



Advancing Propulsion Performance:

Custom-Tailored Propeller Designs,
Drive Train Optimization,
and Predictive Maintenance for Maximum Efficiency

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Advancing Propulsion Performance

- Introduction
- Product Portfolio
 - Propellers – Our Core Expertise
 - Multipulsion® – Cutting-Edge Technology
- Predictive Maintenance – ProSense
- Promarin Service

Introduction - Promarin

- **Headquarter:** Erftstadt (near Cologne, Germany)
- **Founded:** 1992
- **Locations:** 5 (Germany and the Netherlands)
- **Employees:** 40
- **Core Business:**
 - Custom-tailored Propellers
 - Complete Drive-train Solutions
 - CFD Cluster with 1.600 Cores
 - Worldwide Repair and Maintenance Service



Consultancy &
Project Planning



Life Cycle Monitoring
Service and Spare Parts



Custom Tailored Drive Trains for
Newbuildings and Retrofits



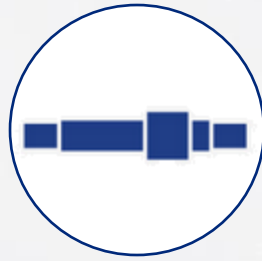
Life Cycle Monitoring
Predictive Maintenance Solutions

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Product Portfolio – Tailor-Made Drive Trains



GEARBOXES



SHAFT LINES



PROPELLERS



NOZZLES



RUDDERS





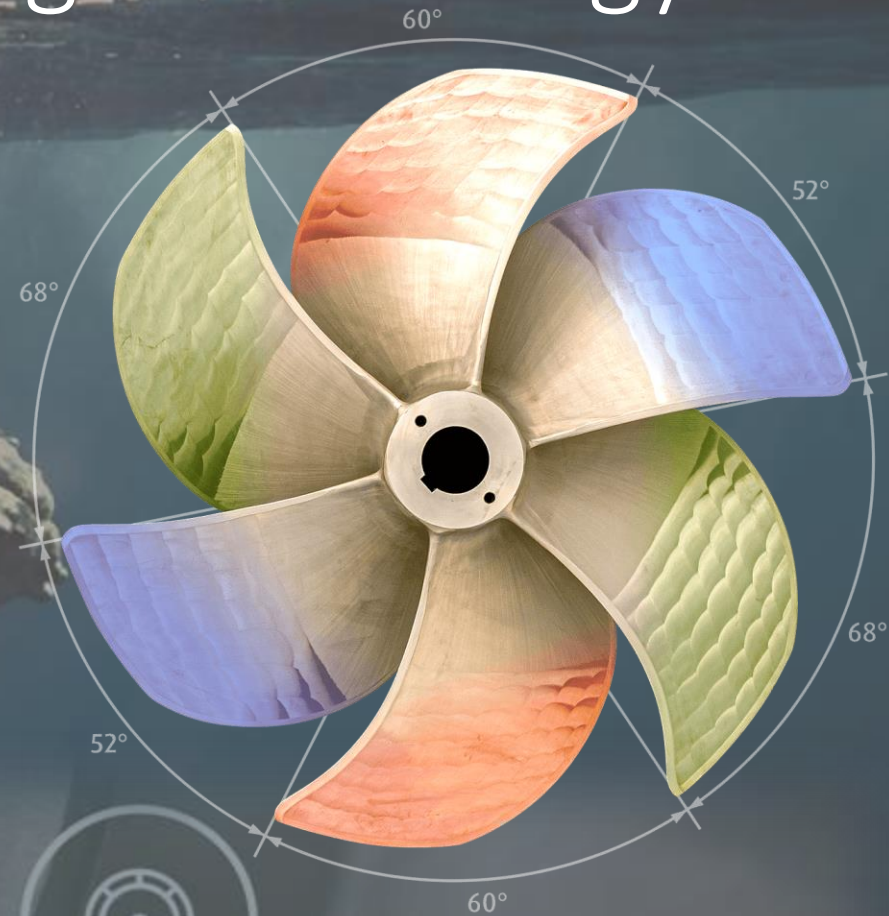
Propellers – Our Core Expertise



- **Blades:** 3 - 7
- **Diameter:** 800 mm – 6500 mm (max. 8200 mm)
- **Design:** Custom-Tailored
- **Propulsion Application Portfolio:**
 - Inland Vessels
 - Workboats / Tugboats
 - Coasters
 - Fishing Boats
 - Seagoing Vessels
 - Yachting
- **Volume:** 1.500 – 1.800 Propellers / Year



