

Autodesk®

# Manufacturing

**Robert 'Buzz' Kross**  
Vice President  
Manufacturing Solutions Division

# Autodesk is...

## More than CAD

Design

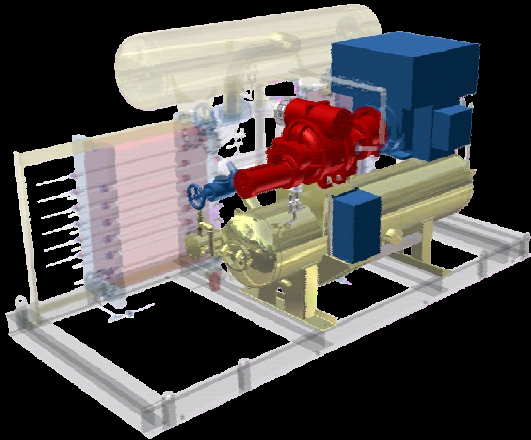
Engineering

Assembly

Supply Chain

Marketing

## More than 'Heavy Metal'





Autodesk®

Ideas Realized





Autodesk®

Ideas Realized

1,288,557



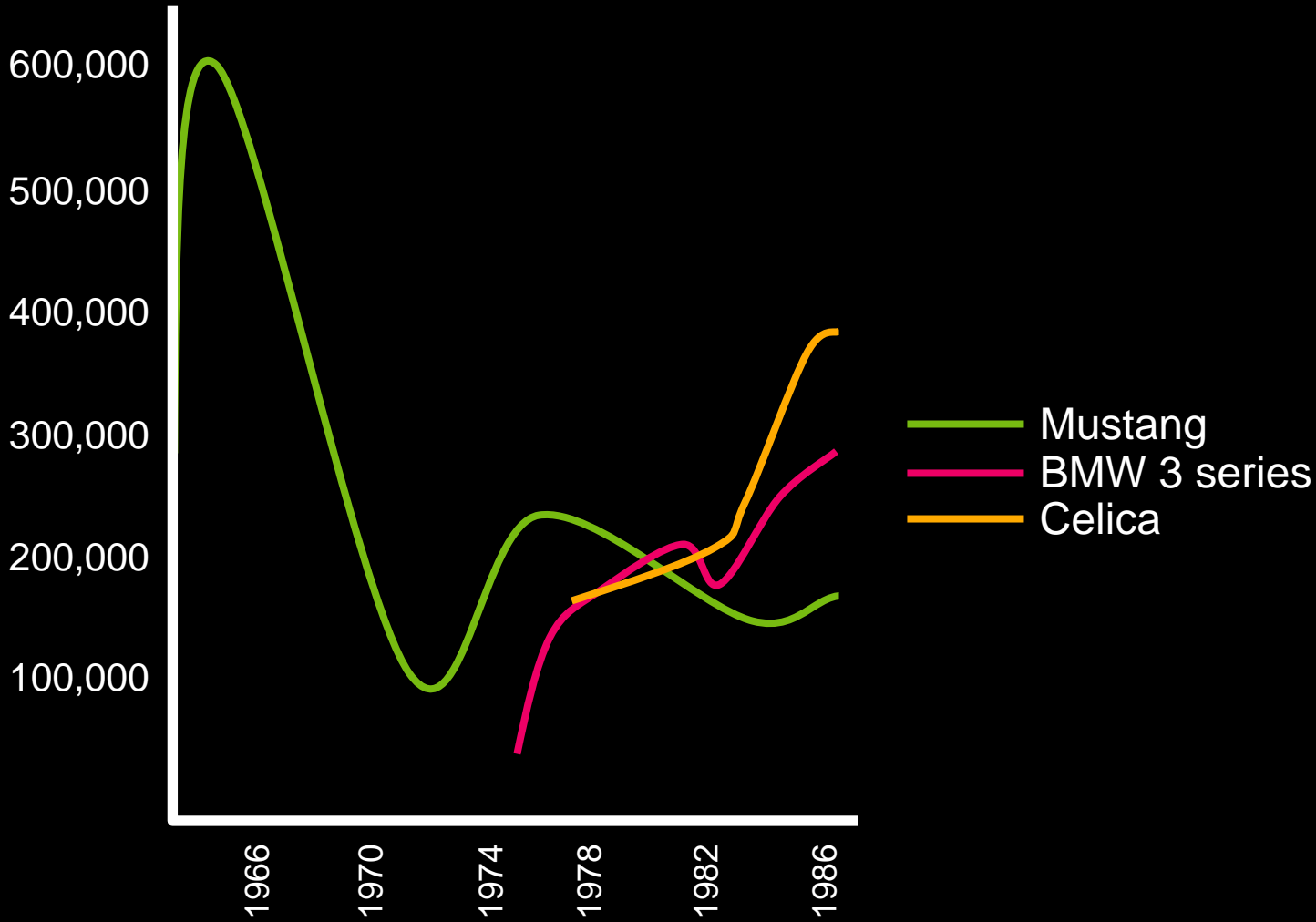


Gremlin—The first American-built import.



# Building Cars







# Building Cool.....



Idea

Design

Engineering

Assembly

Supply Chain

Marketing

Realized

Autodesk © 2006

Autodesk®

Ideas Realized

# Building Cool.....



Idea

Design

Engineering

Assembly

Supply Chain

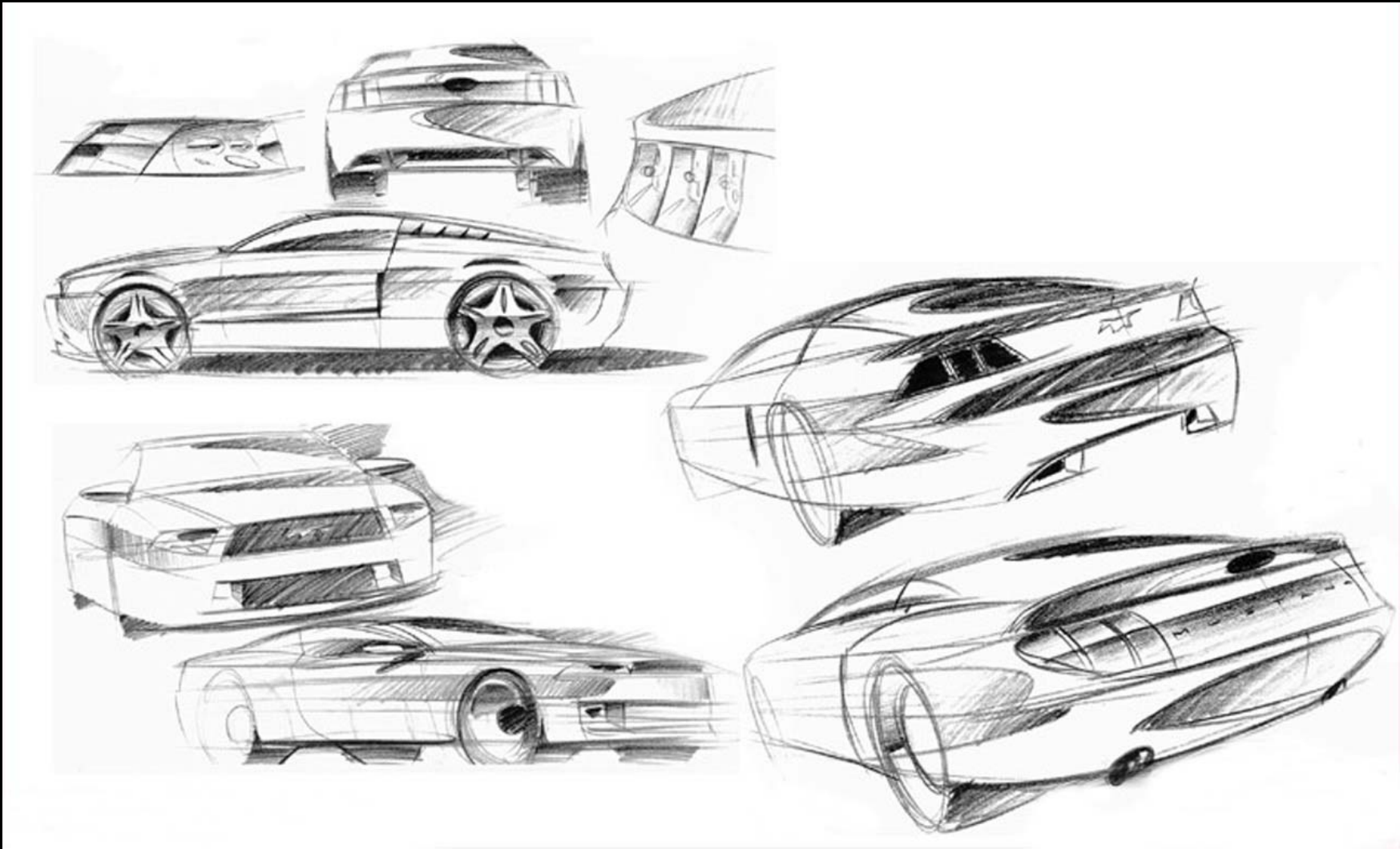
Marketing

Realized

Autodesk © 2006

Autodesk®

Ideas Realized



Idea	<b>Design</b>	Engineering	Assembly	Supply Chain	Marketing	Realized
------	---------------	-------------	----------	--------------	-----------	----------

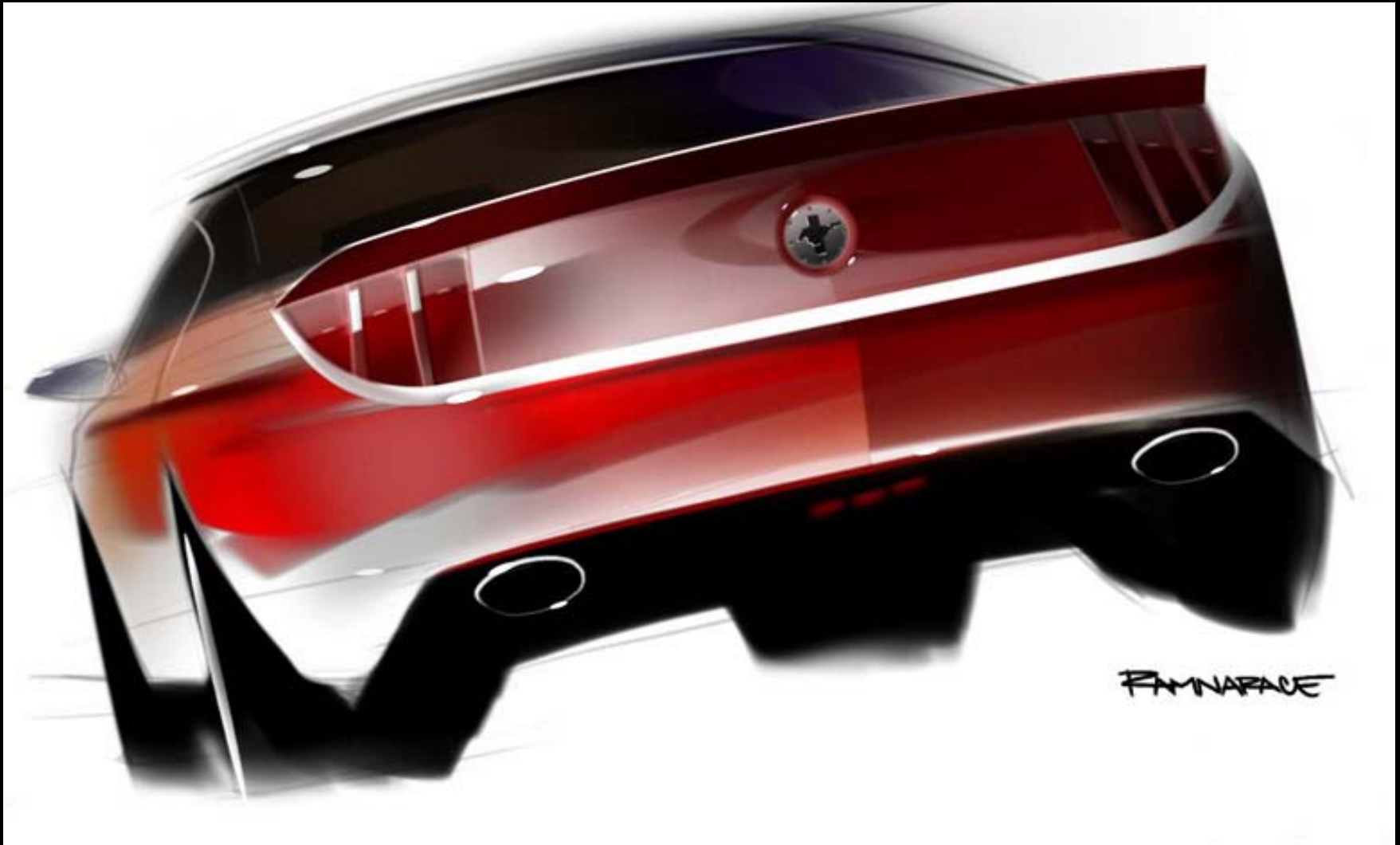


Ideas Realized

Idea	<b>Design</b>	Engineering	Assembly	Supply Chain	Marketing	Realized
------	---------------	-------------	----------	--------------	-----------	----------

