AUTODESK

ADVANCED MANUFACTURING SOLUTIONS

Make anything

About Autodesk Advanced Manufacturing

For nearly 40 years, Autodesk® has pushed the possibilities of what it means to design and manufacture. Covering additive, subtractive, simulation, materials and electronics, products such as Moldflow®, PowerMill®, Netfabb® and FeatureCAM® provide customers globally with solutions across all advanced manufacturing processes and needs.

Now, with Fusion 360 we're ushering in an era of advanced manufacturing that will change everything. Empowering product design and manufacturing innovators to achieve the new possible– in the way businesses can imagine, collaborate, and create.

Your advanced manufacturing innovation partner
With more than 600 manufacturing professionals dedicated to software development, and over $1B investment in advanced manufacturing technology, we are committed to helping you stay ahead of the competition. Our expert technical specialists, consulting teams and specialized local Partner Network are available globally to optimize your manufacturing processes.

We recognize it's difficult to test, learn, and implement new manufacturing processes when you face pressures every day to deliver parts. Our global network of technology centers help expand your R&D capabilities to drive manufacturing innovation, using Autodesk software to push the limits of the latest hardware available today.

Converging design and manufacturing
We are here to help you connect your design and manufacturing workflows, automate your processes, and network with your entire supply chain.

600
software developers

>$1bn
invested by Autodesk

6
manufacturing innovation centers

Choose from a range of digital manufacturing software focused on processes including CAM, additive manufacturing, plastics simulation, and inspection to best fit your business needs:

CAM

PowerMill
Expert high speed and multi-axis CAM software

FeatureCAM
Automated CNC programming software

PartMaker
Precision programming for Swiss-type lathes

Additive

Netfabb
Connected software for additive manufacturing, design, and simulation

PowerMill
Program, control, and simulate high-rate additive manufacturing processes

Simulation

Moldflow
Plastic injection and compression mold simulation software

CFD
Computational fluid dynamics simulation software

Metrology

PowerInspect
Multi-device 3D inspection software

Modeling for Manufacturing

PowerShape
Prepare complex models for manufacture

Integrated CAD/CAM/CAE

Fusion 360
Integrated CAD/CAM/CAE software

Included with all our specialist tools is access to Fusion 360 – our next generation, data-centric platform seamlessly connecting design, engineering and manufacturing. Differentiate your business by:

- Accessing all the technology you need, on demand

- Collaborating with all stakeholders from design to manufacture

- Connecting to suppliers and services providers

- Communicating throughout the development timeline.

AUTODESK® **FUSION 360**™

> **"I've used various softwares in the past, like CATIA, or NX or Mastercam, but none of those really put together designing and manufacturing as well as Fusion 360**

Jeff Hooper,
Backhand Bikes

Integrated CAD, CAM, and CAE software

Fusion 360™ solves the bottlenecks created by traditional CAD, CAM, data management, and simulation solutions by eliminating the disconnected development process that you encounter every day. Unifying our most potent technologies under the power of a single platform, Fusion 360 provides a cohesive experience across design, engineering, and manufacturing with your data at the center – on any device, anytime, anywhere.

Three reasons to use Autodesk Fusion 360

Simplify your entire workflow with one platform
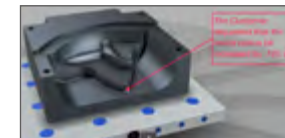
Collaborate seamlessly in the cloud

