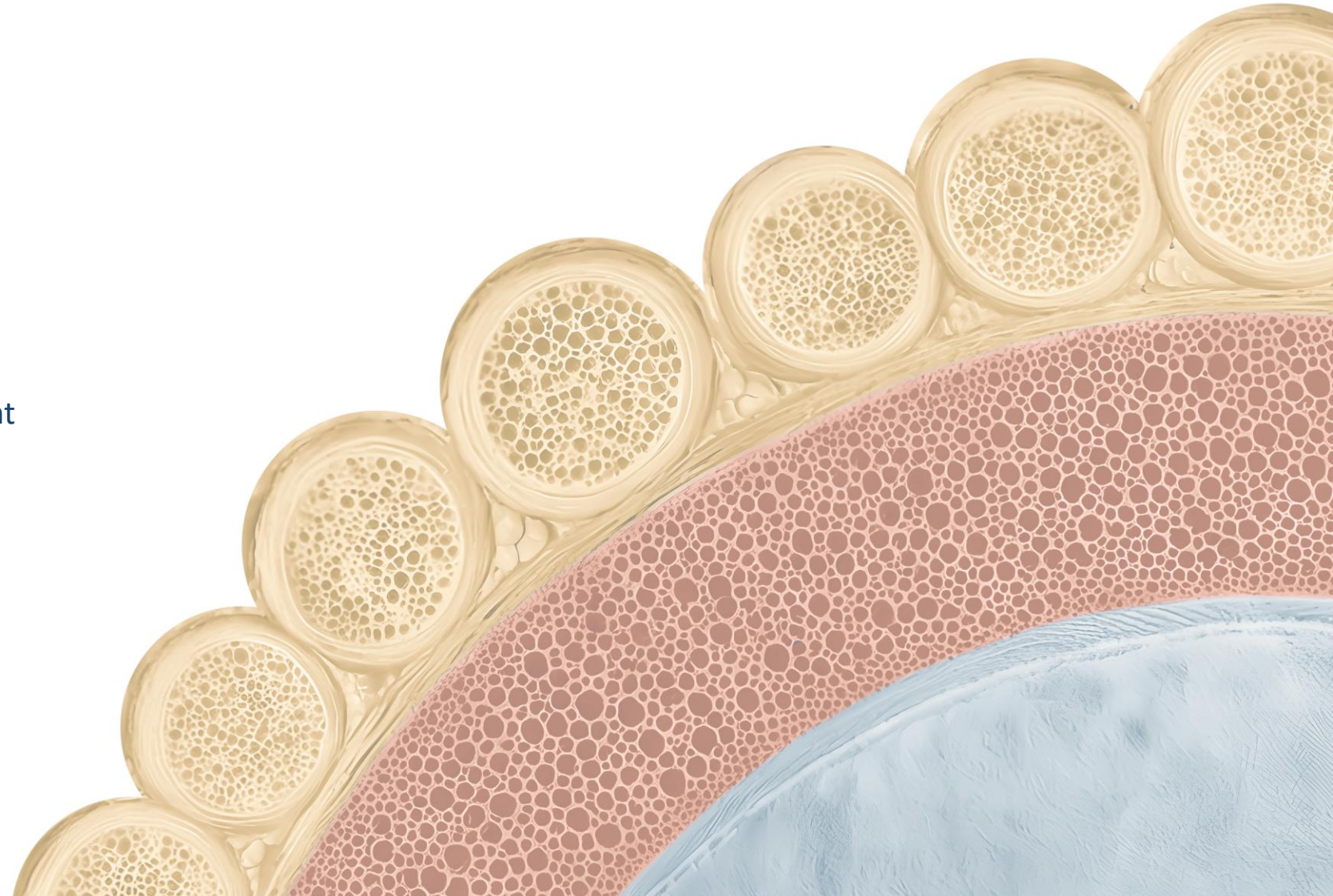
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Putting Science to Work

Enterprise IIoT Platform

Safety & Utility Performance Enhancement

A governed industrial data foundation



01 · PROJECT TIMELINE

From foundation design to enterprise capability



Define

Reference architecture, OT/IT zones, interface standards and access model.

