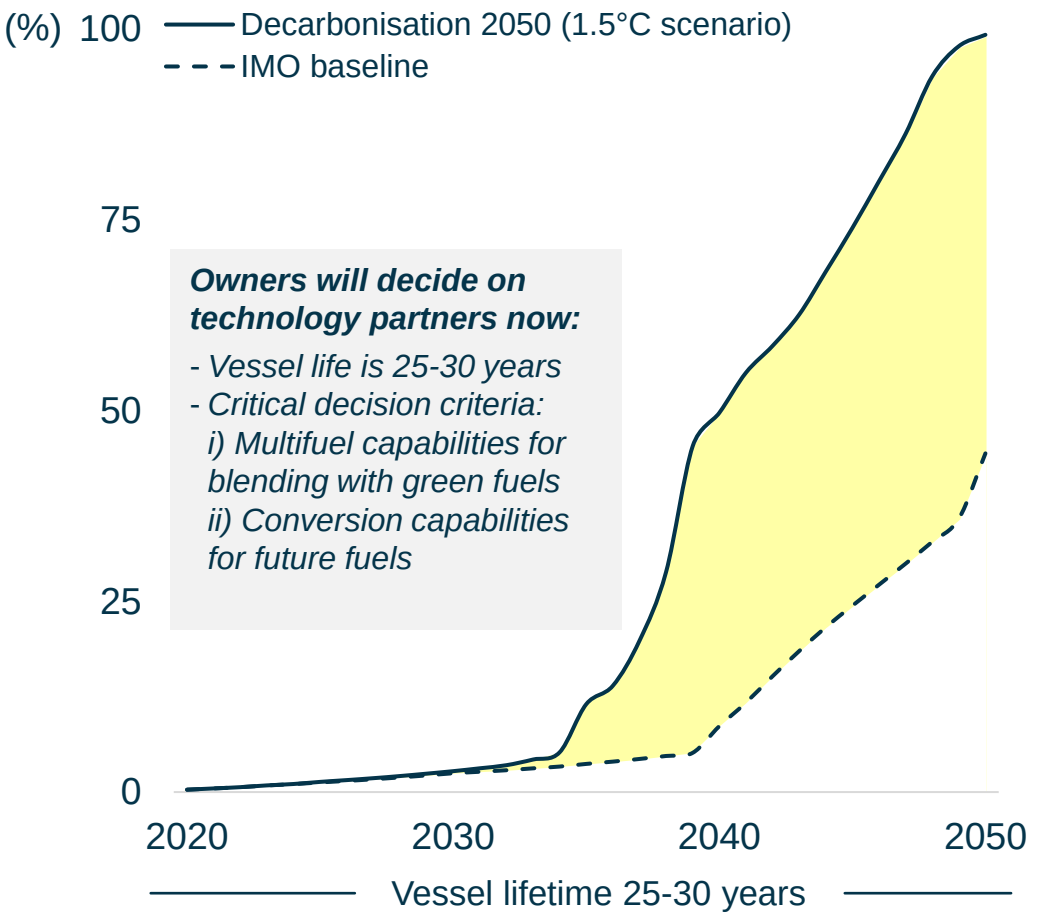
1) Source: Climate Watch, total 49.4 GtCO2e 2) IEA World Energy Outlook 2021 (Net Zero Emissions Scenario), until 2050 with electrification of transport, buildings and industrial sectors



