

Autodesk Investor Meeting  
September 29, 2015

# Expanding Our Market Opportunity

**Amar Hanspal**  
Senior Vice President, IPG

# PLATFORM TRANSITION DRIVES MARKET OPPORTUNITY



## MAINFRAME

1960s – 1980s

Large Corporations

Rental

Thousands of Users



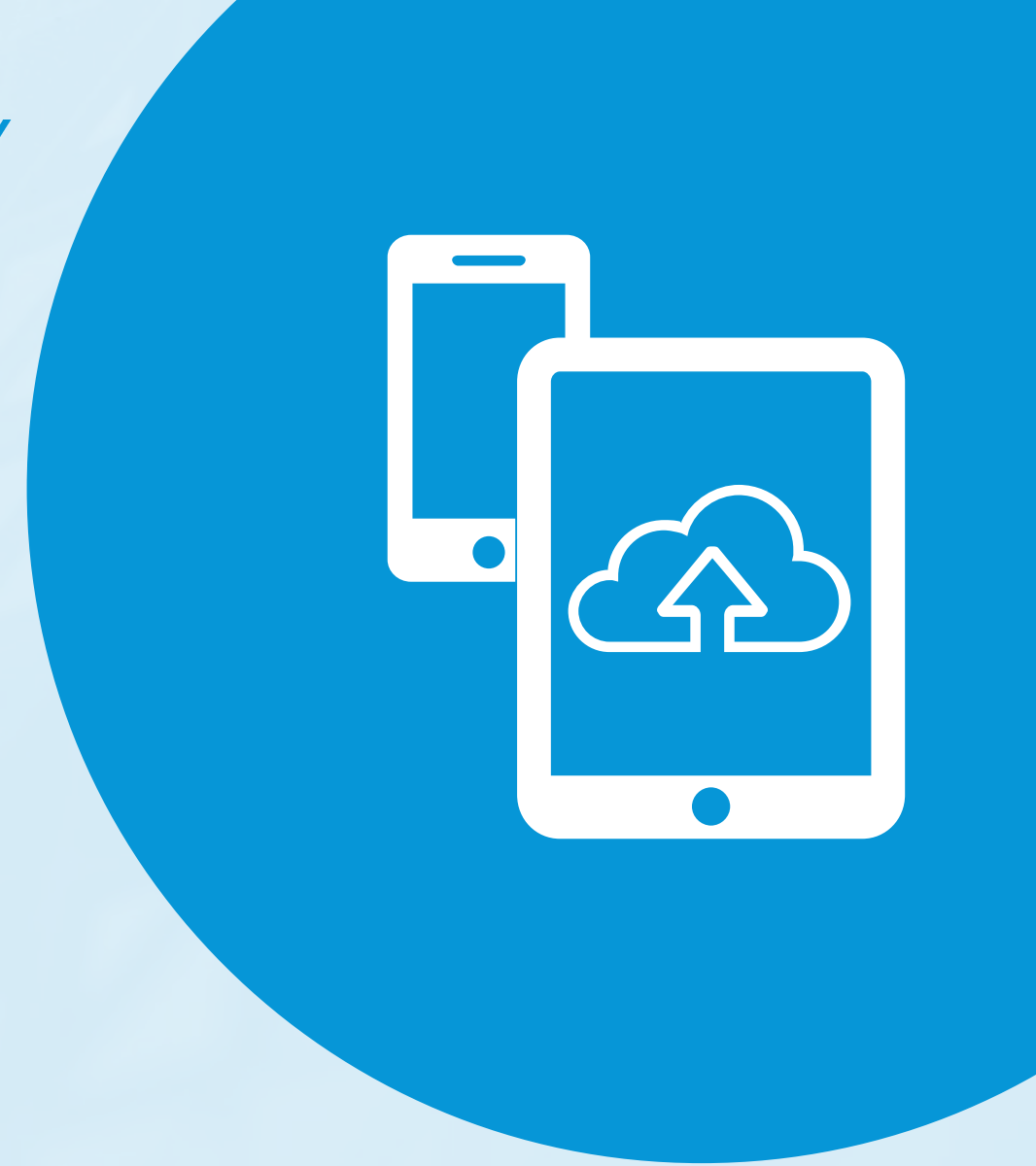
## PC

1990s – 2000s

Enterprise & SMB

License and Maintenance

Millions of Users



## CLOUD and MOBILE

2010s – Present

Everyone

Subscription/Consumption

Billions of Users



# THE CLOUD CHANGES

New Markets | New Subscribers

# EVERYTHING

# BUSINESS USERS

## Marketing



## Sales



## Service & Support



## Finance



## HR



## VERTICAL

### Healthcare



### Education



### Real Estate



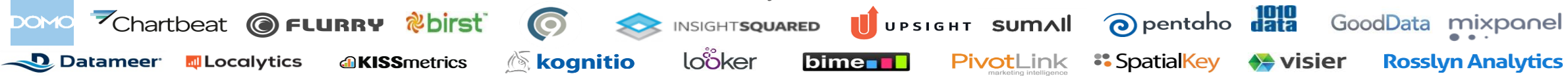
### Other



## Collaboration



## BI/Analytics



## Developers

## IT Ops

## Security

PaaS

IaaS



# BUSINESS USERS

## Marketing



## Sales



## Service & Support



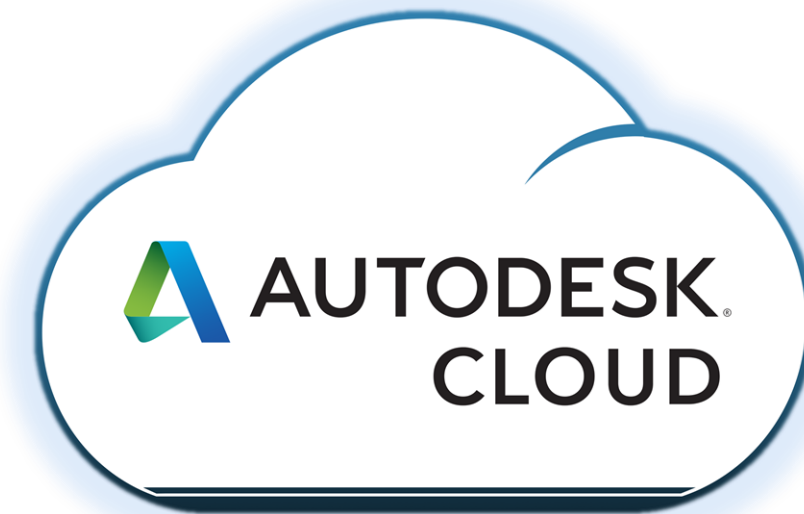
## Finance



## HR



## Design & Engineering



## Collaboration



## BI/Analytics



## Developers

## IT Ops

## Security

PaaS

IaaS



Opps

Industry 4.0



Products as A Service



Preventative Maintenance

Machine Learning

IoT

Field Management



Coordination

Prefabrication

Field Layout

Pre-planning

CONSTRUCTION

Scheduling

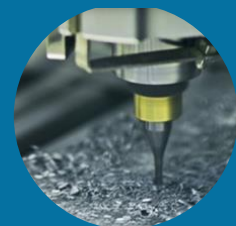


CAM



Robotic

Additive Manufacturing

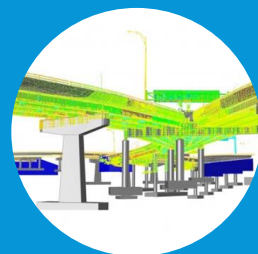


Subtractive Manufacturing



ADVANCED MANUFACTURING

Structural Engineering



Factory



Civil Infrastructure



MEP

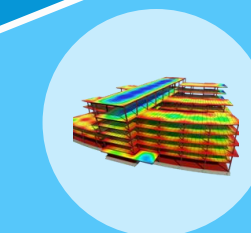
Architecture

Automotive



Mechanical Design

Industrial Design

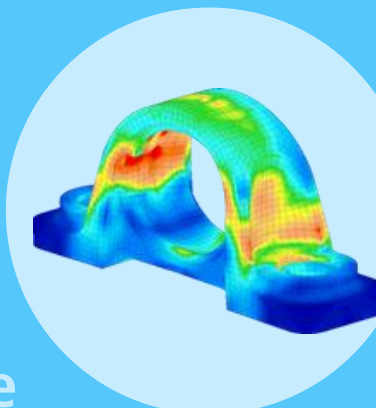


DESIGN & ENGINEERING

Flow & Thermal Analysis

Structural Mechanics

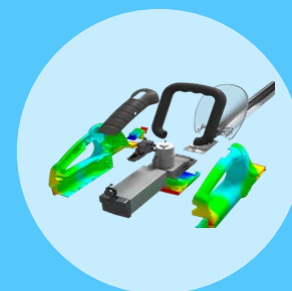
SIMULATION



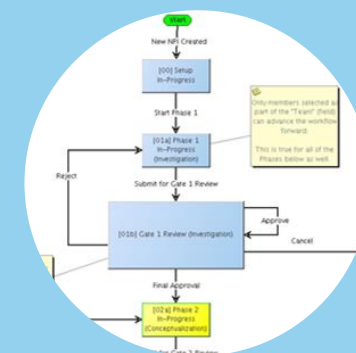
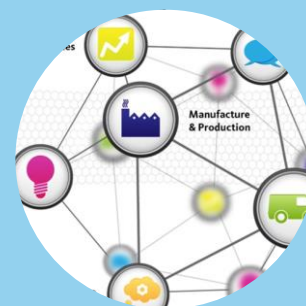
Molding Processes

