

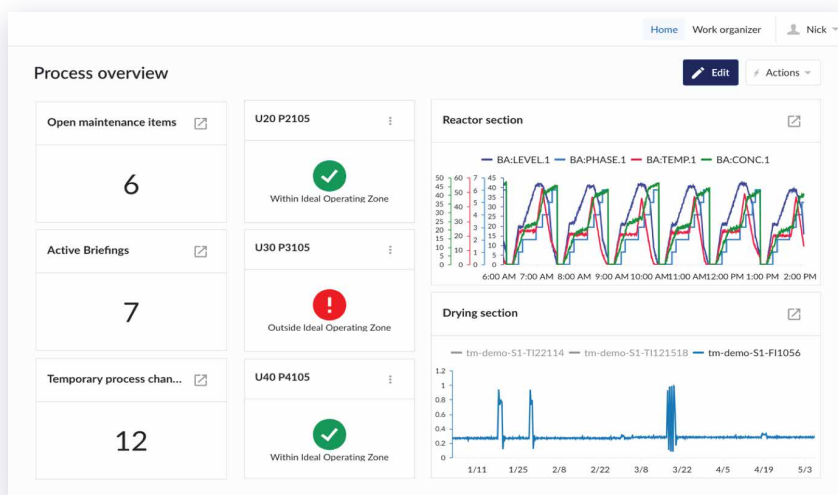
Self-service Advanced Analytics

Integrating at all levels with the OSIsoft PI System to continuously improve operational excellence

On the wave of digitalization within the era of Industry 4.0, companies need to use the data in their OSIsoft PI System as smart as possible to remain market leader and sustain future profitability. Instead of hiring an army of data scientists, operational stakeholders can use TrendMiner's self-service advanced analytics capabilities to improve operational performance. By putting the power of analytics in the hands of process and asset specialists, controllers and production leaders, operational business outcomes can be controlled across departments while growing the production process related knowledge.

The subject matter experts have a good understanding of the data that is directly related to the production processes they are responsible for. TrendMiner enables them to quickly analyze the time-series data captured in the PI System so they can assess the majority of process issues quickly themselves. TrendMiner avoids the need

to create analytics models, speeding up the time to insights and identifying influence factors to process anomalies.



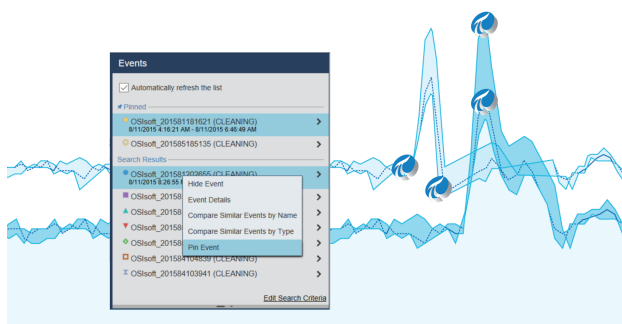
With TrendMiner analytics-driven information can be provided in a personal Production Cockpit with live data and early warnings for creating a business environment of continuous improvement. In this way all users at each level in the organization can proactively contribute to business outcomes in areas such as energy reduction, waste reduction, quality control, yield and predictive maintenance.

SOLUTION APPROACH

TrendMiner works on top of your PI System and makes the time-series data directly available for advanced analytics through plug & play connectivity to all historical data. The platform can be deployed on premises, in a customer managed cloud environment or as a full SaaS solution, supporting single sites up to globally operating business units with consolidation of dispersed historians, helping to optimize fleet performance. TrendMiner can index across multiple PI Systems, increasing interoperability and enabling fast search and analytics. Subject matter experts can search through the PI data as easy as using Google and use any tag or create new calculated tags for pattern search, diagnostics, performance comparison and advanced monitoring.



TrendMiner works directly with PI-AF, allowing users to easily navigate the structure of their plant by going through the defined PI asset framework structure right inside of TrendMiner. Asset Framework templates can be used for cross-asset performance analysis. Good and bad behavior can be shown in trend-tiles or context tiles within dashboards for each stakeholder in the organization.



The events captured in PI-EF are directly available in TrendMiner, but we also offer to create additional events either manually or automatically captured based on process monitors as well as information from 3rd party business systems, like SAP, LIMS, OEE or Batch systems. You can visualize them in the time-series data as well as represent them in tables and Gantt charts. Each context item can be searched for, commented on and used for collaboration with experts in remote locations.

TrendMiner supports PI Vision in two directions; from PI Vision's process overview to dive into the trend analysis capabilities of TrendMiner to investigate the situation of interest or after analyzing the operational performance and showing this information in the PI Vision interface. Through TrendMiner the information shown in the PI Vision dashboard can include 3rd party business application data, to give a full holistic view of operational performance.

Last but not least, TrendMiner not only works on top of the classic PI system, but is also available for OSIsoft Cloud Services (OCS). Our analyze, monitor and predict capabilities are directly available within OCS. In this way small organizations can make use of the advanced analytics capabilities in the cloud version of OSIsoft PI, while global operating organizations can use OCS to analyze and monitor performance of their entire operations.

MAKE BETTER DECISIONS, FASTER

All kinds of events may impact operational performance. Capturing and combining critical events with time series analytics will shed new light on your production process. Contextual information may reside in various data silos, such as your LIMS, MMS or OEE system. Captured contextual information can be leveraged for data driven decisions in the control room and can be the starting point for continuously improving operational excellence through self-service analytics. Contextualization of your time-series data helps you shift performance to the next gear.

SUSTAINABLE VALUE FOR THE PROCESS INDUSTRY

Self-service analytics enables subject matter experts to contribute to overall organizational performance objectives, such as improved overall equipment effectiveness, reduced waste, production with consistent quality, reduction of carbon footprint and increased operational safety.

TrendMiner for continuous improvement enables the organization to gain Operational Excellence and increase overall profitability continuously. We help customers in various industries by giving them the answers they need.

KEY CAPABILITIES



EASY-TO-USE
INTERFACE



REPORTING &
DASHBOARDING



MODELING FREE
ADVANCED ANALYTICS



GLOBAL
COLLABORATION



ASSET FRAMEWORK
SUPPORT



ACTIVE LEARNING &
EARLY WARNINGS