Autodesk's Innovation Strategy

Ian Pendlebury
Sr Director, Simulation

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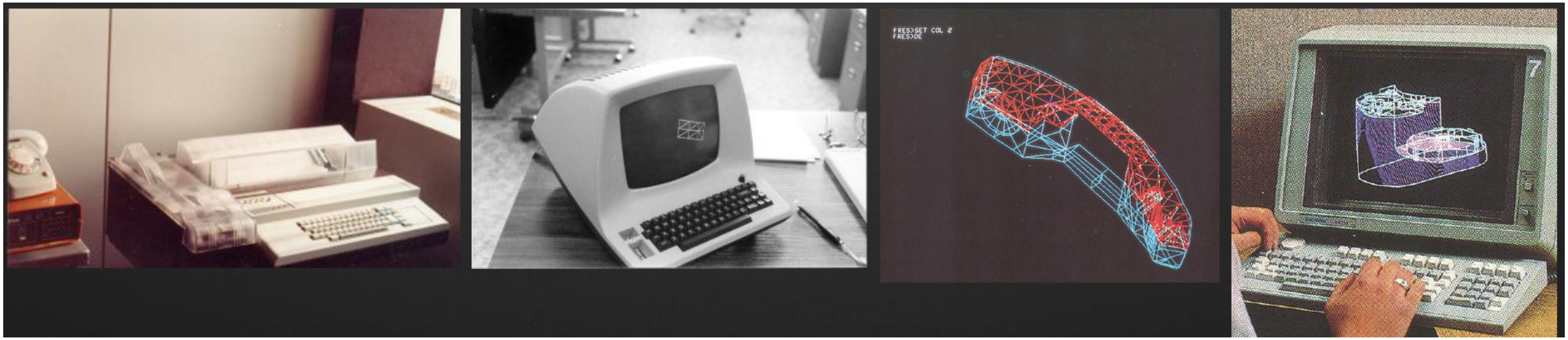
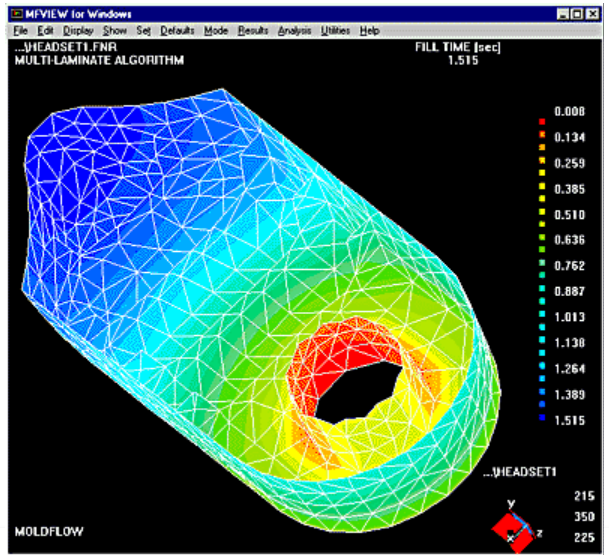
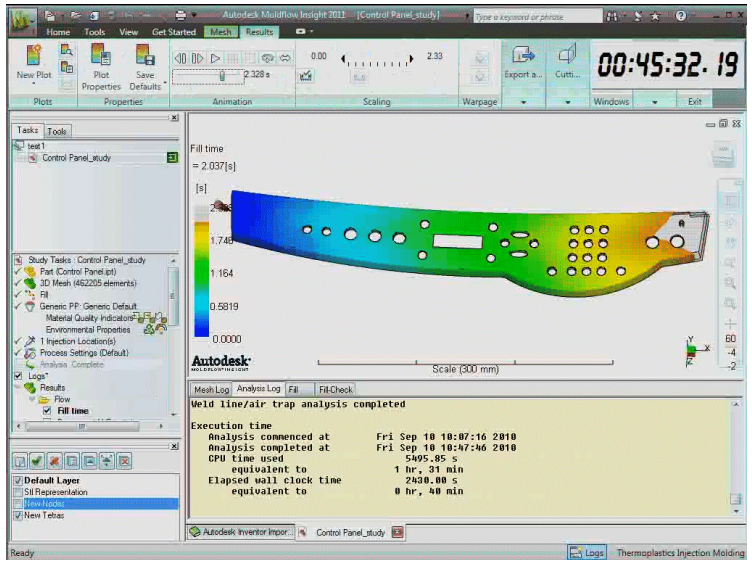
Agenda

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

USA engineers were the first to receive training.







