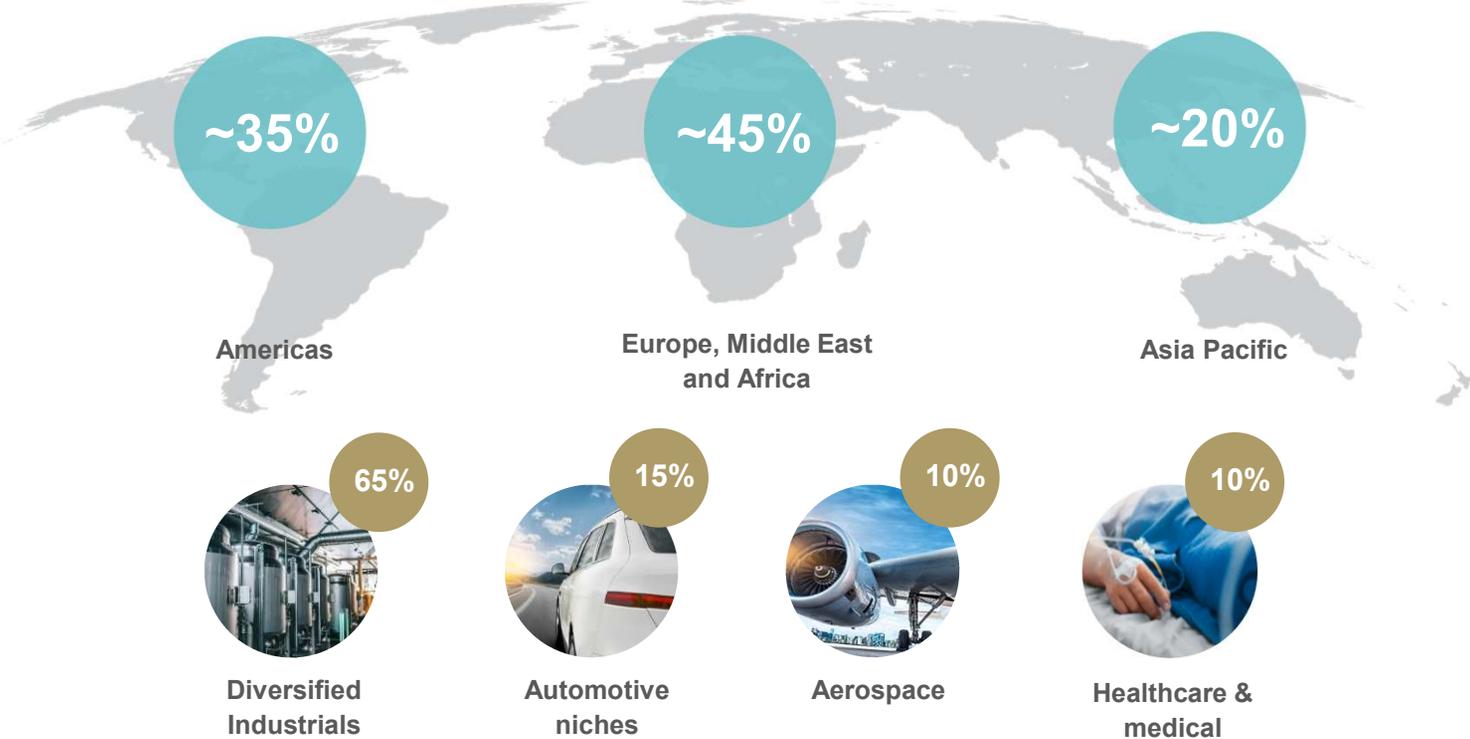


Welcome to the
World of Trelleborg
Marine Anti-Vibration Solutions
February 2025

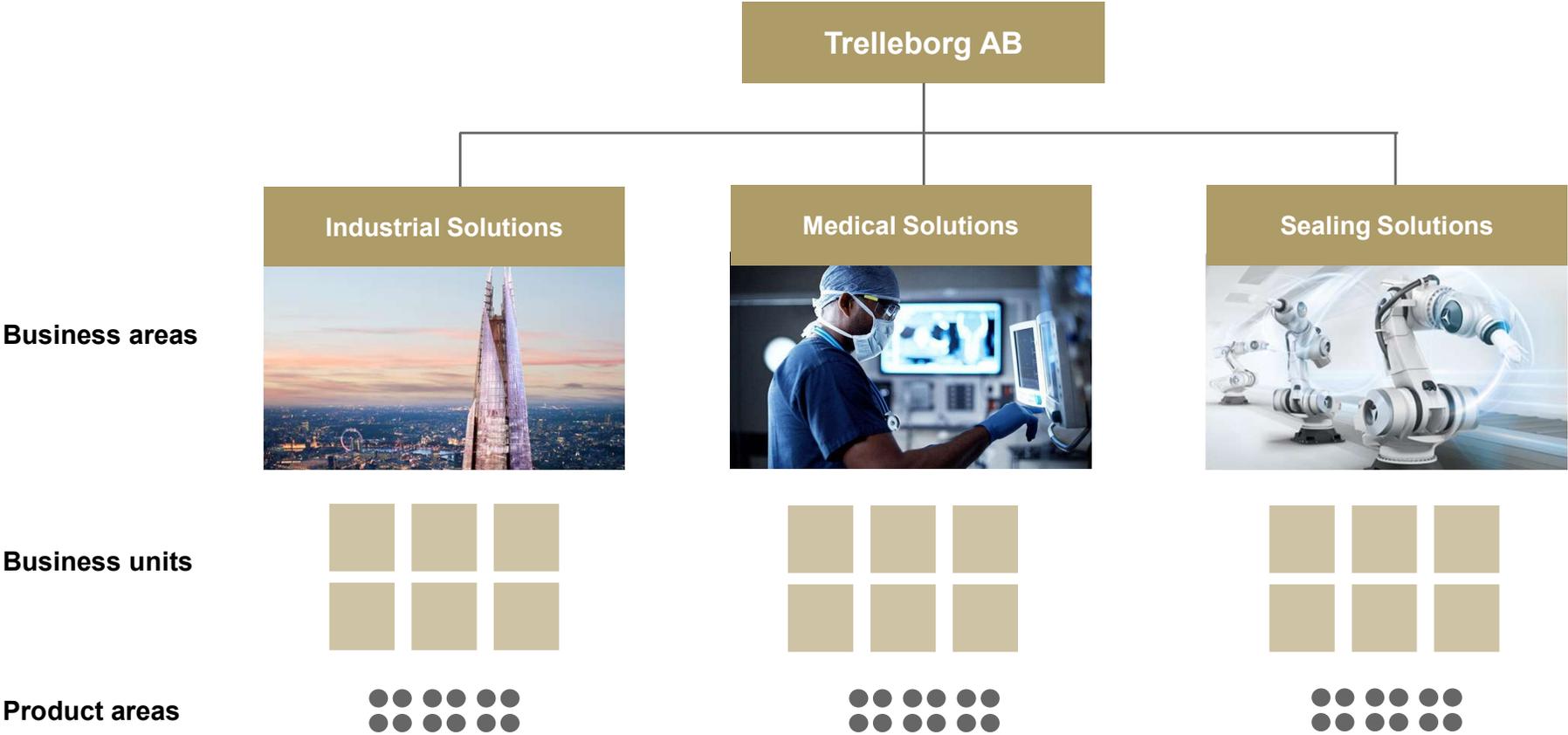
Trelleborg AB - Facts & figures

Sales by geography and industry

<p>~ € 3Bn</p> <p>SALES</p>	<p>~ 100</p> <p>MANUFACTURING SITES</p>
<p>1964</p> <p>LISTED COMPANY SINCE</p>	<p>~ 30</p> <p>R&D CENTRES</p>
<p>~ 40</p> <p>COUNTRIES</p>	



Business structure



Business structure



