# WÄRTSILÄ CORPORATION

Citi Global Industrials Conference 22 September 2011

**VESA RIIHIMÄKI GROUP VICE PRESIDENT, POWER PLANTS** 





### **Q2/11 Highlights**

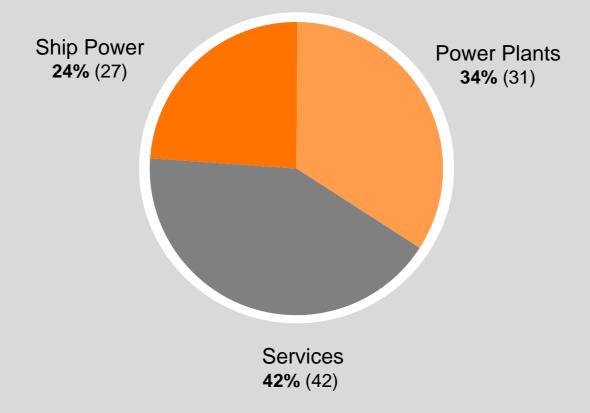


- Net sales EUR 1,036 million, -8%
- Order intake EUR 1,170 million, +5%
- Book-to-bill increased to 1.13 (0.99)
- Operating result EUR 117 million, 11.3% of net sales
- Cash flow from operating activities
   EUR -49 million
- EPS EUR 0.39 (0.43)

Operating result and EPS are shown excluding nonrecurring items. EPS figures have been calculated based on the new amount of shares.



