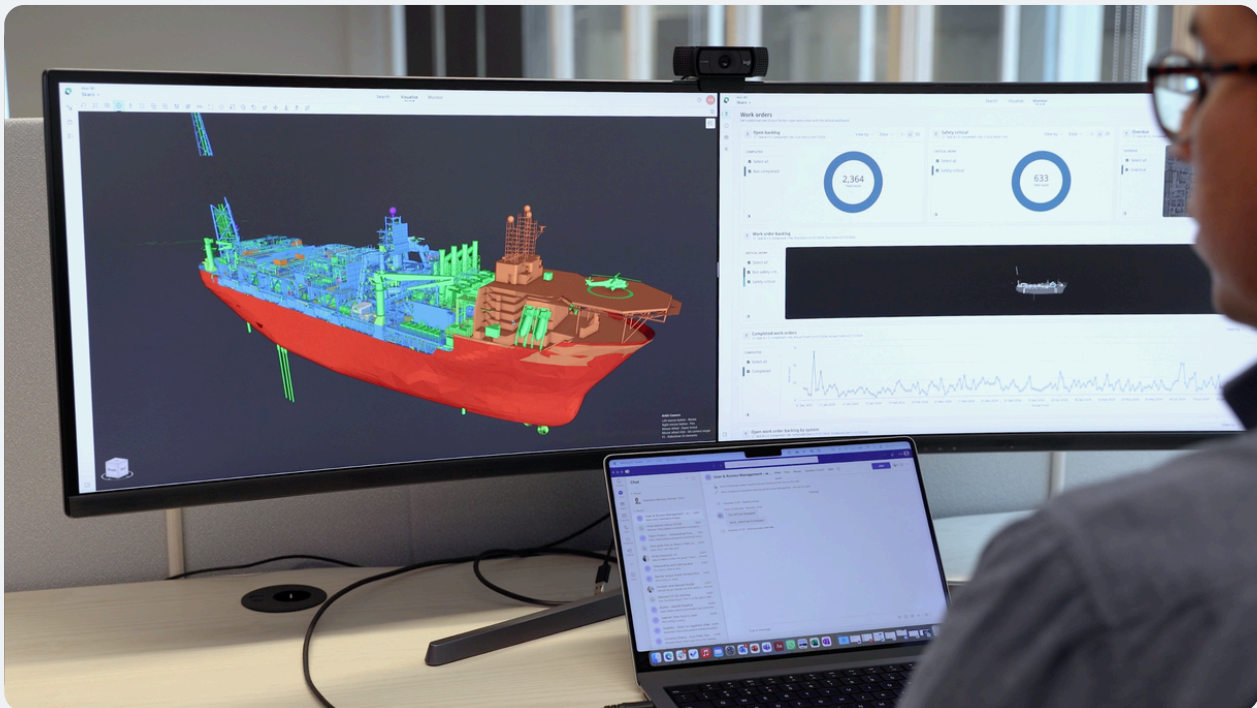




# Aize: Transforming FPSO Operations with Digital Twin Technology

Aize is transforming the way industrial operators interact with their assets by delivering an advanced digital twin solution that enhances operational efficiency, improves collaboration, and ensures data-driven decision-making. Our goal is to empower FPSO operators with a seamless digital experience that bridges the gap between physical assets and digital insights.



Aize is an industrial SaaS (Software as a Service) company from Norway, with offices in Oslo and Aberdeen. As part of Aker, we build on 180 years of industry experience.