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From AU 2011

Autodesk is breaking the barriers to Simulation

Disruptive Trends

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PRODUCTION

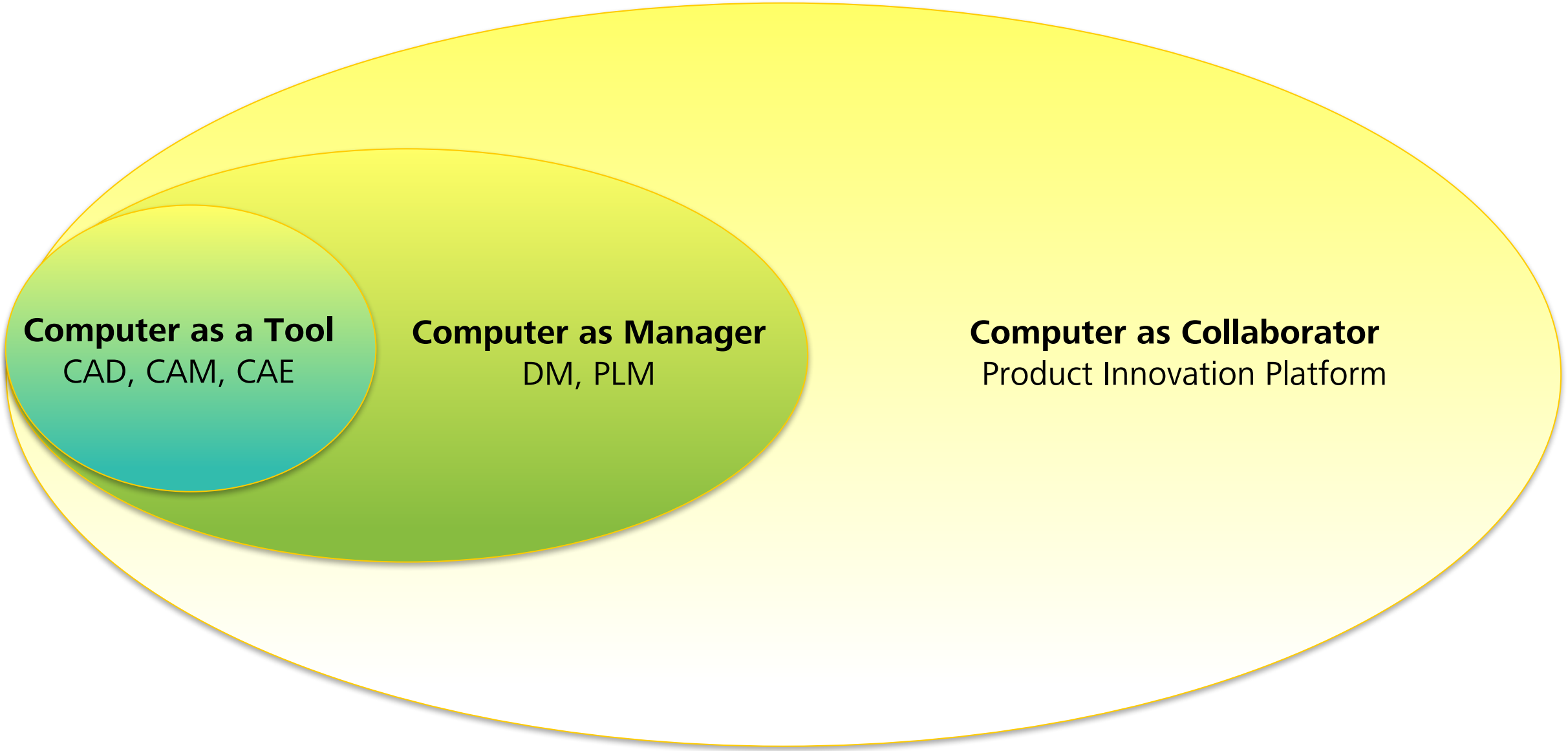

DEMAND