### Net sales by business 1-6/2011





### Our offering covers all key shipping segments

Merchant



Offshore



Cruise and Ferry



Navy

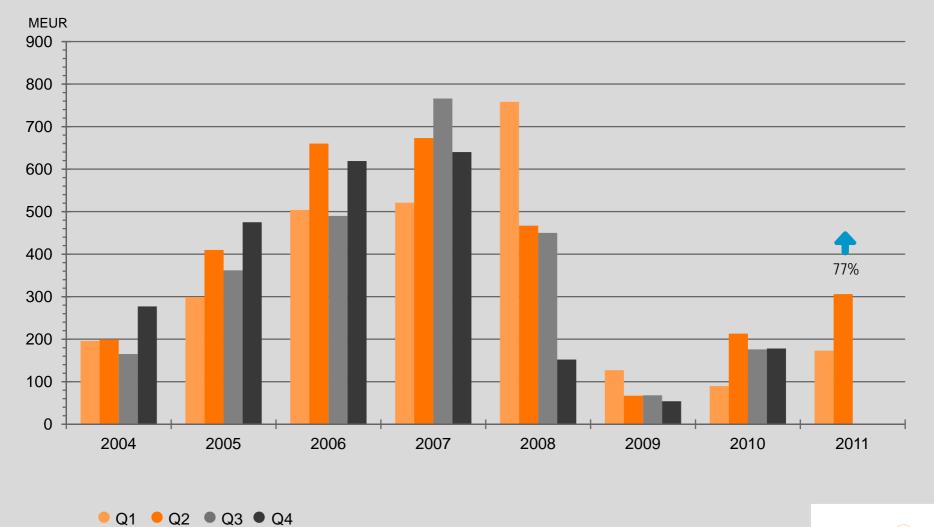


Special Vessels

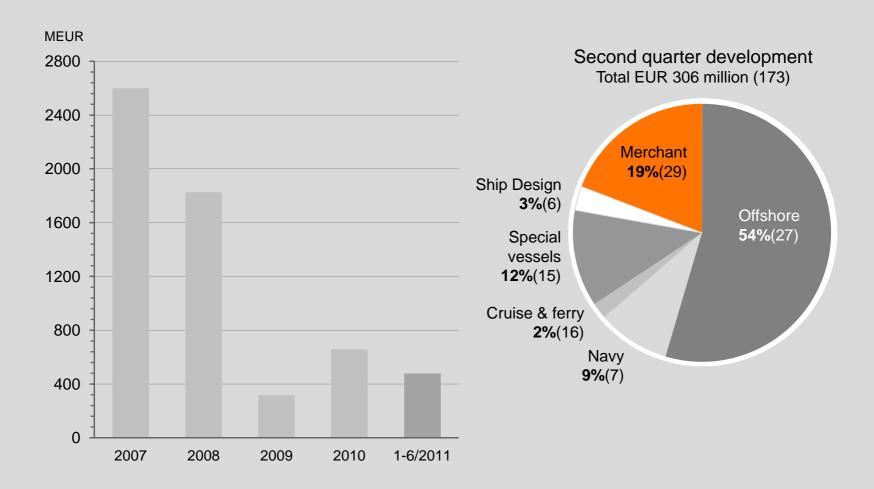




### **Ship Power quarterly order intake**



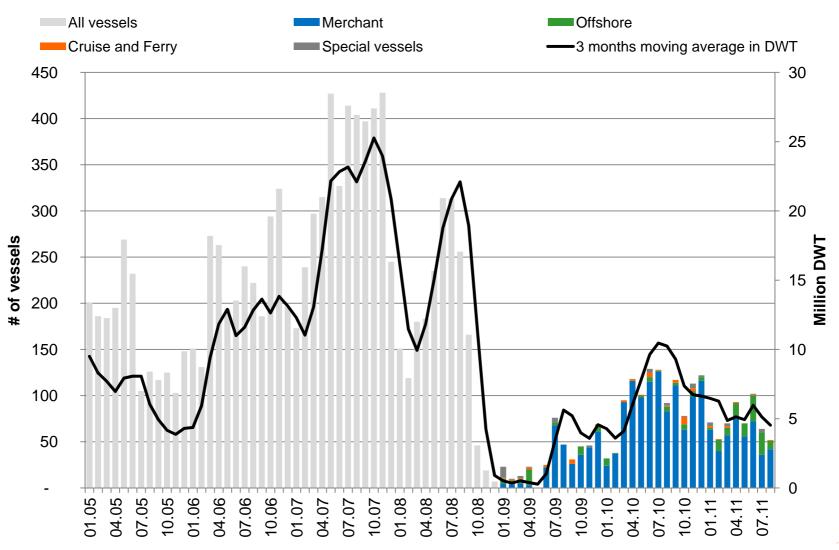
### **Ship Power order intake by segment**



Dual-fuel engine orders for LNG carries are booked as the joint venture Wärtsilä Hyundai Engine Company Ltd's order intake. Numbers in brackets are from Q1/2011



### **Ship Power market Contracting activity**



Source: Clarkson Research Services Limited



### **Ship Power strategy**

- Seek further growth through offering lifecycle solutions for ship owners and operators
- Be the leading system integrator in the ship building industry with further enhancement in our offering and capabilities
- Complement the system integration success with the best product sales and delivery process in the marine industry



### Short, medium and long term considerations

# Fundamentals show risks and opportunities on the short term

- Risks of downturn in global economy are tangible
- High oil prices represent a risk towards global economic growth, however they also stimulate investments in exploration and production for oil and gas
- Expansion of emerging economies continues to support growth of demand for transportation of raw materials and energy

# The future brings interesting opportunities

- Ship owners base is shifting
- Good fundamentals for offshore production and exploration
- Increasing interest in the market for gas powered applications
- Increasing focus on energy efficiency and environmental performance
- Changes in trade routes powered by emerging economies
- New vessel types



### **Target markets and solutions**



Flexible baseload power generation



Grid stability and peaking



Industrial self-generation



Solutions for oil and gas industry



Oil, dual-fuel and gas fired power plants



Liquid biofuel power plants



Flexible grid stability power plants



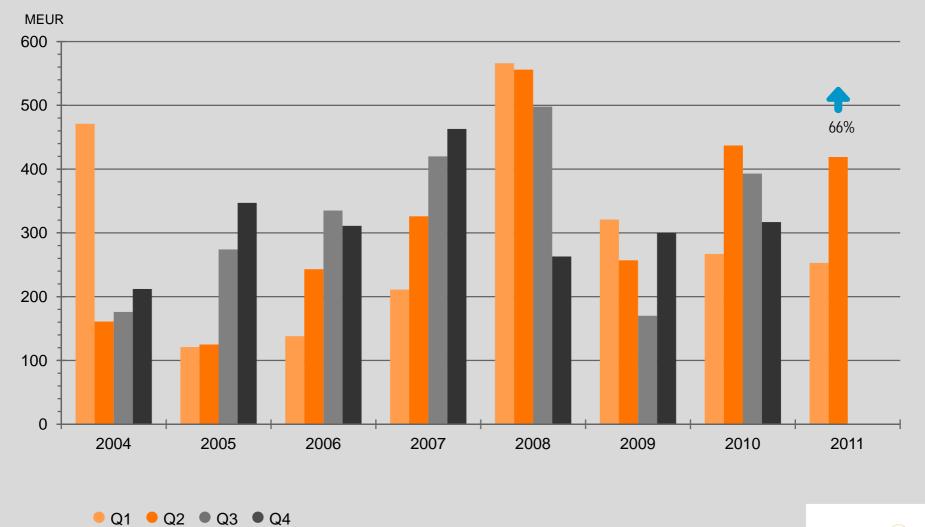
Combined heat & power plants (CHP)