ExxonMobil



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[aize.io](https://aize.io)

# Industry Challenges & Trends



**Unavailable or hard to obtain information of prior activities and real time update of condition,** this makes operator unable to scope maintenance activities according to condition of the equipment



**Lack of availability of information and ability to communicate around it across organisational boundaries** leads to costly & inefficient decision making, risk mitigation & issue resolution



**Multiple versions across different systems between the various stakeholders** leads to lack of access to reliable information and data across capital projects/MMO, vendors, clients and projects



**Lack of understanding of the asset layout, as-built status and relation to surroundings,** sub-optimal planning of maintenance & modification activities and increased HSSE risk



**Lack of interface information, coordination & barrier status in planning of simultaneous activities in a brownfield environment** leads to HSSE risk, inefficient execution and low productivity in on-site execution

## Standing still is not an option, digital tools like Aize help you survive in the long run

### Customer-Centric Approach

Aize collaborates closely with FPSO operators to address real-world challenges through intuitive digital solutions. Our customer-driven development ensures that we provide tools that:

- Improve asset integrity.
- Enhance operational efficiency.
- Optimize team collaboration.

### Success Stories & Proof Points

- Customer Examples – Case studies showcasing how Aize has helped FPSO operators improve uptime, reduce risk, and enhance cross-team collaboration.
- Industry Validation – Adoption by leading offshore operators underscores our impact on the industry.
- Efficiency Gains – Demonstrable improvements

### Key Features

- 3D Visualisation & Digital Twin Functionality Get real-time, interactive 3D views of FPSO assets. Overlay live data, enabling remote inspections and reducing offshore travel.
- Tag Register & Engineering Data Integration- Centralise engineering data for better access and integrity. Streamline reporting and compliance.
- Predictive Maintenance & Remote Inspections - Predict asset failures with AI to reduce downtime. Enhance safety and cut costs with remote inspections.
- Collaboration & Integration- Unify teams with a digital workspace for seamless communication. Integrate with asset management systems.

### Quantifiable Benefits

- Reduction in Downtime – Minimized disruptions through predictive analytics and real-time monitoring.
- Operational Cost Savings – Enhanced efficiency reduces unnecessary maintenance and travel expenses.
- Improved Safety & Compliance – Digital twin capabilities help ensure compliance with industry regulations.

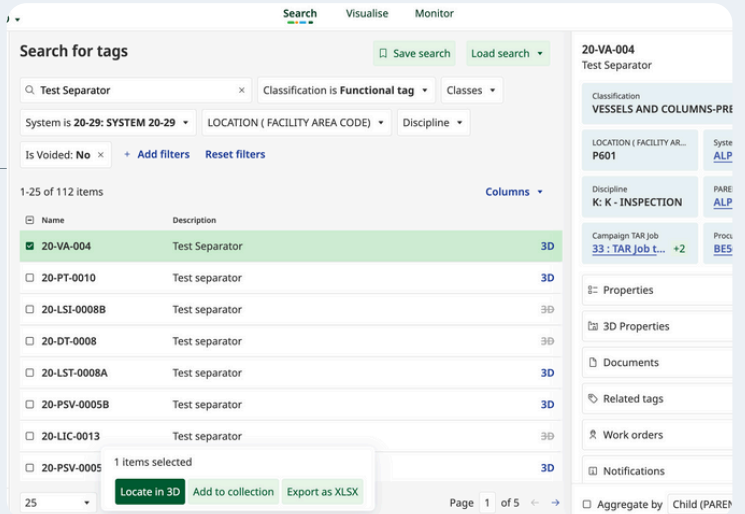
# Capabilities



## FIND

**"I access all the information I need for all relevant assets, and the user interface helps me find the information in a fraction of the time it used to take."**

