

Smart Control Room

Solution Overview

Increase the Overall Equipment Effectiveness (OEE) of your production line thanks to a new approach to smart operations, the Smart Control Room from Atos & Siemens. Defining the journey towards fully autonomous production. In this document, you will learn about how we deliver a service that provides value directly to your business.

Improve process efficiency, gain full control over the production process, increase product quality, and accelerate time to market with a digital transformation of your control room.

By leveraging an open and secured IoT ecosystem within the production line in combination with machine learning algorithm and prediction models, self-learning systems are created. Hence processes and workload of production line operators are improved. High speed production lines create hundreds of process parameters, event messages, or even alarms per minute. However, up to 80% of those notifications are "soft" and can be ignored or taken care of later. Until now, filtering out the relevant process notifications requires significant manual effort of highly experienced operators.

Instead of simply monitoring and displaying numerous alarms and process parameters the smart control room solution provides increased control and enhanced monitoring, to enable a more robust process, delivering the best product quality.



From smart alarms to quality prediction

Depending on your actual situation, production environment and specific requirements your smart control room journey may consist of one or more of the following use-cases:



Smart alarms & critical event prediction

Reduces information overload and provides extra time for preventive action to avoid production downtime

- Looks for patterns in preceding alarms to predict critical events early enough to act
- Early pre-warning notification of incoming critical alarms with prediction probability and expected time to alarm



Anomalies & defect prediction

Reduces waste and interruption of production process

- Real-time detection of anomalies or defects to your product during production process
- Predicts defects that increase the risk of damage and/or breakage of the product



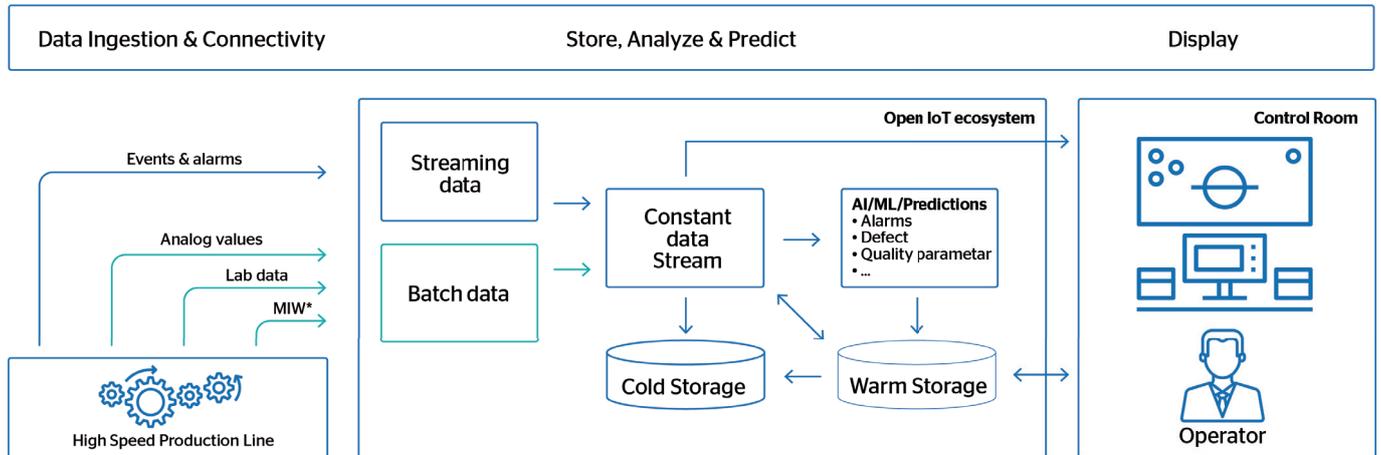
Quality prediction

Improves production efficiency and product quality

- Provides real-time information on multiple product quality parameters
- Provides early warning of risk of off-spec production, enabling immediate improvements during production, instead of quality measurement after batch is complete

Pre-configured and integrated solution

Atos & Siemens have developed a pre-configured and integrated solution implementing a smart control room handling underpinned by the implementation of a business intelligence dashboard that will provide feedback and insights into your production line allowing you to continuously improve your production process.



*MIW - Manufacturing Information Warehouse

Data Ingestion & Connectivity

In order to feed live streaming and batch data (e.g. events, alarms, and various product quality relevant process parameters) all kinds of sensors within your production line are connected to an open and secured IoT ecosystem.

Store, Analyze & Predict

While the live data is being collected and stored it is also being analyzed in parallel. Artificial intelligence and machine learning algorithms are used to predict critical events, anomalies, or product quality issues early enough before they occur. The prediction of events will also enable self-controlled manufacturing processes moving into the scenario of autonomous production.

Display

All results of the event & quality prediction analysis - complemented by other relevant real time process data - are clearly presented on a business intelligence dashboard in your control room. Hence, your operating personnel can focus on the critical events and potential quality issues instead of dealing with countless alarms and process parameters.

* General availability H2/2020

To learn more about the solution or contact an expert, [visit atos.net/iot](https://www.atos.net/iot) or email dialogue@atos.net