

LIFTE H2

› Your Hydrogen Partner ‹

Asset Performance
Management (APM)



LIFTE H2's mission is to empower **energy-intensive businesses** to decarbonize by designing, delivering, and operating clean, affordable, and innovative **hydrogen solutions**.

LIFTE H2 is a **hydrogen infrastructure engineering company**. We are a one-stop solutions provider, integrating hydrogen supply chains into seamlessly interfacing systems and developing next generation products with bundled services.

EUROPE | NORTH AMERICA



Our Hydrogen Expertise

Over 50 employees, with 250 years of hydrogen infrastructure and product development experience

Companies our employees have worked for:



Core Capabilities

Systems
Modeling

Engineering

Project
Delivery

Technical
Operations

Asset
Performance
Management

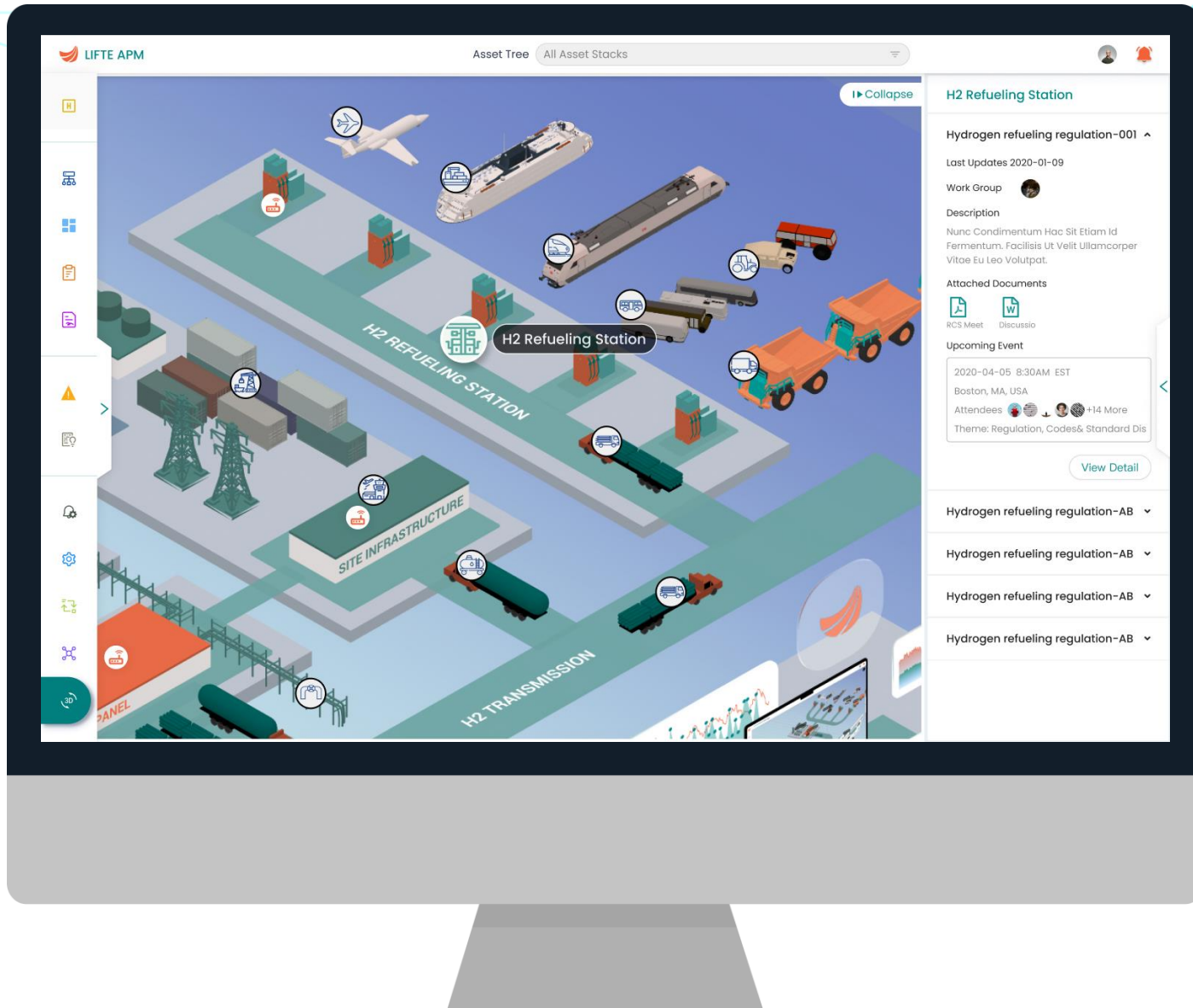
Product
Development



Asset Performance Management



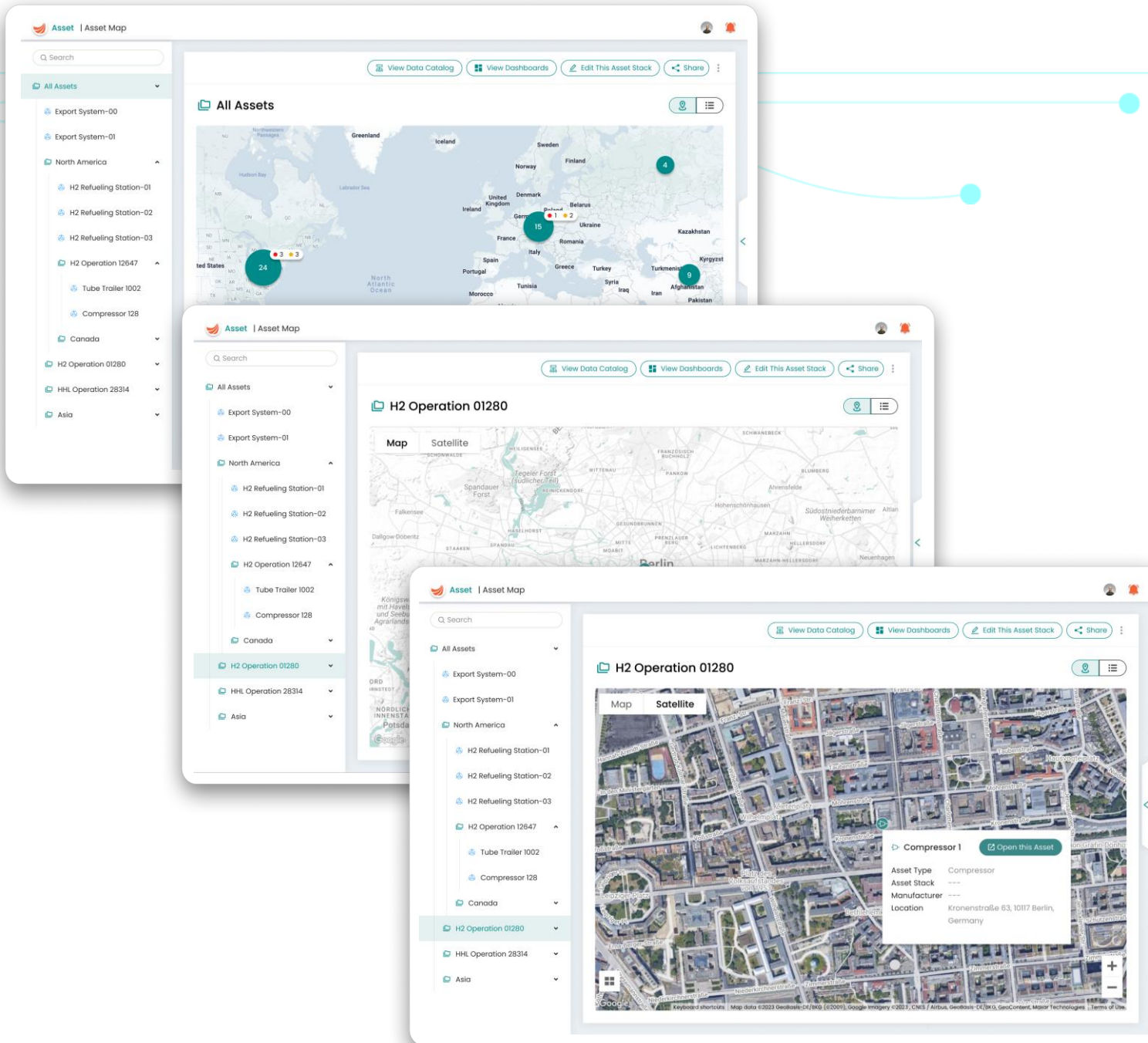
Know what is happening



Interactive 2.5D Diagram

Embedded 2.5D diagram for project overview and interactive dashboards

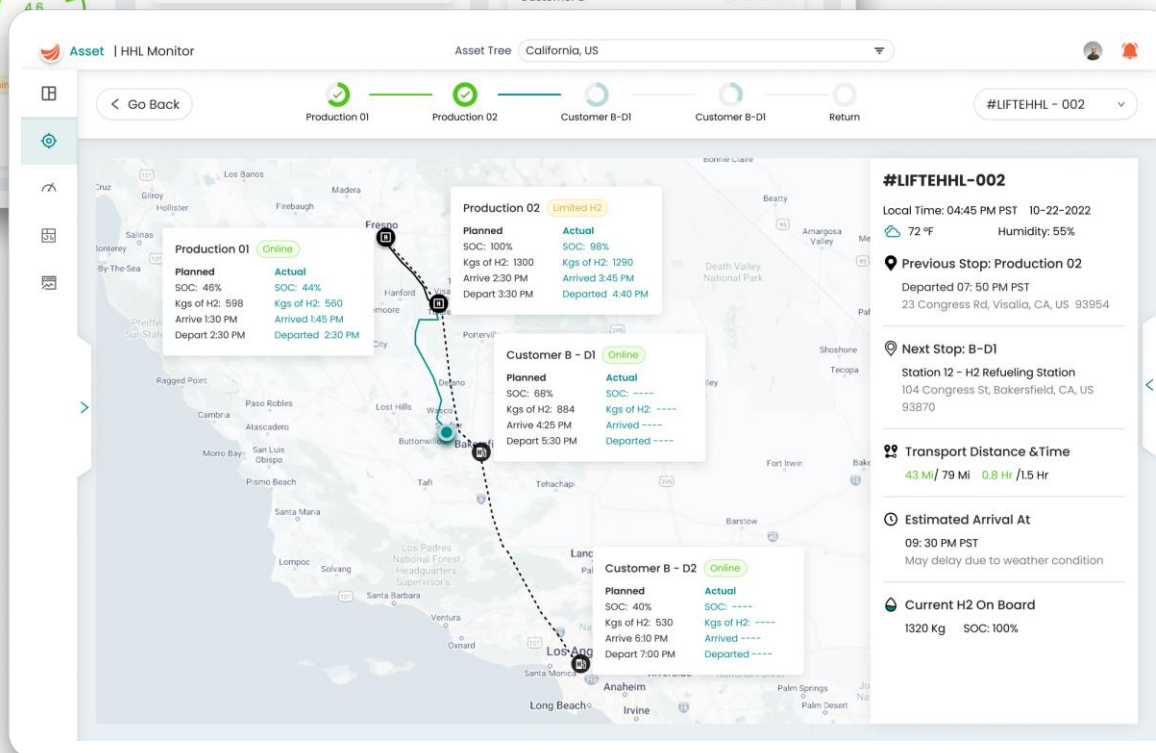
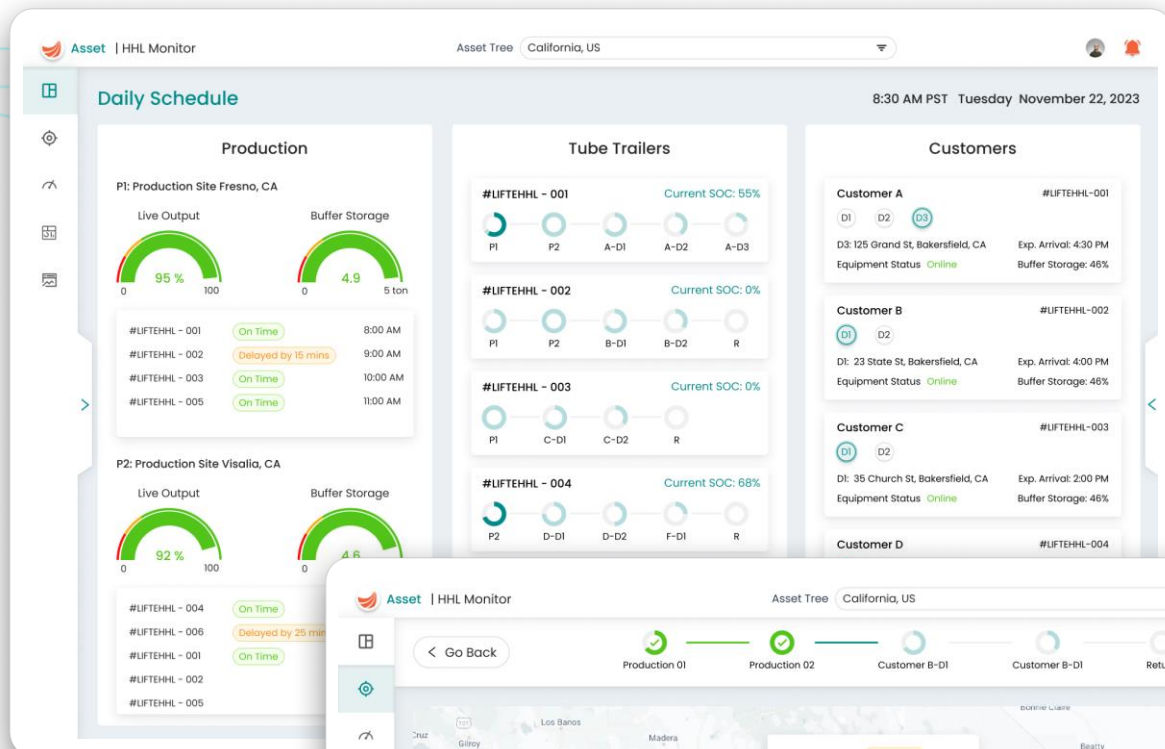
Navigate to what you want to have a closer look at



Asset Stack Page with Map View

View assets and their current operational statuses on a map

See map location details with satellite & 3D views



Mobile Asset Monitor

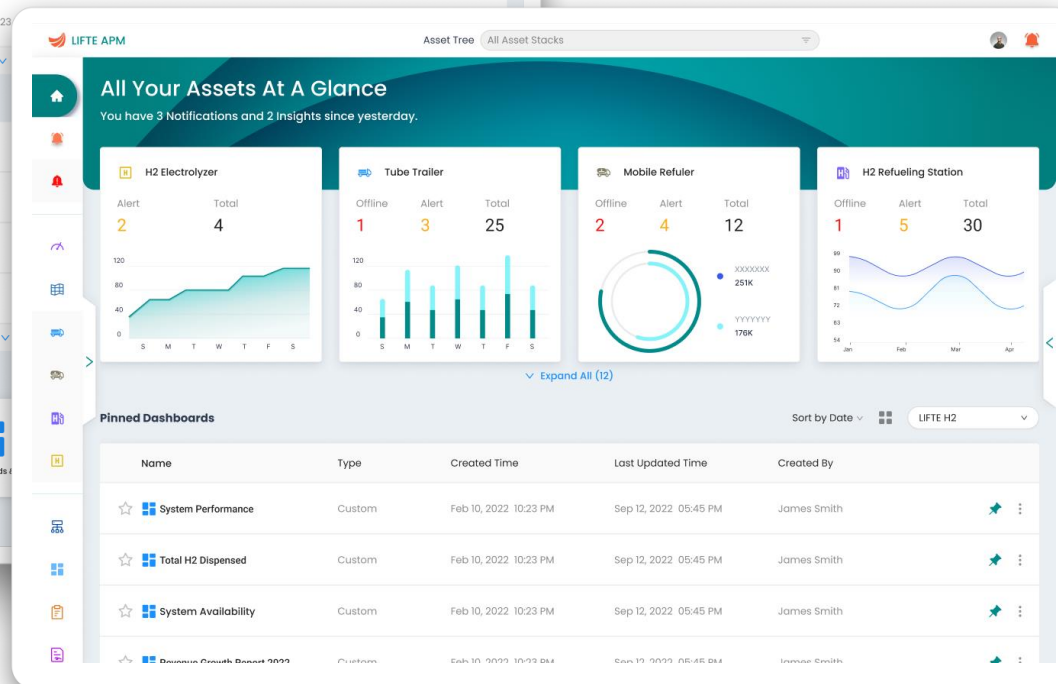
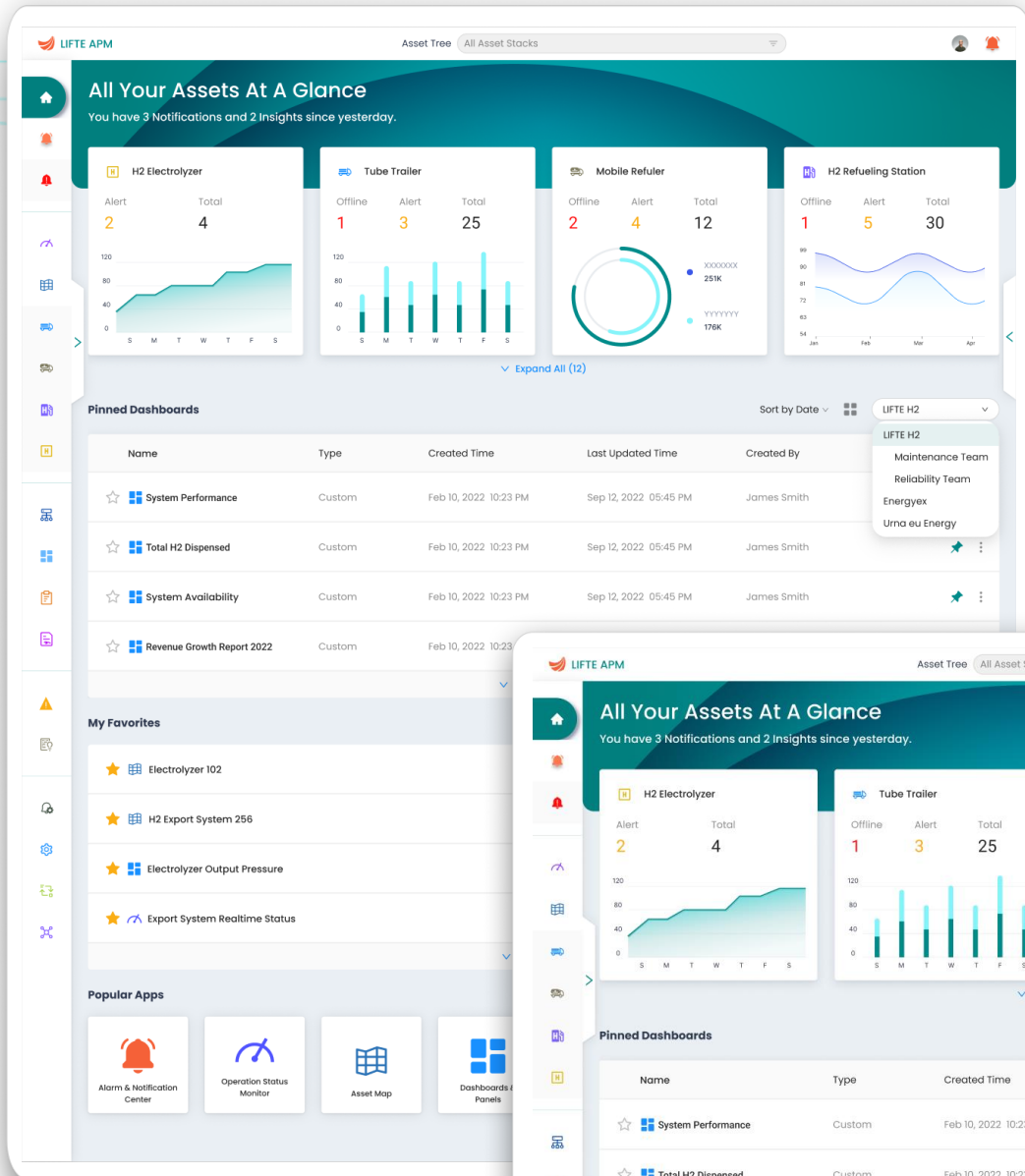
E.g. tube trailers for transport of H2