Welcome to Trelleborg Antivibration Solutions

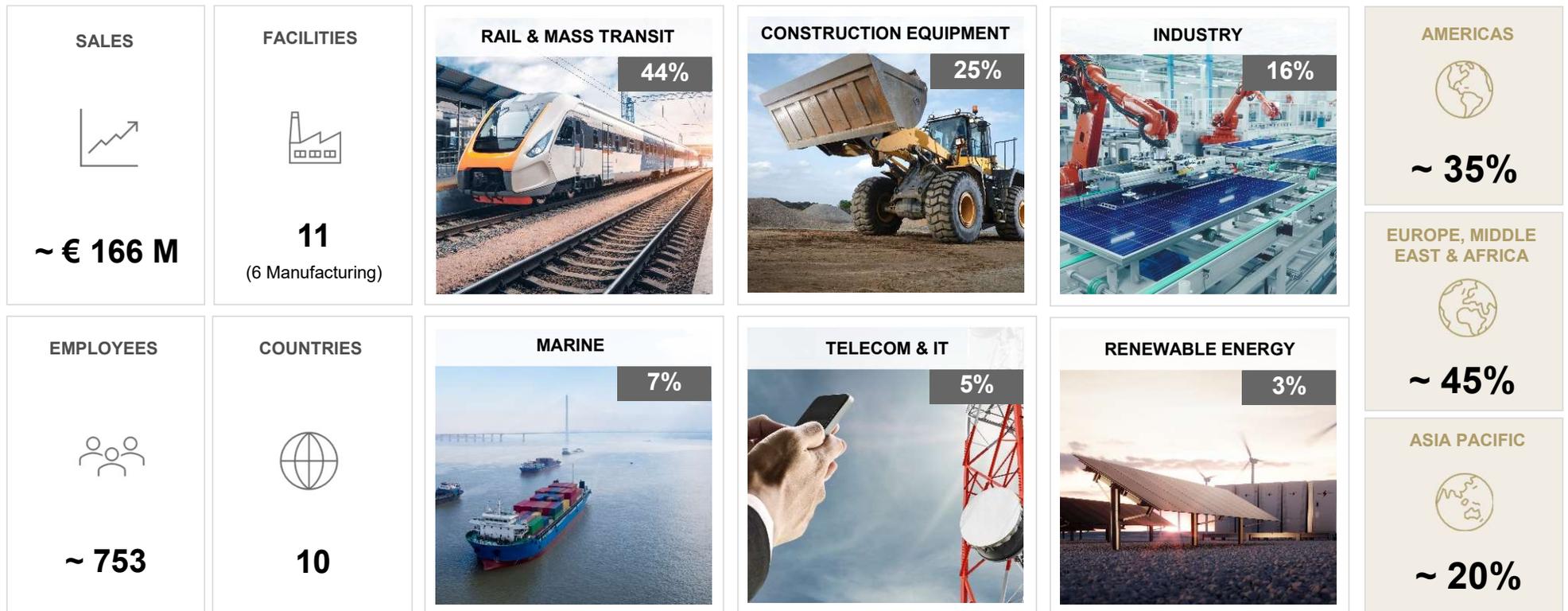
THE FRONTLINE OF INNOVATION



AVS Business overview*

DISTRIBUTION OF SALES & GLOBAL FOOTPRINT

* R12 March 2024



Global service and support network

Wherever we do business, we combine our local knowledge with our global strength and capabilities. Our strong, global supply chain and dedicated service can adapt to and support your logistics, making us a supplier you can rely on.

