

# Accelerating your BoM from Design through to Production

Simon Eaves

Associate Director d2m3 Ltd

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# Class Overview

# Accelerating your BoM from Design through to Production.

- Attendees of this class will learn how to take an Autodesk Inventor BoM and use Fusion Lifecycle to modify, review and release the BoM into production.
- Identify the importance of accurate BoMs through the design and manufacturing process.
- Identify the challenges in producing accurate BoM information without automation.
- Understand how Fusion Lifecycle can reduce mistakes and improve productivity.
- Learn what tools and APIs are available to help ensure BoM accuracy and improve automation.

# Introductions

# Who am I..?



**Simon Eaves**

Associate Director/PDM PLM Consultant

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+44 7785 292 908



# About d2m3



- d2m3 is a leading data management software integrator specialising in TDM, PDM & PLM systems.
- With over 20 years experience implementing Solutions for customers throughout the UK, Europe and North America.
- And a...Fusion Lifecycle Specialised Partner

**AUTODESK® FUSION LIFECYCLE**

# d2m3 - What do we do..?



Provide the resources to help our clients enhance their businesses to become more;

- + Effective
- + Productive
- + Successful

by creating more quality **time** within your design & management related functions



# Business Challenges...

✗ Chaos...

✗ Mistakes...

✗ Delays...

Product  
Management

Sales &  
Marketing

Service &  
Warranty

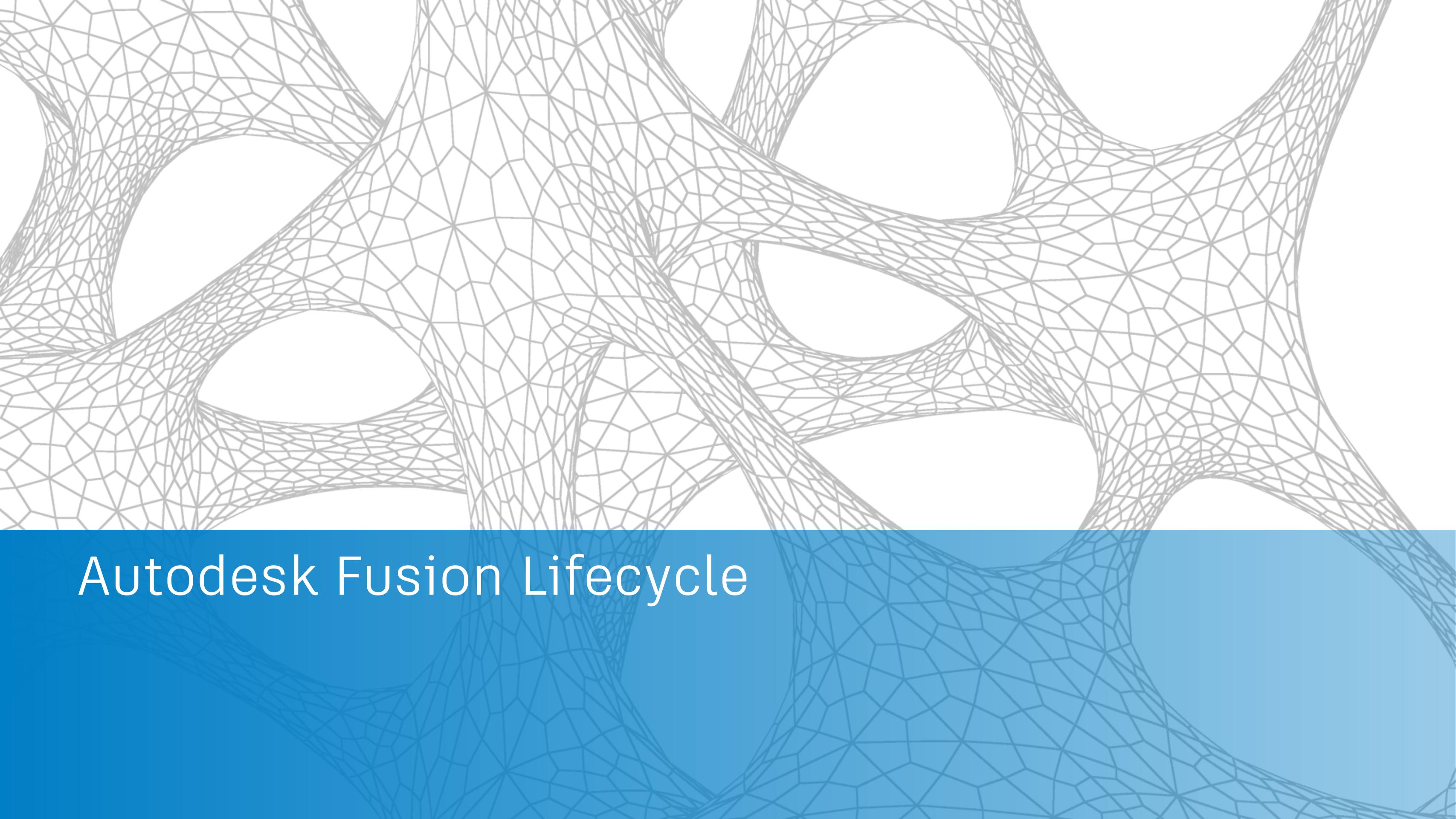
New Product  
Development

Change  
Management

Manufacturing

Supply Chain  
Management



The background features a complex, abstract geometric pattern composed of numerous thin, light gray lines forming a wireframe mesh. This mesh is organized into several large, overlapping spherical shapes that appear to be in motion, creating a sense of depth and perspective. The overall effect is reminiscent of a molecular structure or a microscopic view of a complex material.

# Autodesk Fusion Lifecycle

# Meet those Challenges with Autodesk Fusion Lifecycle

✓ Order...

Product  
Management

Sales &  
Marketing

Service &  
Warranty

✓ Accuracy...

New Product  
Development



Quality &  
Compliance

✓ Acceleration...

Change  
Management

Manufacturing

Supply Chain  
Management

# What is Autodesk Fusion Lifecycle..?

- A Product Lifecycle Management Solution
  - Product Lifecycle Management (PLM) is the process of managing the entire lifecycle of a product from its conception, through design and manufacture, to service and disposal.
  - PLM integrates people, data, processes and business systems and provides a product information backbone for companies and their extended enterprise.



AUTODESK® FUSION LIFECYCLE

# What is Autodesk Fusion Lifecycle..?

- Fusion Lifecycle is a Product Lifecycle Management (PLM) system that connects and organises people, processes, and information improving how companies create, build, support and evolve products and services.



AUTODESK® FUSION LIFECYCLE

# Autodesk Fusion Lifecycle



**Cloud-based**  
zero deployment



**Accessible**  
on any device



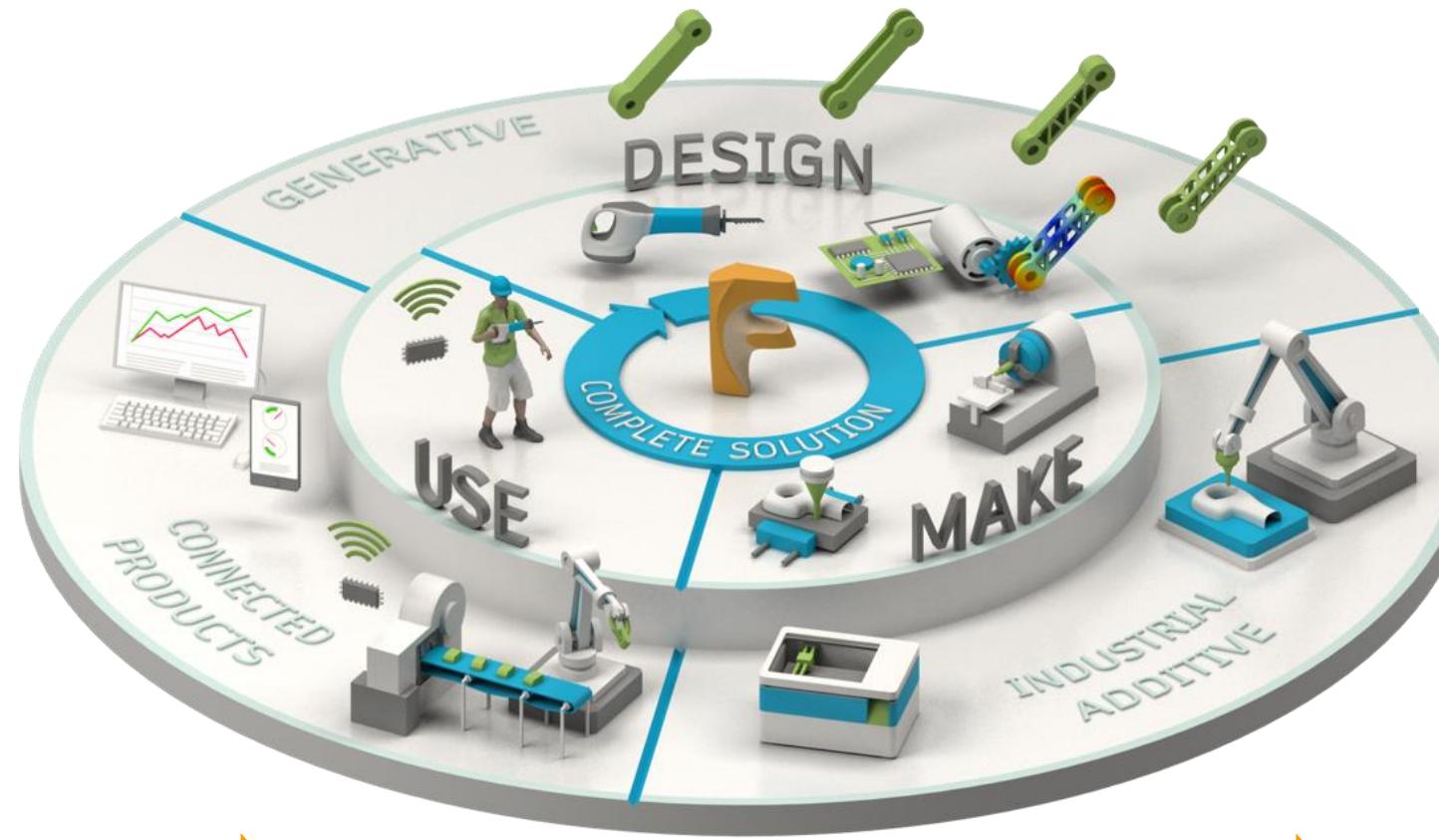
**Role Based**  
Access



**Fast Speed**  
to Production



# Autodesk Fusion Lifecycle is Part of Autodesk's Product Innovation Platform



AUTODESK® FUSION 360™

CAD/CAM/CAE

Product Design &  
Mfg Automation

AUTODESK® FUSION LIFECYCLE

PLM

Product Lifecycle Process  
Collaboration, Control

AUTODESK® FUSION CONNECT

IoT

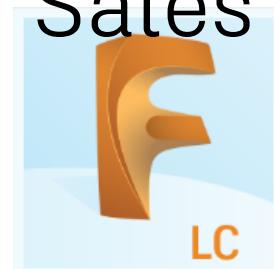
Monitor, Operate, Analyze  
Connected Products

# Fusion Lifecycle Standard Capabilities



# But Autodesk Fusion Lifecycle is much more...

- Quality Management
- Project Management
- Task Management
- Requirements
- Lean Six Sigma
- Change Management
- Document Control
- ISO 9001
- Deviation Waiver
- Risk Analysis
- Feasibility Study
- Sales Handover
- Inspections
- Service
- Installation
- Root Cause Analysis
- Calibration
- FMEA
- Asset Management
- Suppliers
- RFQ
- Project Costing
- NPI\NPD
- REACH & RoHS
- Improvement Charter
- Lean 5S
- Tooling
- Prototype Management
- Accident Reports
- Audits
- Lessons Learnt
- QIP
- Technical Requirements
- Products
- Warranty
- Item Management



The background features a complex, abstract geometric pattern composed of numerous thin, light-grey lines forming a wireframe mesh. This mesh is organized into several large, overlapping spherical structures that appear to be in motion or interconnected. The overall effect is organic and futuristic.