Mobile Refuellers

Live monitoring of production sites, trailer itineraries, and customer sites on one screen

Real-time tracking of individual tube trailer's planned and actual routes with notifications for deviations

Comparing the planned and actual state of charge after each hydrogen filling cycle to assist dispatch managers in rescheduling Itineraries



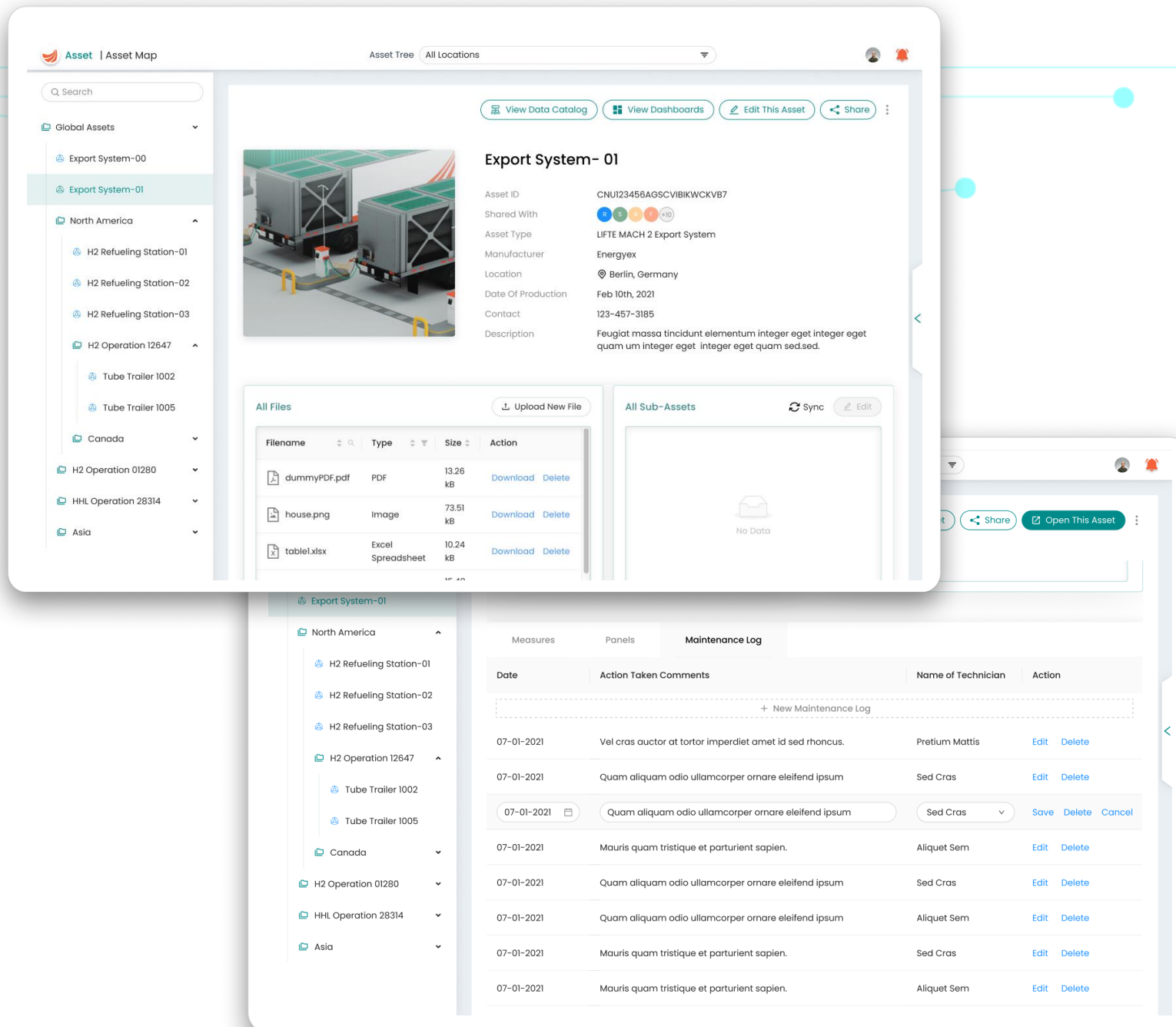
Home Page

enhanced customizability – a view per use case

Redesigned overall navigation logic for hydrogen projects, assets and resources

See recent and pinned modules for quick access

**Notice abnormal situations, ideally
BEFORE they happen**



Asset Details with Operations and Maintenance Log

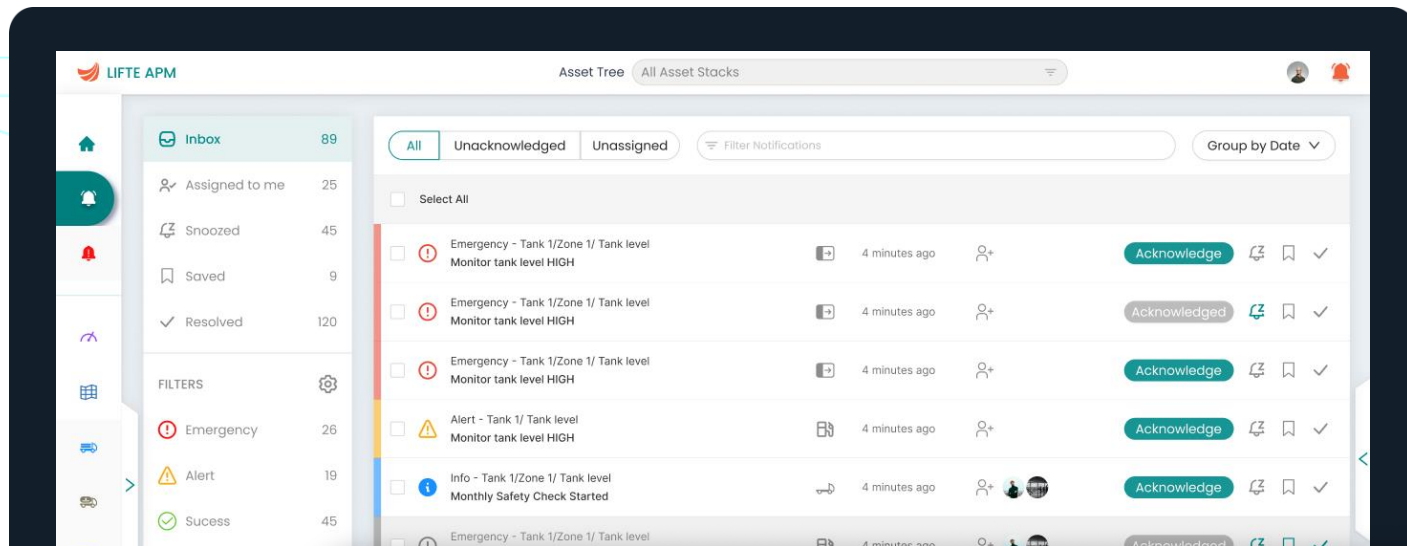
Organize, manage, and view hierarchy and metadata for assets

How many cycles did my vessel go through?

