



# WÄRTSILÄ SERVICES GOES DIGITAL

**SOLUTIONS FOR THE MARINE, OIL & GAS AND ENERGY SECTORS  
CARNEGIE BANK'S SEMINAR, 1 MARCH 2016**

Pierpaolo Barbone,  
President & EVP, Wärtsilä Services



- Who are we? Wärtsilä Services in brief
- Digitalisation in Services
- Customer engagement: Wärtsilä Online Services
- Digital Maintenance Services: Remote support
- Asset Performance Optimisation: Wärtsilä Genius
- Co-creation in the digital age: Wärtsilä Marine Mastermind
- Digitalisation through the eyes of Wärtsilä Services
- Our digital story in a nutshell

# Wärtsilä Services' Mission and Strategic Goal



## Wärtsilä Services' Mission

We create lifecycle services with our customers, enhancing their business – whenever, wherever.

## Wärtsilä Services' Strategic Goal

Our customers recognize us as their most valued and competitive service partner: competent, reliable and easy to deal with.



# Wärtsilä Services 2015 in brief

The size and scope of the Services business provides a platform for further growth.



Net Sales [MEUR]	2015	2014	Change
Services	2,184	1,939	+13%
Wärtsilä group	5,029	4,779	+5%

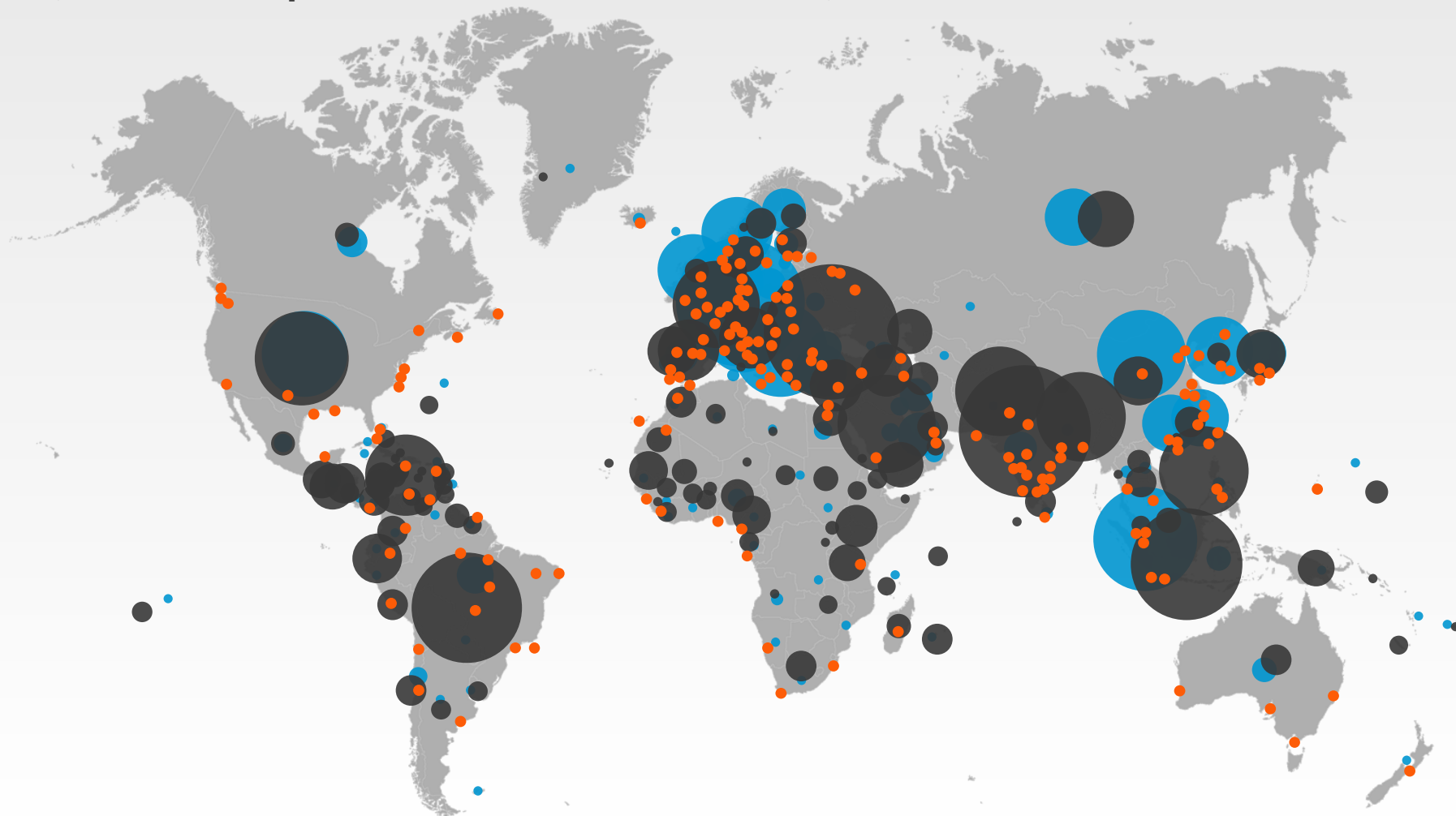
Personnel	2015	2014	Change
Services	10,592	10,692	-1%
Wärtsilä group	18,856	17,717	+6%