Composite Materials

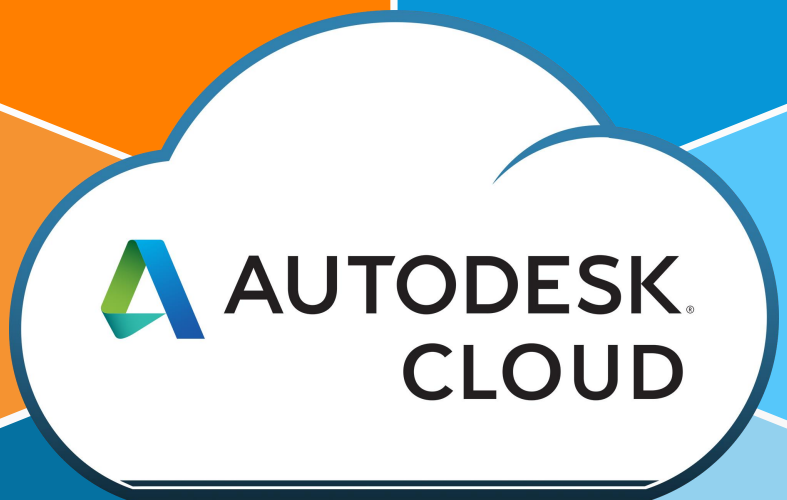
Structural Architecture

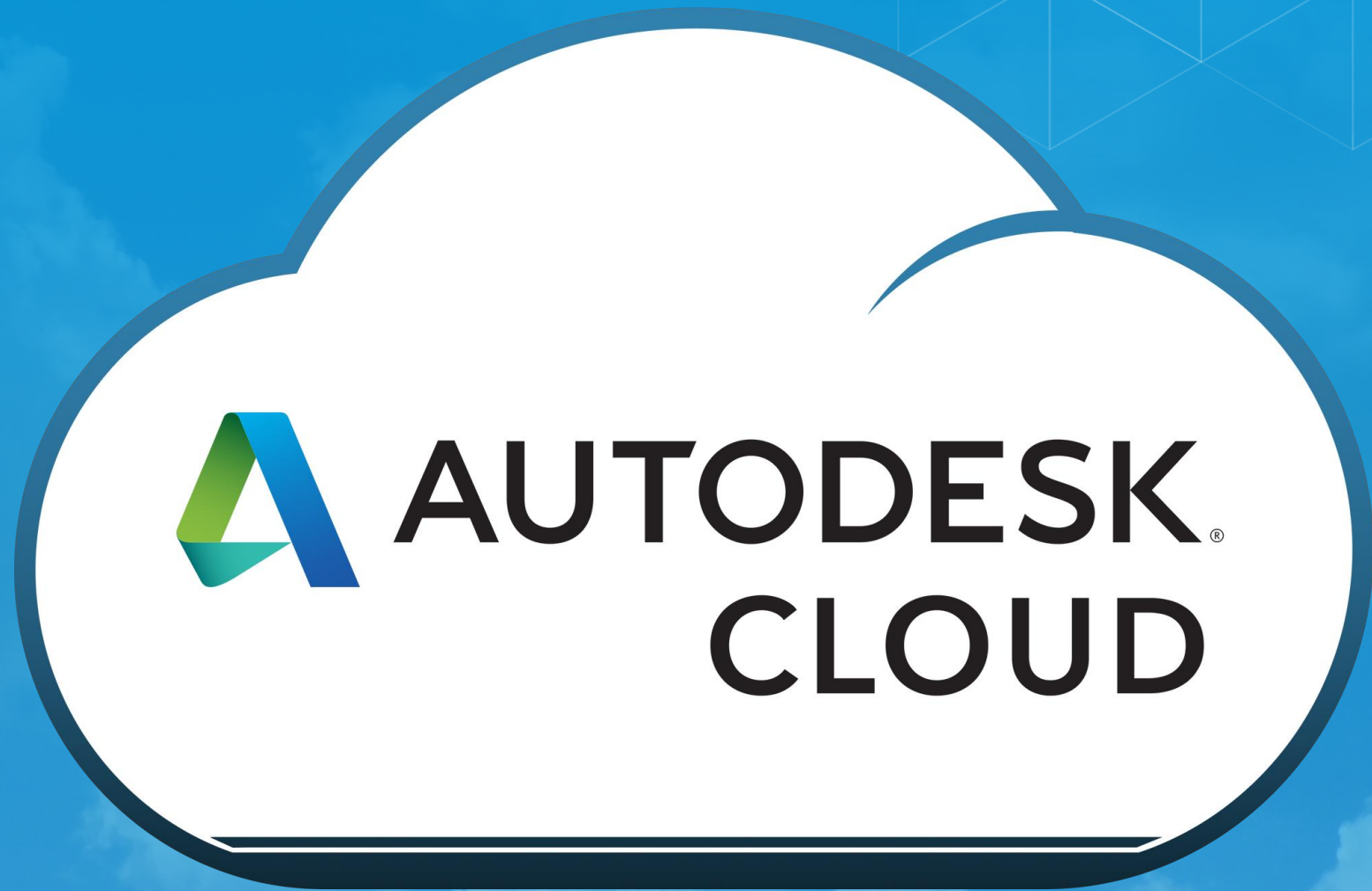


PLM



Item	Phase Start Date	Phase End Date
Phase 1 - Case 1 Review	2015-11-25	2015-11-25
Phase 2 - Case 2 Review	2015-11-25	2015-11-25
Phase 3 - Case 3 Review	2015-11-25	2015-11-25
Phase 4 - Case 4 Review	2015-11-25	2015-11-25
Phase 5 - Case 5 Review	2015-11-25	2015-11-25
Phase 6 - Case 6 Review	2015-11-25	2015-11-25
Phase 7 - Case 7 Review	2015-11-25	2015-11-25
Phase 8 - Case 8 Review	2015-11-25	2015-11-25
Phase 9 - Case 9 Review	2015-11-25	2015-11-25
Phase 10 - Case 10 Review	2015-11-25	2015-11-25





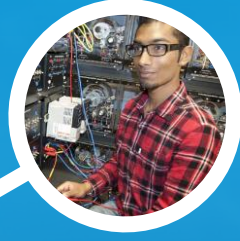
COMPUTE

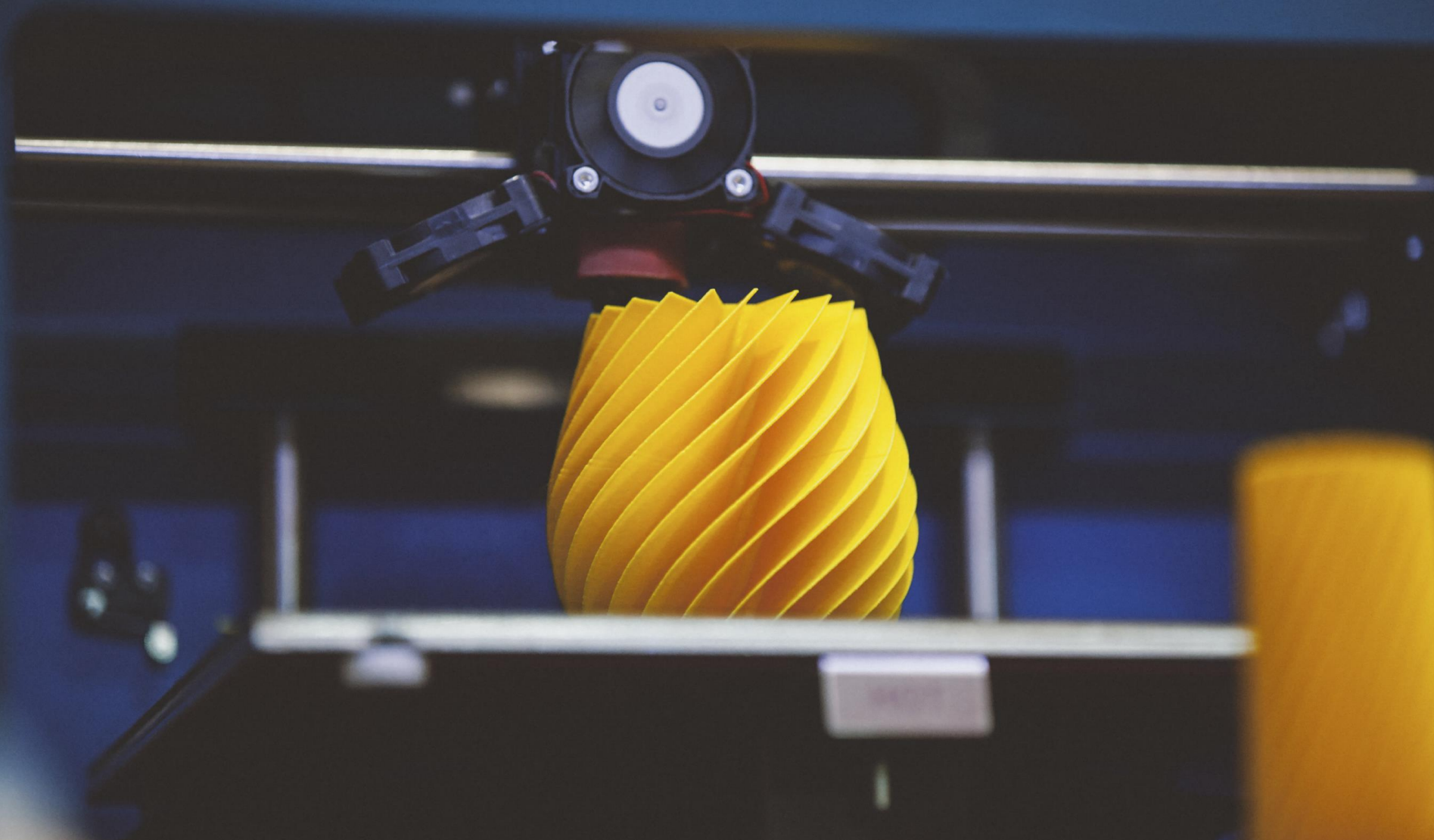
COORDINATE

CONNECT









Opps

Industry 4.0



Products as A Service



Preventative Maintenance

Machine Learning

IoT

Structural Engineering

Factory



Civil Infrastructure

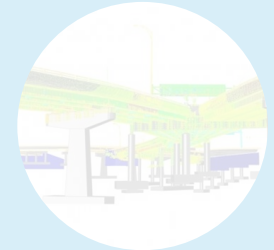


MEP

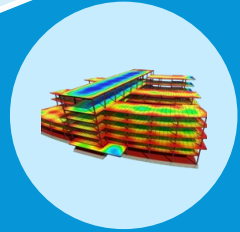
Architecture

Mechanical Design

Automotive



Industrial Design

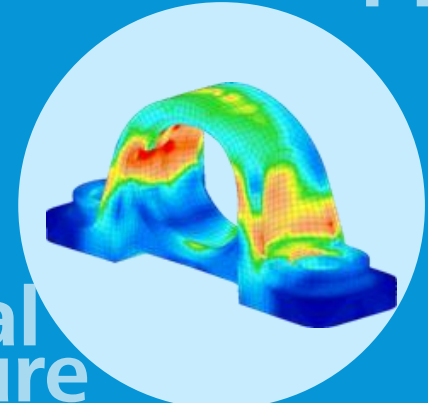


DESIGN & ENGINEERING

Flow & Thermal Analysis

Molding Processes

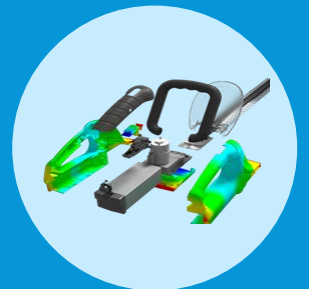
Structural Mechanics



Composite Materials

SIMULATION

Structural Architecture



Field Management

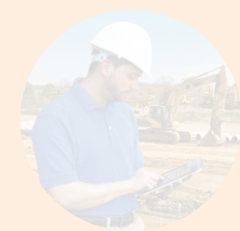


Coordination

Prefabrication

CONSTRUCTION

Scheduling



Field Layout

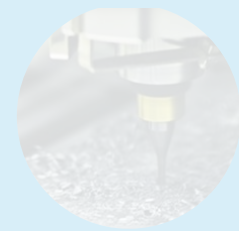
Pre-planning

ADVANCED MANUFACTURING

Additive Manufacturing



Robotic

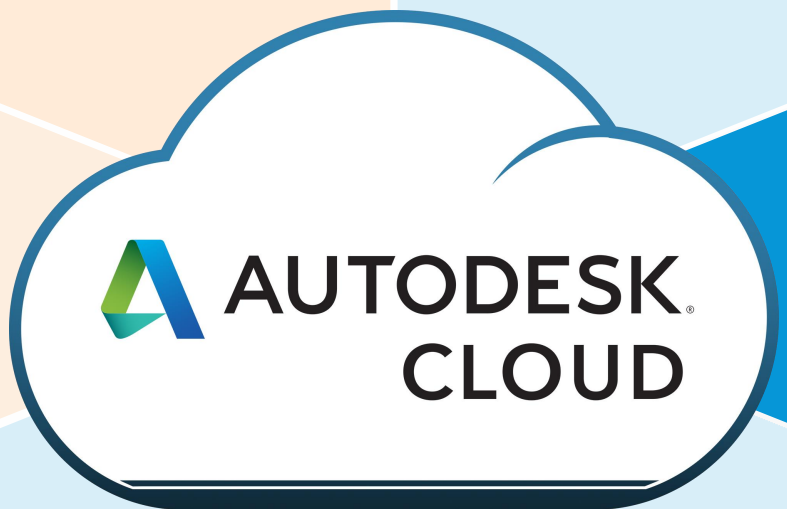
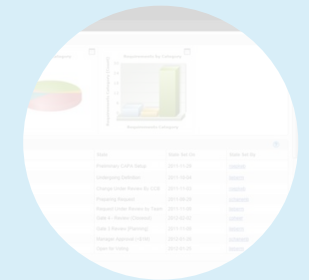