Multipulsion® – Cutting-Edge Technology



50%
less noise*

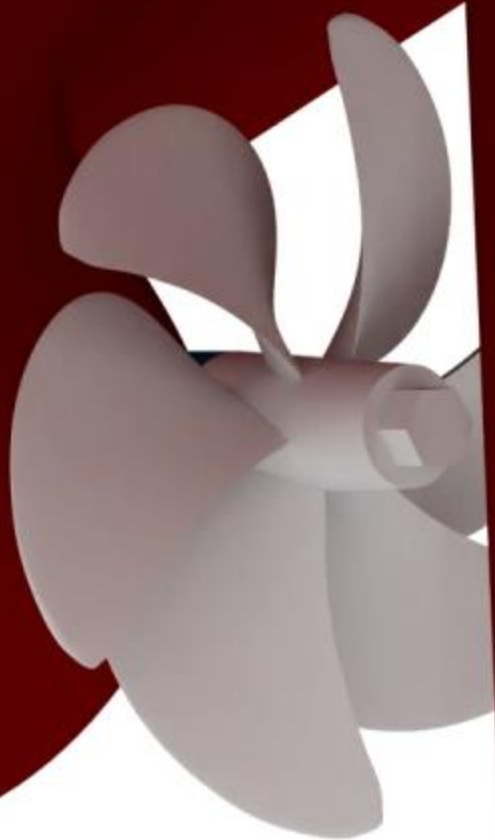


80%