Use generative design to realize previously impossible outcomes

Learn more at www.autodesk.com/fusion-360

AUTODESK® POWERMILL®
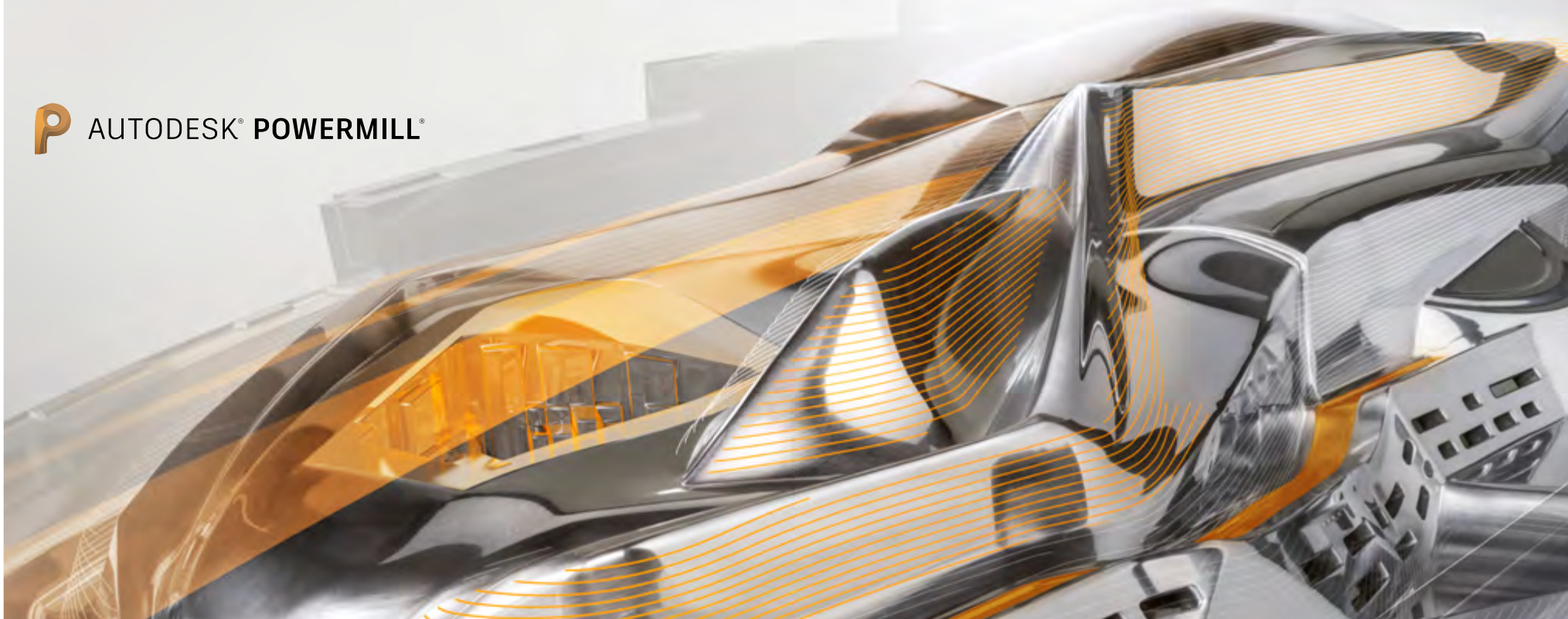
> " With PowerMill, we're seeing jobs come in weeks ahead of schedule. Builds that would traditionally take 10 weeks, we're doing in 4 to 5

Brian Kerkstra,
Manufacturing Engineer,
Paragon D&E

Expert high-speed and multi-axis CAM software

Autodesk® PowerMill® is expert CAM software for programming molds, dies and highly complex components requiring maximum quality, control, and efficiency of your CNC machines. Access a vast library of toolpath strategies and combine with advanced optimization tools to generate the NC code needed to produce exceptional quality parts. Use powerful simulation tools to validate and enhance the motion of 5-axis machines and industrial robots.

Three reasons to use Autodesk PowerMill

Rapidly create high efficiency toolpaths for large, complex parts

Extensive toolpath editing and optimization

Automatic 5-axis collision avoidance for demanding applications

Learn more at www.autodesk.com/powermill

![Autodesk Netfabb logo] **AUTODESK® NETFABB®**
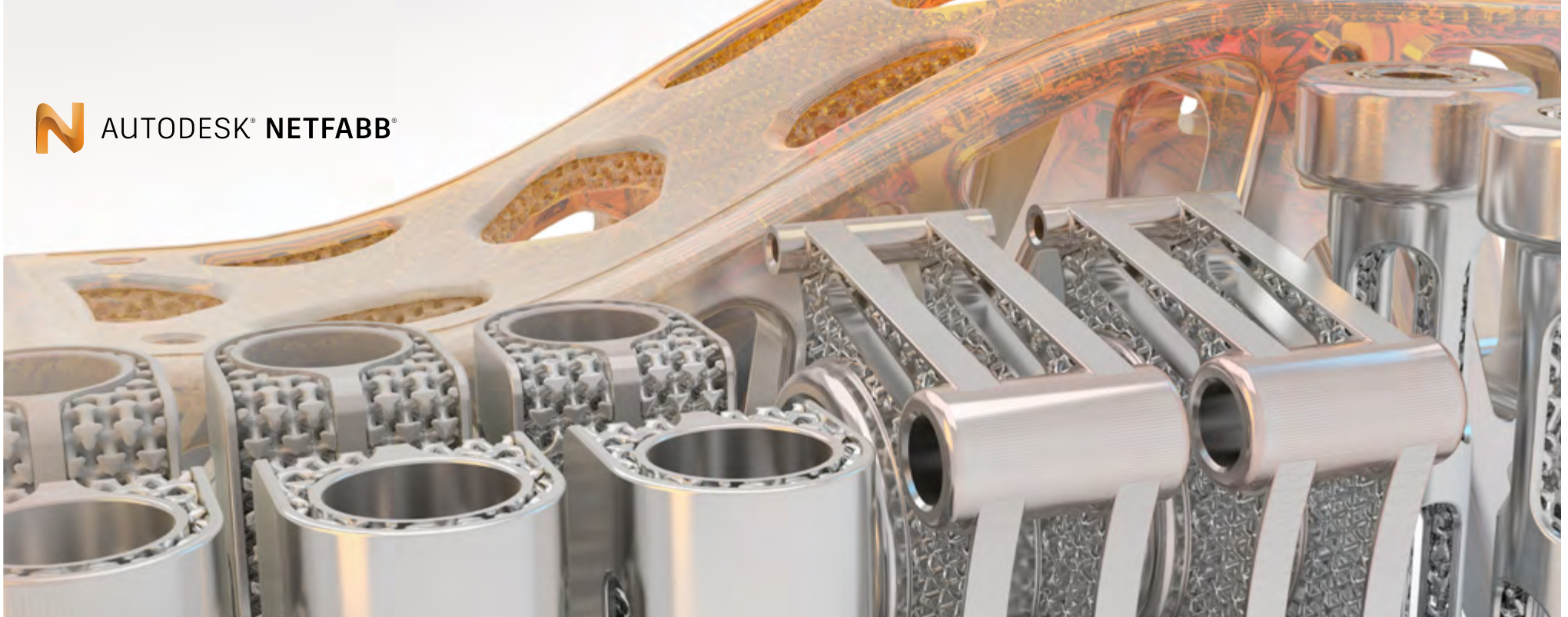
> **"** **Designs are becoming more complex and computer modelling is essential to master the complexity. Autodesk software proved this can be done**
>
> Marko Bosman,
> Chief Technologist AM,
> GKN Aerospace