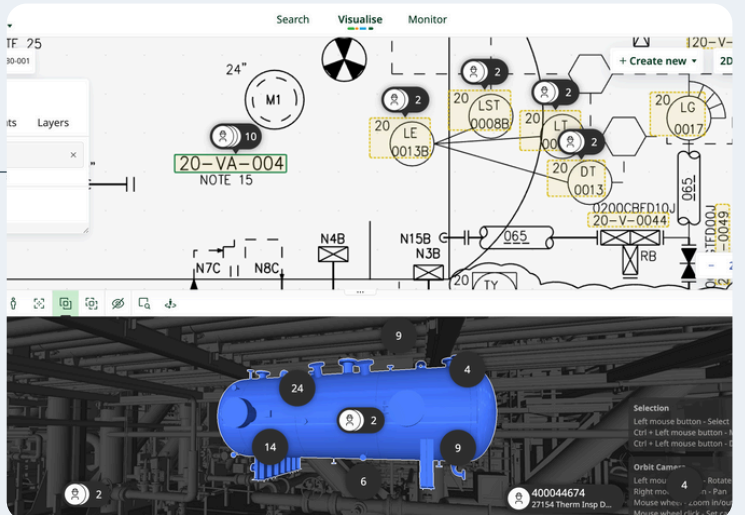
- Search for tags, components, maintenance history, or failure rates from multiple entry points in one place
- Search results can then be refined with advanced filters and located in 3D or 2D to improve decision-making with more spatial context
- A single digital workspace encourages discoverability and independency, eliminates redundant enterprise system licenses and helps people both in and out of your organisation find up-to-date information faster



## NAVIGATE

**"I can sit onshore and navigate any asset, knowing that I will access up-to-date information – the only time we go offshore when we do actual work."**

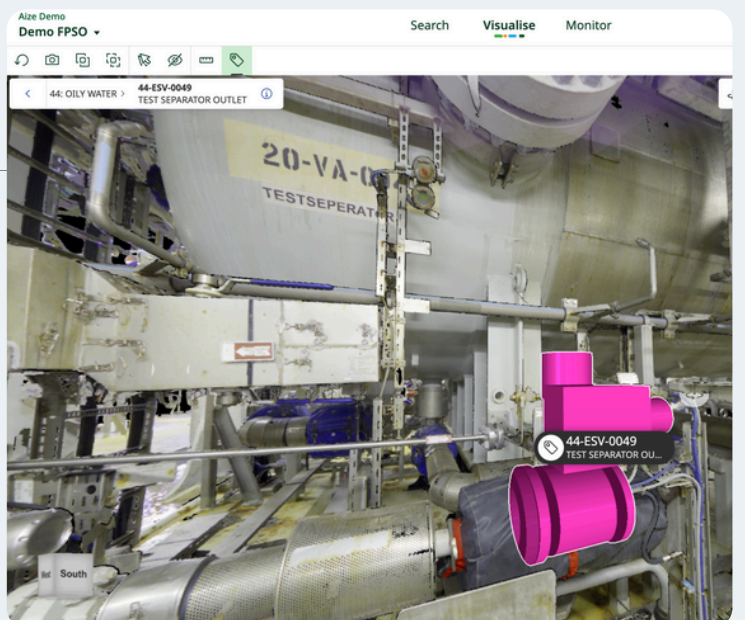
- Navigate across different types of surfaces and interconnected data such as asset hierarchies, smart drawings, PDFs, Excel, CAD, 360-degree images or laser scans
- Split view allows you to view information side by side with relations dynamically synced and made clickable in a form of overlays and annotations
- Manoeuvre core system data and specialist applications with ease without having to leave the workspace and without any domain or software-specific expertise required



## VISUALISE

**"Aize helps us visualise multiple types of data from multiple systems without having to leave the workspace."**

- Browser-based 3D CAD viewer capable of handling large and complex models with tags, point cloud, 360-images, notifications, anomalies or work orders displayed on top and synced overnight
- Blend 2D layout drawings in 3D; visualise maintenance scopes; assess spatial constraints with virtual workers, scaffolding and other objects; measure dimensions; use ghosting, isolating, clipping and other 3D tools to view equipment, modules or deck locations in 3D
- Visualise entire scopes and systems to understand locations and relations of equipment and data; more context and accuracy speeds up decision-making and limits unnecessary trips offshore