less vibration*

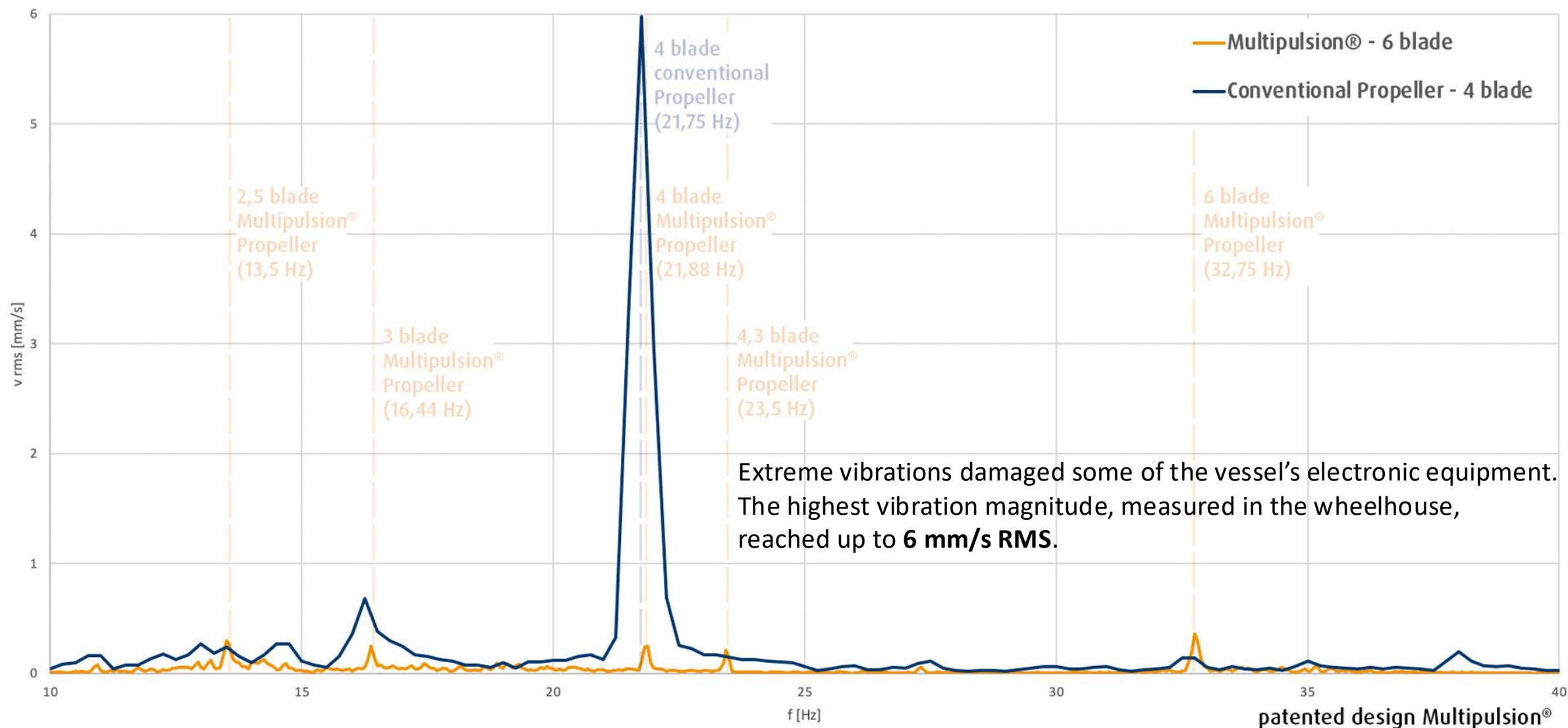


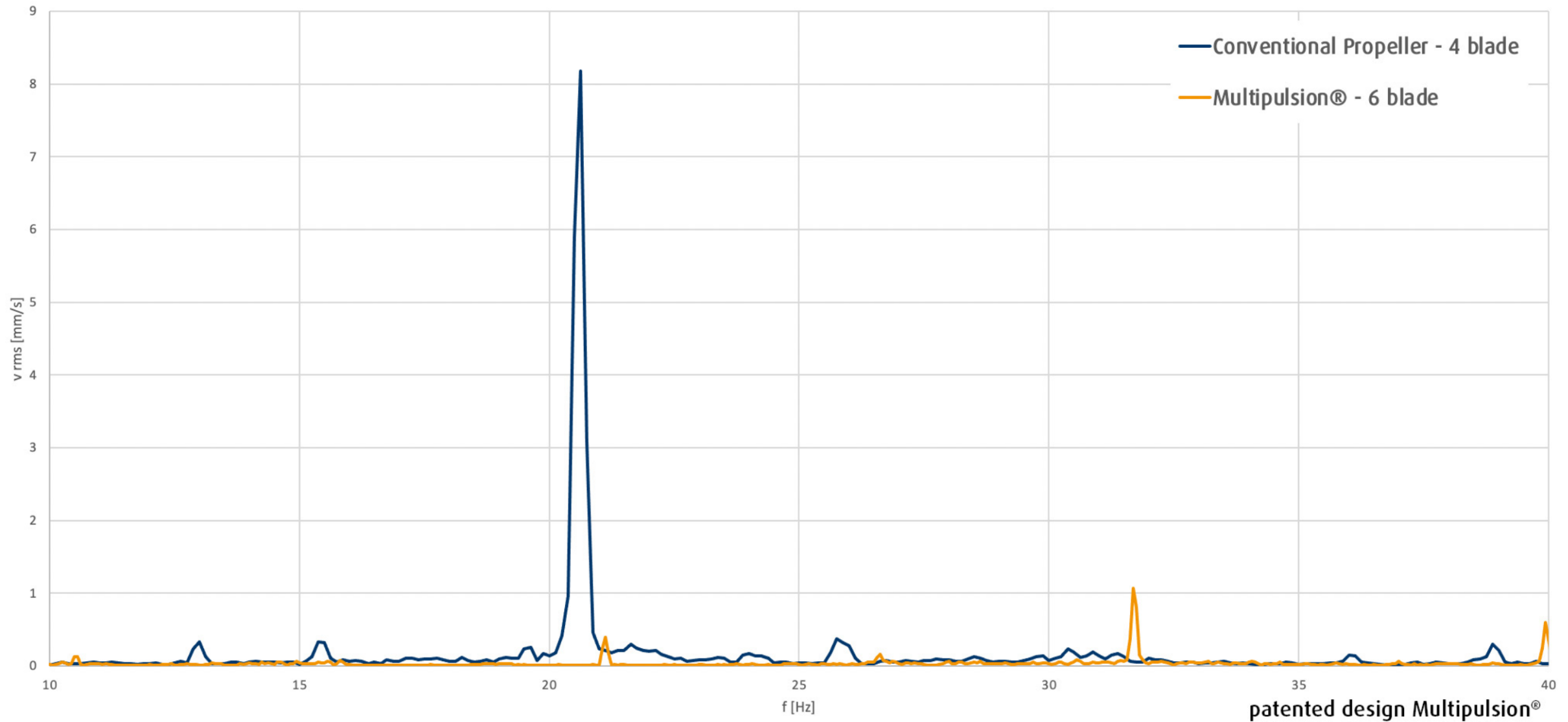
HIGHER