Connect

Priority assets and high-frequency signals onboarded and reconciled with source systems.

Contextualise

PI AF hierarchy, asset templates, metadata, thresholds and data-quality rules established.

Deliver

Safety, utility and energy dashboards; alerts; event frames; DataLink and finance reports.

Operationalise

Governance for access, change control, backup and support; scale-ready reusable patterns.

Evidence of live value delivery began in April 2025, including cold-room early detection and time-stamped alerts.

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02 · PROJECT SCALE

Enterprise reach across sites, assets and operational data

A single platform serving safety, utilities and energy monitoring across Bengaluru, Mangaluru and Hyderabad.

30,783	1,105	10	36	18
tags / data points	connected units	equipment families	DataLink report types	CUF finance reports

Multi-site footprint

Bengaluru: 966 integrated units
Mangaluru: 77 integrated units
Hyderabad: 36 integrated units

The detailed integration register lists 1,079 equipment instances across 48 equipment types; the delivered-capability summary reports 1,105 connected units.

Operational coverage

Safety: FAS, gas detection, cold rooms, fire hydrants, solvent tanks and VOC.

Utilities: chillers, compressors, dryers, pumps, cooling towers and nitrogen plants.

Energy: meters, 11 kV feeders, transformers and diesel generators.

Delivery model

3 full-time FTE supported by cross-functional stakeholders for validation, site coordination and platform acceptance.

Reusable connectors, templates and dashboard patterns allow additional equipment and sites to be onboarded without rebuilding the foundation.

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Turn fragmented operational signals into trusted decisions

The programme combines safety assurance, utility performance, engineering productivity and scalable digital enablement.

Secure & standardise

Create a secure OT-to-IT integration pattern, standard asset hierarchy, trusted metadata and governed access.

Monitor in near real time

Provide role-based visibility of asset state, process parameters, alarms, communication health and energy use.

Act before impact

Use thresholds, event frames and predictive logic to detect anomalies early and trigger targeted escalation.

Accelerate investigation

Align historical trends and influencing parameters to shorten fault isolation, root-cause analysis and response.

Optimise assets & utilities

Enable kW/TR, specific power, availability, running hours and consumption-versus-forecast analysis.

Create a reusable foundation

Expose curated industrial data for reporting, machine learning, digital twins and cross-site benchmarking.

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A contextualised industrial data product, not another dashboard

The differentiation is the reusable combination of brownfield connectivity, pharma-grade governance and value-led deployment.

Context before visualisation

Every tag is bound to a seven-level asset hierarchy carrying site, block, floor, equipment, parameter, units, thresholds and severity.

Self-monitoring reliability

Communication is monitored end to end from equipment to PLC, Kepware and PI; data loss beyond one minute raises a fault event.

Predictive safety logic

Cold-room logic watches approach bands, rate of change, sustained drift and dwell time so teams can act before a critical limit is crossed.

One spine, many users

A common navigation model serves leadership, business units, operating units, blocks and equipment-level investigations.

Finance-ready utility data

The same historian and asset model generates 18 CUF finance reports on the established 20-to-20 billing cycle.

