

# Top reasons AutoCAD users upgrade to Inventor and the Product Design & Manufacturing Collection

For decades, AutoCAD has served you and your team well. And, as the software has gotten better over time, so have you. So why would you consider a change?

Learn how the Product Design & Manufacturing Collection provides you with the tools you need to modernize your modeling approach and gain agility throughout your development process.

## 1 MAKE YOUR DESIGN PROCESS AGILE

Parametric 3D modeling allows for intent and relationships to be created between geometric features, leading to a significant reduction in time spent incorporating design changes. A single parameter can cascade geometric updates throughout the model. In addition, drawings are associative to the 3D model and automatically update alongside any changes.

*By moving to parametric 3D, both Bosch Rexroth Canada and Seibu have been able to make changes at least*

**50%** *faster than they were in 2D.*

## 2 BETTER COMMUNICATE YOUR DESIGN WITH 3D

3D models provide a clearer understanding of what is happening in your design, so issues and opportunities for improvement that are difficult to discern in 2D become more readily apparent. In addition, 3D models can be used to generate high-fidelity renderings and animations, so you can show off your product to the world with stunning visualizations.

*“It is difficult to check complicated interferences using 2D CAD, and we cannot identify everything at the design stage. Often, we found out that they occurred after we assembled a machine, and rework occurred frequently. 3D got rid of such rework.”*

*—Yoshihiro Ito, Development Division Chief, Seibu Electric & Machinery, Ltd.*

## 3 AUTOMATE PRODUCT CONFIGURATION

With the addition of parameters, rules can be defined that automatically configure products to customer specification. This not only reduces engineering time spent on configuration so they're free to work on other valuable projects, but your sales teams can be equipped with the configurator to more rapidly respond to RFPs.

*After moving to parametric 3D, Viewrail has been able to cut design time from 4 hours to 2 minutes and increase completed monthly orders*

**from 12 to 150** *with automated product configuration.*

## 4 STREAMLINE THE TRANSITION FROM DESIGN TO MANUFACTURING

When working with 3D parametric modeling, manufacturing deliverables can be generated automatically and updated any time the model is changed. BOMs are derived from the 3D CAD model and can be version managed. CAM software can rapidly produce CNC toolpaths. Additionally, model-based definition can be used to convey detailed manufacturing information, directly attached to the 3D model.

*“The transition to Autodesk’s manufacturing products has bridged the gap between the design team and production team, this allows us to be reactive to changes and updates and gives us better collaboration on projects.”*

*Gavin Thomas, CNC Manager, Robert Page Engineering*

## 5 TEST AND ANALYZE DESIGNS, EARLY

Using simulation tools integrated into the modeling environment provide the opportunity to test and analyze designs early and throughout the development process. From tolerance stack-ups to stress and thermal analysis, you can get immediate feedback on your design decisions with the ability to easily modify the model to incorporate design enhancements.

*Transitioning from 2D to 3D has allowed Saito Separator to incorporate simulation into their design process, reducing product costs by*

**25-30%**

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