Connected software for additive manufacturing, design, and simulation

Designed for production environments, Autodesk® Netfabb® provides efficient build preparation capabilities alongside tools for optimizing designs for additive manufacturing and simulating metal additive processes, to help you reduce costs, increase efficiency, and improve part performance. Quickly get from a 3D model to successfully printed parts using a complete additive manufacturing toolset that streamlines workflows and reduce build errors.

Three reasons to use Autodesk Netfabb
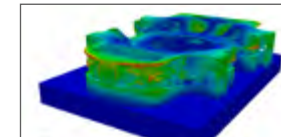
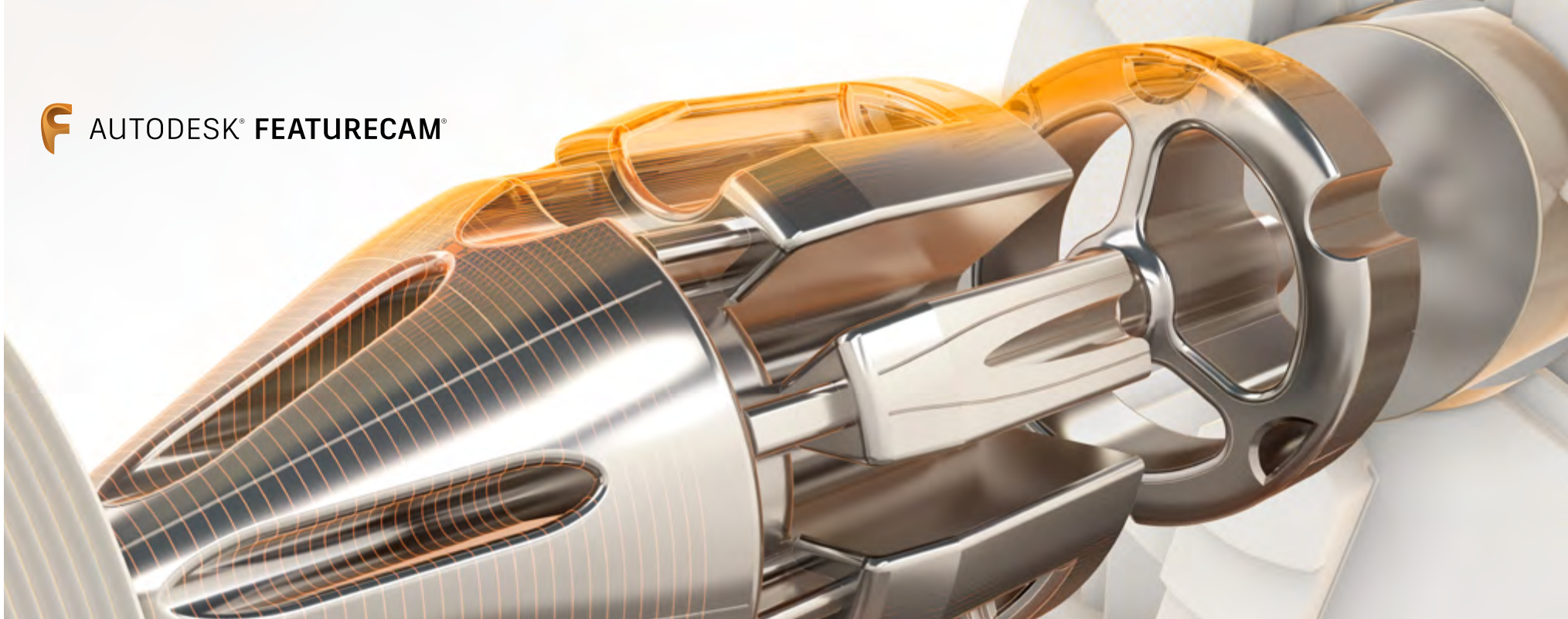Have full control over your toolpath and simulate metal additive processes
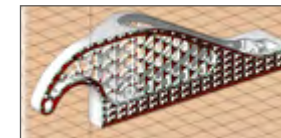
Create models that take advantage of additive manufacturing

