



SERVICES: A GLANCE INTO THE FUTURE

GROWTH AND DIGITALISATION

15 CAPITAL
MARKETS
DAY HELSINKI
FINLAND

Pierpaolo Barbone, President Services
& Executive Vice President

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 m³**



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

Marine & Power Plants

Demand drivers:

- Focus on efficiency of operations
- Strong demand for power generation in developing countries

Growth through:

- Capturing further opportunities within our installed engine base
- Exploring opportunities in the installed base of multiple brands and equipment



Oil & Gas

Demand drivers

- Solid demand for energy
- Pressure to keep production up

Growth through:

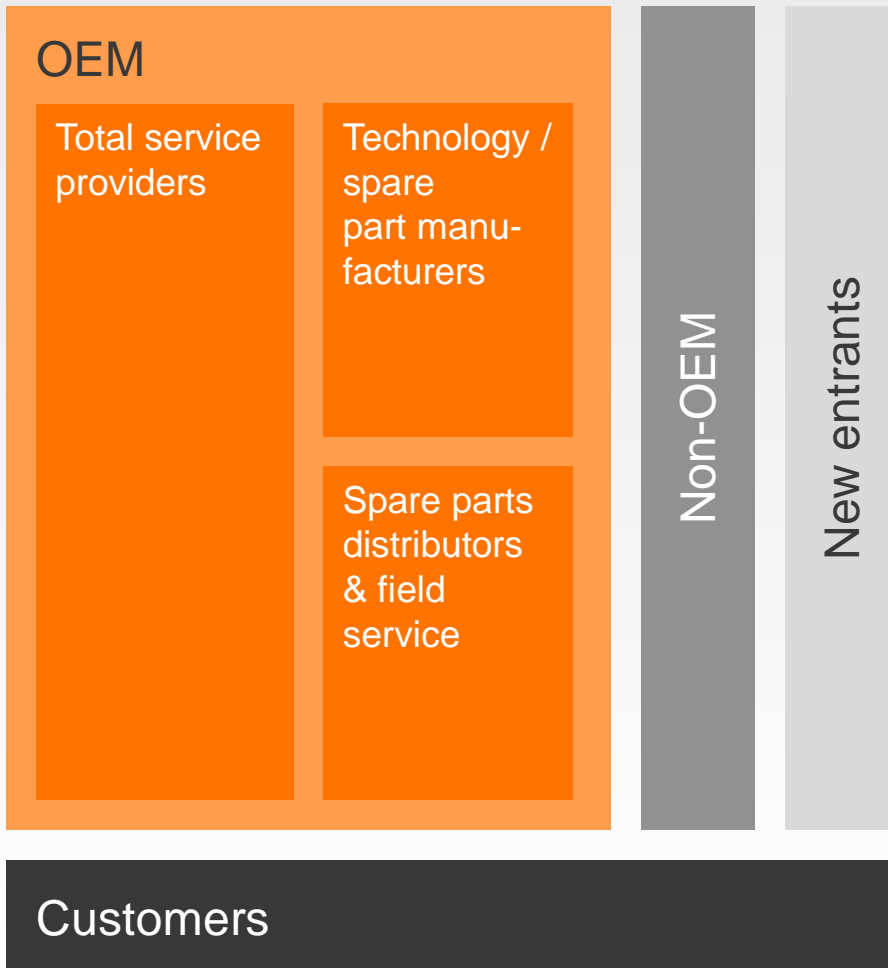
- Building on our installed base in power generation, pumping, and offshore propulsion
- Leveraging existing capabilities



Increasingly shaped by:

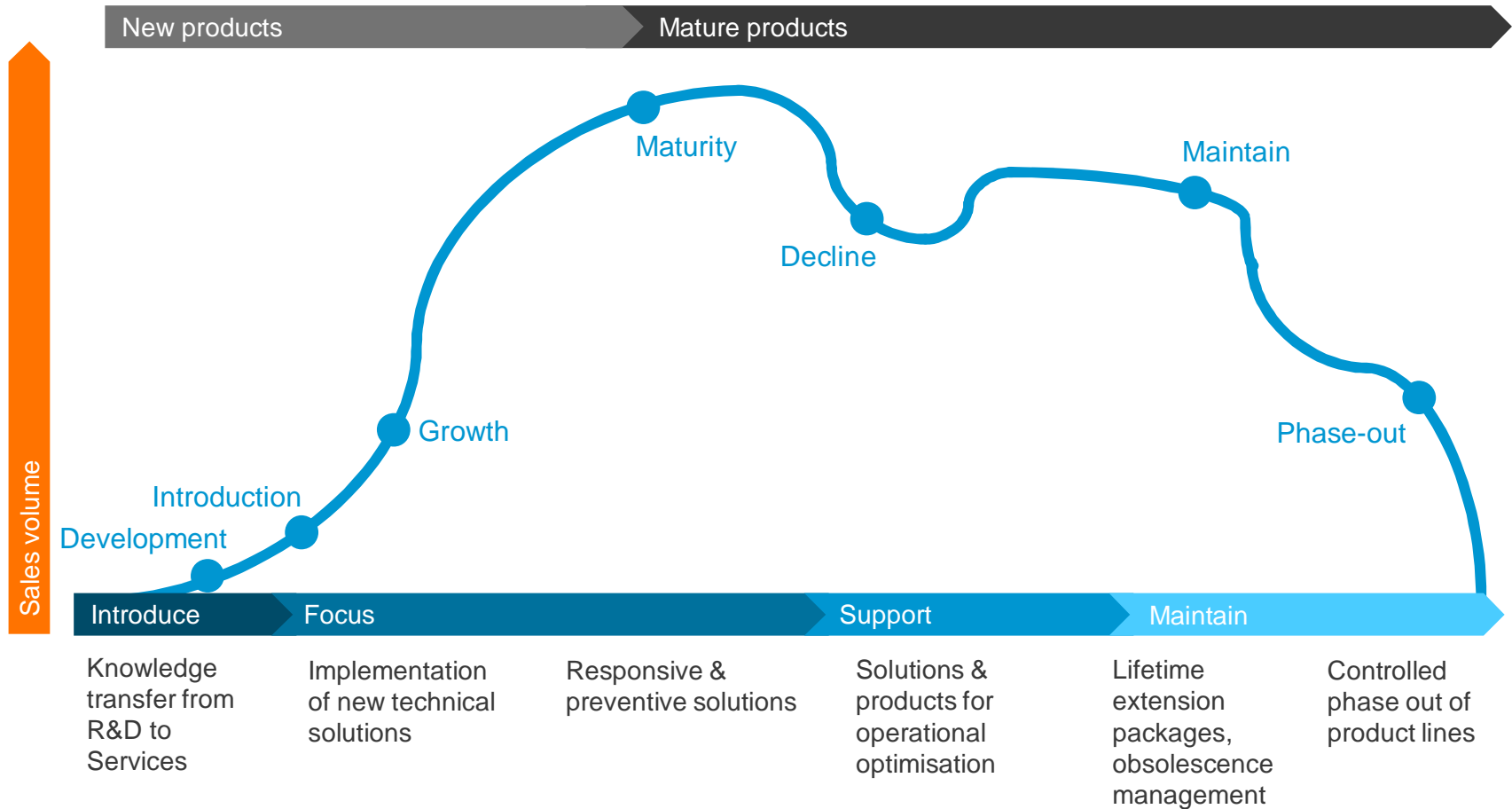
- Complexity, uncertainty and volatility in global economy and politics
- Trade sanctions and trade barriers
- Digital disruption
- Growing importance of gas as a fuel
- New and stricter regulations regarding emissions, safety, and asset efficiency

Changing competitive landscape requires adapting the way we operate



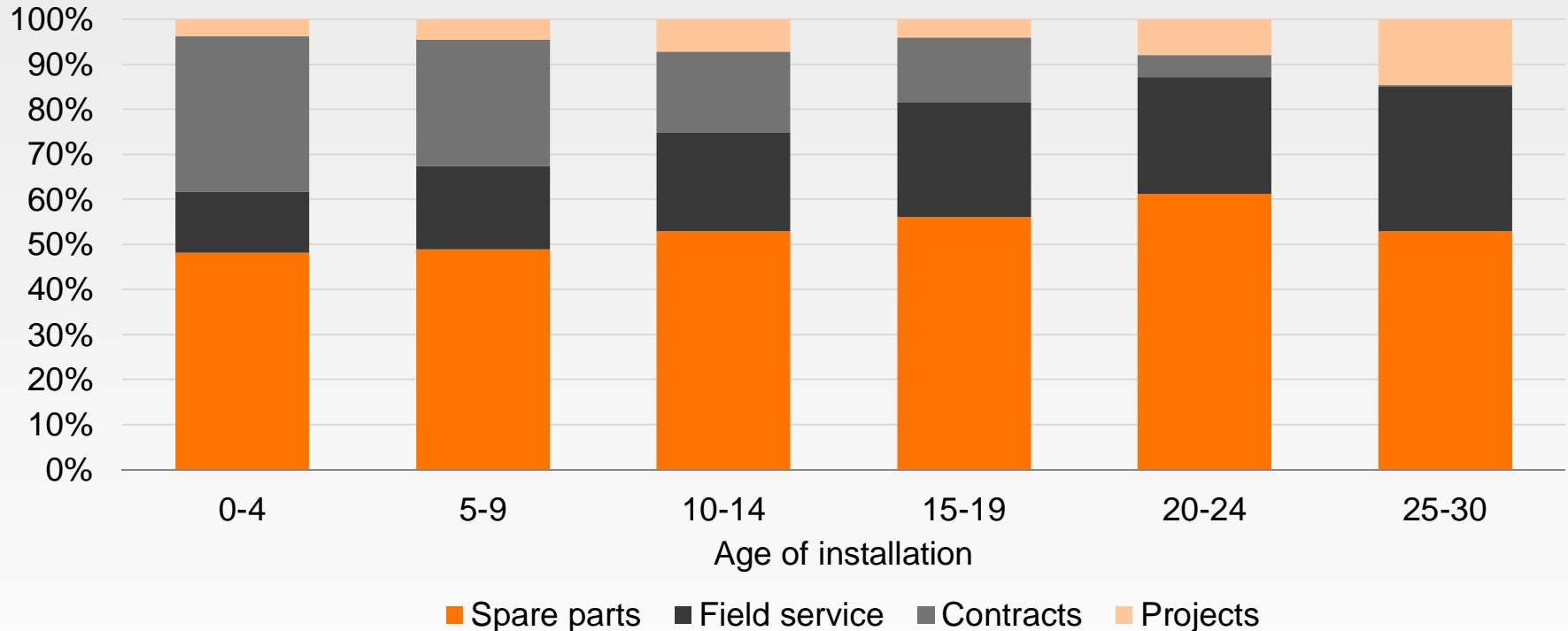
- Increasing our market share through **superior customer service**, improved quality and products that offer **clear customer benefits**
- Changes in customer behaviour and more advanced technology drive **demand for premium services**
- **Digitalisation** is **crucial** for staying competitive and enabling growth
- Extending current products and competences into new markets and making acquisitions require **adapting operating models**