Subtractive Manufacturing

CAM



PLM

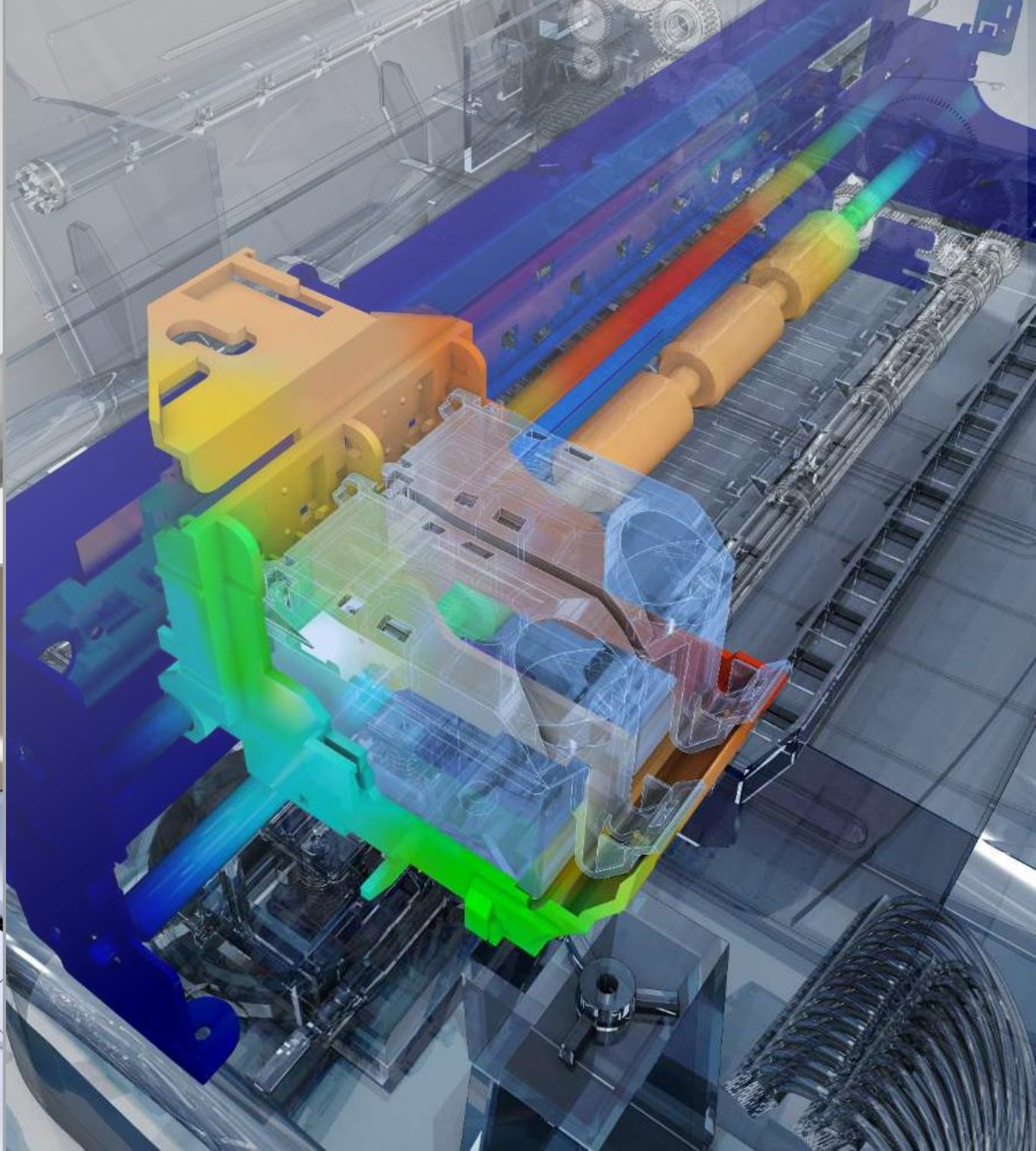
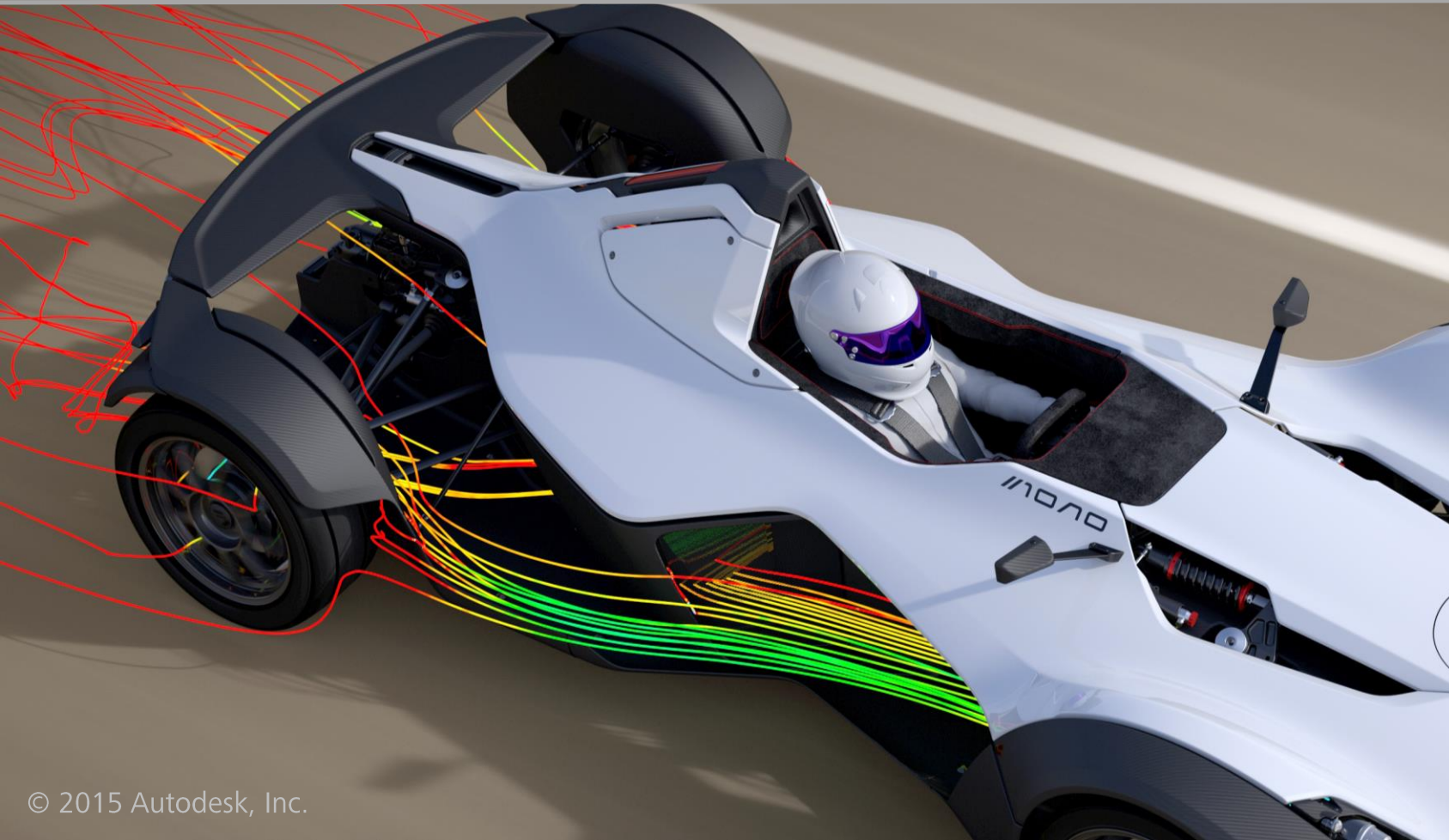
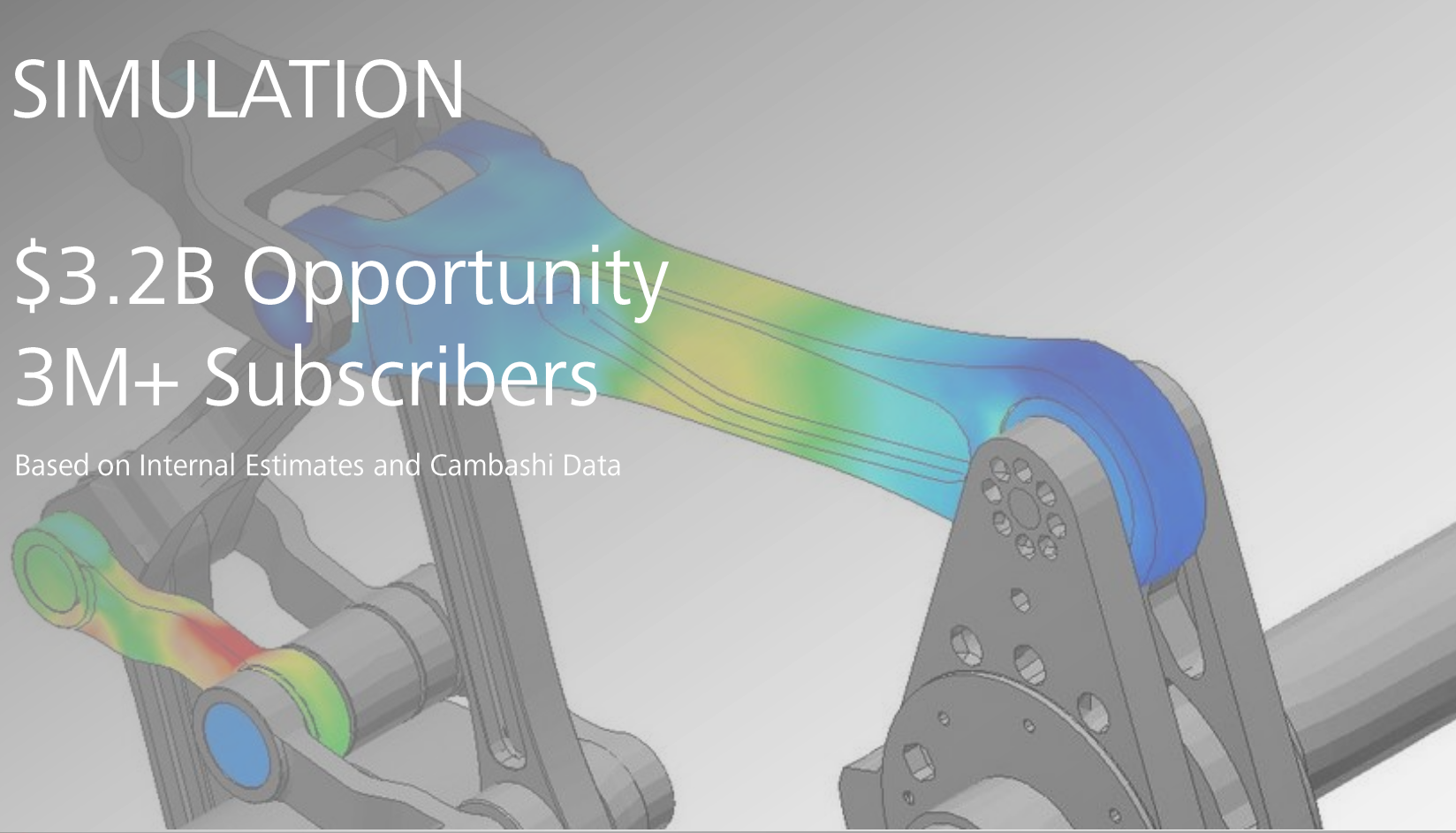