efficiency*

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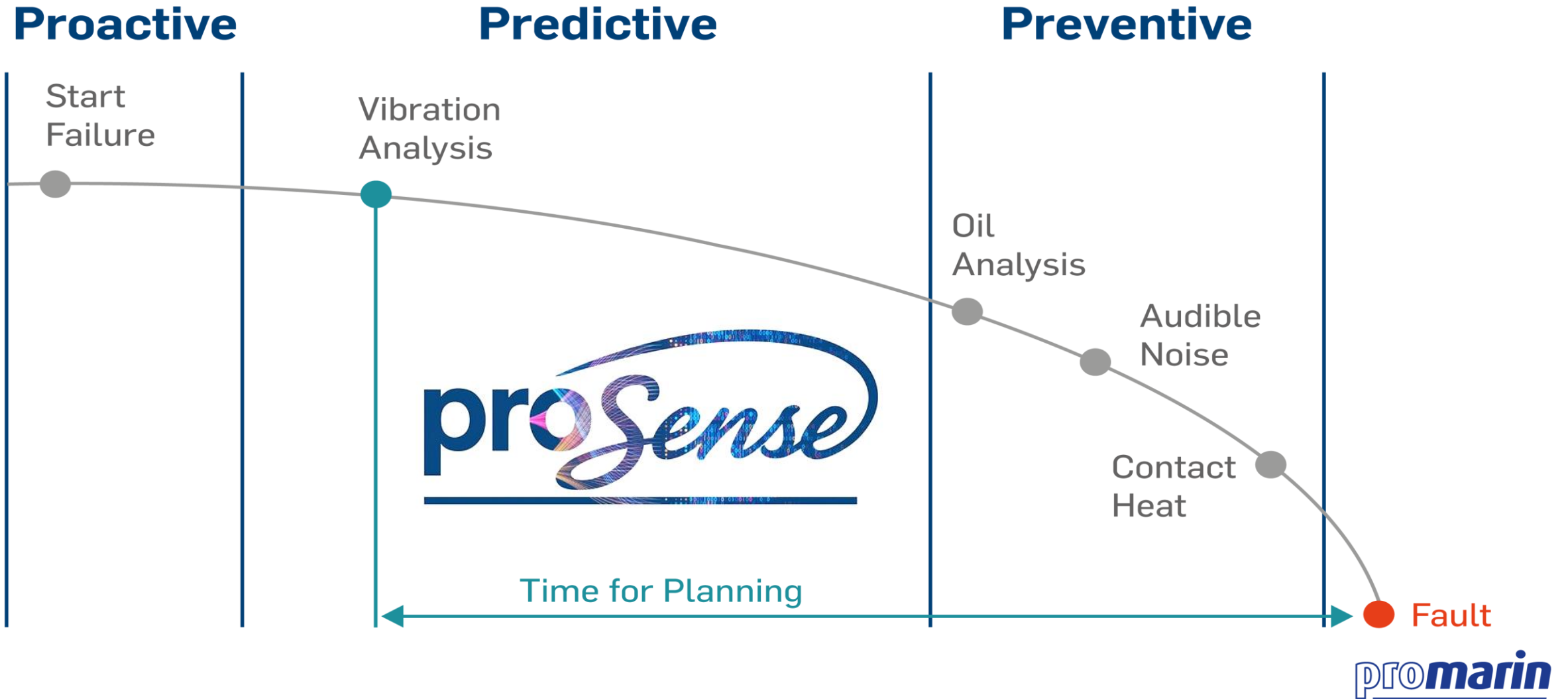