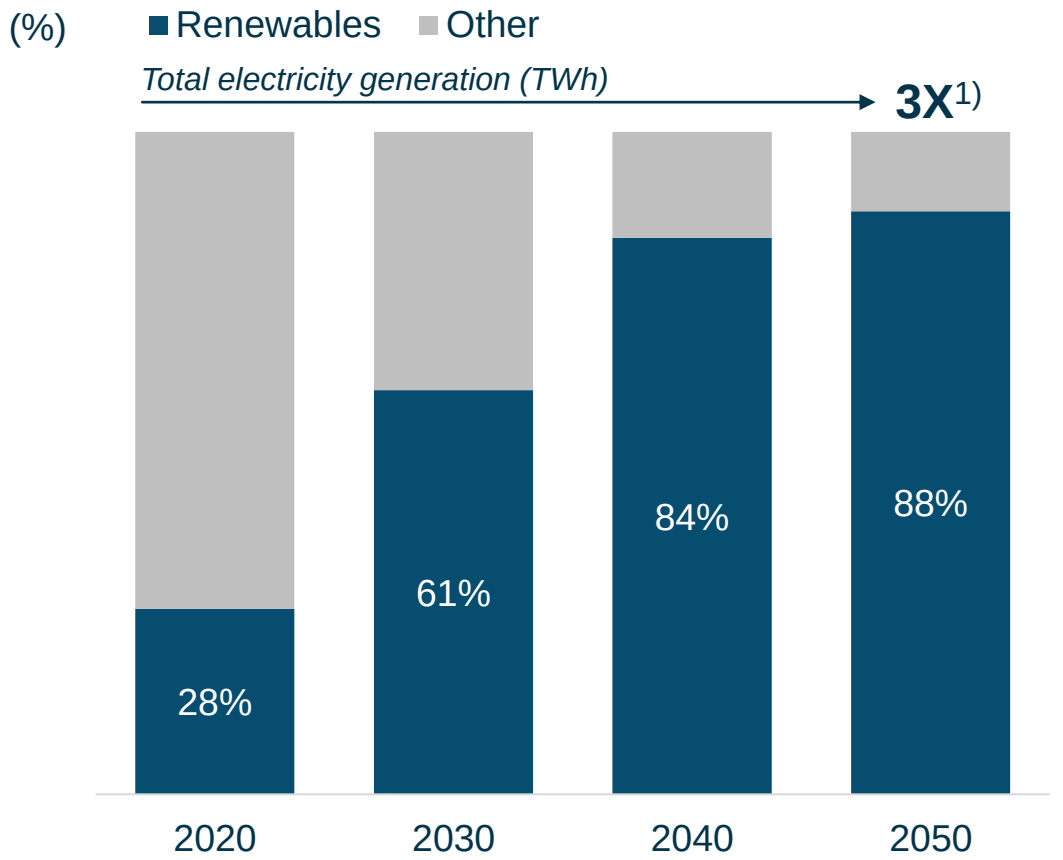
Transform – Decarbonisation creates new business opportunities

Decarbonisation of Marine and Energy is accelerating. Large regional variances in speed of change

Share of carbon neutral and zero carbon fuels in maritime



Share of renewables in global electricity generation



Source: DNV Maritime Forecast 2050 model, Wärtsilä Internal estimates 1) Total electricity generation (TWh) from 2020 to 2050, IEA World Energy Outlook 2021 (Net Zero Emissions Scenario)

There is no silver bullet – entering an era with numerous technologies and fuels

Future technologies …

- **Fuels:**

- Biofuels - Methanol	**Carbon neutral**
- Ammonia - Hydrogen	**Carbon free** [1)]

- **Fossil fuels will be around for a long time**. Gradual **conversion from fossil to green fuels**
- Transition **accelerated by blending green and carbon fuels**
- **Growth in performance-based agreements** leveraging digital solutions

… In Marine

- **Battery technologies:**
  - Hybrids / plug-in hybrids
  - Full electric
- **Energy saving technologies**:
  - Air lubrication
  - Flettner rotors
  - Solar PV
  - Hydrodynamic devices
- **Optimisation solutions**:
  - Route optimisation
  - Predictive maintenance
  - Vessel analytics
- **Autonomous solutions:**
  - Situational awareness and safety

… In Energy

- Rapid **growth in intermittent renewables drives growth in balancing power**
- Energy storage **will grow significantly**
- Thermal balancing growing – reciprocating ICEs have **leading flexibility and energy efficiency**
- Thermal balancing and energy storage **are complementary**
- **Power system optimisation** operating different generation assets