AUTODESK CLOUD

# SIMULATION

\$3.2B Opportunity  
3M+ Subscribers

Based on Internal Estimates and Cambashi Data



Opps

Industry 4.0



Products as A Service



Preventative Maintenance

Machine Learning

IoT

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CONSTRUCTION

Field Management



Prefabrication

Field Layout

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Scheduling

CAM



Robotic

Additive Manufacturing



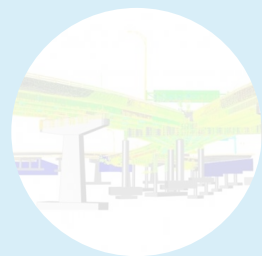
Subtractive Manufacturing



ADVANCED MANUFACTURING

**AUTODESK CLOUD**

Structural Engineering



Factory



MEP

Architecture

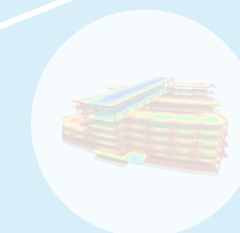
Automotive

DESIGN & ENGINEERING

Industrial Design



Mechanical Design



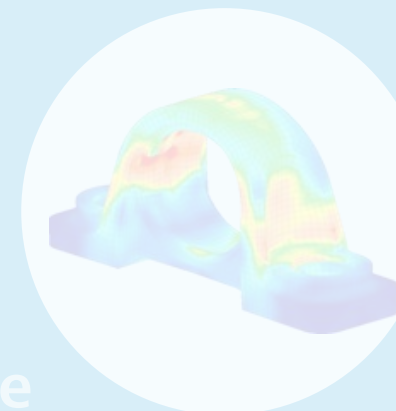
Civil Infrastructure



Flow & Thermal Analysis

SIMULATION

Structural Mechanics



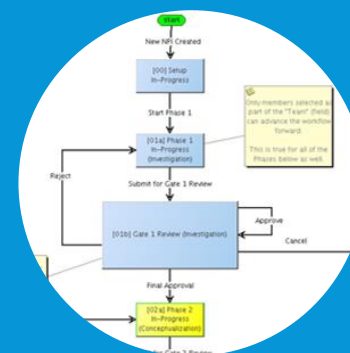
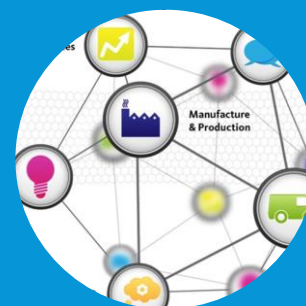
Structural Architecture

Molding Processes

Composite Materials



PLM



Name	Made for Date	Made for By
Phase 1 - Case 1	2011-11-29	000000
Change Order Review - 0101	2011-11-29	000000
Change Order Review - 0102	2011-11-29	000000
Phase 1 Review	2011-11-29	000000
Phase 1 Review - 0101	2011-11-29	000000
Case 1 - Review (Closed)	2012-01-02	000000
Case 1 Review (Closed)	2012-01-02	000000
Phase 1 Review (Closed)	2012-01-02	000000
Open for Review	2012-01-02	000000

# PLM

## \$4B Opportunity 10M+ Subscribers

Based on Internal Estimates and Cambashi Data



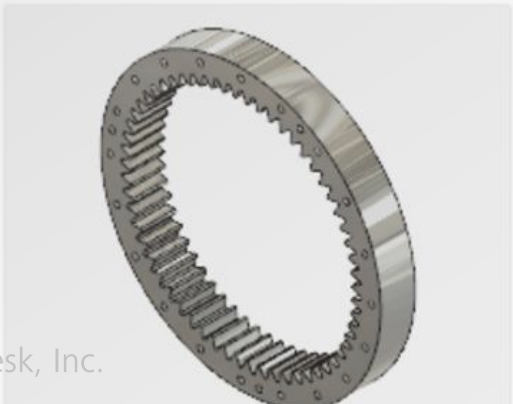
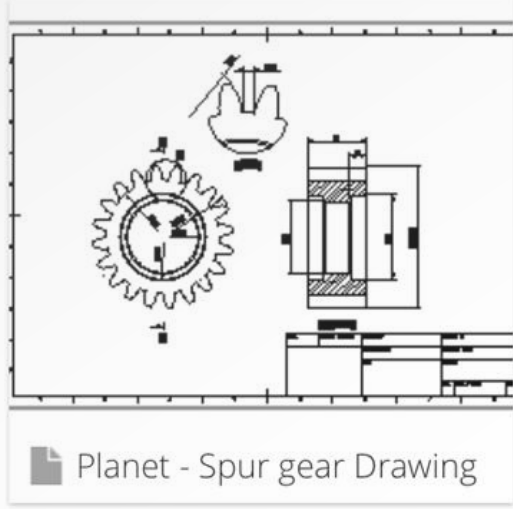
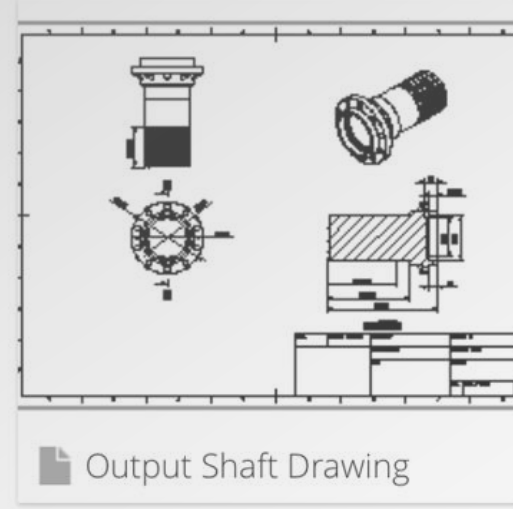
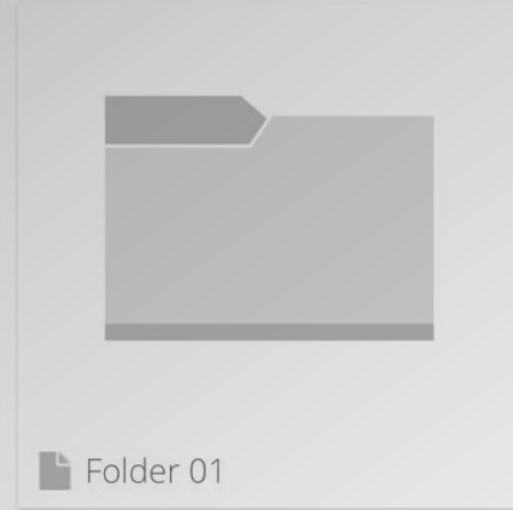


Adam Cohen > ... > **Planetary Gearbox**

Sort by Name

**Upload**

New Folder



**Details**    Activity

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**Planetary Gearbox**  
Project Subfolder  
1 Sub Folder, 8 Files

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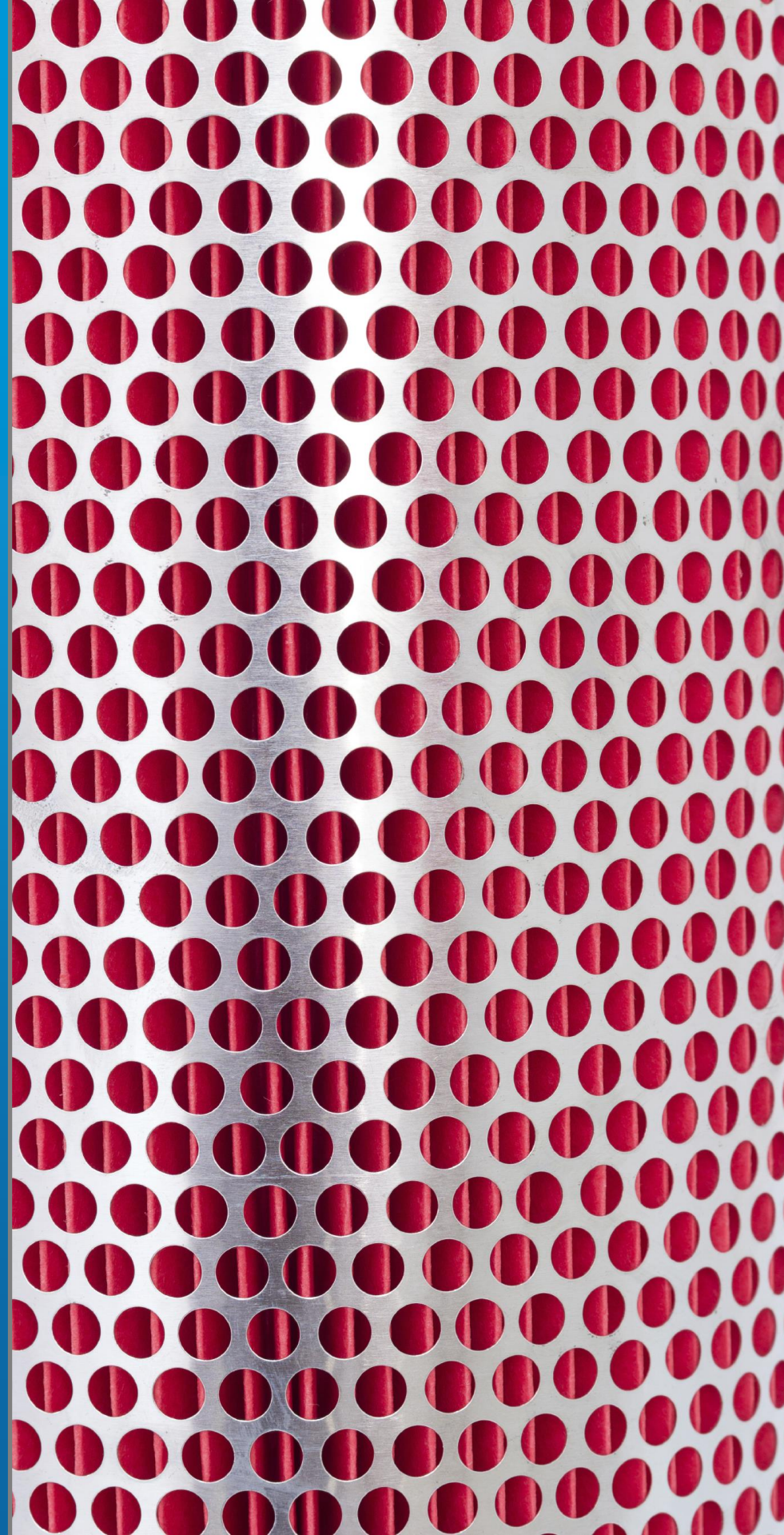
**PEOPLE IN PROJECT**

[Invite](#)

- Brian**
- Hagay**
- Adnan**

## U.S. VALVE & FILTER MANUFACTURER

- **71%** Labor efficiency increase
- **26%** Cost savings
- **3%** Increase in revenue
- Annual Benefit **\$3.2M**





