

VIECELLI MÓVEIS LTDA

ACCELERATING CUSTOM BUSINESS FURNITURE
DEVELOPMENT WITH SOLIDWORKS



Viecelli Móveis leveraged SOLIDWORKS design software, the open SOLIDWORKS Application Programming Interface (API), and SOLIDWORKS eDrawings files to integrate design data into its enterprise resource planning (ERP) system, enabling a more efficient, 3D model-based definition (MBD) approach to production.

Challenge:

Speed up development of custom furniture and merchandising displays for use in stores, restaurants, and other businesses while simultaneously improving quality and reducing development costs.

Solution:

Implement SOLIDWORKS Professional design software, and leverage the open SOLIDWORKS Application Programming Interface (API) to integrate design data with its enterprise resource planning (ERP) system and SOLIDWORKS eDrawings files to move toward a model-based definition (MBD) approach to production.

Results:

- Accelerated time-to-market by 50 percent
- Cut design cycles by 30 percent
- Decreased scrap and rework by 50 percent
- Reduced development costs by 20 percent

When businesses in Brazil need custom-designed furniture and merchandising displays, they turn to Viecelli Móveis Ltda. As Brazil's top manufacturer of custom furniture and display systems—for use in retail and specialty stores; restaurants and shopping malls; and medical, legal, and professional offices—the company supplies its own architectural, design, and manufacturing services, and works closely with leading building architects and architectural firms.



By integrating SOLIDWORKS design software and its ERP system, Viecelli Móveis can extract all required BOM, geometry, and dimensioning information from the associated SOLIDWORKS eDrawings file, eliminating the need to create 2D engineering drawings.



View it in eDrawings.



“With the automation that we’ve achieved integrating SOLIDWORKS with our ERP system, our designers only have to worry about working on the design and getting that job done properly....It’s much easier to visualize and model these designs in SOLIDWORKS, and we’ve been able to automate fabrication by employing MBD techniques.”

— Anderson Viecelli, Owner and Engineering Manager

Until 2011, Viecelli Móveis used AutoCAD® 2D design software to develop and manufacture its custom furniture products. That’s when business growth, the need to visualize innovative concepts in 3D, and increasing demand for faster delivery times prompted Owner and Engineering Manager Anderson Viecelli to evaluate 3D product development solutions.

“Our primary challenge was to dramatically accelerate product design cycles,” Viecelli explains. “However, we didn’t treat design as if it were an island unto itself, but wanted to integrate 3D design data with our business processes, laying the foundation to ultimately take advantage of a 3D MBD approach to manufacturing. Just as we create furniture to fulfill unique requirements, we use our own in-house ERP system—we customized the ERP developed by our partner IndexOnLine Systems—to have total integration between 3D design data and the ERP tool.

“Having used AutoCAD 2D tools, we first looked at Autodesk® Inventor® before deciding to evaluate SOLIDWORKS® software,” notes IT Manager Alex Santos. “We found SOLIDWORKS to be easier to use, faster, and a better solution overall.”

“SOLIDWORKS was much easier to integrate with our ERP system,” adds Alex Klein, owner and software engineer of IndexOnLine Systems. “The open SOLIDWORKS API enabled us to more efficiently extract important design information from SOLIDWORKS for use in our ERP system.”

Viecelli Móveis standardized on SOLIDWORKS Professional design software because it’s easy to use, supplies the flexibility necessary for integration with the company’s ERP system, and provides robust design visualization and communication tools. “SOLIDWORKS is better suited for helping us meet our efficiency, quality, and manufacturing goals,” Viecelli says.

