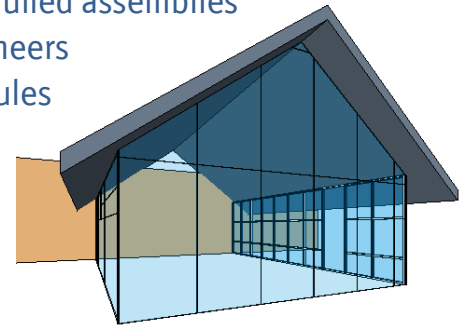


Friedman Frontier Commercial Fenestration Design, Estimating, and Quoting

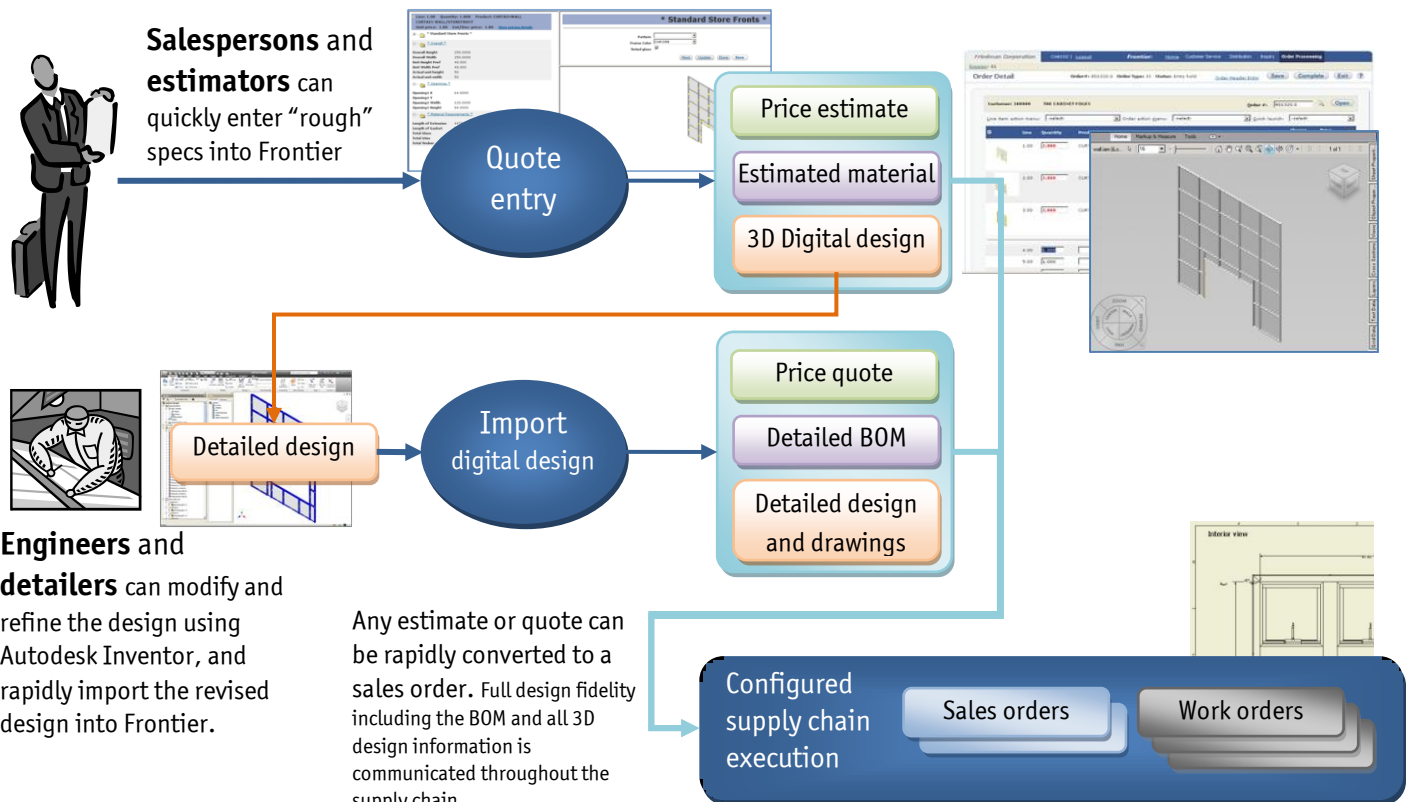


- Rapidly estimate and bid complex curtain walls, storefronts, and mullied assemblies
- Salespersons can easily generate multiple estimates **without** engineers
- Powerful 3D design integration allows use of both 3D design tool rules and Frontier configuration rules
- Flexible workflows accommodate both semi-custom and engineered-to-order products
- Fully integrated with Frontier supply chain execution and ERP



