

Problem

Legacy EMS solutions focus mainly on tracking the consumption (the effect) and ignore the underlying process dynamics (the cause) that influence the energy efficiency of a production line. Also, these solutions lack the necessary analytics capabilities for providing advanced energy insights to help drive higher efficiencies.

Solution

4PointX EMS is a process-aware energy analytics app that helps reduce wastage and align (specific) energy consumption with production. The solution quantifies idle energy, and also computes internal benchmarks (for various product types) to help understand if consumption is optimal and what process parameters are impacting efficiency the most.

BENEFITS OF A PROCESS-AWARE EMS

Better Planning

– of energy capacity to match production demand

Lower OpEx

– increases competitiveness and sustainability

Increased Asset Life

– EMS can help create a business case for VFDs

Reduced CO₂ emissions

– comply with regulations and protect environment

4POINTX EMS ADVANCED CAPABILITIES

Scalable for multiple plants and multi-vendor metering infra

Data Lake 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



Features

Energy monitoring

- Real-time consumption by overall Plant w/ equipment level drill down
- Historical trends (daily and monthly)
- Power, current and voltage readings

Specific energy

- kWh/ton
- Production vs. consumption: daily and monthly trends

Idle energy

- MWh due to equipment idling
- As a % of total Plant energy

Benchmarking

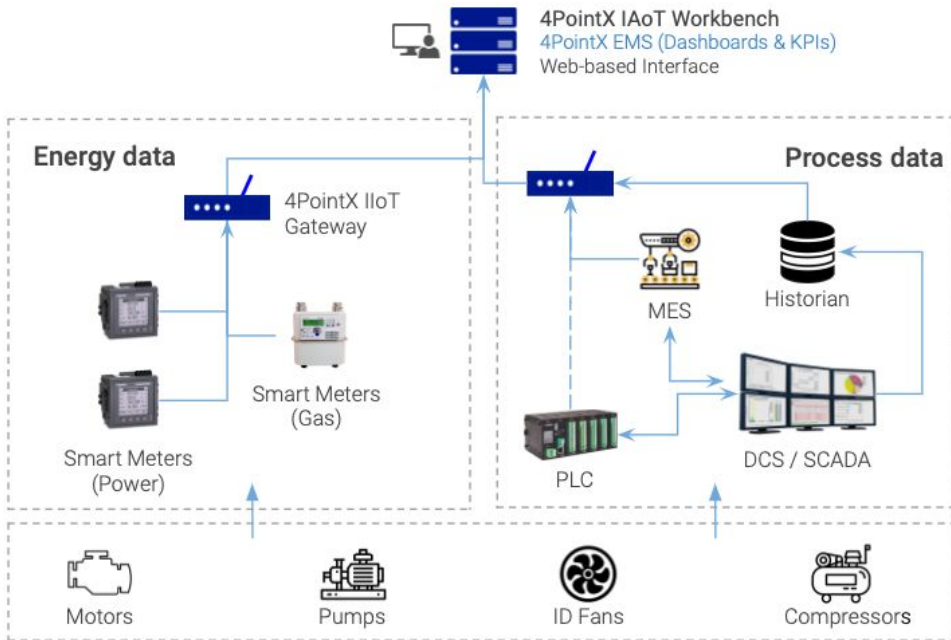
- Specific energy consumption for various product mix (product type, width, thickness etc.)
- Benchmarking and comparison

Other features

- Alerts configuration
- Daily report generation and mailing
- Raw data export
- API for 3rd party integration