United States – South Haven
Sales
Customer Support
Design & Engineering

United Kingdom - Leicester
Manufacturing
Sales
Customer Support
Design & Engineering

Germany - Velten & Laudenbach
Manufacturing
Sales
Customer Support
Design & Engineering

Mexico, Silao
Manufacturing
Sales
Design & Engineering

Netherlands - Rotterdam
Sales
Design & Engineering

Finland - Kikka
Manufacturing
Sales
Design & Engineering

Switzerland - Adliswil
Sales
Customer Support
Design & Engineering

China - Wuxi
Manufacturing
Sales
Customer Support
Design & Engineering

India - Bengaluru
Manufacturing
Sales
Customer Support
Design & Engineering

Australia – Sydney
Sales
Customer Support

Sustainability



OUR NEW CLIMATE TARGET AND VISION



Maritime anti-vibration solutions

Noise and vibration in machinery at sea cause damage to equipment and bring discomfort to people. Trelleborg Antivibration Solutions specializes in minimizing these effects, which reduces downtime, maintenance, and long-term cost of ownership.



DEFENSE



DREDGING



MACHINERY



OFFSHORE



SHIPBUILDING

Maritime

POLYMER SOLUTIONS FOR DEMANDING ENVIRONMENTS

Harsh and variable conditions in the marine environment demand high-quality, low-maintenance products and stringent testing. Our solutions encompass these factors and more, enabling you to keep costs low over the whole product and project lifecycle.

FEATURES & BENEFITS:

- Increase reliability
- Optimize comfort, health and safety
- Reduced down time and maintenance
- Help to achieve environment objectives
- Meet business goals
- Protect valuable loads

SOLUTIONS:

- Shock mounts
- Exhaust systems
- Noise & vibration isolation



APPLICATIONS:

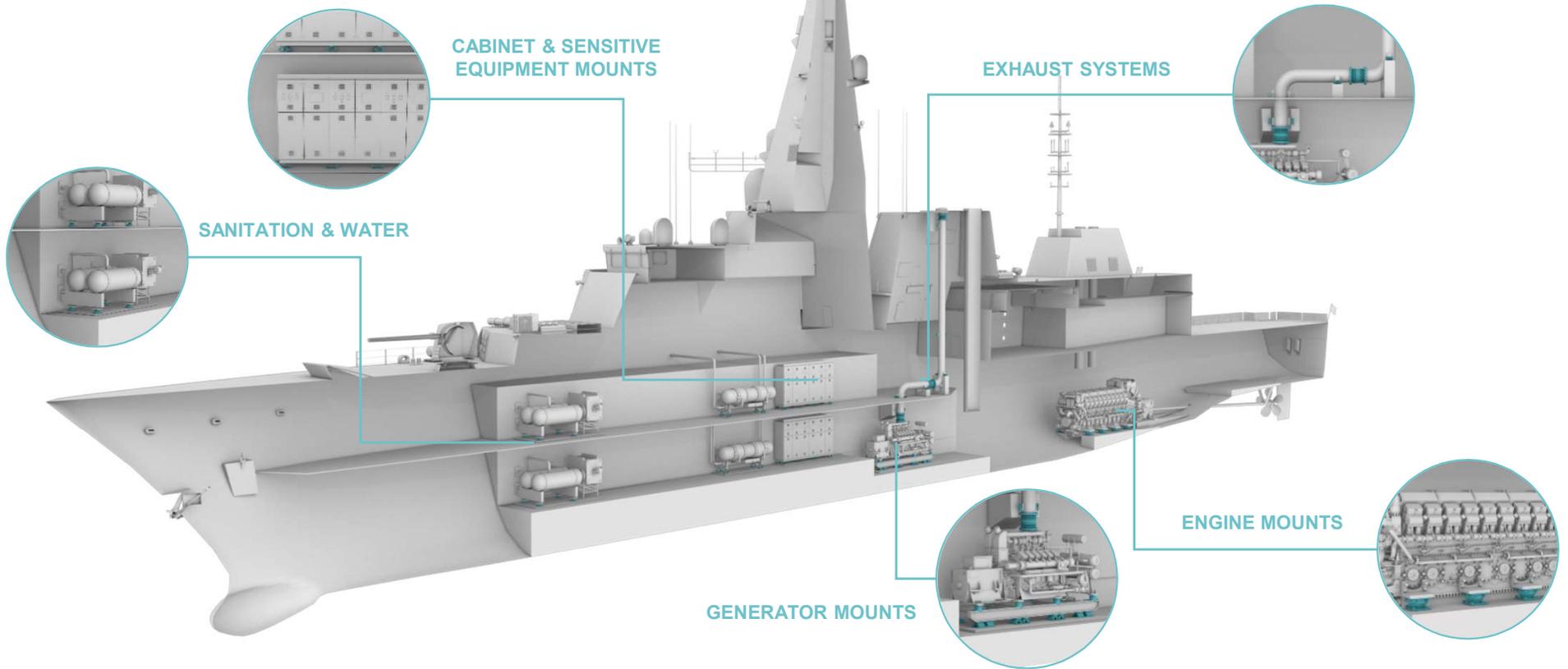
- Ship building & defence
- Inland shipping & cargo
- Dredging & off-shore
- Passenger Vessels