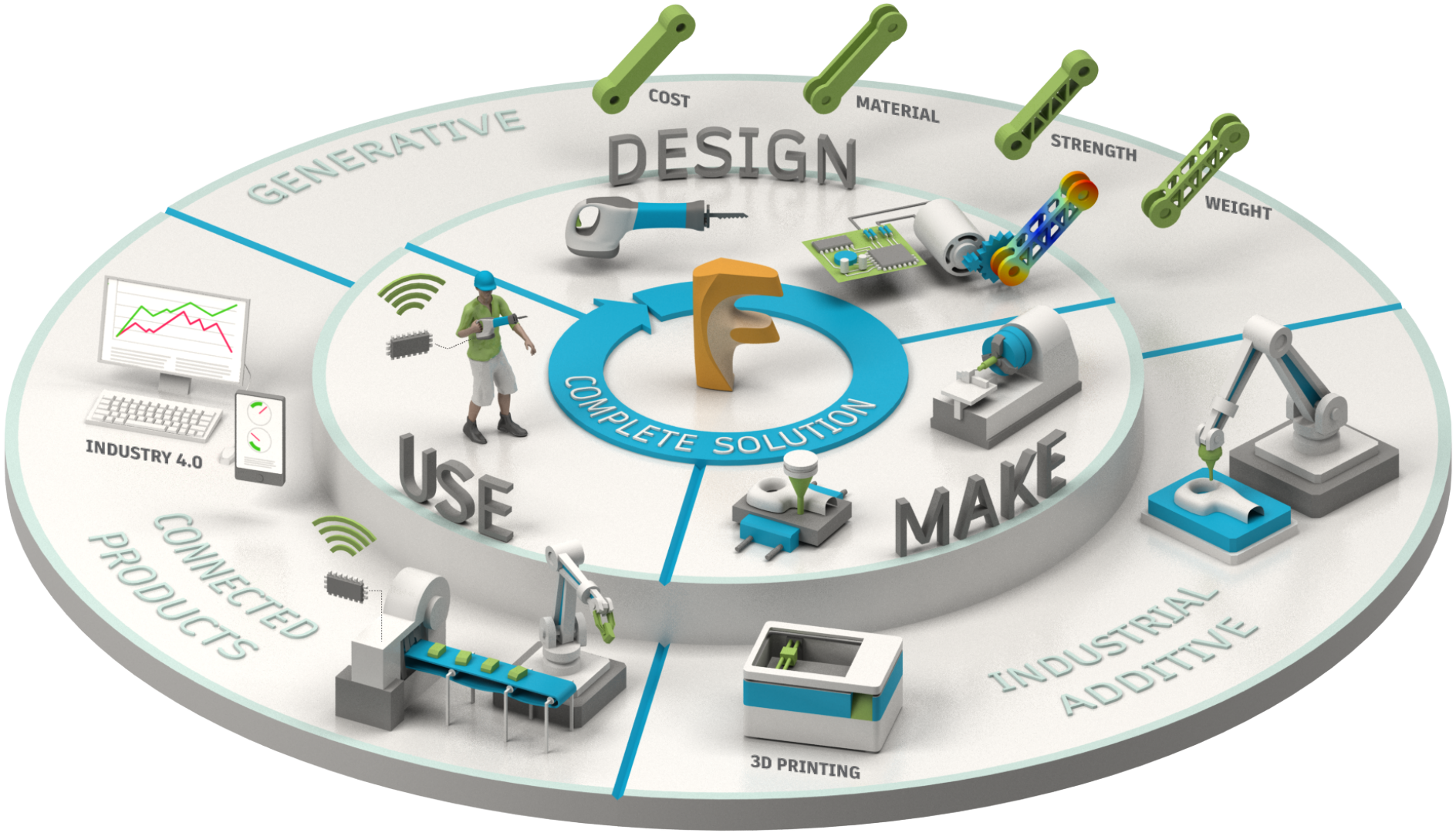

PRODUCTS

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

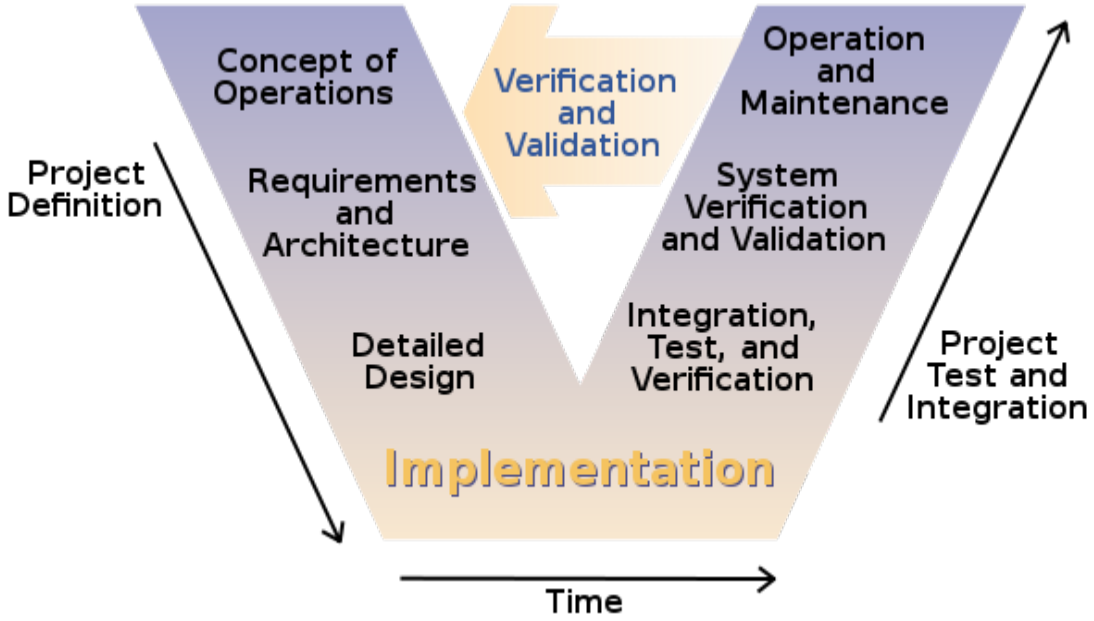
Change the way we interact with the Computer



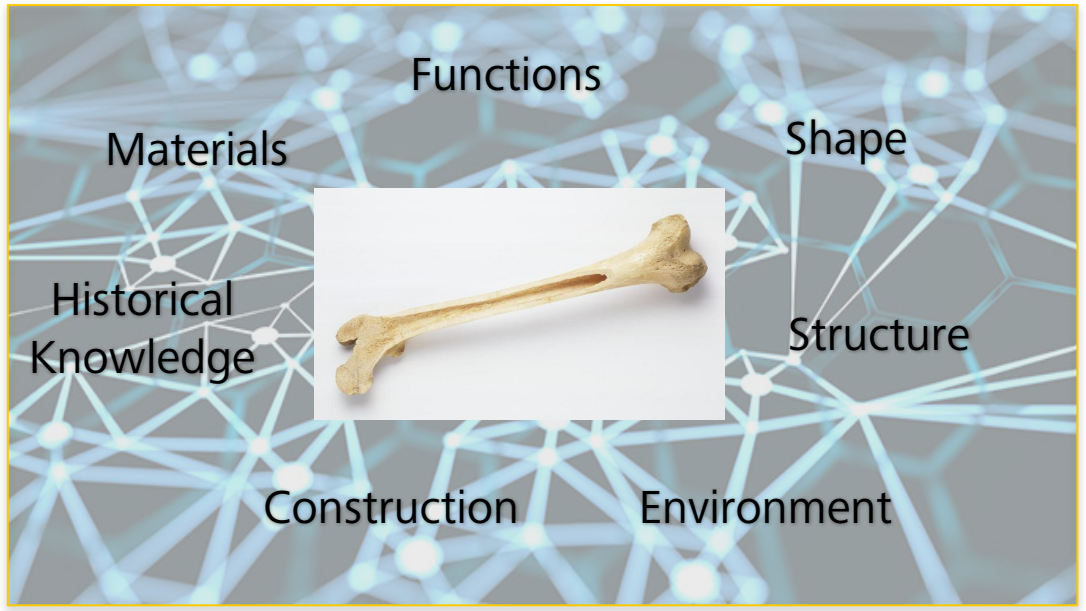

COST
MATERIAL
STRENGTH
WEIGHT
GENERATIVE
DESIGN
COMPLETE SOLUTION
INDUSTRY 4.0
USE
MAKE
CONNECTED PRODUCTS
3D PRINTING
INDUSTRIAL ADDITIVE

Challenge Orthodoxy

Man-Made



Natural Design



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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