Reusable scale-up pattern

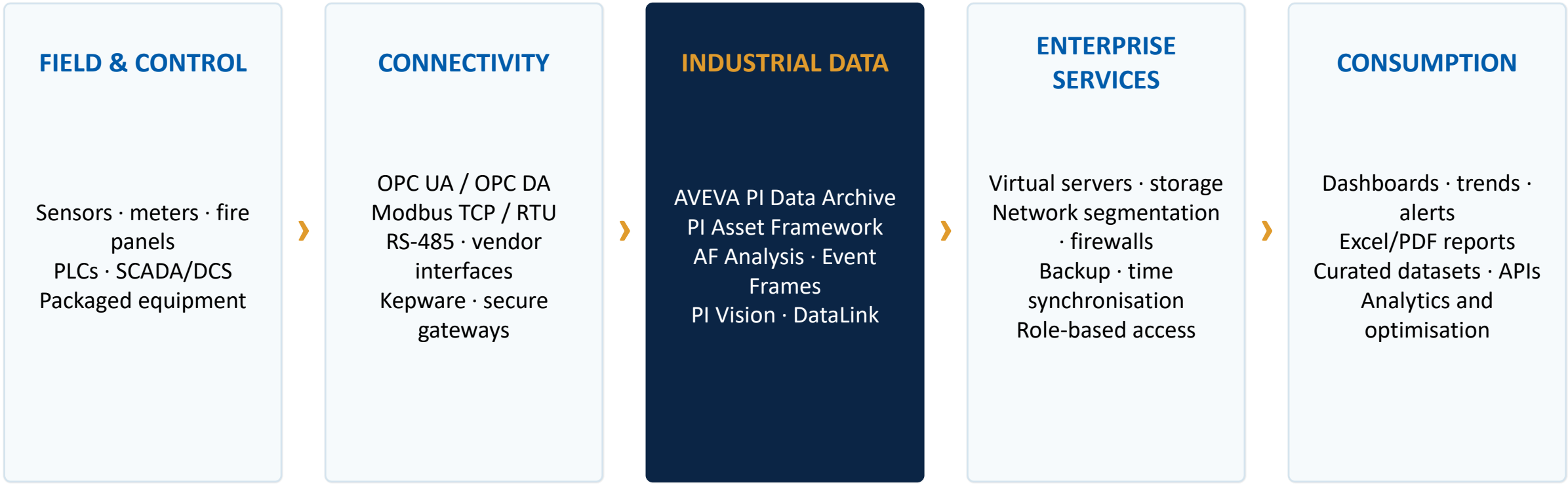
Connectors, asset templates, calculations, event logic and dashboard patterns are reused across equipment families and sites.

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A layered architecture from field signal to governed insight

Read-only acquisition preserves operational continuity while the PI platform historises, contextualises, calculates and visualises.