1) When generated with green electricity

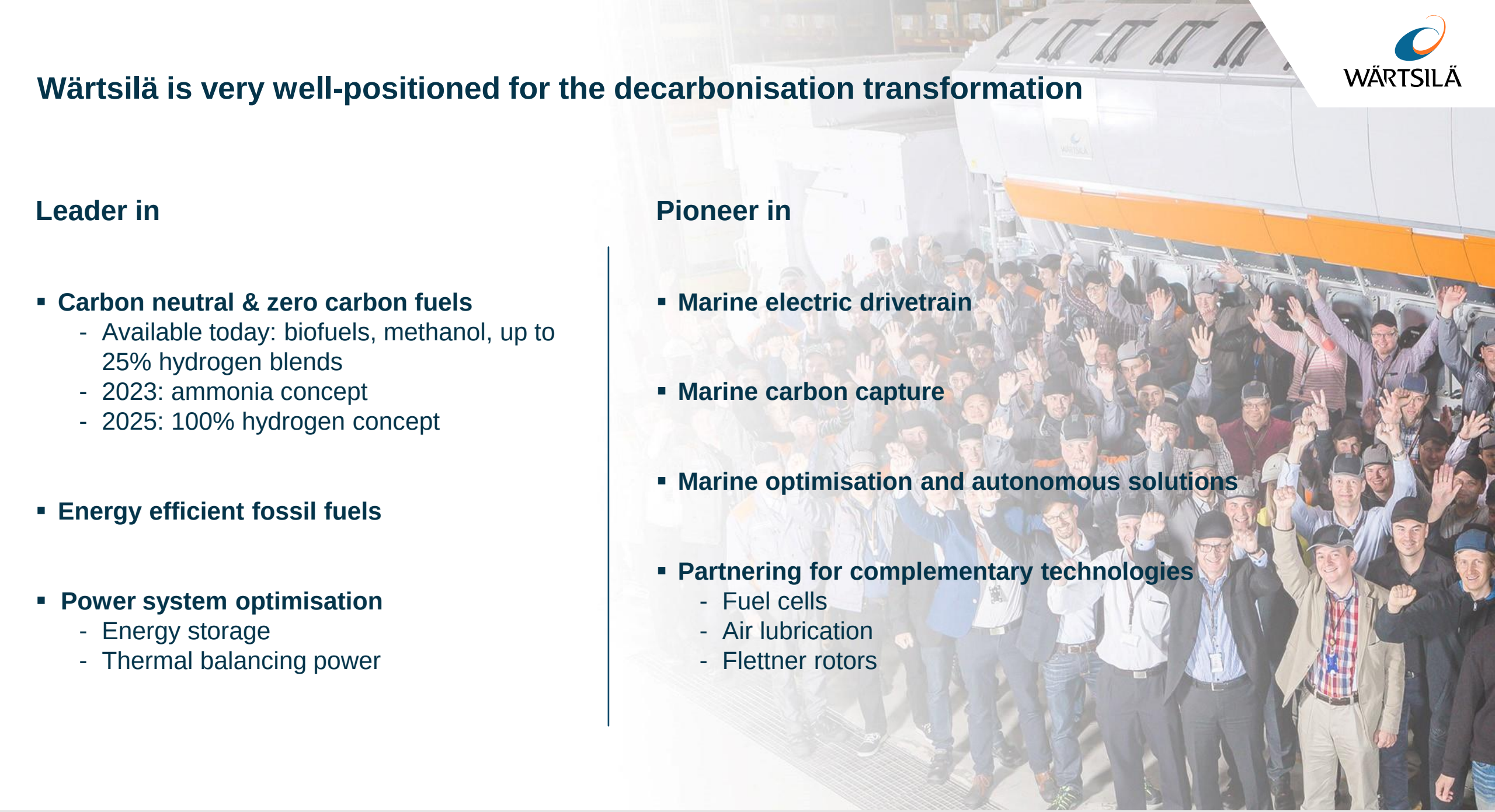
Wärtsilä is very well-positioned for the decarbonisation transformation

Leader in

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

Pioneer in

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



Leading the decarbonisation journey with a strong commitment to R&D and through partnering for a broad solution offering

Proactive dialogue on customers' specific technology roadmap

Competence & experience to engage in a credible customer dialogue on "all" technologies

Solution offering for "most" technologies

Leveraging leadership in core technologies and partnering for complementary technologies

Key takeaways

- Working with **many of the new technologies for decades**
- Conversion to new fuels requires only a **limited number of new engine parts**
- Large **technology synergies between Marine and Energy**
- Transformation manageable with a **stable R&D allocation of ~3% of net sales**

Perform – Leverage market recovery and growth

Wärtsilä well-positioned as #1-3 in global markets – focus on organic growth driven by decarbonisation and services. Complement with potential partnerships and bolt-on acquisitions

	Marine Power	Voyage (60-70% hardware)	Marine Systems	Energy
				
Topline growth potential	↗	→	→	↑
Key focus	▪ Services ▪ Fuel flexibility & efficiency ▪ Hybrids, full electric, energy saving devices	▪ Business turnaround and profitability ▪ Marine optimisation solutions	▪ Exhaust gas cleaning ▪ Carbon capture ▪ Shaft line solutions	▪ Services ▪ Power system optimisation ▪ Thermal balancing ▪ Energy storage
Current addressable market EUR	**+5bn**	**+1bn**	**+2bn**	**+10bn**
Share of Group Q321 LTM revenue [1)]	**~40%**	**~6%**	**~14%**	**~38%**