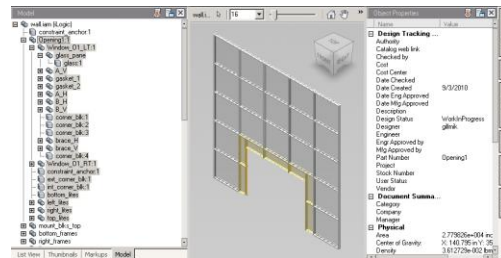
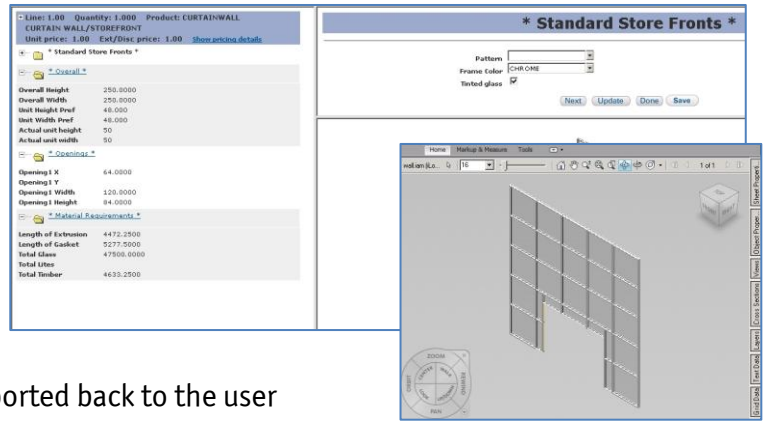
Speed of estimating and design is vital in the competitive building products industry.

Suppliers of commercial fenestration products are under pressure to rapidly estimate, engineer, and quote complex assemblies such as store fronts, curtain walls, and complex mullied units. The Friedman **Frontier** solution provides an end-to-end solution for commercial window manufacturers, providing powerful 3D design integration and class-leading “configured ERP” for make-to-order manufacturing and fulfillment.



Salespersons and estimators can rapidly estimate complex jobs without engineering.

The power of the Frontier parametric **Product Configurator** allows salespersons and estimators to rapidly configure complex window assemblies. Using a simple browser-based interface, users answer a few basic questions about the assembly being estimated. A full 3D “estimated” product design is created **without requiring assistance from engineers**. Violations of design constraints as defined by your engineers are reported back to the user immediately during the estimating process, further reducing the estimating turnaround time.

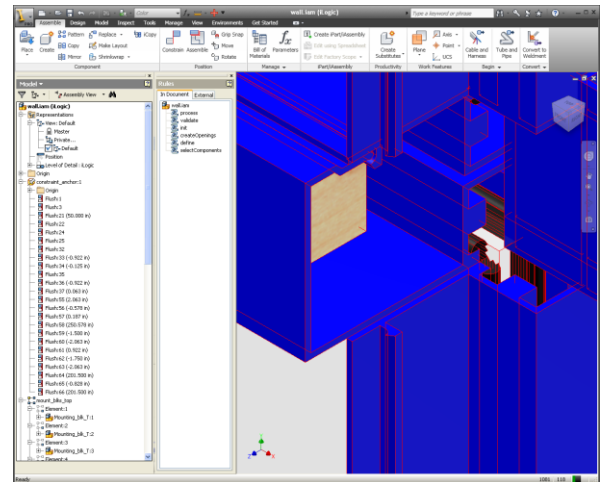


The created design includes a **full bill of materials**, which can be used to further validate the estimated selling price calculated by the Frontier Product Configurator. The digital design contains not only an accurate 3D representation of the estimated assembly, but can also contain an unlimited number of 2D detailed views.

Engineers can refine the design, or create “engineered to order” designs.

The digital design created by the initial estimate can be further refined by your engineering staff if required (for example, once detailed measurements and takeoffs are known). Engineers use **Autodesk Inventor®** to modify and validate the design. The modified design can then be imported back into Frontier as a quotation. Frontier will recognize any changes to the bill of materials based on the design, and recalculate projected costs accordingly.

Engineers also have the capability to create complex **“engineered to order” designs** within Inventor without an existing estimate, and to import those designs into Frontier directly. Frontier’s deep integration with Inventor allows the bill of materials for these truly custom designs to be understood and incorporated into a new estimate or quote.



Rapidly convert estimates and quotes to sales orders and work orders. Any valid estimate or quotation can be converted to a sales order when the job is approved. The pricing, digital design and BOM information associated with the converted quote is carried to the sales order and work orders. All components of the supply chain have access to the detailed digital design, right down to the shop floor and machine level.

Frontier for Commercial Fenestration

- Estimate, engineer, bid, and configure complex assemblies
- Rapid estimating and engineering capabilities
- Full ERP supply chain integration from estimating and engineering through manufacturing to shipment and installation