Record key maintenance events

View and share telemetry data associated with each asset

Notification on upcoming events

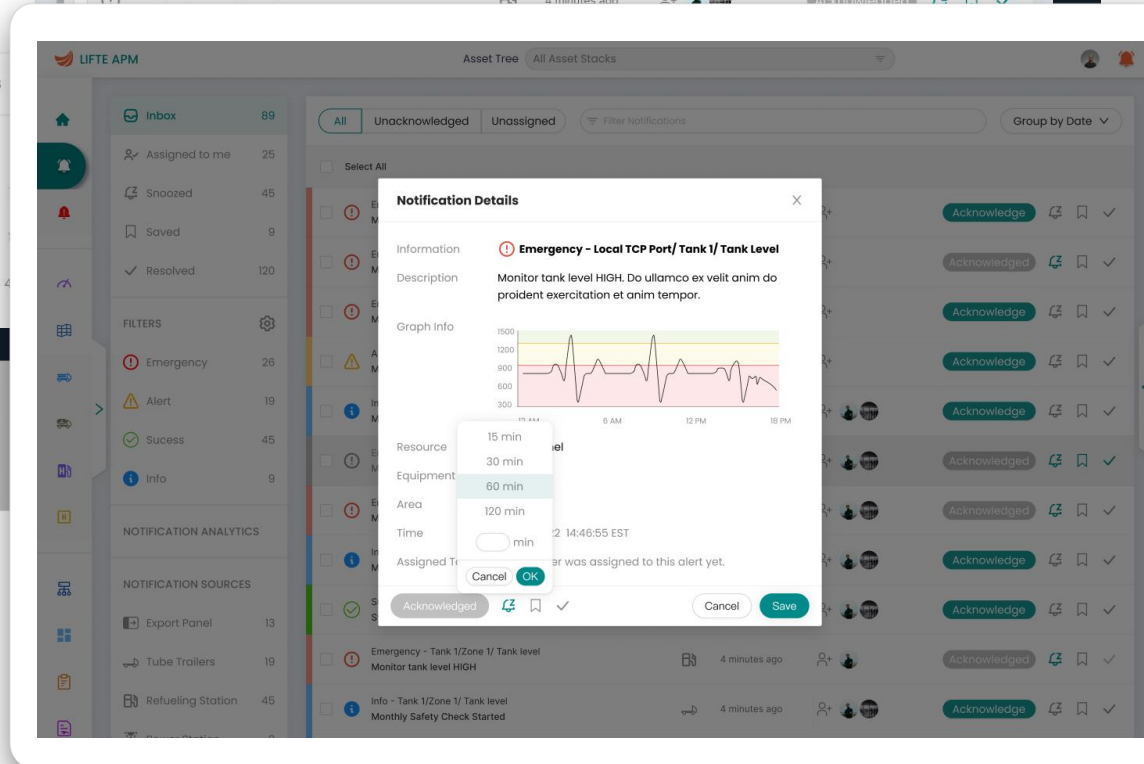


Condition-based Alarms & Notifications

Receive alarms from custom thresholds set on data

Acknowledge, snooze, group, suppress, bookmark, and silence notifications

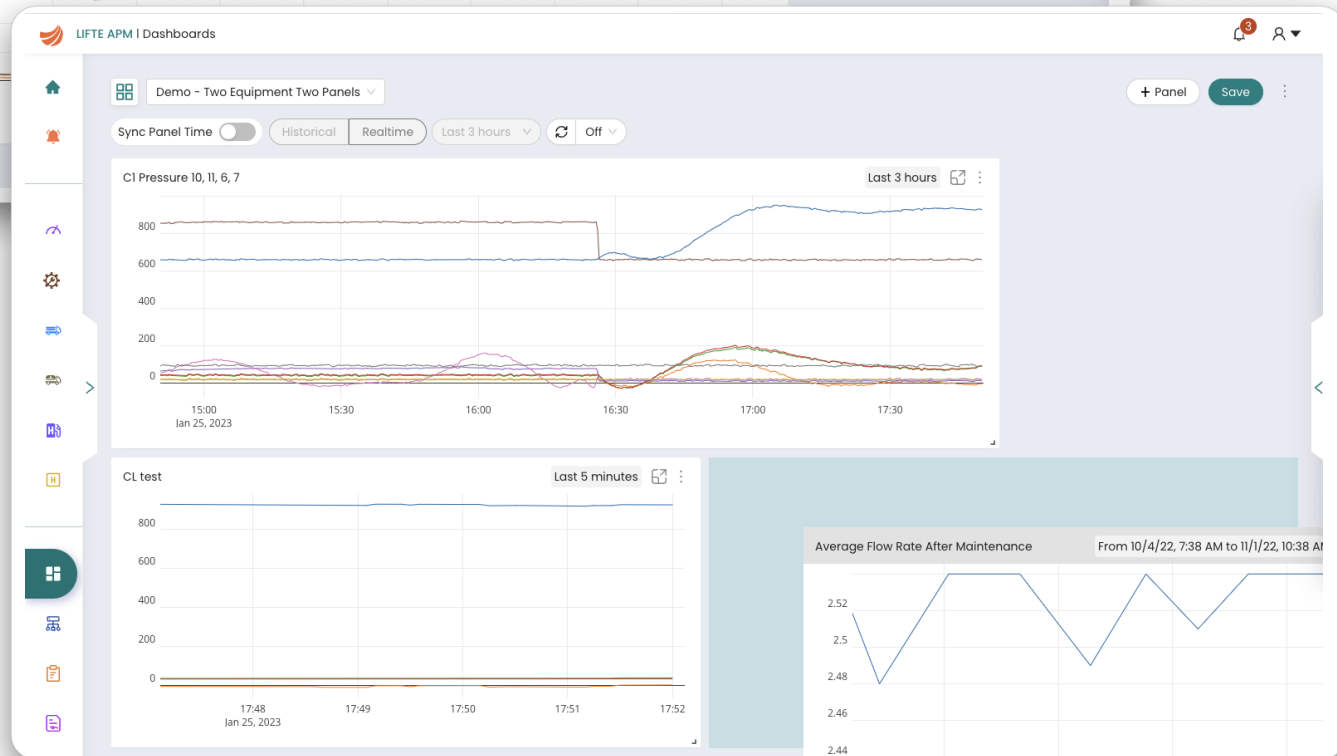
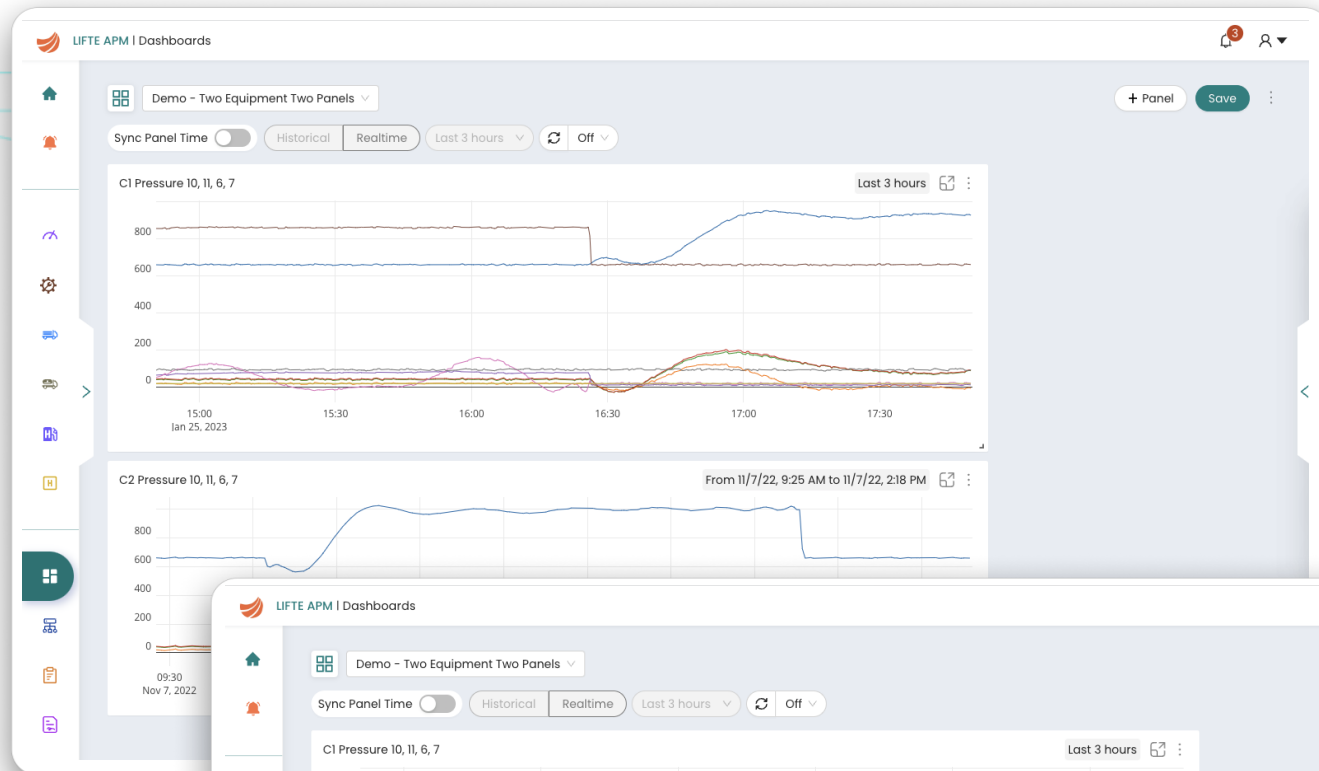
Assign notifications to others for issue traceability and collaboration



Target User Segment

Operations engineers who set custom threshold for monitoring and preventative maintenance