Managing the lifecycle of our installations



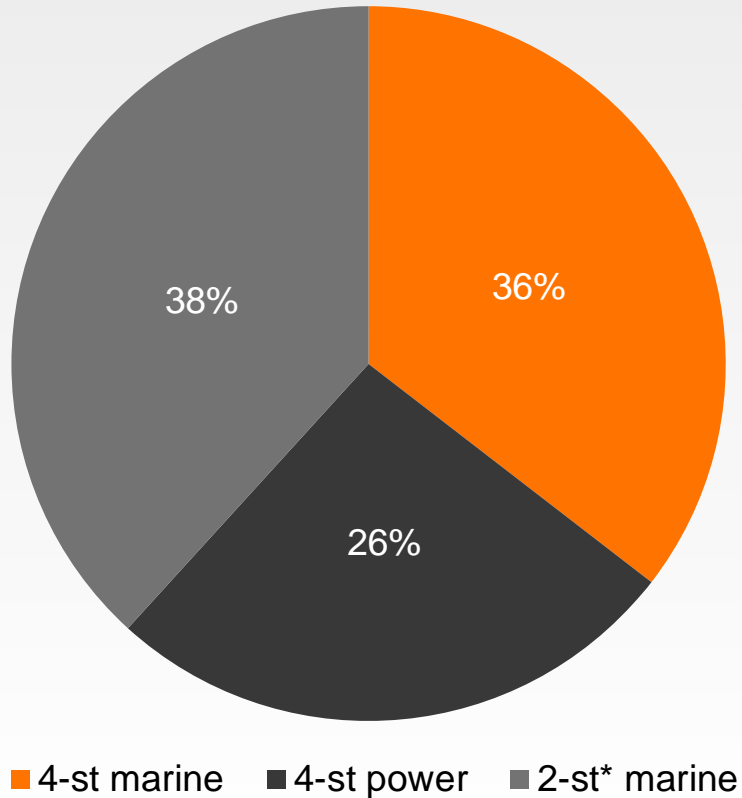
Managing the lifecycle: A closer look at our business