Opps

Industry 4.0



Preventative Maintenance

Products as A Service



IoT

Machine Learning

Coordination

CONSTRUCTION

Field Management



Prefabrication

Field Layout

Pre-planning



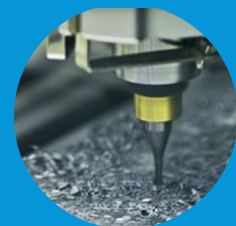
Scheduling

CAM

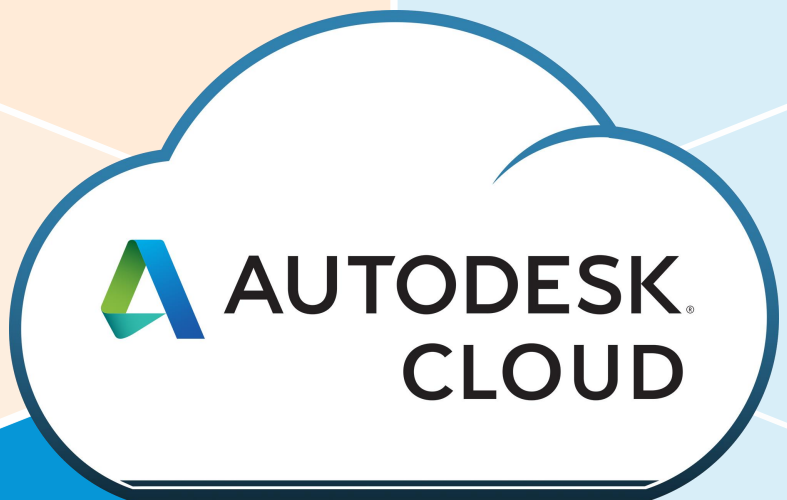


Robotic

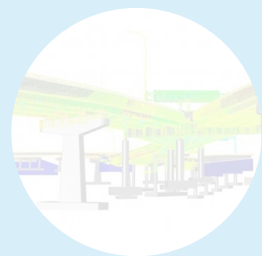
Additive Manufacturing



Subtractive Manufacturing



Structural Engineering



Factory



MEP

Architecture

Automotive

Civil Infrastructure

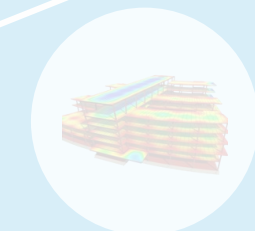


Mechanical Design



Industrial Design

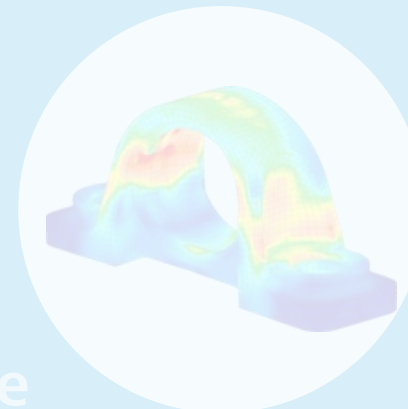
DESIGN & ENGINEERING



Molding Processes

Flow & Thermal Analysis

Structural Mechanics

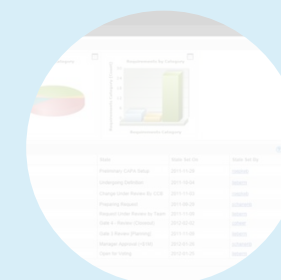


SIMULATION

Composite Materials

Structural Architecture

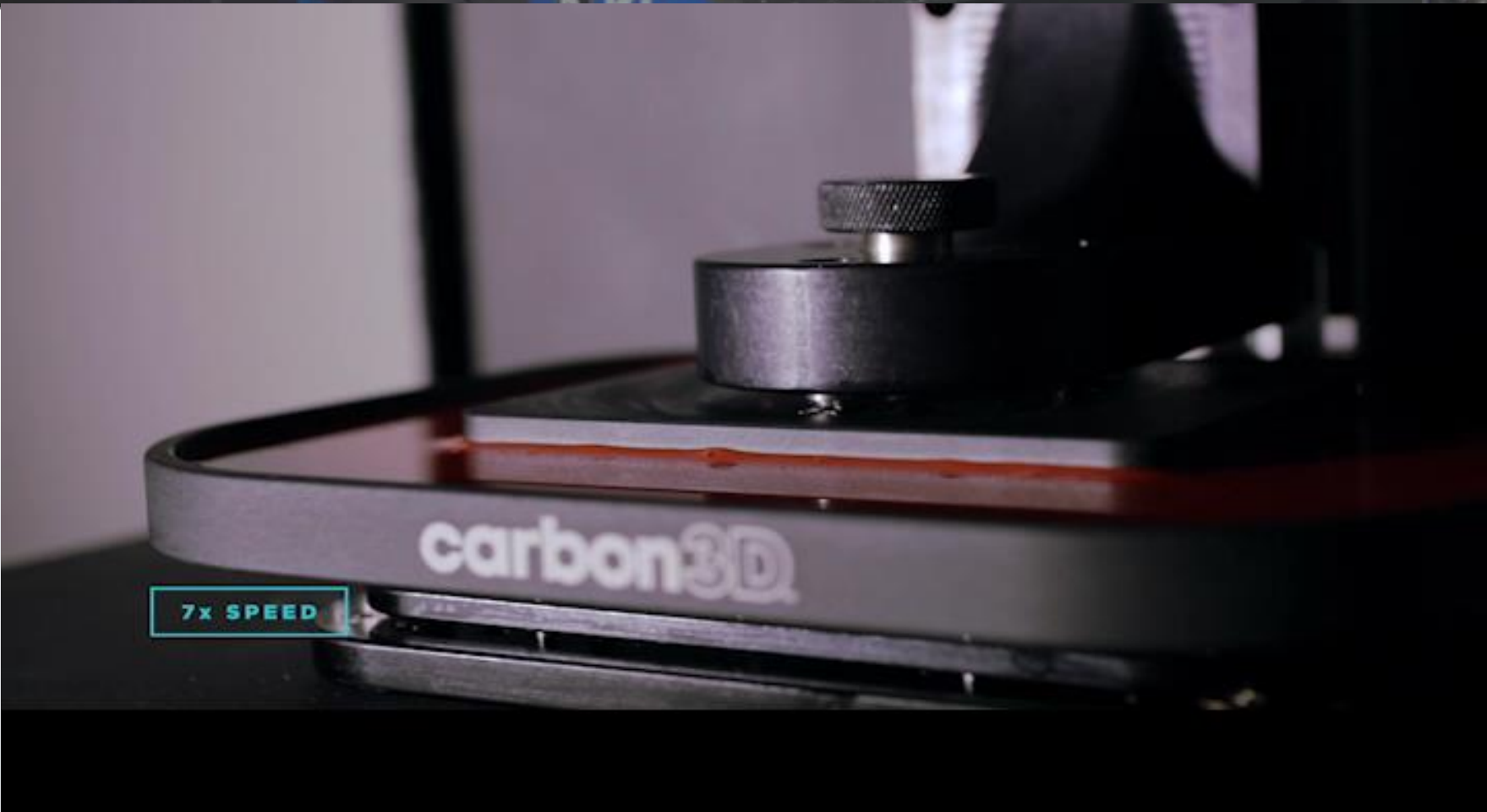
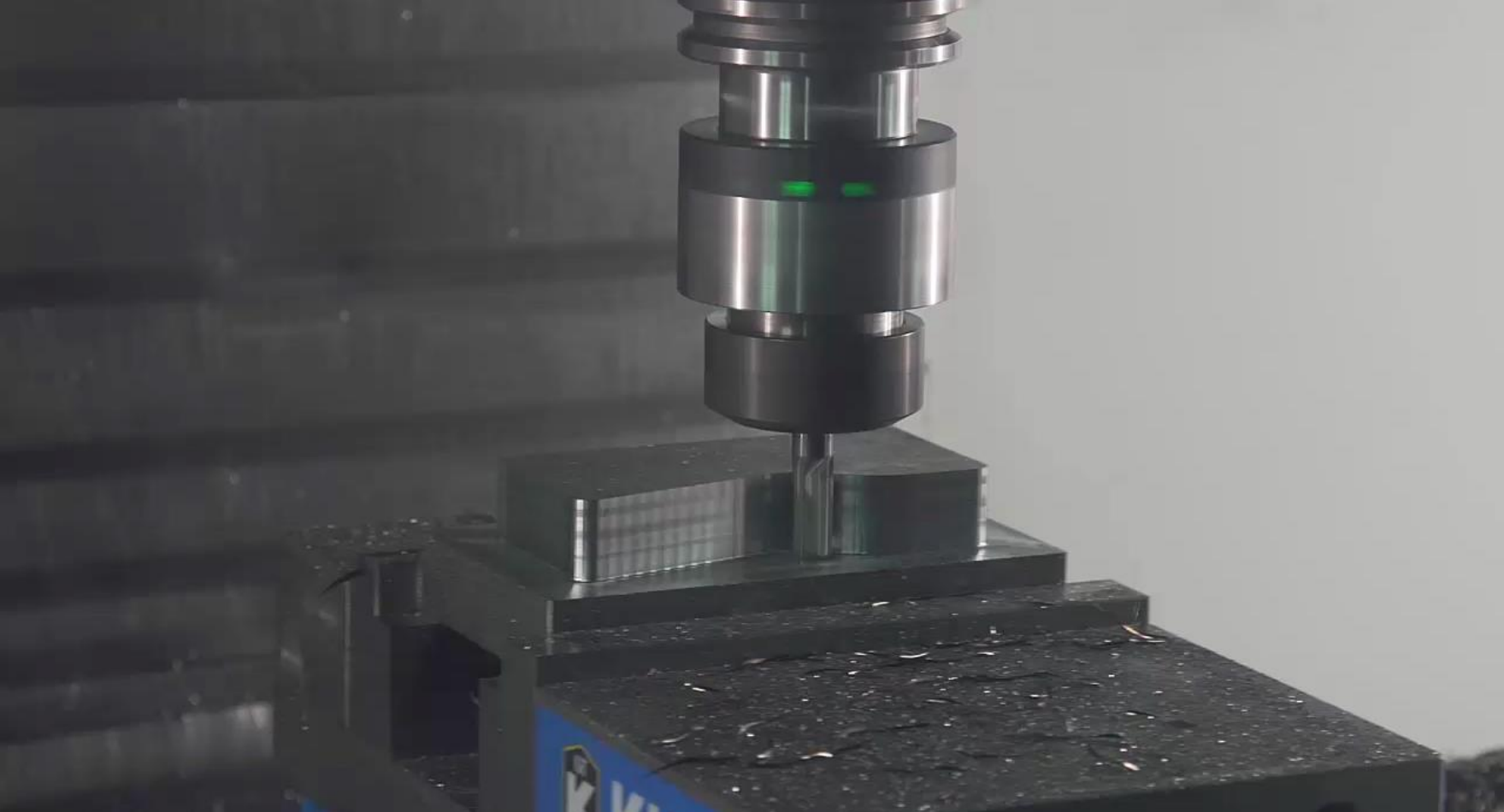
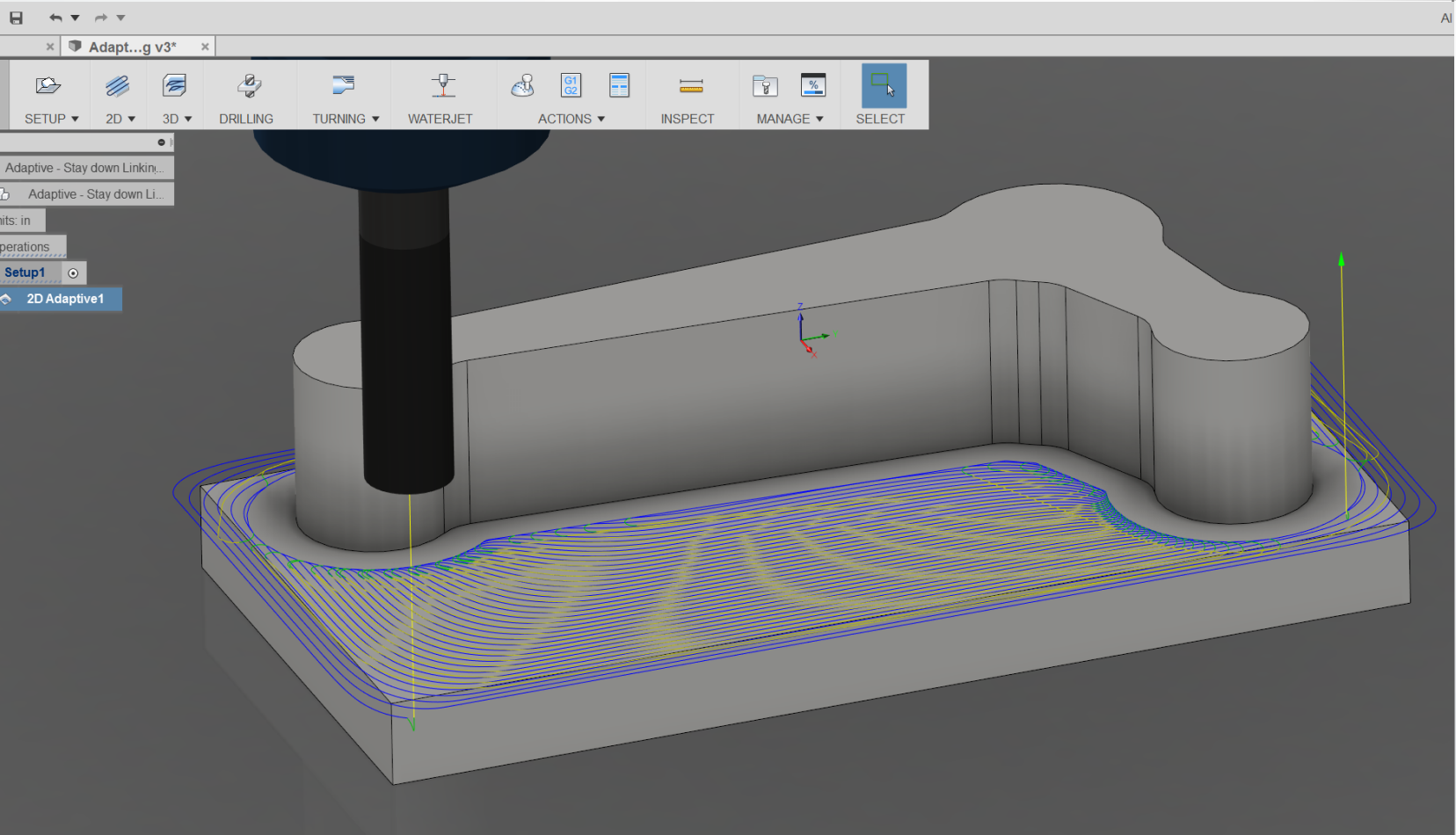
PLM