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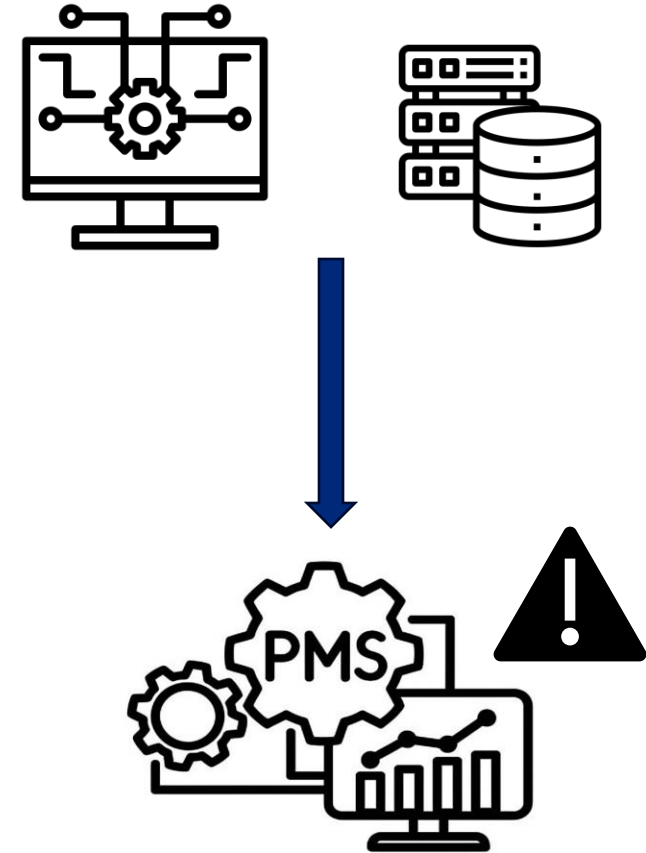
Predictive Maintenance