Maximize the numbers of parts you can fit into each build

Learn more at www.autodesk.com/netfabb

AUTODESK® FEATURECAM®

> ❝ FeatureCAM has been a blessing. It takes our design, gets the G-code made, and goes into the machine in lightning time

Don Binkley,
CEO,
D&D Engineering

Automated CNC programming software

Fusion 360 with FeatureCAM automates CAM programming with automatic and interactive feature recognition technology for faster part production. Knowledge-based programming helps you intelligently program a comprehensive range of CNC applications, including mills, multi-tasking turning centers, Swiss-type lathes, and wire EDMs. Fusion 360, PartMaker, Fusion Team, and HSMWorks are included as complementary solutions to FeatureCAM.

Three reasons to use Autodesk FeatureCAM
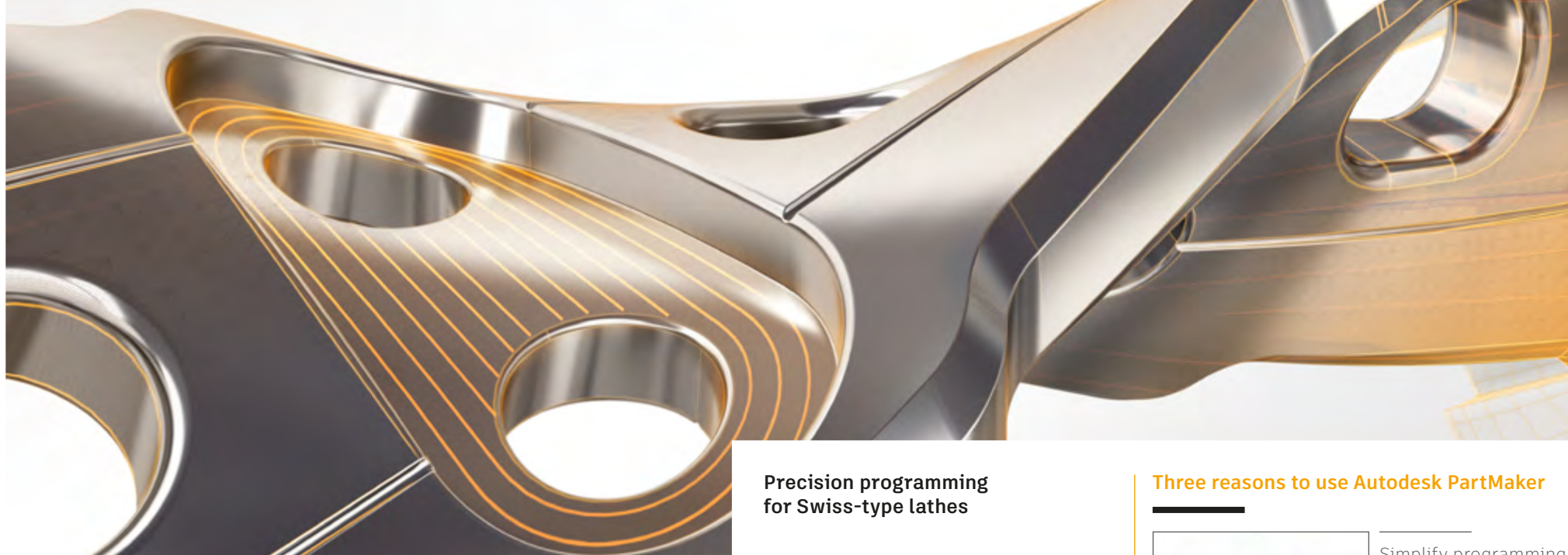
Automate your workflow from design to NC code

Single interface for all your CNC applications
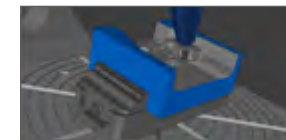
Produce consistent results with built-in manufacturing knowledge

Learn more at www.autodesk.com/featurecam

P AUTODESK® **PARTMAKER**®

> " We make a tremendous amount of
> medical components. PartMaker was the
> logical choice – it has allowed us to take
> highly complex parts and program them
> in one operation

Lee Dwyer,
General Manager,
Astro Medical Devices

Precision programming for Swiss-type lathes

PartMaker enables high precision programming for Swiss-type lathes. Machine parts complete with efficient cycle times and achieve high quality, burr-free finishes. Specifically developed for Swiss lathes, PartMaker supports the CNC techniques commonly used by Swiss programmers. Our globally established relationships with many machine tool manufacturers helps to ensure PartMaker post-processors generate accurate NC code for your lathe.