Reliability engineers who set lifecycle counts on equipment

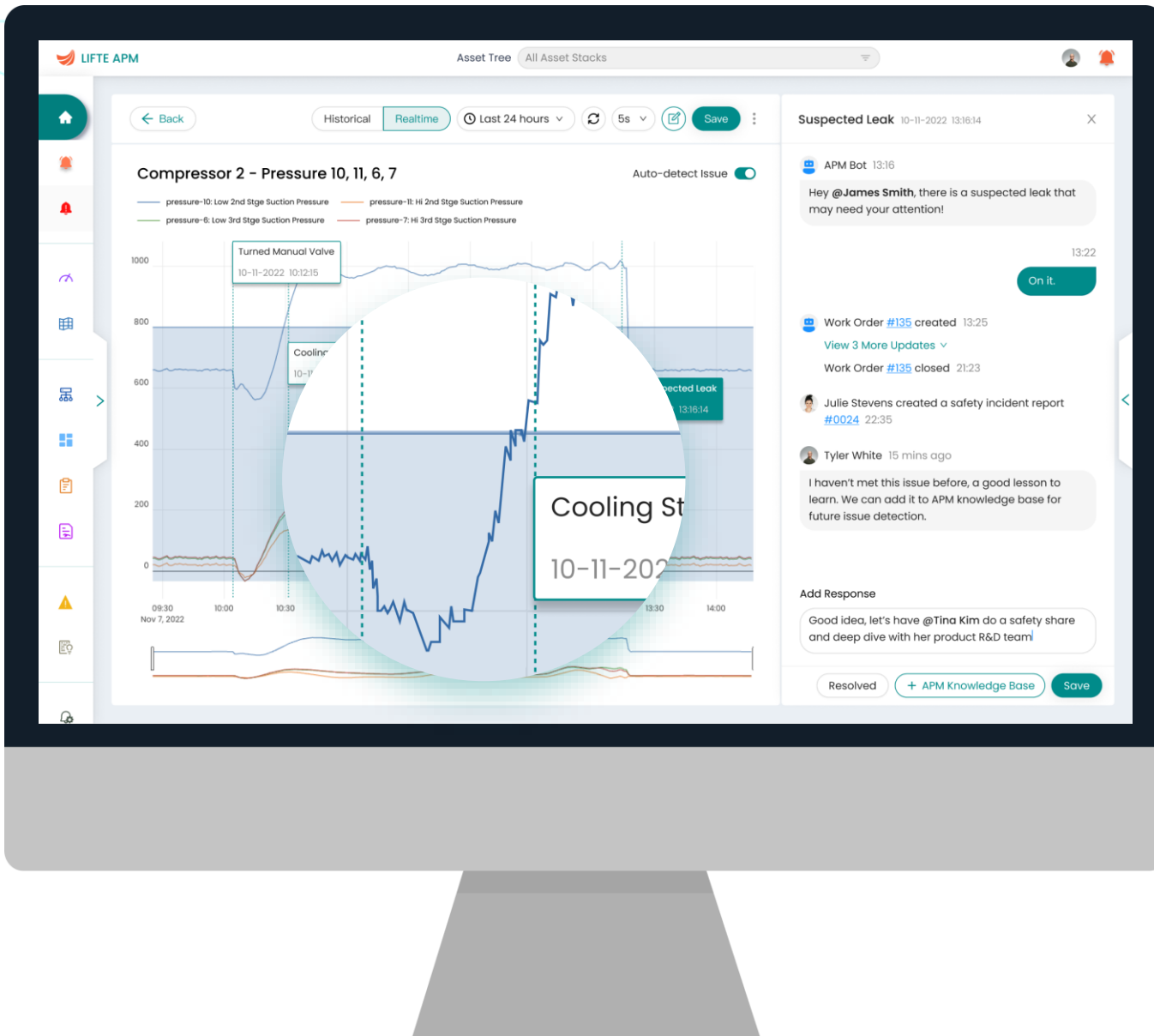


Fast & Simple Dashboard

Intuitive dashboards focused on speed and ease of use

Select from custom panels with individual time control: ideal for hydrogen use cases

Data structure built for fine-grain control of data access permission and share control

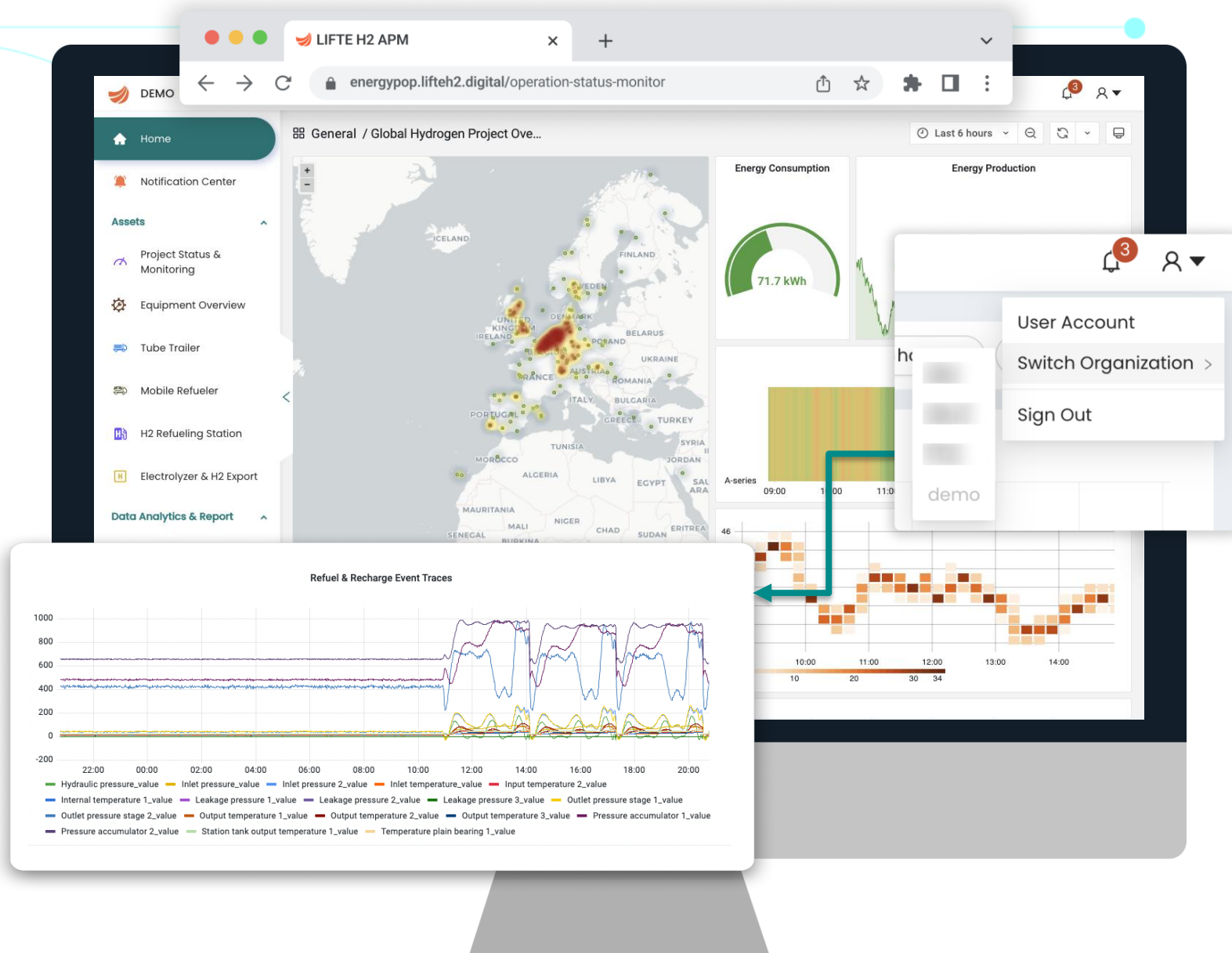


Graph Annotation

Create annotations on panels

Highlight key area of interest for sharing and reporting

Collaborate on event markers within specific data scope



Org Switcher & Multi-tenancy

URL-based multi-tenancy and organization switcher

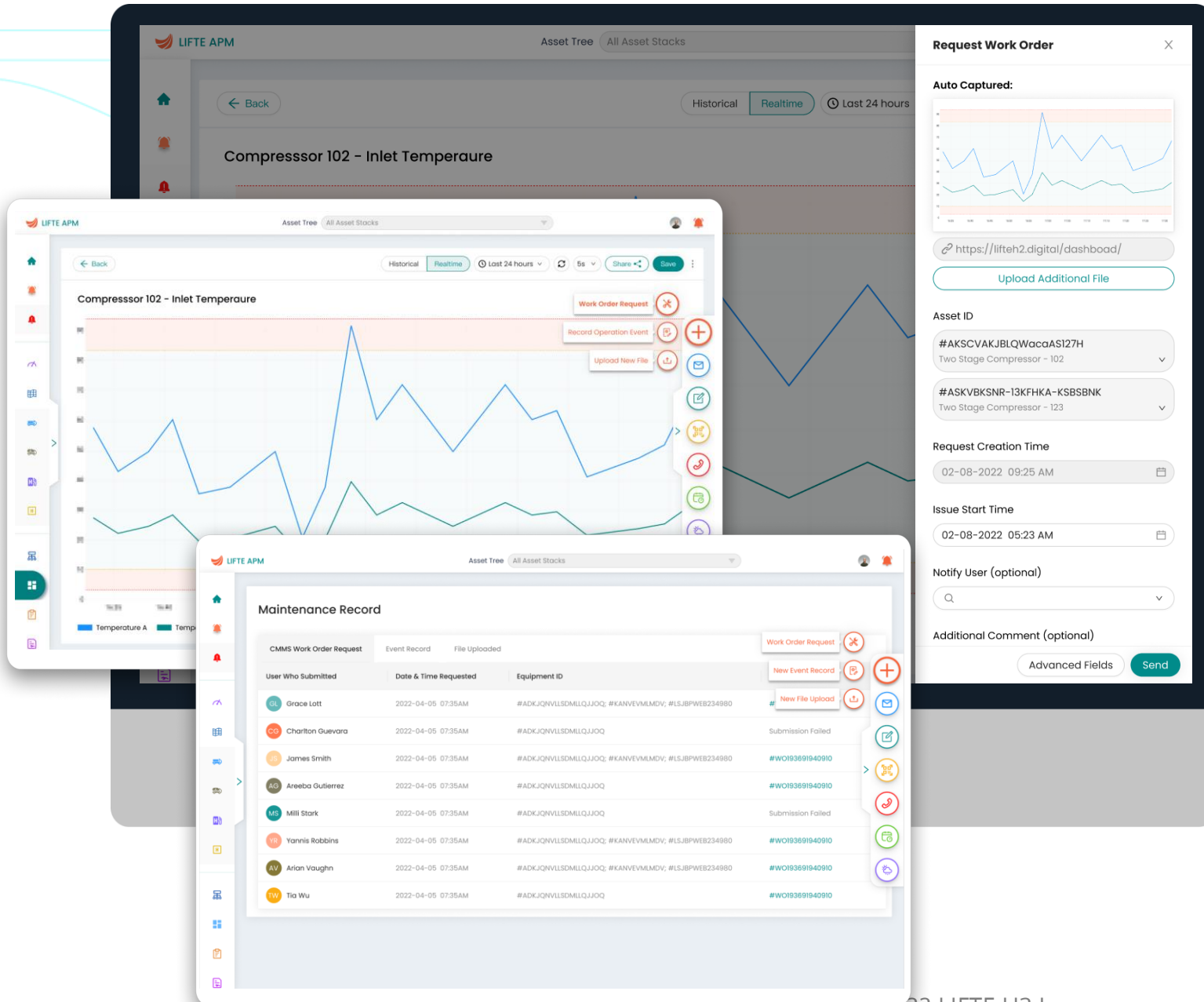
Data store and ownership segregation with ISO and SOC 2 certifications

Org-specific feature flags, user roles, permissions, and grants

Key Use Case

An equipment OEM reliability engineer can easily collaborate with multiple clients and switch to each client's tenant for data access with pre-baked permissions and real-time updates.