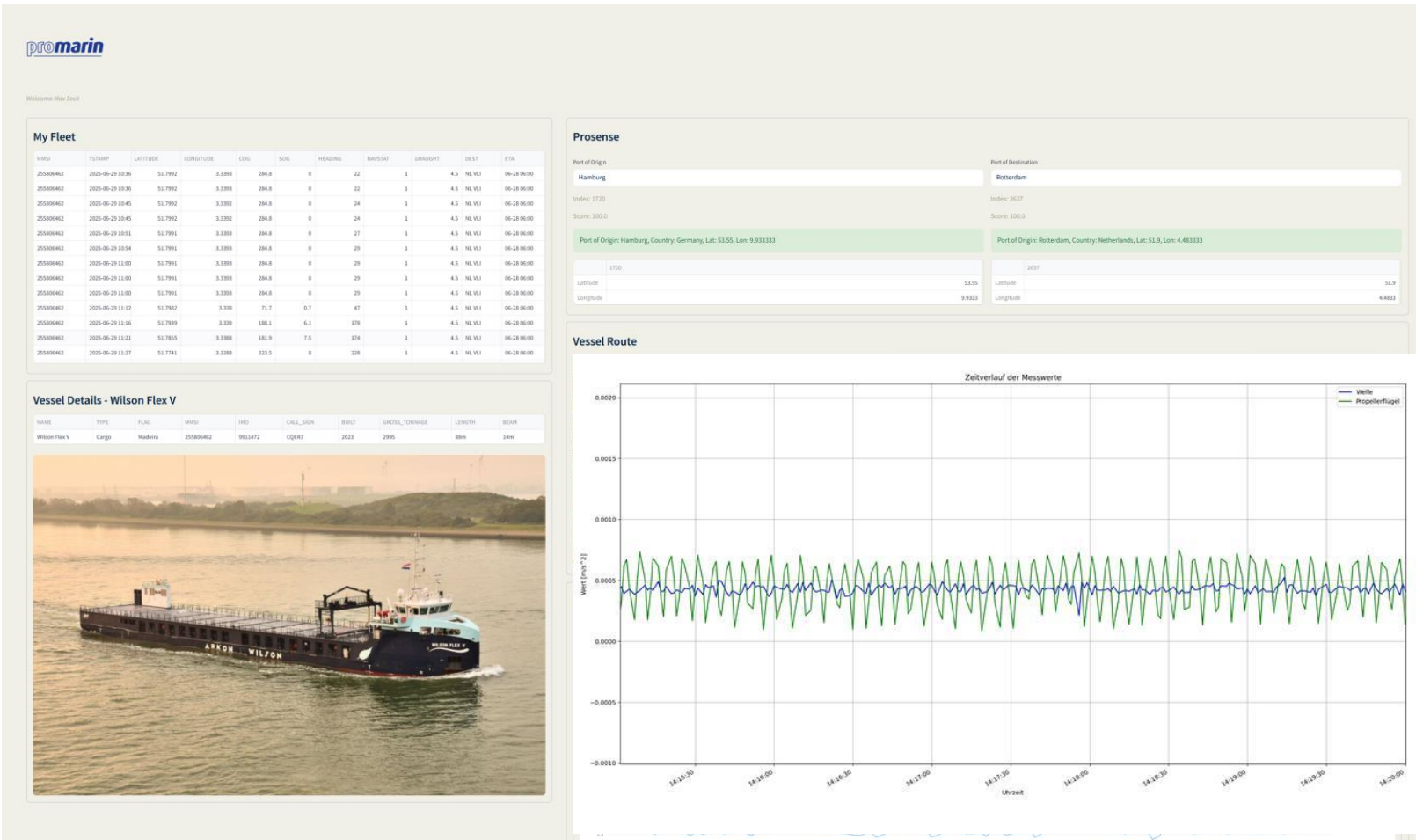
Predictive Maintenance

Vibration data analysis using advanced algorithms enables the identification of mechanical issues at their earliest stage, including:

- Imbalance and bearing defects
- Misalignment errors
- Propeller and gearbox damage
- Clutch problems

