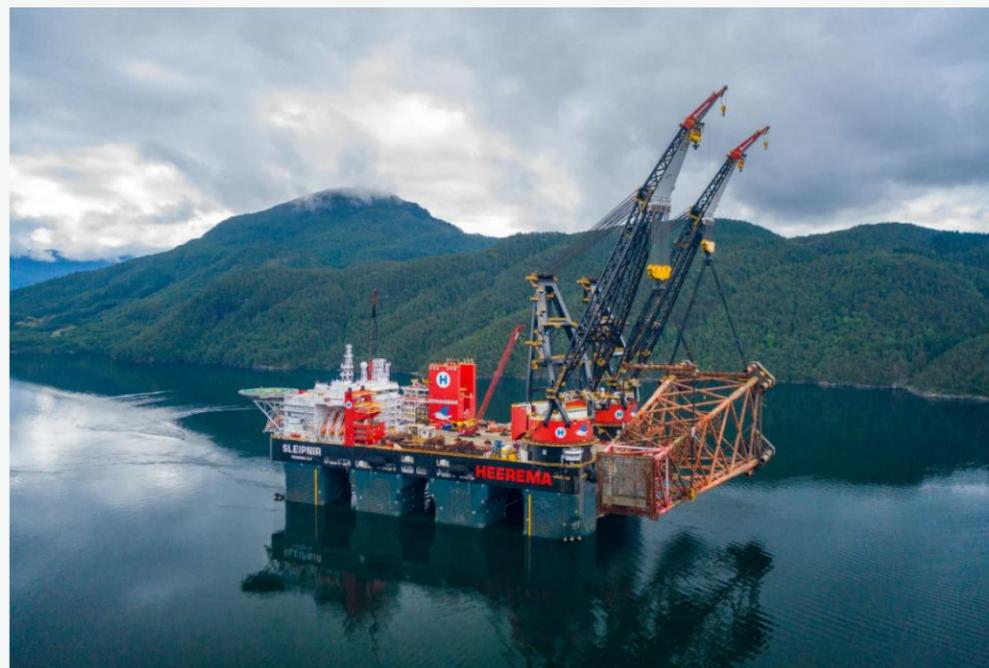




# THE PROBLEM

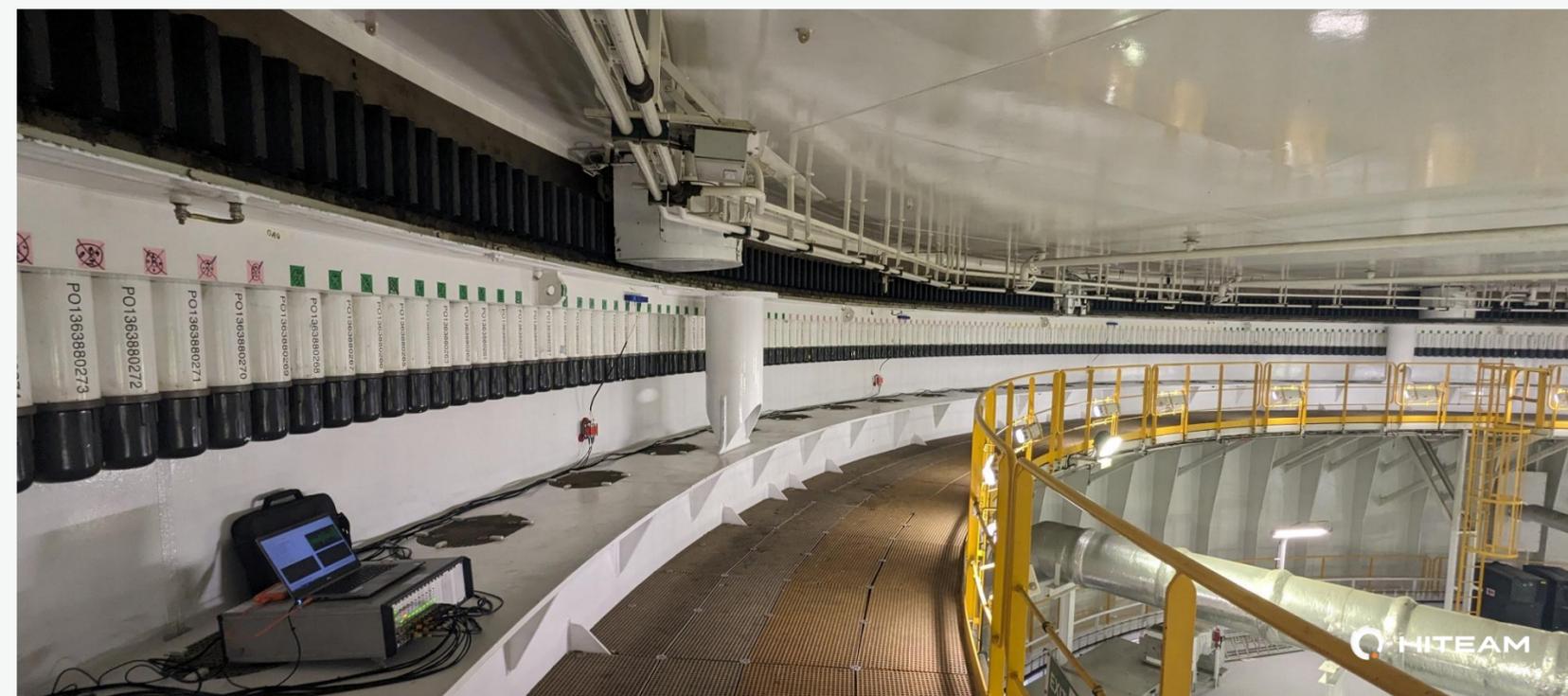
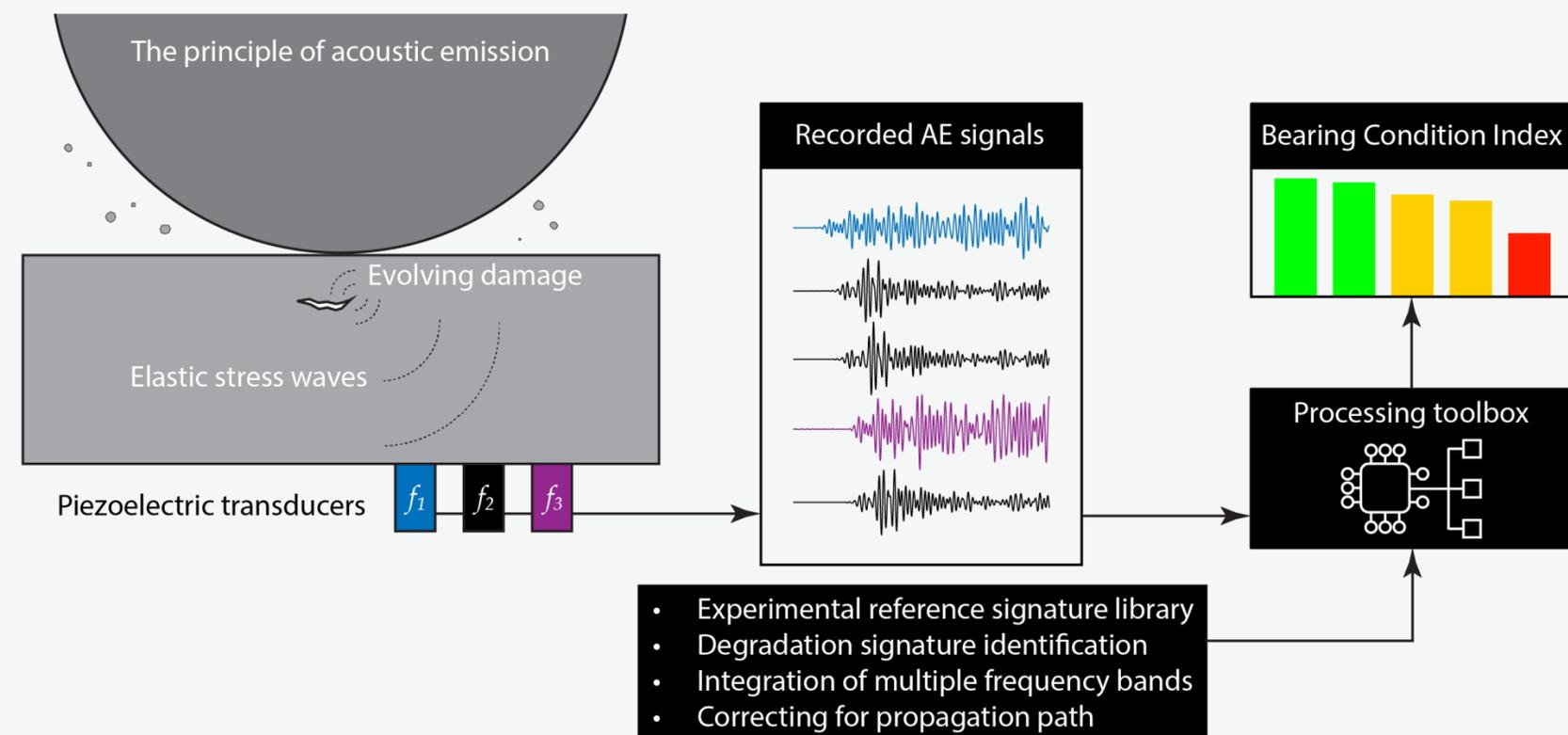
- Offshore operations often involve low-speed roller bearings
- Inspection techniques for these bearings fall short
- Limited data to support maintenance decisions
  - Budget is limited
  - safety concerns are high



