

The background of the slide features a 3D rendered image of several mechanical components, possibly turbine blades or engine parts. These components are shown in a light, semi-transparent yellow color with a white wireframe grid overlaid on them, suggesting a simulation or design process. The lighting is soft, creating highlights and shadows that emphasize the curved, aerodynamic shapes of the parts.

# Autodesk's Innovation Strategy

Ian Pendlebury  
Sr Director, Simulation



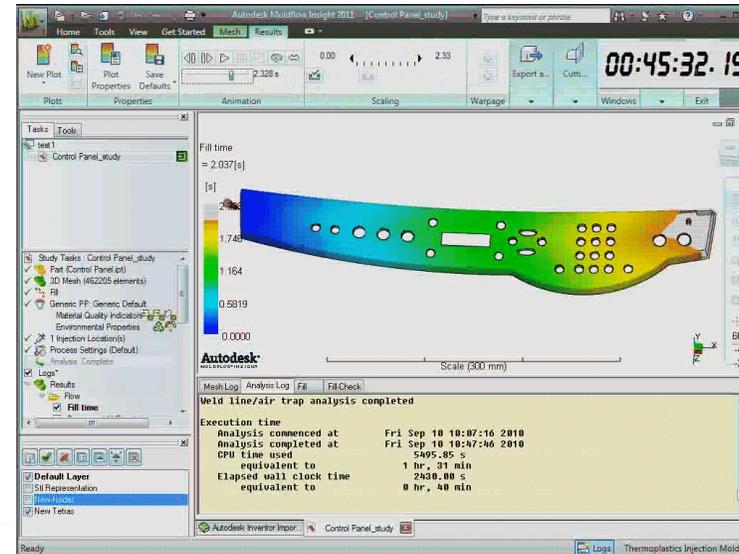
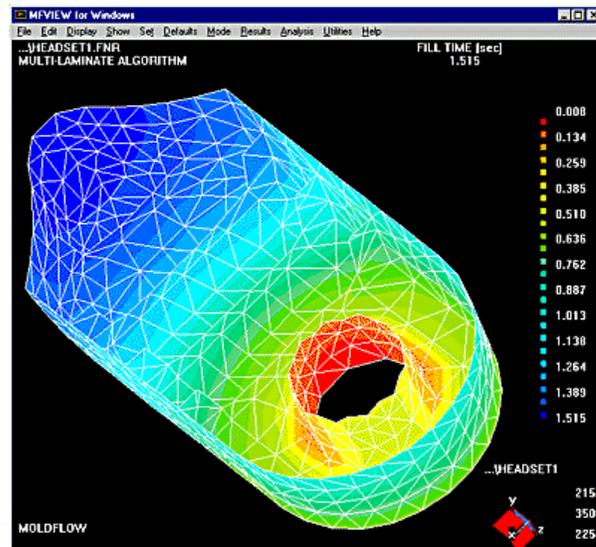
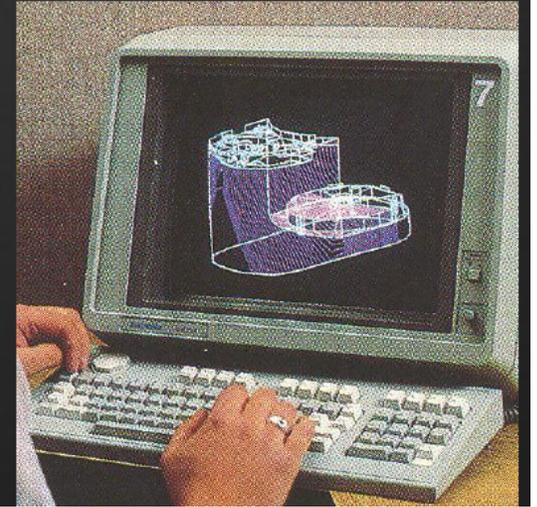
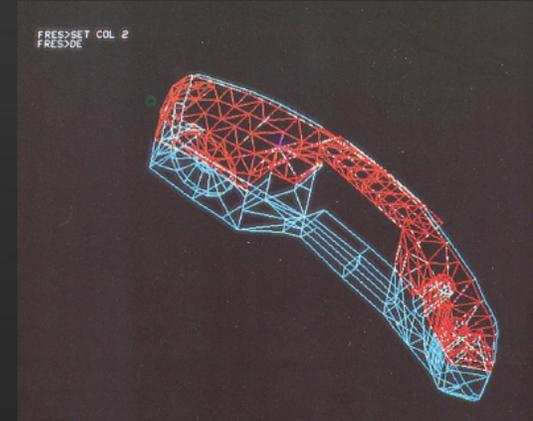
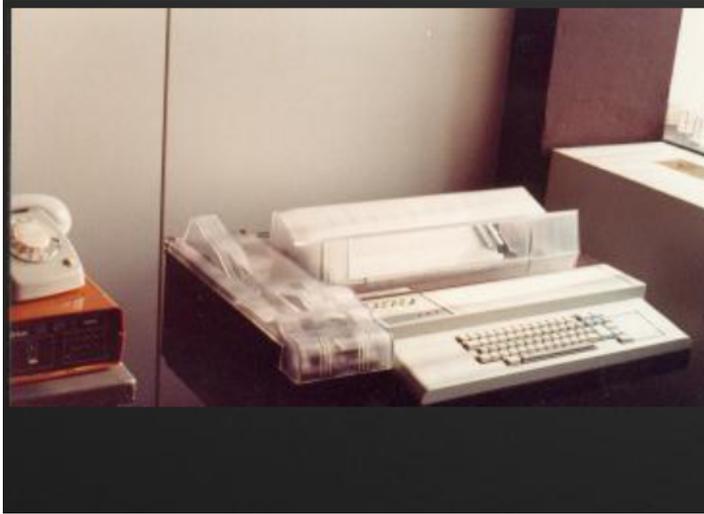
# Agenda

