Mendygo

Building Managment System 4.0

Efficiency
Automized

Intelligence
Centralized

Sustainability
Realized

Beyond Traditional Automation

Buildings have evolved. Your systems should too. Modern facilities are intricate ecosystems. You manage energy, water, HVAC, and security simultaneously. Yet, traditional Building Management Systems (BMS) are often siloed, technologically outdated, and restricted to on-premise data—leaving you with blind spots.

Break the Silos. Mendygo BMS 4.0 bridges the gap. We replace fragmented spreadsheets with a unified cloud platform. By integrating peripheral systems like Water, Generators, and Busbars into a single dashboard, we transform raw data into a roadmap for operational excellence.
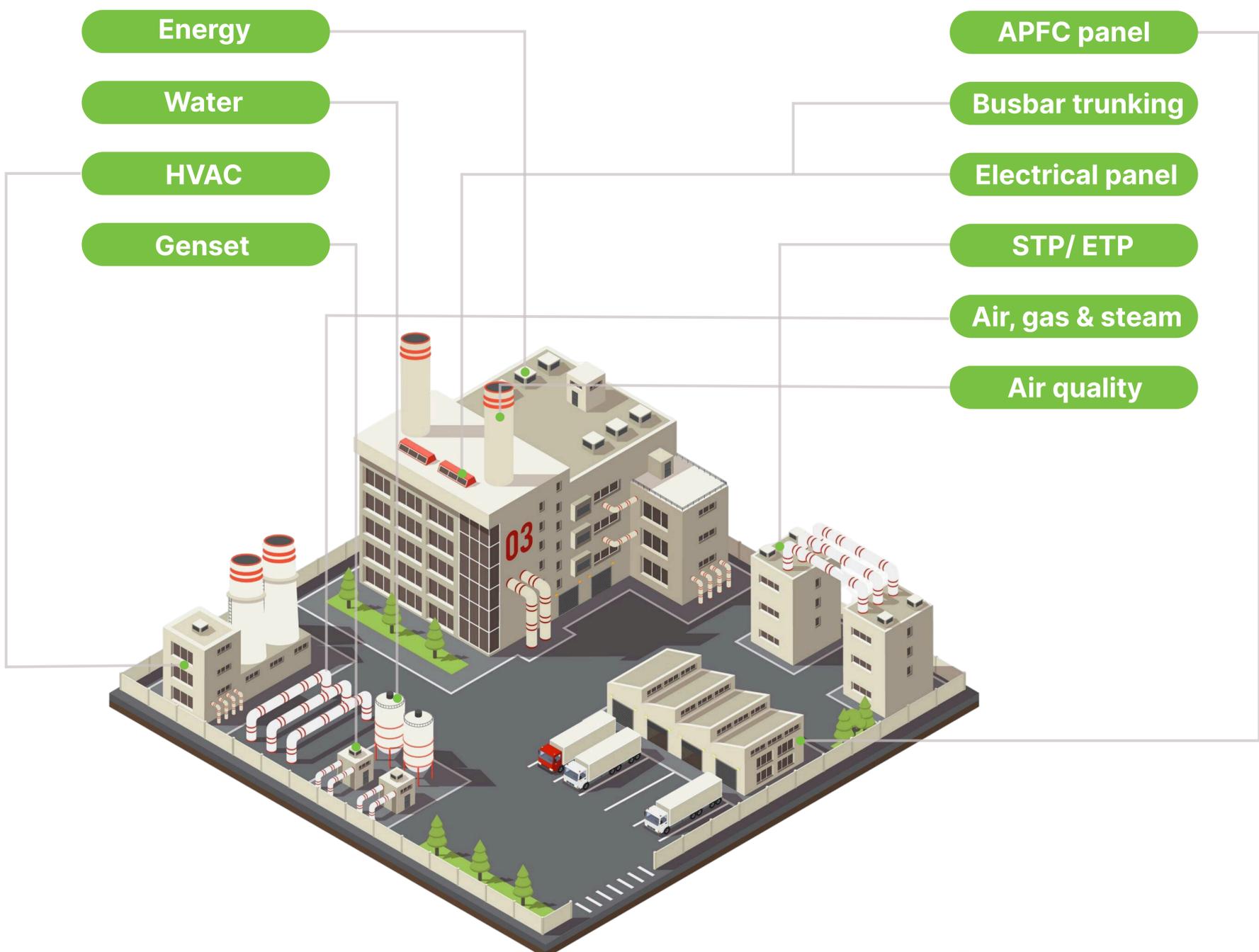
Efficiency
Maximized