The BoM from Design to Manufacturing

# Terms of Reference - BoM

- A BoM (Bill of Materials) or product structure is a list of the raw materials, sub-assemblies, intermediate assemblies, sub-components, parts and the quantities of each needed to manufacture an end product.

# Terms of Reference – dBoM

- An dBoM (Design Bill of Materials) is a type of BoM that reflects the product as designed by engineering, as it leaves the design tool and before it is modified by an engineer within another tool/application.

dBoM

# Terms of Reference – eBoM

- An eBoM (Engineering Bill of Materials) is a type of BoM reflecting the product as it leaves engineering after it may have been modified by an application other than the design tool.

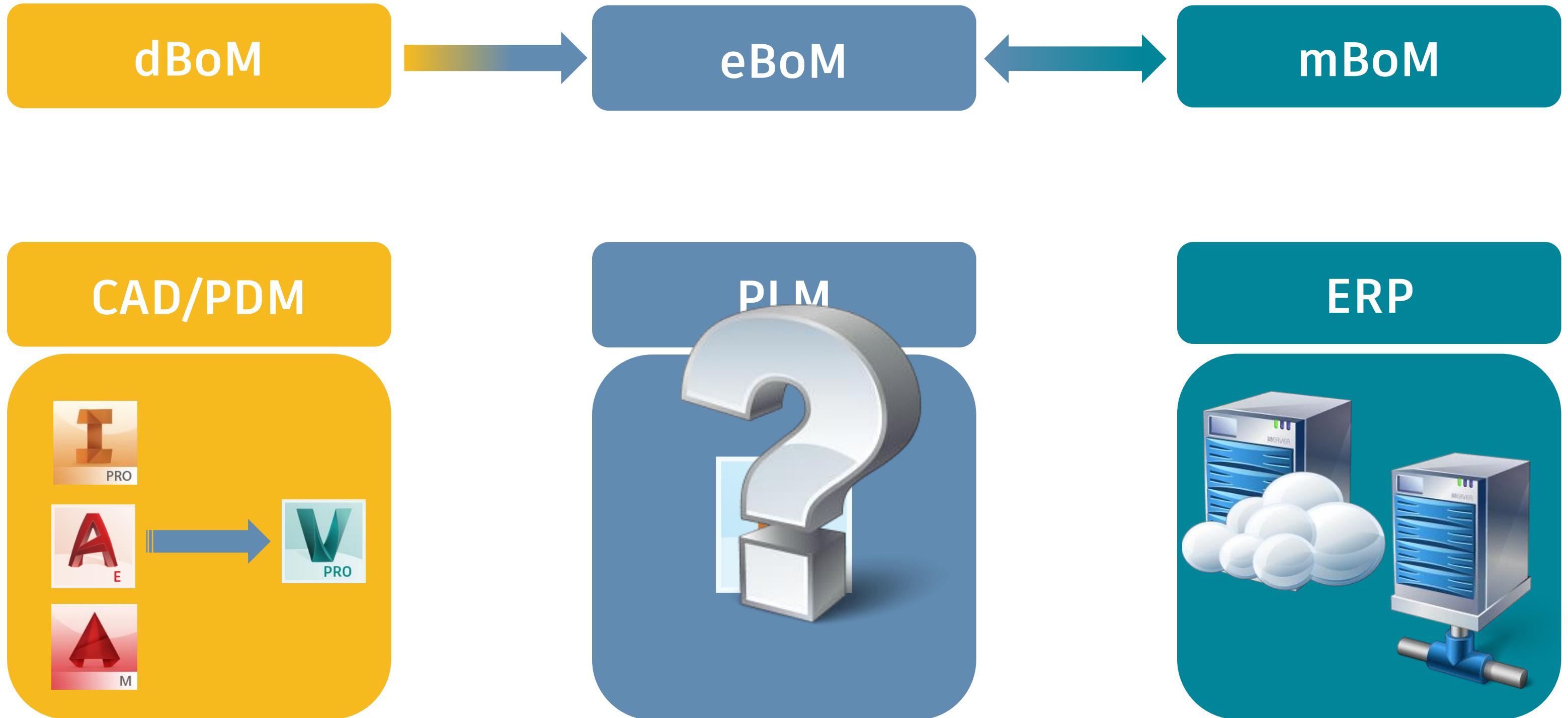
eBoM

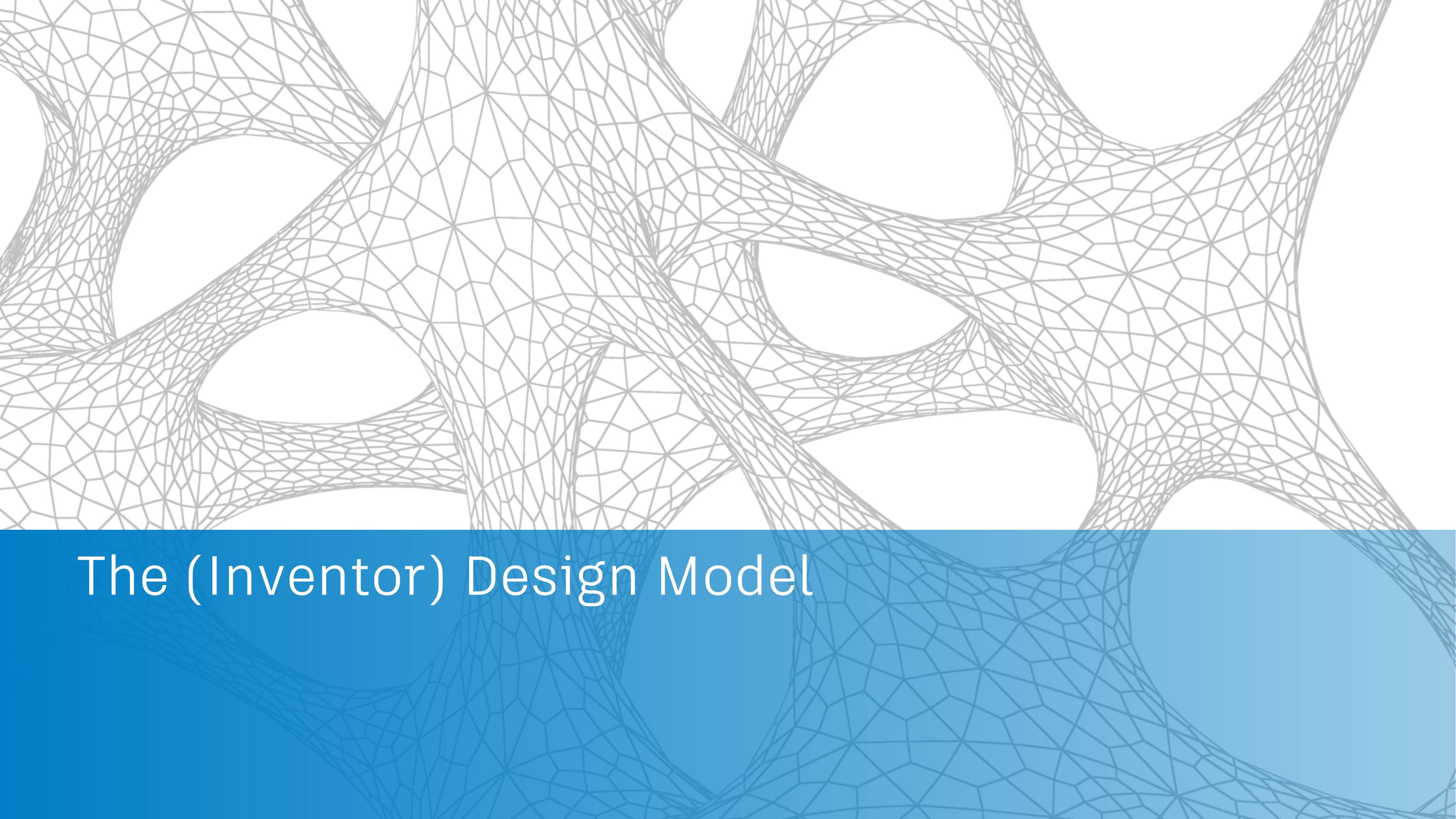
# Terms of Reference – mBoM

- Unlike the eBoM, which is organized with regards to how the product is engineered, the mBoM is focused on the parts & structure that are needed to manufacture and produce a product.

mBoM

# The BoM Lifecycle...





# The (Inventor) Design Model

Autodesk Inventor Professional 2017 ASY00070.iam

File Assemble Simplify Design 3D Model Sketch Inspect Tools Manage View Environments Data Standard Get Started Vault Electromechanical Autodesk A360 d2m3

Place Create Free Move Free Rotate Joint Constrain Show Pattern Show Sick Mirror Copy Hide All Bill of Materials Parameters Create Substitutes Productivity Plane Axis Point Work Features

Component Position Relationships Pattern Manage Productivity Work Features

Model Assembly View

ASY00070.iam

- Relationships
- Representations
- Origin
- PRT10131:1
- PRT10143:1
- PRT10144:1
- PRT10137:1
- PRT10132:1
- PRT10141:1
- PRT00182:1
- PRT10138:1
- PRT10142:1
- PRT10146:1
- NEMA 17 with T5 Pulley:1
- ASY10059:5
- ASY10059:6
- ASY10059:7
- ASY10059:8
- PRT10148:1
- PRT10148:2
- ASY10058:1
- ASY00071:1
- PRT10149:1
- Arduino:1
- Laser Diode Module:1
- Switching power supply:1
- Emergency stop switch:1
- ON\_Off Switch:1
- ASY10063:1
- ASY10064:1
- ASY10065:1
- PRT10153:1
- STEPPER DRIVER:1
- STEPPER DRIVER:2
- SKF B- Angular contact SKF B7200 BE:2
- 2M Mains Lead and 3 Amp Pin Plug Assy:1
- Harness2
- Screw GB/T 823-1988 M5 x 14:1
- Screw GB/T 823-1988 M5 x 20:1
- Screw GB/T 823-1988 M5 x 20:2
- Screw GB/T 823-1988 M5 x 20:3
- Screw GB/T 823-1988 M5 x 20:4
- Screw GB/T 823-1988 M5 x 20:5

For Help, press F1

My Home ASY00070.iam

207 73

Autodesk Inventor Professional 2017 ASY00070.iam

File Assemble Simplify Design 3D Model Sketch Inspect Tools Manage View Environments Data Standard Get Started Vault Electromechanical Autodesk A360 d2m3

Bill of Materials [ASY00070.iam]

Model Data Structured Parts Only

Item	Part Number	Thumbnail	BOM Structure	Unit QTY	QTY	Stock Number	Description
1	PRT00131		Normal	Each	1	PRT00131	BASE PLATE
2	PRT00143		Normal	Each	1		CASE - LEFT SIDE
3	PRT00144		Normal	Each	1		CASE - LEFT SIDE
4	PRT00137		Normal	Each	1		X-AXIS SHAFT SUPPORT
5	PRT00132		Normal	Each	1		REAR COVER
6	PRT00141		Normal	Each	1		ENCLOSURE LID
7	PRT00182		Normal	Each	1		WORKSHEET
8	PRT00138		Normal	Each	1		X-AXIS SHAFT SUPPORT W/MOTOR

Import... Export... Done

For Help, press F1

Autodesk Inventor Professional 2017 ASY00070.iam

File Assemble Simplify Design 3D Model Sketch Inspect Tools Manage View Environments Data Standard Get Started Vault Electromechanical Autodesk A360 d2m3

Bill of Materials [ASY00070.iam]