4-stroke sales distribution by age of installation

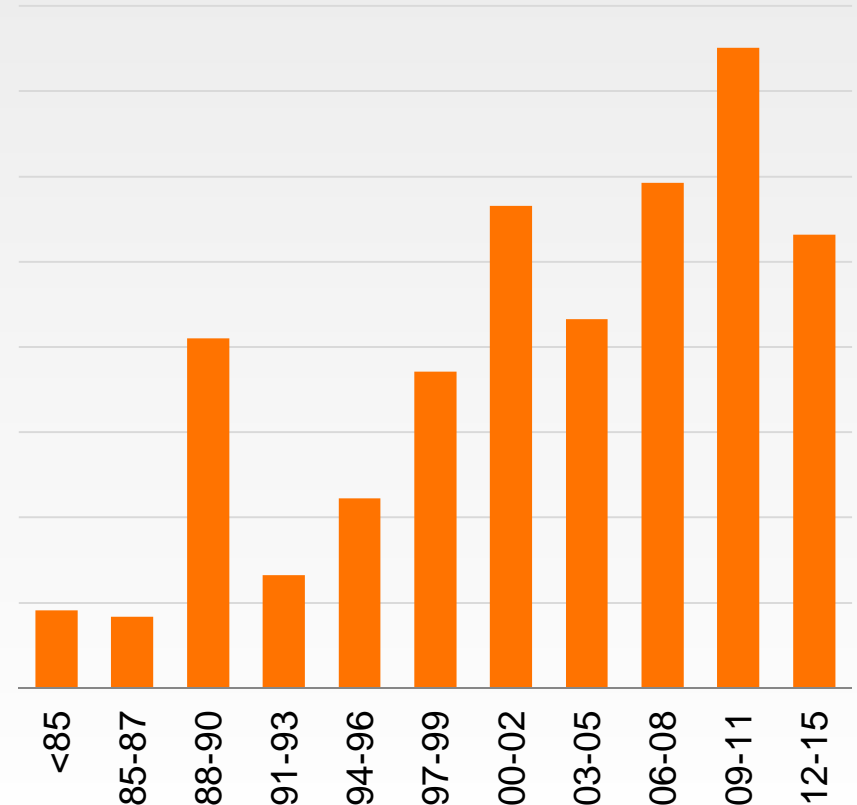


We manage long relationships with our customers

Wärtsilä's engine installed base

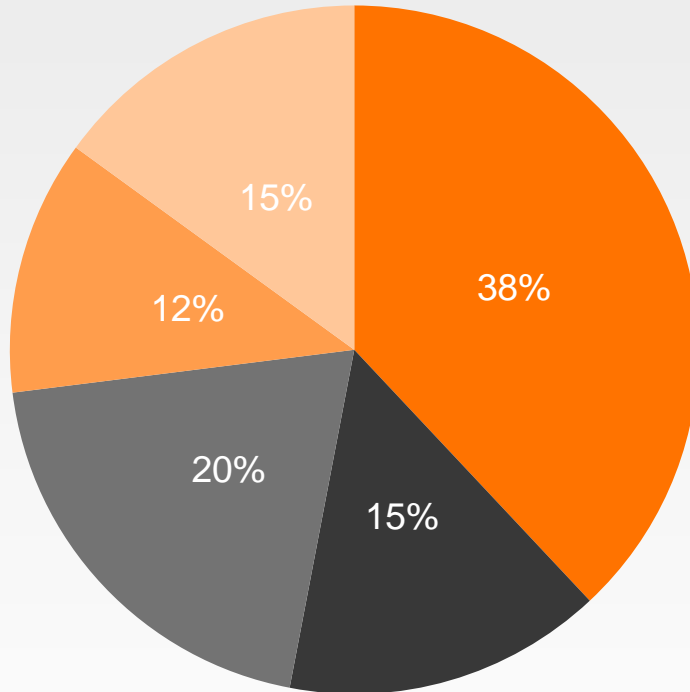


Engine installed base: MW distribution by commissioning year

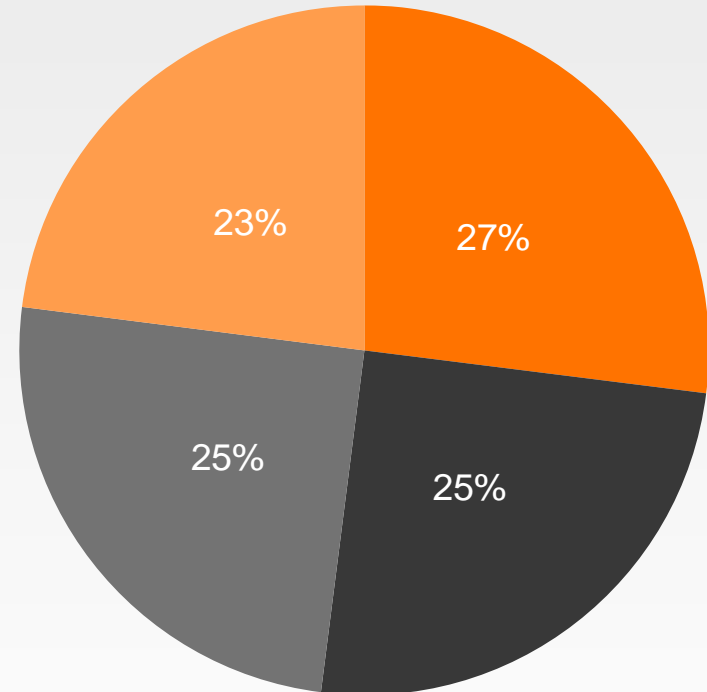


* 2-stroke now Winterthur Gas and Diesel Ltd. (WinGD), a joint venture between Wärtsilä and CSSC