Autodesk © 2006

Autodesk®

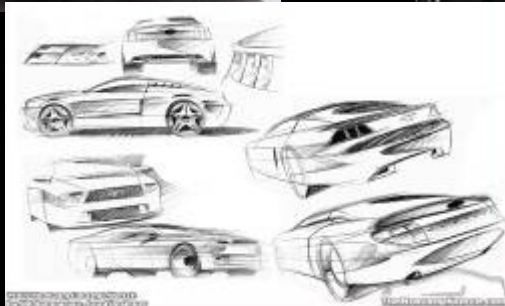


Ideas Realized

Idea	<b>Design</b>	Engineering	Assembly	Supply Chain	Marketing	Realized
------	---------------	-------------	----------	--------------	-----------	----------

Autodesk © 2006

Autodesk®



Idea

**Design**

Engineering

Assembly

Supply Chain

Marketing

Realized

Autodesk © 2006

Autodesk®

Ideas Realized



Idea

Design

**Engineering**

Assembly

Supply Chain

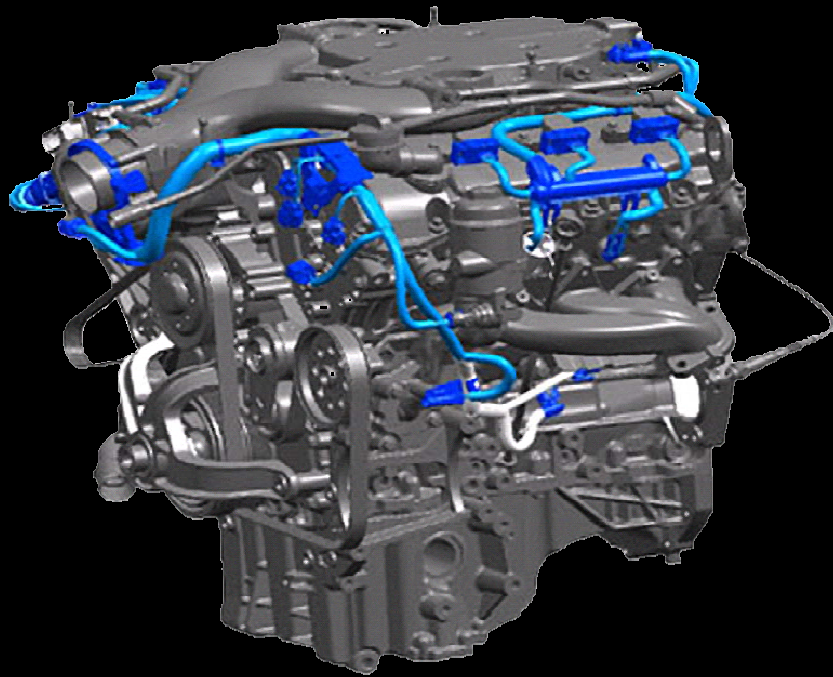
Marketing

Realized

Autodesk © 2006

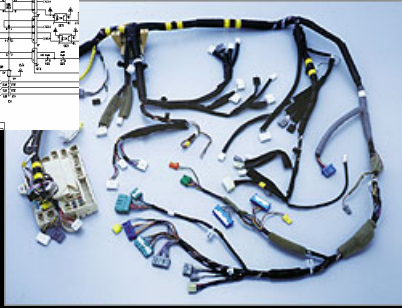
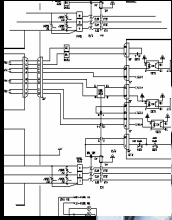
**Autodesk®**

Ideas Realized

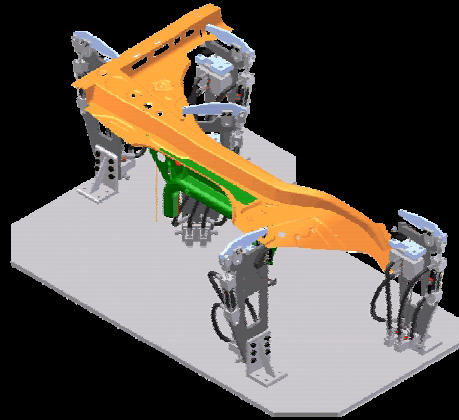


Idea	Design	<b>Engineering</b>	Assembly	Supply Chain	Marketing	Realized
------	--------	--------------------	----------	--------------	-----------	----------

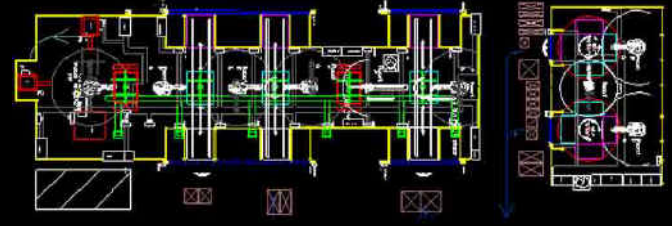
Autodesk © 2006



Wire harnesses



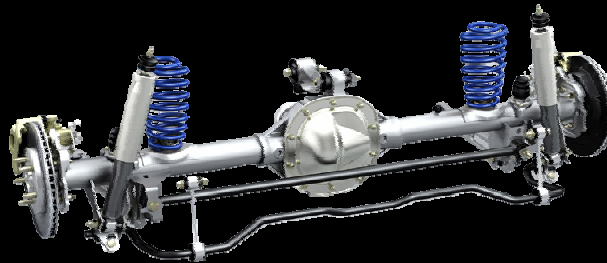
Tool and fixture



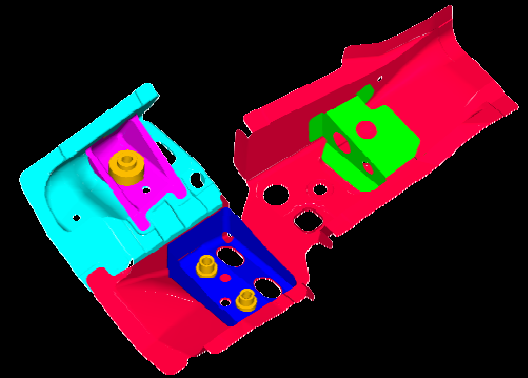
Plant Layout



Components



Suspension



Body Engineering

Idea

Design

**Engineering**

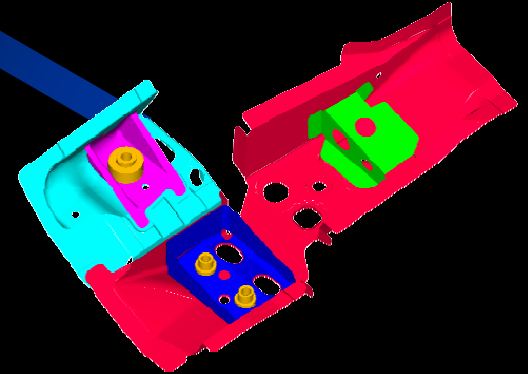
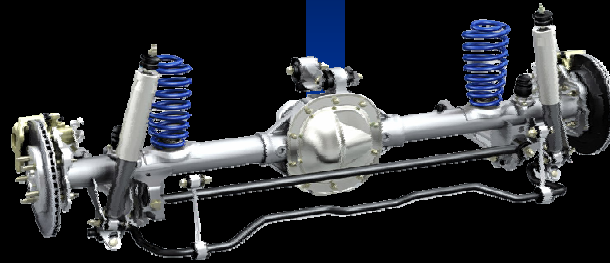
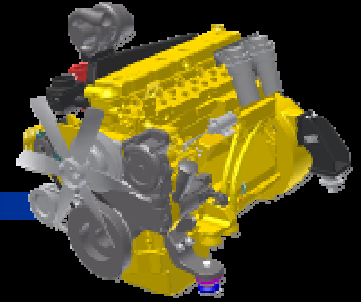
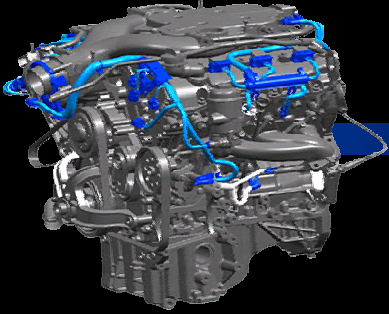
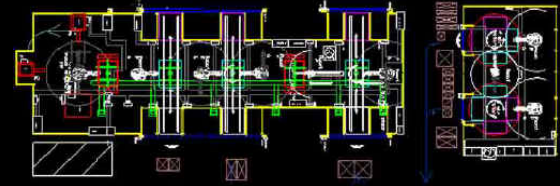
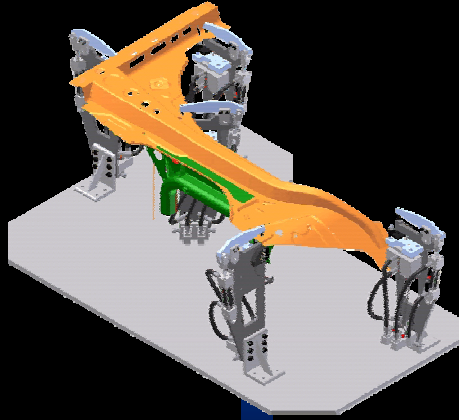
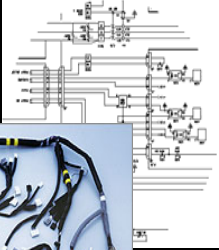
Assembly