Place Create Free Move Free Rotate Joint Constrain Component Position Relations

Model Assembly View

ASY00070.iam Relationships Representations Origin PRT10131:1 PRT10143:1 PRT10144:1 PRT10137:1 PRT10132:1 PRT10141:1 PRT00182:1 PRT10138:1 PRT10142:1 NEMA 17 with T5 Pulley ASY10059:5 ASY10059:6 ASY10059:7 ASY10059:8 PRT10148:1 PRT10148:2 ASY10058:1 ASY00071:1 PRT10149:1 Arduino:1 Laser Diode Module:1 Switching power supply:1 Emergency stop switch:1 ON\_Off Switch:1 ASY10063:1 ASY10064:1 ASY10065:1 PRT10153:1 STEPPER DRIVER:1 STEPPER DRIVER:2 SKF B- Angular contact SKF B7200 BE:2 2M Mains Lead and 3 Amp Pin Plug Assy:1 Harness2 Screw GB/T 823-1988 M5 x 14:1 Screw GB/T 823-1988 M5 x 20:1 Screw GB/T 823-1988 M5 x 20:2 Screw GB/T 823-1988 M5 x 20:3 Screw GB/T 823-1988 M5 x 20:4 Screw GB/T 823-1988 M5 x 20:5

Item	Part Number	Thumbnail	BOM Structure	Unit QTY	QTY	Stock Number	Description
8	PRT00138		Normal	Each	1		X-AXIS SHAFT SUPPORT W/MOTOR
9	PRT00142		Normal	Each	1		ENCLOSURE RIGHT SIDE
10	NEMA 17 with T5 Pulley		Normal	Each	1		MOTOR
10.1	Base		Normal	Each	1		MOTOR BODY_2
10.2	Cuerpo		Normal	Each	1		MOTOR BODY_1
10.3	Tapa		Normal	Each	1		TAPA
10.4	Eje		Normal	Each	1		MOTOR BODY
11	PRT00146		Normal	Each	1		Threaded rods

Import... Export... Done

My Home ASY00070.iam

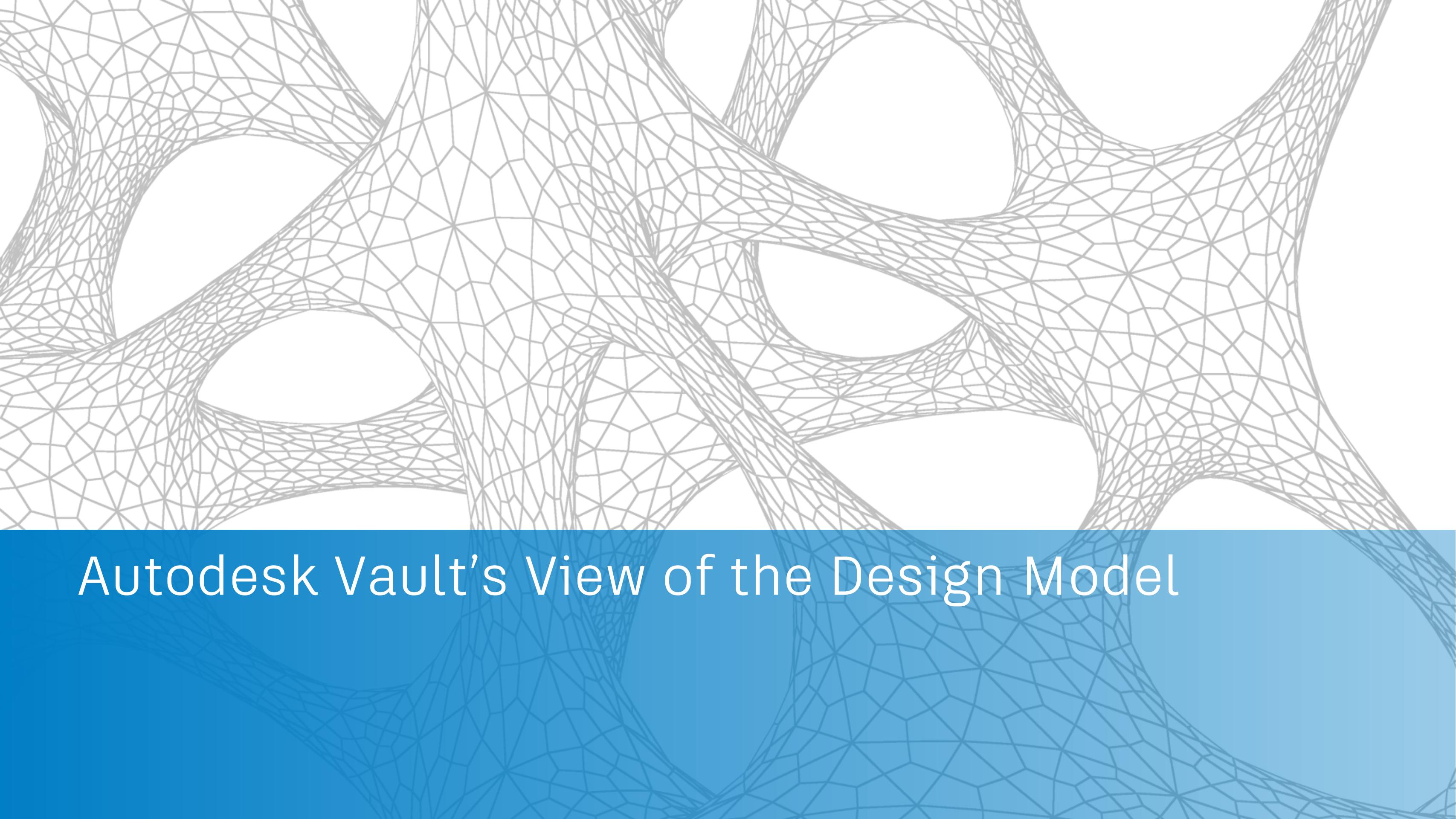
For Help, press F1

# The Exported BoM from Inventor

A	B	C	D	E	F	G
Item	Part Number	BOM Structure	Unit QTY	QTY	Stock Number	Description
1	PRT00131	Normal		1	PRT00131	BASE PLATE
2	PRT00143	Normal		1		CASE - LEFT SIDE
3	PRT00144	Normal		1		CASE - LEFT SIDE
4	PRT00137	Normal		1		X-AXIS SHAFT SUPPORT
5	PRT00132	Normal		1		REAR COVER
6	PRT00141	Normal		1		ENCLOSURE LID
7	PRT00182	Normal		1		WORKSHEET
8	PRT00138	Normal		1		X-AXIS SHAFT SUPPORT W/MOTOR
9	PRT00142	Normal		1		ENCLOSURE RIGHT SIDE
10	NEMA 17 with T5 Pulley	Normal		1		MOTOR
10.1	Base	Normal		1		MOTOR BODY_2
10.2	Cuerpo			1		MOTOR BODY_1
10.3	Tapa			1		TAPA
10.4	Eje			1		
11	PRT00148	Normal		1		Threaded rods
12	ASY00059	Purchased		1		12MM SHAFT SUPPORT
12.1	SHF12	Normal		1		SHAFT FITTING
12.2	ISO 4762 - M3 x 10	Normal		1		Hexagon Socket Head Cap Screw
13	PRT00148	Normal		1		M10 THREADED BAR
14	ASY00071	Normal		1		MOTOR
14.1	PRT00183	Normal		1		Y-AXIS SIDE
14.2	PRT00139	Normal		1		X-AXIS MOVING PART
14.3	PRT00184	Normal		1		Y-AXIS SIDE W/MOTOR
14.4	Threaded rods GB/T 15389-1994 M10 x 1000	Normal		1		Threaded rods
14.5	NEMA 17 with T5 Pulley	Normal		1		MOTOR
14.5.1	Base	Normal		1		MOTOR BODY_2
14.5.2	Cuerpo	Normal		1		MOTOR BODY_1
14.5.3	Tapa	Normal		1		TAPA
14.5.4	Eje	Normal		1		MOTOR BODY
14.6	ASY00059	Normal		1	4	12MM SHAFT SUPPORT



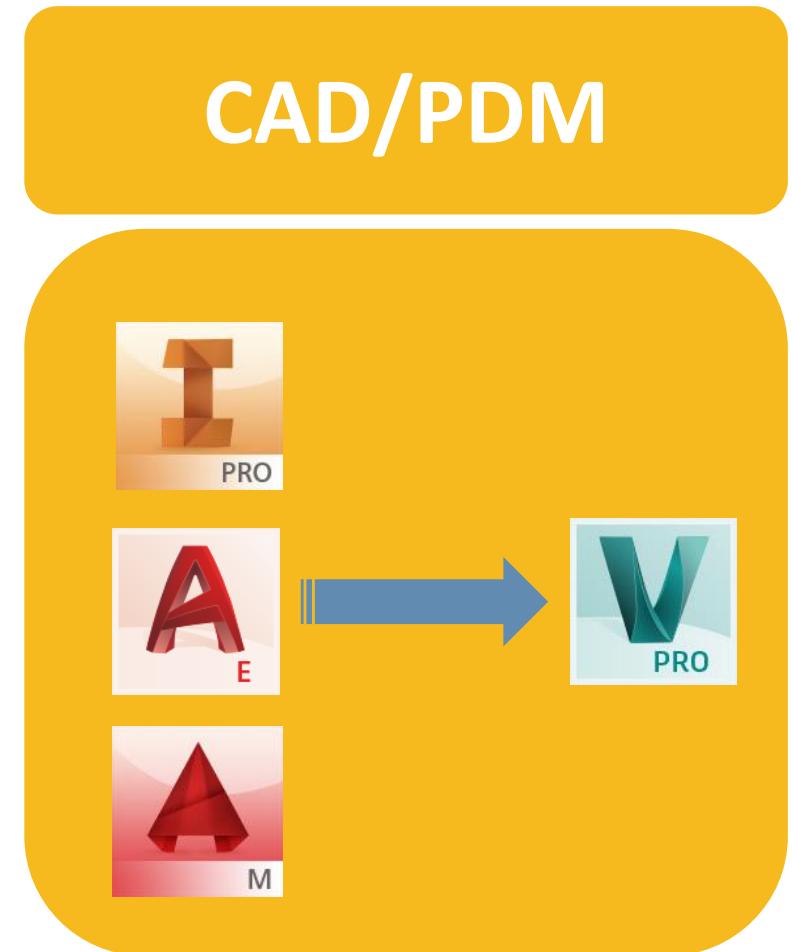
Excel

The background features a complex, abstract wireframe structure composed of numerous thin, light gray lines forming a organic, branching pattern. It has several large, irregularly shaped holes or voids throughout the design. The overall effect is reminiscent of a molecular model or a futuristic architectural rendering.

# Autodesk Vault's View of the Design Model

# Autodesk Vault

- Autodesk Vault is an Excellent BoM Data Aggregator
  - Combine Data...
    - from Inventor,
    - from AutoCAD Electrical &
    - from AutoCAD Mechanical...
- Into a single dBoM.