Non-core businesses

Continue active portfolio management based on:

- Market attractiveness
- Value creation
- Strategic fit

6 Divestments in 2020-2021

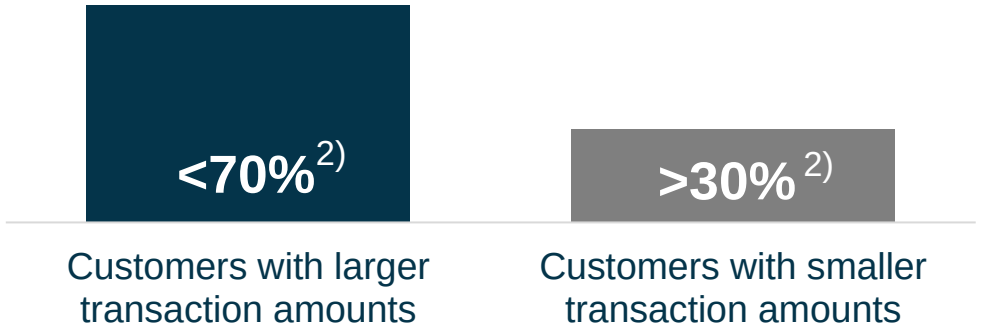
1) Excluding Portfolio Businesses

Growing Marine Power's transactional services business. Leveraging our installed base and capturing the needs of customers with smaller transaction amounts

