

CASE STUDY
MARITIME

An Ultra-Precise Digital Replica of a Vessel with Ataris

How Ataris, UK Docks and DE&S used reality capture and PrevU3D to give global teams remote access to a vessel — scanned in 3 days, delivered in just over 4 weeks.

CLIENT
UK Docks · DE&S

PARTNER
Ataris

CONTEXT
Vessel Maintenance

Scan to Remote Operations: Ataris Brings a Vessel Onshore with Prevu3D

How a photorealistic digital twin gave onshore teams access to a vessel operating on the other side of the world.

Ataris partnered with UK Docks and the UK Ministry of Defence's DE&S Naval Ships Support Team to implement a digital twin for vessel maintenance and remote operations. Using 3D laser scanning and Prevu3D, the team created an ultra-precise digital replica of the vessel.

The Challenge

DE&S-managed vessels operate in remote global locations, creating real obstacles for engineering, maintenance, and decision-making teams:

- Limited ability to access vessels remotely
- No centralized, up-to-date visual record of vessel conditions
- Inefficient collaboration between onshore and onboard teams
- High costs and delays from long-distance inspection travel
- Difficult preparation for maintenance cycles every 2.5 years
- Higher risk of miscommunication and reactive planning

CLIENT

UK Docks · DE&S
Naval Ships Support
Team

PROJECT

Full vessel digital twin
for remote
maintenance

SCOPE

Laser scanning, 3D
mesh, secure hosting

INDUSTRY

Maritime / Defence

Where Prevu3D Made the Difference

Ataris ran a full-scale reality capture workflow and brought the data into Prevu3D to create a photorealistic, highly accurate digital twin – cabins, compartments, and engine rooms, all accessible through a web-based 3D environment.



Engine room pumps as a navigable 3D mesh in RealityPlatform™ – every technical space captured in high detail.

Data capture

- Full vessel scan with a Leica RTC360
- All interior and technical spaces in high detail

Processing

- Registered in Leica Cyclone
- Exported to .E57 and uploaded to RealityPlatform™

Platform

- Automated point cloud to 3D mesh
- Secure hosting and web access for global teams

The Outcome

The digital twin replaced 24+ hour journeys for inspections with remote access from anywhere. Teams moved from reactive, travel-heavy operations to remote, data-driven vessel management.

- Remote troubleshooting and faster issue resolution
- Better preparation for dry dock and maintenance cycles
- Clear visibility into asset condition and configuration
- Lower travel expenses and logistical overhead
- Retrofits and upgrades planned before boarding
- A single source of truth for lifecycle management

3 days

Full vessel scan on site

4 wks

End-to-end project delivery

1.1 TB

Scan data processed and hosted

“For years, point clouds were unwieldy and couldn't be utilized by our clients. Prevu3D changes this and enables Ataris to provide revolutionary solutions to our maritime clients.”

Samuel Lee

Managing Director, Ataris

About Ataris

Ataris uses state-of-the-art 3D scanning equipment and advanced processing tools to capture structures and objects. The company has completed over 100 projects in more than 30 countries — from the world's largest container ships to offshore hyperbaric chambers — combining marine engineering knowledge with onboard vessel experience.

Prevu3D solutions adopted

RealityPlatform™

Secure, cloud-based reality capture management — transforming point clouds into digital twins for faster, more accurate project delivery.

RealityTwin™

Turns 3D scan data into a shared visual environment, using spatial context and connected data to plan, execute, and optimize work.



ABOUT PREVU3D

Prevu3D is the operational as-built platform for industrial teams — turning reality capture into a connected 3D environment that engineering, operations, and compliance teams can act on from anywhere. Built around three pillars of Capture, Manage, and Connect, the RealityPlatform™ transforms scan data from any source into a navigable spatial environment that connects directly to CAD, BIM, ERP, PLM, and IoT systems via RealityConnect™.

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