- Flashback
- FOMT and Tech Trends
- Where Autodesk is going



*USA engineers were the first to receive training.*

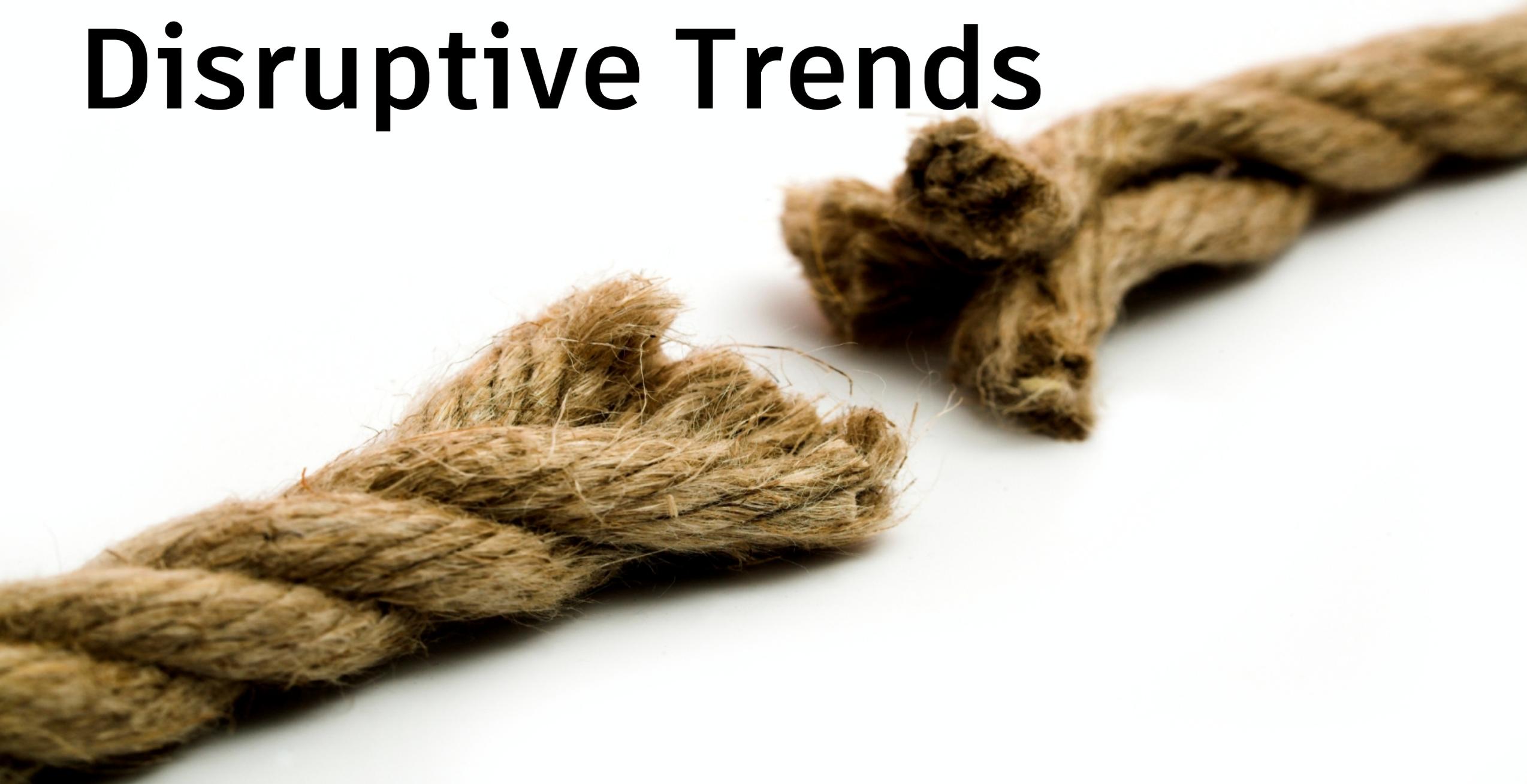


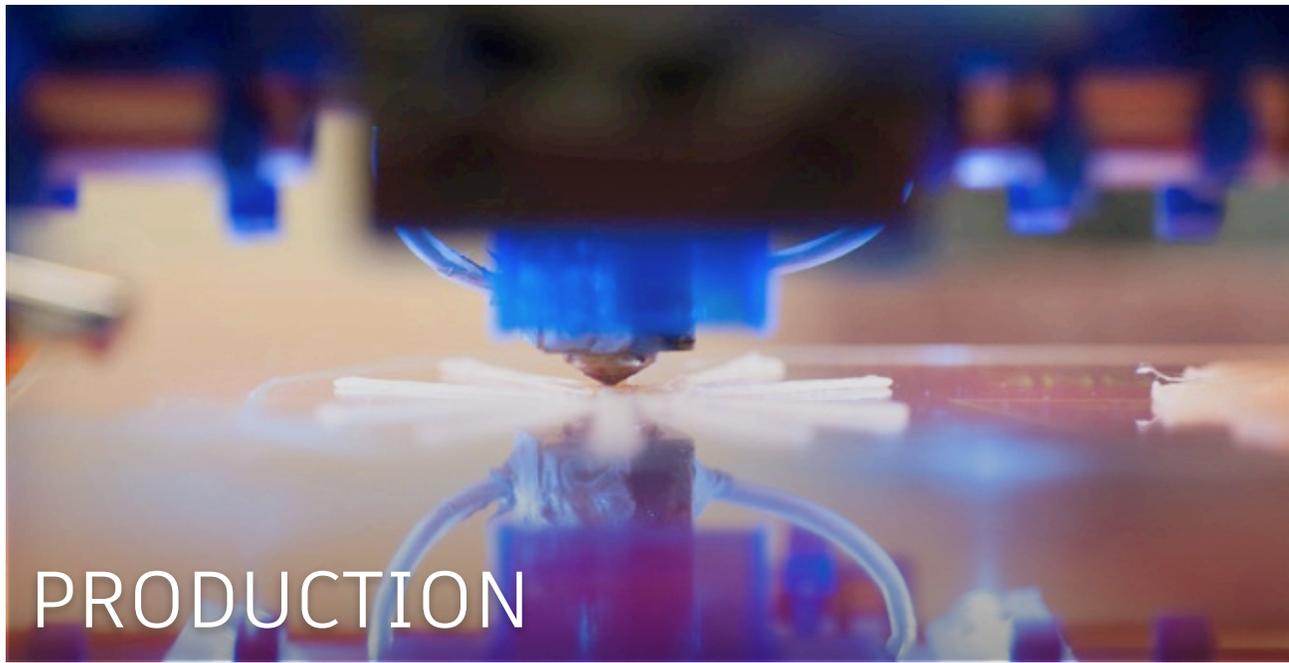


From AU 2011

Autodesk is **breaking the  
barriers** to Simulation

# Disruptive Trends





# Technology Trends

LAN