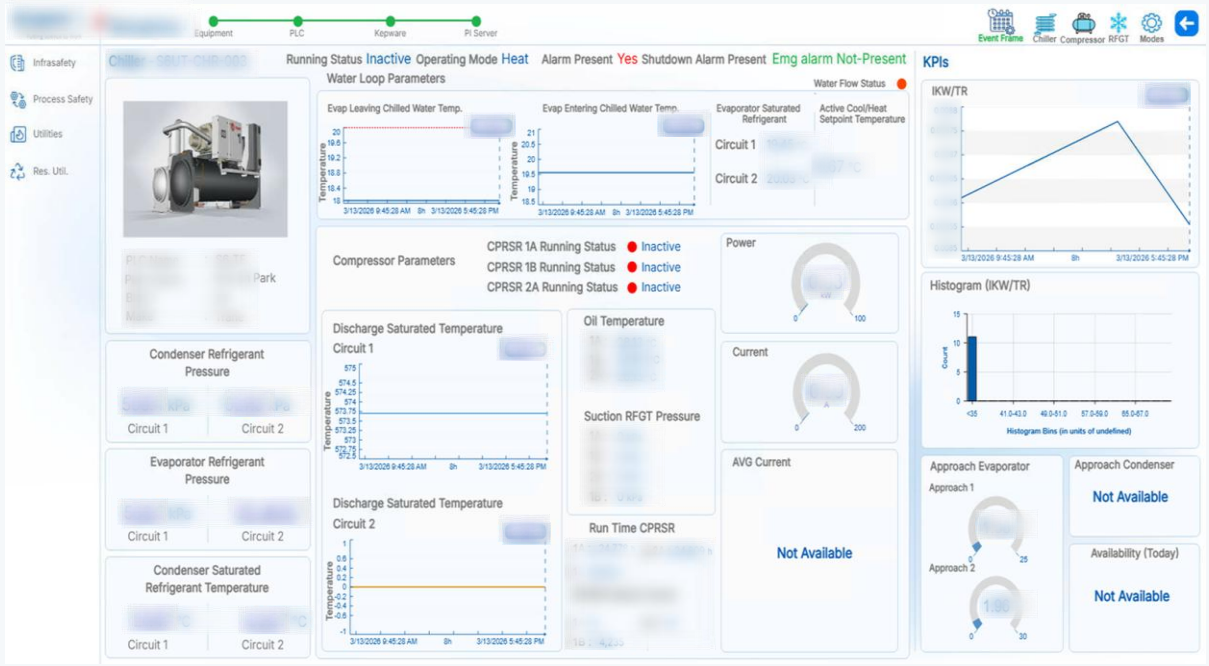


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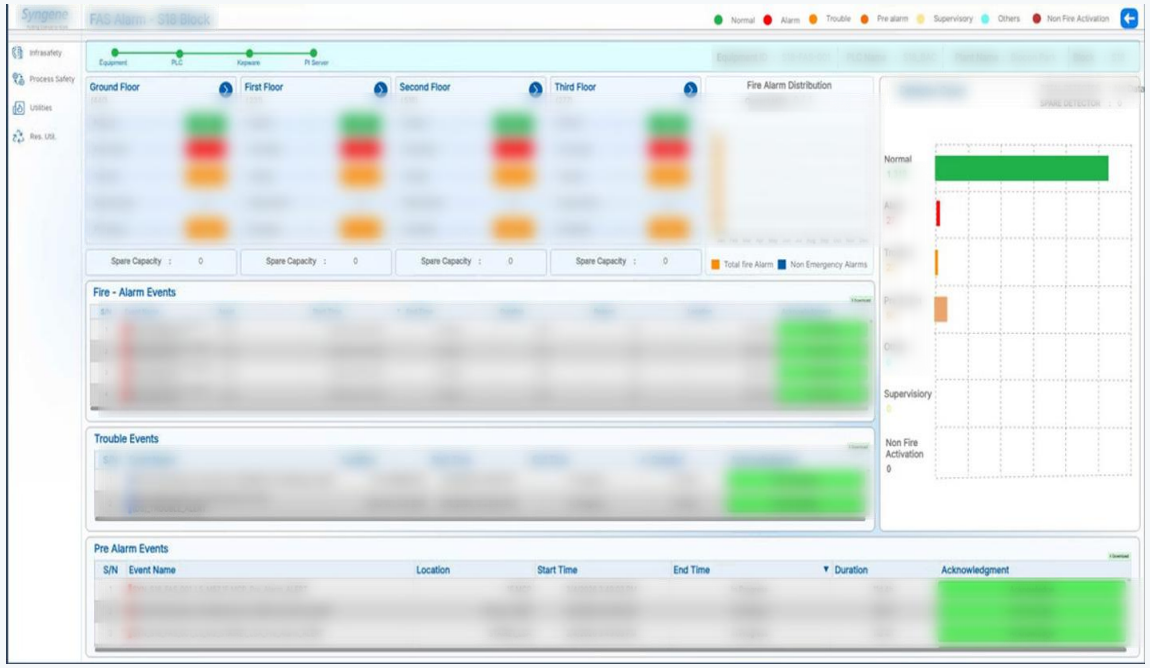
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Safety and equipment monitoring in action

Representative AVEVA PI Vision screens. All displayed values, identifiers and figures are intentionally blurred for IP sensitivity.