# ADVANCED MANUFACTURING

\$3.6B Opportunity  
1M+ Subscribers

Based on Internal Estimates and Cambashi Data





Opps

Industry 4.0



Products as A Service



Preventative Maintenance

Machine Learning

IoT

Field Management



Coordination

Prefabrication

Field Layout

Pre-planning

CONSTRUCTION

Scheduling



ADVANCED MANUFACTURING

Additive Manufacturing



Robotic

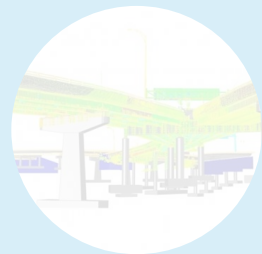


Subtractive Manufacturing

CAM



Structural Engineering



Factory



Civil Infrastructure



MEP

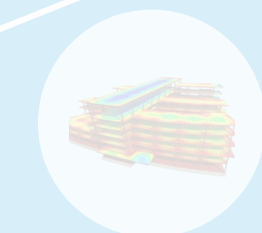
Architecture

Automotive

Mechanical Design



Industrial Design



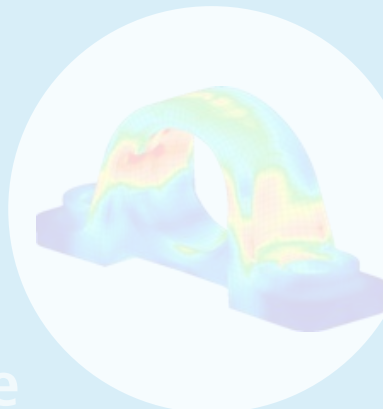
DESIGN & ENGINEERING

Flow & Thermal Analysis

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SIMULATION

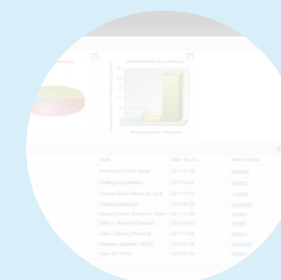


Composite Materials

Structural Architecture



PLM



 **AUTODESK.  
CLOUD**

# IoT

\$6B Opportunity  
10M+ Subscribers

Based on Internal Estimates and Cambashi Data



# Preventative Maintenance



Equipment starts showing signs of failure

Sensors capture and send data

Data analytics detect the failure

Tailored solution triggers business process

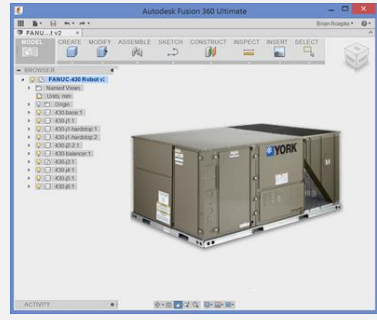
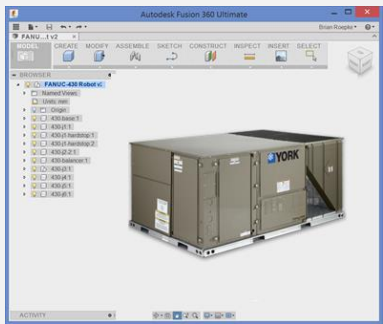
# Smarter Systems



# Improved Design Quality

Which parts fail the most?

What else can I learn?



Original design

Are we consuming too much power?

What's the MTBF?

Analytics

Optimized Next Gen



Opps

Industry 4.0



Products as A Service



Preventative Maintenance

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Coordination

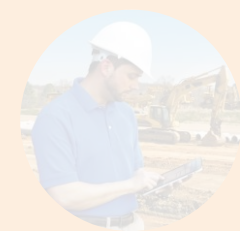
Prefabrication

Field Layout

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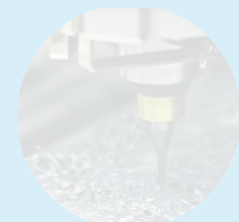


CAM



Additive Manufacturing

Robotic



Subtractive Manufacturing



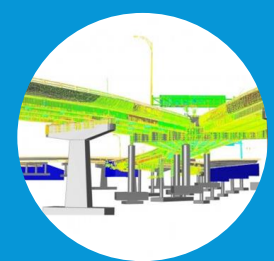
ADVANCED MANUFACTURING

Structural Engineering

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Civil Infrastructure



MEP

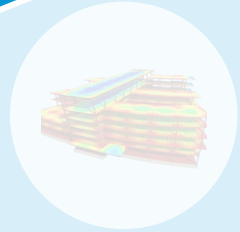
Architecture

Automotive



Mechanical Design

Industrial Design



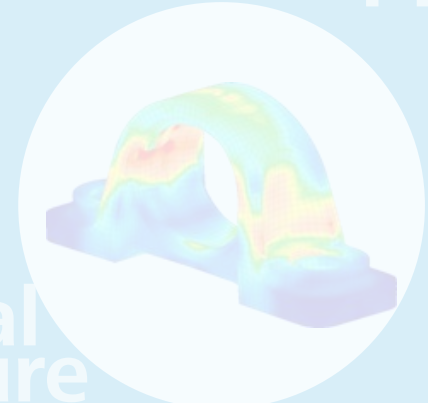
DESIGN & ENGINEERING

Flow & Thermal Analysis

Molding Processes

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SIMULATION

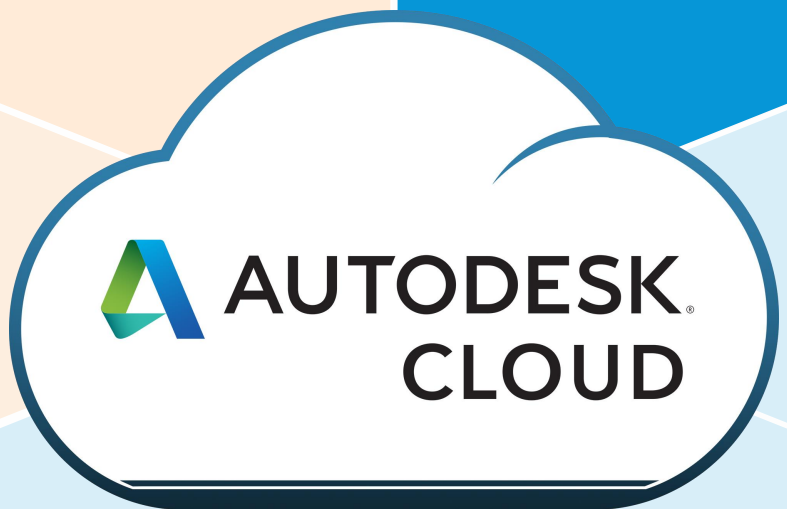
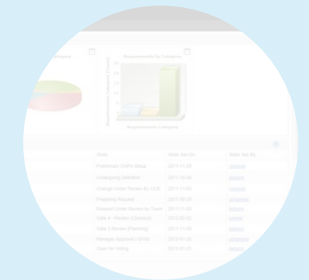