→ Cloud

Workstation

→ Devices everywhere

2D/3D

→ Immersive AR/VR

CPU

→ GPU

Siloed

→ Connected

Coded logic

→ Machine learning

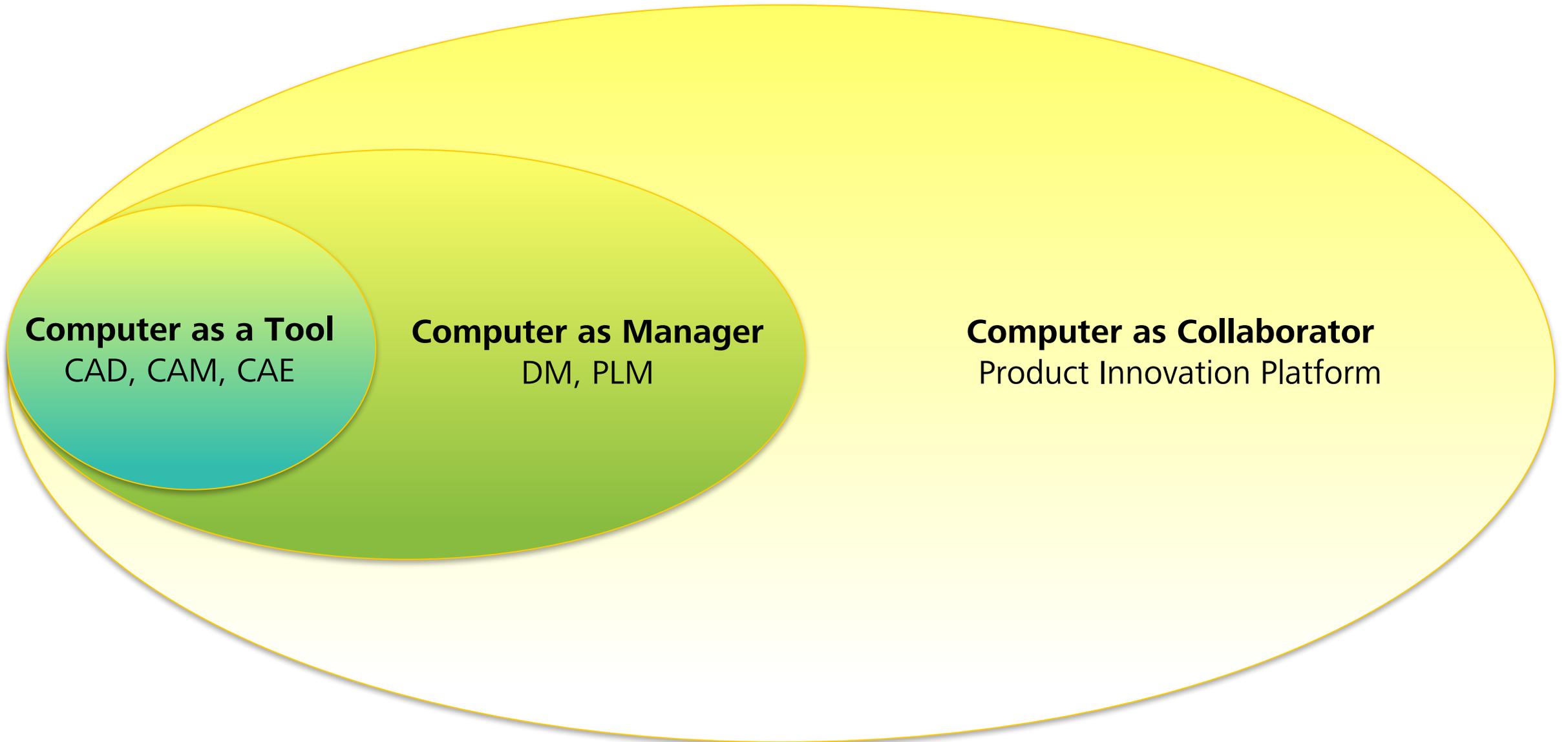
Human driven design

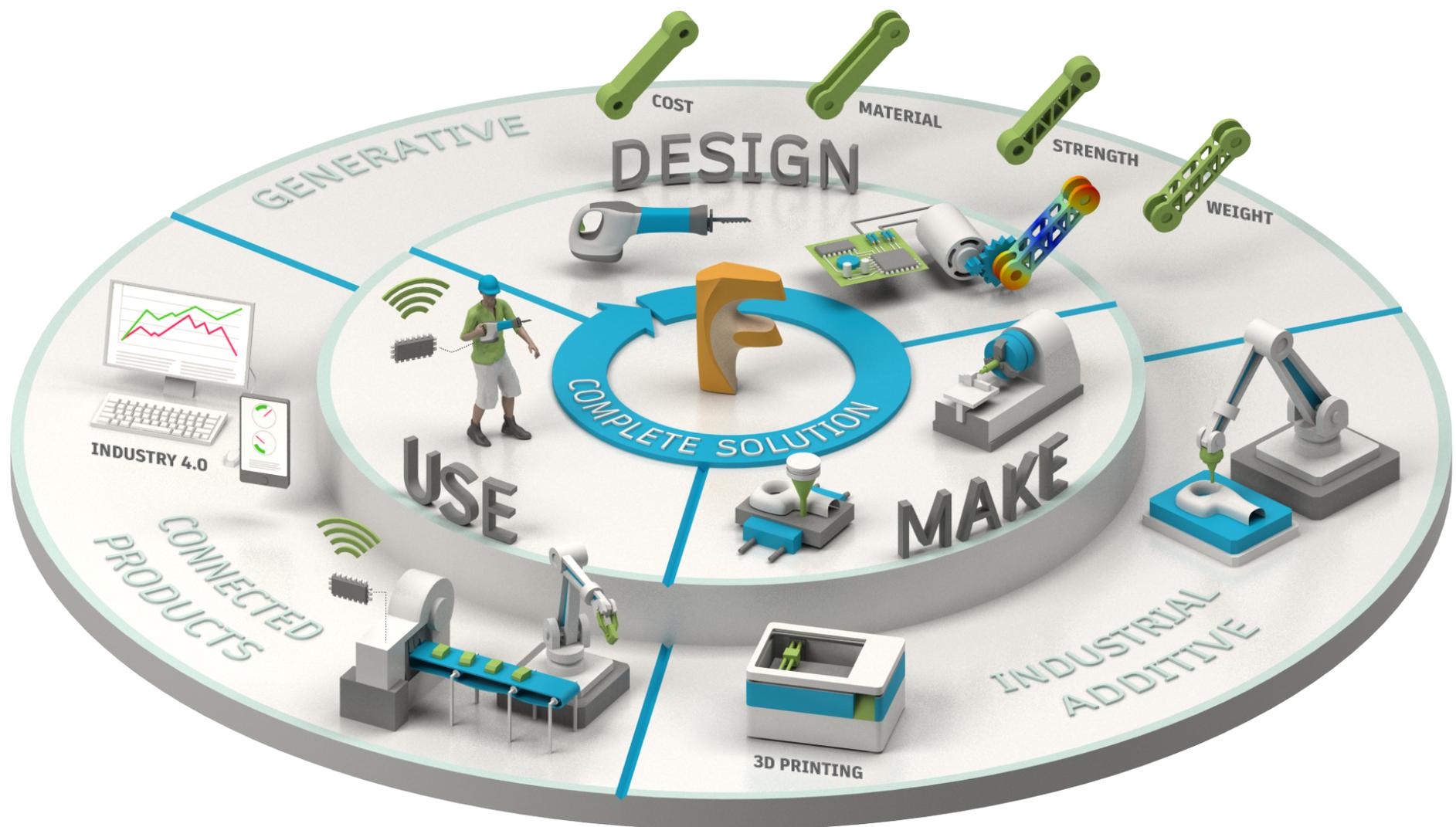
→ Generative design

Application centric