Net sales split 2014



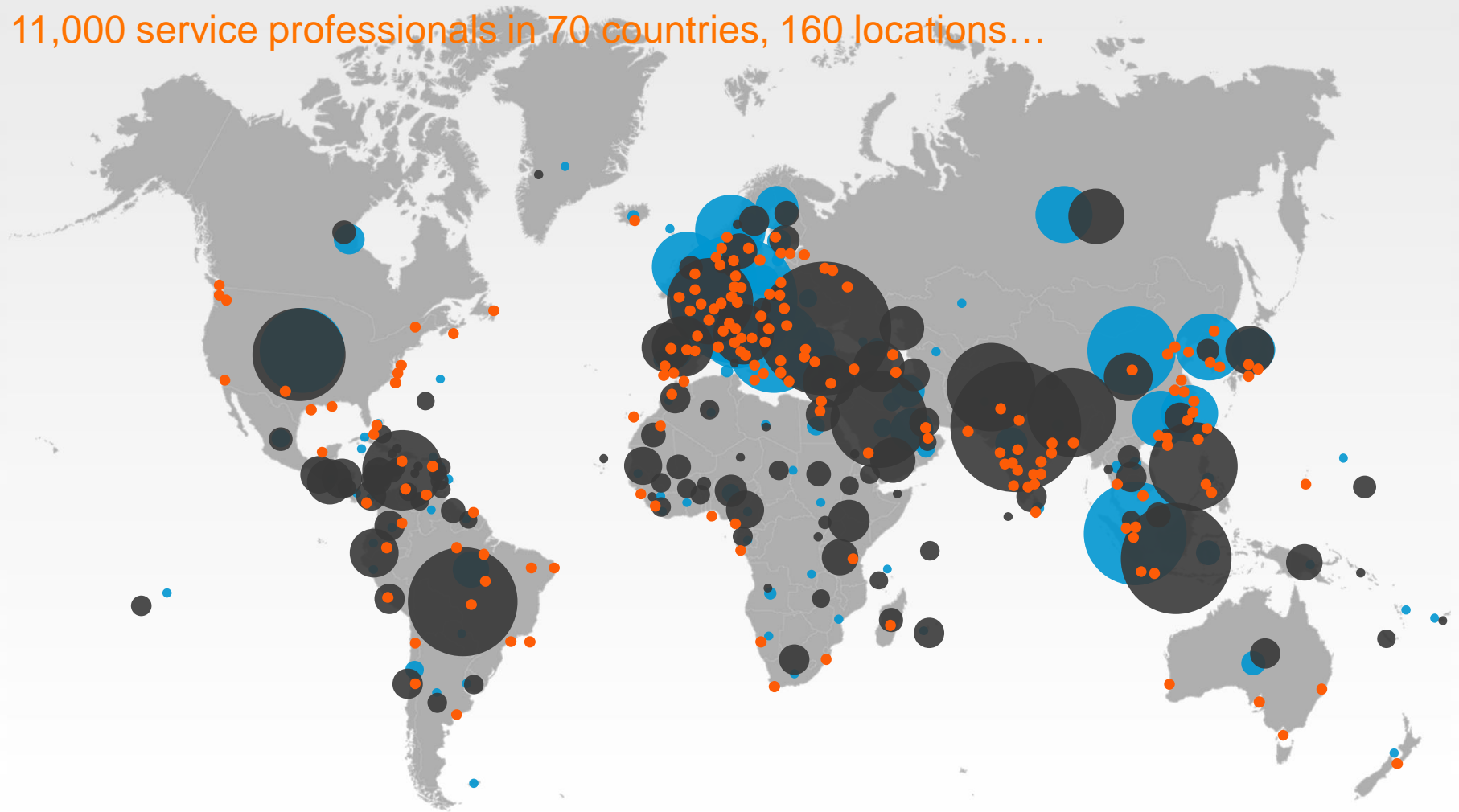
- Power ■ Offshore ■ Merchant ■ Cruise & Ferry
- Special Vessels & Navy



- Middle-East and Asia ■ Americas
- Northern Europe ■ Southern Europe and Africa

We are where our customers need us to be

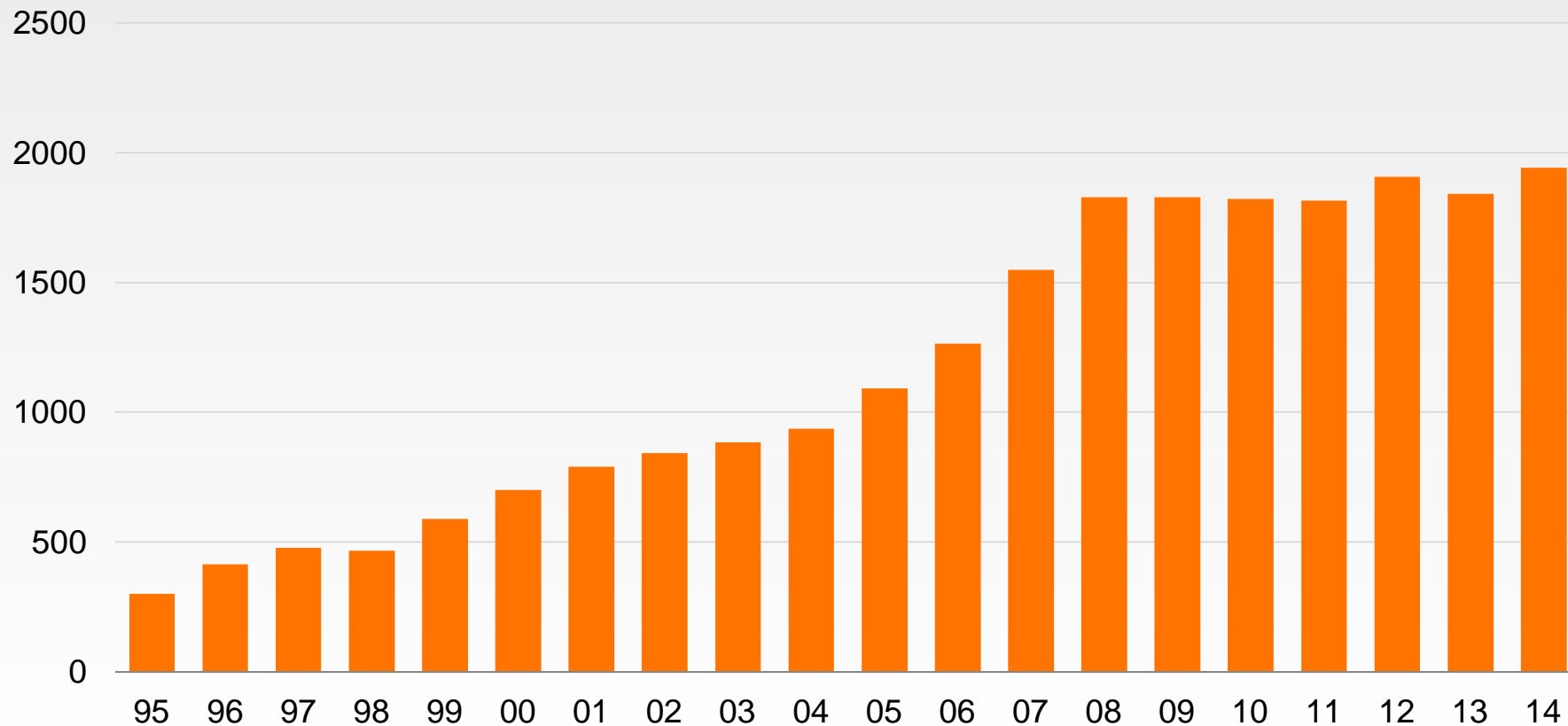
11,000 service professionals in 70 countries, 160 locations...