Act!

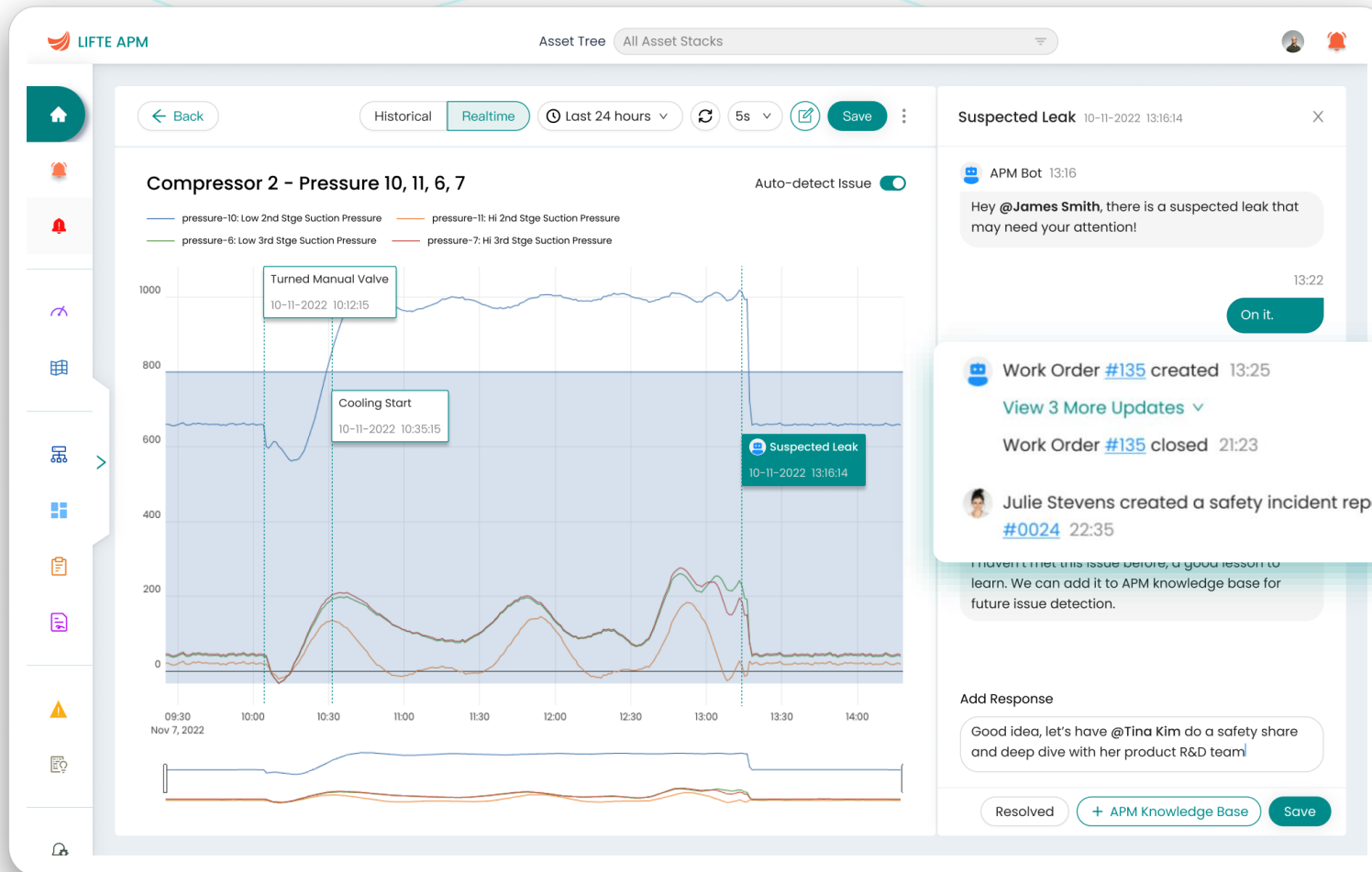


Request Work Order with Live Data to Maintenance

Fast work order request with embedded live data screenshot and APM link to maintenance system and crew

Prefilled with context and annotations for efficiency with minimal input from user