Supply Chain

Marketing

Realized

Autodesk © 2006



Idea

Design

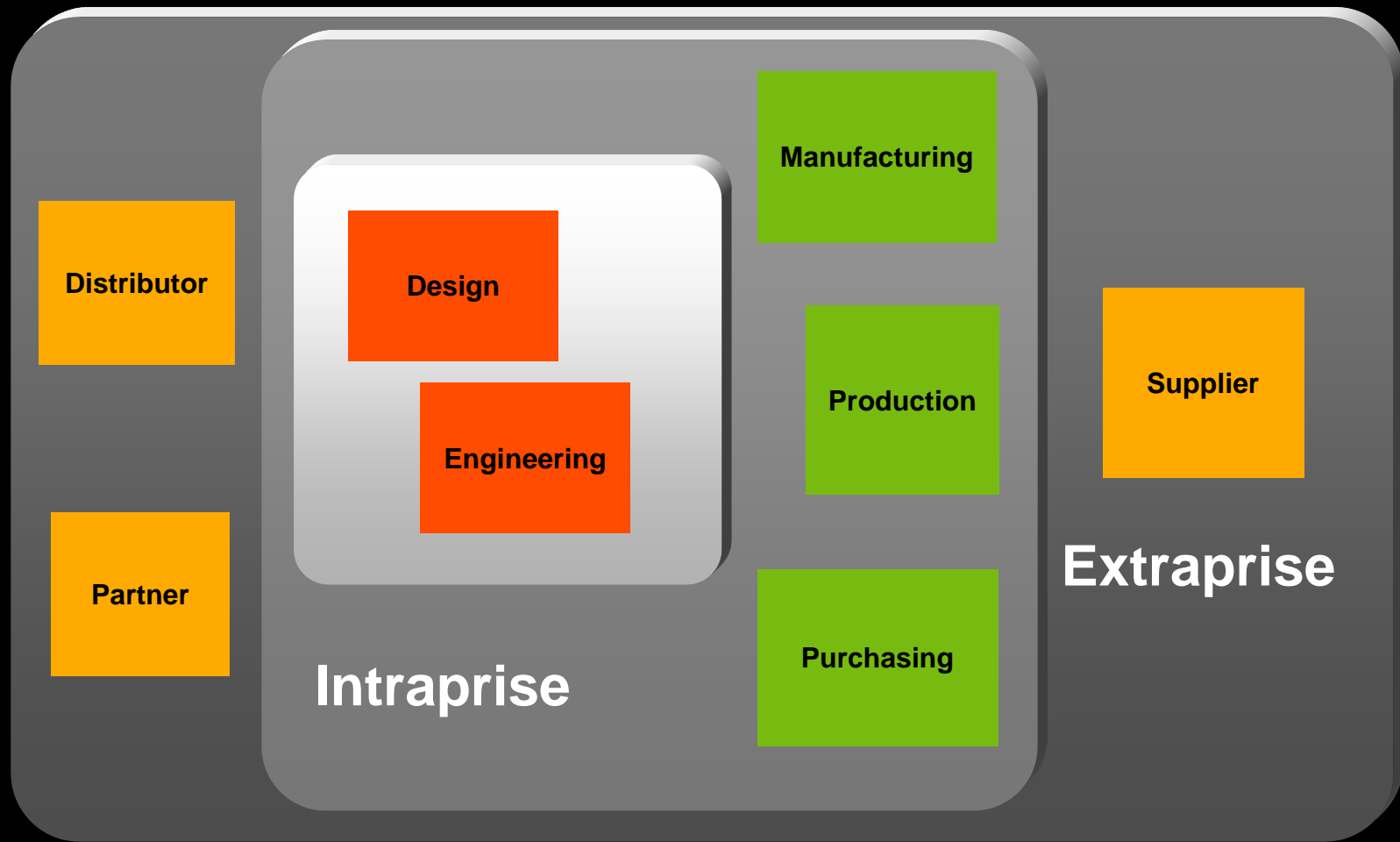
Engineering

**Assembly**

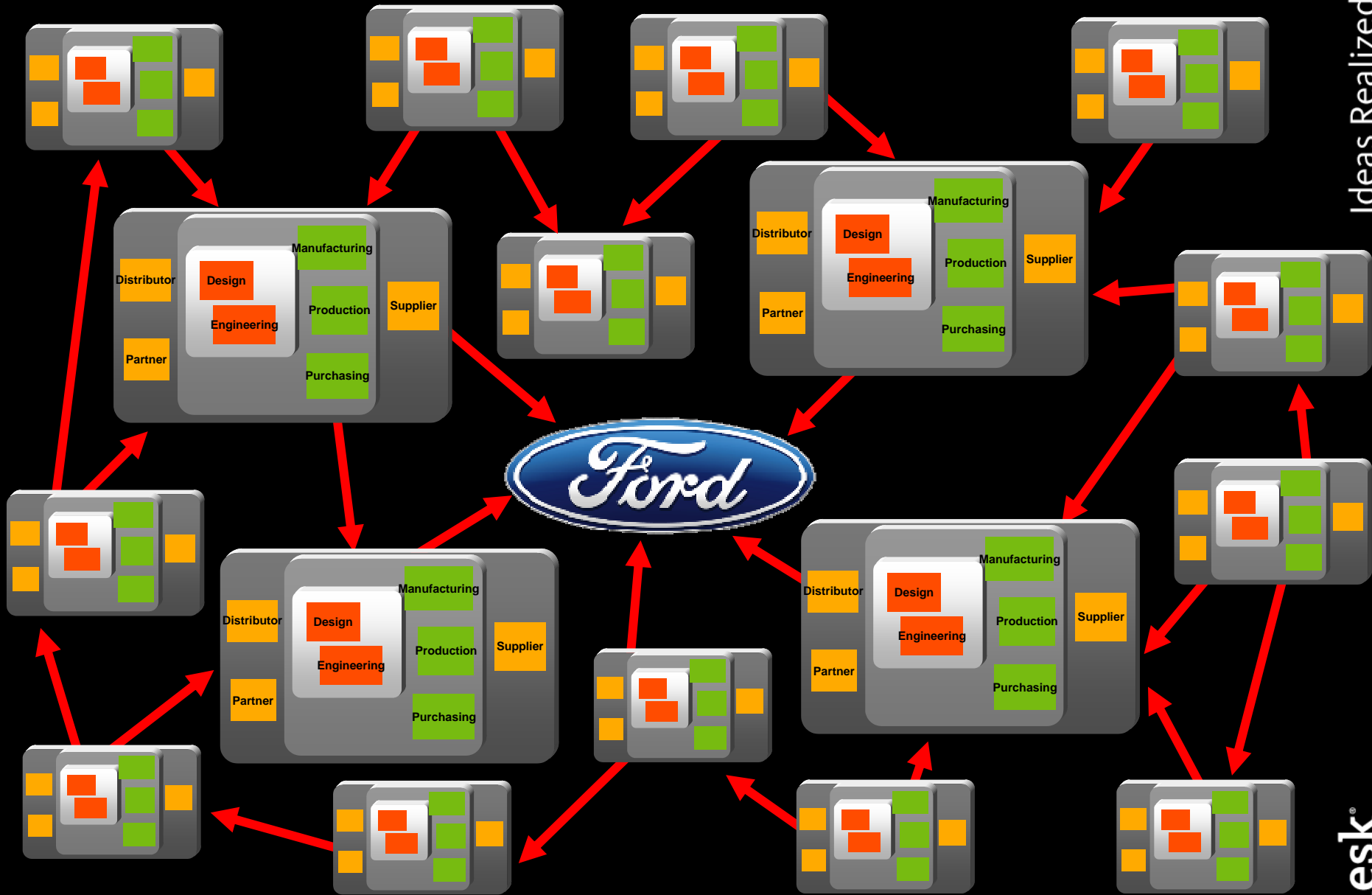
Supply Chain

Marketing

Realized



Idea	Design	Engineering	Assembly	<b>Supply Chain</b>	Marketing	Realized
------	--------	-------------	----------	---------------------	-----------	----------



Ideas Realized

Idea	Design	Engineering	Assembly	<b>Supply Chain</b>	Marketing	Realized
------	--------	-------------	----------	---------------------	-----------	----------

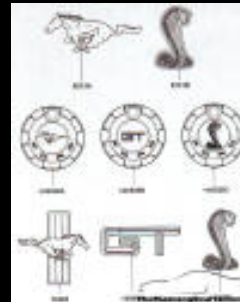


Web Videos

TV Commercials



Product Brochures



Rendered Images

Manual Illustrations

Advertising

Idea	Design	Engineering	Assembly	Supply Chain	Marketing	Realized
------	--------	-------------	----------	--------------	-----------	----------



Ideas Realized

Idea	Design	Engineering	Assembly	Supply Chain	<b>Marketing</b>	Realized
------	--------	-------------	----------	--------------	------------------	----------