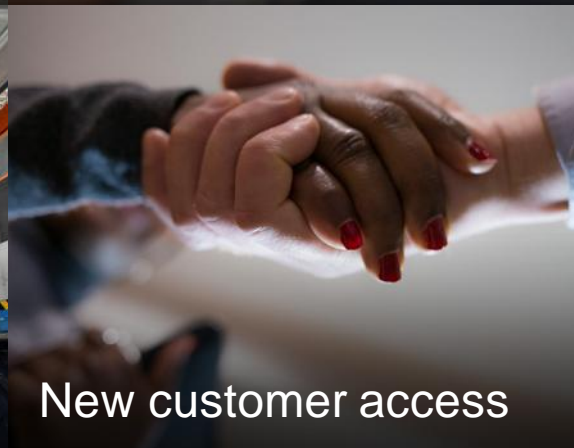
- Marine installed base by operating country
- Power installed base by operating country
- Service locations

Net sales development

MEUR



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

Customer first

We will nourish our partnerships with the existing customer base by focusing on improved:

- Time to quote
- Delivery accuracy
- Quality of field service

Access to new customers

We will seek to grow our customer base organically and through acquisitions by leveraging our existing competences.

- Exploring opportunities in the installed base of multiple brands and equipment



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

- Asset performance management agreements
- Retrofits
- Upgrading of installed base

Focus areas for agreements:

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



Asset Management

Full responsibility for operations & maintenance

- Lifecycle cost guarantee
- Risk management
- Performance guarantee
- Extending lifetime of asset

Monthly fixed and variable fee

Maintenance Agreements

- Responsibility for maintenance
- Financial predictability
- Ensured performance
- World class technical expertise
- Global and local coordination

Monthly/quarterly fixed or variable fee, parts and work included

Technical Management

- Maintenance planning
- Maintenance cost prediction
- Condition evaluation
- Condition monitoring
- Periodical inspections

