

# Global chemical producer makes the white choice in data management systems

Advanced data analysis and visualisation enhances plant safety and productivity



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## Background

It's unlikely you've ever stopped to think about how the shirt you bought for your first day of work got its gleaming white sheen. Or, for that matter, the paint on your freshly decorated living room wall. That pristine veneer can be found across a variety of household items, from your cosmetics and sun lotion, through to the paper in your printer and the sugar in your sugarbowl. These small wonders are the result of a little known pigment that's used almost everywhere. It's called titanium dioxide.

Naturally occurring in only a select few parts of the world, the pigment is obtained through a highly specialised extraction and production process. There are only a handful of manufacturing companies with the expertise to do this.

One such company is Czech Republic-based Precheza. It's a major producer and supplier of inorganic pigments and has been producing titanium dioxide for more than 50 years.

Precheza exports around 90% of its produce to meet global demand for this essential chemical, while committing to globally recognised standards in the areas of occupational health and safety management systems, quality, environmental protection and energy management. To remain consistent with these standards, Precheza relies on robust data management and

## Challenge

A global chemical producer needed to reduce opex and increase data analysis capabilities to stay competitive

## Solutions

### FactoryTalk Historian SE

- Obtain real-time process and production information to improve productivity and efficiency
- Reduce deployment time and lowers total cost of ownership
- Connect to virtually any control system or human machine interface (HMI) software and collect real-time data at high speeds and at full resolution

## Results

### Reduced annual costs

- Lower opex and greater efficiency in unified software solution creates faster time to value of investment

### Improved visualisation capabilities

- Enhanced ability to visualise and analyse multiple years of production data for optimisation purposes

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analysis processes that drive operational efficiency and plant safety.

### **Casting the dye**

Process management serves an important purpose in the production of titanium dioxide. Using specialist tools, the operators need visibility to critical elements such as the temperature and pressure at the production facility. This data informs critical decisions that impact everything from the safety of the workers through to the profitability of the plant, so fast and comprehensive access to information is essential.

Having the right software in place plays a critical role in effective plant management, enabling the capture and analysis of massive volumes of historical data for better present-day decision-making.

It was clear that to remain competitive, a new solution would be required. Precheza had been using Rockwell Automation control systems and visualisation software in other areas of the business, and so began to consider our solutions for this case too. A major attraction in doing so would be to unify software solutions for automation across the business into one provider, which would allow for greater integration of systems and also entail savings in operating costs.

This led to exploration of our historicisation system, Factory Talk (FT) Historian SE. Operators were also seeking better reporting tools with enhanced analysis and visualisation. FT Historian provides users with access to historical data for progressive optimisation, for

which they typically need to process and analyse several years of data.

Precheza's IT team used a temporary license to make sure our solution met their needs. Having satisfied its selection criteria, Precheza began working with us to transition from the legacy platform to FT Historian.

### **Right on schedule**

The implementation itself was a simple process. A schedule of work with deadlines for implementation was created, preceded by a one-year preparatory period, which included clarifying the technical requirements, verifying them at the testing site and agreeing on the terms and conditions of the entire project.

The installation and configuration process began in August 2018, providing ample time for the installation of client applications, operator training and the transfer of original historical data into the new system. This led up to the production-ready implementation of FT Historian SE in January 2019. A three-month decommissioning period was put in place so that the two systems were operating in parallel, leading to the termination of the legacy platform in March 2019.

The installation was completed in April 2019 without any downtime incurred in the production facility.

### **In with the new**

The biggest challenge faced over the course of the transition was the conversion of five years of data from the previous system into the FT Historian. As the



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software used in the two systems was incompatible, choosing the right method for converting this data into a new system would be crucial. After several tests, a solution recommended by Rockwell Automation was chosen, but even so, this procedure required manual intervention by Precheza staff and, in particular, verification of the transferred data, which took approximately 20 days of work.

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**The data allows the user to gain far deeper insight into the state of production and offers superior reporting capabilities**

The systems integrator, Slovak company M.D.J s.r.o., and Precheza's own IT team played important roles in converting the data. M.D.J already had extensive experience in the FT Historian solution and led the whole project to a successful end. The company also provided the benefit of its FT Historian know-how and responded flexibly to other requirements that arose during implementation. Also integral to the team was distributor ControlTech Ltd., which ensured the smoothness of supplies and coordination of the business side of the project.

**Exploring new capabilities**

Precheza now operates an environment predominantly equipped with control and visualisation systems from Rockwell Automation. Its users appreciate the openness of the system and the simplicity of integrating data from various sources, allowing them to manage application requirements in-house without being heavily dependent on our support.

From a practical point of view, maintenance of the entire system has been significantly simplified due to the high level of operational performance in the new system. FT Historian SE ensures the availability of production data for users even in the event of a main server failure. It can

be serviced during operation without the risk of data loss, which brings the added benefit of saving human resources.

The greatest benefit for Precheza, however, has been in how it's able to use its data. Operators now have access to a range of features that help them to orchestrate the analysis and visualisation of production processes. This allows the user to gain far deeper insight into the state of production and offers superior reporting capabilities. Precheza staff are already finding that these features allow for better decision-making and optimisation of tasks.

**A better view of the processes**





The benefits of the implementation have met Precheza's expectations. It will take several years for the total cost of operation of the new system to become fully apparent, but it's already comparing favourably to that of the previous system. Building on its new data analysis capabilities, Precheza will now focus on deeper user training in advanced manufacturing data analysis so it can explore the full set of capabilities that FT Historian SE offers.

As a next step, Precheza is planning to adopt more of the Asset Framework capabilities of FT Historian SE. As well as lowering the capex of its data operations, this project will create a framework for analysis of production processes, enabling greater contextualisation of data from individual parts of its operations. Ultimately, this will help to increase the speed and accuracy of data analysis and bring levels of visualisation that wouldn't have been possible in Precheza's previous architecture.

In other words, the future looks a shade of bright, gleaming white.

**Additional Information**  
**[www.rockwellautomation.com](http://www.rockwellautomation.com)**

*The results mentioned above are specific to Precheza's and M.D.J s.r.o.'s use of Rockwell Automation products and services in conjunction with other products. Specific results may vary for other customers.*

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AMERICAS: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

ASIA PACIFIC: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

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