the **click** group

Autodesk © 2006

**Autodesk**

# Beyond Automotive

Idea

Design

Engineering

Assembly

Supply Chain

Marketing

Realized



# Specialty Vehicles

Idea

Design

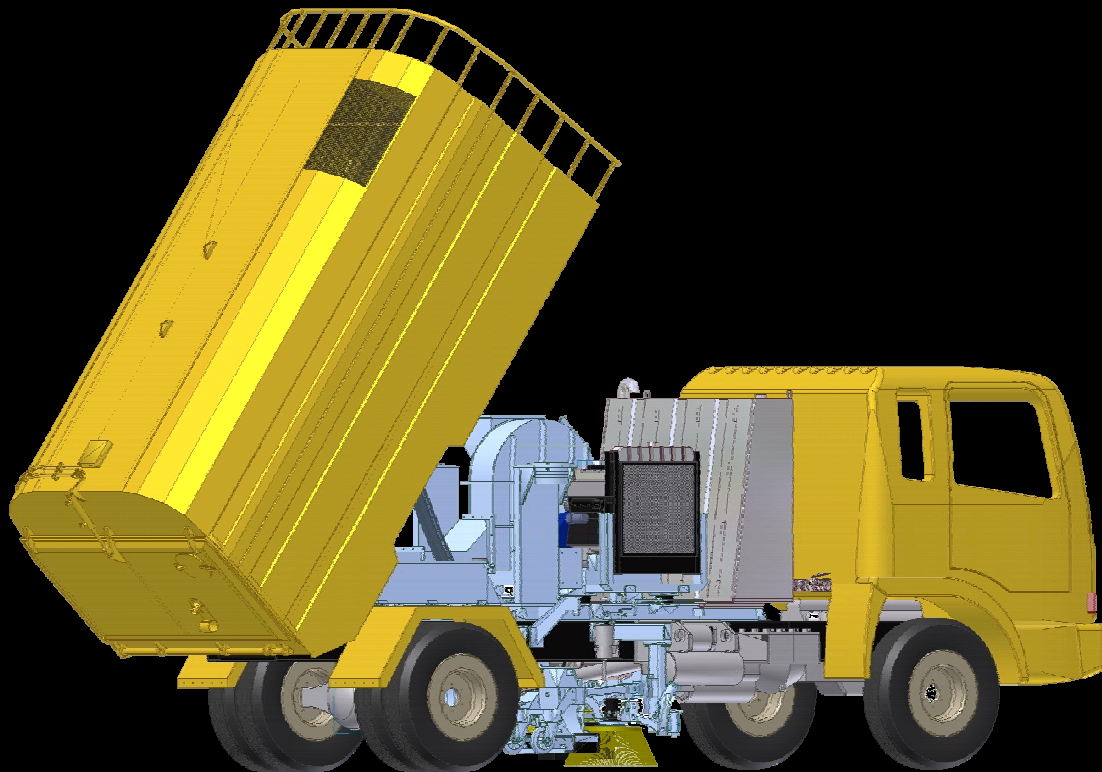
Engineering

Assembly

Supply Chain

Marketing

Realized



# Industrial Equipment

Idea

Design

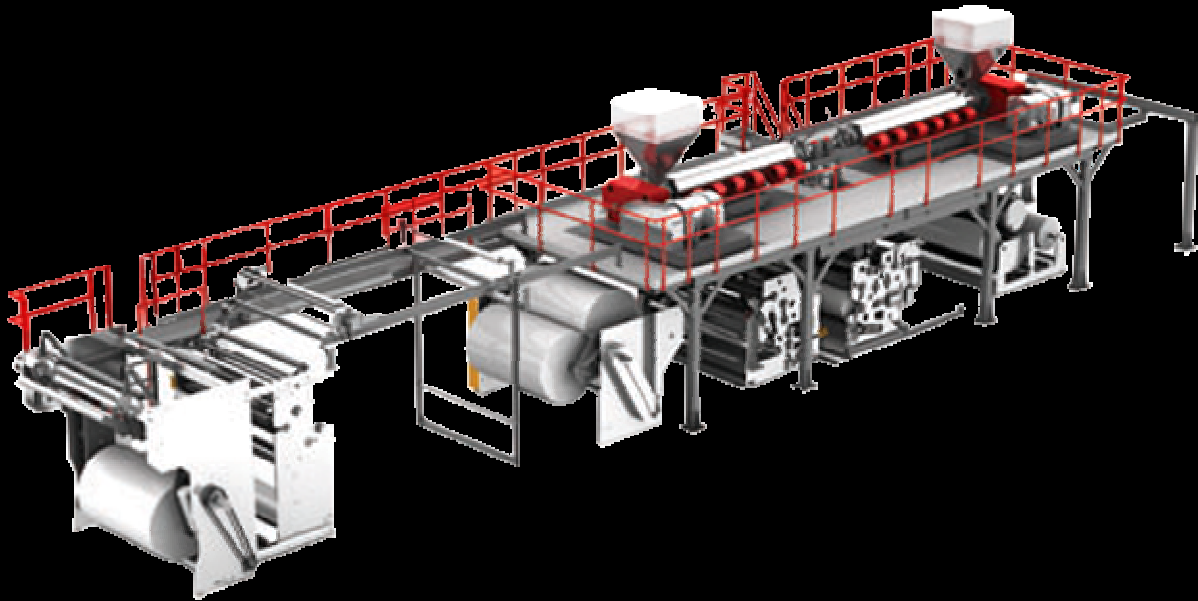
Engineering

Assembly

Supply Chain

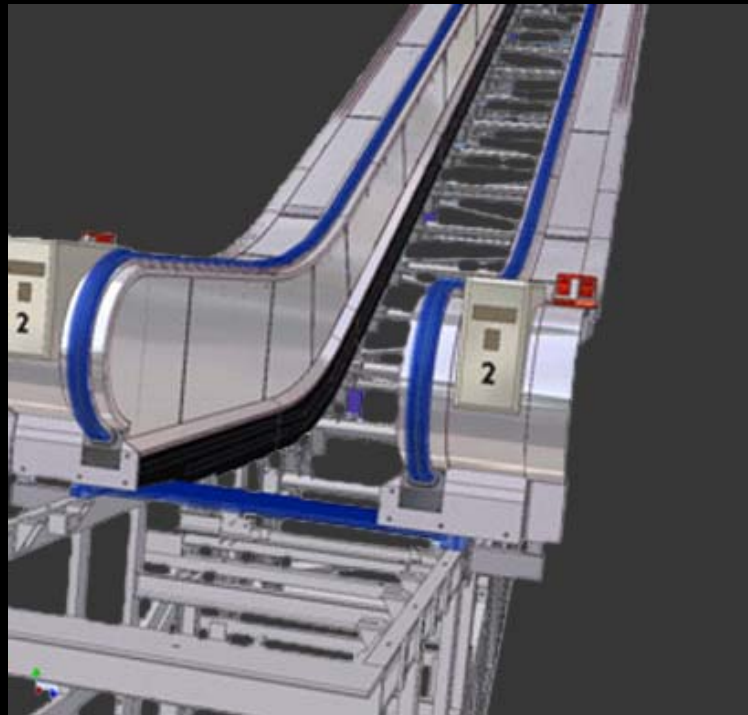
Marketing

Realized



# Building Products

Idea	Design	Engineering	Assembly	Supply Chain	Marketing	Realized
------	--------	-------------	----------	--------------	-----------	----------