Fixed monthly/quarterly management fee, parts and work on purchase order basis

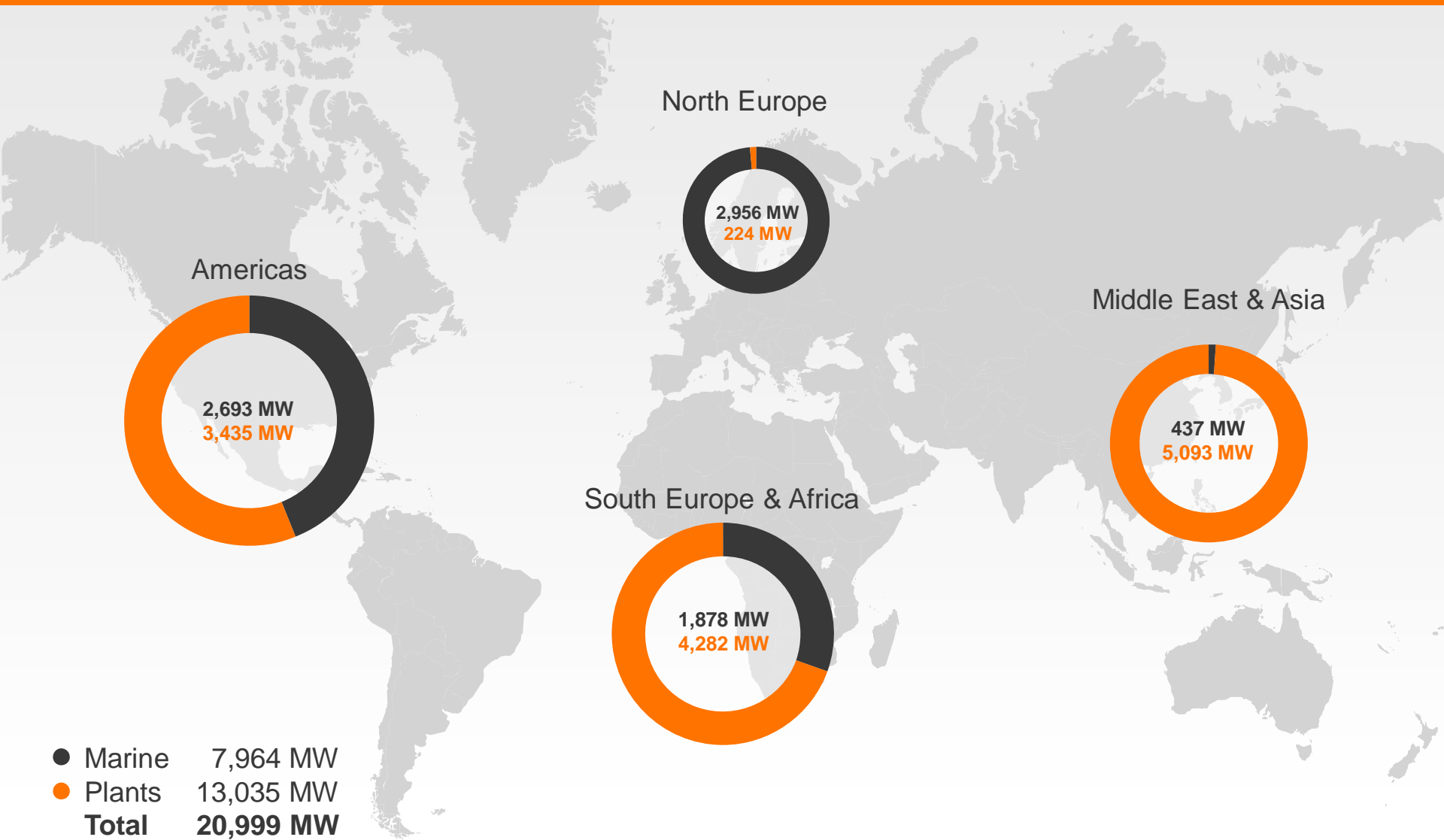
Supply Agreements

Consisting of one or more of the following

- Manpower
- Spare parts
- Workshop services
- Online services
- Competence development and training

Purchase order basis

Installed base under agreements



Digitalisation

- The effects of digitalisation are expected to be so big that it is often referred to as the third industrial revolution.
- Wärtsilä is part of this transformation, and invests in developing new solutions and services that create value for our customers and enable us to grow together with them.



Digitalisation will create new growth and opportunities for industries.

Megatrends that drive digitalisation



Technology

Digitalisation is driven by technological developments and the changes they enable.

New business models

Digitalisation is changing customer value creation, as new business models become available.

User experience

Growing user expectations create demand for seamless and effortless solutions, with a focus on e.g. data visualisation.

Human behaviour

Ultimately, digitalisation is a cultural change with a net positive effect on our lives on many levels.

- Through partnerships with common business goals, digitalisation can help our customers' business top line growth.
- New opportunities emerge at all stages from design to operations support, creating new business models and making old ones more efficient.
- Digitalisation enhances customer engagement, enabling a seamless and rewarding customer experience.
- Digitalised services can improve performance throughout the installation lifecycle.



Improving customers' business top line with a co-growth approach

Customer value creation is a partnership in which digital technology and analytical skills of human experts are combined to achieve a common goal.

1.
Customer
engagement

2.
Intelligent
engines and
components

3.
Digital
maintenance
services

4.
Virtual
concepts

5.
Asset
performance
optimisation

- Digitalisation enables new forms of customer engagement.
- Increasingly sophisticated digital services offer value and empowerment.
- User experience is expected to be seamless and intuitive.