Autodesk Vault Professional 2017

Simon Eaves

File Edit View Go Tools Actions Help

New Standard File... Edit File Datasheet... Report... Plot... Find... Layout Quick Sync... Change Category... Change State... Change Revision... Update Properties from Folder Search Help

Home

Vault\_M - Administrator

- Change Order List
- Item Master
- Project Explorer (\$)
- Content Center Files
- Designs
- Libraries
- Templates
- My Search Folders

Project Explorer (\$)

(d:\WORK\_V\Vault\_M\_2017\)

Name	Description	Revision	State
Content Center Files			
Designs			
Libraries			
Templates			
Designs_2017.ipj			Released

Properties

My Worklist

ECO-000021 (06/07/2016)

My Shortcuts

Add new group

Home

Project Explorer

Item Master

Change Order List

5 Object(s) (0 selected)

se-vps Vault\_M

29/05/2017

Autodesk Vault Professional 2017

File Edit View Go Tools Actions Help

New Standard File... Edit File Datasheet... Report... Plot... Find... Check In... Find... Layout Quick Sync... Change Category... Change State... Change Revision... Update Properties from Folder Search Help

Home

- Vault\_M - Administrator
  - Change Order List
  - Item Master
  - Project Explorer (\$)
  - Content Center Files
  - Designs
  - Libraries
  - Templates
- My Search Folders

Project Explorer (\$) (Search Results) (d:\WORK\_V\Vault\_M\_2017) ASY00070

Name	Description	Revision	State
ASY00070.dwg	CNC LASER ...	B	Released
ASY00070.iam	CNC LASER ...	B	Released

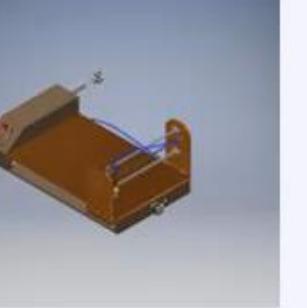
History Uses Where Used Change Order Preview CAD BOM Datasheet

Latest Released

File Name	Version	Revision	State (Historical)	Checked Out By	Created By	Checked In	Comment	Path
ASY00070.iam	21	B	Released		Administrator	29/05/2017 08:35		\$/Designs/P
2M Mains Lead and 3 Amp Pin Plug Assy.iam	30	A	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
Arduino.upt	25	A	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
ASY00057.Harness2.iam	36	B	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
ASY00071.iam	9	A	Released		Administrator	26/09/2016 13:35	Released to manufact...	\$/Designs/P
ASY10058.iam	40	B	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
ASY10059.iam	32	B	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
ASY10063.iam	30	A	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
ASY10064.iam	30	A	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
ASY10065.iam	30	A	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
Emergency stop switch.upt	25	A	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
ISO 7046-1 - M5 x 25H.upt	8		Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Content C
Laser Diode Module.upt	23	A	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
NEMA 17 with T5 Pulley.iam	31	A	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
ON_Off Switch.upt	24	A	Released		Administrator	29/05/2017 08:32	Released to manufact...	\$/Libraries/S
DPDT00107.upt	13	A	Released		Administrator	26/09/2016 13:35	Released to manufact...	\$/Designs/P

Properties ASY00070.iam

System	
User Defined	
Approved By	
Approved On	
Author	jg
Comments	
Description	CNC LASER ENGRAVER
IsCC	False
Keywords	
Material	
Part Number	ASY00070
PLM Classification	
PLM Level 2	
Project	
Project Number	
ThinClient URL	http://se-vps/AutodeskTC/se-vps/Vault_M#/Entit...



2 Object(s) (1 selected)

se-vps Vault\_M

29/05/2017

Autodesk Vault Professional 2017

File Edit View Go Tools Actions Help

New New Standard File... Edit File Datasheet... Report... Plot... Go to: Enter an item number Find... X X

Assembly Items Layout Quick Sync... Change Category... Change State... Change Revision... Update Properties from Folder Search Help

**Home**

- Vault\_M - Administrator
  - Change Order List
  - Item Master
- Project Explorer (\$)
  - Content Center Files
  - Designs
  - Libraries
  - Templates
- My Search Folders

**Item Master**

Number	Revision	State	Title (Item, CO)
ASY00071	B	Released	ASY00071
ASY00061	B	Released	ASY00061
SW3dPS-3 Pin PLug	B	Released	2M Mains Lead and 3 Amp Pin Plug Assy
ASY00059	B	Released	ASY10059
ASY00057.Harness2	A	Released	ASY00057.Harness2
<b>ASY00070</b>	<b>A</b>	<b>Released</b>	<b>ASY00070</b>
NEMA 17 with T5 Pulley	B	Released	NEMA 17 with T5 Pulley
ASY00065	A	Released	ASY10065
ASY00064	A	Released	ASY10064
ASY00063	A	Released	ASY10063
ASY00062	A	Released	ASY10062
ASY00058	A	Released	ASY10058
Screw GB 823 M3.5 x 25	A	Released	Screw GB/T 823-1988 M3
PRT00182	A	Released	PRT00182
10AWG-GRY.Wire_7	A	Released	HA_VC_537
10AWG-BLK.Wire_38	A	Released	HA_VC_534

General History Bill of Materials Where Used Change Order View Associated Files Datasheet

Latest Released Today Multi-Level All Rows

Number	Position Number	Item Description	Quantity	Units	State (Historical)
<b>ASY00070</b>	-	CNC LASER ENGRAVER	-	Each	Released
PRT00131	1	BASE PLATE	1 Each	Each	Released
PRT00143	2	CASE - LEFT SIDE	1 Each	Each	Released
PRT00144	3	CASE - LEFT SIDE	1 Each	Each	Released
PRT00137	4	X-AXIS SHAFT SUPPORT	1 Each	Each	Released
PRT00132	5	REAR COVER	1 Each	Each	Released
PRT00141	6	ENCLOSURE LID	1 Each	Each	Released
PRT00182	7	WORKSHEET	1 Each	Each	Released
PRT00138	8	X-AXIS SHAFT SUPPORT W/MOTOR	1 Each	Each	Released
PRT00142	9	ENCLOSURE RIGHT SIDE	1 Each	Each	Released
NEMA 17 with T5 Pulley	10	MOTOR	1 Each	Each	Released
PRT00146	11	Threaded rods	1 Each	Each	Released
ASY00059	12	12MM SHAFT SUPPORT	4 Each	Each	Released
PRT00148	13	M10 THREADED BAR	2 Each	Each	Released
ASY00071	14	MOTOR	1 Each	Each	Released
ASY00058	15	LASER ACTUATOR	1 Each	Each	Released
PRT00149	16	ENCLOSURE, BUTTON FACE	1 Each	Each	Released
Arduino	17	ARDUINO UNO	1 Each	Each	Released
Laser Diode Module	18	50mW LASER MODULE	1 Each	Each	Released
Switching power supply	19	STEP AP214	1 Each	Each	Released
Emergency stop switch	20	E STOP SWITCH	1 Each	Each	Released

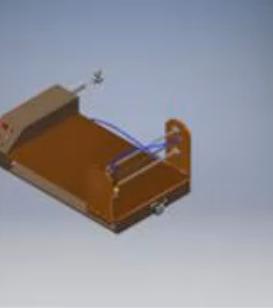
Properties

ASY00070

System

User Defined

- Associated File Revision B
- Equivalence Value ASY00070
- PLM Classification
- PLM Level 2
- ThinClient URL http://se-vps/AutodeskTC/se-vps/Vault\_M#/Entit...



110 Items (1 selected)

se-vps Vault\_M

29/05/2017

A	B	C	D	E	F	G
1	Level	Number	Material	Item Description	Item Qty	Units
2	1	ASY00070		CNC LASER ENGRAVER		Each
3	1.1	PRT00131	MDF Medium Density Fiberboard	BASE PLATE	1	Each
4	1.2	PRT00143	MDF Medium Density Fiberboard	CASE - LEFT SIDE	1	Each
5	1.3	PRT00144	MDF Medium Density Fiberboard	CASE - LEFT SIDE	1	Each
6	1.4	PRT00137	MDF Medium Density Fiberboard	X-AXIS SHAFT SUPPORT	1	Each
7	1.5	PRT00132	MDF Medium Density Fiberboard	REAR COVER	1	Each
8	1.6	PRT00141	MDF Medium Density Fiberboard	ENCLOSURE LID	1	Each
9	1.7	PRT00182	Gold	WORKSHEET	1	Each
10	1.8	PRT00138	MDF Medium Density Fiberboard	X-AXIS SHAFT SUPPORT W/MOTOR	1	Each
11	1.9	PRT00142	MDF Medium Density Fiberboard	ENCLOSURE RIGHT SIDE	1	Each
12	1.1	NEMA 17 with T5 Pulley		MOTOR	1	Each
13	1.10.1	Base	solidworks materials Acero aleado	MOTOR BODY_2	1	Each
14	1.10.2	Cuerpo	solidworks materials Acero aleado	MOTOR BODY_1	1	Each
15	1.10.3	Tapa	solidworks materials Acero aleado	TAPA	1	Each
16	1.10.4	Eje			1	Each
17	1.11	PRT00146			1	Each
18	1.12	ASY00059			1	Each
19	1.12.1	SHF12			1	Each
20	1.12.2	ISO 4762 - M3 x 12		Hexagon socket Head Cap Screw	1	Each
21	1.13	PRT00148	Generic	M10 THREADED BAR	2	Each
22	1.14	ASY00058		LASER ACTUATOR	1	Each
23	1.14.1	PRT00136	MDF Medium Density Fiberboard	Y-AXIS MOVING PART	1	Each
24	1.14.2	ASY00061		THREADED ACTUATOR	1	Each
25	1.14.2.1	PRT00135	MDF Medium Density Fiberboard	Y-AXIS NUT SUPPORT	1	Each
26	1.14.2.2	ISO 4035 - M10		Hexagon thin nuts (chamfered) - Product group	2	Each
27	1.14.3	LUHR12		LUHR/LUJR-Linear Bearing Units - with Close	2	Each
28	1.15	PRT00149	MDF Medium Density Fiberboard	ENCLOSURE, BUTTON FACE	1	Each
29	1.16	Arduino	Generic	ARDUINO UNO	1	Each
30	1.17	Laser Diode Module	Generic	50mW LASER MODULE	1	Each
31	1.18	Switching power supply	Generic	STEP AP214	1	Each



Excel

ASY00070 BoM Vault Export

# Fusion Lifecycle Data Import

# Manual Import Data into Fusion Lifecycle

Edit Import

Save

Cancel

Run

		Item Number	Revision	Title	Description	Material	Lifecycle State		Release Date	Quantity
	Level	Number	Revision	Title	Description	Material	Lifecycle State	ThinClient URL	Release Date	Quantity
1	1	ASY00070	A	ASY00070	CNC LASER ENGRAVER		Production		2016-03-05	
2	1.1	PRT00131	A	PRT10131	BASE PLATE	MDF Medium Density Fiberboard	Production		2016-03-05	1
3	1.2	PRT00143	A	PRT10143	CASE - LEFT SIDE	MDF Medium Density Fiberboard	Production		2016-03-05	1
4	1.3	PRT00144	A	PRT10144	CASE - LEFT SIDE	MDF Medium Density Fiberboard	Production		2016-03-05	1
5	1.4	PRT00137	A	PRT10137	X-AXIS SHAFT SUPPORT	MDF Medium Density Fiberboard	Production		2016-03-05	1
6	1.5	PRT00132	A	PRT10132	REAR COVER	MDF Medium Density Fiberboard	Production		2016-03-05	1
7	1.6	PRT00141	A	PRT10141	ENCLOSURE LID	MDF Medium Density Fiberboard	Production	http://se-vps/AutodeskTC/se-vps/Va	2016-03-05	1
8	1.7	PRT00182	A	PRT10182	WORKSHEET	Gold	Production	http://se-vps/AutodeskTC/se-vps/Va	2016-03-05	1
9	1.8	PRT00138	A	PRT10138	X-AXIS SHAFT SUPPORT W/MOT	MDF Medium Density Fiberboard	Production	http://se-vps/AutodeskTC/se-vps/Va	2016-03-05	1
10	1.9	PRT00142	A	PRT10142	ENCLOSURE RIGHT SIDE	MDF Medium Density Fiberboard	Production		2016-03-05	1
11	1.10	NEMA 17 with T5 Pulley	A	NEMA 17 with T5 Pulley	MOTOR		Production		2016-03-05	1
12	1.10.1	Base	A	Base	MOTOR BODY_2	solidworks materials Acero aleado	Production		2016-03-05	1
13	1.10.2	Cuerpo	A	Cuerpo	MOTOR BODY_1	solidworks materials Acero aleado	Production		2016-03-05	1
14	1.10.3	Tapa	A	Tapa	TAPA	solidworks materials Acero aleado	Production		2016-03-05	1
15	1.10.4	Eje	A	Eje	MOTOR BODY	solidworks materials Acero aleado	Production		2016-03-05	1
16	1.11	PRT00146	A	PRT10146	Threaded rods	Steel, Mild	Production		2016-03-05	1
17	1.12	ASY00059	A	ASY10059	12MM SHAFT SUPPORT		Production		2016-03-05	4
18	1.12.1	SHF12	A	SHF12	SHAFT FITTING	Aluminum	Production		2016-03-05	1
19	1.12.2	ISO 4762 - M3 x 10	A	ISO 4762 M3 x 10	Hexagon Socket Head Cap Screw		Production		2016-03-05	1
20	1.13	PRT00148	A	PRT10148	M10 THREADED BAR	Generic	Production		2016-03-05	2