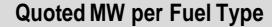
Pumping and compression applications

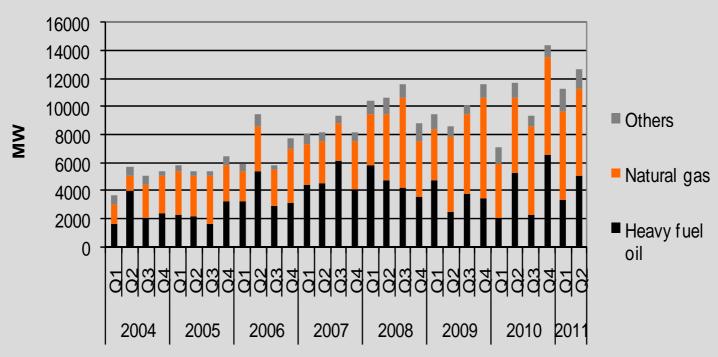


### **Power Plants quarterly order intake**



#### **Power Plants - Markets remain solid**





Share of natural gas is consistently increasing

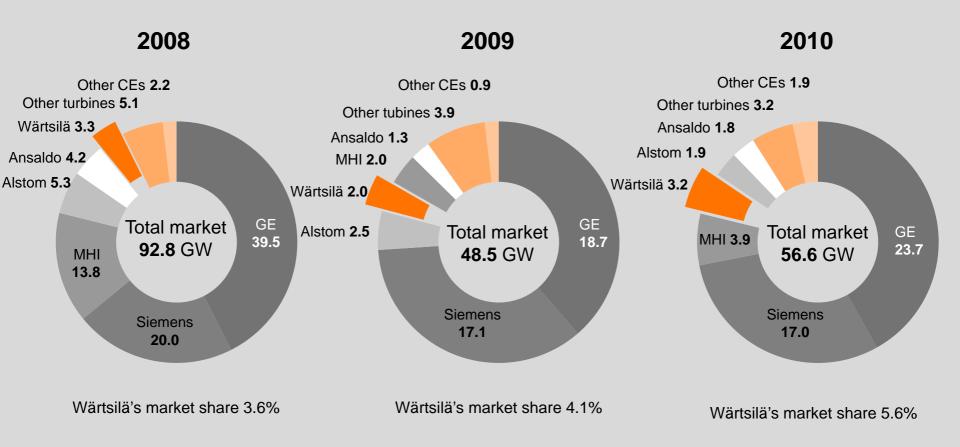


### **Power Plant strategy going forward**

- Maintain our leading position in HFO power plants by enhancing our value proposition
- Grow strongly in large utility gas power plants by capturing market share from other technologies
- Grow in power plants based on renewables by enabling a wide fuel range
- Grow in oil and gas and emergency power applications by introducing our value proposition to the industry globally