SAVING TIME AND MONEY, IMPROVING QUALITY

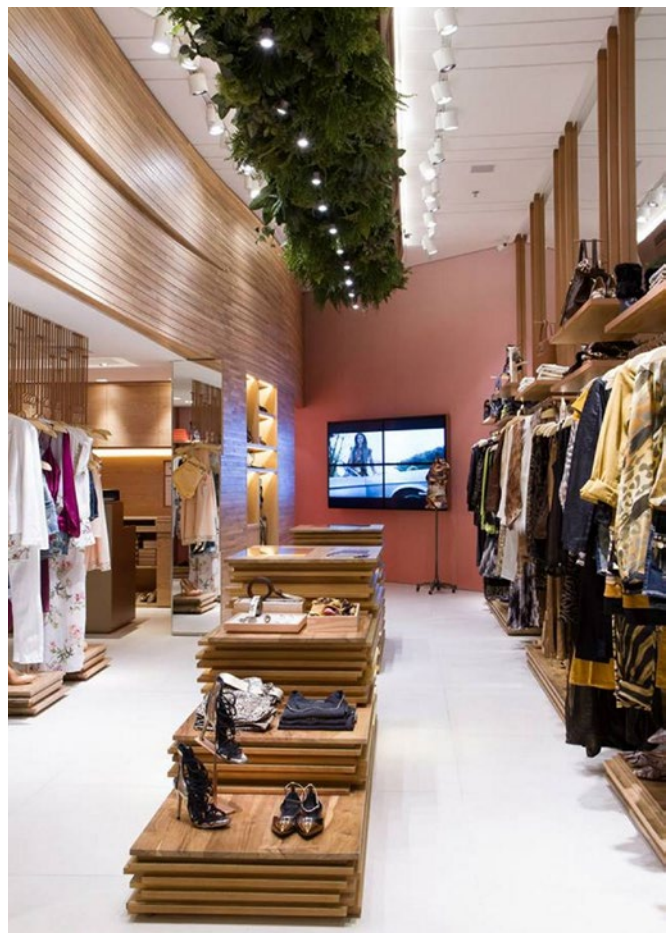
Since implementing SOLIDWORKS, Viecelli Móveis has realized significant productivity gains—reducing time-to-market by 50 percent, design cycles by 30 percent, scrap and rework by 50 percent, and development costs by 20 percent—while also reducing errors and improving quality. Using SOLIDWORKS, Viecelli Móveis can deliver furniture and merchandising displays for an entire store in just 10 to 15 days.

“With the automation that we’ve achieved integrating SOLIDWORKS with our ERP system, our designers only have to worry about working on the design and getting that job done properly,” Viecelli says. “For example, we are currently creating merchandising displays for 70 stores for Arezzo [a women’s shoe brand], which involves lots of sheet metal and structural piping. It’s much easier to visualize and model these designs in SOLIDWORKS, and we’ve been able to automate fabrication by employing MBD techniques.”

TAKING ADVANTAGE OF MBD WITH EDRAWINGS

Viecelli Móveis can take advantage of MBD methodologies through the integration of design data—in the form of SOLIDWORKS eDrawings® files—with business and manufacturing processes. Through its SOLIDWORKS-ERP integration, the company can automate sheet metal bending and fabrication by automatically extracting geometric, dimensioning, and materials information from associated eDrawings files.

“Our designers use SOLIDWORKS to visualize the project, including assembly, without having to actually produce the parts,” Klein explains. “Our ERP system then extracts all of the required bill of materials [BOM], geometry, and dimensioning information to manufacture the design from the SOLIDWORKS eDrawings file, eliminating the time and effort required to create 2D engineering drawings while simultaneously improving accuracy and quality.”



Using SOLIDWORKS design and SOLIDWORKS eDrawings tools, Viecelli Móveis has realized productivity and quality improvements, allows the company to develop furniture and merchandising displays for an entire store in just 15 days.

LEVERAGING MOBILE TECHNOLOGY

By using eDrawings files to facilitate integration of design data with the company's ERP system, Viecelli Móveis can leverage mobile tablet technology for more flexible access and visualization of design information, both internally and externally. The custom furniture manufacturer currently uses Microsoft® Surface™ tablets for accessing eDrawings through its ERP system and plans to use eDrawings for iPad® in the future.

"We're trying to get away from using paper, and using eDrawings with our ERP system enables us to achieve that goal," Viecelli says. "From conceptual design and engineering through manufacturing and assembly, everyone involved with product development can visualize the entire development process with eDrawings. Our Assembly Department no longer uses paper drawings. Instead, they use mobile devices to access eDrawings for part information required for assembly. Not only is the process faster, it's also more tightly controlled, allowing us to improve quality and increase throughput."



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