Identify consumption spikes instantly. Benchmark performance across equipment and locations to eliminate wastage before it impacts the bottom line
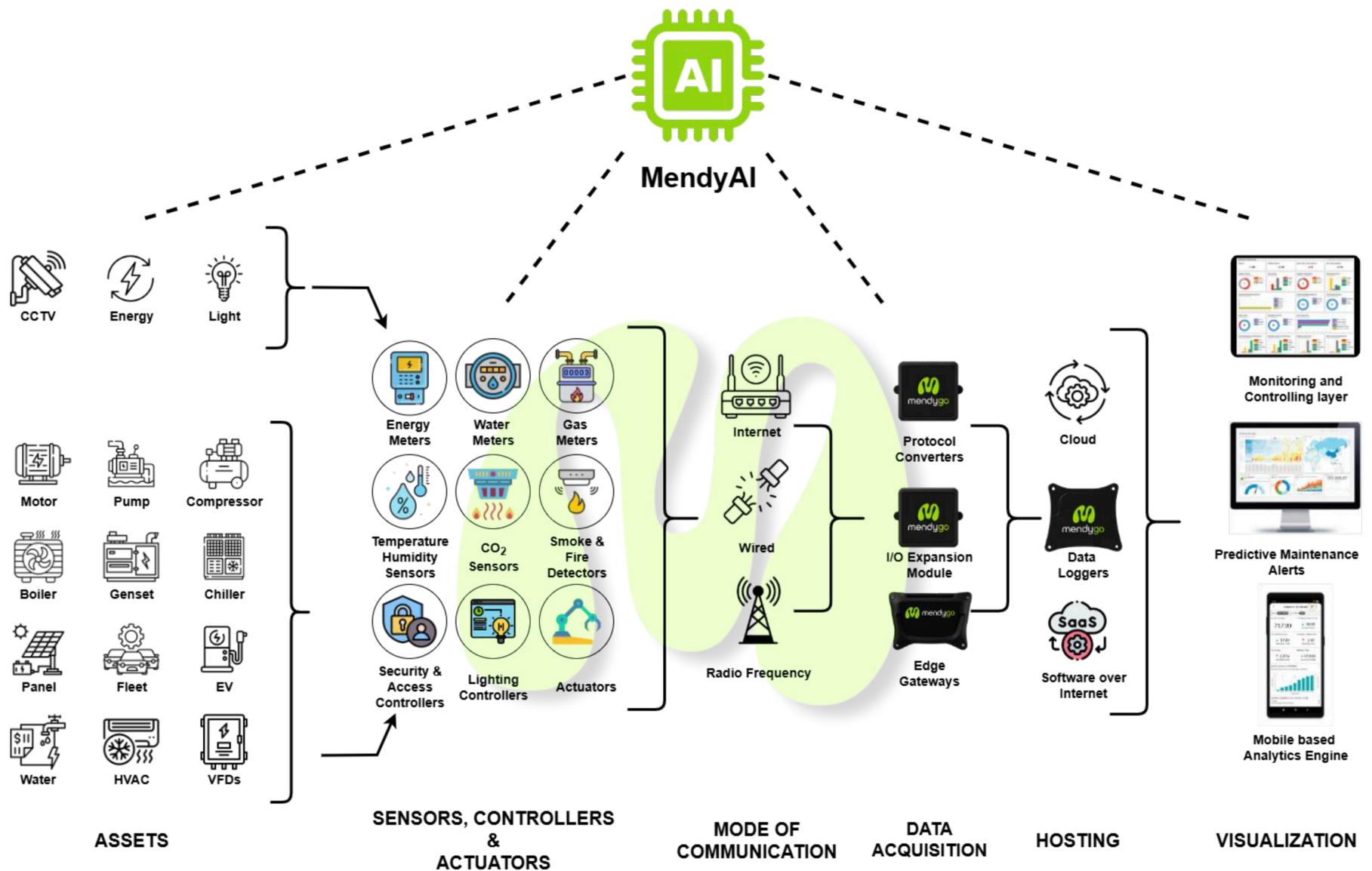
Compliance
Automated

Say goodbye to manual logs. Auto-generate audit-ready reports for ESG, BRSR, and ISO standards, ensuring you meet regulatory goals effortlessly

Reliability
Secured

Move from "Fix it when it breaks" to "Fix it before it fails." AI-driven predictive maintenance prevents expensive breakdowns and extends asset life.