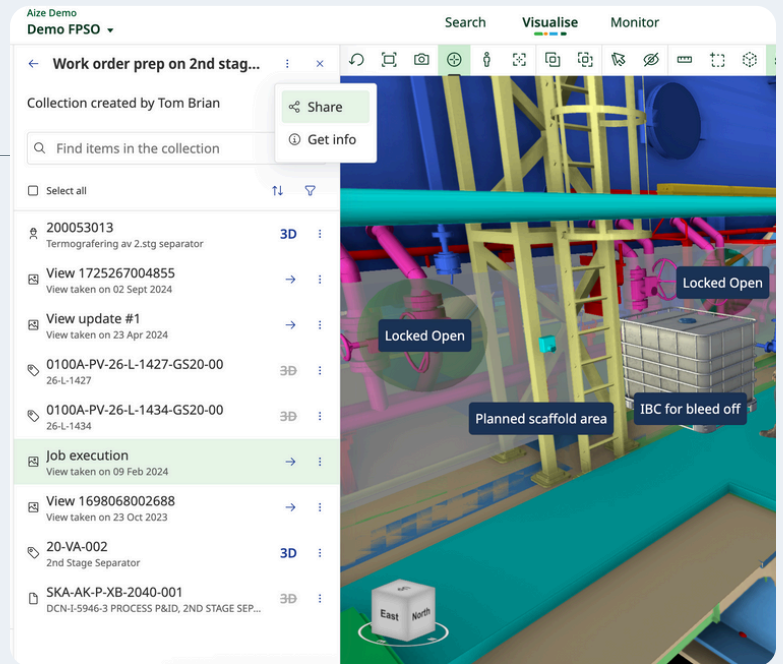




## COLLABORATE

**"I can communicate and share information with my colleagues in a shared workspace, in an intuitive way, centred around the equipment in discussion."**

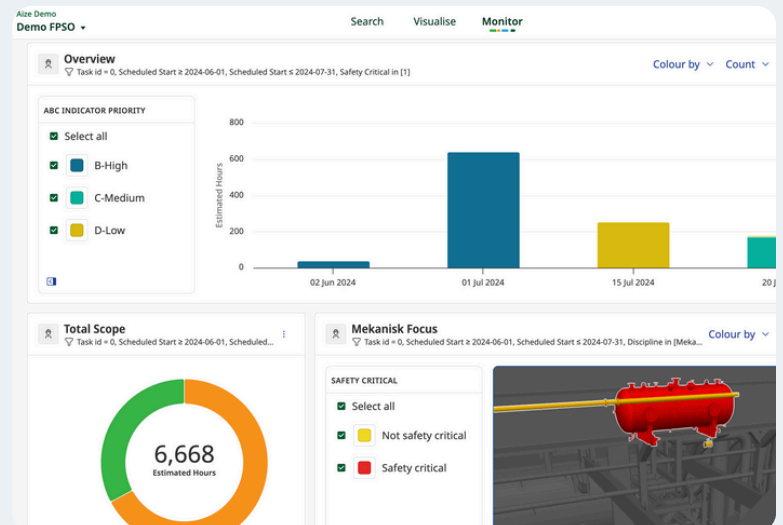
- Manage tasks effectively by aligning team efforts in a single collaborative workspace with all information available at hand; detail work pack reviews; conduct resource planning and sequence work order activities
- Group and save multiple objects in collections, annotate, comment, and maintain chat history; facilitate communication and enhance collaboration by tagging and notifying relevant team members - in and out of your organisation
- Share views and location of the workspace, fostering collective understanding through joint visual referencing; maintain traceability and conversation history in one place to leverage organisation-wide competence with transparent workflows



## GAIN INSIGHT

**"Combining and analysing data from multiple sources helps us gain deeper insights and make better, data-driven decisions."**