Bridge the gap between the maintenance system and operational live data



Work Order, Reporting and LFI Integration

Track every step of the maintenance intervention

Create a record of the intervention

Store safety and incident related data for automatic use and integration

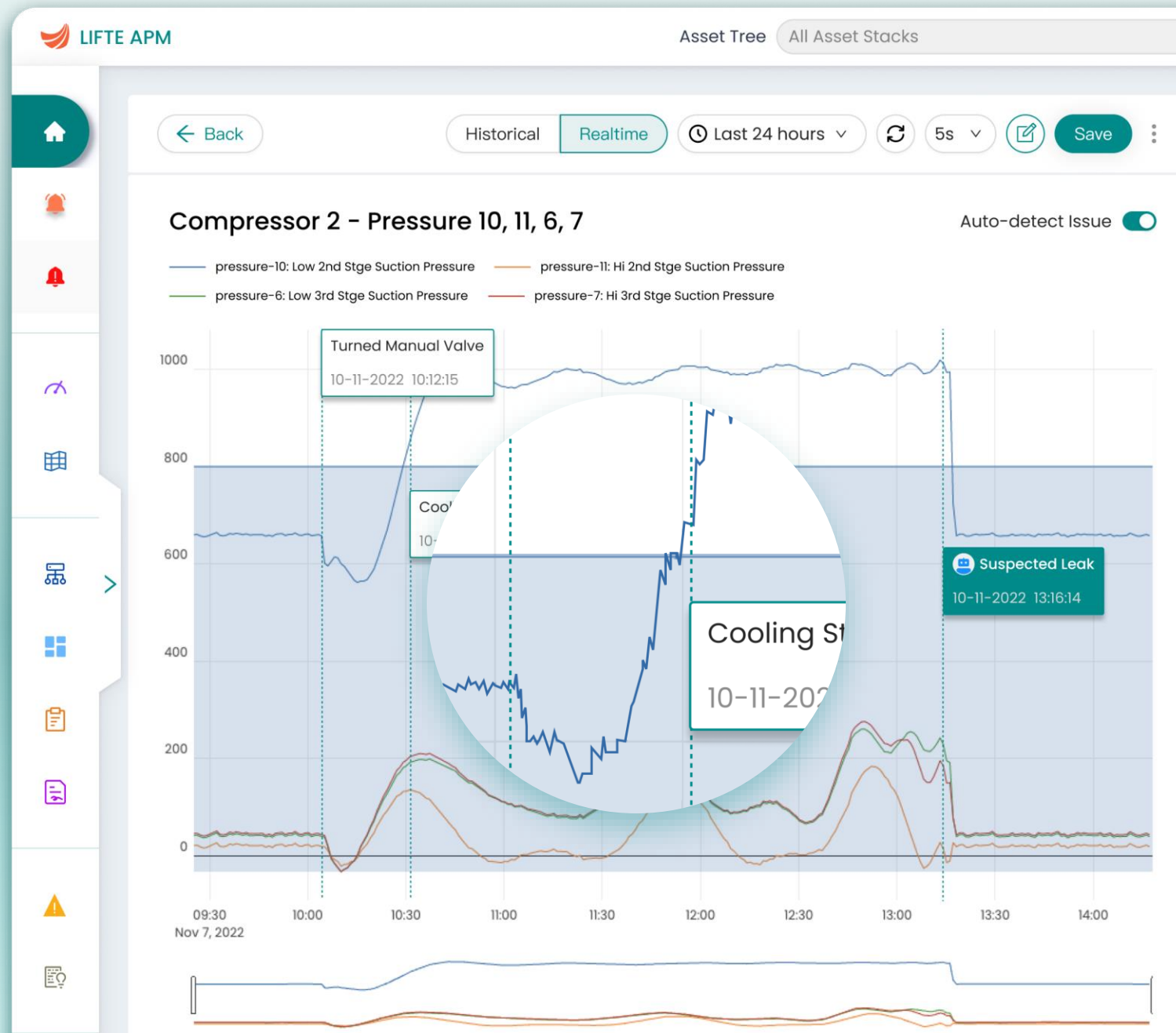
Learn for the future

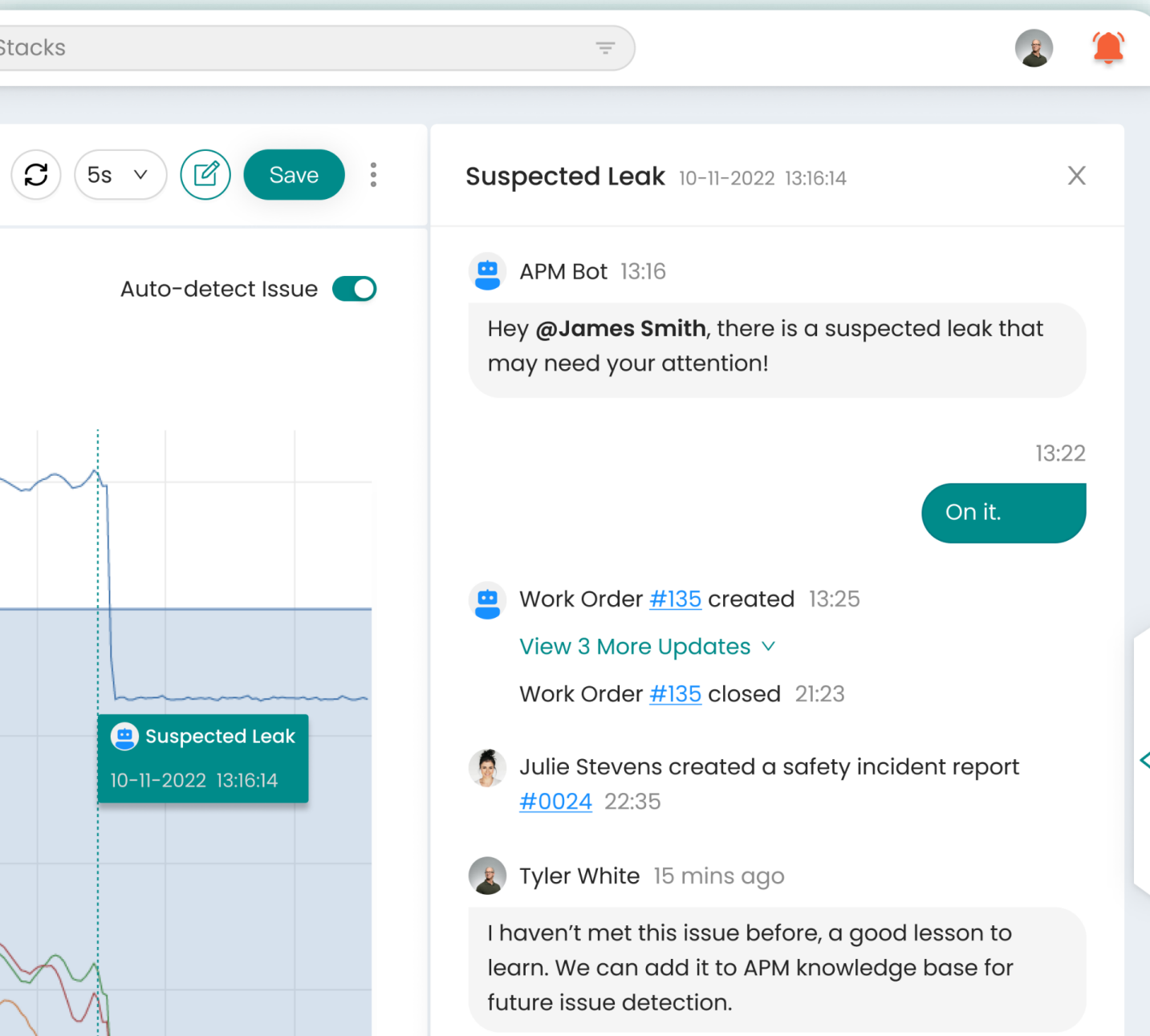
No data left behind: access all your data live in one place

Overlay ultra-fast asset data streams (10-500hz) with alerts and manual events, no coding or VPN required

Overlay operational data with reference data – e.g. from FAT or historic operations

Compound your live data with historic safety data (incidents, frequency, ...)





ChatAPM: predictive maintenance powered by H2 expert insights and APM Bot

Gain insights and advice on complex challenges from LIFTE's H2 expert network, or let APM Bot detect issues and anomalies after learning from your APM knowledge base

Goal: increase the performance of your assets

LIFTE APM Feature Overview

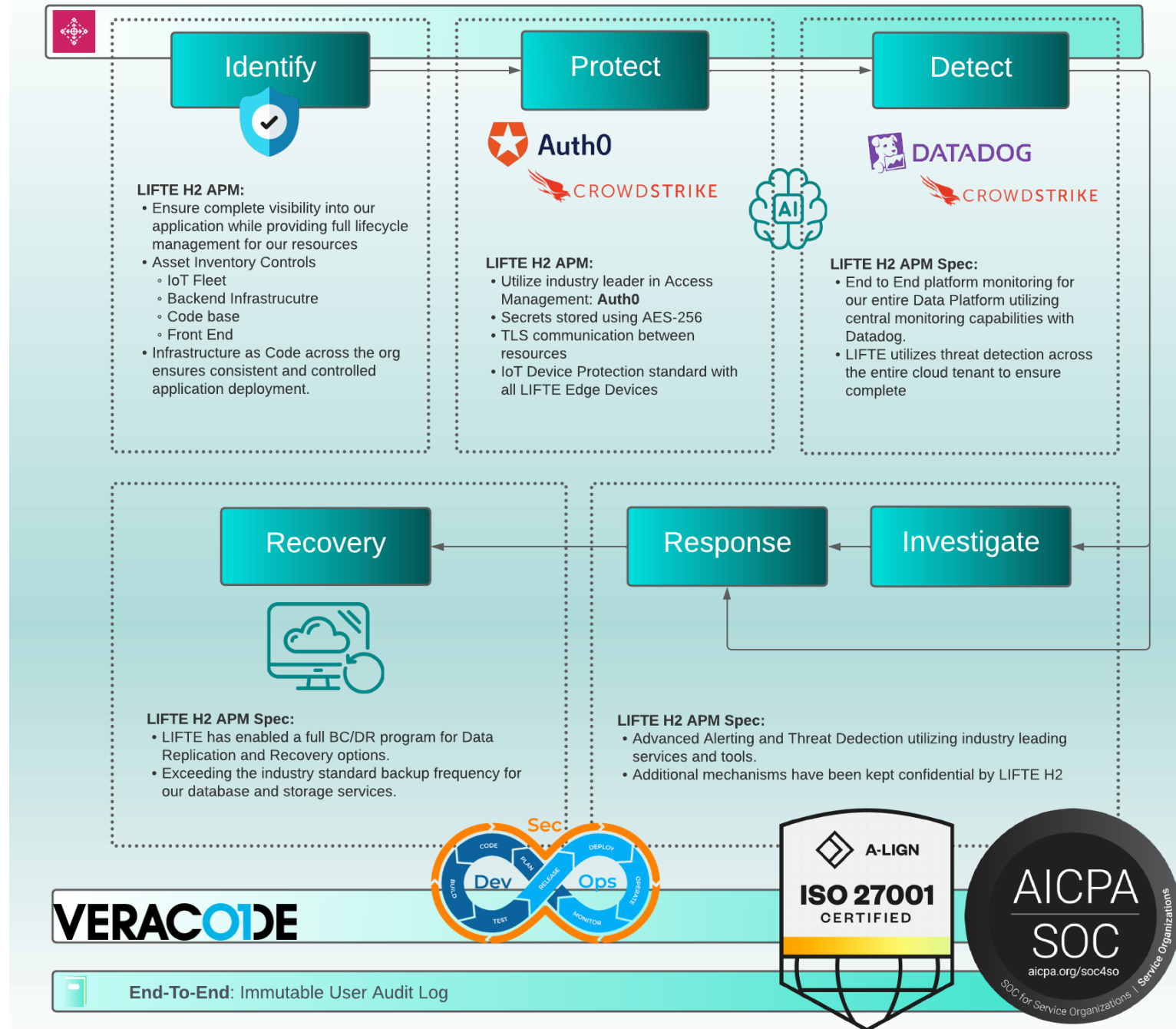
* Status as of March 7th, 2023



But... is it safe?