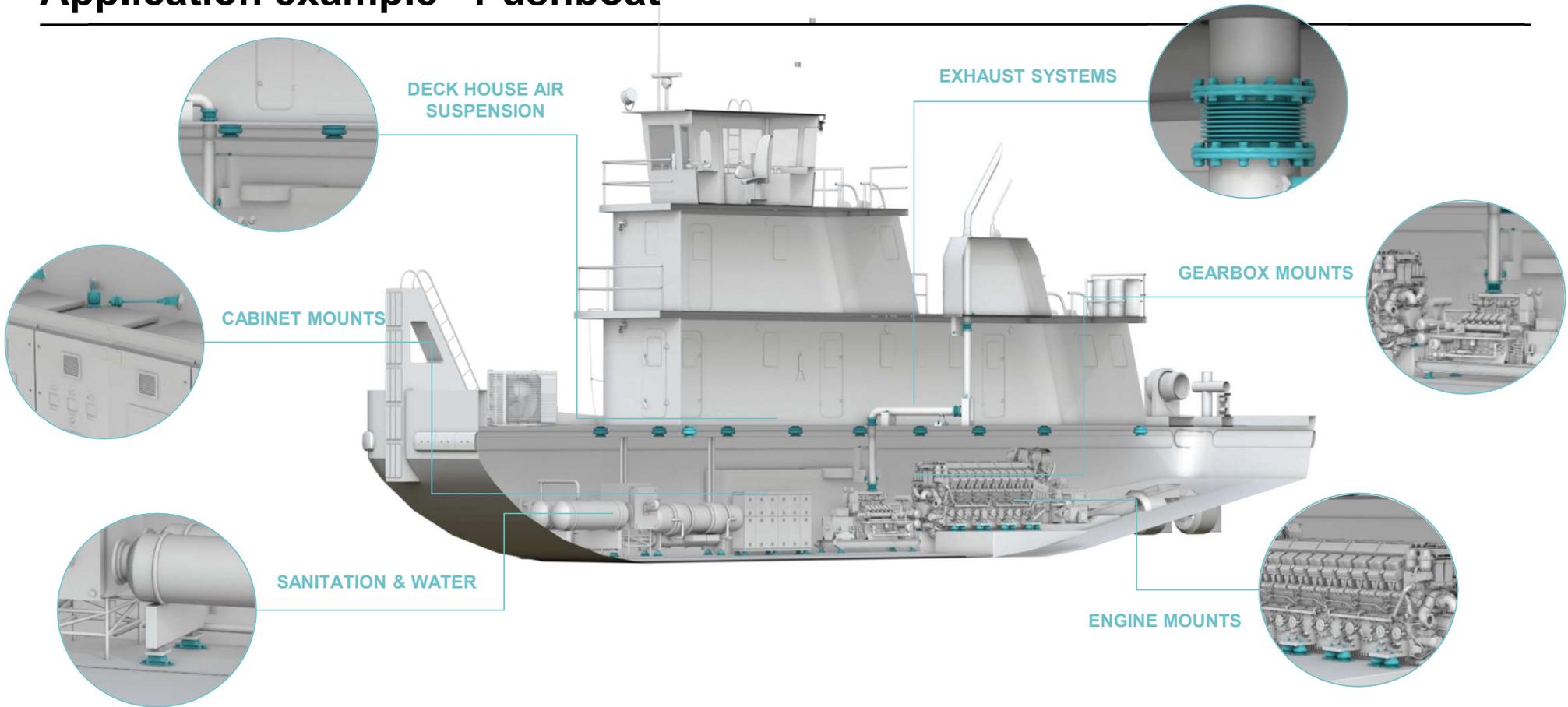
Application examples



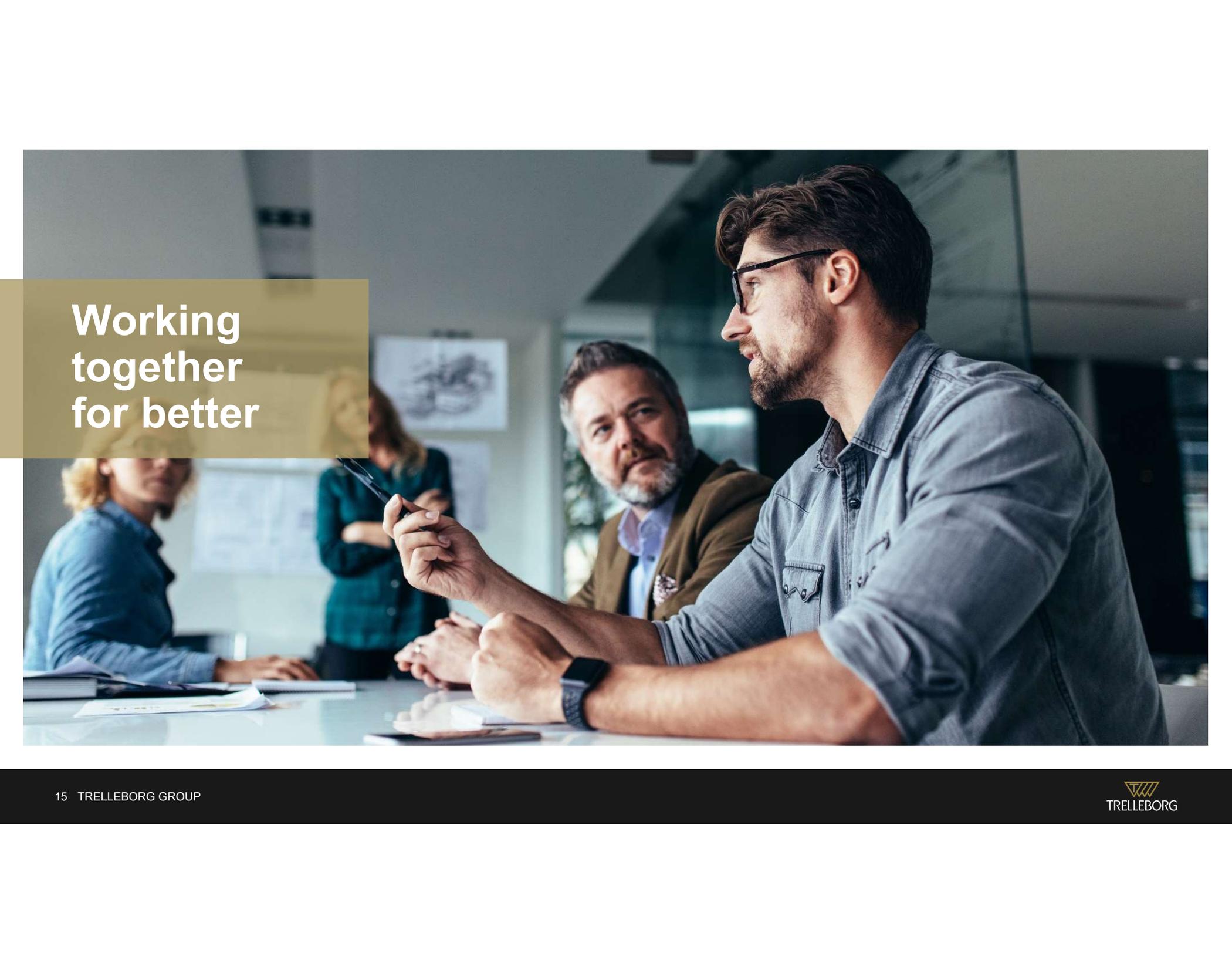
Application example - Frigate



Application example - Pushboat



Mount	Application	Product name
1	Engines, Turbines and Diesel Generator Sets (propulsion systems)	Evolo 600 series, Cushyfloat, Cushyfoot, RA/RAEM, D-mount, Super-D, XK-mount, Silicone bellows
2	Winch and Lifting Arrangements	Evolo 600 series, XK-mount, Cushyfoot
3	Exhaust Line Systems	Lexsys Elastic exhaust system
4	Deckhouse/Accommodation	Towair/Dredgair Airspring system, Evolo 631/633 series
5	HVAC Systems	Evolo 600 series, Cushyfloat, RA-RAEM, Silicone bellows, Rubber expansion joints
6	Sewage systems	Evolo 600 series, Cushyfloat, RA-RAEM, Silicone bellows, Rubber expansion joints
