AkzoNobel:

Improving factory performance (OEE) with
scalable Industrial Internet of Things (IIoT)

by Inimco and PA Solutions

Background

AkzoNobel is a company that specializes in producing sustainable and innovative coatings on which customers, communities, and the planet increasingly rely.

Their coatings are prevalent in various industries, and **the company operates in over 150 countries**, aiming to become a global industry leader. Being one of the most sustainable paints companies across the globe, they have been inventing the future for more than two centuries.

Inimco and PA Solutions offer a solution to solve real-time monitoring of Overall Equipment Effectiveness (OEE) and production processes on a global scale.

The aim of AkzoNobel's collaboration with industrial IoT implementation specialist Inimco was **to transform the manual method into a streamlined, networked digital process with a low tolerance for error.** The basis for this is the PA Facts framework, which is built on a Microsoft Azure IoT platform. Currently, the solution is implemented at 50+ factories worldwide.

Challenge

The customer's product is already such a high level of quality that it is difficult to gain benefits from trying to improve the product itself. On the other hand, the internal processes were not always that efficient. For example, the monitoring of machine performance was a manual pen-and-paper process which had to be executed by an operator onsite every 15 minutes throughout the entire workday.

Digital innovation is always disruptive.
However, it should always empower the employees to do their job even better or more optimally, and ensure that everyone is aligned during this process to make the solution work.

Solution

HOW WAS THE CHALLENGE SOLVED?

The **AkzoNobel Performance Portal** solution was developed by Inimco/PA Solutions on **Microsoft Azure** technology and tailored for the manufacturer.

It allows the operators and managers to actively monitor the production process and OEE and provides insights in all parameters of all production processes worldwide.

WHAT SOFTWARE IS INCLUDED OR USED?

Azure IoT, PA Facts framework, App services & Functions, Stream Analytics, Azure Analysis Services, SQL, DataBricks, PowerBI, Time Series Insights

HOW WAS THE SOLUTION TECHNICALLY REALIZED?

It works by **capturing information collected at the plant level** using Azure IoT Edge, pushing that data into the cloud, and then combining it with any other information uploaded by individual operators, SAP, or any other company system.

Using a combination of the Azure IoT platform and the PA Facts framework for real-time interaction in an operator portal and integration with PowerBi and Time Series Insights for global reporting.

Benefits & Facts

Using a standardized IIoT platform the customers can quickly scale their OEE monitoring globally across multiple use cases.

The real-time production and OEE monitoring allows the operators and management to focus on the current state of the production line rather than what was happening a couple of days ago. By keeping the solution simple and easy to use,

all involved end-users, from young users who have grown up with digital technologies to the older ones near retirement, are able to invest in keeping the factories up and running in their optimal state. Since its activation, **AkzoNobel has been able to conduct a new 12-week OEE Accelerator program** built around the Performance Portal, enabling them to boost plant performance.

CUSTOMER PROJECT OUTCOMES:

OEE improvement 5 – 15%

50+ factories 1,129 production lines connected

17M€ direct savings so far

Being years ahead of the competition

Conclusion & Scope

AkzoNobel faced a challenge in manual machine performance monitoring. Inimco/PA Solutions developed a solution called Performance Portal, which is implemented at over 50 factories worldwide and allows for real-time monitoring of Overall Equipment Effectiveness (OEE) and production processes.

The Performance Portal is easy to use and has empowered operators and managers to focus on the current state of the production line, leading to improved plant performance. The solution's standardized IIoT platform has allowed for global scalability and real-time production monitoring.

The solution is easy to use and has resulted in improved OEE monitoring, an increase in OEE by 5 - 15%, and faster rollout compared to MES.

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