4POINTX
Simplifying Industrial Analytics

Energy Monitoring System
Specific energy optimization for production lines

Problem	Legacy EMS solutions focus mainly on tracking the consumption (the effect) but ignore the underlying process dynamics (the cause) that influence the energy efficiency of a production line. In addition, these solutions lack the analytics capabilities necessary for providing advanced energy insights to help drive higher efficiencies.
Solution	4PointX EMS is a process-aware energy analytics solution that leverages Machine Learning to benchmark the consumption for various production scenarios and uses this knowledge to alert when deviations occur. For e.g., the solution tracks wastage due to equipment idling, tells how consumption varies by product, and gives insights on what process parameters are impacting efficiency the most.

BENEFITS
OF PROCESS-AWARE EMS

Better Planning
– of energy capacity to match production demand

Lower OpEx
– increases competitiveness and sustainability

Increased Asset Life
– by tracking asset idling and process anomalies

Reduced CO_2 emissions
– comply with regulations and protect environment

ADVANCED CAPABILITIES
OF 4POINTX EMS
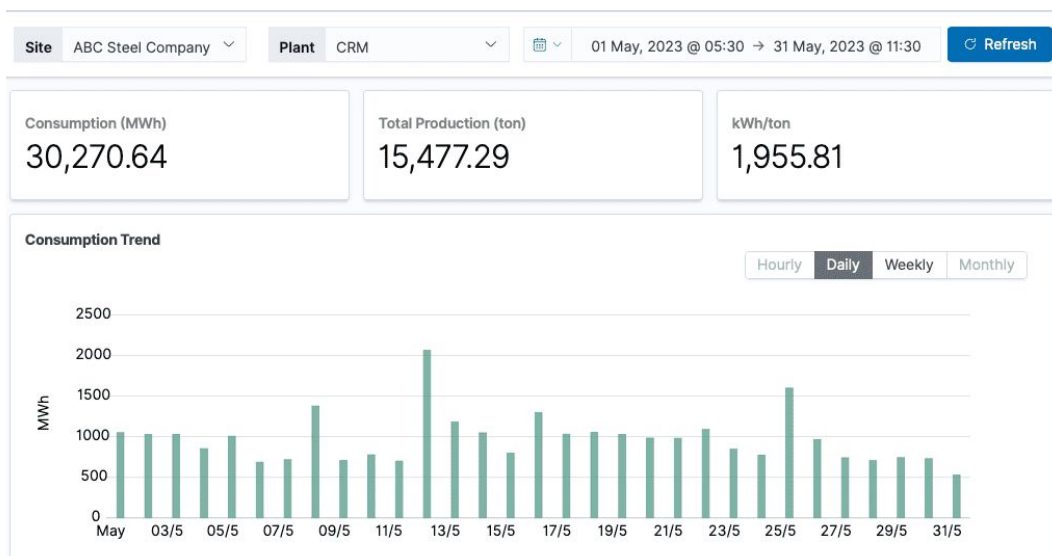
Scalable to multiple plants and multi-vendor metering

IIoT Workbench for merging energy data with process and production data

Custom Dashboards
Using a no-code, drag-and-drop interface

Notebooks
for advanced energy analytics and ML models

| Site | ABC Steel Company | Plant | CRM | | 01 May, 2023 @ 05:30 → 31 May, 2023 @ 11:30 | ↻ Refresh |

Consumption (MWh)	Total Production (ton)	kWh/ton
30,270.64	15,477.29	1,955.81

Consumption Trend   Hourly **Daily** Weekly Monthly

Features

4PointX EMS is one of the three Industry 4.0 Apps on 4PointX IIoT Workbench and comes with the following features.

Energy monitoring

- Real-time consumption at Plant, Line and Panel level
- Power, current and voltage monitoring
- Historical trends & drill-downs

Specific energy

- kWh/ton
- Production vs. consumption trends

Idle energy

- MWh consumed by idling equipment
- Idle energy as a % of total energy
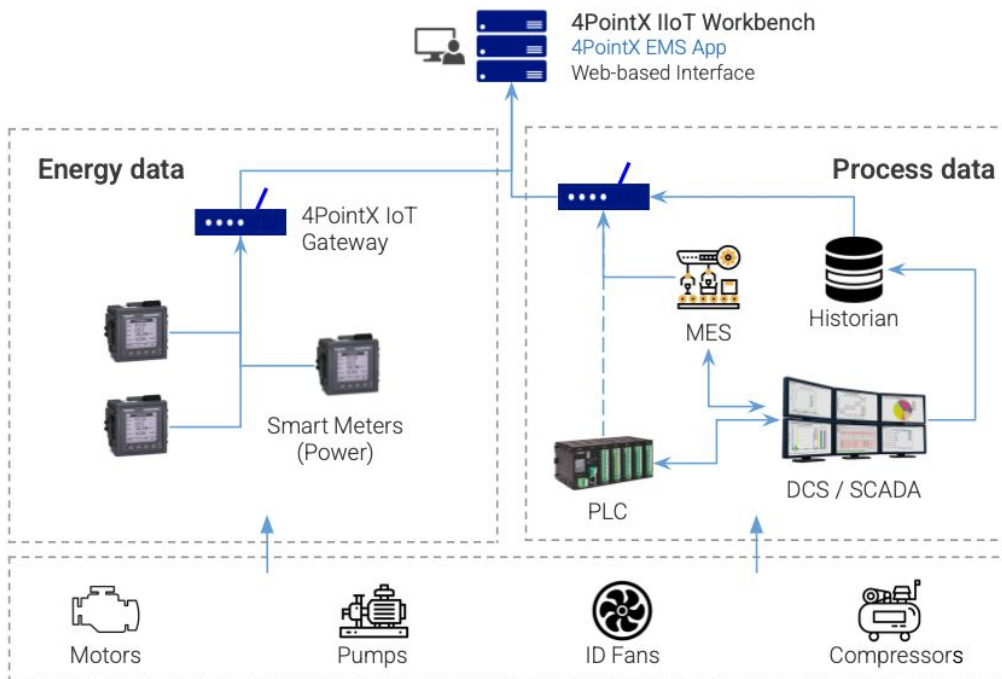
Product variation & benchmarking