Categorisation per customer type

Spend ratio EUR/kW

% of installed base

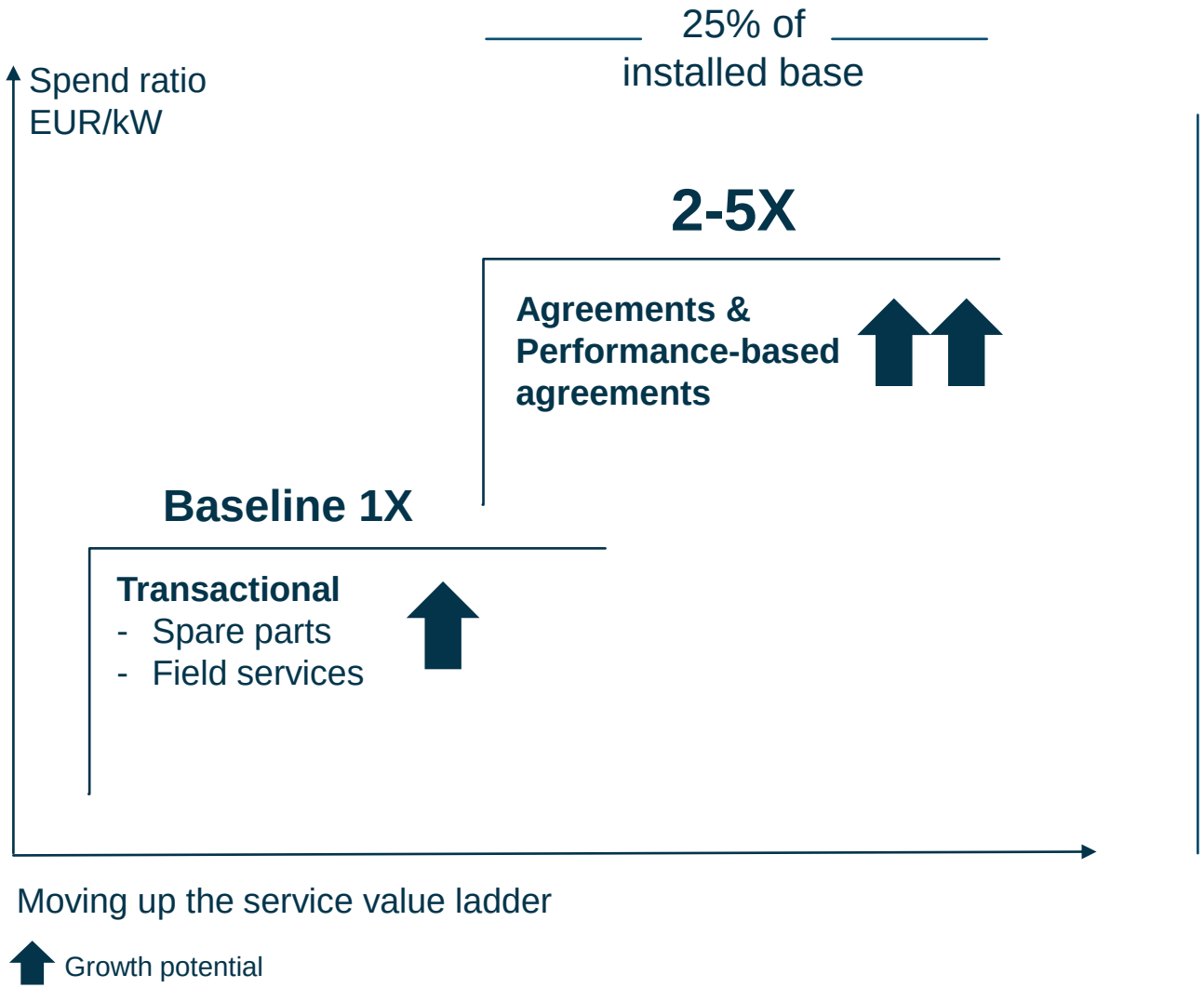


Enablers for growth

- **Leveraging digital solutions**
  - Customer intelligence
  - Automated lead management
- **Redefining our offering**
- **Effective global logistics**

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

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**

Green transition is expected to provide a notable opportunity for retrofits and conversions

Installed base

4S/2S Marine HFO to LNG/ green fuels [1)]

4S Energy HFO to gas

Estimated total market size of EUR ~2.5bn [2)]

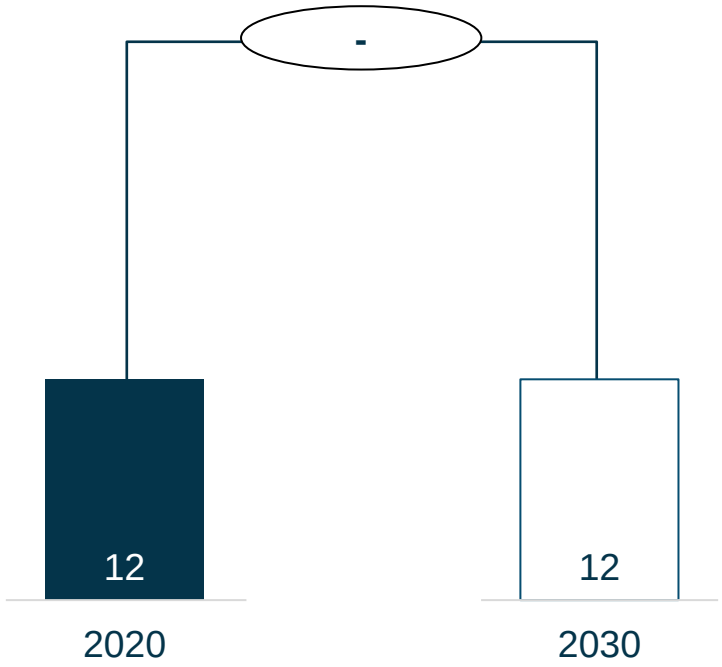
Future potential for conversions to green fuels [1)]

1) depends on fuel availability 2) estimated total market size over 5-10 years

Demand for electricity will grow by 3X with renewables being the way forward, thus accelerating the demand for balancing power

Baseload

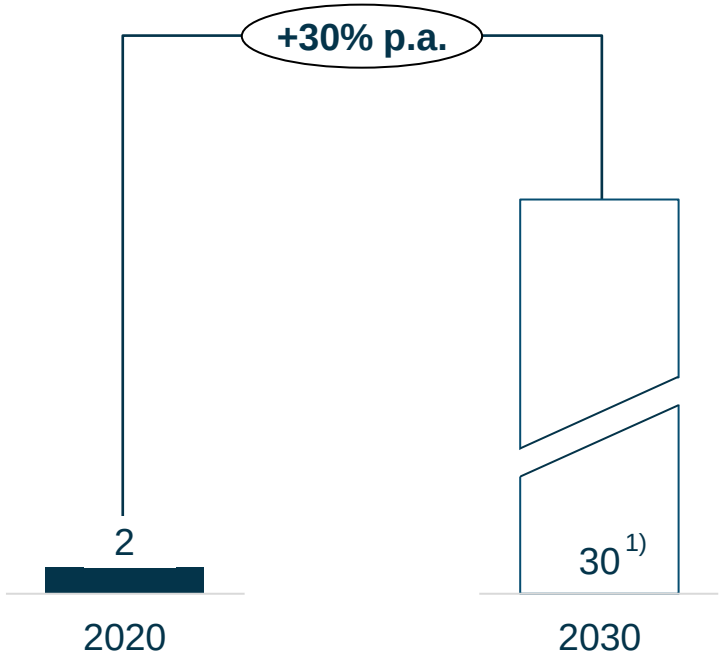
Addressable annual market (GW)