Cold-room and safety monitoring



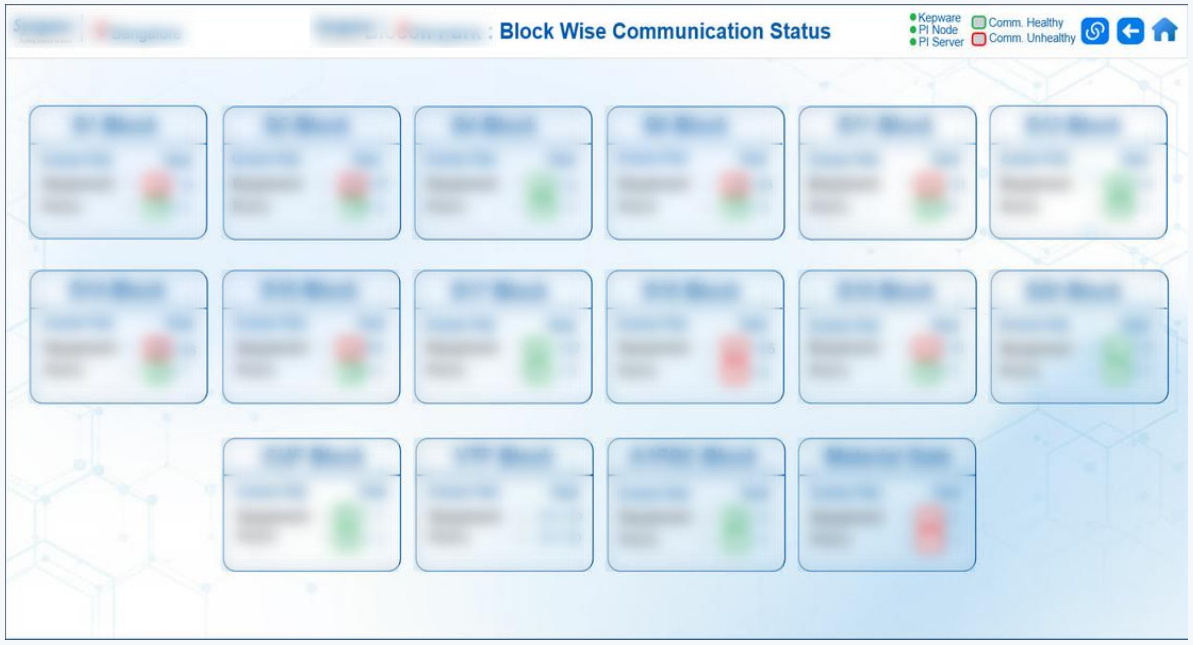
Fire alarm safety and utility overview

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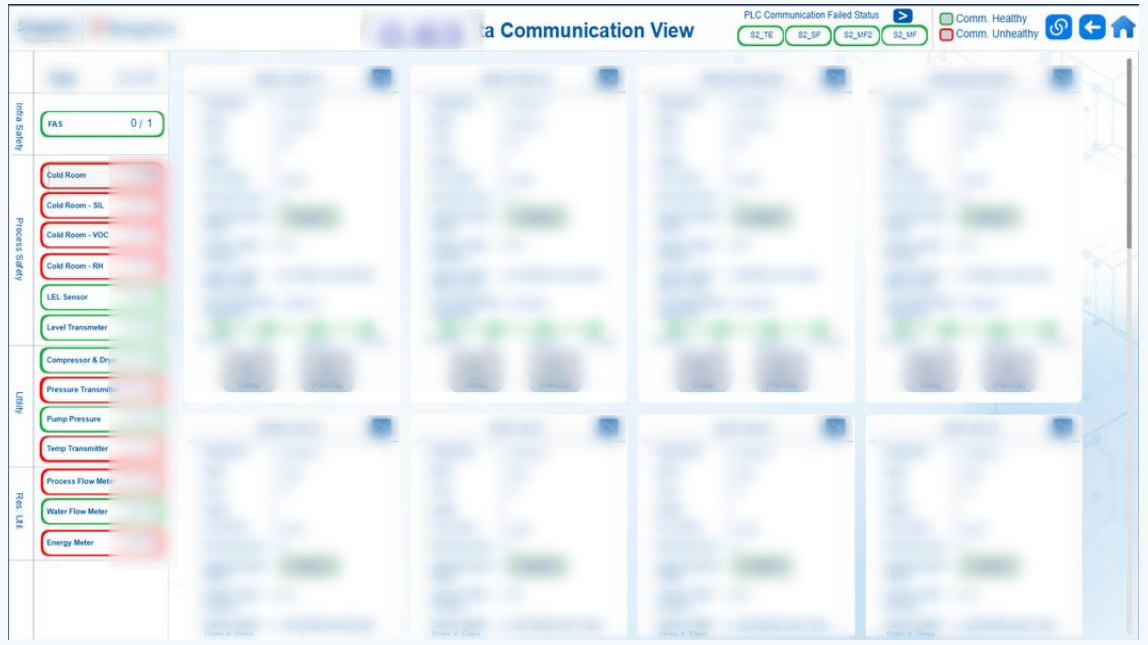
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Connectivity and enterprise visibility

The dashboard estate provides a common operational view while preserving source context and controlled access.



Equipment performance dashboard



Connectivity and communication health

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