Composite Materials

Structural Architecture



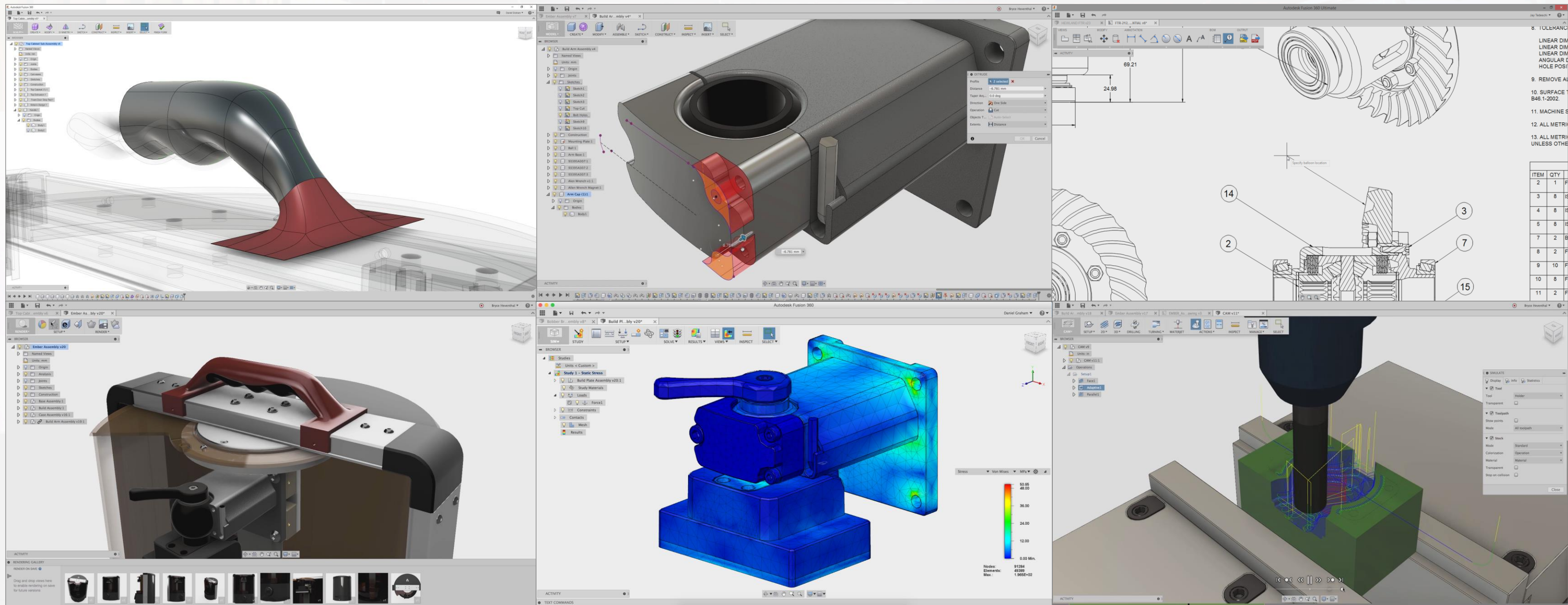
PLM



# DESIGN AND ENGINEERING: Fusion 360

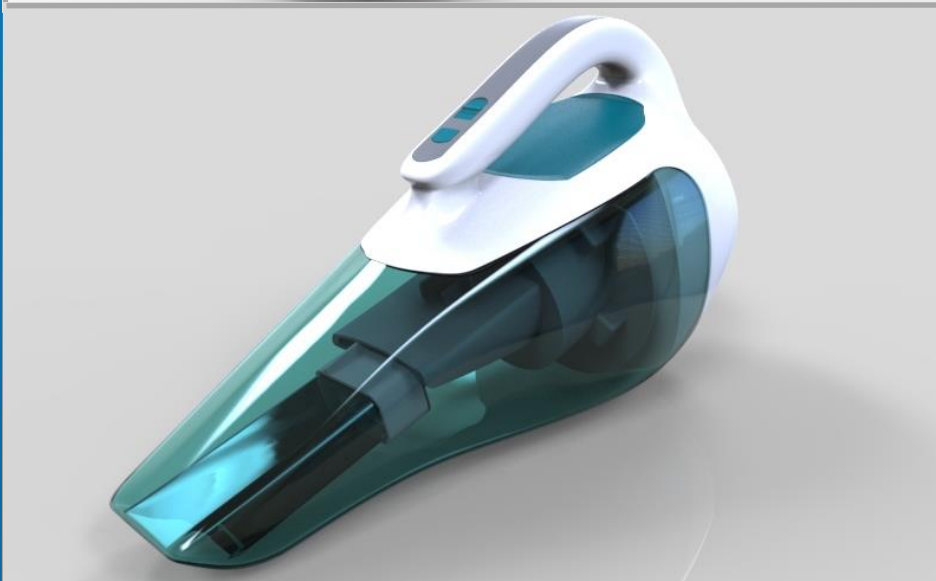
\$5.7B Opportunity  
4M+ Subscribers

Based on Internal Estimates and Cambashi Data





# NEW PRODUCT ENTREPRENEURS



Opps

Industry 4.0



Products as A Service



Preventative Maintenance

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Civil Infrastructure



MEP

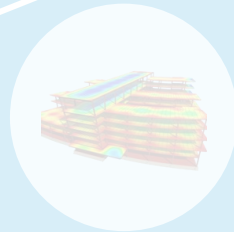
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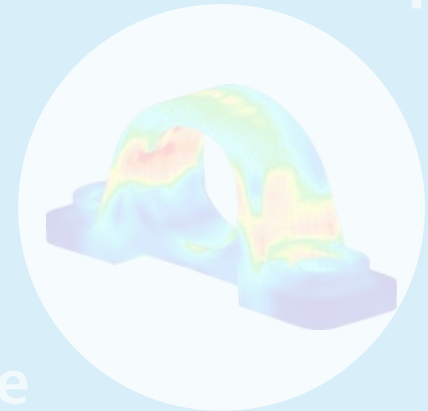


DESIGN & ENGINEERING

Flow & Thermal Analysis

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Field Management



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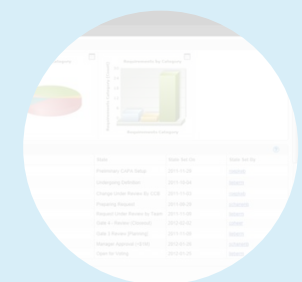
Pre-planning

ADVANCED MANUFACTURING

Additive Manufacturing



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Subtractive Manufacturing

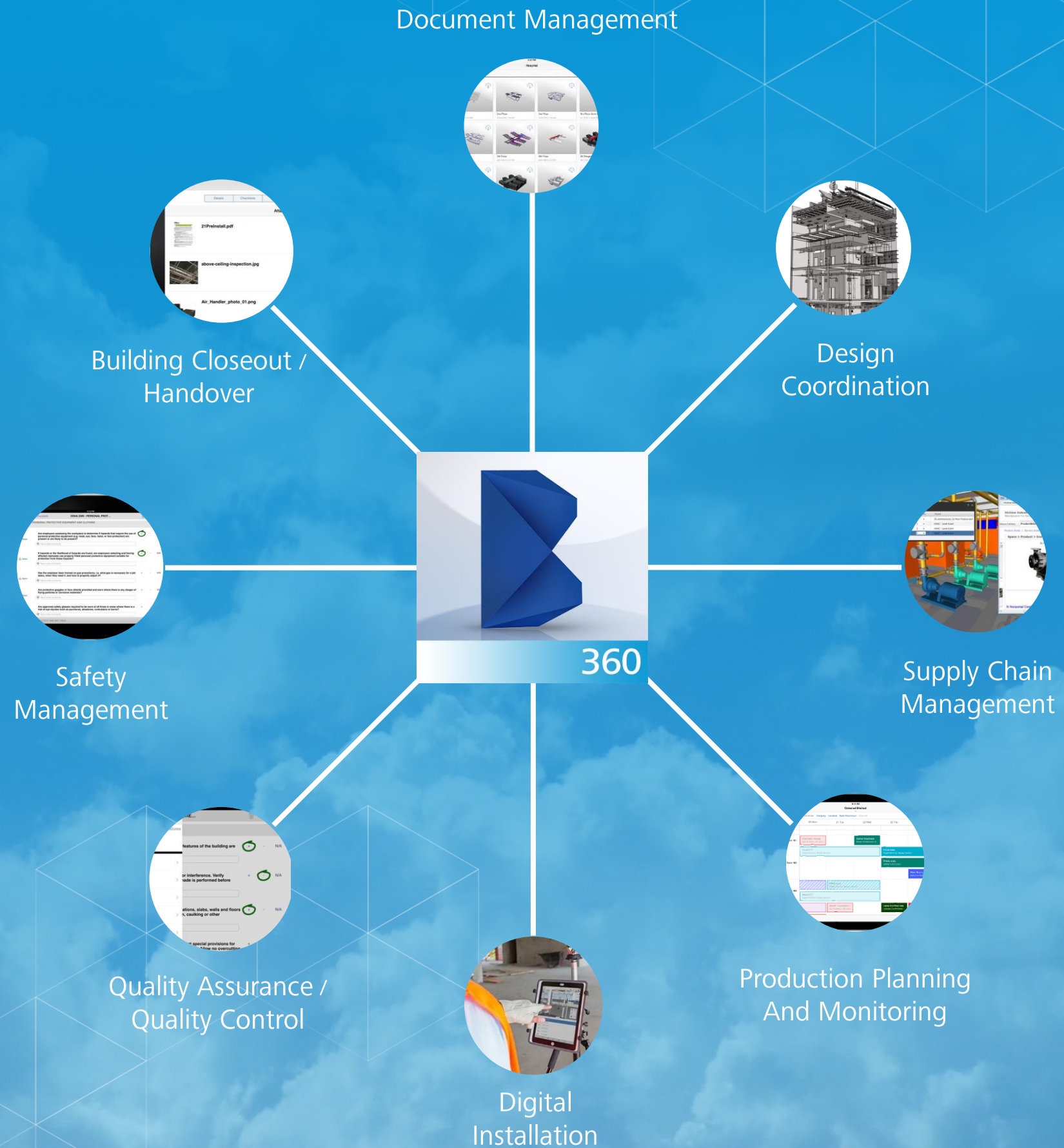
- Productivity has remained **flat** (compared to doubling in manufacturing)
- **40%** of materials become waste
- **98%** of mega projects incur cost overruns
- **77%** of projects are at least 40% late
- On average projects run **20 months** behind schedule



# CONSTRUCTION

\$6B Opportunity  
100M+ Subscribers

Based on Internal Estimates and Cambashi Data



# BIM 360 Glue

### Clashes

Result Sets 04/09/13 11:01 AM

Level 5 - Steel vs Ducts (116)

Group By: Level 5 - HVAC (116)

Vs: All Models (116)

Notifications: All (116)

Notify Comment

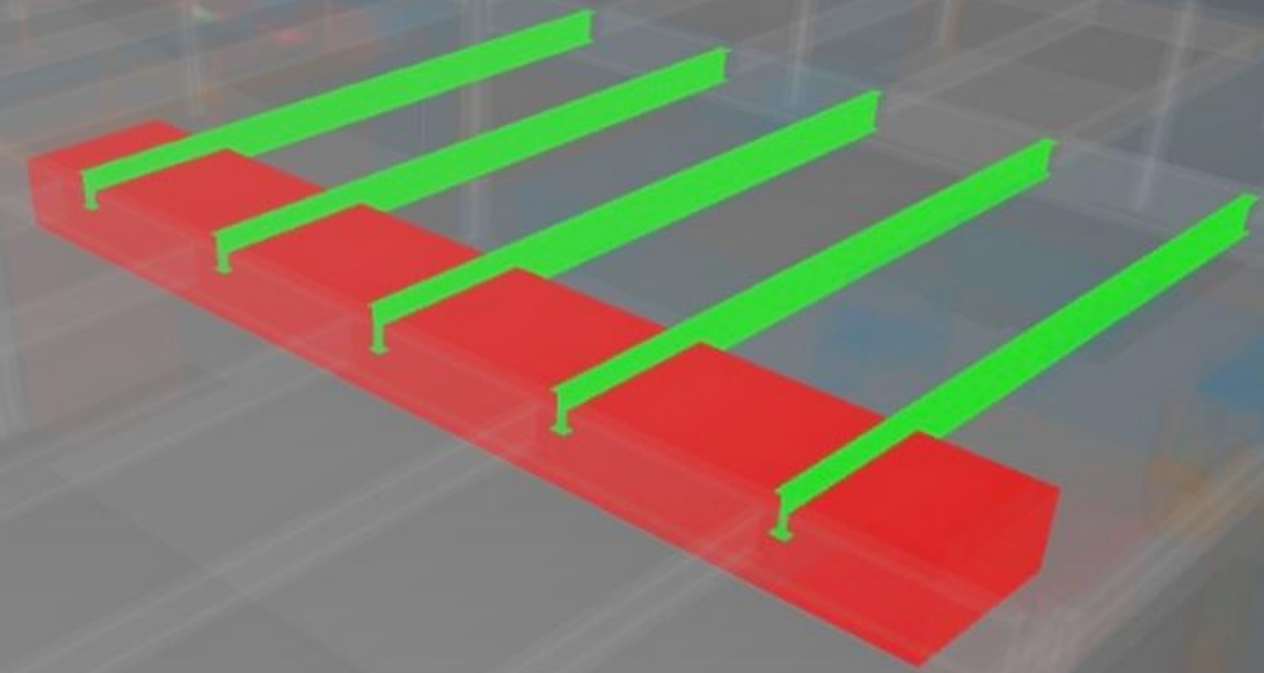
Clash	Magnitude
▶ Rectangular Duc... 82.75 cm	82.75 cm
▶ Rectangular Duc... 77.65 cm	77.65 cm
▶ Rectangular Duc... 61.66 cm	61.66 cm
▶ Rectangular Duc... 65.53 cm	65.53 cm
▶ Rectangular Duc... 100.61 cm	100.61 cm