# Net sales growth (MEUR)



# We are where our customers need us to be

11,000 service professionals in 70 countries, 160 locations...



- Marine installed base by operating country
- Power installed base by operating country
- Service locations

# Services in a nutshell

In one year:

We serve  
**12,000**  
customers

**115,000** deliveries,  
constituting more than  
**900,000** line items, packed  
in **134,000** packages

**117,000**  
unique  
materials  
stored

**16,300,000 kg**  
of parts, with a total  
volume of **46,700 m<sup>3</sup>**



**66,700**  
export  
declarations

Around **106,000**  
transportations making use  
of roughly **150** carrier  
modalities

We maintain  
knowledge  
and skills for  
**350** different  
product types

...**One promise**  
to the customer:

We offer expertise,  
proximity, reliability and  
responsiveness for our  
customers in the most  
sustainable way

Our **3,600** field service  
professionals perform  
**100,000** field services jobs



We provide  
**20,000**  
technical  
answers

We maintain  
**450**  
installations  
under long-  
term contract

# Who are our customers?



OFFSHORE

MERCHANT

CRUISE & FERRY

SPECIAL VESSELS  
& NAVY

**ENERGY**

**HYDRO**

**OIL & GAS**

**MARINE**

- **+181 GW installed base**
- **+24 GW and approx. 600 installations covered by service agreements**
- **+14'500 installations connected to Wärtsilä Online Services**



# A broad range of expertise and services



Engine services



Propulsion services



Electrical and Automation services



Hydro & Industrial services



Seals and Bearings services



Service agreements

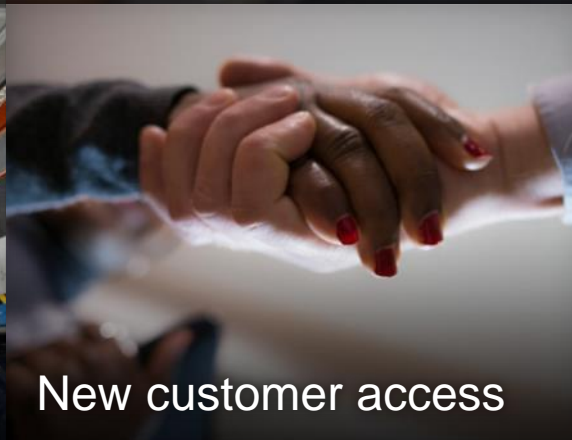


Service projects



Training services

# The only way forward is growth



## We will grow by

- Doing more business with existing customers
- Exploring opportunities within new customer segments by leveraging current competences
- Acquiring businesses in growing markets



# Megatrends that drive digitalisation



# The digital transformation

- Digitalisation is about rethinking services with the help of modern technology to make services easier, faster and more valuable.
- Digitalisation can also offer new ways to increase revenue and growth potential.
- Wärtsilä is utilising connectivity and data gathering to develop a comprehensive digitalised approach to optimising operations and enabling growth together with our customers.



**Digitalisation has already created new opportunities for companies to look for growth. It is changing how companies create value for their customers.**



# Dimensions of digitalisation

## Human behaviour

Ultimately, digitalisation is about change in human behaviour. It's a cultural change that's having a net positive effect on our lives on many levels, from our daily interactions with each other to job descriptions.

## New business models

Digitalisation is changing how companies create value for their customers, and these changes can be profound, going as deep as re-evaluating the nature of their business as completely new business models become available.

## User experience

User experience is central, as user expectations keep growing. This will lead to a demand for seamless and effortless solutions, with a focus on e.g. data visualisations and even wow effects.

