Wärtsilä’s Smart Marine Ecosystem
An announcement
From Smart Marine vision to Smart Marine Reality.

A crucial step forward in the journey.
Connecting intelligent vessels with smart ports

Enabling sustainable societies with smart technology

Innovative technologies
Disruptive business models
Strategic partnerships
The world’s widest product portfolio
Integrated systems through smart on-site solutions

Unrivalled install base
Access to big data for analytics and machine learning

Marine ecosystem know-how
Experience and expertise to understand big data and transform it into business opportunities
Digital Insights
Asset management, operation and commercial optimisation to maximise profitability and minimise emissions

Situational Awareness
Real-time vessel positioning and manoeuvring, maximising safety, reliability and ease-of-use
Wärtsilä acquires Transas

Making the future of shipping a reality today
Navigation systems
Advanced integrated bridge solutions and ECDIS (Electronic Chart Display and Information System)
Ship traffic control solutions
Solutions for a coordinated, holistic approach to maritime traffic control, monitoring and decision support
Maritime simulation & training
Development of personnel, improving efficiency and safety
Software development capability
The key enabler of digital platform and value-added services
Digital platform
Managing operations across the full breadth of the maritime ecosystem
Fleet operations solution
A suite of value-added services, turning data into value for the customer
<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
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<tbody>
<tr>
<td>Annual net sales: around EUR</td>
<td>140M</td>
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<tr>
<td>Employees:</td>
<td>1000 (30% in software development)</td>
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<tr>
<td>HQ in Portsmouth, UK</td>
<td>22 regional offices worldwide and a distribution network spanning 120 countries</td>
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<td>Marine simulation systems:</td>
<td>&gt;5.5K 91+ countries</td>
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<td>Vessel Traffic Management &amp; Information Systems: in</td>
<td>300+ ports 55 countries</td>
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<tr>
<td>Marine onboard equipment:</td>
<td>&gt;13K 100+ countries</td>
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<tr>
<td>Electronic Charts:</td>
<td>&gt;3M sold worldwide</td>
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LEADING SUPPLIER

LEADING SUPPLIER

LEADING ECDIS SUPPLIER
The Smart Marine Ecosystem
FOSSIL FUELS

EMISSIONS AND HIGH FUEL CONSUMPTION

PRESCRIPTIVE MAINTENANCE

ROUTE BASED ON HUMAN EXPERIENCE

RISK OF ACCIDENTS

OPERATIONAL DOWNTIME & REPAIR COSTS

PORT CONGESTION

MANUAL OPERATIONS

SHORT TERM PLANNING

WAITING TIME AND INEFFICIENCIES AT PORT
Multiple sources of energy
Digital Twin
Simulators
Multiple sources of energy
Vessel route and position (navigation system / AIS)
Berthing slot and congestion from VTS
Weather forecasts
Situational awareness
SMART ROUTING AND VOYAGE PLANNING
COLLISION AVOIDANCE AND AUTO-DOCKING
SAFE & AUTOMATED OPERATIONS
TRANSPARENT & COORDINATED PORT OPERATIONS
REMOOTE EMISSIONS & PERFORMANCE MONITORING
HYBRID SHIP
EFFICIENT & GREEN SAILING
REAL-TIME VISIBILITY OF SHIP ETA AND ETD
WÄRTSILÄ SMART MARINE ECOSYSTEM

- Weather forecasts
- Situational awareness
- Berthing slot and congestion from VTS

**SMART ROUTING AND VOYAGE PLANNING**

- Efficient & Green Sailing
- Safe & Automated Operations
- Real-time Visibility of Ship ETA and ETD

- Remote Emissions & Performance Monitoring
- Hybrid Ship
- Multiple sources of energy
- Vessel route and position (navigation system / AIS)

- Digital Twin
- Simulators

- Collision Avoidance and Auto-Docking

- Transparent & Coordinated Port Operations
Next steps

1. Announcement
2. 19th March 2018
3. Merger control clearance in relevant countries
4. Closing expected during Q2 2018
5. Integration execution to begin at closing