SERVICES: GROWTH THROUGH SOLID CORE FOUNDATION AND SMART SOLUTIONS

Pierpaolo Barbone, President, Services & Executive Vice President
The shift towards clean, efficient and smart vessels

**INCREASING REGULATORY PRESSURE**
Further investments to retrofit incompetent assets, increased scrapping and newbuilds

**NEED FOR EFFICIENCY IMPROVEMENTS**
Demand for performance based agreements with shared incentives will increase

**THE RISE OF ”SMART VESSEL”**
Need for total asset management capabilities is set to increase

**VERTICAL INTEGRATION AND MARKET CONSOLIDATION**
Larger entities as customers more likely to outsource more and focus on their core business
The shift towards a clean, digital and smart energy ecosystem

ERA OF RENEWABLES AND ENERGY STORAGE
Demand for system integration around engine power plants and renewables is set to increase

ROLE OF LNG AS A BRIDGING FUEL
Rising demand for specific expertise and service capability in gas technology

SHIFT IN ENERGY PROVIDERS’ BUSINESS MODELS
The need for Asset Management and system integration will increase

ACCELERATING DIGITAL TRANSFORMATION
Growing demand for optimisation of asset operational efficiency, reliability and connectivity
A TYPICAL DAY IN WÄRTSILÄ SERVICES...

- 200 Customers served through online channels
- 800 Installations under lifecycle solution agreement
- 71 ton Spare parts shipped to customers
- 70 Customers served through 24/7 support centre
- 2-3 Customer training courses held
- 5,000 Field service engineers at customer sites
- Serving customers at 160 locations worldwide
- >40,000 Vessels operating with Wärtsilä scope
- >4,000 Plants operating with Wärtsilä scope
The size and scope of the Services business provide a solid platform for growth together with our customers.
Installed base development supports our growth ambitions…

Current Installed Base | New Deliveries
...as does the increasing number of installations under agreement
Customer satisfaction rates show steady improvement

Formula: NPS = % of Promoters - % of Detractors

Number of feedback >2000/Year

- 2015
- 2016
- 2017
- Apr. 2018
We are continuously expanding our service portfolio to meet the needs of customers.

**UNDERWATER SERVICES**

Underwater services minimise vessel downtime and off-hire by enabling work to be performed underwater during port calls instead of in dry dock.

**LOCK-N-STITCH**

Lock-N-Stitch is a sophisticated technology for metal stitching repair, thread repair, furnace brazing and fusion welding for marine and power applications.
Increasing energy efficiency with a smart energy storage solution

Challenge
• Reduce environmental emissions and modernise the vessel to make it more competitive.

Solution
• Battery solution with estimated reduction in emissions of 5.5 million kg CO₂, 30 tons of NOx and 1,200 kg SOx per year. In addition transformers, filters, switchboard, shore connection equipment, upgrades of existing components and commissioning.

Benefits
• Reduced energy consumption
• Lower operating costs
• Increased redundancy and responsiveness
• Improved environmental footprint

Sveinung Økland, Operation Manager, North Sea Shipping AS.
Ensuring reliable operations of solar power plant

Challenge
• Optimised energy production of the PV plant in Burkina Faso consisting of solar plant which share control system with the thermal power plant. The thermal plant operates on 11 x Wärtsilä 32 engines.

Solution
• 7-year Asset Management Agreement for remote support by Wärtsilä Expertise Centres, to continuously monitor the plant parameters for optimised performance.

Benefits
• Efficient and stable power with unsurpassed performance
• Reduced fuel cost and environmental impact

This project represents a breakthrough in the industry.
Christophe Fleurence, Africa Business Development VP, EREN RE
Growing in smart solutions from our strong core business

Combining our core business with asset management, connectivity, and business model re-engineering creates a solid foundation for new customer lifecycle value propositions, revolutionising how this industry is operating.
From delivery excellence to optimising our customers’ business

Our offering is based on meeting the needs of our customers according to their business objectives.
Situational awareness at your fingertips

Challenge
• Access to right real-time data for decision making and route optimisation.

Solution
• A mobile solution that utilises data collected from the vessel’s bridge, automation systems, and onboard sensors integrated with third-party information like weather forecasts to help improve the safety and efficiency of operations.

Benefit
• Insights how to achieve for example:
  – Increased safety and efficiency of operations
  – Optimal trim to save fuel
  – Exact RPMs needed to reach port just-in-time
  – Show how route performance compares to other vessels in the industry

Eniram Mobile increases safety, emphasises efficiency and provides insights into compliance.
ASSET MANAGEMENT

Managing equipment lifecycle in the most cost-effective manner
Growing in smart solutions from our strong core business

- Environmental awareness and a greater focus on efficiency are changing customers’ service needs
- Hybrid solutions increase the importance of intelligent monitoring, control and optimisation
- Our transition to asset management will further improve customer performance
THANK YOU