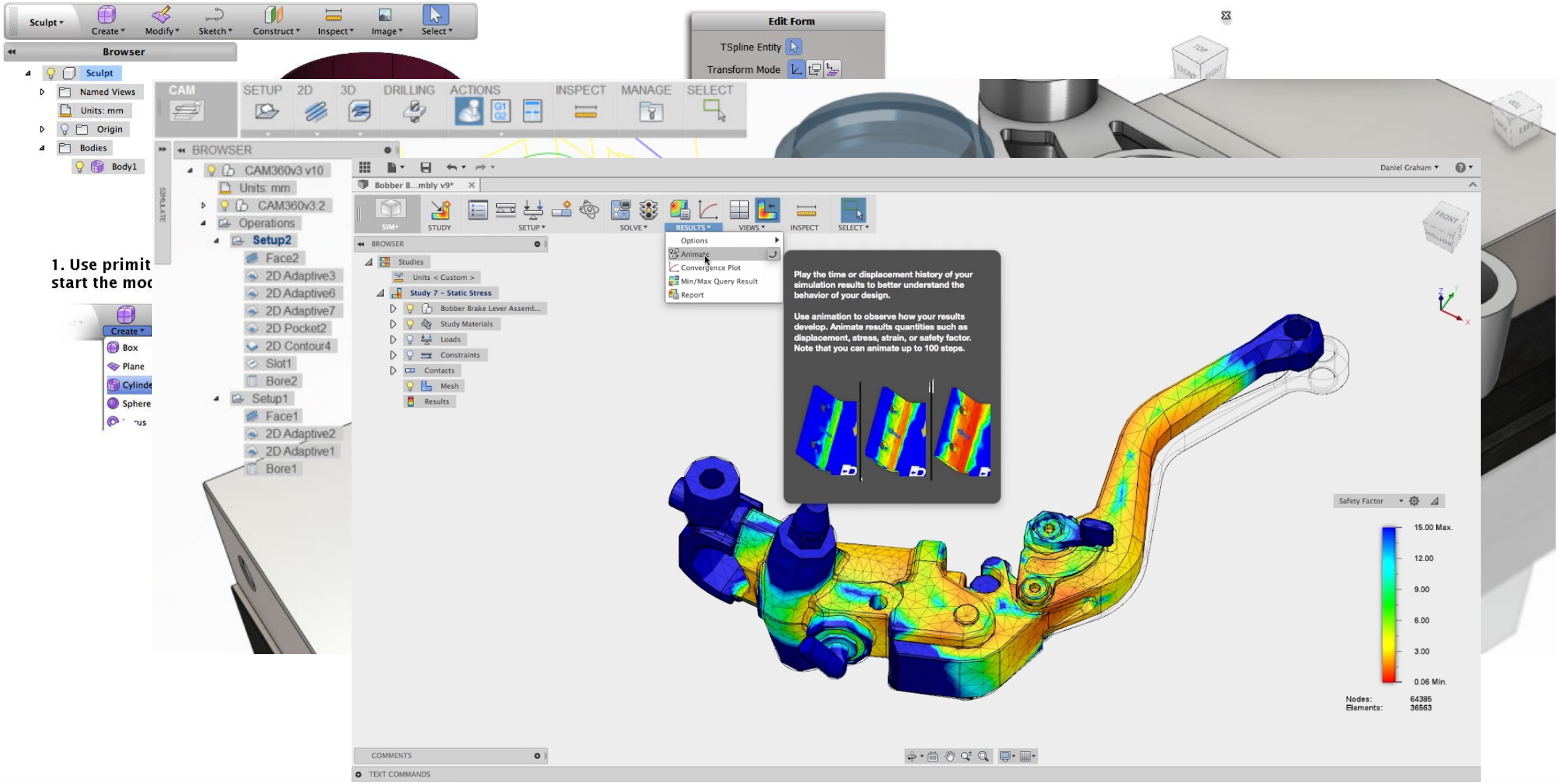
Autodesk Investments

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