- Energy
- Water
- HVAC
- Genset

- APFC panel
- Busbar trunking
- Electrical panel
- STP/ ETP
- Air, gas & steam
- Air quality

Architecture

MendyAI

CCTV	Energy	Light	

Motor	Pump	Compressor
Boiler	Genset	Chiller
Panel	Fleet	EV
Water	HVAC	VFDs

ASSETS

Energy Meters · Water Meters · Gas Meters

Temperature Humidity Sensors · CO₂ Sensors · Smoke & Fire Detectors

Security & Access Controllers · Lighting Controllers · Actuators

SENSORS, CONTROLLERS & ACTUATORS

Internet · Wired · Radio Frequency

MODE OF COMMUNICATION

Protocol Converters · I/O Expansion Module · Edge Gateways

DATA ACQUISITION

Cloud · Data Loggers · Software over Internet

HOSTING

Monitoring and Controlling layer · Predictive Maintenance Alerts · Mobile based Analytics Engine

VISUALIZATION

Application

● **Electrical & Power Infrastructure**
Monitor Busbar joints, APFC panels, and Active Energy. Track SEC, THD, and thermal hotspots to prevent electrical failure.

● **HVAC Management**
Real-time control of Chillers, AHUs, and VFDs. Uses adaptive setpoints and predictive analytics to extend equipment lifecycle.

● **Water & STP/ETP**
Track distribution and quality parameters (pH, TDS, COD, BOD). Detects leakages and monitors filtration for compliance.

● **Genset & Compressed Air**
Optimize Genset fuel/loading and Compressed Air pressure. Identifies pipeline leaks and inefficiencies instantly.

Solution layers

Sensing & processing

Smart edge appliance

Smart Edge Gateway

Gateways

| Series 1-100 | Series 1-200 | Series 2-100 | Series 2-200 |

Protocol converter

Protocol Converter

Meters & controllers

| Water Meter | Gas Meter | Power Monitoring Unit | Controller |

Sensors

| Temperature Sensor | Vibration Sensor | Fuel Sensor | Fire Detector |

Visualization & analysis

Dashboards, reports & alerts.
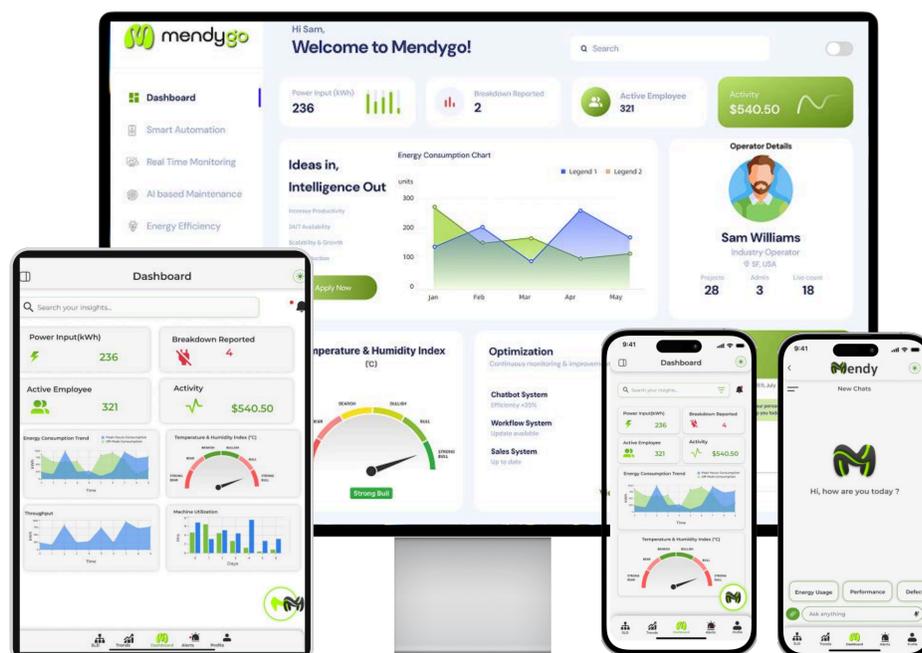
Key features