## Technology

Digitalisation is driven by technological developments, but its significance is in the changes made possible by these technologies.



# Wärtsilä's focus areas for digital value creation

1.  
Customer  
engagement:

*Online  
Services*

2.  
Digital  
maintenance  
services:

*Remote  
Support*

3.  
Asset  
performance  
optimisation:

*Genius*

# Wärtsilä Online Services – transparency for the customers



**My  
installations**



**Parts Online**



**Technical  
knowledge**



**TechRequest**



**Warranty  
Online**

**Wärtsilä Online services, brings savings to your operations  
by less handovers and manual steps**

# Wärtsilä Online Services – optimising our processes



Procurement



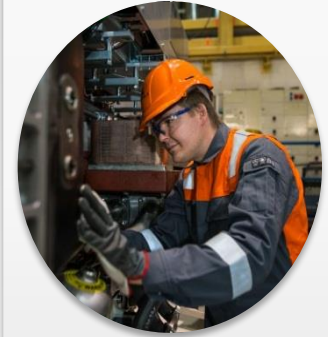
Logistics



Fleet or  
installation  
administrative  
tasks



Technical  
support



Operations and  
maintenance

**Technical knowledge:** Manuals and bulletins

**My installations:** access and manage information on your installations and equipment

**Parts Online:** Spare Part Catalogues,  
RFQ's, purchase orders

Create and view: **TechRequest**

Create and view: **Warranty Online (and Monitoring)**

Full overview

Maintenance planning, document management, cost and process optimization



# Digital maintenance services

- Interactive and real-time data helps secure and optimise the operation of power plants and vessels.
- Utilising this data can help predict maintenance and competence needs well in advance, enabling better planning.
- Transparency of real-time data from order to invoicing.



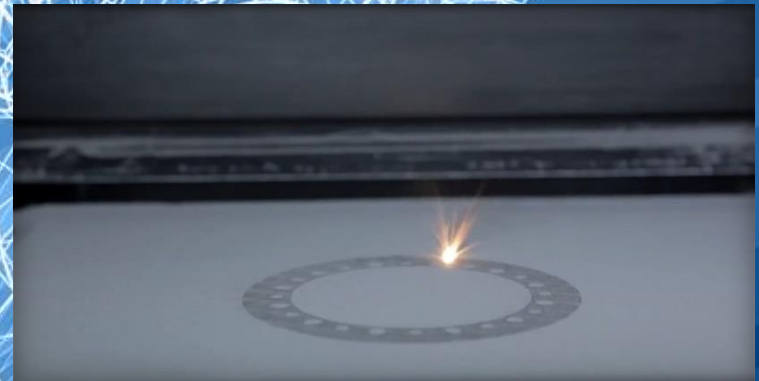
# Digitalisation happened yesterday...

- Data and sophisticated data analysis are becoming a key part of operations.
- Information based on analytics can help secure and optimise the operations of power plants and vessels, and therefore improve e.g. safety and efficiency of equipment.
- Utilising data can enable better operations and business planning.
- Already today we are able to remotely access and monitor installations even if they are in remote, difficult-to-access locations.
- Combining e.g. condition based maintenance, operation optimisation, analytics and advisory the installation's fuel consumption and maintenance intervals can be optimised.

# Virtual concepts

Solutions based on 3D design can offer new ways to benefit from real-time information and knowledge to:

- Enhance technical assistance
- Support maintenance and servicing
- Enable new types of virtual training concepts from video training to holograms and augmented reality.
- Increase the availability of selected components through 3D printing.





# Asset & lifecycle management

We will continue to develop and commercialise our portfolio of value-adding services:

- Asset performance management agreements
- Retrofits
- Upgrading of installed base
- Solutions for remote monitoring and real-time optimisation

Focus areas for agreements:

- Marine: LNG carriers, cruise
- Oil and gas: offshore drilling and production, OSV's
- Power Plants