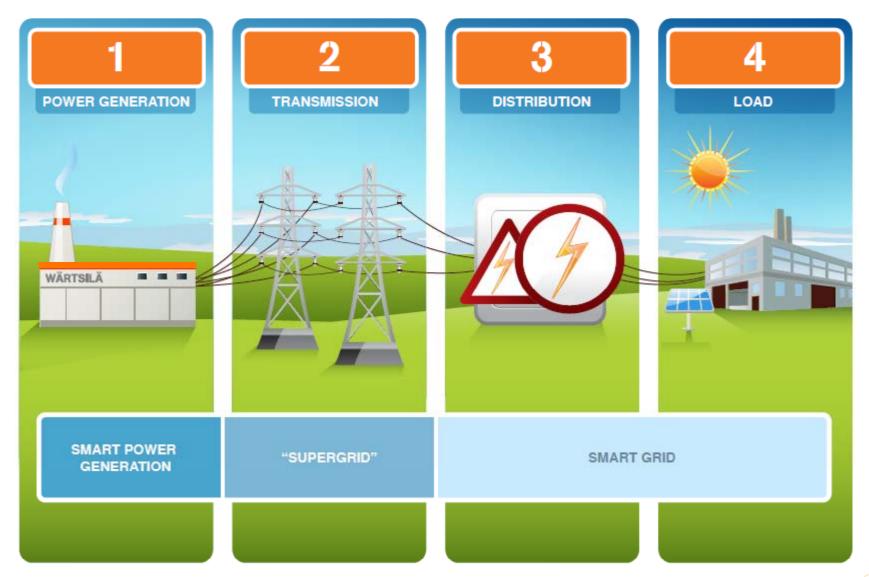
### **Power Plants market** Gas turbine and engine manufacturers



Market data includes all prime mover units over 5 MW and estimated output of steam turbines for combined cycles. The data is gathered from the McCoy Power Report and IESG. In oil and gas engine technology, Wärtsilä has a leading position.



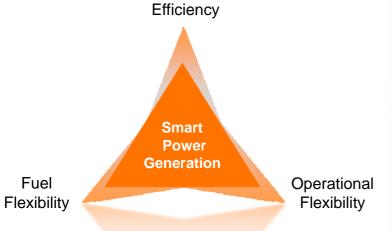
### **Smart Power System**



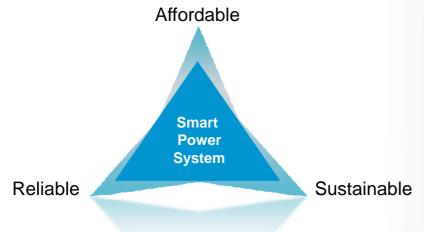


### **Smart Power Generation**

1) All in One! A unique combination of valuable features! Energy

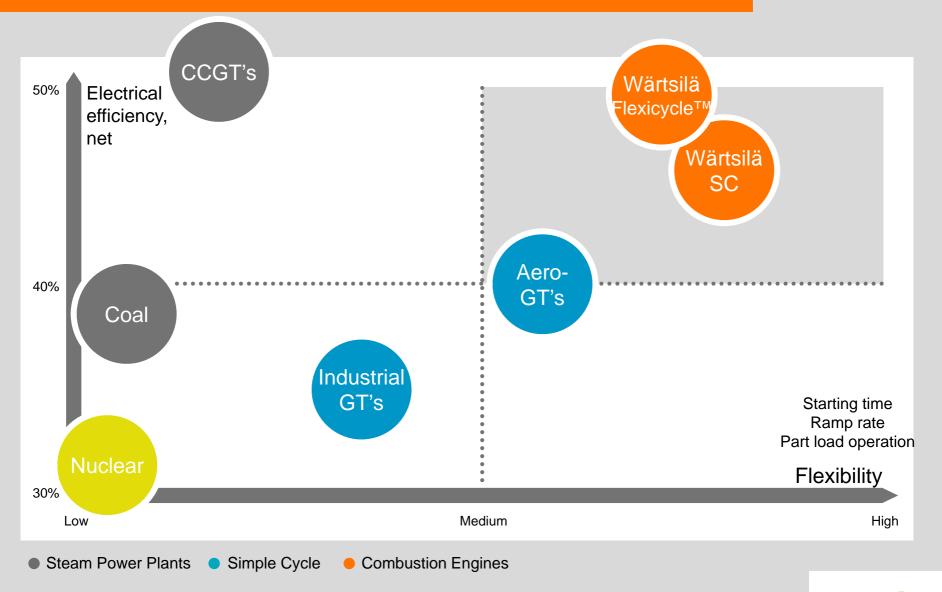


2) The missing piece of the low carbon power system puzzle!