1 Create a real time digital twin of your facility

Leverage a live, data-driven digital twin to replicate your factory or building virtually. Gain real-time insights, simulate scenarios, and make smarter decisions with a comprehensive view of your facility's operations.

2 Unlock patterns in your data with Trends

Dive deep into historical and real-time data to identify trends, anomalies, and performance insights. Our powerful analytics engine enables you to make data-backed decisions for continuous improvement and optimized operations.
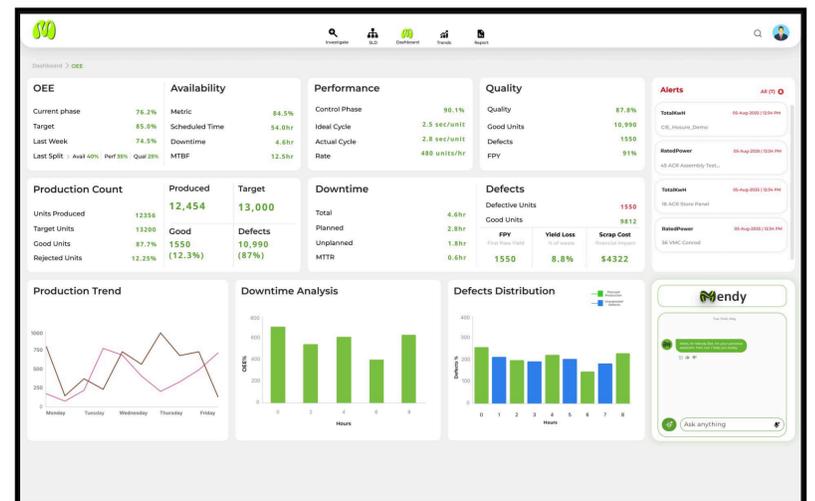
3 Centralised dashboard for unified KPI monitoring

Monitor critical KPIs across systems through a single, intuitive dashboard. Get a unified view of operations and performance metrics in real time to stay informed and in control
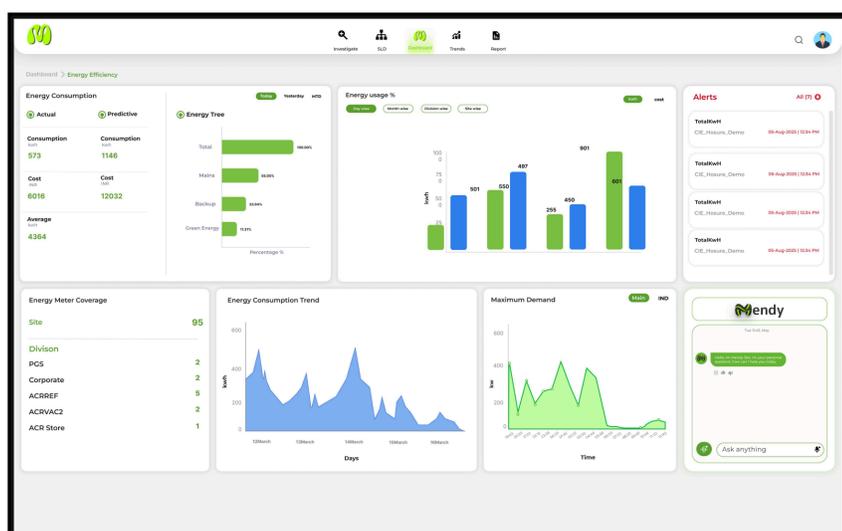
4 Comprehensive reporting at your fingertips