7	Seperators	Evolo 600 series, Cushyfloat, RA-RAEM, Silicone bellows, Rubber expansion joints
8	Converters, Electronic Cabinets	Evolo 600 series, Cushyfloat, RA/RAEM, Stabilizers
9	Chilled Water Plant	Evolo 600 series, Cushyfloat, RA-RAEM, Silicone bellows, Rubber expansion joints



Working
together
for better

Solutions for maritime engine manufacturer

POLYMER SOLUTIONS FOR DEMANDING ENVIRONMENTS

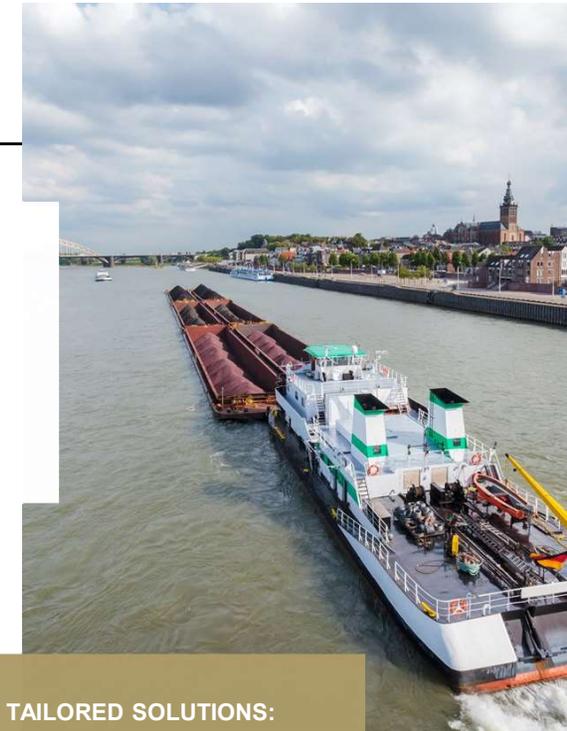
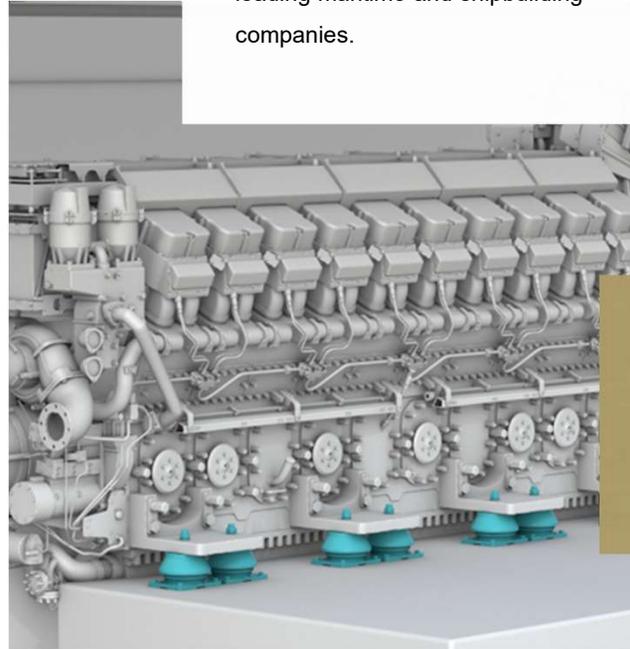
Specialized in delivering high-performance anti-vibration solutions for maritime engines. Expertise in reducing noise, vibration, and harshness (NVH) across various vessels, from commercial shipping to defense fleets.