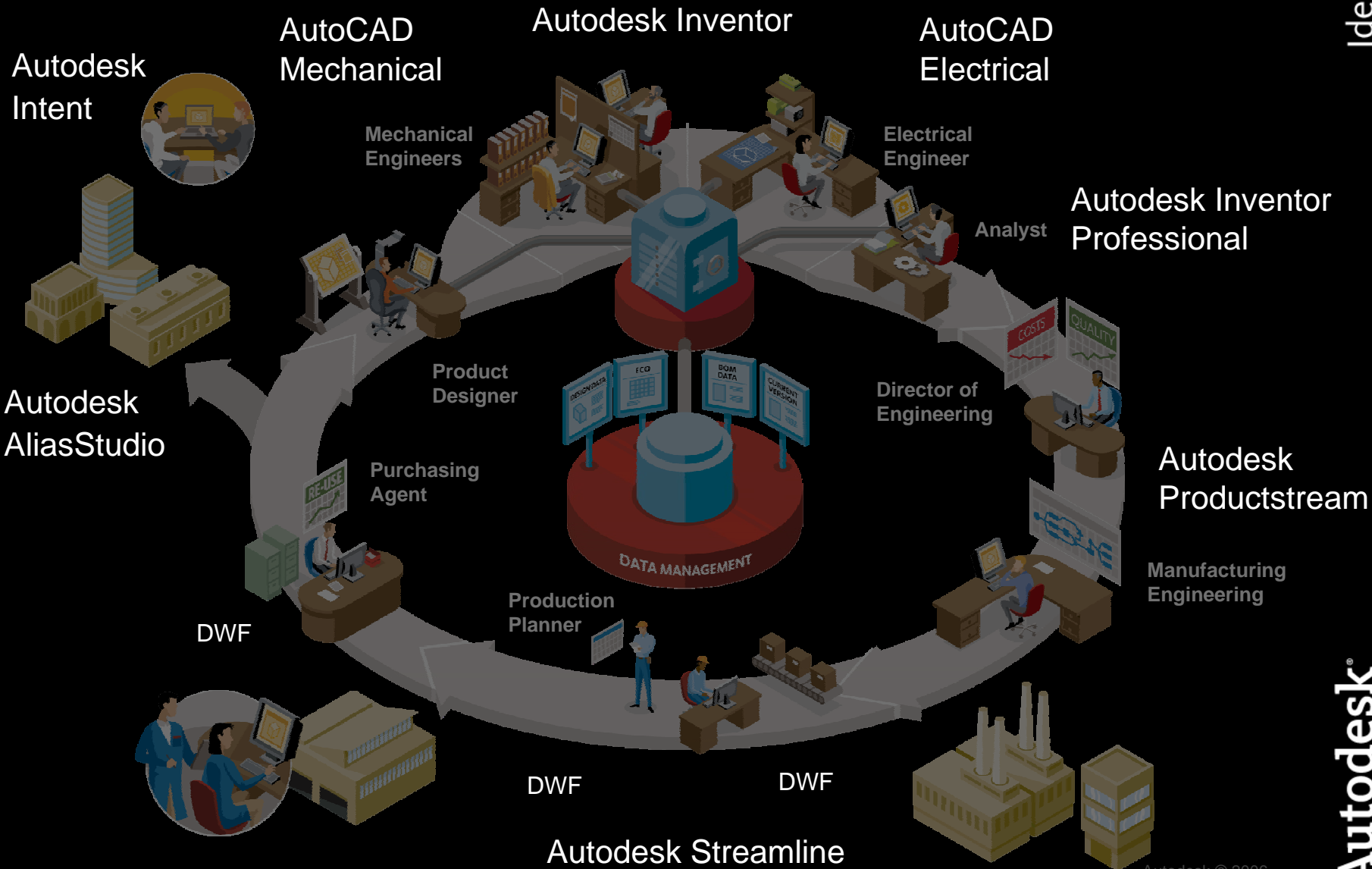


# Consumer Products





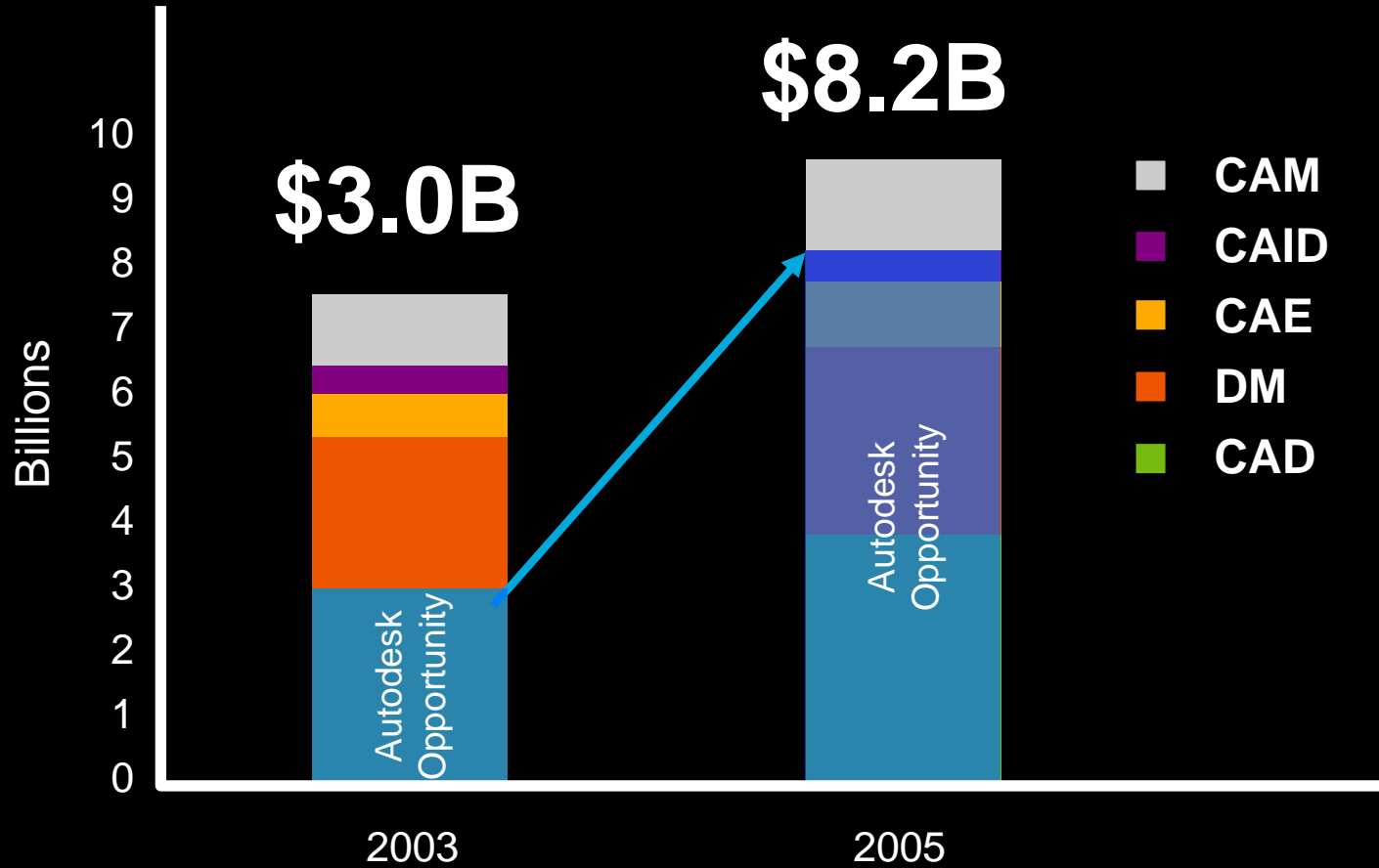
# The Complete Solution



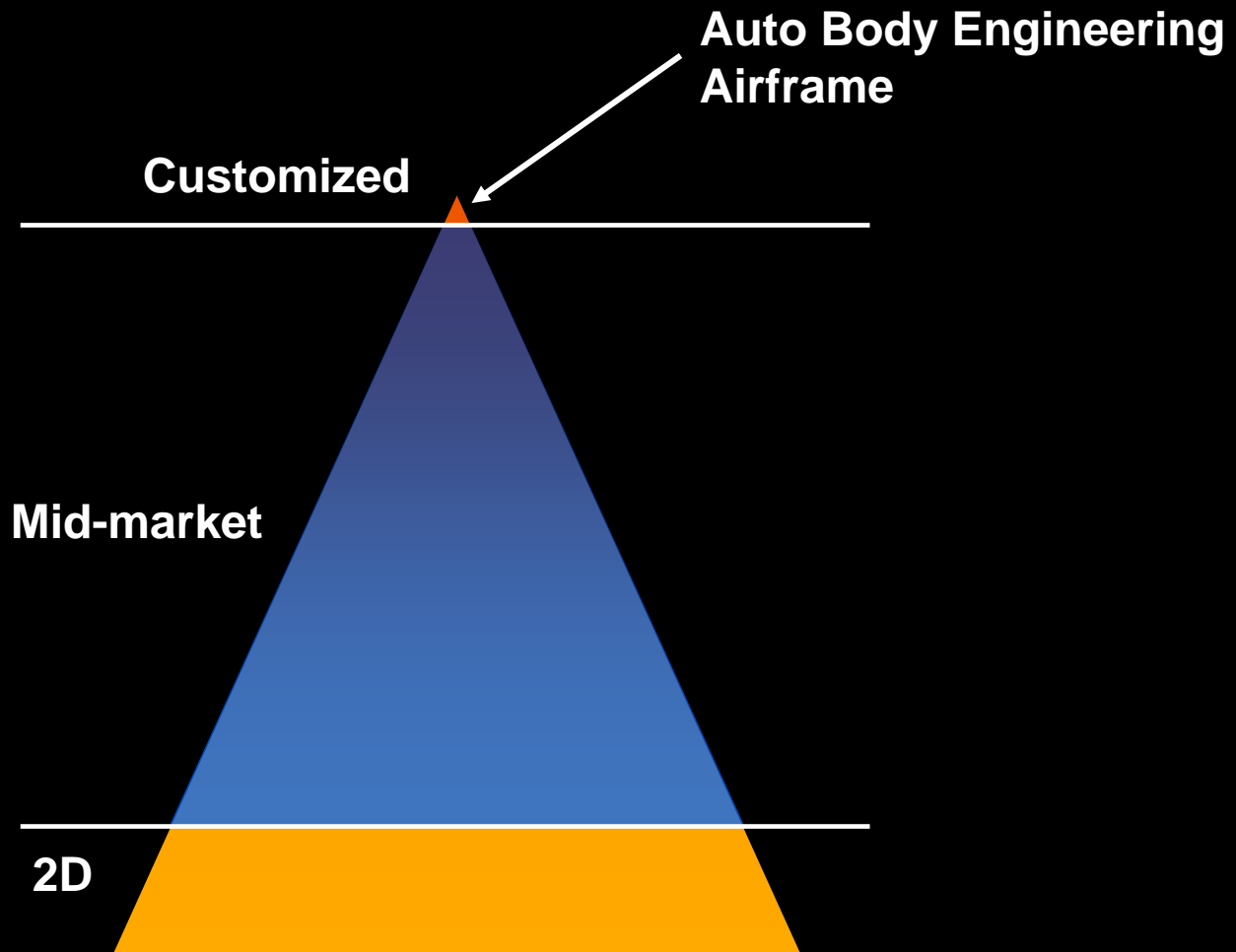
Ideas Realized

Autodesk®

# Expands Addressable Market



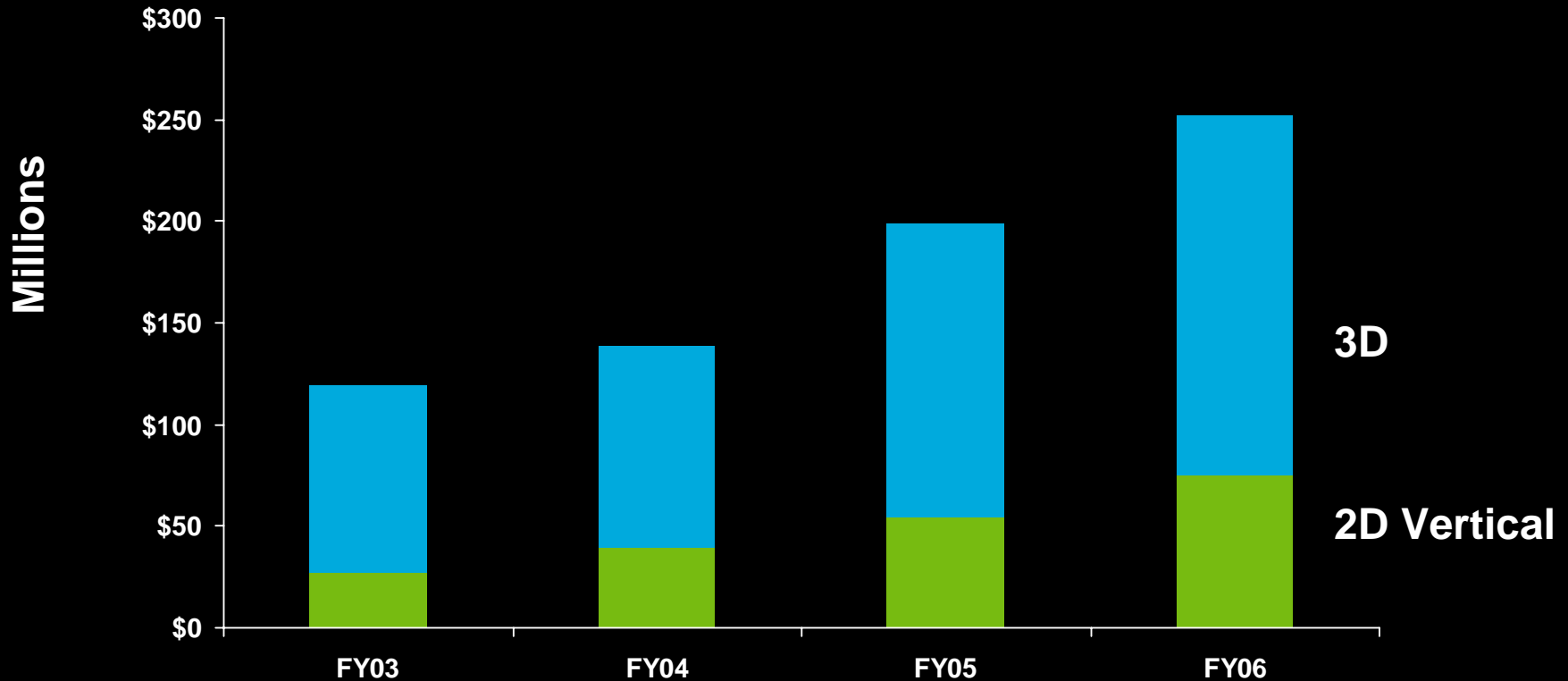
# Mainstream Dominates



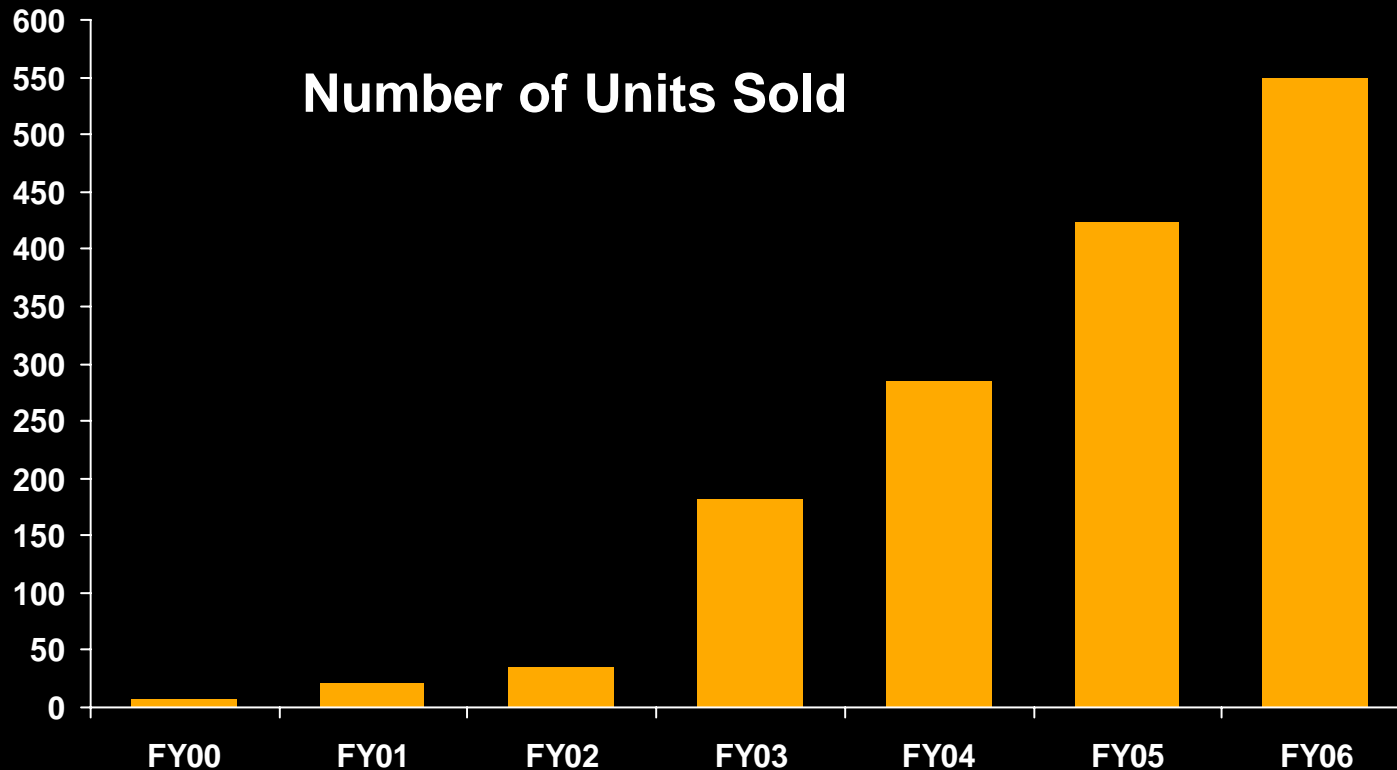
# MSD Revenue 3YR CAGR 29%

Strong Growth Across All Products

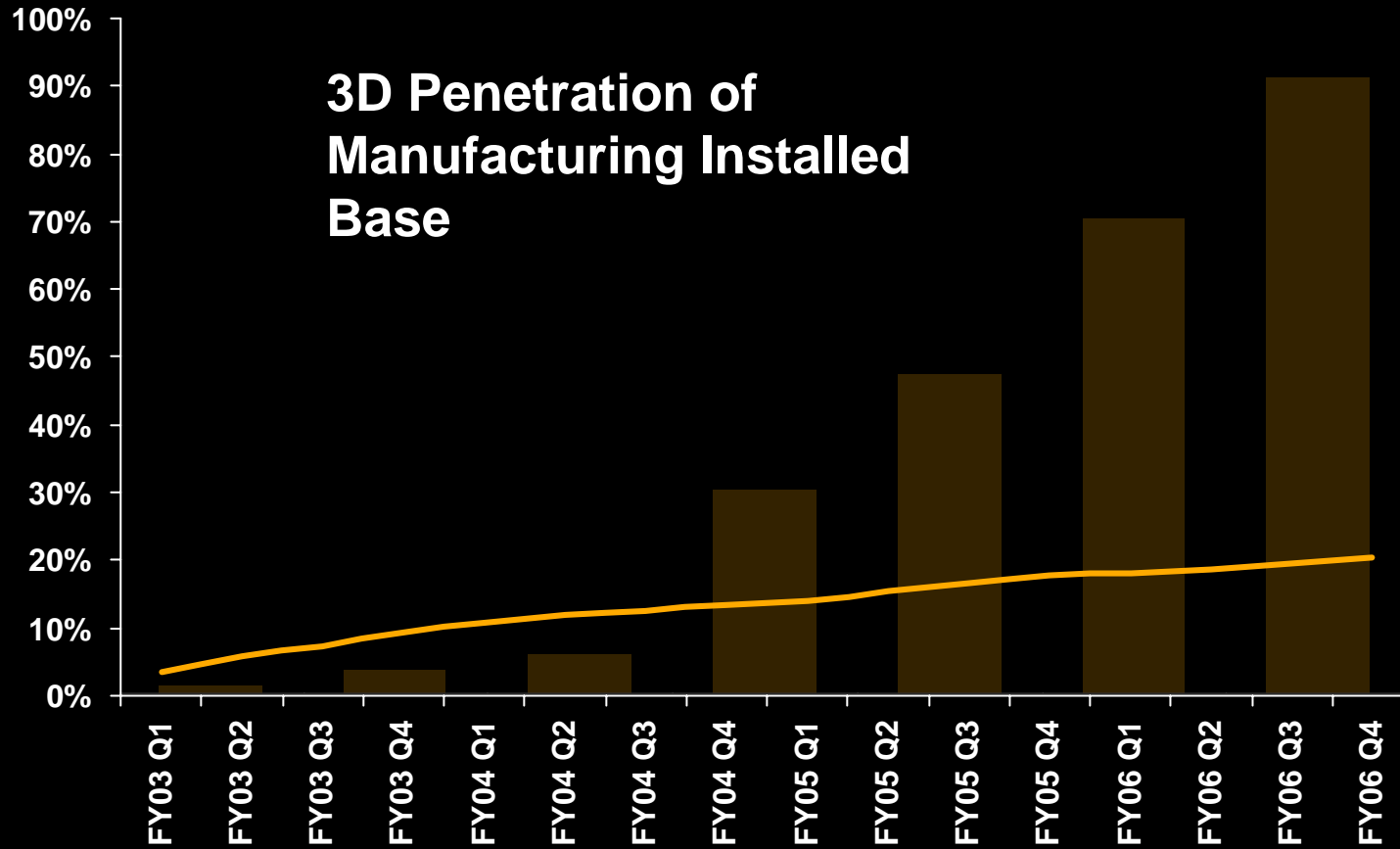
Ideas Realized



# Inventor Installed Base Shows Industry Leading Growth



# Significant 3D Future Opportunity





# Autodesk AliasStudio

Industry Leading Design

Brand

Engine of innovation

Automotive

Consumer products



# Autodesk Intent Sales Force Automation

Moves engineering to point-of-sale  
Eliminates quote iteration  
Time to market

Ideas Realized

**Improv™ Pricing System** V 1.04      02/20/01    3:34:31PM  
 Lester Building Systems      Price: 101

**Design Summary Report**

**Project Number:** GSMA-1020-0-0

**Dealer:** Lester Improv Team      **Description:** 40x20x12 Unit Frame I  
**Customer:** Johnson Storage      **County:** Carter      **State:** MN