# THE SOLUTION

## HITEAM JIP

- Based on ultrasound emissions generated by degradation within the bearing
- Patented technology, developed at TU Delft
- No baseline needed, retrofittable
- Comprehensive Bearing Condition Index



# FUNDAMENTAL RESEARCH

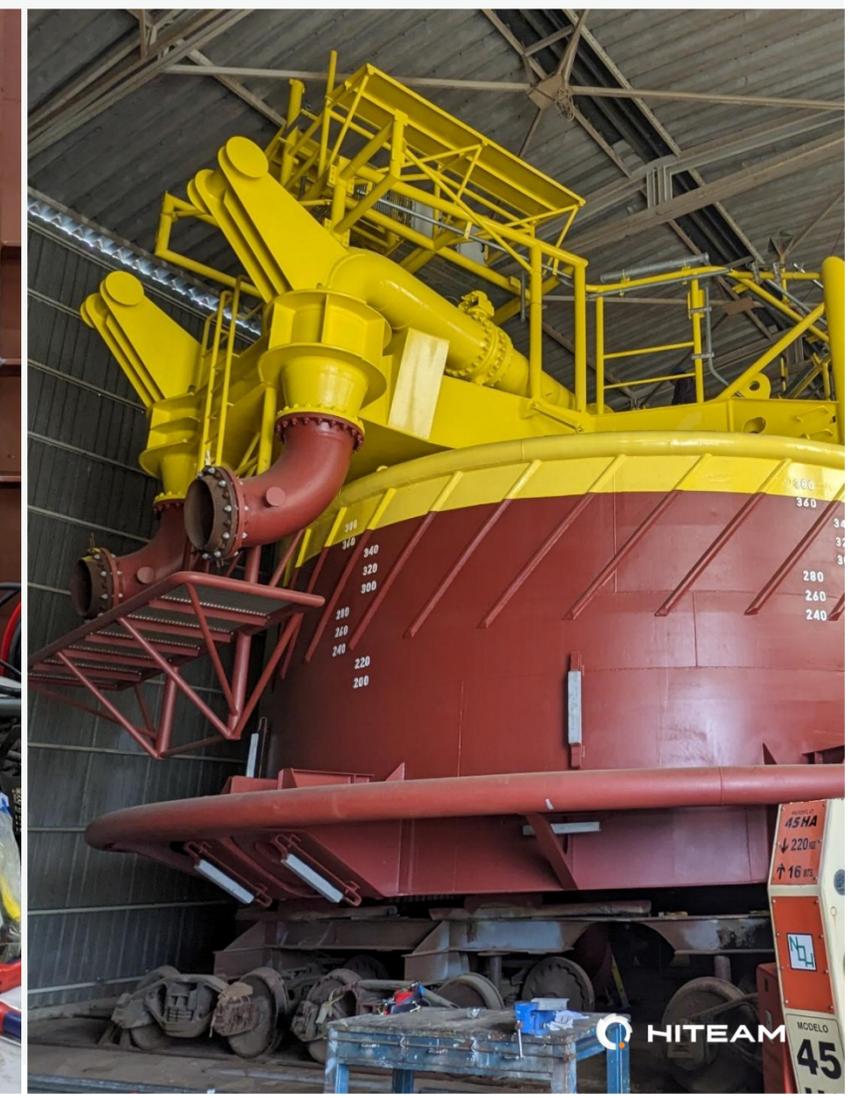
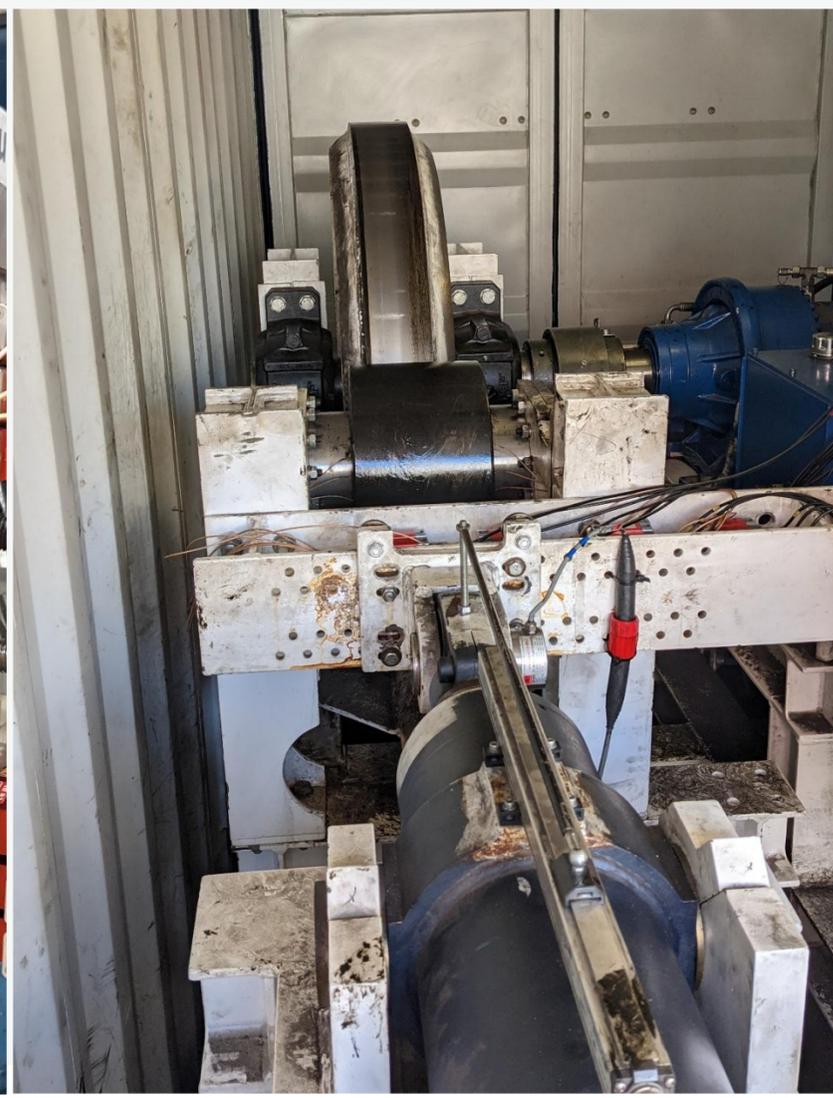