Three reasons to use Autodesk PartMaker

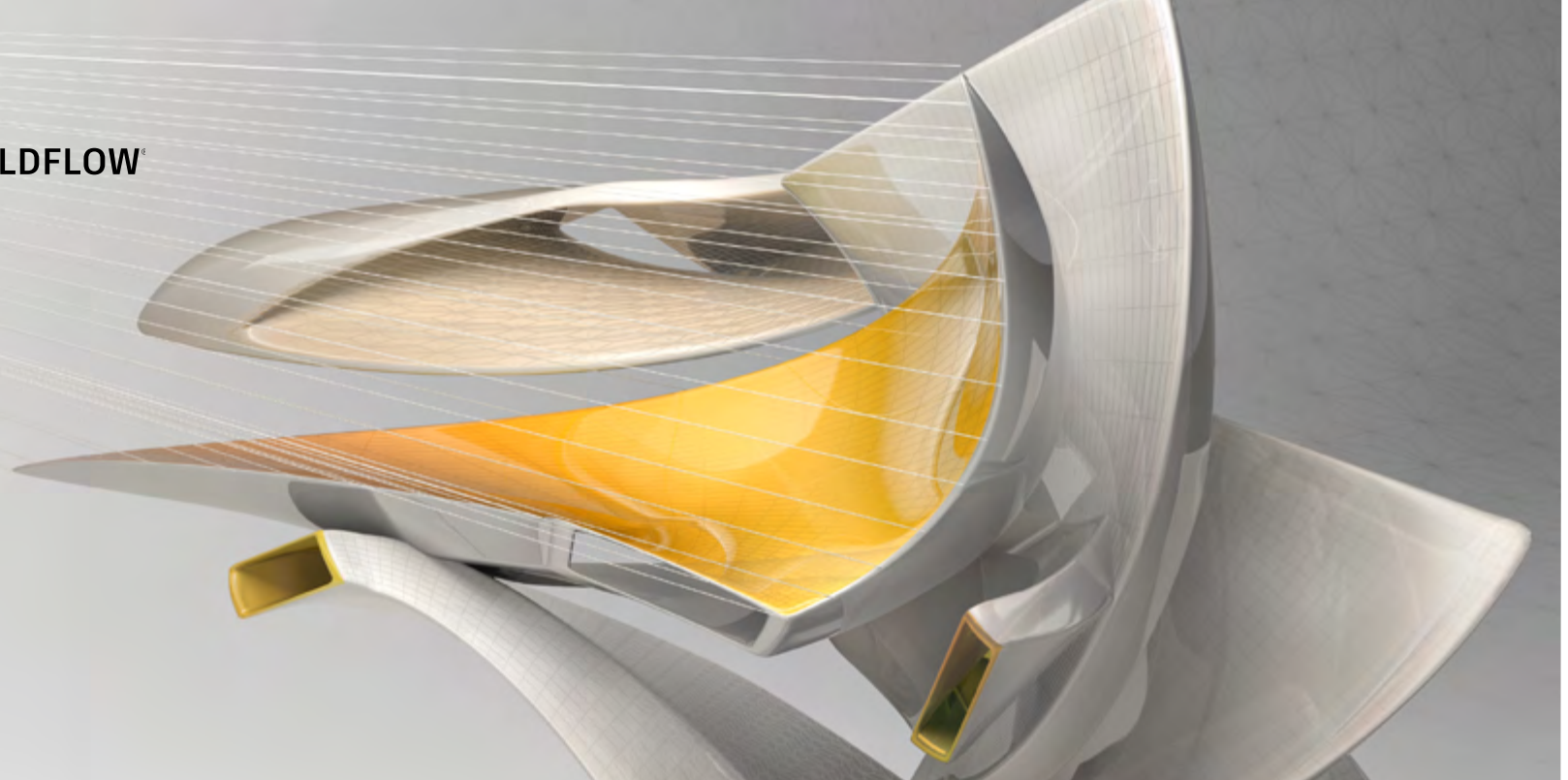Simplify programming of precision turning machines with live tooling

Specific functionality for Swiss style machining
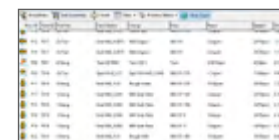
Quick synchronization of machining processes for efficient cycles times

Learn more at manufacturing.autodesk.com/solutions/partmaker-featurecam
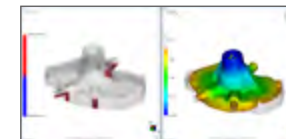
AUTODESK® **MOLDFLOW**®