Generate detailed reports, including BRSR and maintain a digital logbook for audit trails. Ensure compliance, track progress, and make data-driven decisions with ease.
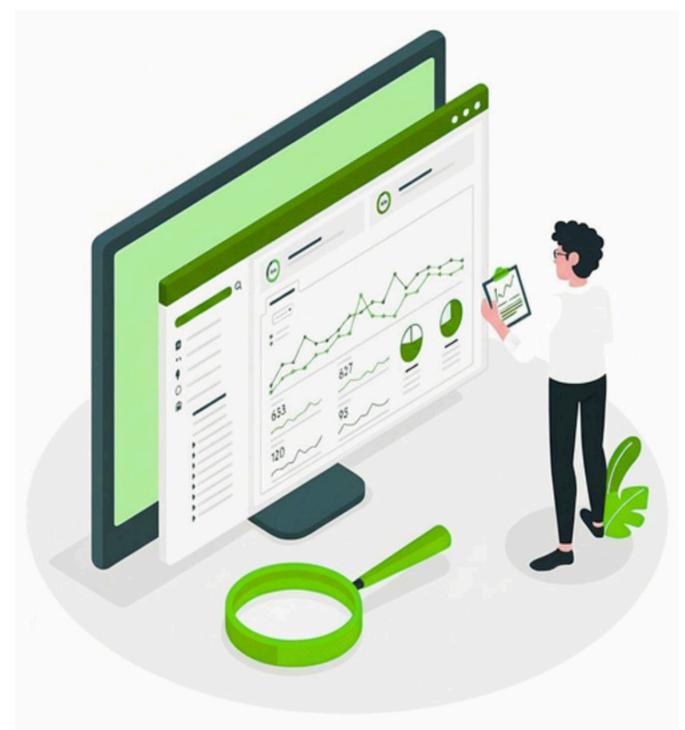
Key features

5 Real-time alerts on WhatsApp & Email

Receive critical notifications instantly via WhatsApp, and email. Set up custom alert thresholds to ensure timely responses and proactive issue resolution.
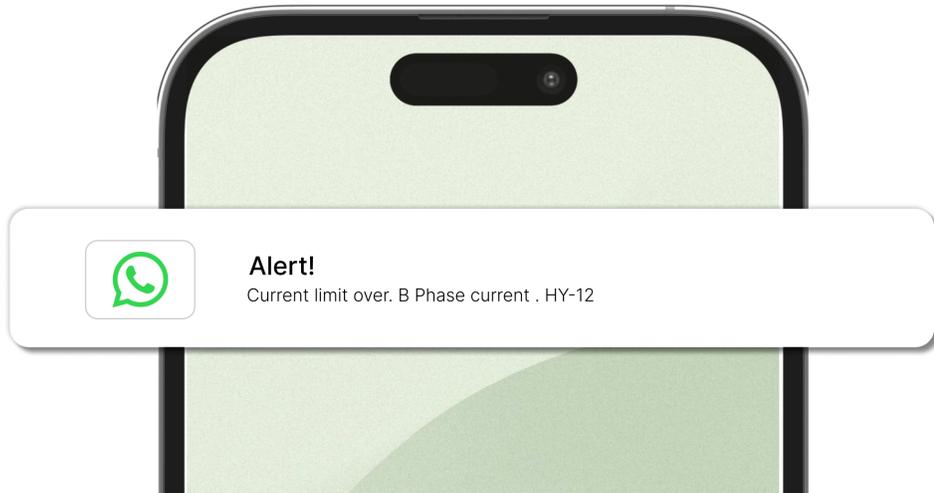
6 From alerts to actionable insights by Investigate

Analyze historical and real-time time series data to understand the root cause of alerts. Pinpoint anomalies, identify trends, and take data-driven corrective actions to prevent future issues.