**Signal Identification Tests**  
Huisman, 2020–2021

**Natural Degradation Test**  
Allseas, 2021–2022

**Linear Bearing Tests**  
Huisman, 2023

**Turntable Laboratory Test**  
SBM / ANCAP, 2025



# HEAVY-LIFTING

## FIELD VERIFICATION

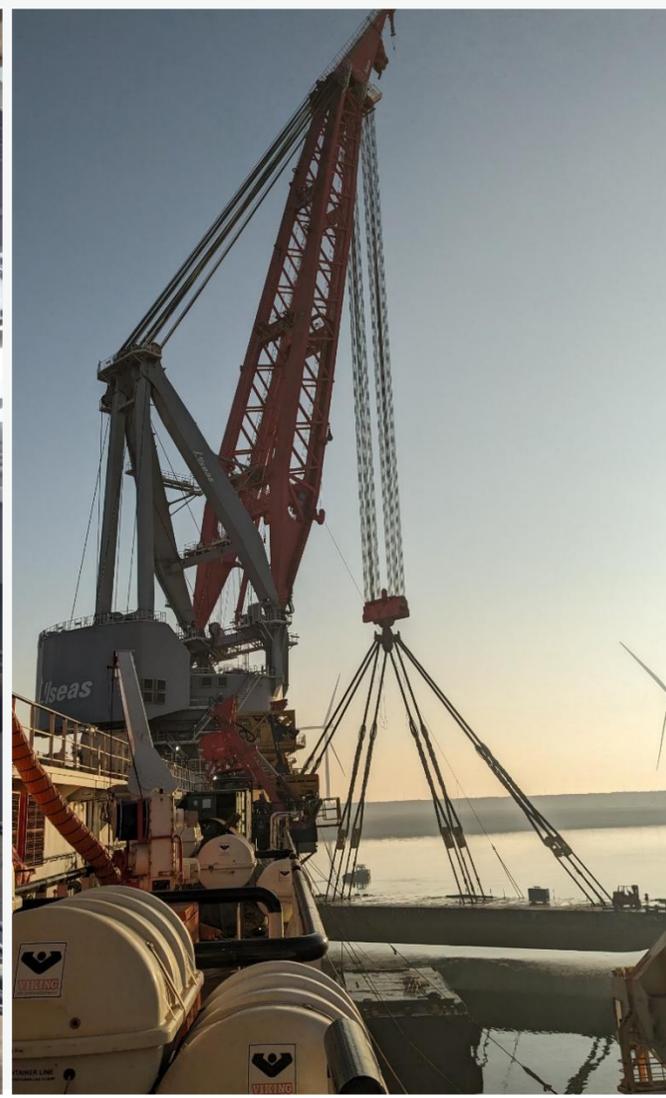
**Sandpiper**  
Offshore Mast Crane  
Allseas, 2023 Singapore