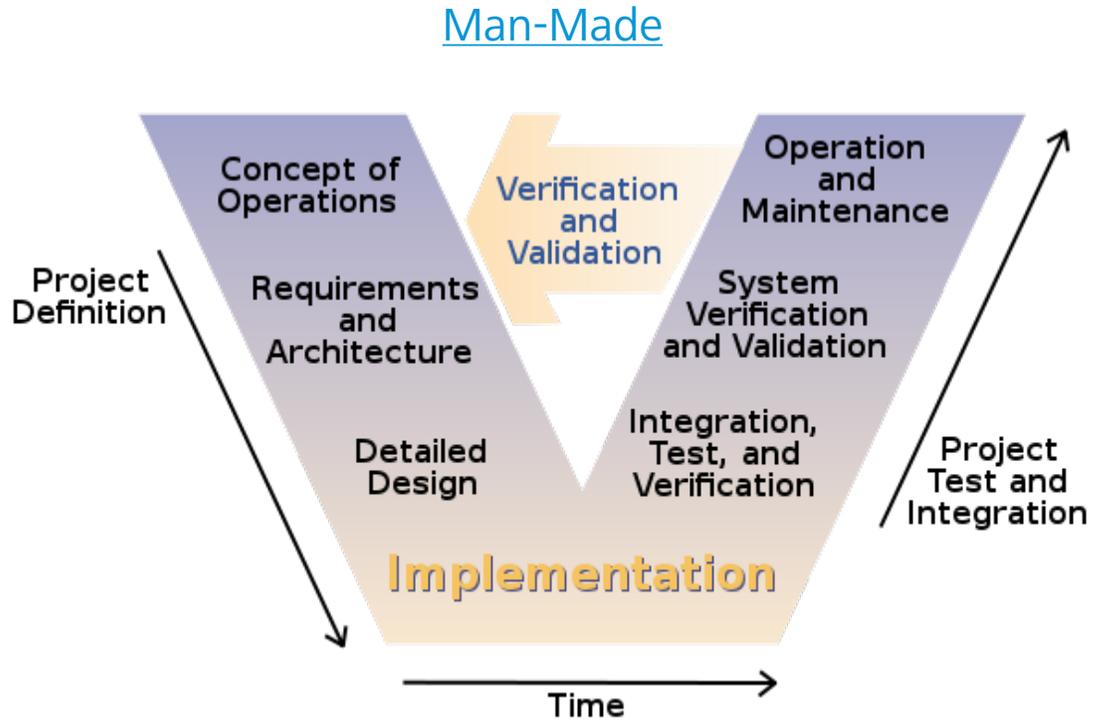
→ Data centric

# Change the way we interact with the Computer

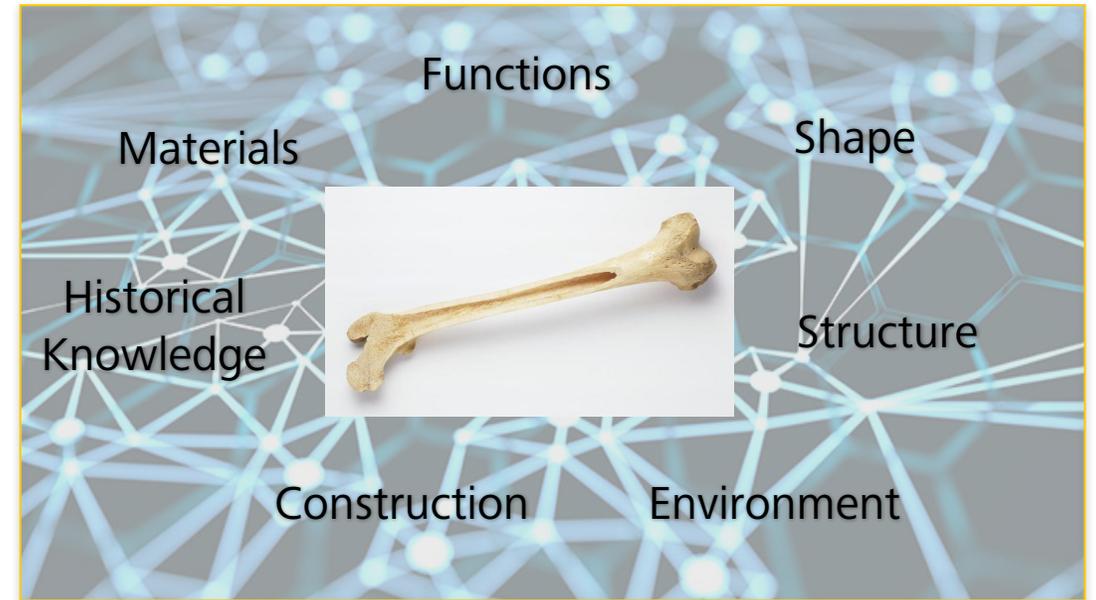




# Challenge Orthodoxy



## Natural Design



# Tech breakthroughs required

- Cloud based platform
- Advanced manufacturing simulation
  - Additive, Composites, Injection Molding, Hybrid
- Advanced materials representation
  - Anisotropic, continuously variable, multi-scale
- Generative design
  - Automatic shape generators & environment simulation
- Machine learning
- Distributed, massively parallel approaches
- Interactive, immersive, photo realistic output

