WÄRTSILÄ INDUSTRIAL OPERATIONS FOOTPRINT NOW AND IN THE FUTURE

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GROUP VICE PRESIDENT, WÄRTSILÄ INDUSTRIAL OPERATIONS
Our industrial challenge

The markets are volatile and require flexibility

Wärtsilä meets external performance pressures effectively

• Increasing requirements on quality, delivery and cost and to deliver as promised
• Main market location shifting (customer presence in Asia)
• New industry cost-level (reduction by 10-30%)
• Increased environmental demands
• Increased pressure throughout the supply chain

A sustainable profitable growth for Wärtsilä

2000

• 2000: Market downturn
• 2001: Layoffs in Italy, sold welded part operations Trieste, closed Zwolle factory

2003

• 2002: Wärtsilä expands with Propulsion
• 2001: Layoffs in Italy, sold welded part operations Trieste, closed Zwolle factory

2005

• 2005: Expansion into Asia
• 2005: Clear market upturn
• 2004: Closed Turku factory, sold Mulhouse factory and intellectual property
• 2003: Wärtsilä volumes at lowest point

2008

• 2009: WIO plans next moves
• New momentum to secure flexibility
• 2008 Market downturn
• 2006: Wärtsilä expands into Automation
• 2006: Market upturn much greater than expected

Key data Wärtsilä 2004

| Net sales  | 2.4  B€ |
| EBIT      | 4.6   % |
| People    | 11,000 | # |

Key data Wärtsilä 2009

| Net sales  | 5.3  B€ |
| EBIT      | 12.1  % |
| People    | 18,500 | # |

24 March 2010
Flexibility is obtained from people, outsourcing, supply chain optimisation and streamlining of manufacturing foot print.
Wärtsilä’s current manufacturing capacity

Norway, 390 employees
Propellers, gears, propulsion controls, R&D, power drives, power distribution, vessel automation

Finland, 1,430 employees
Engine manufacturing, R&D

China, 1,130 employees
Low-speed engines, thrusters, components, seals, bearings, auxiliary engines, propellers, shaft lines, blades and hubs

UK, 180 employees
Seals, synthetic bearings, R&D

The Netherlands, 530 employees
Propellers, thrusters, propulsion controls, R&D, DTS – Component Machining unit

Switzerland, 270 employees
R&D and licensing

Spain, 70 employees
Engine manufacturing, R&D, blades, propellers

Italy, 890 employees
Engine manufacturing, R&D

India, 130 employees
Gears, propellers, components, auxiliary engines

South Korea, 30 employees
Engine manufacturing

Number of employees December 31, 2009:
4,900 in Industrial operations, 18,541 Wärtsilä total

70-80% in Europe, 20-30% in Asia
WCN Dalian Rep. Office
Dalian Marine Diesel (DMD)
Qingdao Qiyao Wärtsilä MHI Linshan Marine Diesel Co Ltd (QMD)
Wärtsilä CME Zhenjiang Propeller Co., Ltd.
Nantong COSCO Shipyard Automation Co
CSSC-MES Diesel (CMD)
Wärtsilä Services (Shanghai) Co Ltd
Wärtsilä Ship Design (Shanghai) Co Ltd
Hudong Heavy Machinery (HHM)
Wärtsilä Qiyao Diesel Shanghai Co., Ltd.
Wärtsilä Propulsion (Wuxi) Co., Ltd.
Wärtsilä Services (Shanghai) Co Ltd Nansha Office
Wärtsilä China Ltd. (H.K)
Zhuhai Yuchai Marine Power Co. Ltd

2010: WIO starts Wärtsilä Engineering Centre China (WECC)
• Local provision of competences as a service provider in a global network

• Operational engineering activities* are brought close to the customers
  – Better engineering support for customers
  – Closely located to local manufacturing
  – Local operational functions for application engineering, quality, problem solving, supplier development, product localisation and production support and development.
  – Shorter information loop to serve running projects
  – Shorter engineering lead-times, faster and more efficient
  – Growth support in Asia
  – Technical hub function
  – IP protection