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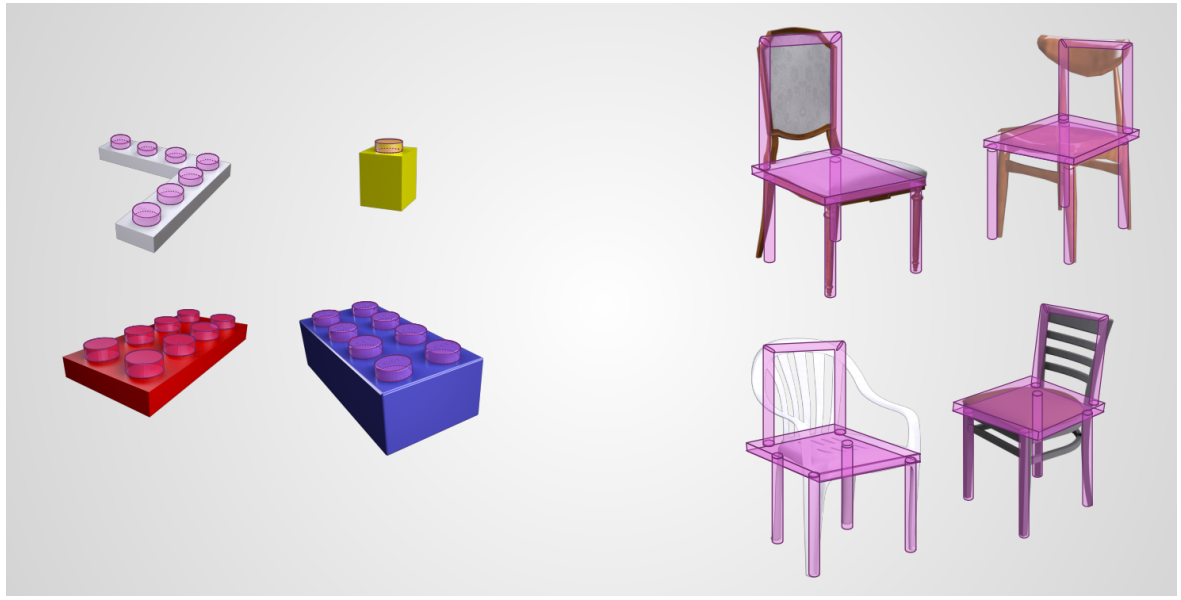