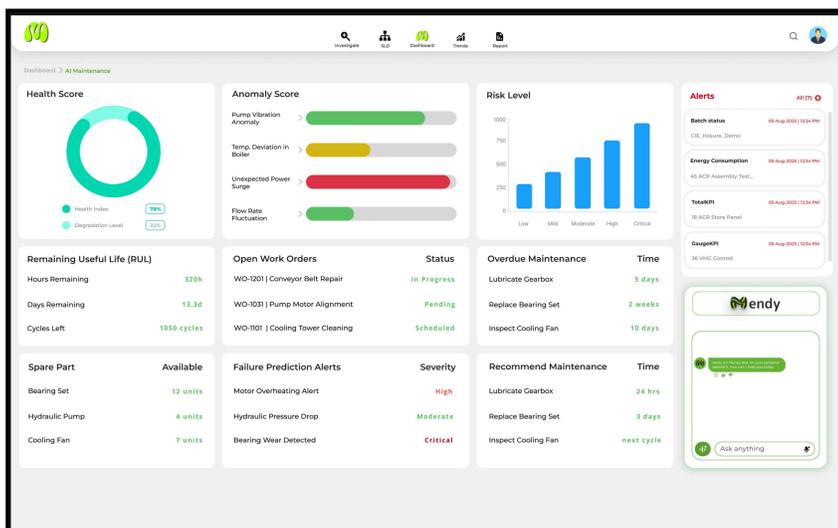**Alert!**
Current limit over. B Phase current . HY-12
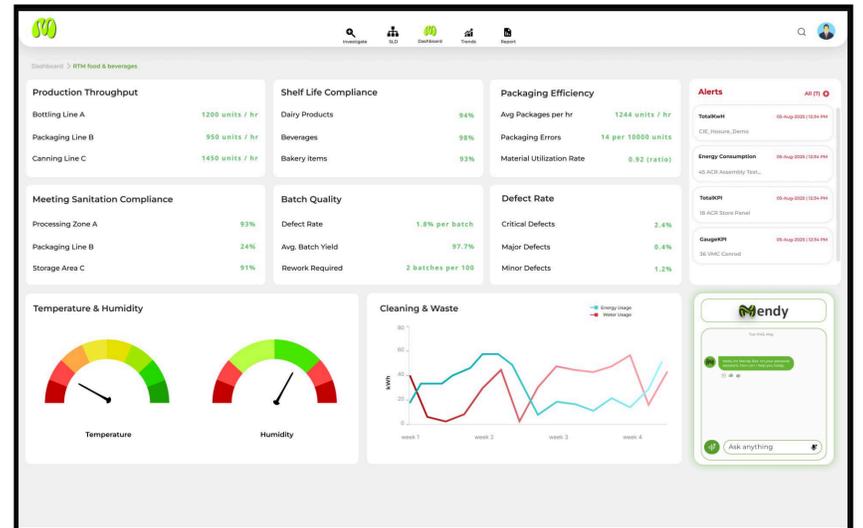
7 Seamless configuration - anytime, anywhere

Configure devices, and meters remotely using our intuitive web app to match your operational requirements, ensuring a fully adaptable and scalable solution for your building or factory.

8 Hierarchy based access control to the web application

Assign user roles and permissions based on organizational hierarchy to ensure secure and controlled access. Restrict or grant functionalities based on roles, safeguarding critical data while enabling seamless collaboration across teams.

9

Anytime anywhere access by mobile & web apps

Leverage a live, data-driven digital twin to replicate your factory or building virtually. Gain real-time insights, simulate scenarios, and make smarter decisions with a comprehensive view of your facility's operations.

10

Low latency actuation for your critical systems

Dive deep into historical and real-time data to identify trends, anomalies, and performance insights. Our powerful analytics engine enables you to make data-backed decisions for continuous improvement and optimized operations.

11

Smarter decisions with AI-powered insights

Leverage AI-driven analytics for predictive maintenance, thermography reports, and anomaly detection. Gain proactive insights to optimize energy usage, detect faults early, and enhance overall system efficiency.
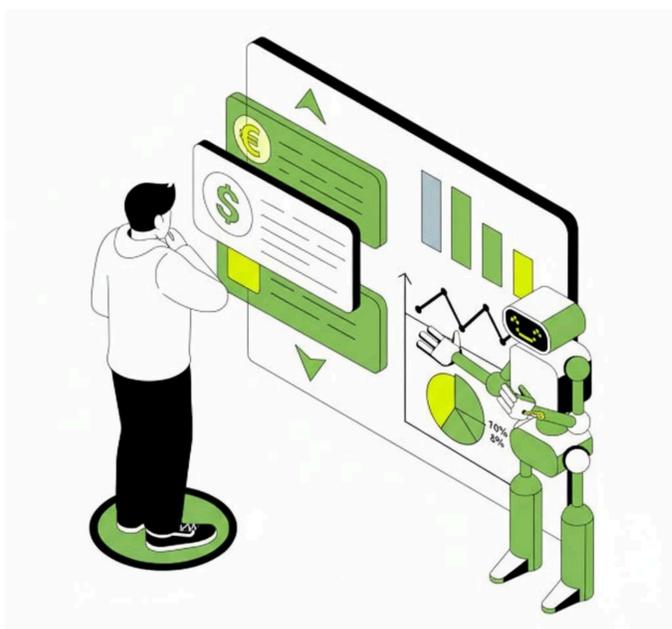
Shield in a box

