Top reasons machine designers upgrade to the collection

The Product Design & Manufacturing Collection is a powerful set of applications that provides extended capabilities to Inventor and AutoCAD for engineers who design complex and custom products, equipment, and systems. These tools enable associative workflows for downstream processes and unite teams with connected data throughout the entire product development process.

1 Powerful 3D mechanical design
Create your design ideas with powerful 3D mechanical design, documentation, and product optimization tools. Work efficiently with a blend of parametric, direct, and freeform modeling capabilities.

> *To model an impeller manually took a couple of days. With iLogic it takes **15 minutes**.*
> – Alex Curtin, Product Manager, FS-Elliott

2 Specialized engineering tools
Model 3D parts and assemblies in less time with specialized tools for sheet metal, frame design, tube and pipe, cable & harness, presentations, design accelerators, and more.

> *Inventor has improved our efficiency in engineering and design and shortened lead times at least **20%**.*
> – Frank Camus, Vice President of Engineering, DIS-TRAN

3 Design automation
Capture and reuse engineering knowledge and intent to configure new designs while reducing errors and time spent on tedious, repetitive modeling tasks.

> *A simple project that would take us **4 hours**, we can now do in **20 minutes**.*
> – Ryan Rittenhouse, Senior Design Automation Engineer, Viewrail

4 2D and 3D together
Accelerate design work by leveraging existing 2D data to build 3D models and create manufacturing documentation using the familiar DWG format. Combine the capabilities of 2D and 3D CAD to layout and visualize electromechanical designs.

5 Tolerance stackup analysis
Balance mechanical fit and performance with the cost of tighter tolerances based on an analysis of the cumulative dimensional variation between mating geometry.

> *With Inventor Nastran we can do simulations in-house instead of outsourcing them.*
> – Bjorn Tore Edkerhovd, Engineering amanger, Mento Services

6 Advanced simulation
Choose from a complete portfolio of powerful study types to help validate and optimize designs before they are released for production.

> *Inventor CAM **reduced** some of our **machining times** on an order of **20 to 30 hours**.*
> – Tim Evans, Shop Manager, Kalitta Motorsports

7 CAM and Nesting
Streamline the transition from design to manufacturing with integrated tools for generating multi-axis toolpath strategies and sheet metal nests.

> *There are so many functionalities for different utilities we need. It's all in one package with Fusion 360. I can't think of a competing product in the space that comes close to that.*
> – Jonathan Ward, CEO, ICON

8 Access to Fusion 360
Explore design alternatives and accelerate production from any location using Inventor and Fusion 360 together.

9 Production system and work cell design
Plan, design, install, and operate the entire production process with integrated factory layout design, installation sequencing, and analysis tools.

> *Now our work is much easier because we're building a library of factories. We just take the 2D mechanical representation from the library, place them in the layout drawing, complete the configuration, and synchronize it all to 3D. None of our work is lost in the transition, so we can meet our deadlines faster.*
> – Assaad Hani, Analyst, Technica International

10 Photorealistic renderings
Render high-fidelity imagery and animations of products for use in design reviews, documentation, and sales and marketing collateral.

Ready to learn about the Product Design & Manufacturing Collection? Visit:
autodesk.com/collections/product-design-manufacturing