* This excludes R&D activities
Capacity growth in Asia - examples

**Wärtsilä CME (Zhenjiang)**
No 1 in China and 4th biggest FPP manufacturer in the world

**Wärtsilä Propulsion (Wuxi)**

**Wärtsilä Qiyao Diesel Company Ltd. (Shanghai)**

![Graph showing annual output and employees growth for Wärtsilä CME, Wärtsilä Propulsion, and Wärtsilä Qiyao Diesel Company Ltd.](image)
Key issues:

• Volatile and unpredictable market calls for **flexibility in supply chain**
• Customer requests move from “technology” to “**benefits of technology**”
• Customer demands for **quality** (first time right and reliability), **timely responses**, **short lead time**, **competitive life cycle costs**, **serviceability** and **high power output density**.
• **Environmental** and **Energy efficiency** concern is raising throughout all world leaders.
### Our transition: presence

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<thead>
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<th>2009</th>
<th>Targets 2010+</th>
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- Close to customers
- Assembly focused
- Global supplier base
- **Plan to reduce European footprint**
- Component manufacturing by supply chain

**Expansion and focus to develop industrial competences in one division**
Plan to reduce European footprint

The Netherlands

- **Controllable Pitch Propeller** manufacturing is planned to be moved to China and naval applications focused in Norway.
- **Thruster** manufacturing is planned to be transferred to Trieste, Italy.
- **Foundry** (Fixed Pitch Propellers, blades and hubs) is planned to be moved to the existing foundries in China and Spain.
The Netherlands

- **Component** manufacturing DTS in Zwolle is planned to be integrated into the supply chain.

Finland

- Wärtsilä 20 **generating set** production moved to China
## Our transition: products

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| **Engine division**  
• Engines (2-stroke and 4-stroke) | **Engines** (2-stroke and 4-stroke)  
• Propulsion equipment | **Start renewal of portfolio**  
• Conceptual approach on commonality, modularity, platforms, design to manufacture, design to cost and design to service |
| **Ship Power**  
• Propulsion equipment | **Propulsion equipment**  
• Automation equipment  
• Ecotech products | |
Main differentiators
- Environmental compatibility
- Lower product cost
- Lower total cost of ownership
- Technology leadership
- Energy efficient solutions
- Fuel flexibility
- Improved reliability
- Modular design
- Solutions integration
- Faster product development
- Shorter time to profit
Wärtsilä R&D environment

Global challenges = our opportunities

CLIMATE AND ENVIRONMENT

ENERGY GUARANTEE
(reliable power supply)

Customer focus = our focus

ENERGY EFFICIENCY

ULTRA LOW EMISSIONS

RELIABILITY

LIFE CYCLE COST

Our strengths

PEOPLE WITH KNOWHOW

INNOVATIONS

SYSTEMATIC WAY OF WORKING

TESTING & VALIDATION

Our improvement areas

STATE-OF-THE-ART SIMULATION

SUPPLY CHAIN INTEGRATION

DESIGN FOR MANUFACTURING, ASSEMBLY, COST, SERVICE ABILITY
Continuous strong focus on R&D and life-cycle solutions will further strengthen Wärtsilä’s position as technology leader.
The WIO strategy 2010+

Main strategy

Main themes

Competitive product portfolio
- Develop a streamlined portfolio of products
- Approach: commonality, modularity, platforms, design to manufacture, design to cost and design to service
- Environmental solutions

R&D and manufacturing footprint with integrated supply chain
- Footprint close to the customers
- Capacity cost and capital efficiency
- Product Life Cycle Management

Quality, Delivery and Cost (QDC)
- Focus on assembly and testing
- Flexible operations
- Pull production & continuous flow
- Secure competitive product cost
- Supply chain integration
- Standard commodity as well as tailor made products

Key Drivers

Key Enablers

- People
  - Performance Culture
- Process development
  - Continuous improvement
- Project Management
  - Risk Management

STRATEGIC GOAL

We provide market leading products

24 March 2010