FEATURES & BENEFITS:

- Compensate vibrations and noise for a longer lifetime
- Reduced downtime and maintenance costs
- Lower acoustic signature
- Extending the time between major overhauls (TBO)
- Reduce life-cycle costs
- Shock-proofing
- Increase reliability
- Safe return-to-port

PROVEN EXPERTISE:

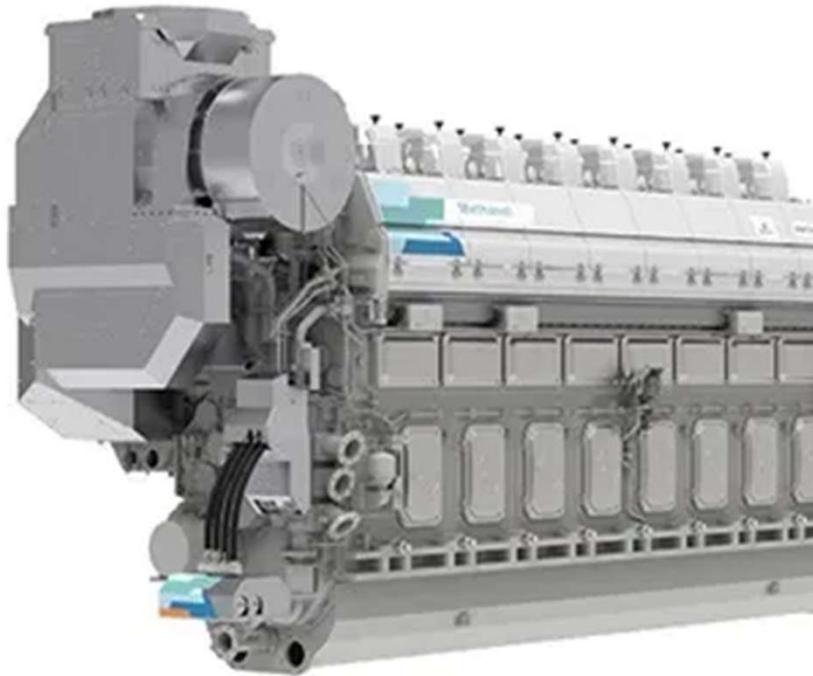
Decades of experience working with leading maritime and shipbuilding companies.



TAILORED SOLUTIONS:

- Engine mounts
- Shock absorbers
- Vibration isolators

Solutions for next-generation engines



EVOLVING WITH FUTURE PROPULSION NEEDS

- **Addressing the Challenges of NexGen Engines & Gensets:**
- **Specific Needs for Vibration & Noise Control:**
 - Custom solutions to mitigate vibrations and noise from engines/gensets powered by **hydrogen (H₂), methanol, or ammonia**.
 - Ensuring compatibility and optimal performance in alternative fuel engines for greener maritime operations.
- **Adapting to Traditional & Dual-Fuel Engines:**
 - Advanced polymer technology for **classic gas (LNG) and diesel engines with SCR** (Selective Catalytic Reduction).
 - Enhanced anti-vibration mounts for **Dual-Fuel vs. Spark Ignited** engines, tailored for improved efficiency and noise control.
- **Propulsion Architecture Evolution:**
 - Addressing the impact of **hybrid systems** on vibration and noise, focusing on both mechanical and electric components.
 - Solutions for **Gensets with electric motor modules** to ensure smooth operation and reduced mechanical stress.