**Building Unit:** 1      **Description:** Main Building

<b>Building Type:</b> Unit Frame I Utility	<b>Design Code:</b> None	<b>Roof Live Load (psf):</b> 20.00
<b>Width:</b> 60'-0"	<b>Wind Speed (mph):</b> AG	<b>Roof Dead Load (psf):</b> 4.00
<b>Length:</b> 60'-0"	<b>Wind Exposure:</b> N/A	<b>Ceiling Dead Load (psf):</b> 1.00
<b>Height:</b> 12'-0" Clear	<b>Importance Factor:</b> I	
<b>Bay Spacing:</b> 0'-112"	<b>Seismic Zone:</b> II	
<b>Roof Slope:</b> 0'-112"		
<b>Side Overhang:</b> S1x 24.50' S2x 24.50'	<b>Diaphragm:</b> Linear	
<b>End Overhang:</b> E1x 24.50' E2x 24.50'	<b> Knee Braces:</b> Ceiling	

**PriceBook:** GP071801

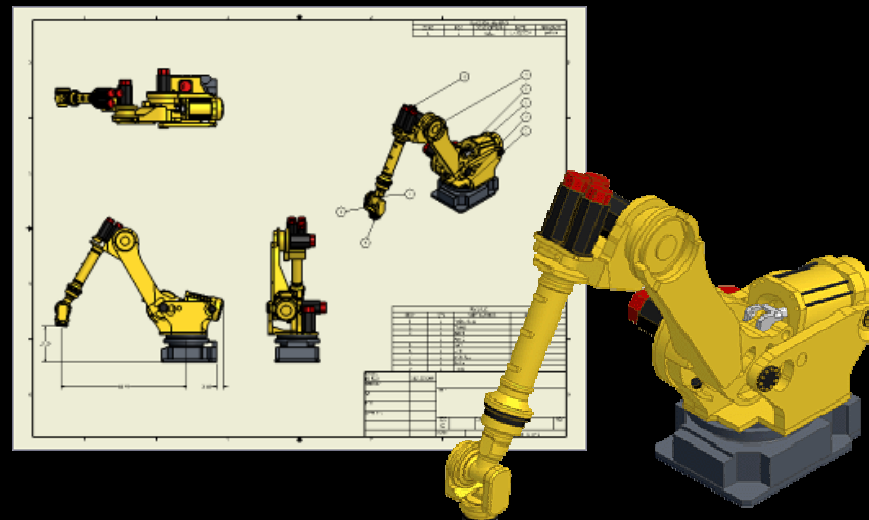
<b>Foundation Type:</b> Precast/Recast/In-Place, Rear	<b>Foundation Depth:</b>	
<b>Frost Depth:</b> 48.00	<b>Curb Wall Width:</b> 0.00	
	<b>Curb Top to Grade:</b> 0.00	
	<b>Curb Wall Height:</b> 0.00	

**Floor Thickness:** 4.00  
**Concrete Strength:** 3000.00  
**Fast Anchor Type:** Anchor Bolts With Nuts

**Columns and Secondary Framing**

Material Location	Member ID	Qty	Size	Species	Grade	Spig
Brn Chd Brace	Brn Chd Brace	1	2x6	SYP	No.2	120.0"
Purlin	Purlin	1	2x6	SYP	No.2	32.0"
Wall Girt	E1 Wall Girt	1	2x4	SYP	2400F-2.0E MBR	24.0"
Wall Girt	F1 Wall Girt	1	2x4	SYP	2400F-2.0E MBR	40.0"
Wall Girt	E2 Wall Girt	1	2x4	SYP	2400F-2.0E MBR	24.0"
Wall Girt	F2 Wall Girt	1	2x4	SYP	2400F-2.0E MBR	40.0"
Wall Girt	S1 Wall Girt	1	2x4	SYP	2400F-2.0E MBR	24.0"
Wall Girt	S1 Wall Girt	1	2x4	SYP	2400F-2.0E MBR	40.0"
Wall Girt	S2 Wall Girt	1	2x4	SYP	2400F-2.0E MBR	24.0"
Wall Girt	S2 Wall Girt	1	2x4	SYP	2400F-2.0E MBR	40.0"
Structural Header	H1 S1 A	4	2x6	DFL/SYP	2200F-1.5E MBR	0.0"
Wall Girt	F1 Wall Girt	1	2x4	SYP	No.2	24.0"
Wall Girt	E2 Wall Girt	1	2x4	SYP	No.2	24.0"
Wall Girt	S1 Wall Girt	1	2x4	SYP	No.2	24.0"
Wall Girt	S2 Wall Girt	1	2x4	SYP	No.2	24.0"
Column	SW Column	1	T8000	SYP	TST #1	120.0"
Column	EW Column	1	T8000	SYP	TST #1	120.0"

1 OF 3



Autodesk®

# AutoCAD Mechanical

## Purpose Built 2D

Faster growth than 3D competitors  
Unique Autodesk offering

**Notes:**

- 1.) FINISH DIAMOND VOGEL 40103 (BLUE) 4 MILS MIN
- 2.) FILL CASING WITH MOBIL EP 90 GEAR LUBE OR EQUIV.
- 3.) TORQUE ALL BOLTS TO 45 FT. LB. AND APPLY BLUE LOCTITE.

Item No.	Description	Quantity	Material
20	Retaining Washer	ISB 444 - 3/8	
24	2 Deep Groove Ball Bearing	DIR 625 T1 - 6206 - 31 x 62 x 16	
25	2 Deep Groove Ball Bearing	DIR 625 T1 - 6206 - 31 x 62 x 16	
24	1 Shaft 2		
23	1 Shaft 1		
22	2		
21	1 Shaft Seal Ring	DIR 3708 - A - 48 x 62 NBR x 7 - NBR	
20	1 Shaft Seal Ring	DIR 3708 - A - 31 x 47 NBR x 7 - NBR	
29	1 Housing A		
28	1 Housing B		
27	6 Washer	ISB 7898 - 6 - 1/4 HV	
19	6 Hex-Head Bolt	ISB 4 817 - M6-25	
18	18 Hexagon Locknut Head Cap Screw	ISB 4 762 - M6-16	

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

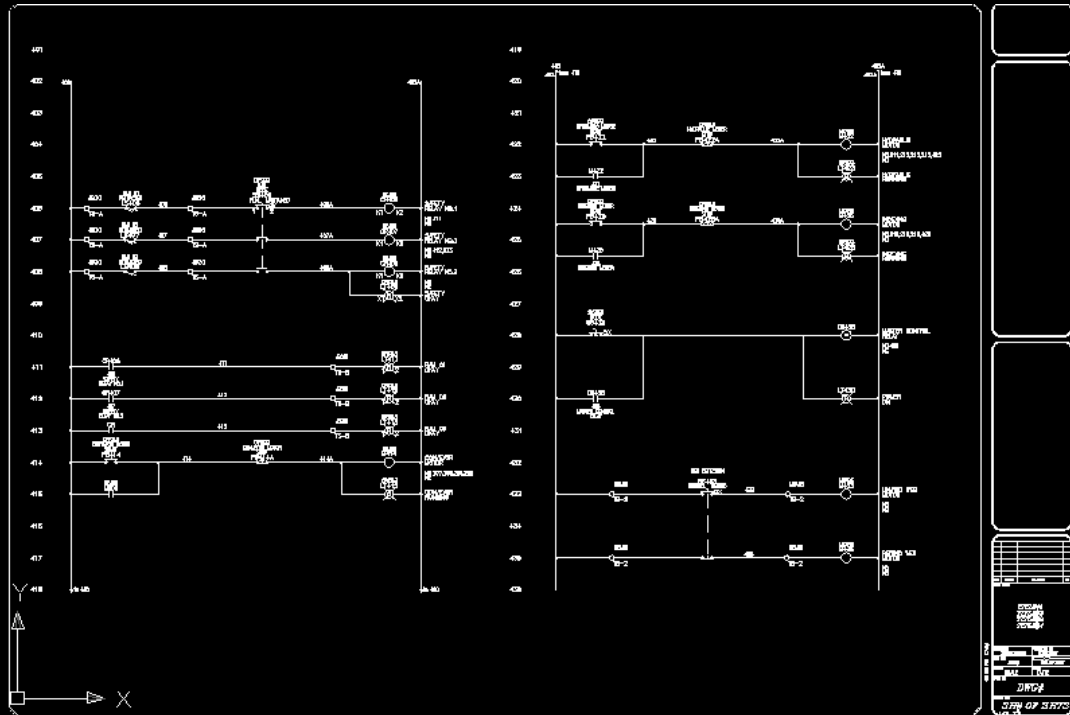
Item No.	Description	Quantity	Material
21			
22			
23			
24			
25			

Item No.	Description	Quantity	Material
21			
22			
23			
24			
2			

# AutoCAD Electrical

## Purpose Built Schematics

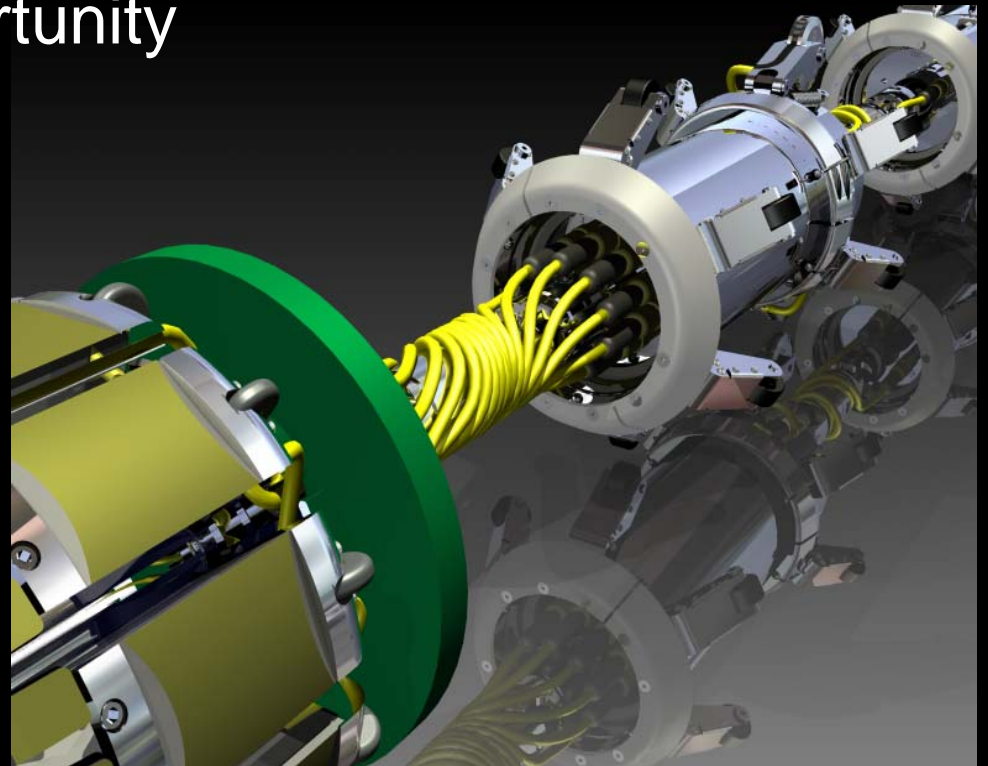
Integrated Electrical and Mechanical  
Unique Autodesk offering