Best-in-class security & compliance

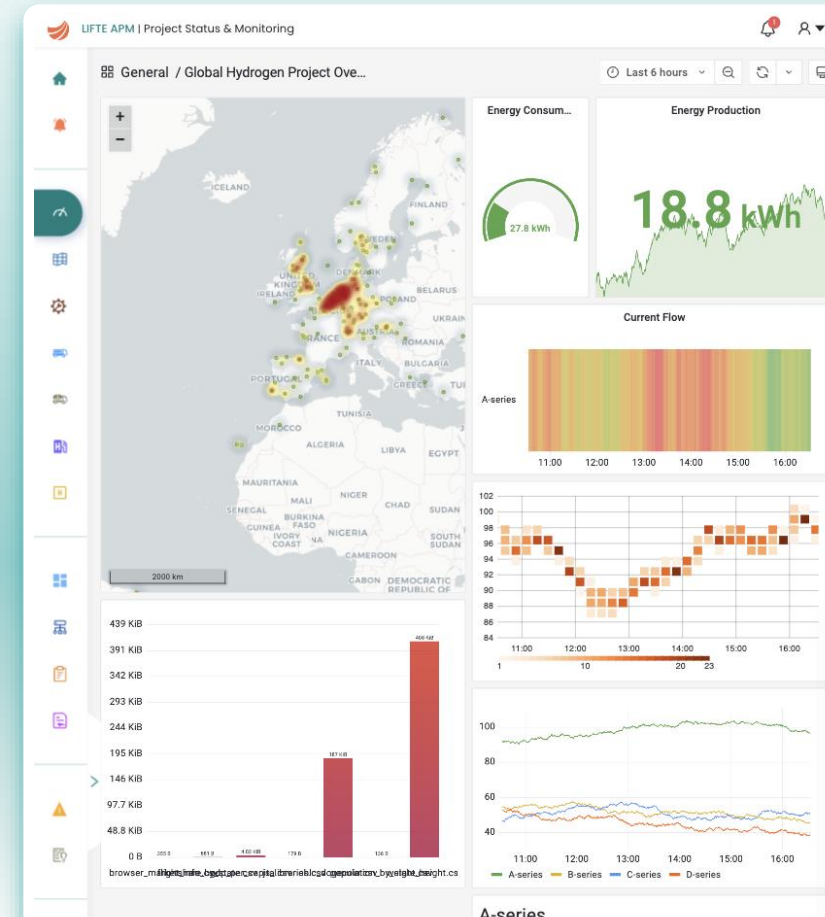
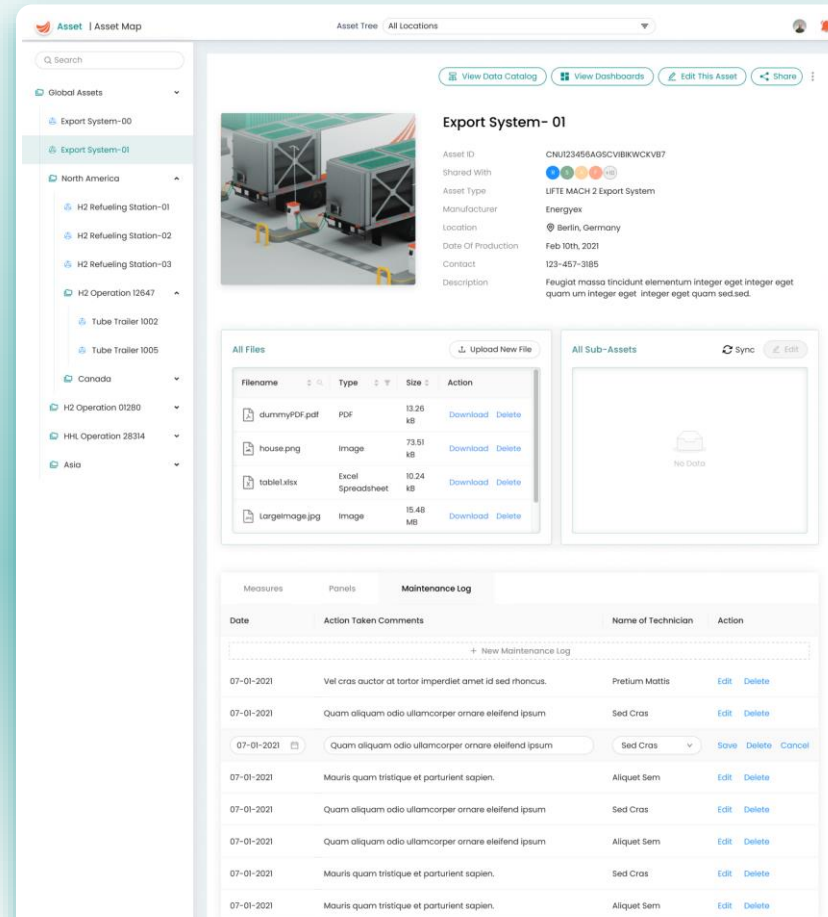
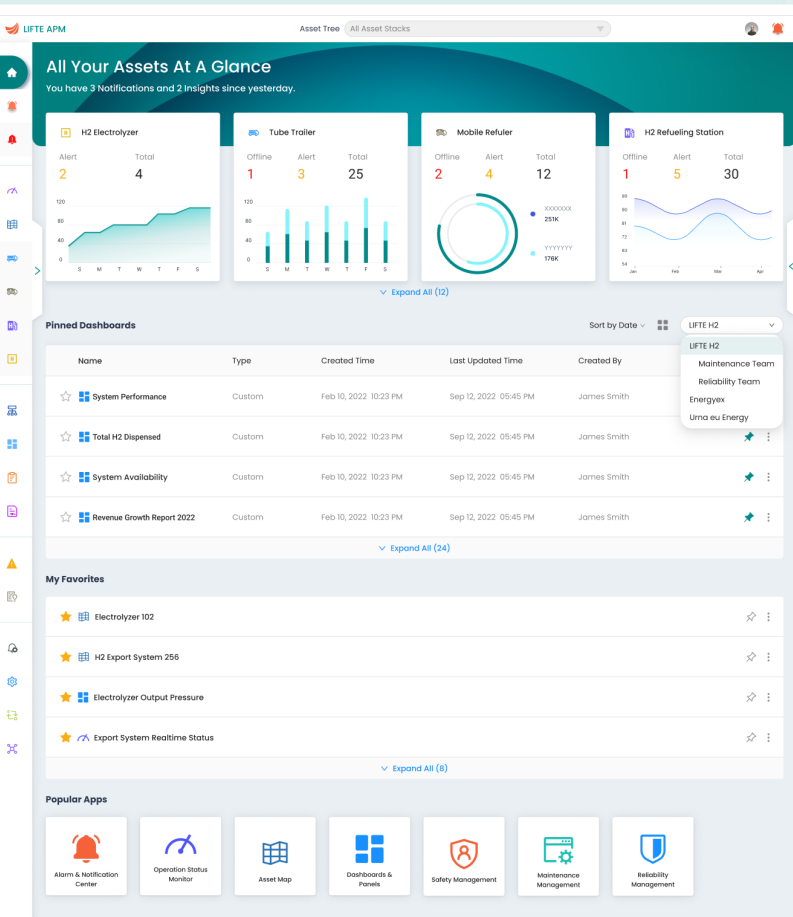
- ISO 27001 & SOC2 Type 1 certified; SOC2 Type 2 & ISO 9001 in progress, exp. 2H 2023
- Battle-tested by world's leading energy companies IT & OT with field deployments
- SSO & federation (e.g., AD, Okta)
- X.509 device certification for mutual authentication and authorization
- Security & architecture partnership with Veracode & AWS
- 100% infrastructure-as-code (IaC) for maximum auditability



Summary

Showcase your data with APM's powerful analytics and visualization tools

Whether you are a technical expert or a department lead, APM is designed to streamline your digital journey with effortless reporting in a unified interface

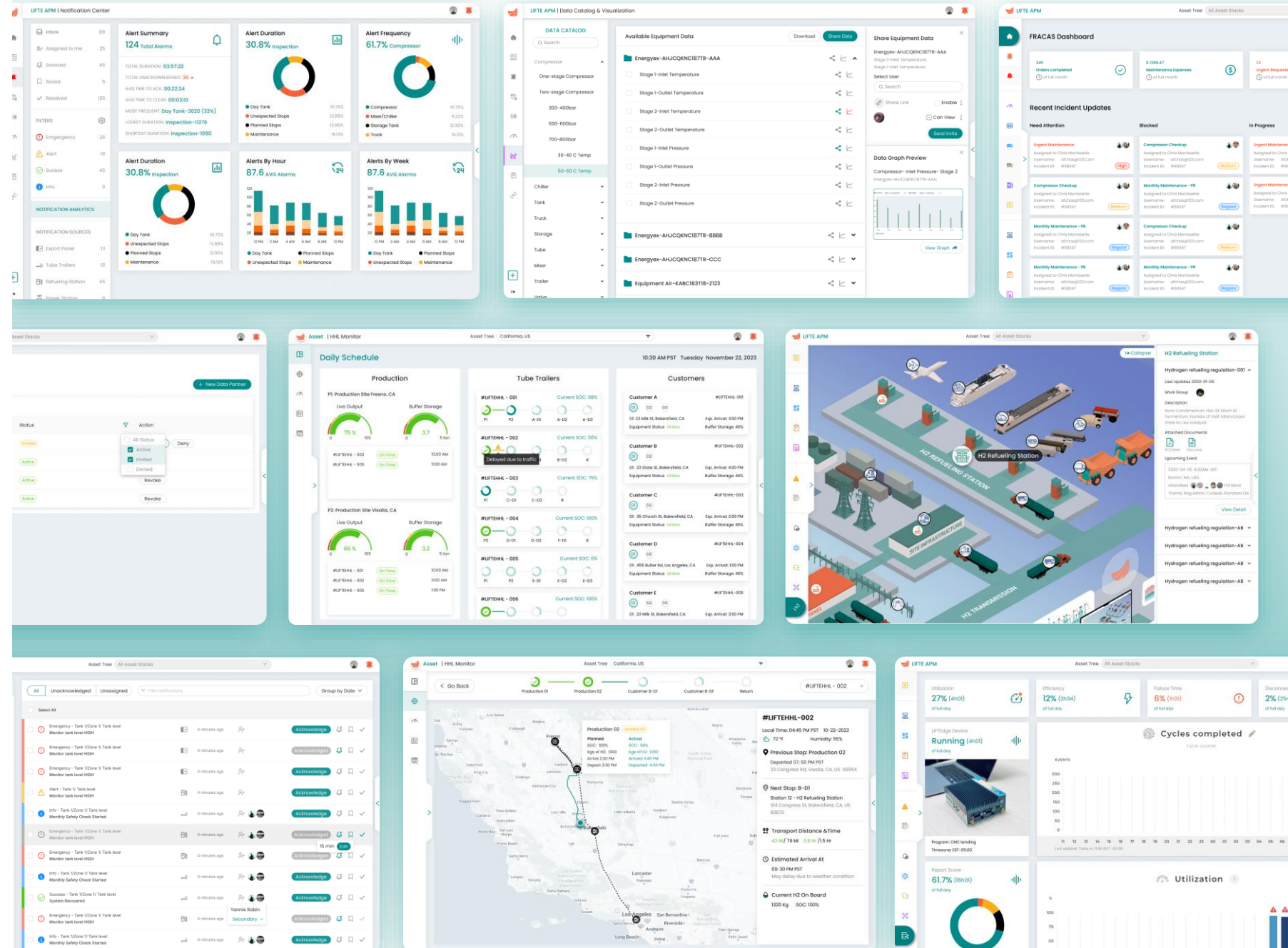


Customization + Integration

LIFTE Digital brings our experience to you with flexible customization options and deep integration with your existing systems

- ➔ 2.5D Value-chain Visualization
- ➔ H2 Transport Optimization
- ➔ Reliability & FRACAS Process Management
- ➔ Safety System Integration

We look forward to working with you as your H2 digitalization partner



For inquiries on demo, trial, and managed APM services, please contact:

Paul Karzel
MD Berlin Office
Paul.Karzel@lifteh2.com
+49 176 821 95 410

Richard Zhang
Head of Digital
Richard.zhang@lifteh2.com
+1 (617) 286-6372



WWW.LIFTEH2.COM

Boston, US | Berlin, DE