Becoming your future strategic partner

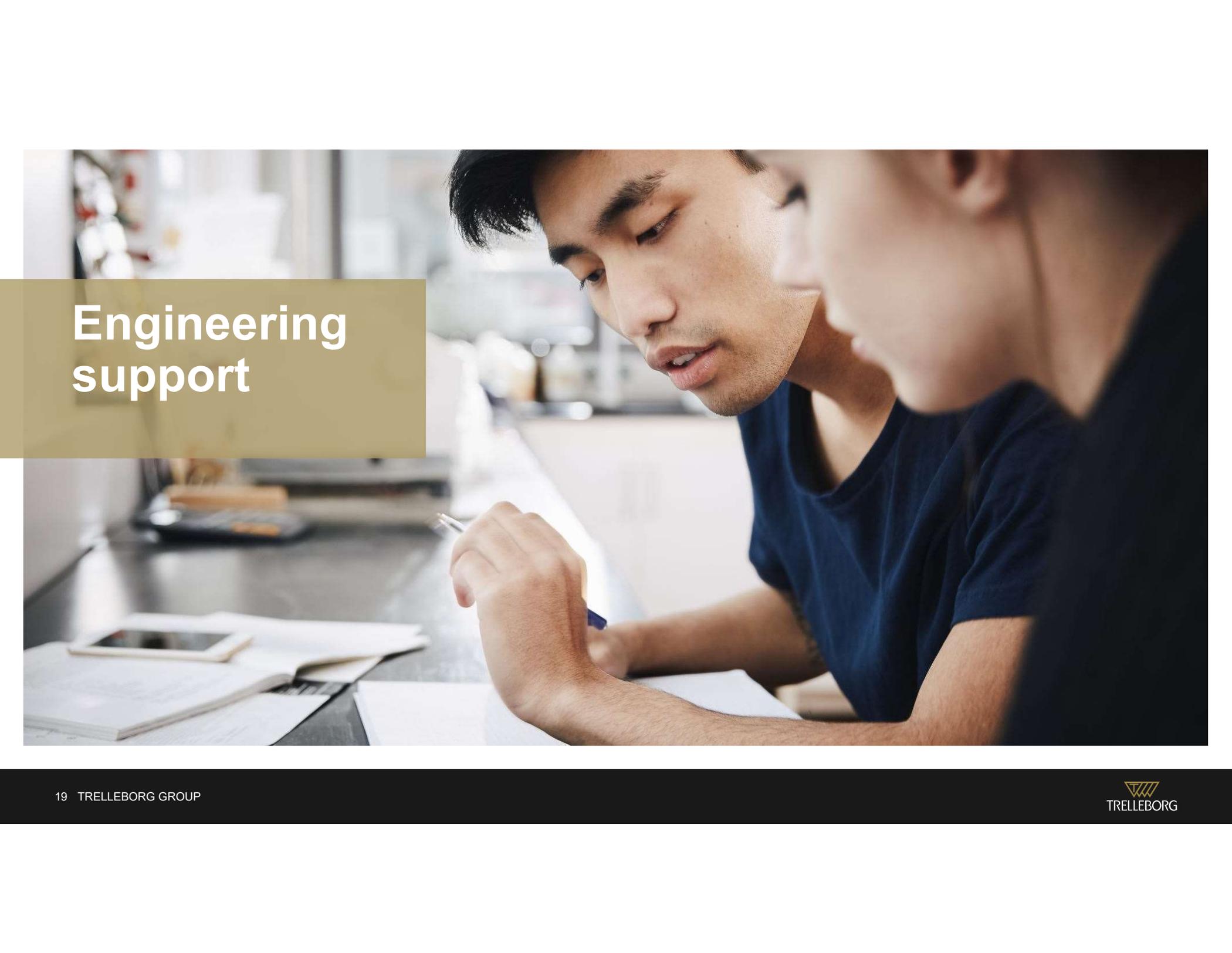
FROM VENDOR TO TRUSTED ADVISOR:

As your strategic partner, we're dedicated to delivering innovative, customized solutions for the maritime engines of the future. Together, we'll navigate the evolving landscape of propulsion systems with confidence, efficiency, and shared success.

- Transitioning from a vendor to a trusted advisor
- Organize workshops to determine the needs of these NexGen applications
- Early design involvement: support from our engineering and innovation teams
- Long-term agreements, beneficial for both parties
- Stock Management based on Forecasting Intelligence

Customer



A photograph of two men in a workshop or office setting. They are both wearing dark blue t-shirts and are looking intently at a laptop screen. The man in the foreground is holding a pen over a document. The background shows a blurred workshop environment with various tools and equipment.

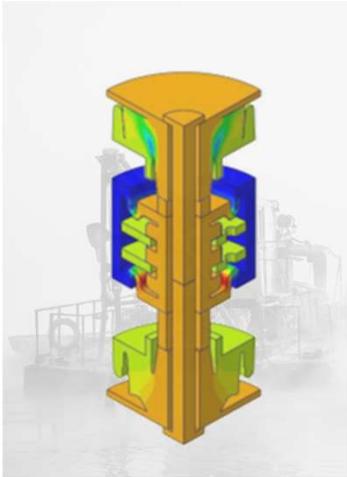
Engineering support

Product Engineering Group

Noise and vibration in machinery at sea cause damage to equipment and bring discomfort to people. Trelleborg Antivibration Solutions specializes in minimizing these effects, which reduces downtime, maintenance, and long-term cost of ownership.