# Autodesk Inventor

## Industry Leading Engineering Solution

**#1 Best Selling** last 5 years  
Revolutionary Functional Design  
88% Installed Base opportunity



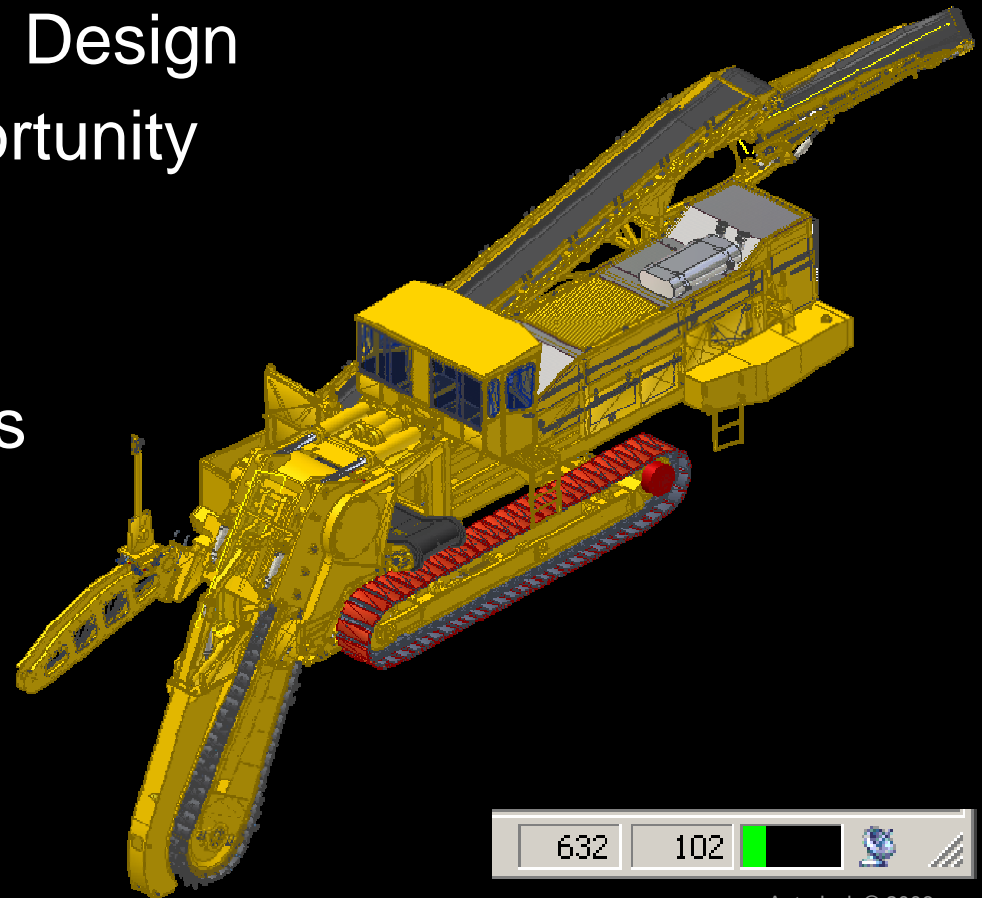
# Autodesk Inventor

## Industry Leading Engineering Solution

**#1 Best Selling** last 5 years  
Revolutionary Functional Design  
88% Installed Base opportunity

New in Release 11

- Ultra-large assemblies



Autodesk © 2006

# Autodesk Inventor

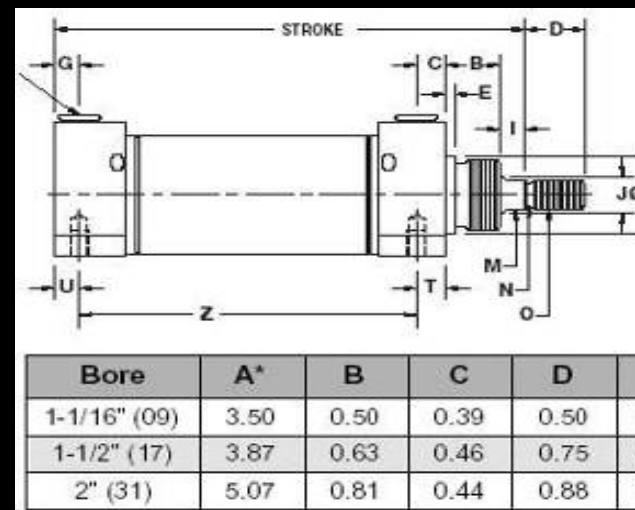
## Industry Leading Engineering Solution

Ideas Realized

**#1 Best Selling** last 5 years  
Revolutionary Functional Design  
88% Installed Base opportunity

New in Release 11

- Assembly configurations



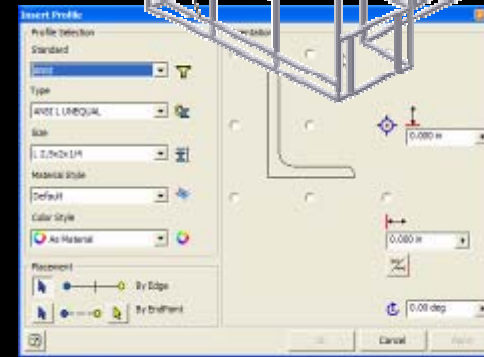
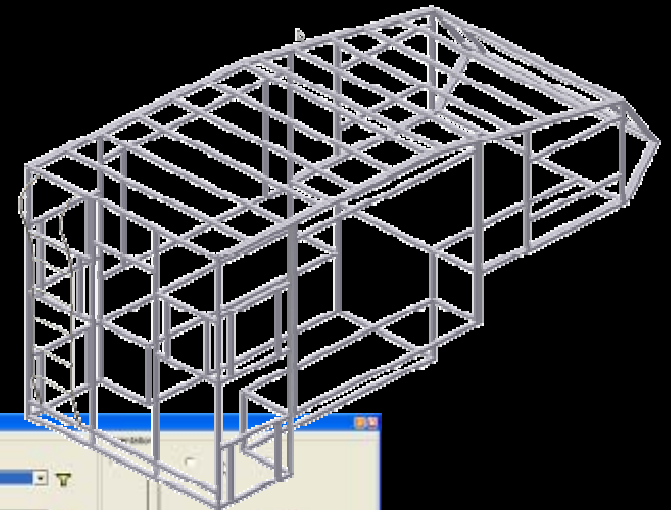
# Autodesk Inventor

## Industry Leading Engineering Solution

**#1 Best Selling** Last 5 Years  
Revolutionary Functional Design  
88% Installed Base opportunity

New in Release 11

- Frame generator



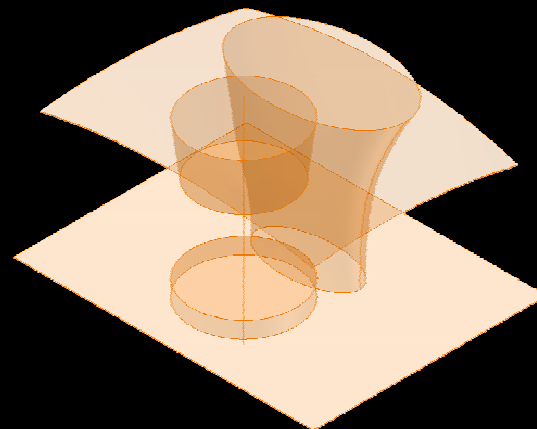
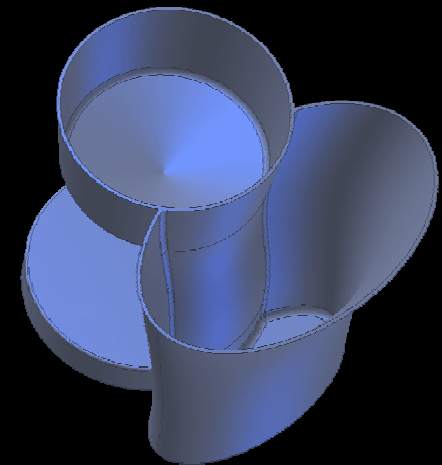
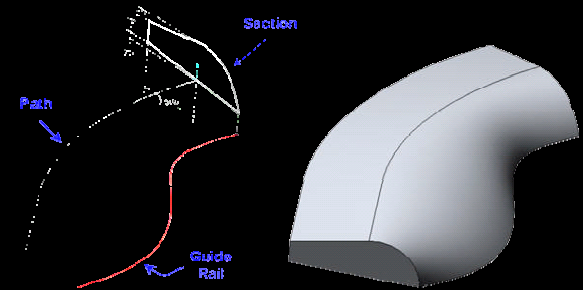
# Autodesk Inventor

## Industry Leading Engineering Solution

**#1 Best Selling** last 5 years  
Revolutionary Functional Design  
88% Installed Base opportunity

New in Release 11

- Complex shapes



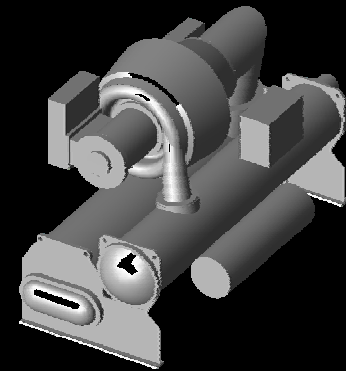
# Autodesk Inventor

## Industry Leading Engineering Solution

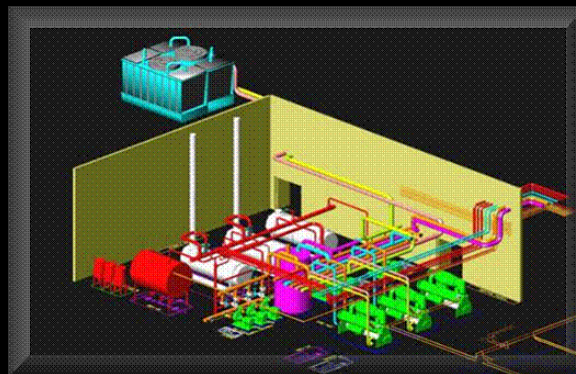
**#1 Best Selling** last 5 years  
Revolutionary Functional Design  
88% Installed Base opportunity

New in Release 11

- Inventor – Building Systems link



From Inventor...