# Autodesk Investments

Acquisition	Resulting Capability	PIP Impact
<b>Moldflow</b>	Injection Molding Simulation	Advanced Manufacturing & Materials
<b>Firehole</b>	Composite Performance Solver	Advanced Manufacturing & Materials
<b>Delcam</b>	Advanced Manufacturing Tools for driving subtractive and additive	Advanced Manufacturing
<b>Magestic</b>	Composite Manufacturing Simulation	Advanced Manufacturing
<b>Netfabb</b>	Additive Modelling	Advanced Manufacturing
<b>T-Splines</b>	Natural Shape Modeling	Generative Design
<b>WITHIN Labs</b>	Latticing Technology	Generative Design
<b>Nei</b>	Nastran Solver	Generative Design
<b>Terascale</b>	Explicit Solver	Generative Design
<b>SeeControl</b>	Cloud based IoT	Cloud Platform
<b>Bitsquid / VRED</b>	Immersive, Interactive, Photo Realistic	Immersive Visualization
<b>Pan Computing</b>	Metals Additive Manufacturing Simulation	Advanced Manufacturing

# Autodesk R&D Projects

Project	Capability
Fusion	Unified cloud based Design, Sim & Manufacturing environment
Forge	Cloud based data and collaboration platform
Design Graph	Machine Learning for Design
Autodesk Generative Design	Natural Language driven Generative Design
Stingray for Industry	Immersive AR/VR experience

# Fusion 360

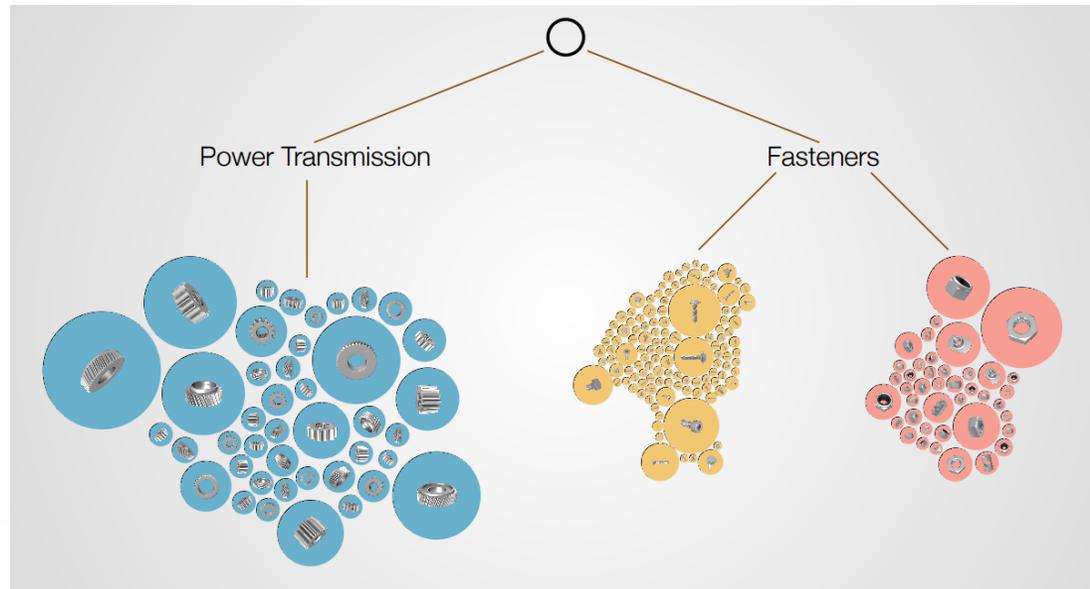
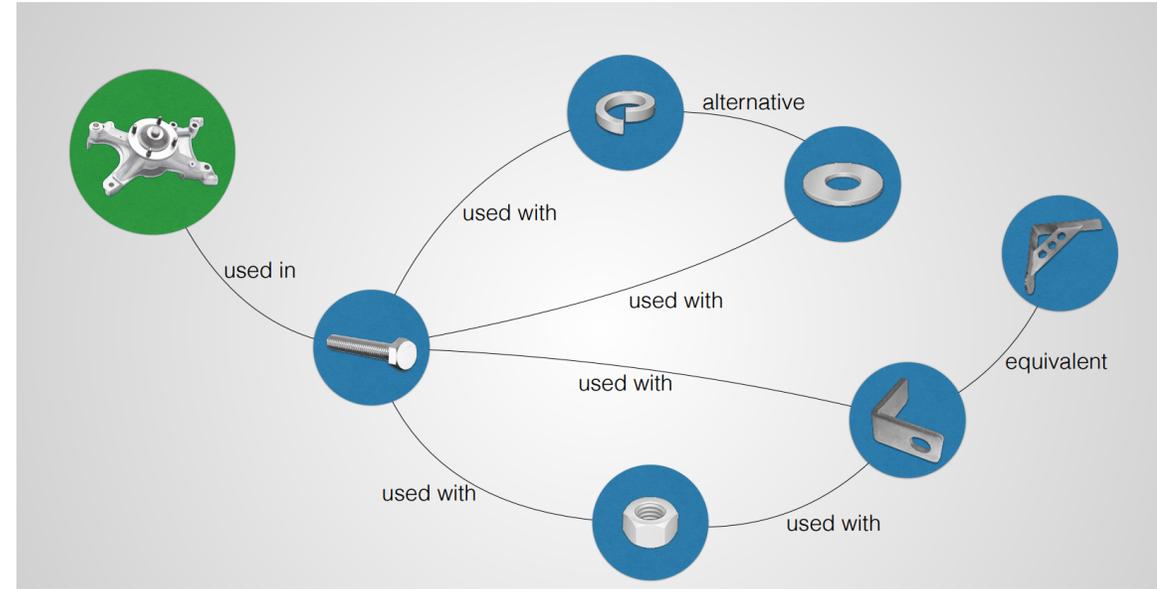
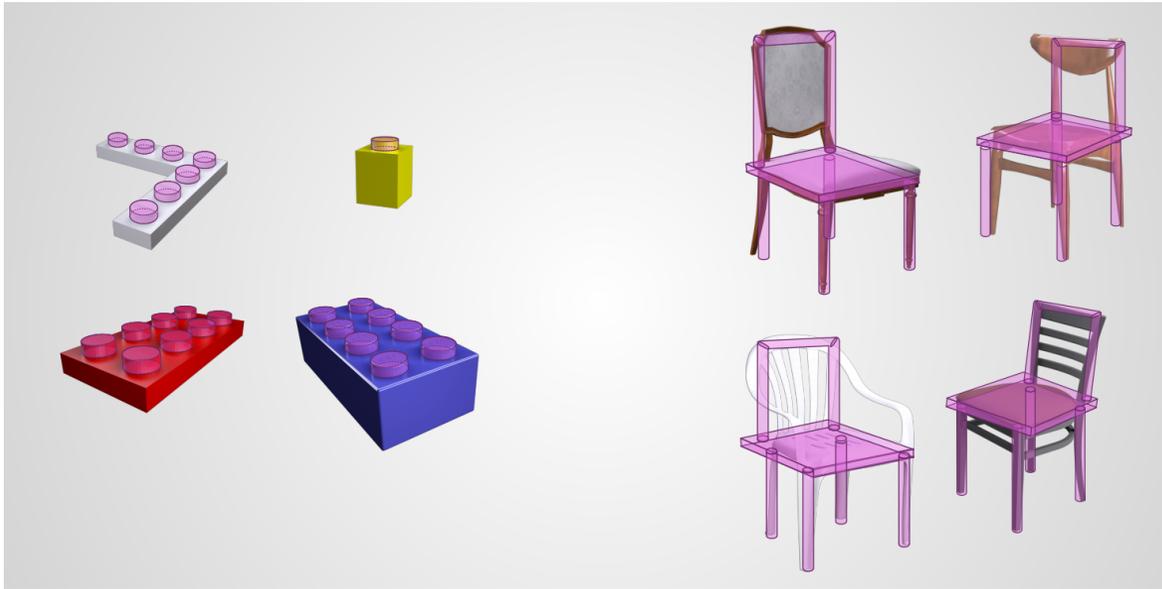
1. Use prmit  
start the moc