**Pioneering Spirit**  
Topside Lift System  
Allseas, 2023 Rotterdam



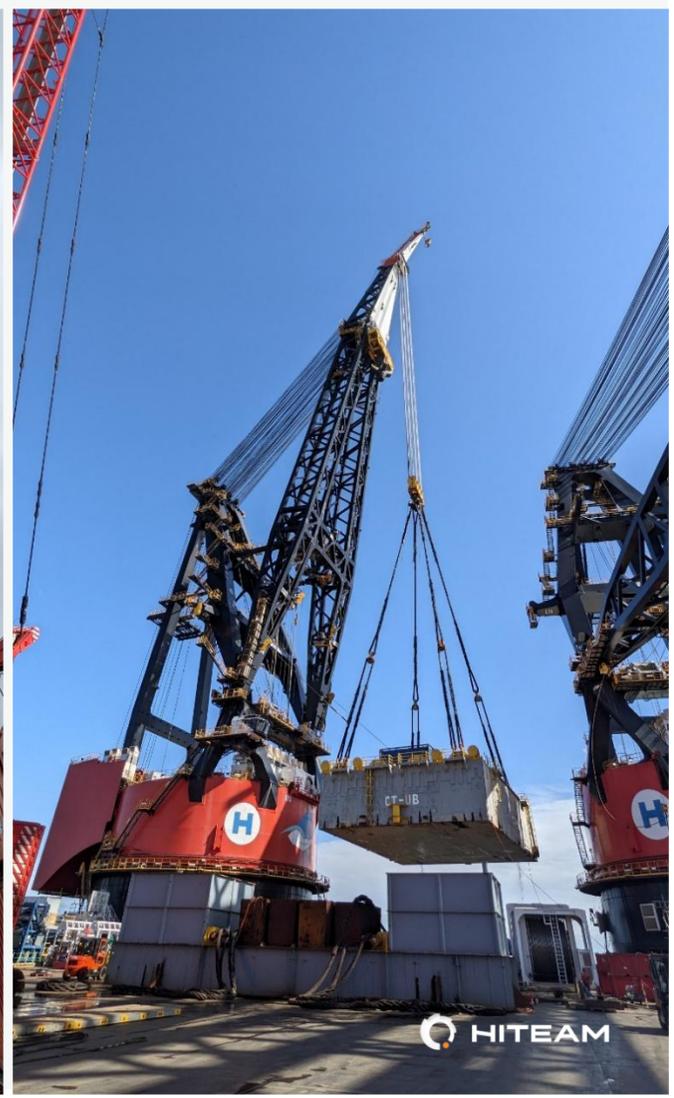
**Pioneering Spirit**  
Tub Mounted Crane  
Allseas, 2025 Rotterdam