...to ABS

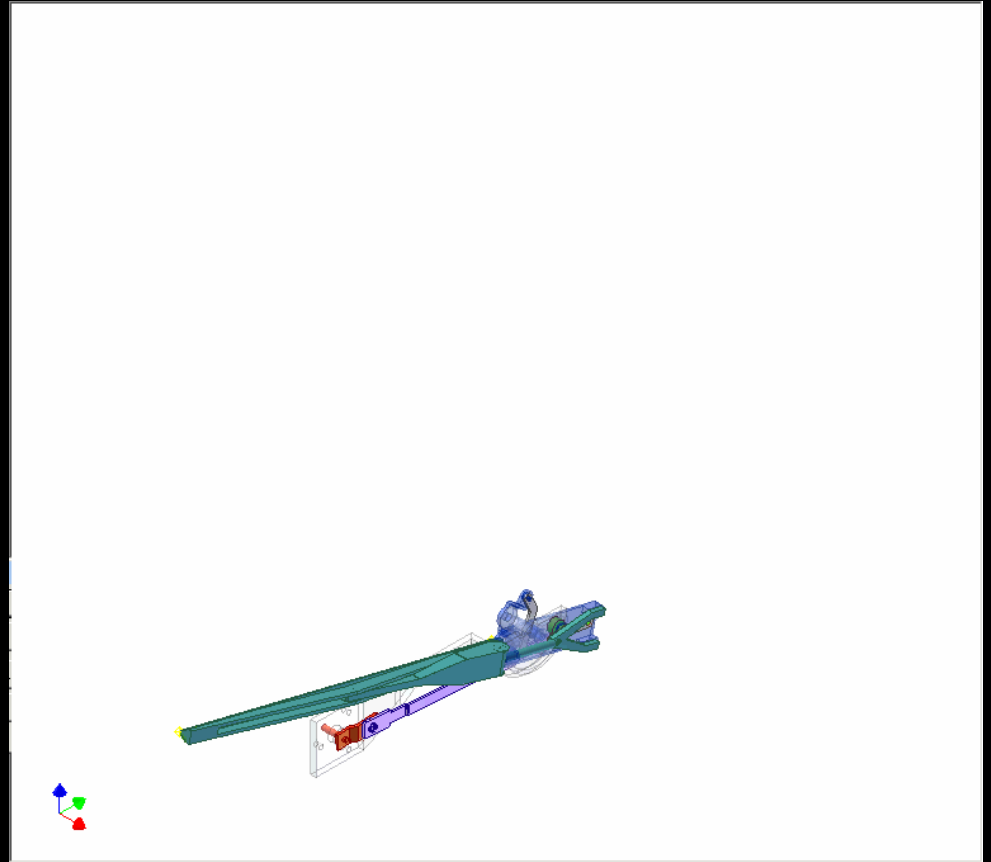
# Autodesk Inventor Professional

## The Inventor Model in Action

Electronic integration  
Piping  
Stress analysis

New in Release 11

- Dynamic simulation

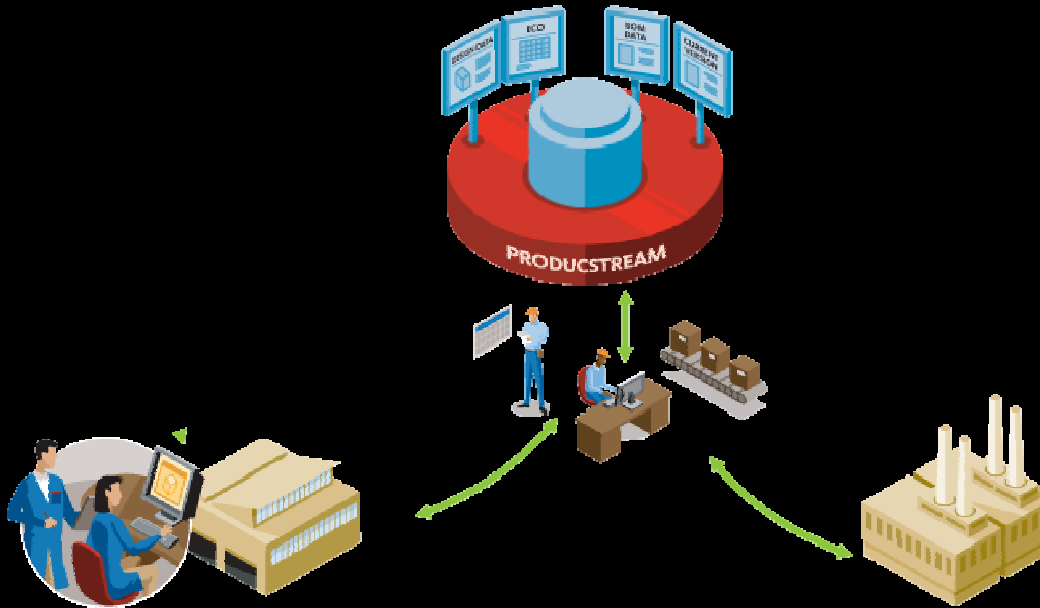


## Significant Up Sell Opportunity

# Autodesk Productstream

## Enterprise Data Management

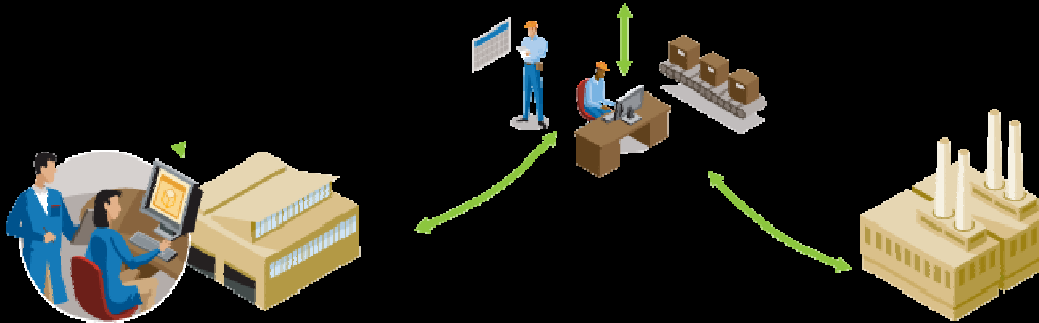
Revolutionary Data Management  
Fast deployment  
241,000,000 files managed



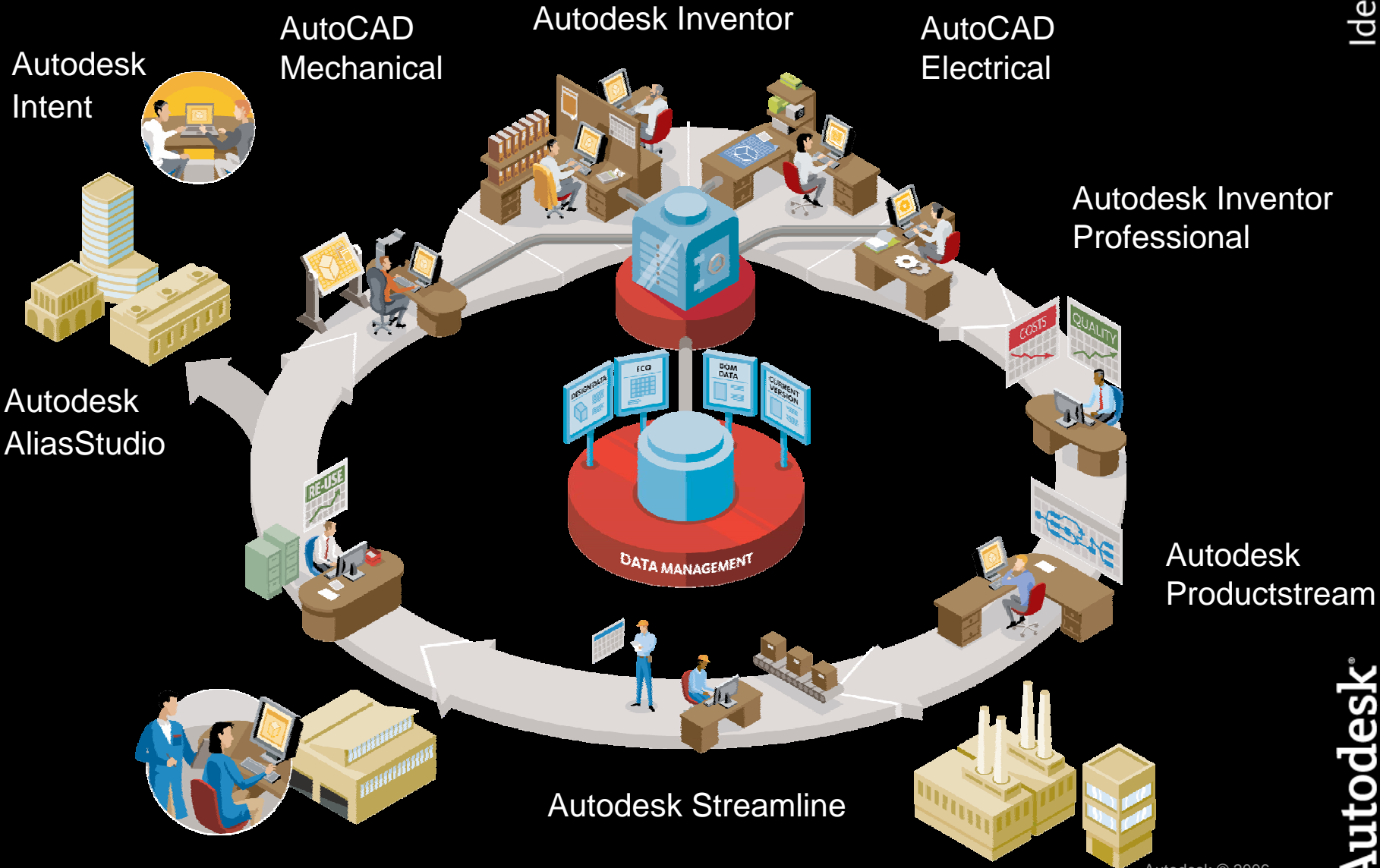
# Autodesk Streamline

## Supply Chain Collaboration

Connects suppliers, distributors and customers  
On-Demand service



# Simplified Design to Manufacturing



Ideas Realized

Autodesk®



Idea

Design

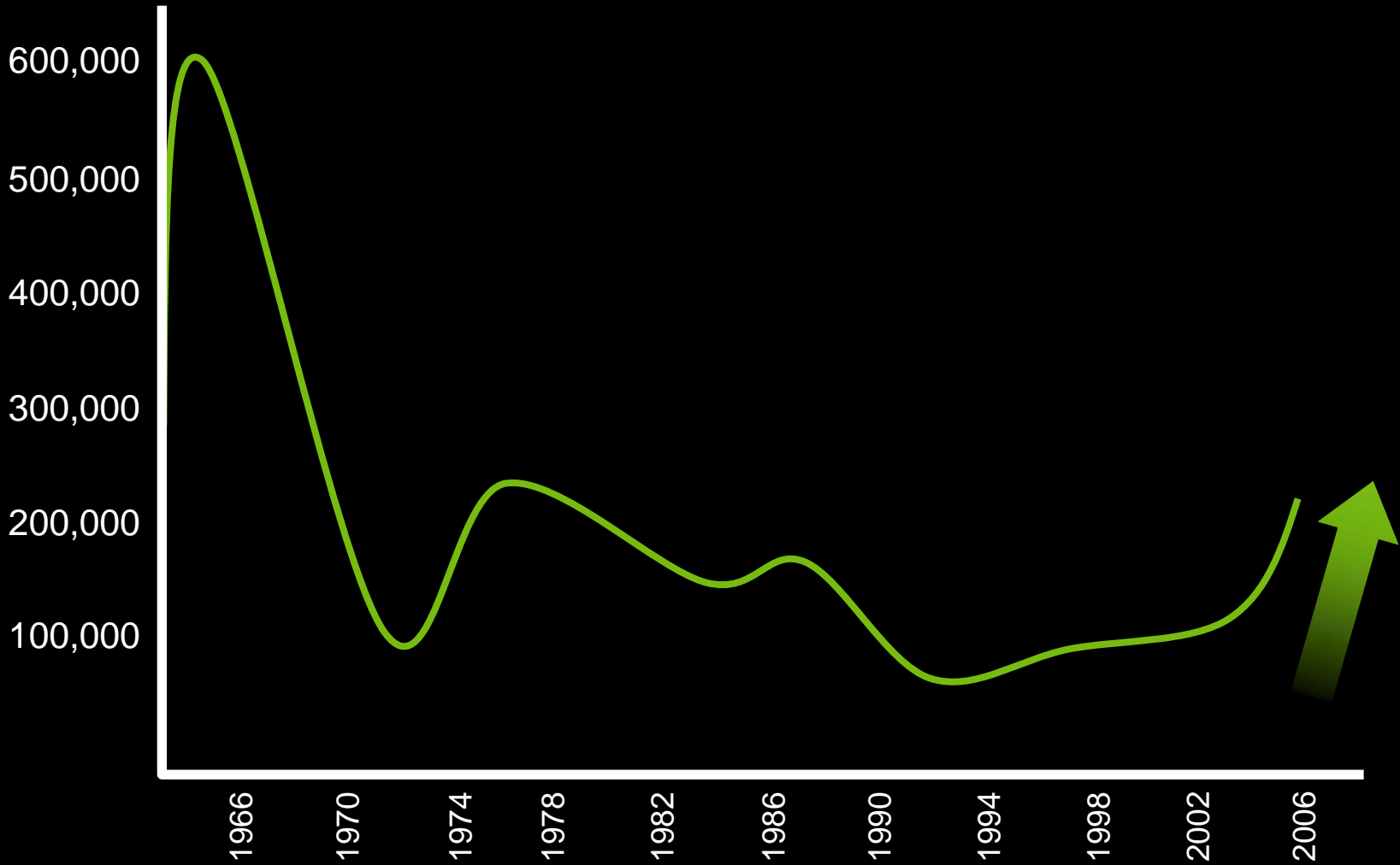
Engineering

Assembly

Supply Chain

Marketing

**Realized**



**Autodesk®**

Ideas Realized