The screenshot displays the Autodesk Fusion 360 software interface. The main workspace shows a 3D model of a mechanical part, likely a brake lever assembly, with a stress simulation overlay. The simulation results are color-coded, with a legend on the right indicating a Safety Factor range from 0.06 Min. to 15.00 Max. The legend also shows the number of Nodes (64385) and Elements (36563).

The interface includes several toolbars and panels:

- Top Bar:** Sculpt, Create, Modify, Sketch, Construct, Inspect, Image, Select.
- Browser Panel (Left):** CAM, SETUP, 2D, 3D, DRILLING, ACTIONS, INSPECT, MANAGE, SELECT. The tree view shows a hierarchy of models and operations, including CAM360v3 v10, CAM360v3.2, and Setup2.
- Results Panel (Right):** A dropdown menu for RESULTS is open, showing options like Animate, Convergence Plot, Min/Max Query Result, and Report. A text box explains: "Play the time or displacement history of your simulation results to better understand the behavior of your design. Use animation to observe how your results develop. Animate results quantities such as displacement, stress, strain, or safety factor. Note that you can animate up to 100 steps." Below this text are three small images showing the progression of the simulation results.

# Design Graph

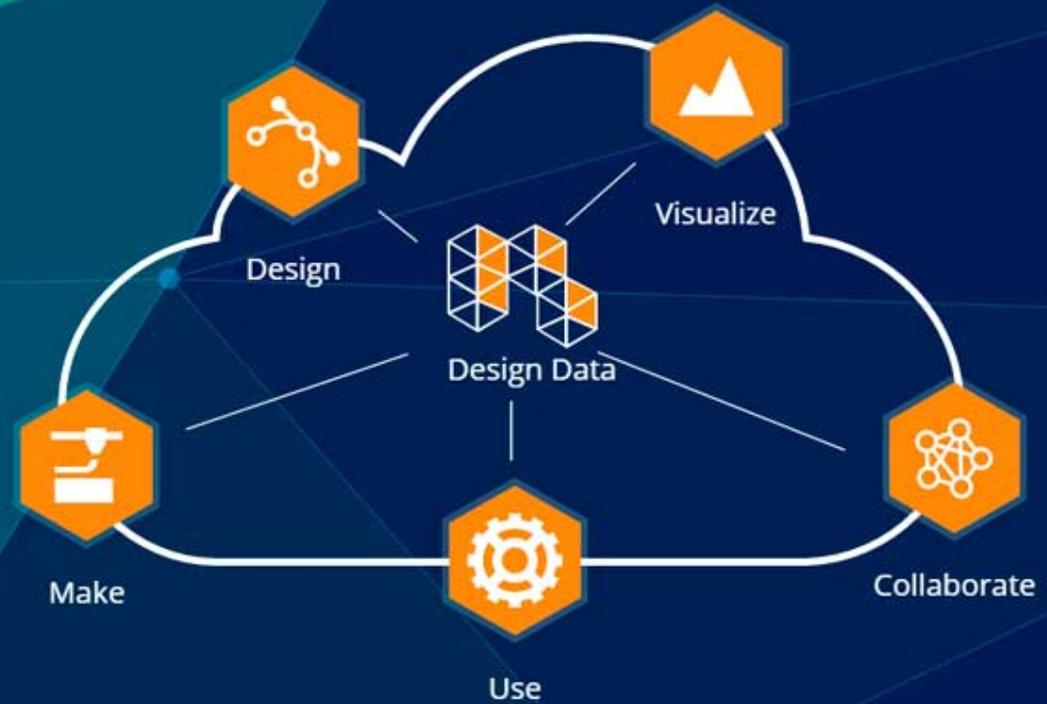


TECH PREVIEW

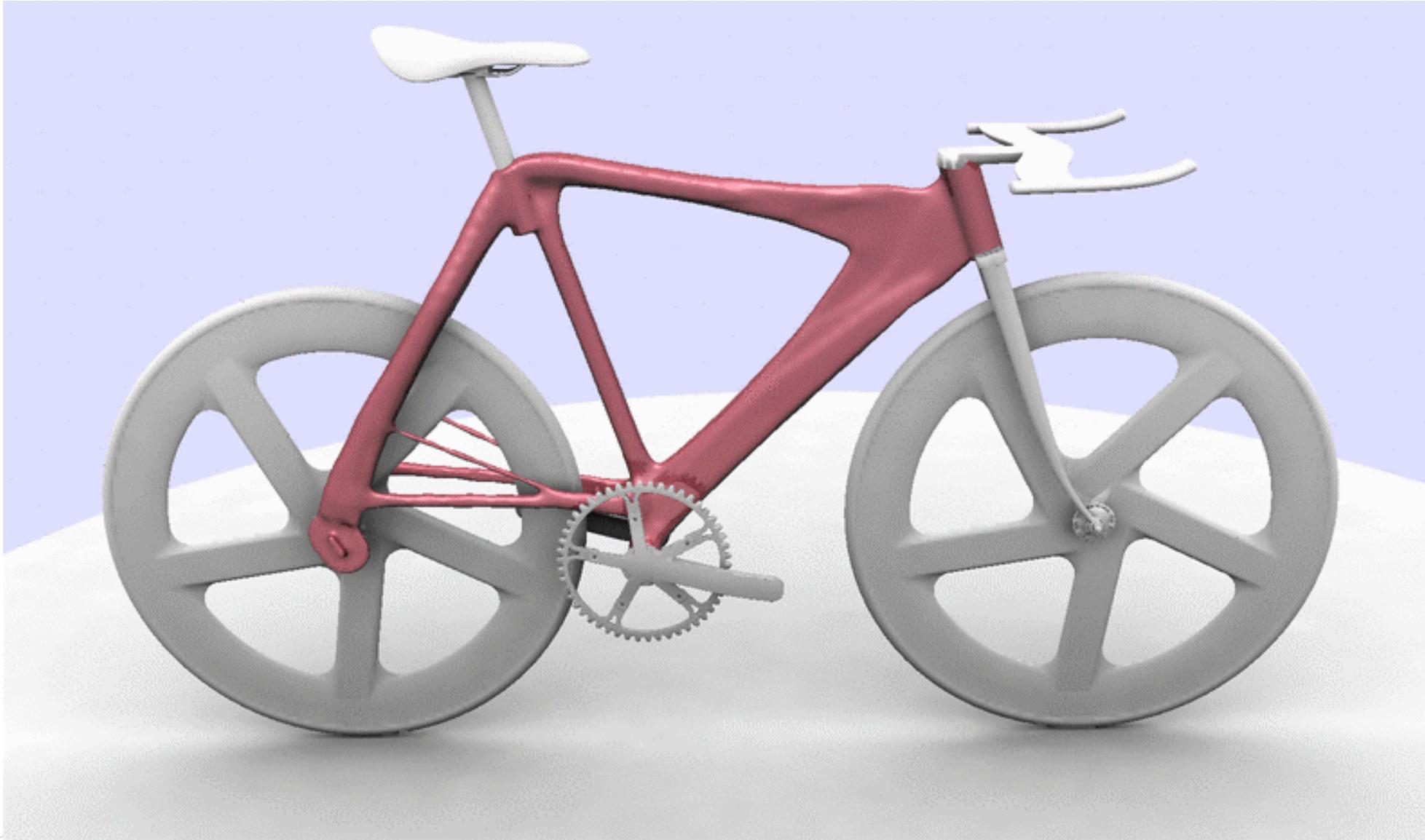
# FORGE Platform

Forge is a set of Autodesk Cloud Services, APIs and SDKs for developers to create the data, apps, experiences and services that power the future of making things.

[Learn more about Forge](#)



# Autodesk Generative Design



# Stingray for Industry



# Autodesk Simulation

- World class simulation tools
- Breaking the barriers to simulation
- Enabling computer as a collaborator



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