### Operational flexibility vs. electrical efficiency

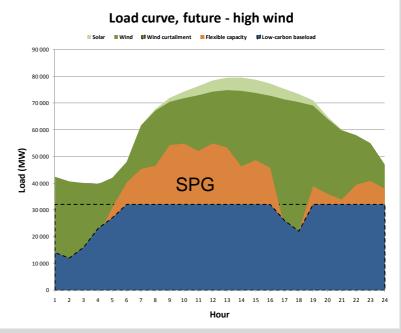




### **Benefits to power systems**



- Secures the supply of affordable and sustainable power
  - Enable highest penetration of wind and solar power capacity
  - Maximizing the use of wind power capacity by minimizing wind curtailment
  - Ensure system stability in wind variability and contingency situations
  - Avoid negative prices
- Ensures true optimization of the total power system operation
  - Remove abusive starts and stops, and cyclic load from base load plants that are not designed for cycling
  - Improves system total efficiency
- Enables reaching the high renewable energy share targets





### **Smart Power Generation: Elering**



# Target to grow strongly in the large utility gas power plants

- Market for gas driven power plants growing
- Ramp down of older coal based generation and uncertainty over nuclear power will increase demand for gas based generation
- Demand increasing also in emerging markets
- Variations in renewable generation and power demand require dynamic and flexible capacity

#### **Turnkey project order from Estonia**

- Contract signed with Elering AS, the Estonian transmission system operator
- Order value EUR 129 million, covers two dynamic grid reserve power plants with a total output of 250 MW
- Fast start-up capability enables response to sudden and unexpected drops in electricity supply
- Maintenance agreement to be signed



#### All in one features



#### Agility of dispatch

- Megawatts to grid in 1 minute from start
- 5 minutes to full load from start
- Fast shut down in 1 minute
- Fast ramp rates up & down
- Unrestricted up/down times
- High starting reliability
- Remote dispatch access including start & stop
- Black start capability

#### Low generation costs

- High efficiency (46% open cycle, 50 % Flexicycle)
- Wide economic load range
  - Multiple units
  - Any plant output with maintained high efficiency
- No derating → higher dispatch in hot climate and at high altitude
- Low maintenance costs, not influenced of frequent starts and stops, and cyclic operation
- Low/no water consumption

#### High plant reliability and availability

- Multiple units enable firm (n-2) power (n=number of installed units)
- Typical unit availability > 96%
- Typical unit reliability ~ 99%
- Typical unit starting reliability > 99 %

#### **Optimum plant location and size**

- Industrial outlook Location in load pockets (cities)
- Flexible, expandable plant size
- Step by step investment
- Low pipeline gas pressure requirement (5 bar)

#### **Fuel flexibility**

- Natural gas and biogases with back-up fuel
- Liquid fuels (LBF, LFO, HFO)
- **Fuel conversions**