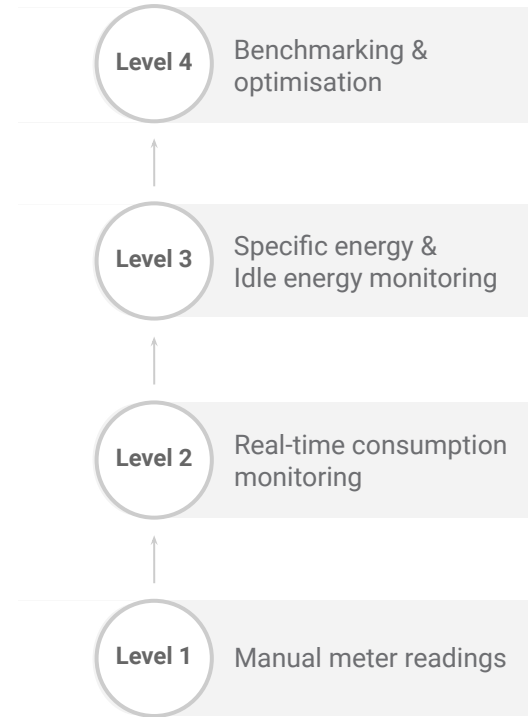
Data Acquisition

4PointX EMS is one of the three I4.0 apps on 4PointX IAoT Workbench. The workbench integrates with Plant's automation systems and smart metering infra for collecting Process and Energy data. The workbench supports a wide range of PLCs, SCADA/ DCS and smart meter vendors.



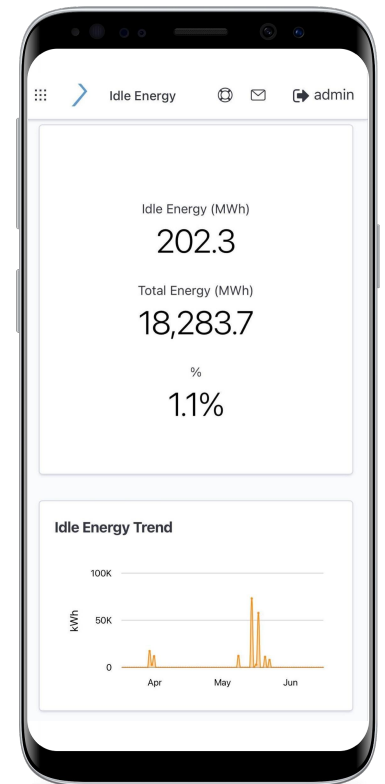
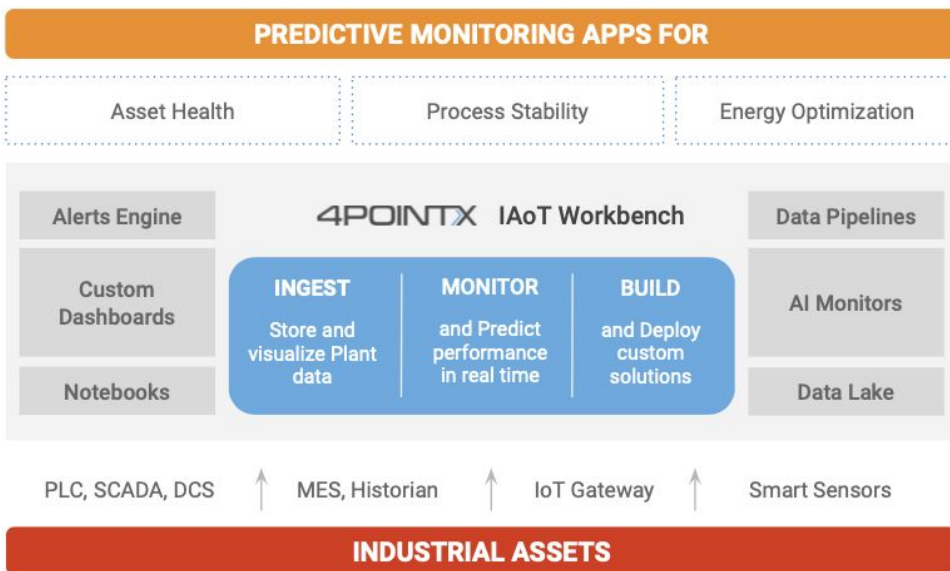
4POINTX

EMS Maturity Levels



4PointX IAoT Workbench

4PointX IAoT Workbench simplifies industrial analytics by bringing the best of IT to OT allowing Plant operations managers to build & deploy data-driven solutions at ease. The Platform integrates with existing automation systems and provides a scalable analytics layer with visualisation and predictive capabilities.



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