- Specific energy consumption for various product specs — grade, thickness etc
- Benchmarking (against past consumption)

Other features

- Alerts
- Reports & custom dashboards
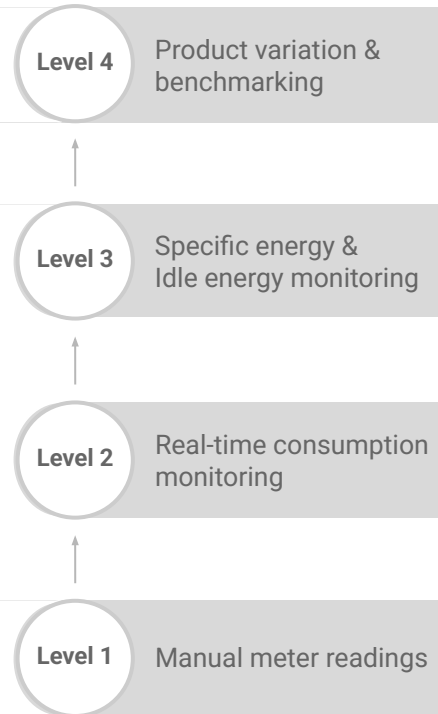- APIs for third-party integration

Easy to deploy and scale

4PointX IoT Gateway integrates with smart meters and MES for collecting Energy and Production data. The solution can scale to multiple plants and sites for a centralised deployment.

EMS Maturity Levels

Level	Description
Level 4	Product variation & benchmarking
Level 3	Specific energy & Idle energy monitoring
Level 2	Real-time consumption monitoring
Level 1	Manual meter readings

4PointX IIoT Workbench

4PointX IIoT Workbench simplifies industrial analytics by bridging the IT/OT gap and enabling manufacturers to implement data-driven solutions to optimize the production lines. The Workbench integrates with SCADA and provides a scalable analytics layer for building custom IIoT solutions.
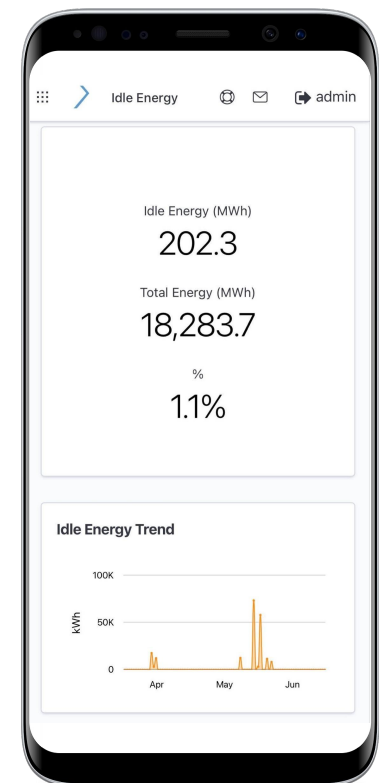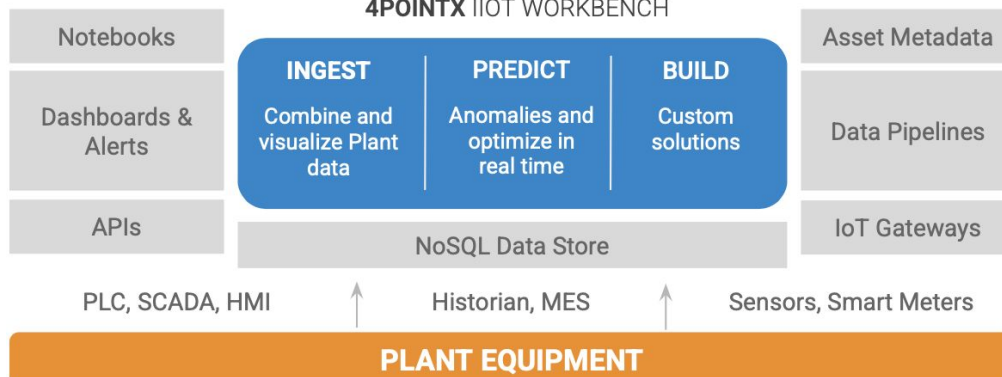
© 4PointX Pte. Ltd. 2019−2026