- Baseload market moving towards thermal balancing as share of renewables increases

Thermal balancing

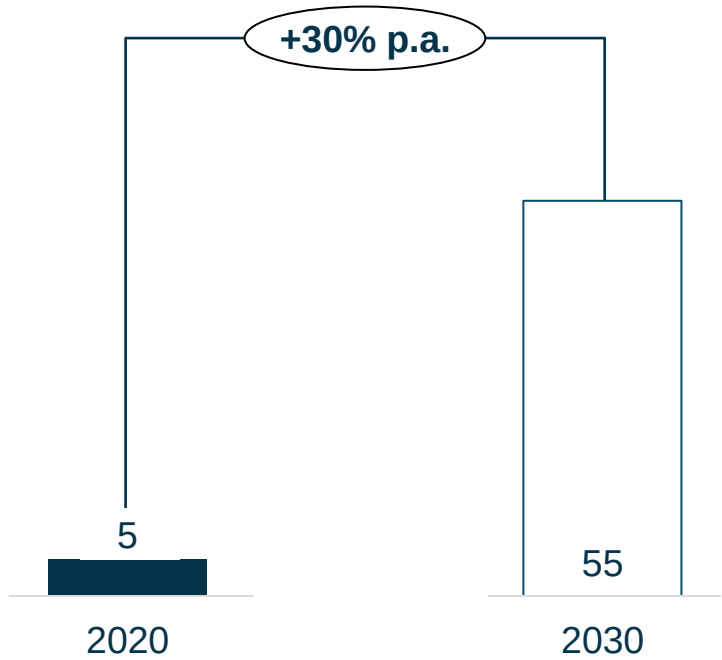
Addressable annual market (GW)



- Reciprocating engines are the most suitable technology for thermal balancing with leading capabilities in quick ramping, flexibility, and energy efficiency

Energy storage

Addressable annual market (GWh)



- Significant growth expected in front-of-meter energy storage
- Complementary to thermal balancing due to long- and short-term balancing needs

Source: Bloomberg New Energy Outlook 2020, Wärtsilä estimates 1) Key markets 10-15 GW

Wärtsilä's energy storage business is growing rapidly and is expected to become profitable within a few years

Power system optimisation for the lowest energy cost, highest uptime and reliability

Our value proposition

Power system optimisation offering

- **Complete balancing power** offering
- Strong capabilities in **optimising different generation assets**
- **Leading software platform**, GEMS, to scale and optimise performance

Strong execution skills

- **Sector proven partner with strong energy track record**
- **Competitive supply chain**

Energy storage key facts

Global #1-3

2021 order intake > EUR 700m

>6X growth from 2020 [1)]

~70% long term service agreements

Proven power system optimisation

1) Order intake

Perform – Robust execution

The Wärtsilä Way sets the scene for profitable growth

Purpose

Enabling sustainable societies through innovation in technology and services

Target position

Shaping the decarbonisation of Marine and Energy

- New financial targets
- New decarbonisation targets

Strategic priorities

Roadmap to improve performance and reach Target Position

Values

Customer Success, Passion, Performance

Strategic priorities to improve performance and reach 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.

- **Improve performance** in existing businesses
- **Generate profit and cash to fund**
  - Business and technology transformation
  - Good shareholder returns
- **Clear capital allocation principles** and **active portfolio management**

Developing a performance culture

- Being **successful by making our customers successful**
- **Clear leadership and delegated profit & loss responsibilities**
- **Caring for people** and **professional development**
- **Discipline in risk management** for capturing and executing projects
- **Improve speed and make decisions close to where customer value is created**
- **Mindset of continuous improvement**

Ambitious sustainability targets for 2030

To provide a product portfolio which will be ready for zero carbon fuels

To become carbon neutral in our own operations

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