Cygnus is a plug-and-play smart edge appliance that seamlessly connects legacy systems, IoT devices, and partner solutions into a unified BMS 4.0 platform. Designed for on-premise deployment, Cygnus ensures real-time data processing at the edge, reducing cloud dependency for faster insights and secure operations. It integrates Tor IoT solutions, meters, existing infrastructure, and third-party systems seamlessly—eliminating the need for costly replacements. Cygnus makes BMS deployment simple, scalable, and future-ready. We call it Shield in a Box – because it's everything you need, in one powerful solution.

Unified BMS 4.0 Ecosystem

- Bridges legacy systems with modern IoT platforms

- Supports BACnet, Modbus, MQTT, OPC-UA, RS485, CANBUS

- Enables on-site analytics & AI-driven optimizations

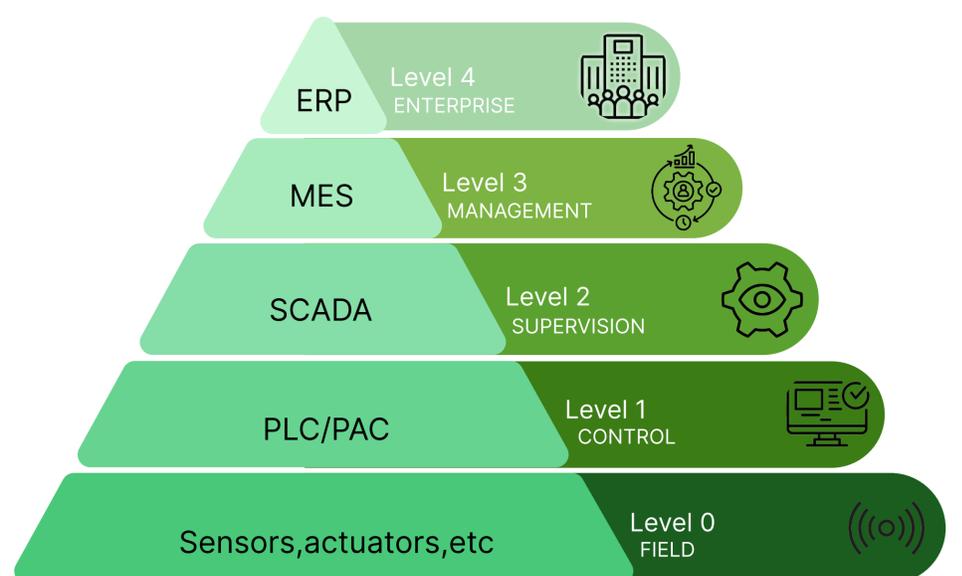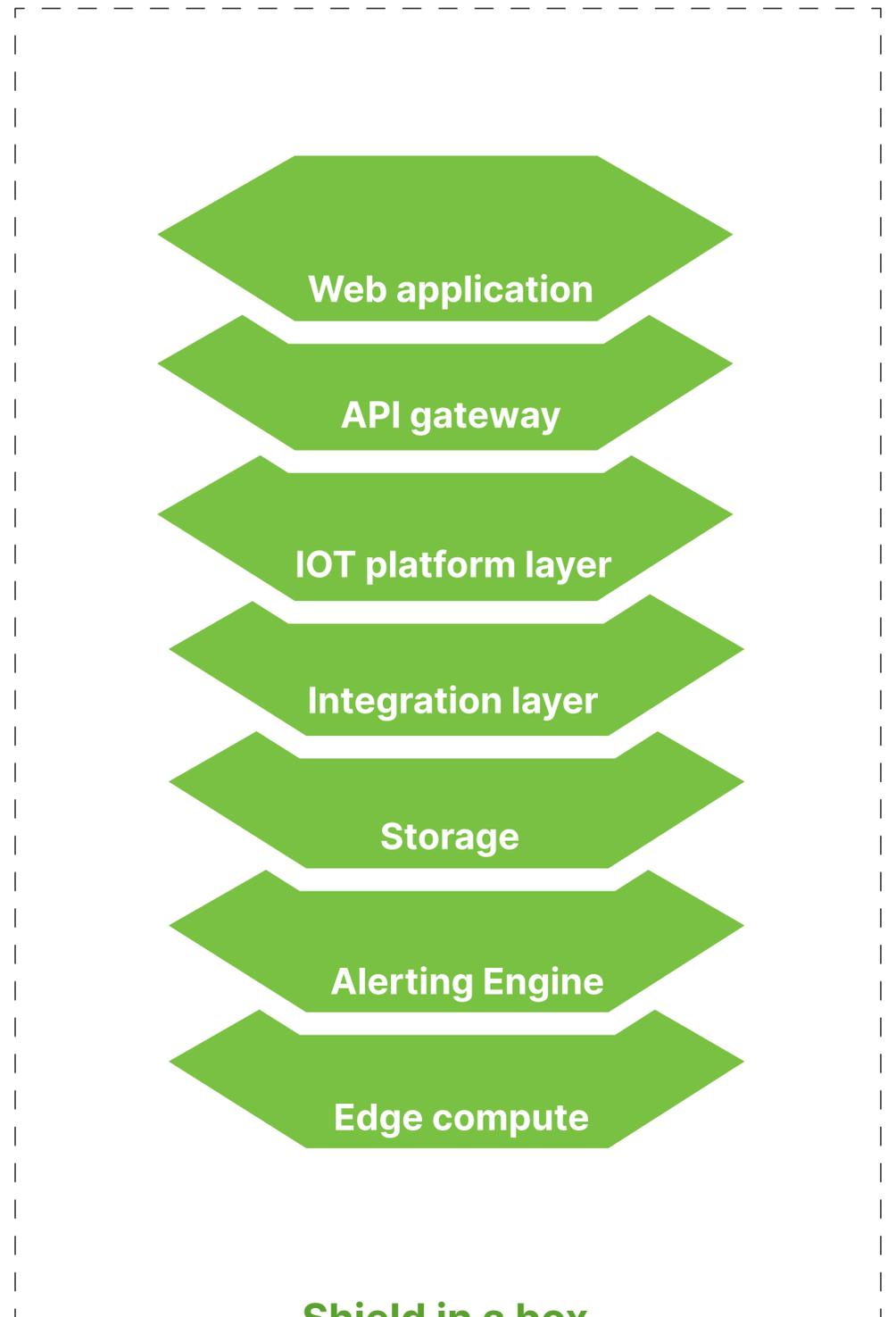- Ensures tamper-proof, encrypted data sharing

Extend capabilities beyond core

- Existing infrastructure remains intact

- Eliminates the need for costly replacements

- Multi-protocol support ensures universal compatibility

Plug-and-play deployment

- Pick and choose modules, avoiding unnecessary investments

- Modular expansion with certified partner systems

- Continuous innovation with new partner integrations

Web application

API gateway

IOT platform layer

Integration layer

Storage

Alerting Engine

Edge compute

Shield in a box

ERP — Level 4 ENTERPRISE

MES — Level 3 MANAGEMENT

SCADA — Level 2 SUPERVISION

PLC/PAC — Level 1 CONTROL

Sensors,actuators,etc — Level 0 FIELD

Capabilities

1 RnD

Technology refinement by 100+ inhouse team of engineers and subject matter experts in embedded systems, hardware development, type testing - validation, application and platform development.

2 Applications & Analytics

Expertise in developing and deploying customized applications with platform and database development along with managing infrastructure and security.

3 Manufacturing

Our hardware is manufactured in state-of-the-art pick and place setup for board building along with code burning bank for building multiple boards in parallel.

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