TRACK & TRACE IN A REGULATED AREA AT UHLMANN PAC-SYSTEME

Orchestra
SUCCESS STORY

Uhlmann
UHLMANN GROUP

USE CASE:
PHARMA COMPLIANCE

Uhlmann Pac-Systeme GmbH & Co. KG is one of the world's leading system providers for the sustainable packaging of pharmaceuticals and parenteral products in blisters, trays, bottles and cartons. In addition to its innovative packaging lines, Uhlmann offers consulting, project management, comprehensive services and digital solutions from a single source.

Uhlmann's software solution Pexcite is a future-oriented platform for integrative software solutions in the packaging of pharmaceutical products. Pexcite centralises the operation and reporting for an efficient workflow of the fragmented production environment. For this purpose, Pexcite offers various products from the SCADA area. Pexcite also offers a complete portfolio in the Track & Trace area to ensure the clear labelling of pharmaceutical products and to protect against plagiarism. Pexcite is web-based and it brings together originally machine-specific functions such as user management, audit trail and alarm management.

> **„For me, Orchestra is the solution to simplify the integration of equipment into the pharmaceutical shop floor and to integrate it in a modular and sustainable way."**
>
> HOLGER ANGELE,
> SOFTWARE & DIGITAL DESIGN ENGINEER,
> UHLMANN PAC-SYSTEME

Challenges

- Highly heterogeneous environment due to a variety and use of machines of different manufacturers along production and packaging lines.

- Lack of a standard for data exchange in and across the different levels of the ISA95 pyramid.

- Extremely high implementation and maintenance costs due to frequently used point-to-point connections between machines and higher-level systems..

- Highly regulated working environment - a validated working environment makes changes and adaptations lengthy and expensive.

- Heterogeneity in the production environment is reinforced by the long life of the validated machine environment, as generations of machines and thus of interfaces coexist

What were the requirements for the project?

The aim of the project was to use Orchestra to create an interface standard with simultaneous flexible connection of all existing machines in the production environment. The goal was to implement the line and site concept based on a well-maintainable standard interface architecture. The challenge here was the harmonisation, typification and contextualisation of the heterogeneous data from different machine manufacturers. Particular attention was paid to the approach of „data integrity by design", which emphasises the traceability of functions for simple validation processes.

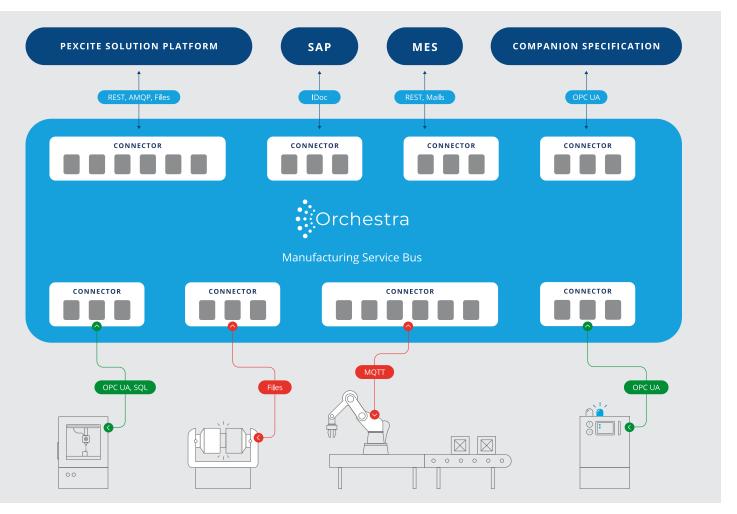## What was particularly important to the customer during implementation?

For Uhlmann it was particularly important that Orchestra creates a clear architecture that can be maintained sustainably and adapted for the future. Furthermore, the validation and data integrity were of decisive importance for the use in the critical, regulated infrastructure.

How was the solution conceptualised? Which services were used?

The solution was designed with Orchestra with a special focus on use cases. Therefore, every use case was mapped and implemented via different possibilities (OPC UA, REST, AMQP, ...).

How was the project implemented?

Thanks to partnership-based development and close cooperation between Uhlmann and soffico, an integration architecture was created with which systems and machines can be connected across all levels, from the shop floor to the line and site servers to the ERP. A service-oriented plug & play concept (SOA) was implemented by means of a multi-layer scenario architecture.

| PEXCITE SOLUTION PLATFORM | SAP | MES | COMPANION SPECIFICATION |

REST, AMQP, Files | IDoc | REST, Mails | OPC UA

CONNECTOR · CONNECTOR · CONNECTOR · CONNECTOR

Orchestra
Manufacturing Service Bus

CONNECTOR · CONNECTOR · CONNECTOR · CONNECTOR

OPC UA, SQL | Files | MQTT | OPC UA

THE BENEFITS AT A GLANCE

Central connection and control of a wide variety of machines and systems with the help of Orchestra on the Pexcite platform enabled the implementation of a service-oriented plug & play concept which replaced point-to-point connections. The connection of various data sources is now quick to implement, easy to maintain and clearly structured. The result is a strengthened line concept with central, error-minimised control and reporting. Orchestra's low-code approach results in a clear and easy-to-understand operation of the interfaces for the future.

You want to learn more?

If you have any personal or further questions about this success story, our experts will be happy to help you. We would also be happy to present Orchestra to you personally in a live demo!

Learn more about our products!

With Orchestra you digitalise in a benefit and result-oriented way!

Soffico is your contact for digital transformation in industry. With Orchestra, we take you further - no matter where you are at the moment. From the start of your digitalisation project to the comprehensive networking of your production data and processes. With Orchestra, you build your own Industrial Suite.

Fully modular and tailored to your IIoT Case

Low-code approach owing to graphical interface

Connection of all relevant IT systems

From the switchboard to the cloud: integration of existing systems and facilities

Use of production and manufacturing data along the entire value chain

Highly scalable through integration of different protocols and formats

Transparent monitoring of your data flows

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