#### Low environmental impact

Low CO<sub>2</sub> and local emissions even when ramping and on part load

#### Fast track delivery

12-15 months full EPC



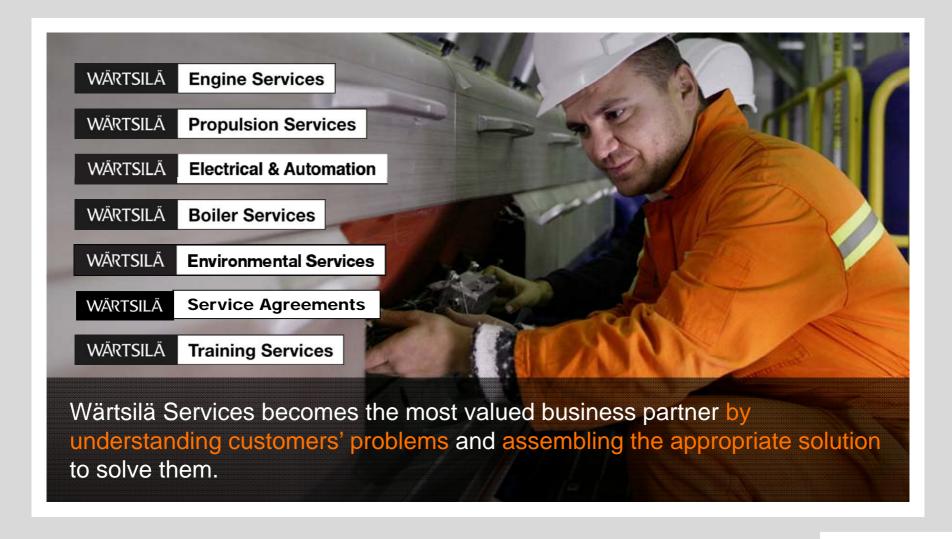
### **Technology comparison**

	Electrical efficiency full load, %	Typical plant size, MW	Normal starting time to full load, minutes	Dynamic capabilities	CO <sub>2,</sub> g/kWh
Nuclear	31-33	1000 - 2000	>2000	Poor	-
Coal	33-45	300 - 4000	>180	Poor	820 - 1050
CCGT gas	50-57	200 - 1500	80	Not good	370
SPG Gas engine	46	10 - 500	5-10	Excellent	430
Aero GT	33-41	20-300	10-13	Good	500
HDGT	30-35	100-1000	13-30	Decent	560
SPG Flexicycle*	46/50	100-500	10/60 *	Excellent	400