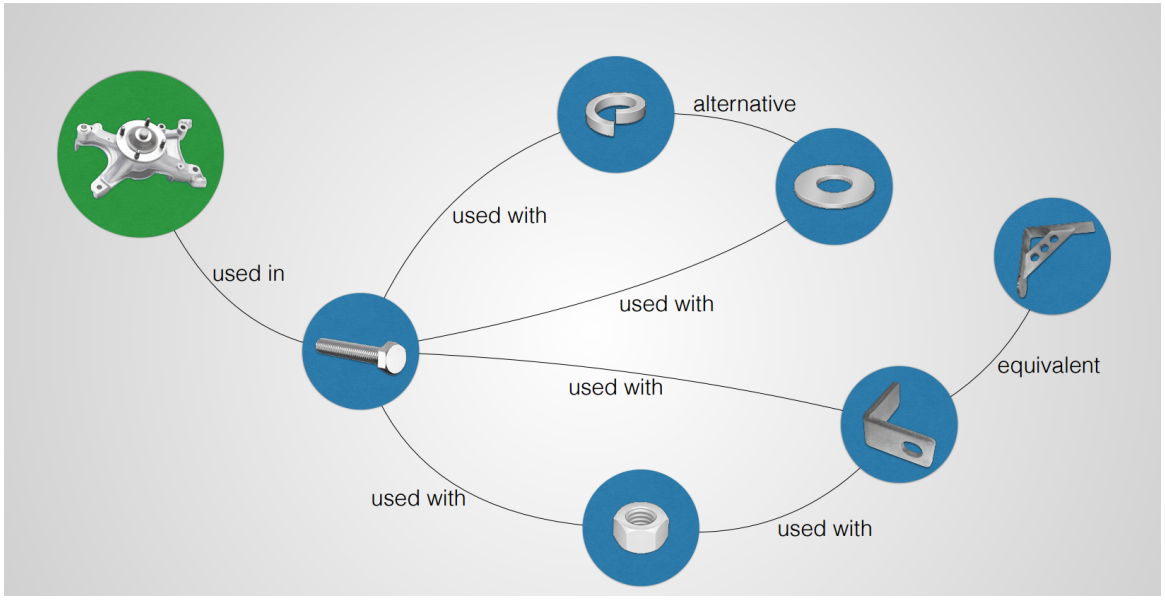
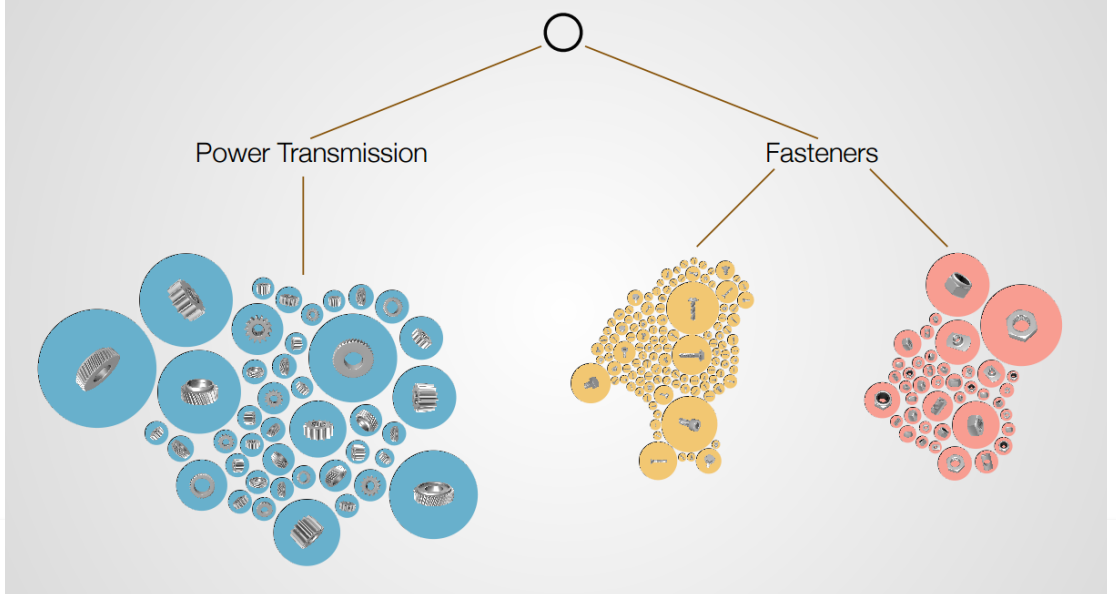
Design Graph





