

Automation Without the Maintenance Headaches

How Festo cut design time and boosted quality with automation that runs itself

The Client:

FESTO SE & Co. KG

Festo is a world's leading supplier of automation technology and technical education. It deploys its products and services to meet the challenge of smart production for the future in the course of digitalization.

This includes producing and selling pneumatic and electrical control and drive technology for factory or process automation. Festo is a world market leader in industrial education and consultancy. Festo's extensive network includes sales subsidiaries, distribution centers, and factories in 61 countries worldwide. Festo innovations in pneumatic and electric drive technology deliver higher productivity for the success of your business. For industrial and process automation—from single components to turnkey solutions.

The Challenge:

Remove Non-Value-Added Work

Festo's design department wanted to reduce the amount of non-value-added engineering work for custom orders while maintaining accuracy. To achieve this goal, Festo partnered with SIGMAXIM, not only to automate their processes, but also to enhance overall quality.

By analyzing their workflow, they identified several labor intensive and tedious tasks that were ideal candidates for automation. Engineering was receptive to automating these tasks as they were slow and boring to perform, and the number of rules made it difficult to teach new engineers.

Festo had experimented with automation in the past, but the results were hindered by high maintenance demands, and the focus was on the automation itself and not the product.

The Solution:

SmartAssembly for Creo Parametric

SmartAssembly is an automation platform that enables organizations to achieve company initiatives from design to manufacturing. It can put any or all design and process rules into Creo to eliminate non-value-added engineering work by:

Automating Design Processes: Replacing manual tasks with automation to ensure consistency and reduce errors.

Generating Deliverables: Automatically creating outputs, e.g., BOMs, drawings, and manufacturing data, optimized for production systems.

Driving Data: Taking information from Creo and driving it directly into enterprise systems like Windchill, and ERP systems like Oracle and SAP.

INDUSTRY

Automation Technology and Technical Education

CHALLENGES

- Eliminate repetitive, non-value-added engineering work
- Reduce dependency on manual rules and training
- Improve accuracy & design consistency
- Accelerate design cycles for custom orders

SOLUTION

SIGMAXIM SmartAssembly

BENEFITS

- Project with 6X faster process
- Increased quality and consistency
- Ability to offer more highly specialized products to customers faster
- Expected savings = 1200 engineering hours per year

The Results: Reduced Time to Market

SIGMAXIM partnered with Festo to build applications to import DXF files into Creo and make mass changes to the Creo models. These changes were done at the feature and geometry level, effectively reading specific geometry requirements from the DXF, and applying those to the Creo features in the model tree structure.

"One application took a 3-hour process per design and SIGMAXIM rendered it in 30 minutes. The time savings, although impressive, were surpassed by the quality and consistency of the results," said Andreas Siedler, Senior System Architect at Festo.



Festo can now make more iterations of a product without the investment of engineering hours needed before the automation was available.

Our customers can request highly

specialized products with very little lead time. All of this results in getting custom products to market faster with less involvement from engineering.

"Working with SIGMAXIM allowed Festo to create process-specific automation without having to worry about maintaining the code," explained Siedler.

The Future: Building on the ROI

Engineering has embraced SIGMAXIM automation, as it has freed them from boring and tedious work so they can focus on more important tasks.

Festo has captured the large number of process rules which are often difficult to train new hires. The first application was a huge success and paid for itself within the first year.

Having completed SmartAssembly training, Festo is now in the process of writing additional automation applications independently.

"We still partner with SIGMAXIM to develop application architectures as we continue to learn, but we now write the applications ourselves," said Siedler.

The next automation project is for a PC board layout, with Festo anticipating a substantial savings of approximately 1200 hours of engineering time per year.



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M Andreas Siedler
Senior System Architect
Festo SE & Co. KG

ABOUT SIGMAXIM

SIGMAXIM has been the leading global expert in Creo automation solutions for over 20 years. We partner with companies of all sizes to deliver low risk, efficient automation solutions for both standardization and product configuration initiatives.

CONTACT US

Learn how SIGMAXIM's Creo Automation platform can help optimize your unique design process.

+1 617-981-6500 | +1 877-SIGMAXIM
www.sigmaxim.com | info@sigmaxim.com