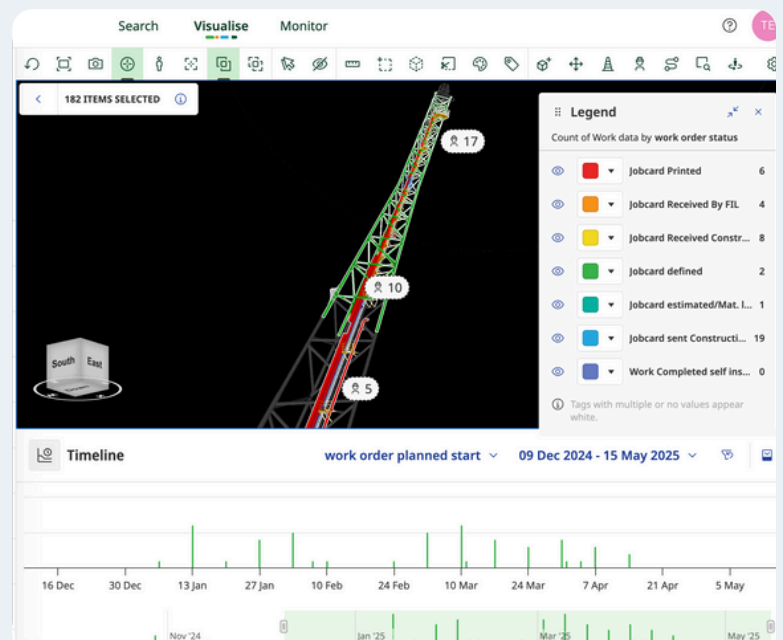
- Monitor status and progress with an asset health dashboard, offering an intuitive visual overview of equipment status, work orders, and performance via a single KPI overview
- Grasp operational synergies and interdependencies to identify barriers, risks, and anomalies particularly in high-risk areas, aiding process optimisation and risk avoidance
- Prioritise HSSE compliance and integrate risk analysis to ensure safety, mitigate potential risks, and foster a secure operational environment, thereby safeguarding crews and strengthening operational reliability



## PLAN

**"I have a full overview of all activities occurring within an area of interest and can properly plan and execute these so they can be carried out efficiently."**

- Implement predictive maintenance workflows, plan for simultaneous operations (SIMOPs) and assess TAR readiness for smooth turnaround execution
- Utilise 3D & 2D assessments for space, area, and zone evaluation to plan for heavy lifting operations, track work order status including readiness, due dates, and criticality, and maintain a record of equipment info and history for comprehensive project management
- Execute cost-saving measures with onshore surveys, enhance planning through optimisation techniques and increase resource planning efficiency



# Here's how it works in practice

## **Towards predictive maintenance**

Aize uses machine learning to support your transition to Predictive Maintenance (PdM) models. This helps maintain optimal working conditions, extend asset lifecycles, and reduce costly reactive maintenance. By monitoring equipment performance, Aize detects defects early, allowing for timely inspections and repairs before issues escalate.

## **Connectivity and integration with third-party apps**

Connect your existing enterprise applications and third-party tools with Aize for maximum flexibility.

Integrations include:

- CMMS (e.g., SAP, Maximo)
- Work orders, performance history
- Engineering TAG register
- Time series data
- DMS (P&IDs, isometrics, documentation)
- Media library
- 3D visualization tools (photogrammetry, laser scans)
- Third-party analytical tools

## **Handle Simultaneous Operations (SIMOPS)**

Plan parallel activities in live production environments, such as expansions or technology upgrades, with minimal risk. Aize helps you manage and reduce the risks of simultaneous operations.

## **Lifting Operations**

Aize supports safe lifting operations during installation, removal, or decommissioning. The digital planner ensures compliance with standards and maintains risk at acceptable levels.

## **TAR management**

Efficiently manage plant shutdowns and turnarounds with Aize's centralized digital system. Improve communication between maintenance, operations, and safety teams, while streamlining scope, change, and permitting processes.

## **Integrity management**

Streamline integrity processes by reducing data volume and eliminating the need to switch between applications. Aize enables better analysis and optimization throughout the integrity lifecycle.

## **Temporary equipment and lay-down management**

Identify and assess risks associated with temporary equipment using Aize's digital twin. Visualize potential hazards during installation, use, and removal to ensure safe operations.

## **Barrier management and cumulative risks**

Ensure safety by establishing and maintaining barriers to manage operational risks. Aize tracks barriers across processes and systems to minimize incident risks.



Curious to learn more?

Visit [aize.io/fpso](https://aize.io/fpso) to reach out and learn more about Aize.