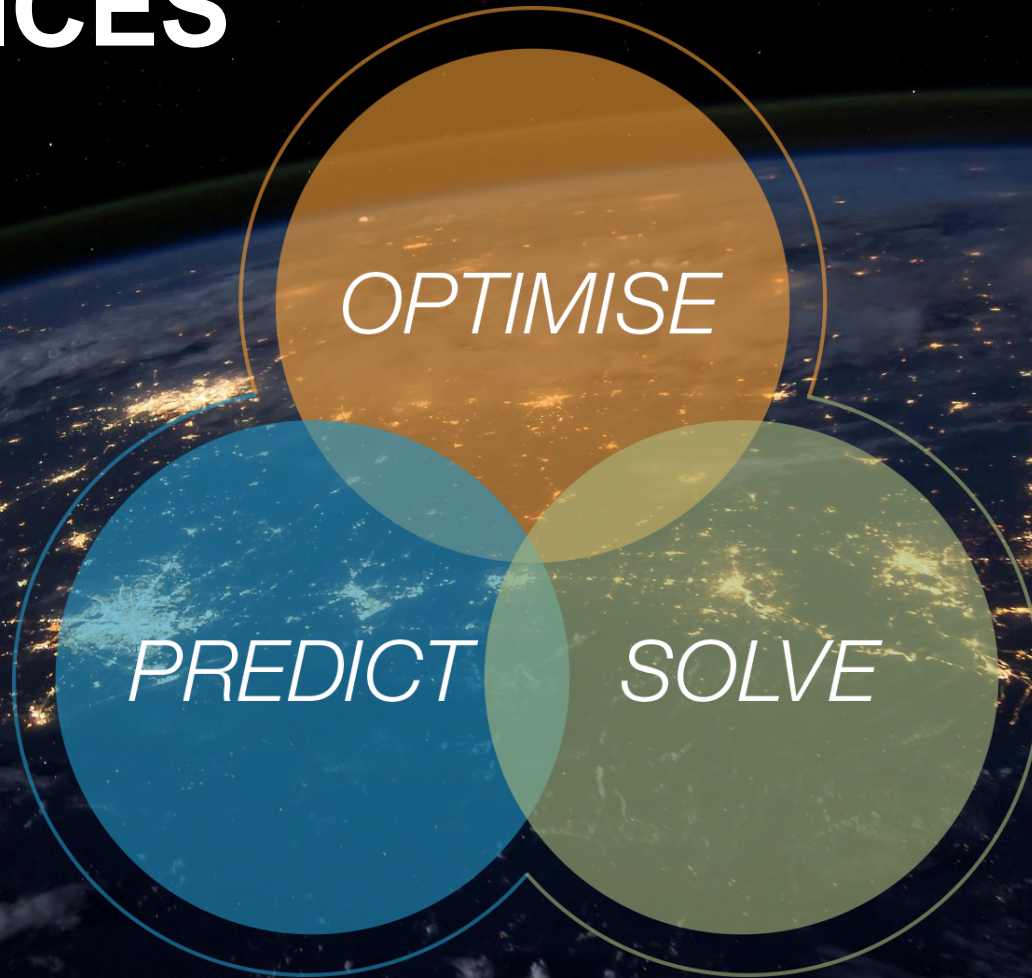






# WÄRTSILÄ GENIUS SERVICES

# WÄRTSILÄ GENIUS SERVICES





- *Asset performance optimisation develops and manages services and solutions that enhance the performance of our customers' assets and business*
- *We will be recognised as industry leader in Digitalisation and increase Wärtsilä service sales by improving our customers' satisfaction through enhancing the performance of their assets and increasing their business*



**Wärtsilä Genius services will enhance the performance of your assets as well as help your business top line growth**

# OPTIMISE BY WÄRTSILÄ GENIUS SERVICES

Increase competitiveness and effectiveness  
in your daily operations with real-time optimisation





# Would you like to Optimise?

Increase your operational efficiency



Explore others' best practises



Manage fuel and other operating costs



Optimise your asset according to your operation strategy



Use the most convenient, safe and cost-efficient sea route



# PREDICT BY WÄRTSILÄ GENIUS SERVICES

Improve your asset and business availability and predictability with lifecycle maintenance



# Would you like to Predict?

Align operational decisions on the actual condition of the equipment



Match maintenance to your operational profile



Financial predictability



Get the most profitable routes for your vessels by using the holistic market view



Increase your revenue with more efficient usage of your fleet throughout its lifetime



Ensure capacity and availability of your operations





# SOLVE BY WÄRTSILÄ GENIUS SERVICES

Ensure the safety of your operations and get instant support whenever and wherever you need it

The screenshot displays the 'Installation Performance Summary' page in the Wärtsilä Genius Services web application. The page is organized into several sections, each representing a different installation. Each section provides key performance indicators (KPIs) and health status for various components.

