

Sailing into Digital Continuity with Automation

How seamless data transfer from 3D models directly to manufacturing boosted quality & scalability

The Client: Griffon Marine

Griffon Marine is a leading designer and manufacturer of custom interiors and cabinetry for luxury yachts. Founded in 1848, they specialize in crafting high-quality wood fittings and intricate components for the marine industry.



With a long history serving prestigious clients in the naval field, they are renowned for their craftsmanship and expertise.

The Challenge: Achieving Digital Continuity

Despite their expertise, creating fully featured Creo Parametric models was time-consuming and complex. Griffon Marine's products required adherence to a complicated set of company design rules, as well as strict manufacturing requirements, (e.g., grain alignment, edge band specifications, and thickness adjustments). Without an effective way to consistently apply these rules in Creo Parametric, errors increased, leading to delays, material waste, and reduced product quality.

To address these challenges, Wilfried Cadiou, CIO, stated, *"Our main goal was facilitating Digital Continuity in order to optimize the quality and efficiency of our IT systems."*

He emphasized that achieving Digital Continuity starts with the model itself. While Griffon Marine had the right tools, rules documented, and standards defined, the challenge was ensuring engineers applied them consistently. The execution in the models often fell short, resulting in missing details that affected overall quality.

Onboarding new engineers worsened the problem, as getting them up to speed took time, and their mistakes often flowed downstream.

Key Challenges Included:

- **Manual Tasks:** The need to manually apply a myriad of business rules and modeling guidelines was an arduous process prone to human error.
- **Operational Bottlenecks:** Disconnected workflows between design and production teams resulted in miscommunication and delays.
- **Scaling Challenges:** Onboarding new engineers was slow due to the need to memorize complex company rules and CAD methodologies.

As product demand increased, the need for efficiency, accuracy, and quality grew rapidly. Griffon Marine sought a solution to automate their complex business rules and methodologies, aiming for seamless Digital Continuity across all company sites.

INDUSTRY

Custom Yacht Interiors & Cabinetry

CHALLENGES

- **Complex guidelines & company rules** caused inconsistent team compliance.
- **Manual workflows** created inefficiencies and poor design-to-production communication, leading to delays.
- **Onboarding delays** from complex rules & CAD methodologies led to errors.

SOLUTION

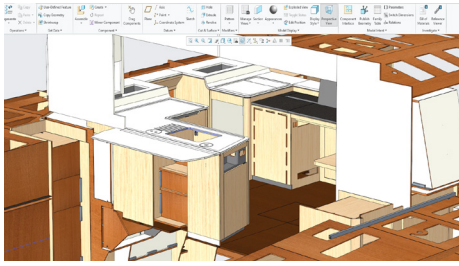
SIGMAXIM SmartAssembly

BENEFITS

- **Digital Continuity:** Optimized material usage, toolpaths, and schedules by eliminating manual steps.
- **Faster Onboarding:** No more need to memorize complex rules made onboarding faster and easier.
- **Scalability:** Operational improvements enabled them to take on more projects.

The Solution: SIGMAXIM SmartAssembly

Recommended by industry peers and PTC, SIGMAXIM's SmartAssembly was selected for its ability to automate complex design rules as well as its seamless integration with existing systems.



SmartAssembly is an automation tool 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: Take information from Creo and drive it directly into enterprise systems like Windchill, and ERP systems like Oracle and SAP.

SmartAssembly embedded Griffon Marine's complex rules directly into Creo Parametric, ensuring their standards were automatically followed each and every time. The resultant models enabled the Digital Continuity needed between design and downstream departments.

Digital Continuity and More

SmartAssembly delivered transformative results by enabling fully featured Creo models to provide rich information to Griffon Marine's manufacturing systems.

The Numerical Control programs are generated directly from the 3D models in their CAM tools (Actcut & Actwood by Almacam), which originated in Creo & SmartAssembly.

This seamless data transfer from design to production optimized material usage, production schedules, tool path creation, and eliminated manual tasks. In addition, they achieved:

Increased Speed & Quality: Consistent application of CAD methodologies and company rules led to substantial time savings, cost reductions, and enhanced design quality.

Faster Onboarding: New engineers no longer need to memorize extensive rules and methodologies, making onboarding faster and easier, while reducing errors.

Scalability: Operational improvements enabled them to grow and take on even more projects.

SIGMAXIM's SmartAssembly dramatically boosted Griffon Marine's productivity, empowering them to meet client demands with unmatched efficiency and quality.

Digital Continuity in Action

SmartAssembly has transformed Griffon Marine's design process by using detailed, fully featured 3D models, ensuring Digital Continuity from design to manufacturing. This integration accelerates processes, minimizes errors, and enhances production quality, enabling them to handle higher volumes efficiently.

Wilfried explains, *"With SmartAssembly, we didn't just automate CAD model creation—we enabled CAD/CAM integration by embedding manufacturing intelligence into every 3D model, giving us a faster, more efficient workflow and higher-quality parts."*

He continues, *"This allows us to move directly from 3D models to manufacturing with uninterrupted continuity. The models incorporate the necessary logic and symbols for tasks like grain alignment, material colors, edge band*

specifications, thickness adjustments, and manual actions that are interpreted by the CAM tool. This streamlines workflows and ensures process consistency."

By automating this intelligence into the model,

manufacturing tools use this information to derive the part's topology and manufacturing details (e.g., shapes, sharp corner symbols). This enables production of a complete list of parts with minimal user interaction.

Creo models now act as a single source of truth—from detailed 3D models to individual parts—driving efficient production all the way to CNC machines, streamlining the entire process and ensuring high-quality output.

The Future: A Growing Competitive Edge

By replicating the automation to other locations, Griffon Marine created more continuity between their divisions. This continues to strengthen their competitive edge and reinforce its position as a leading provider of high-quality, precision-engineered products.

Ready to achieve similar results?

Contact info@sigmaxim.com to learn more about our Creo automation platform or to schedule a free demo.