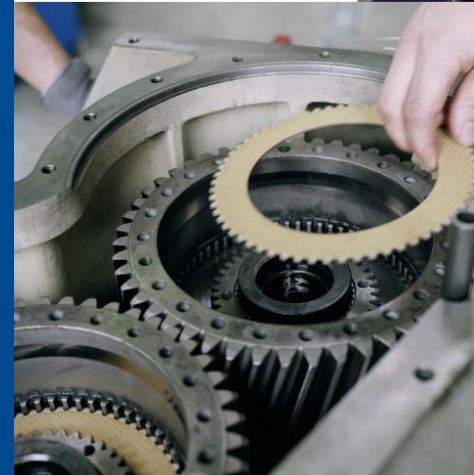
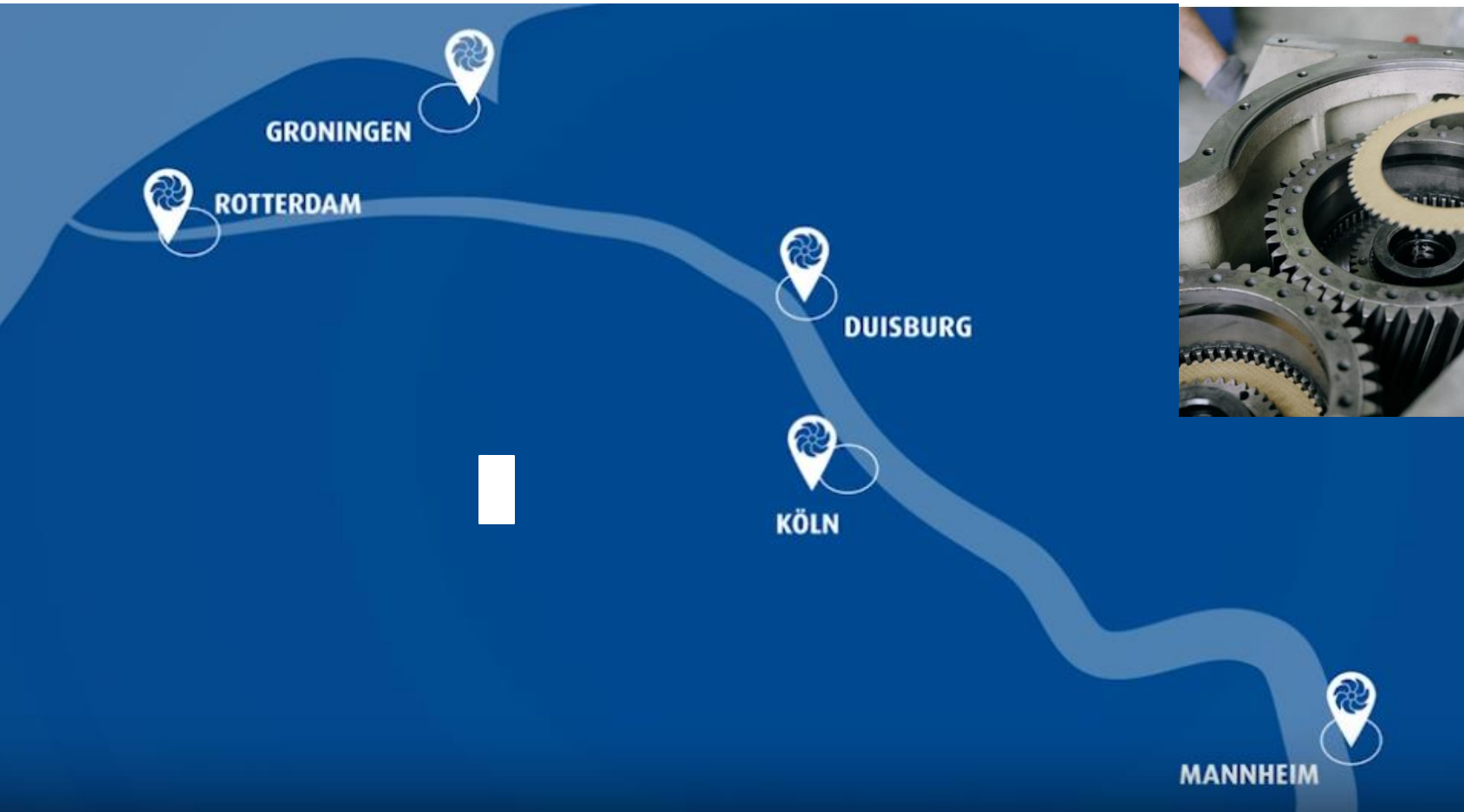


Predictive Maintenance – Vibration Measurement



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SERVICE GMBH



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Thanks for your attention.

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PROPELLER & MARINETECHNIK GMBH