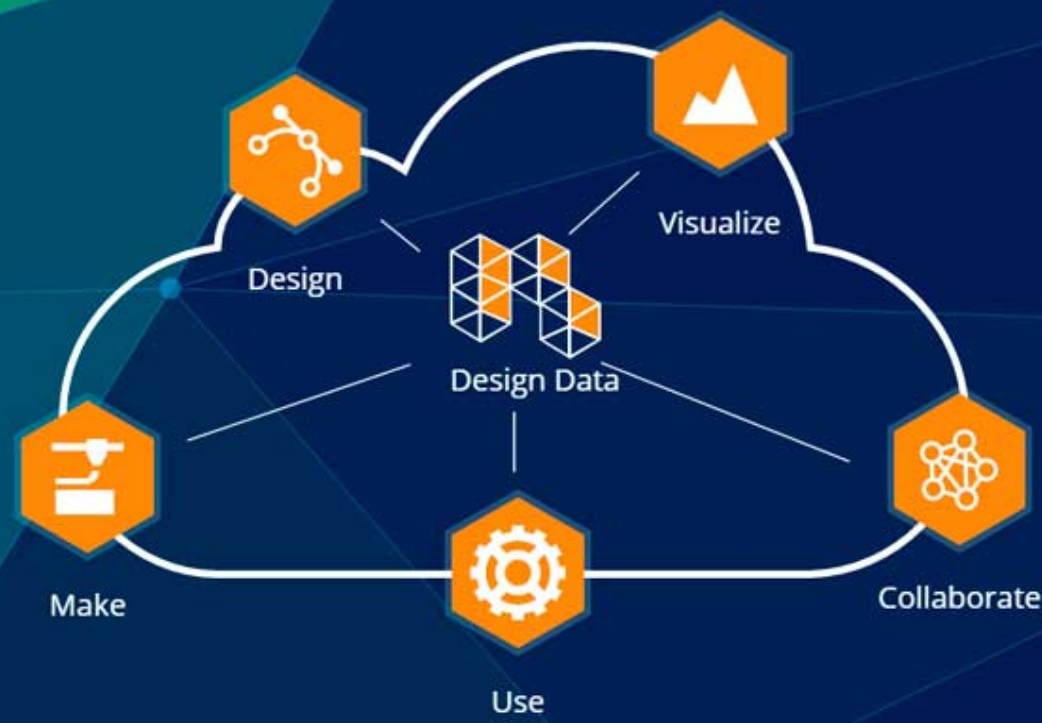


TECH PREVIEW

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



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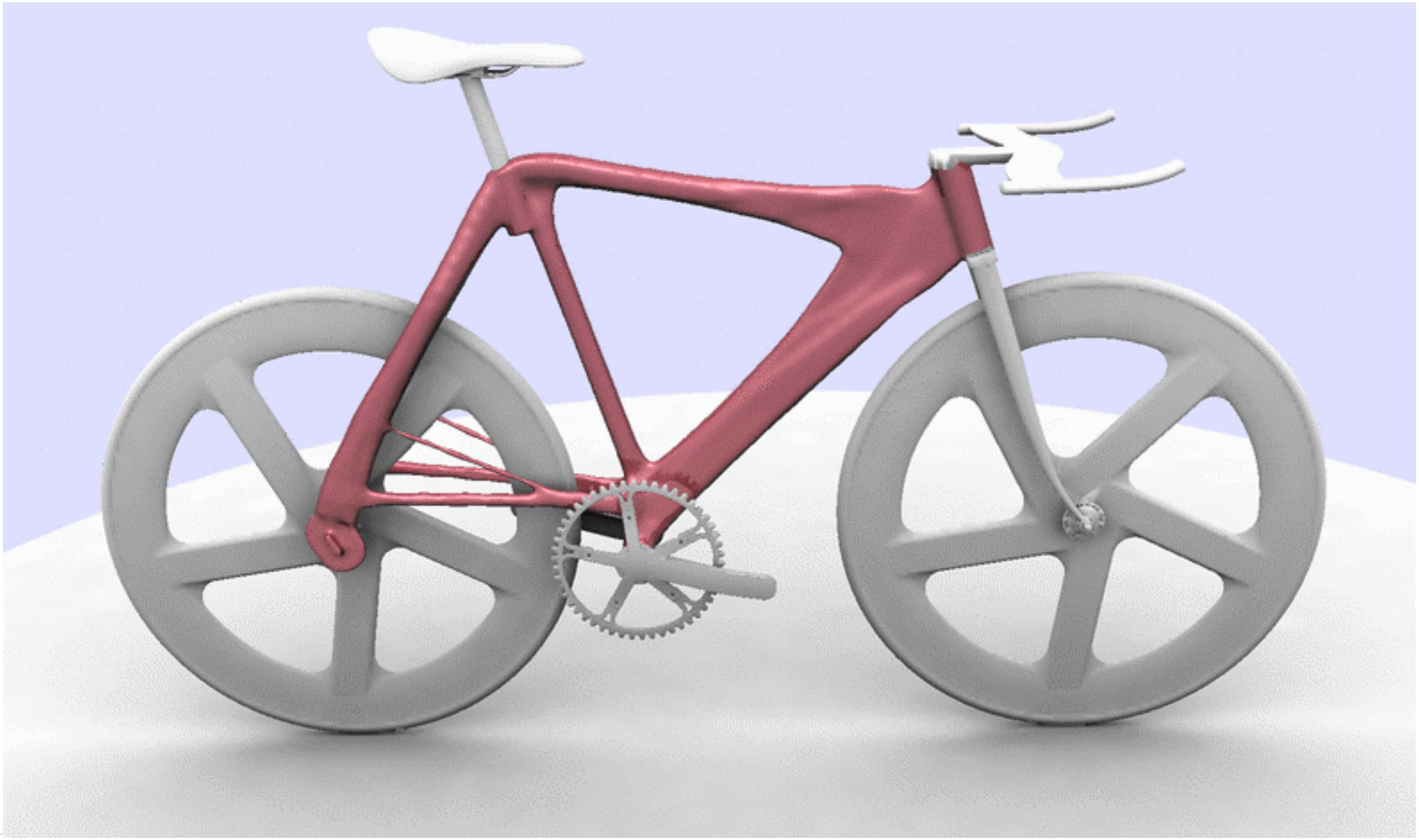
Autodesk Generative Design



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Stingray for Industry

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Autodesk Simulation

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