

How King Automation Cut 60% of Time from Design to Production with Simulation Software



King Automation, Inc. is a fast-growing industrial automation company primarily focused on the automotive industry, supporting the many global automakers and suppliers setting up production facilities in the Southeastern United States. Key automotive customers include BMW, Mercedes-Benz, Volkswagen, Benteler, Magna, ThyssenKrupp and FFT.

The company, based in Roebuck, SC, specializes in automation engineering, robotics and controls. Services include solution implementation, software development for PLCs and supervisory HMI, configuration and commissioning of servo drivers/servo motion, electrical installation, assembly and safety services. King Automation, Inc. uses controllers to handle equipment and machine logic, motion control functions and conveyor lines as well as robot cells and paint process, among others.

According to Gustavo dos Santos, Robot Programmer and PLM Manager at King Automation, Geometric Solutions assisted with the implementation of Siemens' Tecnomatix Process Simulate software on two projects for BMW at their Spartanburg, SC plant. The project involved programming the robots in all areas of the plant, including paint shop, assembly, and body shop. In total, the project involved 22 programmable logic controllers (PLCs). For BMW, each PLC controls up to 14 robots, with 300 robots commissioned in total.

Tecnomatix Process Simulate utilizes organizational knowledge and 3D models of product design in order to virtually validate the manufacturing processes, optimizing and commissioning, resulting in faster launches and higher production quality. Without this simulation software, the virtual commissioning

would have been "impossible," according to dos Santos. Simulating the process reduced the timeline for the project from 14-18 months down to 6 months, saving 60% of the time from design to production on the floor.

King Automation believes that Process Simulate is one of the most reliable software resources for manufacturing process simulation due to its key features:

- Static and dynamic collision detection
- 2D and 3D sections
- Sequencing of operations
- Automatic assembly path planning
- Resource modeling (3D geometry and kinematics)
- Line and workstation design
- 3D interactive documentation, including electronic work instructions
- Advanced filtering and display of product and manufacturing information (PMI)

King Automation, Inc. initially decided to purchase the Process Simulate software because it allowed them to increase the scope of the business and better meet the needs of their customers. It has provided them with the ability to work from a different perspective and allowed them to do more work offline throughout the project rather than once it was physically installed. They continue to upgrade the software and are very pleased with version 14, which has been significantly enhanced.

Process Simulate software has saved King Automation both time and money on current and future projects and allowed them to provide industry-leading services to their automotive clients. In addition, Geometric Solutions provided “incredible” presales guidance in helping them select the right solution and “is always prompt with support.”

Why Choose Geometric Solutions?

An Experienced Partner

Geometric Solutions has a unique advantage over other VARs that sell Siemens Digital Industries Software. We don't just sell it – we use it every day. Geometric Solutions is part of the Waltonen family of companies, which includes Waltonen Engineering, a Tier 1 supplier to General Motors since 1957, and Independence Tooling Solutions. This real-world experience allows us to give our clients an unparalleled perspective on which modules to buy, and how to configure the software for maximum efficiency and effectiveness.

Geometric Solutions has been in existence since 2002, becoming the first Tecnomatix VAR partner of Siemens. In fact, the Waltonen family of companies is the largest non-OEM user of Tecnomatix in the country, with more than 25 seats that we own and use on a daily

basis. We also have 164 seats on NX, 12 seats on Process Simulate, 9 seats on Line Designer, 3 implementations of Teamcenter, and deep experience using other Siemens software solutions including VSA, DPV, Plant Simulation, and Mechatronics Concept Designer (MCD).

The Entire Siemens Software Suite

While we sell and support the entire suite of Siemens Digital Industries Software, we have particularly deep expertise in the following solutions:

Tecnomatix – Tecnomatix digital manufacturing solutions help to ensure that you can build your products as well as you design them. Whether you are designing a new plant from the ground up or introducing a new product into an existing facility, Tecnomatix solutions can help streamline implementation, reduce startup costs, and get you from art to part as quickly as possible.

Teamcenter – Teamcenter is the world's most widely used Product Lifecycle Management (PLM) system, helping companies to manage product data and streamline operations across the enterprise. With Rapid Start, we can quickly deliver all of the robust Product Data Management (PDM) capabilities of Teamcenter, plus provide you with the flexibility to grow into additional PLM capabilities as needed.

NX – NX is the integrated product design, engineering and manufacturing solution that helps you speed product development, improve quality, and reduce costs. It is a powerful suite of integrated tools including NX CAD, NX CAM, NX CMM, and NX Line Designer.

Solid Edge – Solid Edge is a portfolio of affordable, easy-to-use software tools that address all aspects of the product development process. Solid Edge combines the speed and simplicity of direct modeling with the flexibility and control of parametric design – made possible by synchronous technology.

Flexible Services

Geometric Solutions provides a full range of consulting and implementation services to our clients to get the most out of the Siemens Digital Industries Software investment. In addition, we offer a unique Service to Ownership™ partnership program to successfully transition clients from a service model to full ownership of the software.

Our consulting work consists of discover calls, software demonstrations, and onsite visits to perform gap analyses. The gap analysis involves working with customers to understand their current environment versus where they want to be, to meet their goals and stay competitive. In addition, we have resources available to install and implement any of the Siemens software tools.

The Service to Ownership™ program is perfect for smaller companies that question if they have enough work to justify a software investment, or if they have the internal ability to use the tools. We complete a small project for the client with the software, while they look “over our shoulder” and build the ROI case for acquiring the software. With the second project, we work shoulder-to-shoulder with the client by providing online support while they learn to use the tool in their own processes. By the third project, the client has taken ownership of the software, and our role is to “look over their shoulder” to assist as needed and guarantee that they have a successful conclusion. By this point you are up and running and your team is full engaged, ready to assume full control with total confidence.

Unparalleled Support

Geometric Solutions is your first line of support for Siemens software, with a direct line to Siemens for any issues requiring additional support. Tech support is provided by experienced Application Engineers Monday through Friday, 8am – 5pm EST, and is available through our toll-free support line 844-GEO-SUPT (844.436.7878) or via email at techsupport@geoplms.com.

In addition, we provide complimentary “Lunch & Learn” sessions to keep your skills up-to-date on Siemens Digital Industries Software.

Custom Training

We offer a variety of standard and customized training options, including instructor-led classroom training, web-based training, and onsite training. Classes are held at our office locations in Chicago, Indianapolis, and Warren (Detroit), or at the customer’s location.

Our web-based training options include instructor-led GoToMeeting sessions or can be self-paced using the Siemens Learning Advantage portal. The benefits of web-based training is that it can be broken up into increments and spread out over time, allowing users to maintain their typical daily workload. Classes are scheduled at customer request and are usually reserved for individuals that are part of the same company.

Our most flexible training option involves bringing the classroom onsite to your facility. With this option, we can build a customized curriculum tailored to your needs, as well as offering industry-specific tutorials. Depending upon proximity and duration, this option can contain additional expenses for travel and lodging.