Today

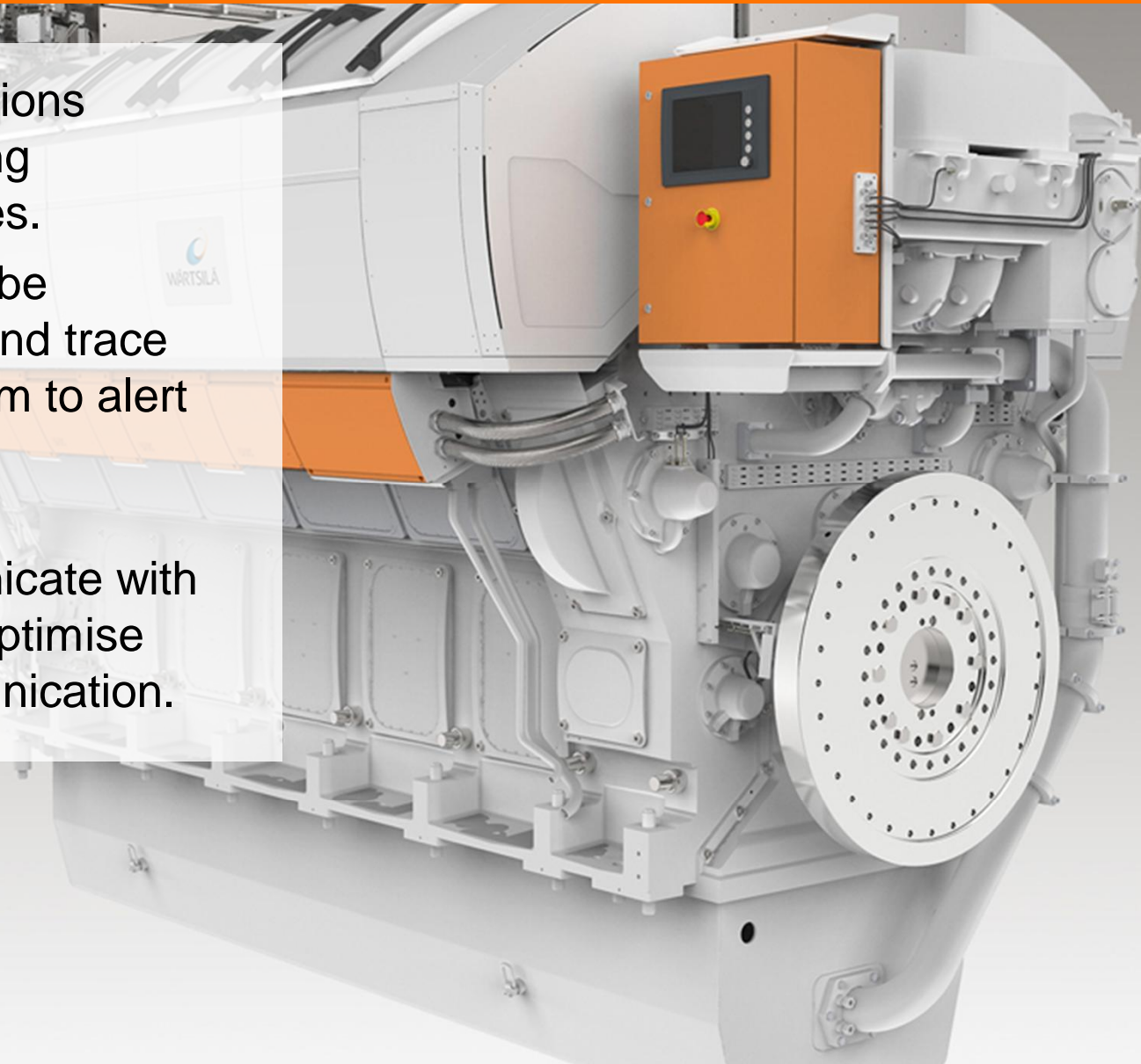
- Wärtsilä Online Services with all customer asset information visible to the customer through the internet platform.
- Spare part online ordering included with order tracking information and latest condition based maintenance reports.
- Customers are able to connect to asset level data and perform basic trending functionalities.

Future (2016-2018)

- Condition based maintenance results create online dynamic maintenance schedules for customers.
- Remote centres available for running diagnoses, making adjustments and operating the assets remotely.
- Customer online spare part ordering is one of the biggest sales channels and includes proactive offering.



- Breakthrough innovations emerge from exploiting intelligent technologies.
- Key components will be equipped with track and trace features enabling them to alert when issues arise.
- In intelligent engines, components communicate with each other and self-optimize based on this communication.



Today

- R&D projects ongoing to test "black box" data collection from engines.
- Testing of part identification tags.

Future (2016-2018)

- New ecosystem with suppliers in place. Smart or intelligent components embedded, enabling remote identification of condition.
- Improved machine-to-machine communication.
- Interaction between machine data and external conditions will optimise the business.



- 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.



Today

- Reports available through Wärtsilä Online Services.
- Global planning board available for Wärtsilä's use through global skills management system.

Future (2015-2017)

- Digital and mobile concepts and tools, like virtual engineering, make interaction with customers transparent and collaborative throughout the maintenance process.
- Accurate, more user-friendly guidance at customers' locations.
- Real-time services from online diagnostics to remote operation from remote centers.



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.



Today

- Augmented reality and holograms in test use.
- Deployment of remote training concepts.
- 3D design exists for all of the new portfolio equipment.

Future (2016-2017)

- Holograms and augmented reality are used for training and supporting customers remotely.
- Live direct or indirect view of physical real-world environment augmented with sound, video, graphics or other data.
- External developers will be utilised to create virtual mobile apps to support customer business and operations.
- 3D printing will optimise the local availability of selected components.

- Focus shifting from maintenance and servicing to more comprehensive optimisation of customer business.
- Wärtsilä's asset performance optimisation concepts are designed to optimise e.g. an installation's energy efficiency, or even the management of an entire fleet.
- This will be done by integrating advanced dynamic voyage planning, ship efficiency advisory services and energy analysis, as well as extensive condition monitoring of the main equipment into one consolidated solution.



The technical enabler behind Wärtsilä's performance optimisation concepts is a single ecosystem.

Today

- Condition monitoring and manual dynamic maintenance planning available for engines and propulsion.
- Predictive services for selected equipment.
- Data acquisition platform available for measuring ship or power plant performance.

Future (2015-2016)

- Fleet management information available in Wärtsilä's online services portal.
- Asset performance optimisation services can help define the optimal performance of the ship or power plant, as well as help customers optimise business performance.
- All equipment or installation-based condition and performance data in the same data cloud.



- Changing competitive landscape and customer expectations creates a need to adapt our operating models
- We will seek business growth within our installed base and explore opportunities in new markets where we can leverage our existing competences
- Our focus is on strengthening our leadership in lifecycle services
- We will continue investing in the development of new digital solutions and services that create value for our customers and enable us to grow together with them



Thank You

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