Page 1 of 5

Displaying 1 - 25 of 124

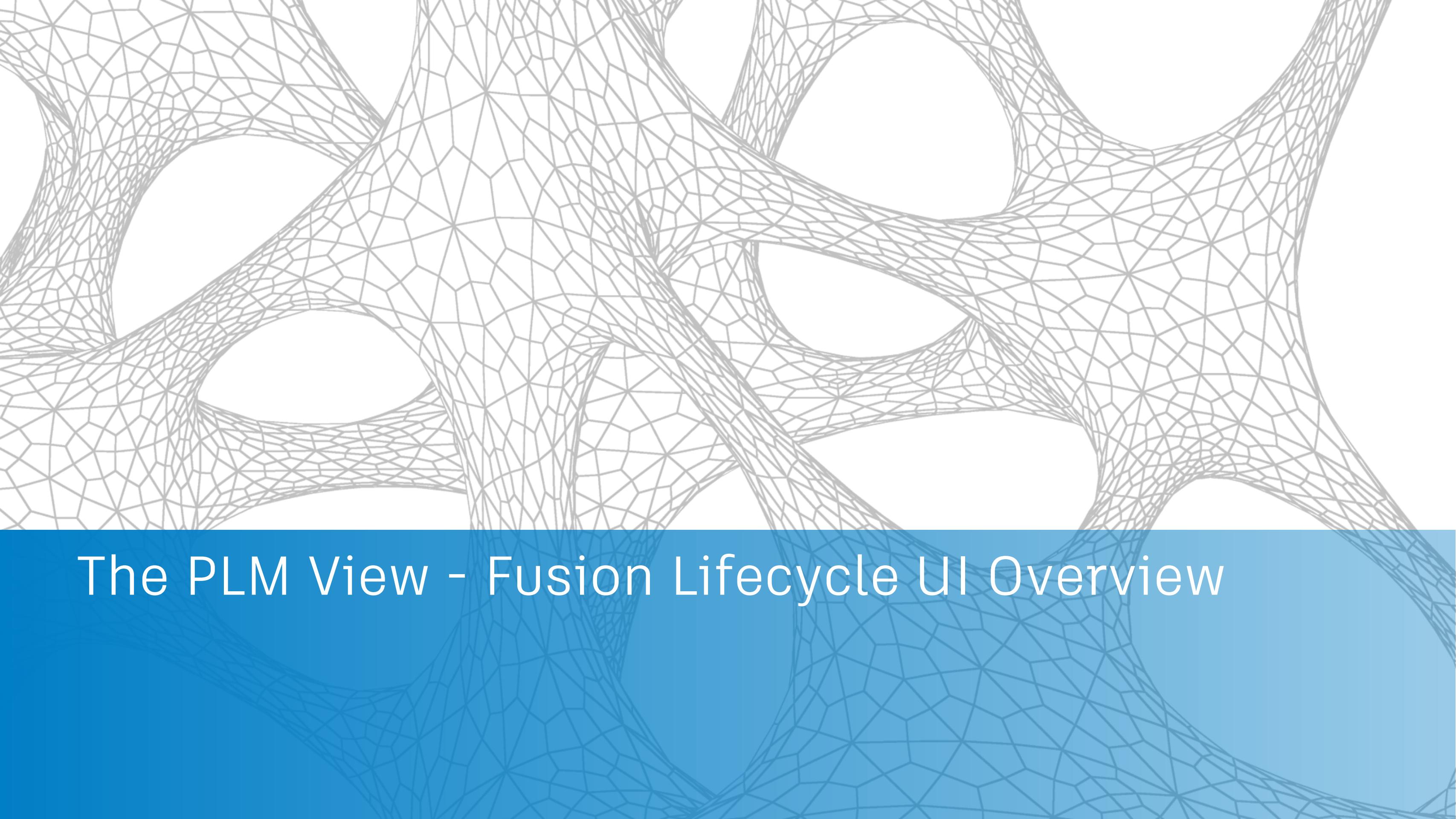
Import Settings Problems (50)

Project Name  
ASY00070

Project Description  
First production Release of ASY00070 from Vault

For new records Select...  
For matching records Select...  
For new picklist values Use blank instead  
 Strictly enforce all validations and constraints  
 Ignore validations and constraints whenever possible

For new BOM relationships Select...  
For existing BOM relationships Select...



# The PLM View - Fusion Lifecycle UI Overview

# What does the Fusion Lifecycle UI Give You?

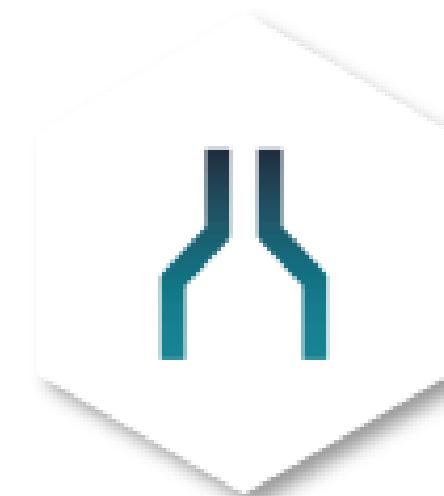
Control of Product &  
Project Data



Information Access



Streamlined Processes



Real-time Visibility



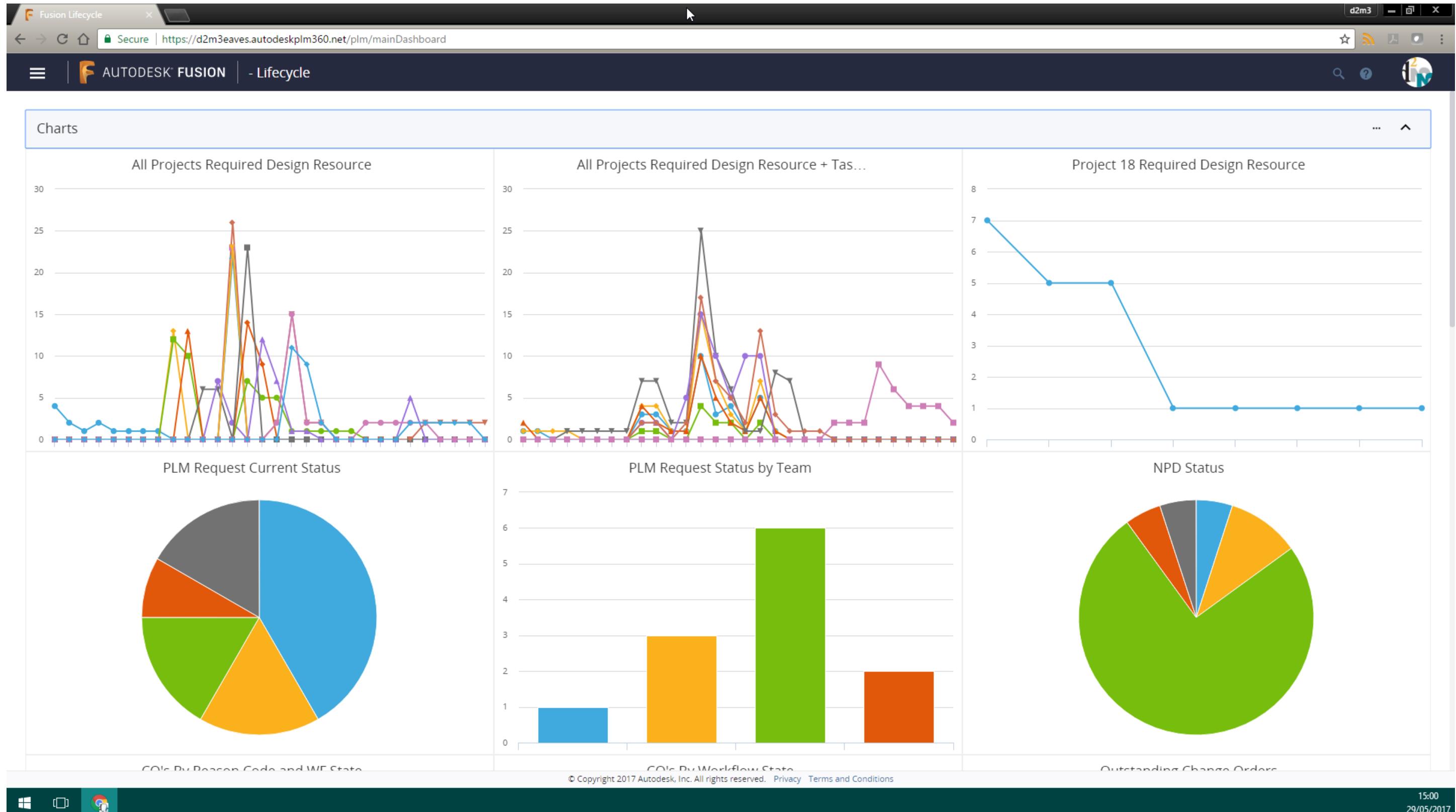
Accountability &  
Traceability



Collaboration

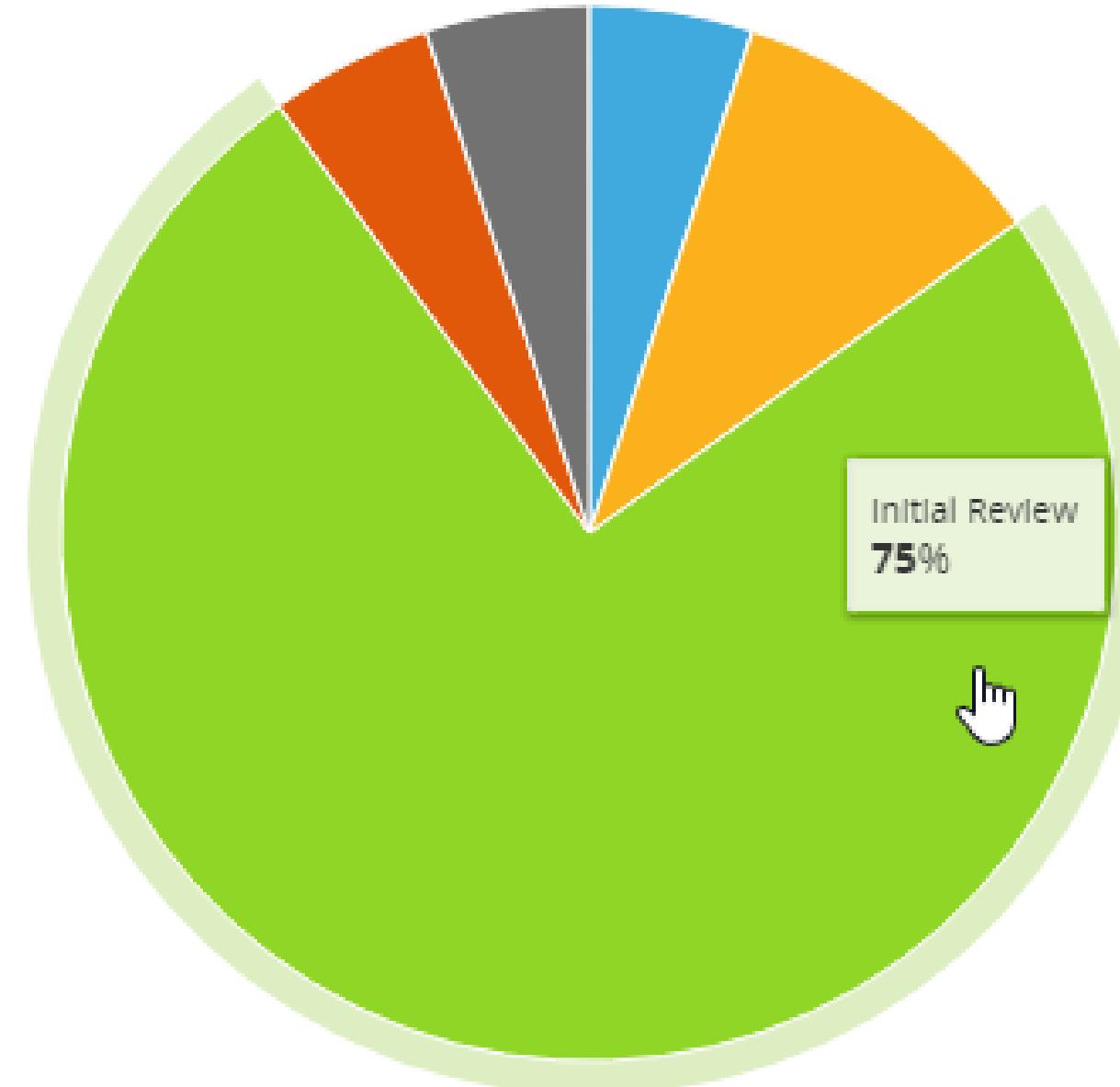


# Home Page – View Your Data, Your Way



# Home Page – View Your Data, Your Way

NPD Status



# Home Page – What have I been asked to do?

The screenshot shows the Autodesk Fusion Lifecycle main dashboard. At the top, there's a navigation bar with icons for Home, Search, and Help, along with a user profile icon. Below the navigation bar is a header titled "My Outstanding Work". The main content area is a table with the following columns: Due Date, Item Name, Workspace, State, State Set On, and State Set By. The table lists several items:

Due Date	Item Name	Workspace	State	State Set On	State Set By
23/05/2017	NPI000006 - Larger Domestic Model of Henry	2. DEMO - NPD/NPI	Milestone Approvals	22/05/2017	Simon Eaves
	PREQ000013 - New Product Concept	1. DEMO - PLM Request	Awaiting Project Team ...	15/05/2017	Simon Eaves
	AU000015 - Numatic International Ltd -	Audits	Create	10/05/2017	Simon Eaves
	PREQ000009 - Address Motor Overheating Issues	1. DEMO - PLM Request	Awaiting Project Team ...	08/05/2017	Ian Kelsall
14/05/2017	NPI000008 - New Hand Held Henry	2. DEMO - NPD/NPI	Feasibility WIP	08/05/2017	Simon Eaves
	NPI000003 - New Product Introduction	2. DEMO - NPD/NPI	Feasibility WIP	04/05/2017	Simon Eaves
23/04/2017	NI000002 - New Home Flatbed Laser Engraver	New Product Introduction	[01b] Gate 1 Review (In...	31/03/2017	Simon Eaves
	CO000008 - Move to Design	6. DEMO - Change Orders	Create	28/03/2017	Simon Eaves
17/10/2016	CA000002 - To resolve issue with an over heating power supply	Corrective / Preventative Actions	Create	29/09/2016	Simon Eaves

Below the table, there are sections for "My Bookmarks" and "My Recently Viewed Items". The footer contains copyright information and system status icons.

# Home Page – Where can I go?

The screenshot shows the Autodesk Fusion Lifecycle main dashboard. The top navigation bar includes links for Secure connection, Apps (d2m3, EPDM, FLC, FLC Demo, FLC Projects, Scripting, Social/Profiles, Travel), Autodesk Main Slack, and a search bar. The main content area displays a table of non-conformances under the heading "Non Conformances". The table has columns for Due Date, Item Name, Workspace, State, State Set On, and State Set By. The data is grouped by due date:

Due Date	Item Name	Workspace	State	State Set On	State Set By
23/05/2017	NPI000006 - Larger Domestic Model of Henry	2. DEMO - NPD/NPI	Milestone Approvals	22/05/2017	Simon Eaves
	PREQ000013 - New Product Concept	1. DEMO - PLM Request	Awaiting Project Team ...	15/05/2017	Simon Eaves
	AU000015 - Numatic International Ltd -	Audits	Create	10/05/2017	Simon Eaves
	PREQ000009 - Address Motor Overheating Issues	1. DEMO - PLM Request	Awaiting Project Team ...	08/05/2017	Ian Kelsall
14/05/2017	NPI000008 - New Hand Held Henry	2. DEMO - NPD/NPI	Feasibility WIP	08/05/2017	Simon Eaves
	NPI000003 - New Product Introduction	2. DEMO - NPD/NPI	Feasibility WIP	04/05/2017	Simon Eaves
23/04/2017	NI000002 - New Home Flatbed Laser Engraver	New Product Introduction	[01b] Gate 1 Review (In...	31/03/2017	Simon Eaves
	CO000008 - Move to Design	6. DEMO - Change Orders	Create	28/03/2017	Simon Eaves
17/10/2016	CA000002 - To resolve issue with an over heating power supply	Corrective / Preventative Actions	Create	29/09/2016	Simon Eaves

Below the table, there are sections for "My Bookmarks" and "My Recently Viewed Items".

# Home Page – Where can I go?



## Engineering Product Management

The Engineering Product Management powered by Autodesk PLM 360 provides a central view into all of the processes related to your product.

[More information](#)



## Supplier Management

Supply and Procurement applications in Autodesk PLM 360 help everyone in the organization involved with the negotiation, purchase, and receipt of goods and services work from Supplier

[More information](#)



## Quality Management

Quality Management Powered by Autodesk™ PLM 360 delivers the tools manufacturers need to collect and analyze quality data, define inspection standards, track and communicate non-

[More information](#)



## Engineering Change Management

The Engineering Change Management App powered by Autodesk PLM 360 provides a repeatable request, review, analysis, and change implementation process that is flexible for a number

[More information](#)



## Lean 5S Auditing

The Lean 5S Audit app, helps you to check that all the 5S processes have been carried out correctly. This app helps you to audit the processes for Sort, Straighten, Shine, Standardisation and Sustain.

[More information](#)



## Manufacturing Asset Management

Get the tools you need to collect and analyze data related to assets so you can keep them available and in good shape.

[More information](#)



## Equipment calibration

Equipment calibration is a necessary part of any production line, calibration can be painless with proper planning and tracking. With Equipment calibration app you can add all of your calibration

[More information](#)



## FMEA Analysis

Use the Failure mode and effect analysis (FMEA) app to review as your components, assemblies, and subsystems and record the results for each type for Functional, Design or Process FMEA analysis.

[More information](#)



## Deviation / Waiver Request

The Deviation / Waiver Request provide an exception to the normal standard process allowing the use of a part or design during a short period of time, certain quantity build, or design phase.

[More information](#)



## Accident Reports

Avoid penalties and keep a complete record of work-related injuries with the Accident Report App powered by Autodesk PLM 360.

[More information](#)



## Design Review

Manage your design review requirements, issues, concerns, and discuss alternatives with the Design Review App powered by Autodesk PLM 360.

[More information](#)



## Field Failure Request

The Field Failure Request App powered by Autodesk PLM 360 enables your field technicians to communicate quality issues onsite on any device, and at any time.

[More information](#)



## Return Merchandise Authorization

The Return Merchandise Authorization App powered by Autodesk PLM 360 provides a standardized and repeatable means to manage the RMA process.

[More information](#)



## New Product Introduction (NPI)

The NPI App powered by Autodesk PLM 360 provides utilizes an industry standard stage gate process keeping your new product's introduction to the market on schedule and on budget.

[More information](#)



## Document Control

The Document Control App powered by Autodesk PLM 360 provides an effective and secure means to distribute, enforce standards, and manage change of your documents.

[More information](#)



## Customer Management

The Customer Management App powered by Autodesk PLM 360 can connect your customer data to all of your processes currently or soon to be managed by Autodesk PLM 360.

[More information](#)



## Marketing Asset Management

Marketing Asset Management app can be used for the management, control, tracking, and distribution of brand assets, marketing materials, sales tools and creative materials.

[More information](#)



## CE Marking

Use the CE Marking PLM 360 App to manage your approval stages needed for the affixing of the CE marking on your product. Track when the EC Declaration Of Conformity is completed and get a

[More information](#)



## Autodesk Services Implementation Tracker

Manage your Autodesk implementation with the Autodesk Services Implementation Tracker, powered by PLM 360. Build your implementation plan in Phases and Sprints, use the project

[More information](#)



## Supplier Quarterly Business Review (SQBR)

Supplier Quarterly Business Review (SQBR) helps everyone in the organization to visualize the Supplier Performance.

[More information](#)

# The Imported BoM Item

# Fusion Lifecycle BoM Management

In this section we will see...

- Item & BOM Management with Lifecycle Control
- Configurable, context-specific BoM views
- Revision Effectivity
- BoM Comparison



## Charts

## My Outstanding Work

	Due Date	Item Name	Workspace	State	State Set On	State Set By
■	23/05/2017	NPI000006 - Larger Domestic Model of Henry	2. DEMO - NPD/NPI	Milestone Approvals	22/05/2017	Simon Eaves
		PREQ000013 - New Product Concept	1. DEMO - PLM Request	Awaiting Project Team ...	15/05/2017	Simon Eaves
		AU000015 - Numatic International Ltd -	Audits	Create	10/05/2017	Simon Eaves
		PREQ000009 - Address Motor Overheating Issues	1. DEMO - PLM Request	Awaiting Project Team ...	08/05/2017	Ian Kelsall
■	14/05/2017	NPI000008 - New Hand Held Henry	2. DEMO - NPD/NPI	Feasibility WIP	08/05/2017	Simon Eaves
		NPI000003 - New Product Introduction	2. DEMO - NPD/NPI	Feasibility WIP	04/05/2017	Simon Eaves
■	23/04/2017	NI000002 - New Home Flatbed Laser Engraver	New Product Introduction	[01b] Gate 1 Review (In...	31/03/2017	Simon Eaves
		CO000008 - Move to Design	6. DEMO - Change Orders	Create	28/03/2017	Simon Eaves
■	17/10/2016	CA000002 - To resolve issue with an over heating power supply	Corrective / Preventative Actions	Create	29/09/2016	Simon Eaves

## My Bookmarks

## My Recently Viewed Items

Fusion Lifecycle x d2m3

Secure | https://d2m3eaves.autodeskplm360.net/plm/workspaces/57/items/itemDetails?view=split&tab=details&mode=view&itemId=urn%60adsk.plm%60tenant.workspace.item%60D2M3EAVES,57,17126

Apps d2m3 EPDM FLC FLC Demo FLC Projects Scripting Social/Profiles Travel Autodesk Main Slack

AUTODESK® FUSION - Lifecycle

Home > Items and BOMs

Item Descriptor Item Number

ASY00070 - MDF CNC LASER ENGRAVER	ASY00070
ASY00069 - Large BED CNC LASER ENGRAVER	ASY00069
ASY00068 (A) - CNC Aluminium Base LASER ENGR...	ASY00068 (A)
ASY00057 - Medium Sized CNC LASER ENGRAVER	ASY00057

ASY00070 - MDF CNC LASER ENGRAVER [REV:w] ▾

Pending | Unreleased

Details Attachments Bill of Materials Where Used Related Changes Associated Design Reviews Milestones Change Log

Edit

Summary (1 of 7)

Item Number ASY00070

Description MDF CNC LASER ENGRAVER

Unit of Measure Each

ERP Part Number

Vault BOM Details (2 of 7)

Material

Title ASY00070

Classification (3 of 7)

Classification BOM

Level 2 PRODUCT

Level 3

Class Description 900 - BOM - PRODUCT -

Class Number 900

Environmental Compliance (4 of 7)

14:44 31/05/2017

Fusion Lifecycle d2m3

Secure | <https://d2m3eaves.autodeskplm360.net/plm/workspaces/57/items/itemDetails?view=split&tab=details&mode=view&itemId=urn%60adsk.plm%60tenant.workspace.item%60D2M3EAVES.57.17126>

Apps d2m3 EPDM FLC FLC Demo FLC Projects Scripting Social/Profiles Travel Autodesk Main Stack

AUTODESK FUSION - Lifecycle

Home > Items and BOMs

**ASY00070 - MDF CNC LASER ENGRAVER** [REV:w]

Pending Unreleased

Item Descriptor Item Number

ASY00070 - MDF CNC LASER ENGRAVER	ASY00070
ASY00069 - Large BED CNC LASER ENGRAVER	ASY00069
ASY00068 (A) - CNC Aluminium Base LASER ENGR...	ASY00068 (A)
ASY00057 - Medium Sized CNC LASER ENGRAVER	ASY00057