<sup>\*)</sup> Simple cycle / combined cycle

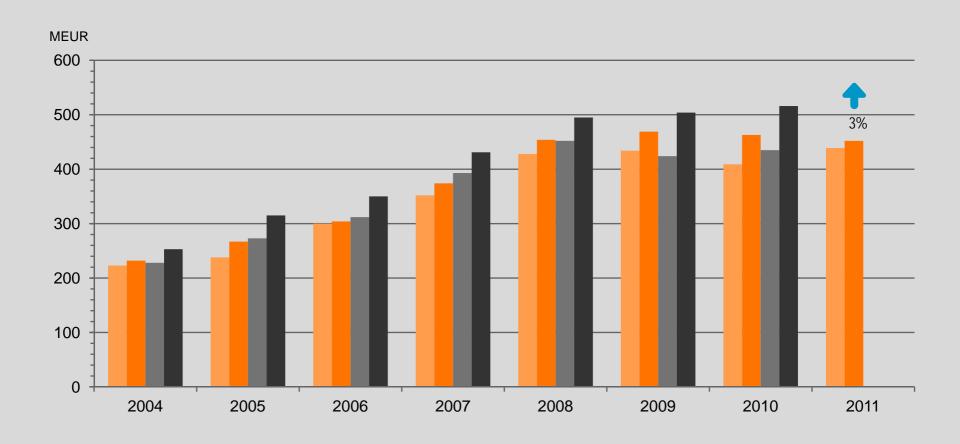


### Services expertise areas





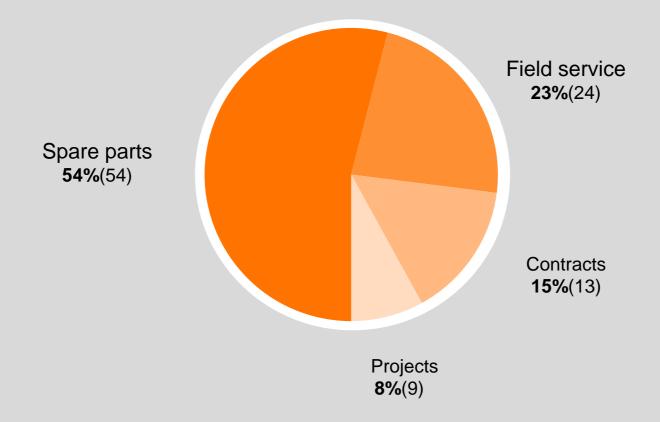
### **Services - Net sales by quarter**









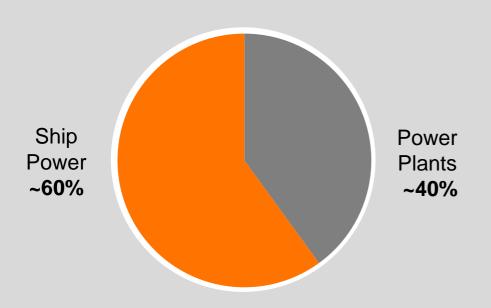


Numbers in brackets are from 1-6/2010

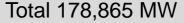


### Services distribution per business

#### **Net sales distribution**



#### Installed base distribution







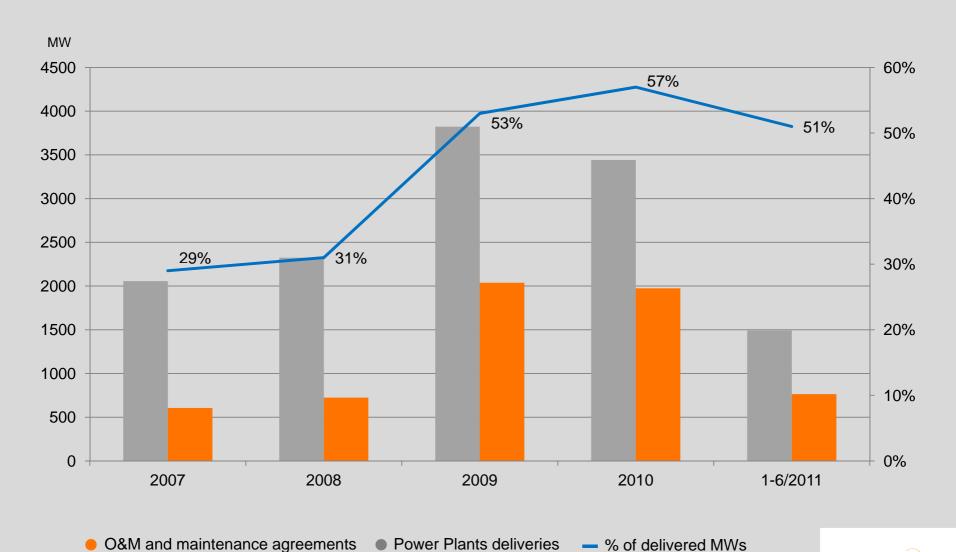
### **Services strategy**

- Maximize our market share with our present customer base and present portfolio
- Constantly develop our offering proposition with value-enhancing products in existing customer segments
- Grow strongly with service agreements, together with Ship Power and Power Plants
- Become the market leader in our industry in environmental solutions



### **Development of Power Plants service agreements**







### Continued interest in marine service agreements



# Target to grow through service agreements Continued interest in maintenance agreements seen in marine and power plant markets

- Reduction of fixed costs
- Enhanced performance and reliability

## Technical management contract signed with Ceres LNG Services Ltd

- Five-year contract, based on Dynamic Maintenance Planning
- Covers twenty-four Wärtsilä 50DF dual-fuel engines in six LNG carriers
- Reduced operating costs through predictive maintenance principles and optimised engine performance



#### Market outlook



- Ship Power: Competition and price pressure among shipbuilding suppliers expected to remain intense. Ship Power order intake expected to be significantly better in 2011 than in 2010.
- Power Plants: Recovery in the power generation market expected to continue in 2011. Power Plants' order intake expected to increase in 2011 compared to the previous year.
- Services: While Wärtsilä expects steady demand for power plant services, the overall marine service market is still expected to suffer from overcapacity and the high level of anchored fleet in 2011.



### **Prospects for 2011 revised**



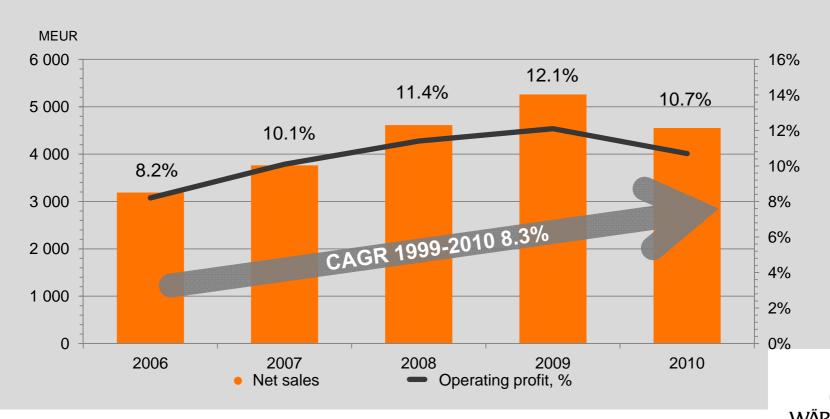
Due to weaker than expected marine service markets and the timing of power plant deliveries, Wärtsilä expects its net sales for 2011 to decline by 0-5% compared to last year.

We reiterate our expectation that operational profitability (EBIT% before nonrecurring items) will be around 11%.



### Long-term growth and profitability

- Target to grow faster than global GDP
- Operating profit margin (EBIT%) target 10-14%
- Maintain gearing below 50%
- Target to pay a dividend equivalent to 50% of earnings per share





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