> ## "We have been using Moldflow for about ten years. Back then, it was the only sensible product on the market. Today, it is basically the standard tool for simulations
>
> **Beat Schiegg,**
> Head of R&D,
> Forteq Nidau AG

Plastic injection and compression mold simulation software

Optimize part and mold designs, reduce potential manufacturing defects, and get innovative products to market faster. Autodesk Moldflow provides tools based on a comprehensive materials database to help CAE analysts, engineers, and designers evaluate different designs, mold configurations, and injection molding processes, reducing the need for costly physical prototypes to plan ahead for manufacturing.
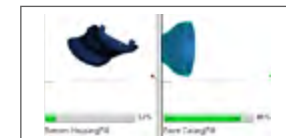
Three reasons to use Autodesk Moldflow

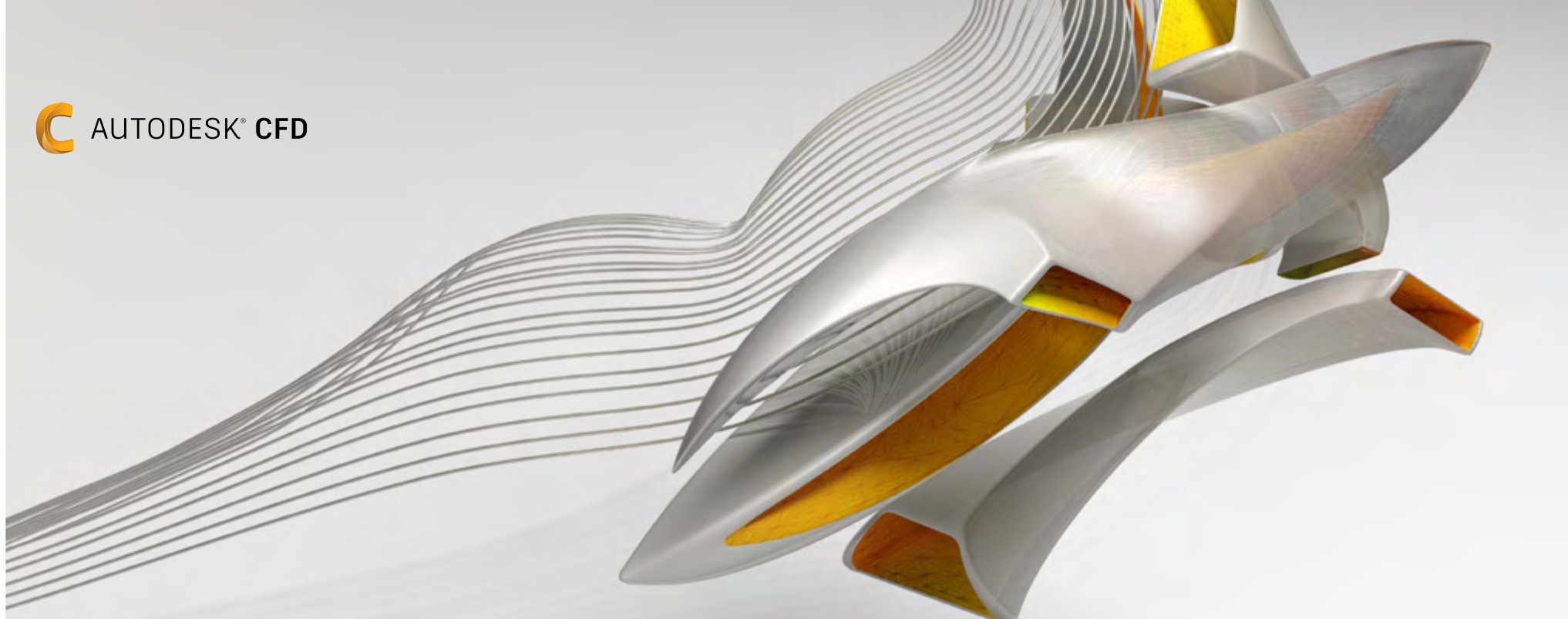Reduce delays and gain insights with plastics part simulation

Optimize part, mold, and manufacturing processes in one interface

Simulate with flexible meshing and solving options

Learn more at www.autodesk.com/moldflow

AUTODESK® **CFD**

> ## " Autodesk has a fantastic suite of software where we can design, analyze, build and see how the data center behaves

Sam Wicks,
Data Center Design Engineer,
Sudlows

Computational fluid dynamics simulation software

Autodesk® CFD software provides fast, accurate, and flexible fluid flow and thermal simulation tools to help predict product performance, optimize designs, and validate product behavior before manufacturing – minimizing reliance on costly physical prototypes and helping you get innovative products to market faster. Accurately predict behavior, optimize and validate designs with a wide range of simulation capabilities before manufacturing.