**GLOBAL STAR** (3 equipments monitored, Connection: OK)

- Current SFOC: 165 g/kWh
- Fleet avg. SFOC: 167 g/kWh
- Vessel type avg. SFOC: 172 g/kWh
- Current Trim: Optimal
- Monthly Achieved Savings: XXXXXX.XX€
- Hull fouling: No effect (next 6 months 2% cost increase)
- Engine Health: No issues
- Propulsion Health: WCP pending investigation
- Automation Health: No issues

Application	Nickname	Description	Running hours	Health
Main Engine	Main	3205 Wärtsilä 9L45	16439	🟢
Auxiliary Engine	Aux1	8530 Wärtsilä 6L20	12582	🟢
WCP	Prop	3245 Wärtsilä WCP	3030	🟡

**GLOBAL GALAXY** (13 equipments monitored, Connection: OK)

- Current SFOC: 175 g/kWh
- Fleet avg. SFOC: 167 g/kWh
- Vessel type avg. SFOC: 172 g/kWh
- Current Trim: F 1.65m (optimal F 1.05m)
- Monthly Achieved Savings: XXXXXX.XX€
- Hull fouling: Cleaning recommended (7% cost increase)
- Engine Health: No issues
- Propulsion Health: No issues
- Automation Health: No issues

**GLOBAL CONSTELLATION** (9 equipments monitored, Connection: OK)

- Current SFOC: 162 g/kWh
- Fleet avg. SFOC: 161 g/kWh
- Vessel type avg. SFOC: 162 g/kWh
- Current Trim: Optimal
- Monthly Achieved Savings: XXXXXX.XX€
- Hull fouling: No effect (next 6 months 2% cost increase)
- Engine Health: No issues
- Propulsion Health: No issues
- Automation Health: No issues

**GLOBAL ORBIT** (15 equipments monitored, Connection: OK)

- Current SFOC: 169 g/kWh
- Fleet avg. SFOC: 161 g/kWh
- Vessel type avg. SFOC: 162 g/kWh
- Current Trim: Optimal
- Monthly Achieved Savings: XXXXXX.XX€
- Hull fouling: No effect (next 6 months 2% cost increase)
- Engine Health: No issues
- Propulsion Health: No issues
- Automation Health: No issues



# Would you like to Solve?

Remote support to ensure safe operation



Get prompt advise from the best experts globally to your operational matter



Shortest possible time to solve any technical issue



# WÄRTSILÄ GENIUS SERVICES

ESSENTIAL SYSTEMS

ENTIRE VESSEL / PLANT

OPTIMISE  
**WHOLE  
VALUE CHAIN**

3<sup>RD</sup> PARTY EQUIPMENT

SINGLE EQUIPMENT



# Co-creation in the digital age

- Digitalisation rewrites the rules of competition
  - Lower entry barriers
- Networking between companies is a must to succeed
  - Open interfaces
  - Co-creation across the value chain







- Digitalised service offering in marine business
- Targeted for start-ups and growth companies
- Objective for Wärtsilä to:
  - Explore the disruptive initiatives
  - Learn from lean start-up mindset
- Launched in Slush 2015

[www.wartsila.com/marinemastermind](http://www.wartsila.com/marinemastermind)



**47 APPLICATIONS**

**17 COUNTRIES**

**5 FINALISTS**



**Finalists: <http://www.wartsila.com/marinemastermind>**

# Digitalisation through the eyes of Wärtsilä Services

- Digitalisation is about **rethinking the services** with the help of modern information technology to make operations easier, faster and more valuable.
- The value of digital services comes from **sophisticated data** collection, analytics and information.
- Digitalisation creates **new opportunities for growth**. It is changing how to create value and enabling new business models.
- Wärtsilä has the ambition to work together with its customers towards a comprehensive digitalised approach to optimising operations and enabling growth. We take a **complete lifecycle perspective** for the marine, oil and gas and energy industries.



# Our digital story in a nutshell

- Long **history** in digitalisation
- Digitalisation is a **cornerstone** of our growth **strategy**
  - Expect clear gains going into the future
  - Further ramp-up – hundreds of people involved
- More product launches and incremental improvements to **Wärtsilä Genius** and **Wärtsilä Online Services**
- Additional **new services and products** to be launched to the market and internal efficiency gains to be harvested
- From idea to product in **3 months mind-set** within digital solutions

Thank You



WÄRTSILÄ

[www.wartsila.com](http://www.wartsila.com)