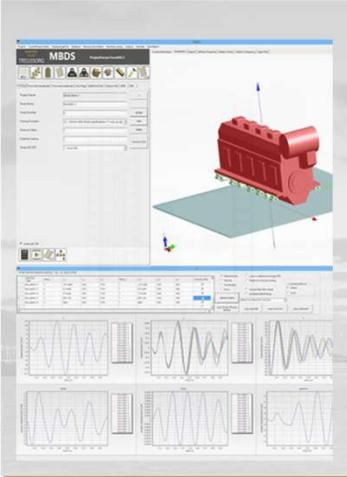
PRODUCT DESIGN



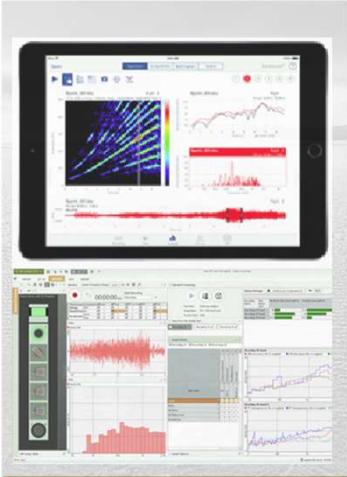
NON-LINEAR FINITE ELEMENT ANALYSIS



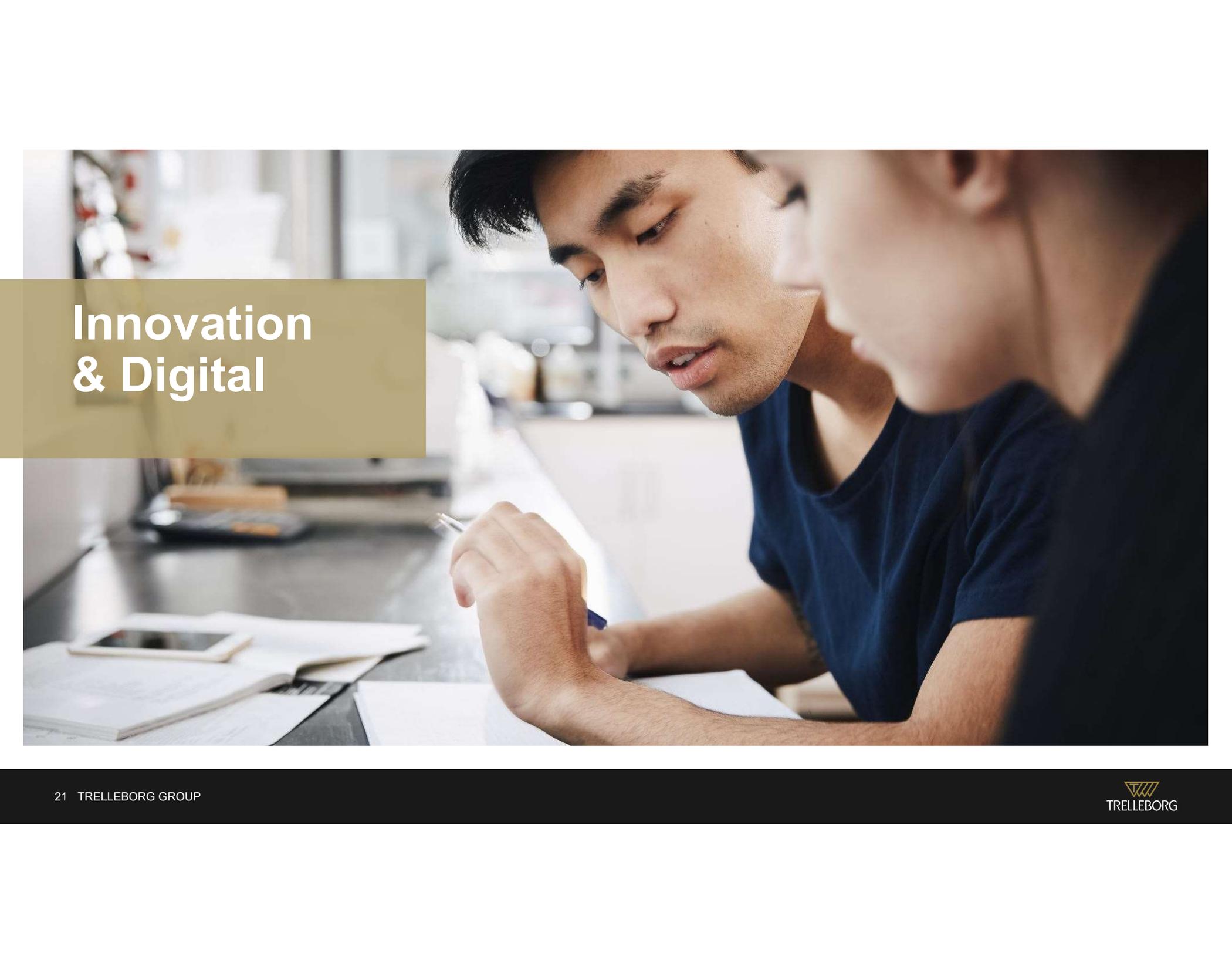
PRODUCT SELECTION



SHOCK CALCULATIONS



VIBRATION ANALYSIS

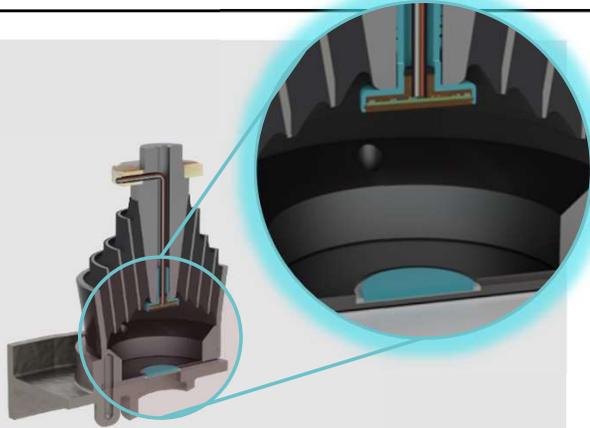


Innovation & Digital

What we do

Digitalization

- Smart Products
- Sensor integration
- Predictive maintenance
- Condition monitoring



Next Gen AVS Components

- Concept development
- Derivation of specifications
- Ideation sessions
- Prototyping and POC



Software Dev-Tools

- In-house development capabilities
- Development accelerators
- Stand-alone simulation blocks for customer's evaluations



Smart Solutions

- Business models
- Process optimisation
- Customer focus and cooperation





TRELLEBORG

www.trelleborg.com