Three reasons to use Autodesk CFD

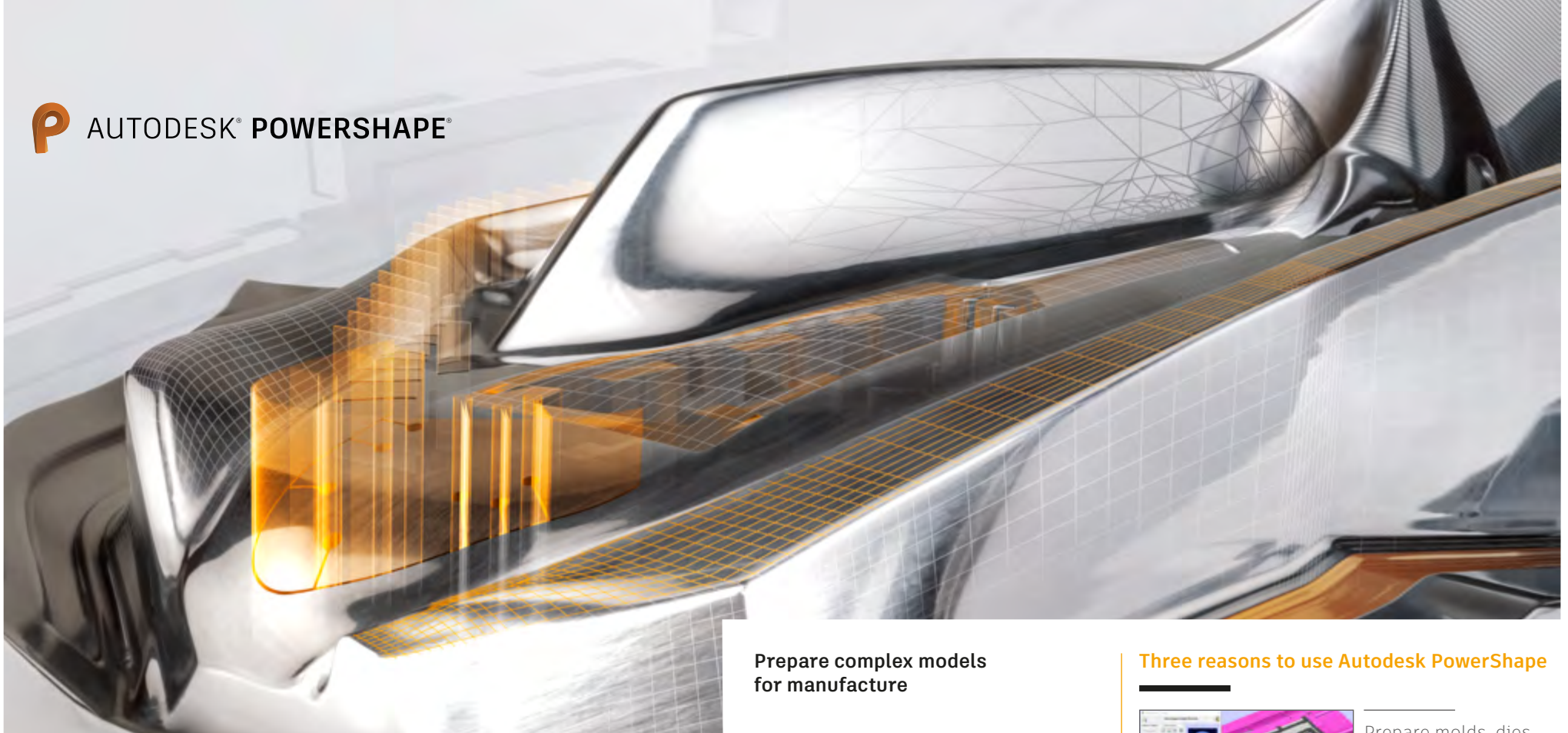Intelligently predict fluid flow and thermal conditions
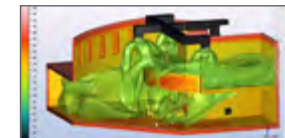
Optimize a range of CFD tools for various industry applications

Flexible simulation capabilities to run locally or on remote servers

Learn more at https://www.autodesk.co.uk/products/cfd/overview

₱ AUTODESK® **POWERSHAPE**®

> " The interaction between PowerMill and PowerShape has definitely streamlined our ability to manufacture molds. We can start making chips right away

Shawn McNamara,
Designer,
Chicago Mold Engineering

Prepare complex models for manufacture

The ideal modeling companion to use alongside PowerMill® and FeatureCAM®. Create additional geometry to help with CAM programming. Sketch wireframe boundaries to control the extents of machining. Automatically produce capping surfaces that smoothly cover ribs and other features produced with other manufacturing processes. Construct curves and surfaces to more precisely control the motion of 5-axis machines and industrial robots.

