MillerKnoll

SIGMAXIM

Driving Global Engineering Standardization with Automation

Enabling Cross-Brand Engineering Integration at MillerKnoll After a Major Merger

The Client: MillerKnoll

MillerKnoll is a global design collective formed through the merger of Herman Miller and Knoll, leaders in modern office furniture and architectural systems. The company manufactures complex, configurable furniture systems across North America, Europe, and India.

The Challenge

When Knoll merged with Herman Miller in 2021 to create MillerKnoll, it brought together two fully developed, decades-mature engineering environments, each with its own:

- Modeling standards
- Hole patterns and hardware logic
- Drawing formats and validation methods
- Windchill processes
- Legacy automation approaches

As cross-brand product development expanded, engineers needed a way to consolidate methodologies efficiently and consistently. Leadership also required greater manufacturing portability—the ability to shift production between plants as capacity demands changed.

In addition, inconsistencies in Windchill data management created operational friction, with teams relying on spreadsheets, manual exports, and email-based coordination to bridge system gaps.

The SmartAssembly Approach

Herman Miller developed a library of SmartAssembly productivity apps that automate repeatable tasks and standardize processes across brands and regions. These apps enable teams to:

- Apply standardized pilot hole and cabinet hole patterns
- Automatically validate alignment and model integrity
- Generate drilling tables directly from model data
- Bring imported or legacy parts up to current modeling standards
- Export structured data cleanly for downstream systems

SmartAssembly allows Knoll engineers to apply Herman Miller-standard logic—and vice versa—without manual recreation or redundant research.

SmartAssembly also integrated directly into Windchill workflows, standardizing data entry and automating check-in processes to reduce duplication and manual intervention.

Measurable Efficiency Gains

SmartAssembly delivered measurable improvements across critical engineering workflows. A drilling-table process that originally required five minutes now runs in approximately 30 seconds with SmartAssembly.

Beyond time savings, the automation reduced variability and significantly lowered the risk of human error.

INDUSTRY

Furniture Designer & Manufacturer

CHALLENGES

- Merging two mature engineering environments with different standards
- Inconsistent modeling, drawing, and validation methods
- Limited reuse of proven engineering methods across brands
- Manual research and recreation of automation logic
- Manufacturing portability challenges between plants

SOLUTION

SIGMAXIM SmartAssembly

BENEFITS

- Reduced non-value-added engineering work
- Standardized processes across merged brands
- Improved global collaboration
- Strengthened downstream data reliability
- Enabled manufacturing portability

Another high-impact application is the Cabinet Hole Validator. Because MillerKnoll manufactures large cabinets with extensive hole patterns, precise alignment is critical. What previously required manual model rotation and visual inspection can now be completed in seconds.

SmartAssembly scans the full model, highlights misaligned holes, and adjusts views automatically—providing instant, model-wide validation at the click of a button.

In addition to accelerating modeling workflows, SmartAssembly eliminated many non-value-added engineering tasks. Processes such as exporting bills of materials, publishing drawings, and organizing files for downstream systems are now automated directly from the model environment.

Standardized Engineering at Global Scale

Beyond efficiency, SmartAssembly established consistent engineering standards across brands and regions. Teams define and enforce a single method for critical tasks—such as pilot hole creation and product validation—ensuring consistent execution across engineers.

"*One of the biggest benefits of SmartAssembly has been establishing a single, consistent engineering standard across our global organization,*" said Nate Zylstra, Specials Technical Program Manager.

As adoption expanded, workflows became uniform across global teams, enabling faster issue traceability and stronger quality control. The growing app library also accelerated cross-brand learning—allowing engineers to apply embedded best practices instantly, without researching legacy standards or recreating logic manually.

Engineers across multiple global facilities now rely on a growing library of SmartAssembly applications to standardize modeling and validation workflows.

Downstream Confidence

Automation strengthened trust even beyond engineering. "*For our CNC team, data manipulated by SmartAssembly is their gold standard,*" said Jerry Schondelmayer, CAD Services Manager.

By delivering consistent, validated outputs, SmartAssembly improves manufacturing readiness and reduces downstream friction.

Operational Portability

Standardization through SmartAssembly also enables true cross-facility production flexibility.

Because engineering logic and validation methods are consistent across brands, Herman Miller products can now be built in Knoll facilities—and Knoll products in Herman Miller facilities—when capacity demands require it.

"*We want portability, and SmartAssembly is part of the standardization we're utilizing to enable that,*" explained Schondelmayer.

Embedded standardized logic allows the organization to shift work between facilities without reengineering processes or retraining teams.

Partnership & Ongoing Support

Beyond the technology itself, MillerKnoll benefited from responsive support from SIGMAXIM throughout adoption.

Even engineers with no prior programming experience were able to build applications confidently, with expert guidance available when needed. This accelerated internal capability development and sustained long-term success.

The Business Impact

SmartAssembly enabled MillerKnoll to:

- Standardize CAD processes across merged brands
- Reduce non-value-added engineering work
- Improve global collaboration
- Strengthen downstream data reliability
- Enable manufacturing portability across facilities

In a complex post-merger integration environment, SmartAssembly evolved from a productivity tool into a foundational layer of engineering infrastructure—enabling cross-brand consistency, operational control, and enterprise-wide agility.

Today, engineers across multiple MillerKnoll facilities worldwide use SmartAssembly apps daily to standardize modeling and validation workflows.

> ***SmartAssembly has enabled a single, consistent engineering standard across our global organization.***
>
> **Nate Zystra**
> *Specials Technical Program Manager*
> MillerKnoll, Inc.

CONTACT US

Learn how SIGMAXIM's Creo automation platform helps engineering teams standardize processes, automate workflows, and improve collaboration across global teams.

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