Details Attachments Bill of Materials Where Used Related Changes Associated Design Reviews Milestones Change Log

Edit

Summary (1 of 7)

Item Number ASY00070

Description MDF CNC LASER ENGRAVER

Unit of Measure Each

ERP Part Number

Vault BOM Details (2 of 7)

Material

Title ASY00070

Classification (3 of 7)

Classification BOM

Level 2 PRODUCT

Level 3

Class Description 900 - BOM - PRODUCT -

Class Number 900

Environmental Compliance (4 of 7)

14:44  
31/05/2017

# The Bill Of Material Tab

Fusion Lifecycle x d2m3

Secure | https://d2m3eaves.autodeskplm360.net/plm/workspaces/57/items/itemDetails?view=split&tab=details&mode=view&itemId=urn%60adsk.plm%60tenant.workspace.item%60D2M3EAVES,57,17126

Apps d2m3 EPDM FLC FLC Demo FLC Projects Scripting Social/Profiles Travel Autodesk Main Slack

AUTODESK FUSION - Lifecycle

Home > Items and BOMs

Item Descriptor Item Number

ASY00070 - MDF CNC LASER ENGRAVER	ASY00070
ASY00069 - Large BED CNC LASER ENGRAVER	ASY00069
ASY00068 (A) - CNC Aluminium Base LASER ENGR...	ASY00068 (A)
ASY00057 - Medium Sized CNC LASER ENGRAVER	ASY00057

## ASY00070 - MDF CNC LASER ENGRAVER [REV:w]

Pending | Unreleased

Details Attachments Bill of Materials Where Used Related Changes Associated Design Reviews Milestones Change Log

Edit

Summary (1 of 7)

Item Number ASY00070

Description MDF CNC LASER ENGRAVER

Unit of Measure Each

ERP Part Number

Vault BOM Details (2 of 7)

Material

Title ASY00070

Classification (3 of 7)

Classification BOM

Level 2 PRODUCT

Level 3

Class Description 900 - BOM - PRODUCT -

Class Number 900

Environmental Compliance (4 of 7)

01/06/2017

## Related BoM Items

Fusion Lifecycle x d2m3

Secure | https://d2m3eaves.autodeskplm360.net/plm/workspaces/57/items/bom/nested?view=split&tab=bom&mode=view&itemId=urn%60adsk,plm%60tenant,workspace,item%60D2M3EAVES,57,17126

Apps d2m3 EPDM FLC FLC Demo FLC Projects Scripting Social/Profiles Travel Autodesk Main Slack

AUTODESK FUSION - Lifecycle

Home > Items and BOMs

## ASY00070 - MDF CNC LASER ENGRAVER [REV:w]

Pending | Unreleased

Item Descriptor	Item Number	Details	Attachments	Bill of Materials	Where Used	Related Changes	Associated Design Reviews	Milestones	Change Log
ASY00070 - MDF CNC LASER ENGRAVER	ASY00070	<a href="#">Edit</a>	<a href="#">Add</a>	<a href="#">Remove</a>	<a href="#">...</a>	Views: Default View Full			
ASY00069 - Large BED CNC LASER ENGRAVER	ASY00069	Default View Full as of Today using the Released Revisions configuration							
ASY00068 (A) - CNC Aluminium Base LASER ENGR...	ASY00068 (A)	#	Descriptor	Material	Quantity	Units	Lifecycle		
ASY00057 - Medium Sized CNC LASER ENGRAVER	ASY00057	0.0	ASY00070 - MDF CNC LASER ENGRAVER [...]		0.00		Working		
		1.1	PRT00131 - BASE PLATE [REV:A]	MDF Medium Den...	1.00	EA	mBOM		
		1.2	PRT00143 - CASE - LEFT SIDE [REV:A]	MDF Medium Den...	1.00	EA	mBOM		
		1.3	PRT00144 - CASE - LEFT SIDE [REV:A]	MDF Medium Den...	1.00	EA	mBOM		
		1.4	PRT00137 - X-AXIS SHAFT SUPPORT [REV:...]	MDF Medium Den...	1.00	EA	mBOM		
		1.5	PRT00132 - REAR COVER [REV:A]	MDF Medium Den...	1.00	EA	mBOM		
		1.6	PRT00141 - ENCLOSURE LID [REV:A]	MDF Medium Den...	1.00	EA	mBOM		
		1.7	PRT00138 - X-AXIS SHAFT SUPPORT W/M...	MDF Medium Den...	1.00	EA	mBOM		
		1.8	PRT00142 - ENCLOSURE RIGHT SIDE [REV:...]	MDF Medium Den...	1.00	EA	mBOM		
		1.9	NEMA 17 with T5 Pulley - MOTOR [REV:A]		1.00	EA	mBOM		
		1.10	PRT00146 - Threaded rods [REV:A]	Steel, Mild	1.00	EA	mBOM		
		1.11	ASY00059 - 12MM SHAFT SUPPORT [REV:...]		4.00	EA	mBOM		
		1.12	PRT00148 - M10 THREADED BAR [REV:A]	Generic	2.00	EA	mBOM		
		1.13	ASY00062 - MOTOR [REV:A]		1.00	EA	mBOM		
		1.14	SKF B7200 BE - Single row angular conta...		1.00	EA	mBOM		

05/06/2017

# Released Revisions

Fusion Lifecycle x Fusion Lifecycle x d2m3 -

Secure | https://d2m3eaves.autodeskplm360.net/plm/workspaces/57/items/bom/nested?view=full&tab=bom&mode=view&itemId=urn%60adsk.plm%60tenant.workspace.item%60D2M3EAVES.57.14924

Apps d2m3 EPDM FLC FLC Demo FLC Projects Scripting Social/Profiles Travel Autodesk Main Stack

AUTODESK FUSION - Lifecycle

Home > Items and BOMs

ASY00057.Harness2 - HARNESS ASSEMBLY [REV:B]

Locked | 05/06/2017 | mBOM

Details Attachments Bill of Materials Where Used Related Changes Associated Design Reviews Milestones Change Log

Edit Add Remove ...

Views: Default View Full

Default View Full as of Today using the Released Revisions configuration

#	Descriptor	Material	Quantity	Units	Lifecycle
0.0	ASY00057.Harness2 - HARNESS ASSEMBLY [REV:B]		0.00		mBOM
1.1	10AWG-RED.Wire4 - 10AWG-RED [REV:A]	Generic	450.00	mm	mBOM
1.2	10AWG-RED.Wire8 - 10AWG-RED [REV:A]	Generic	100.00	mm	mBOM
1.3	10AWG-RED.Wire11 - 10AWG-RED [REV:A]	Generic	390.33	mm	mBOM
1.4	10AWG-RED.Wire12 - 10AWG-RED [REV:A]	Generic	400.00	mm	mBOM
1.5	10AWG-GRY.Wire17 - 10AWG-GRY [REV:A]	Generic	350.00	mm	mBOM
1.6	10AWG-GRY.Wire20 - 10AWG-GRY [REV:A]	Generic	200.00	mm	mBOM
1.7	10AWG-BLU.Wire23 - 10AWG-BLU [REV:A]	Generic	147.30	mm	mBOM
1.8	10AWG-GRN.Wire25 - 10AWG-GRN [REV:A]	Generic	158.32	mm	mBOM
1.9	10AWG-ORG.Wire22 - 10AWG-ORG [REV:A]	Generic	174.19	mm	mBOM
1.10	10AWG-BLU.Wire28 - 10AWG-BLU [REV:A]	Generic	66.11	mm	mBOM
1.11	10AWG-BRN.Wire29 - 10AWG-BRN [REV:A]	Generic	42.14	mm	mBOM
1.12	10AWG-GRN.Wire30 - 10AWG-GRN [REV:A]	Generic	65.80	mm	mBOM
1.13	10AWG-BLU.Wire32 - 10AWG-BLU [REV:A]	Generic	1457.49	mm	mBOM
1.14	10AWG-BRN.Wire33 - 10AWG-BRN [REV:A]	Generic	1457.26	mm	mBOM

09:39  
05/06/2017

Home > Items and BOMs

## ASY00057.Harness2 - HARNESS ASSEMBLY [REV:B]

Locked | 05/06/2017 | mBOM

Details Attachments Bill of Materials

Where Used Related Changes Associated Design Reviews Milestones Change Log

Edit

Add

Remove

...

Views: Default View Full



Default View Full as of Today using the Released Revisions configuration

#	Descriptor	Material	Quantity	Units	Lifecycle
0.0	ASY00057.Harness2 - HARNESS ASSEMBLY [REV:B]		0.00		mBOM
1.1	10AWG-RED.Wire4 - 10AWG-RED [REV:A]	Generic	450.00	mm	mBOM
1.2	10AWG-RED.Wire8 - 10AWG-RED [REV:A]	Generic	100.00	mm	mBOM
1.3	10AWG-RED.Wire11 - 10AWG-RED [REV:A]	Generic	390.33	mm	mBOM
1.4	10AWG-RED.Wire12 - 10AWG-RED [REV:A]	Generic	400.00	mm	mBOM
1.5	10AWG-GRY.Wire17 - 10AWG-GRY [REV:A]	Generic	350.00	mm	mBOM
1.6	10AWG-GRY.Wire20 - 10AWG-GRY [REV:A]	Generic	200.00	mm	mBOM
1.7	10AWG-BLU.Wire23 - 10AWG-BLU [REV:A]	Generic	147.30	mm	mBOM
1.8	10AWG-GRN.Wire25 - 10AWG-GRN [REV:A]	Generic	158.32	mm	mBOM
1.9	10AWG-ORG.Wire22 - 10AWG-ORG [REV:A]	Generic	174.19	mm	mBOM
1.10	10AWG-BLU.Wire28 - 10AWG-BLU [REV:A]	Generic	66.11	mm	mBOM
1.11	10AWG-BRN.Wire29 - 10AWG-BRN [REV:A]	Generic	42.14	mm	mBOM
1.12	10AWG-GRN.Wire30 - 10AWG-GRN [REV:A]	Generic	65.80	mm	mBOM
1.13	10AWG-BLU.Wire32 - 10AWG-BLU [REV:A]	Generic	1457.49	mm	mBOM
1.14	10AWG-BRN.Wire33 - 10AWG-BRN [REV:A]	Generic	1457.26	mm	mBOM



05/06/2017



# BoM Comparison

Home > Items and BOMs

## ASY00057.Harness2 - HARNESS ASSEMBLY [REV:sA]

05/03/2016 - 04/06/2017 | mBOM

Details	Attachments	Bill of Materials	Where Used	Related Changes	Associated Design Reviews	Milestones	Change Log	
Default View Full as of 04/06/2017 using the Released Revisions configuration								
#	Descriptor	Material	Quantity	Units	Lifecycle			
0.0	ASY00057.Harness2 - HARNESS ASSEMBLY [REV:sA]		0.00		mBOM			
1.1	10AWG-RED.Wire4 - 10AWG-RED [REV:A]	Generic	383.48	mm	mBOM			
1.2	10AWG-RED.Wire8 - 10AWG-RED [REV:A]	Generic	97.37	mm	mBOM			
1.3	10AWG-RED.Wire11 - 10AWG-RED [REV:A]	Generic	390.33	mm	mBOM			
1.4	10AWG-RED.Wire12 - 10AWG-RED [REV:A]	Generic	467.28	mm	mBOM			
1.5	10AWG-GRY.Wire17 - 10AWG-GRY [REV:A]	Generic	349.57	mm	mBOM			
1.6	10AWG-GRY.Wire20 - 10AWG-GRY [REV:A]	Generic	180.97	mm	mBOM			
1.7	10AWG-BLU.Wire23 - 10AWG-BLU [REV:A]	Generic	147.30	mm	mBOM			
1.8	10AWG-GRN.Wire25 - 10AWG-GRN [REV:A]	Generic	158.32	mm	mBOM			
1.9	10AWG-ORG.Wire22 - 10AWG-ORG [REV:A]	Generic	174.19	mm	mBOM			
1.10	10AWG-BLK.Wire27 - 10AWG-BLK [REV:B]	Generic	48.02	mm	mBOM			
1.11	10AWG-BLU.Wire28 - 10AWG-BLU [REV:A]	Generic	66.11	mm	mBOM			
1.12	10AWG-BRN.Wire29 - 10AWG-BRN [REV:A]	Generic	42.14	mm	mBOM			
1.13	10AWG-GRN.Wire30 - 10AWG-GRN [REV:A]	Generic	65.80	mm	mBOM			
1.14	10AWG-BLK.Wire31 - 10AWG-BLK [REV:B]	Generic	1462.23	mm	mBOM			





The Working Version – Making a Change

Fusion Lifecycle x Fusion Lifecycle x d2m3

Secure | https://d2m3eaves.autodeskplm360.net/plm/workspaces/57/items/bom/nested?view=full&tab=bom&mode=view&itemId=urn%60adsk.plm%60tenant.workspace,item%60D2M3EAVES,57,14924

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AUTODESK FUSION - Lifecycle

Home > Items and BOMs

ASY00057.Harness2 - HARNESS ASSEMBLY [REV:B]

Locked | 05/06/2017 | mBOM

Details Attachments Bill of Materials Where Used Related Changes Associated Design Reviews Milestones Change Log

Edit Add Remove ...