Three reasons to use Autodesk PowerShape
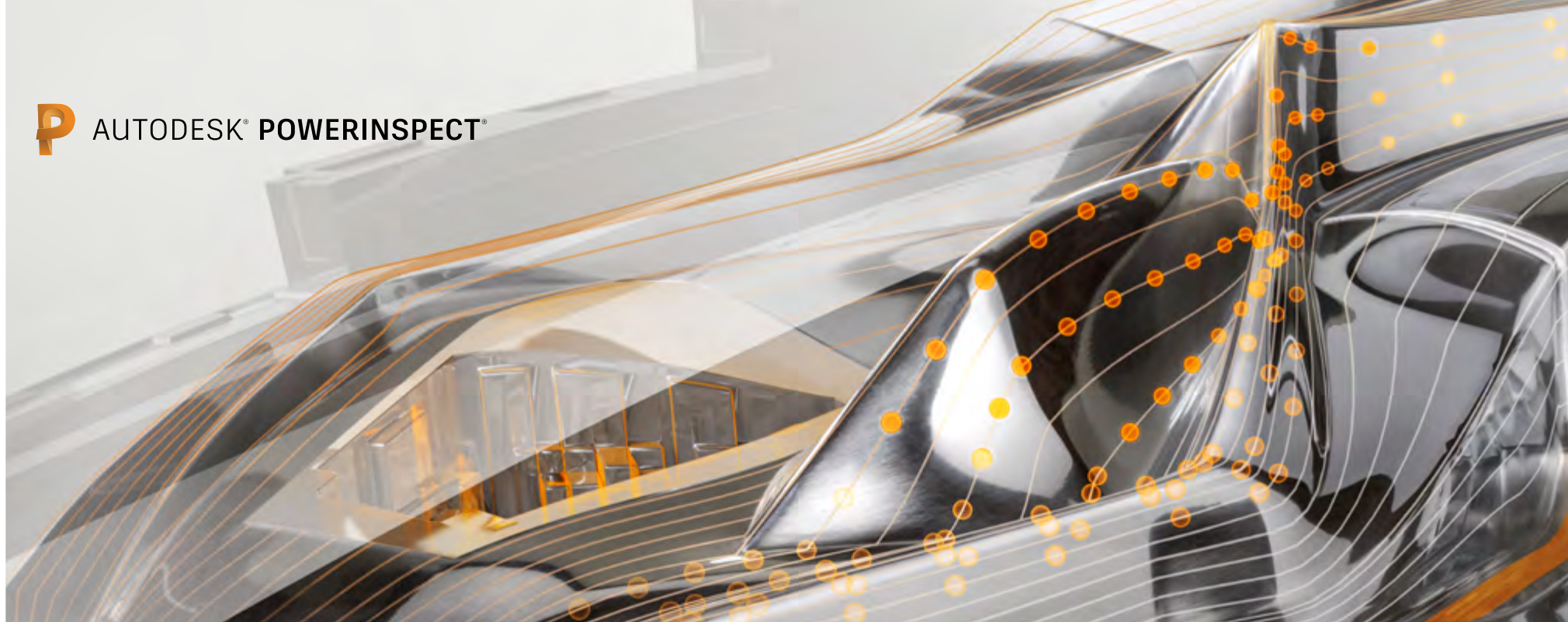
Prepare molds, dies, and complex parts for manufacture
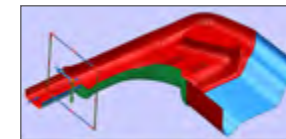
Create geometry to help with CAM programming

Find and repair critical faults to simplify downstream processes

Learn more at www.autodesk.com/powershape
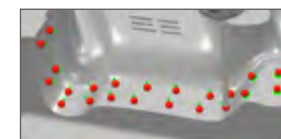
AUTODESK® POWERINSPECT®

> **Our main target was to have one established inspection software on all our different hardware platforms**
>
> **Hr Dr. Gohmann,**
> Head of QM and QA,
> bielomatik Leuze GmbH + Co. KG

Multi-device 3D inspection software

Make inspecting complex freeform surfaces simple with a wide range of measuring devices. Autodesk® PowerInspect® offers a powerful way to inspect, validate, and quality control for all measurement equipment. Inspect parts during machining using On Machine Verification (OMV) to reduce scrap and avoid expensive rework. Minimize long setup times that compromise machine productivity and overall plant capacity.

Three reasons to use Autodesk PowerInspect

Combine with PowerMill to maintain quality and accuracy
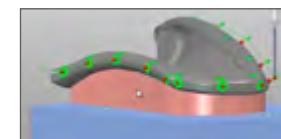
Save money by identifying defects early in the manufacturing process

Easily inspect large, complex, and layered parts

Learn more at www.autodesk.com/powerinspect

AUTODESK.

Learn more or purchase
Access specialists worldwide who can provide product expertise, a deep understanding of your industry, and value that extends beyond your software. Locate a reseller near you at **www.autodesk.com/reseller**