**Sleipnir**  
Auxiliary Crane  
Heerema, 2024 Rotterdam



**Sleipnir**  
Tub Mounted Crane  
Heerema, 2024 Rotterdam



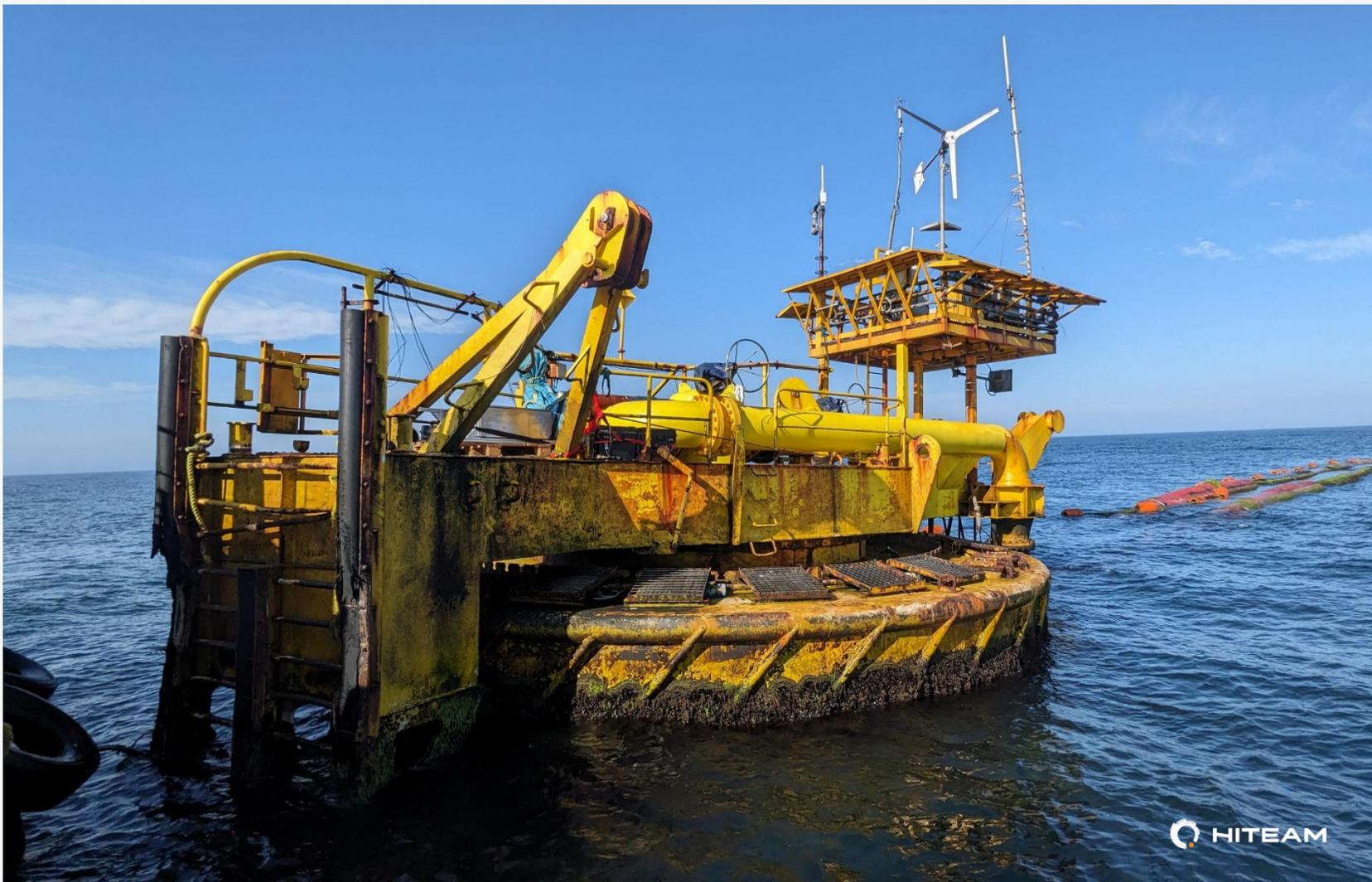
# TURNTABLES

## FIELD VERIFICATION

**Glas Dowl FPSO**  
Bluewater, 2023 Indonesia



**José Ignacio Buoy**  
SBM / ANCAP, 2025 Uruguay



# BEARING JIP

## BENCHMARKING OF ACOUSTIC EMISSION RELIABILITY FOR INSPECTION GUIDELINES

### ● Scope

- Development of guidelines for AE bearing monitoring
- Technology Qualification for cranes and turntables
- Development of reliability framework for operational measurement
- Investigation of operational data fusion and parameter identification

### ● Project Organisation

- Duration 1 year
- Start date 1<sup>st</sup> of January 2026
- Total budget 100 kEuro
  - Participation fee 15kEuro
  - In-kind participation possible (class)
  - Reduced participation fee for former HiTeAM JIP partners



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