### 5 Clashes

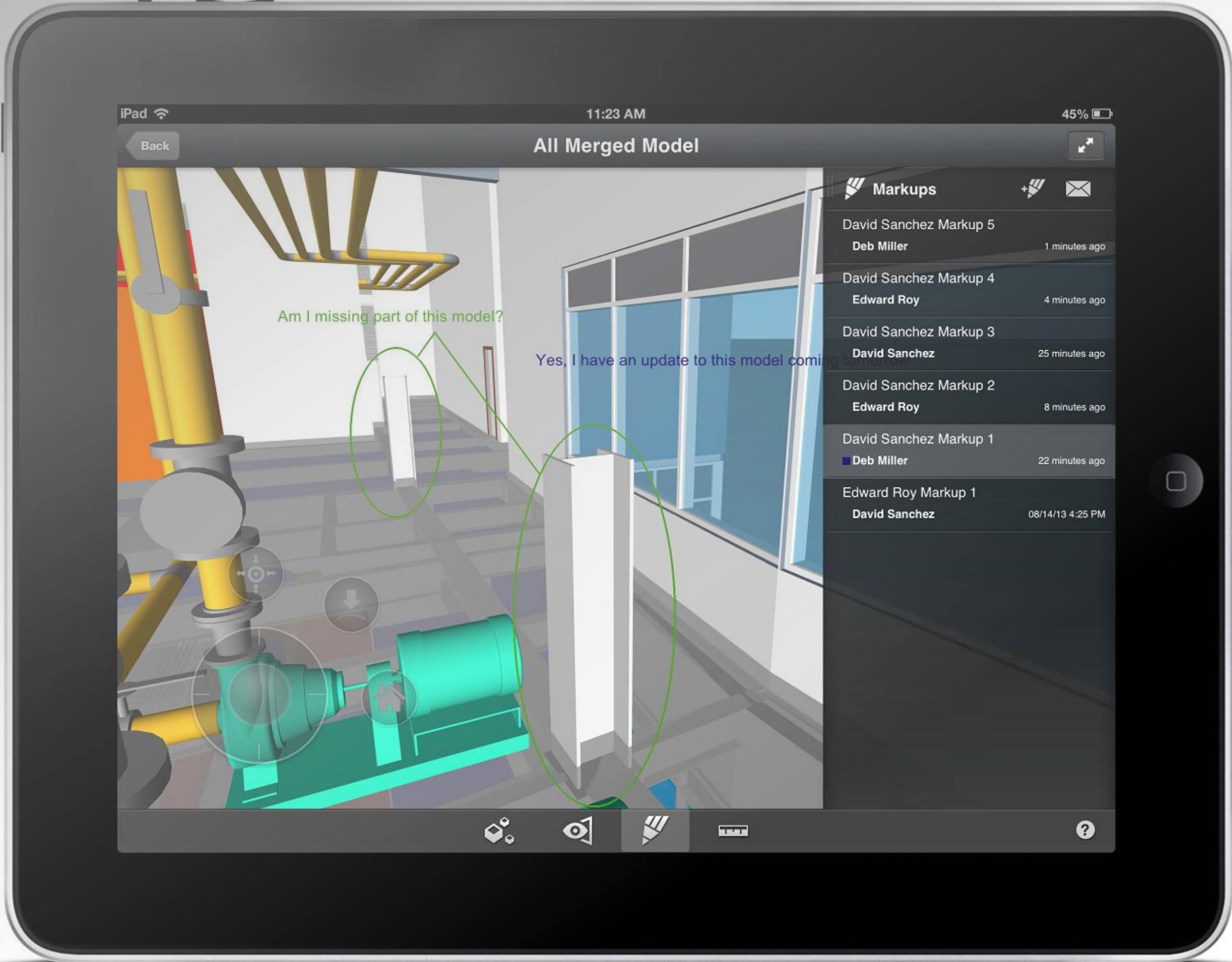
Magnitude: 82.75 cm

Comment: "Adjust duct size to avoid"

<ul style="list-style-type: none"><li>Rectangular Duct [928441]</li></ul>	<ul style="list-style-type: none"><li>5 Objects</li><li>Structural Framing (309)</li><li>W-Wide Flange (276)<ul style="list-style-type: none"><li>W21X57 (26)<ul style="list-style-type: none"><li>W-Wide Flange [24:...</li></ul></li><li>W18X50 (34)<ul style="list-style-type: none"><li>W-Wide Flange [24:...</li><li>W-Wide Flange [24:...</li><li>W-Wide Flange [24:...</li><li><b>W-Wide Flange [24:...</b></li></ul></li></ul></li></ul>
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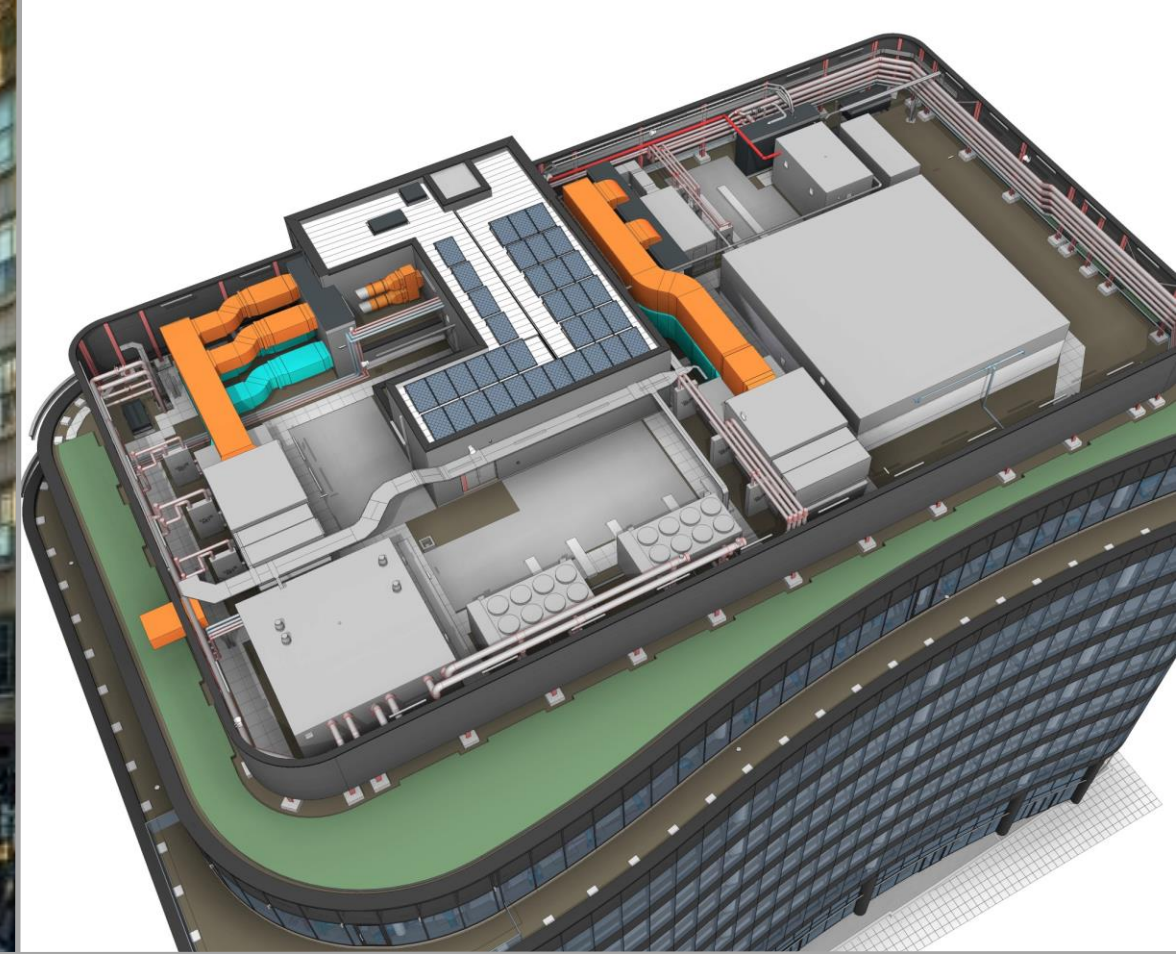


# BIM 360 Field





- **45%** improvement in the speed/labour costs of reactive jobs
- **54%** PPM completion per month
- **50%** improvement in the productivity
- **15-20%** reduction in PPM labour costs



# CHANGING THE CONVERSATION



THE FUTURE OF  
MAKING THINGS

A graphic featuring a white award ribbon with the text "2015 ENR TOP 250" in red and black. A blue starburst shape is overlaid on the ribbon, containing the text "90% Autodesk Customers". The background is a blurred image of an industrial facility with yellow railings and pipes. A list of company names is visible in the background, including "SHANDONG TIANTAI CONSTRUCTION CO. LTD.", "GREAT LAKES DREDGE & DOCK CORP.", "PETROLEUM & PRO...", "ENGINEERING FOR...", "w Delhi, India", "GROUP CO. LT...", "AE AR... ANG, Istanbul Turkey", "a/Ankara, T...", "CONSTR. INDU...", "ZAR... TA... SAAT... TICARET AS, A...", "CHINA POWER ENGINEERING CONSLTG. GR...".

224	
225	
226	
227	
229	
231	
232	
233	242
234	



# \$25B

Opps

Industry 4.0



Products as A Service



Preventative Maintenance

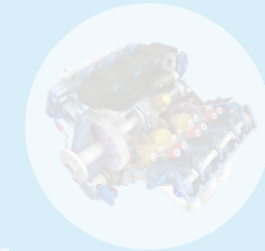


Structural Engineering

Factory



Civil Infrastructure



MEP

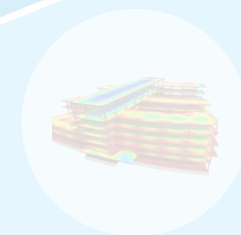
Architecture

Automotive

Mechanical Design



Industrial Design



Field Management

Machine Learning

DESIGN & ENGINEERING

Flow & Thermal Analysis

Molding Processes

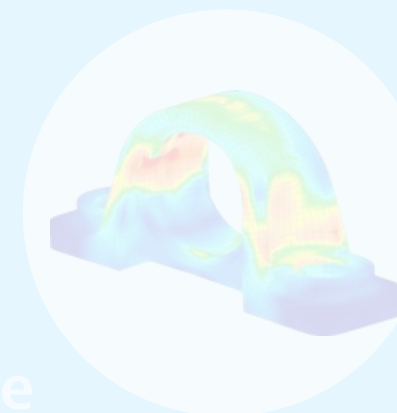


Coordination

CONSTRUCTION

AUTODESK CLOUD

SIMULATION



Composite Materials

Prefabrication

Scheduling

Structural Architecture

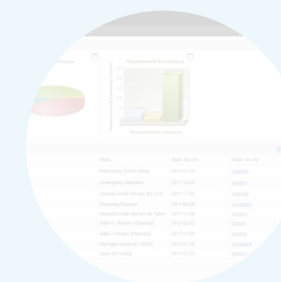
Field Layout



Pre-planning

ADVANCED MANUFACTURING TAM PLM

Additive Manufacturing



CAM



Robotic



Subtractive Manufacturing

A modern industrial workshop with large blue and grey machines, two people talking, and complex ductwork.

Business Model Transformation Builds A Better Business

Platform Transformation Builds A Bigger Business

Together, They Make Autodesk Unstoppable

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