Views: Default View Full

Default View Full as of Today using the Released Revisions configuration

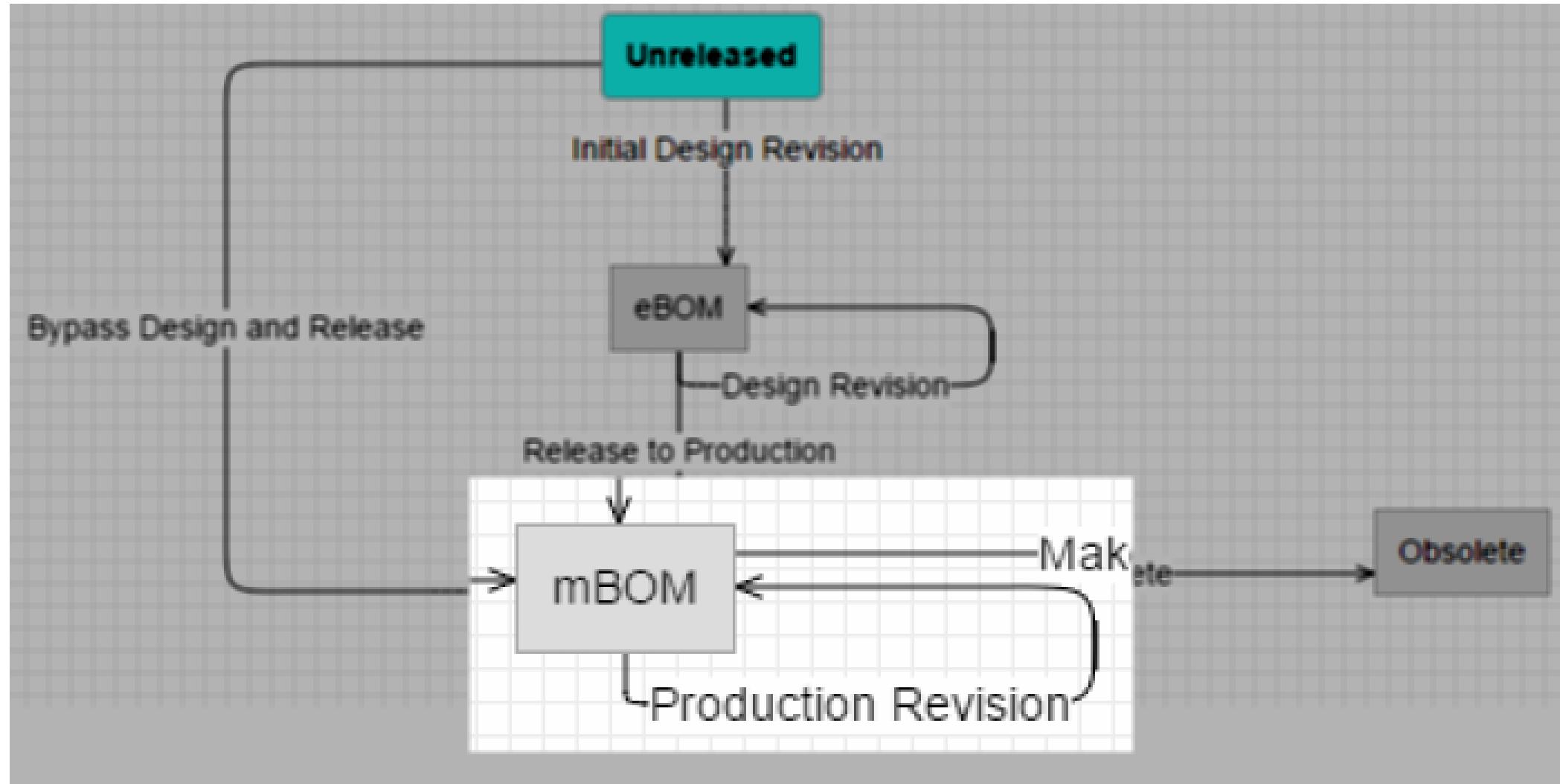
#	Descriptor	Material	Quantity	Units	Lifecycle
0.0	ASY00057.Harness2 - HARNESS ASSEMBLY [REV:B]		0.00		mBOM
1.1	10AWG-RED.Wire4 - 10AWG-RED [REV:A]	Generic	450.00	mm	mBOM
1.2	10AWG-RED.Wire8 - 10AWG-RED [REV:A]	Generic	100.00	mm	mBOM
1.3	10AWG-RED.Wire11 - 10AWG-RED [REV:A]	Generic	390.33	mm	mBOM
1.4	10AWG-RED.Wire12 - 10AWG-RED [REV:A]	Generic	400.00	mm	mBOM
1.5	10AWG-GRY.Wire17 - 10AWG-GRY [REV:A]	Generic	350.00	mm	mBOM
1.6	10AWG-GRY.Wire20 - 10AWG-GRY [REV:A]	Generic	200.00	mm	mBOM
1.7	10AWG-BLU.Wire23 - 10AWG-BLU [REV:A]	Generic	147.30	mm	mBOM
1.8	10AWG-GRN.Wire25 - 10AWG-GRN [REV:A]	Generic	158.32	mm	mBOM
1.9	10AWG-ORG.Wire22 - 10AWG-ORG [REV:A]	Generic	174.19	mm	mBOM
1.10	10AWG-BLU.Wire28 - 10AWG-BLU [REV:A]	Generic	66.11	mm	mBOM
1.11	10AWG-BRN.Wire29 - 10AWG-BRN [REV:A]	Generic	42.14	mm	mBOM
1.12	10AWG-GRN.Wire30 - 10AWG-GRN [REV:A]	Generic	65.80	mm	mBOM
1.13	10AWG-BLU.Wire32 - 10AWG-BLU [REV:A]	Generic	1457.49	mm	mBOM
1.14	10AWG-BRN.Wire33 - 10AWG-BRN [REV:A]	Generic	1457.26	mm	mBOM



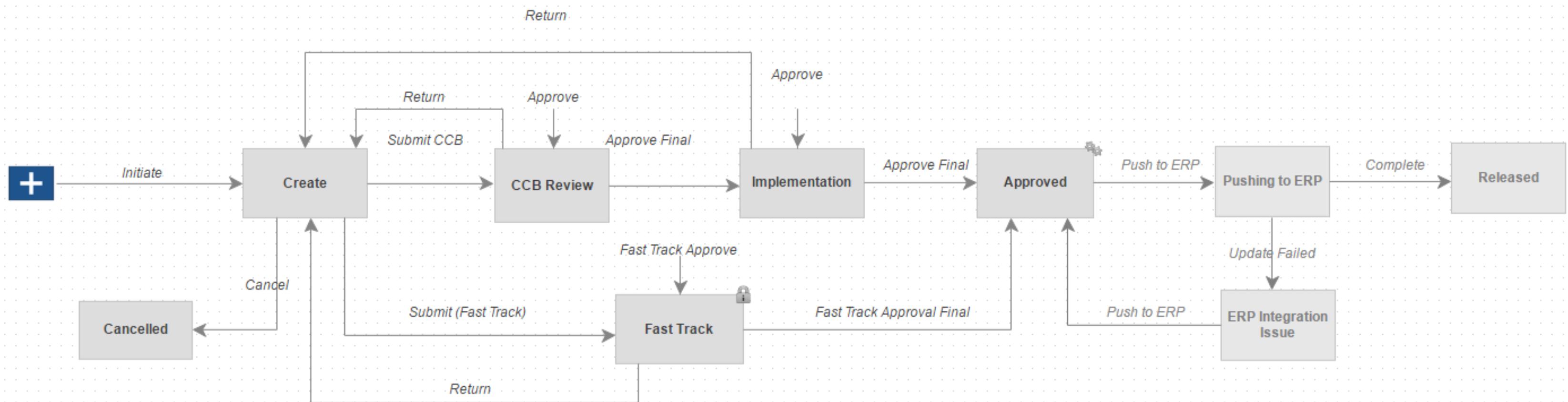


# Controlling the Release Process – Change Orders

# The Fusion Lifecycle, Lifecycle



# An Engineering Change Process



Home > Items and BOMs

## ASY00057.Harness2 - HARNESS ASSEMBLY [REV:w]

Pending | Working

Details Attachments Bill of Materials

Where Used

Related Changes

Associated Design Reviews

Milestones

Change Log

Edit

Add

Remove

...

Views: Default View Full



Default View Full as of Today using the Released Revisions configuration

#	Descriptor	Material	Quantity	Units	Lifecycle
0.0	ASY00057.Harness2 - HARNESS ASSEMBLY [REV:w]		0.00		Working
1.1	10AWG-RED.Wire4 - 10AWG-RED [REV:A]	Generic	400.00	mm	mBOM
1.2	10AWG-RED.Wire8 - 10AWG-RED [REV:A]	Generic	150.00	mm	mBOM
1.3	10AWG-RED.Wire11 - 10AWG-RED [REV:A]	Generic	425.00	mm	mBOM
1.4	10AWG-RED.Wire12 - 10AWG-RED [REV:A]	Generic	400.00	mm	mBOM
1.5	10AWG-GRY.Wire17 - 10AWG-GRY [REV:A]	Generic	350.00	mm	mBOM
1.6	10AWG-GRY.Wire20 - 10AWG-GRY [REV:A]	Generic	200.00	mm	mBOM
1.7	10AWG-BLU.Wire23 - 10AWG-BLU [REV:A]	Generic	147.30	mm	mBOM
1.8	10AWG-GRN.Wire25 - 10AWG-GRN [REV:A]	Generic	158.32	mm	mBOM
1.9	10AWG-ORG.Wire22 - 10AWG-ORG [REV:A]	Generic	174.19	mm	mBOM
1.10	10AWG-BLU.Wire28 - 10AWG-BLU [REV:A]	Generic	66.11	mm	mBOM
1.11	10AWG-BRN.Wire29 - 10AWG-BRN [REV:A]	Generic	42.14	mm	mBOM
1.12	10AWG-GRN.Wire30 - 10AWG-GRN [REV:A]	Generic	65.80	mm	mBOM
1.13	10AWG-BLU.Wire32 - 10AWG-BLU [REV:A]	Generic	1457.49	mm	mBOM
1.14	10AWG-BRN.Wire33 - 10AWG-BRN [REV:A]	Generic	1457.26	mm	mBOM



Home > Change Orders

## CO000023 - Amended harness with additional crimps and altered wire lengths.

Create

Details

Affected Items

Material Disposition

Attachments

Approval Workflow

Workflow

Milestones

Change Log

Edit

Add

Remove

...

#	Item	Lifecycle	Effectivity	From	To
1	ASY00057.Harness2 - HARNESS ASSEMBLY [REV:w]	Production Revision	05/06/2017	B	C



 Locked |  Fast Track

## Details

## Affected Items

[Details](#)

## Affected Items

## Material Disposition

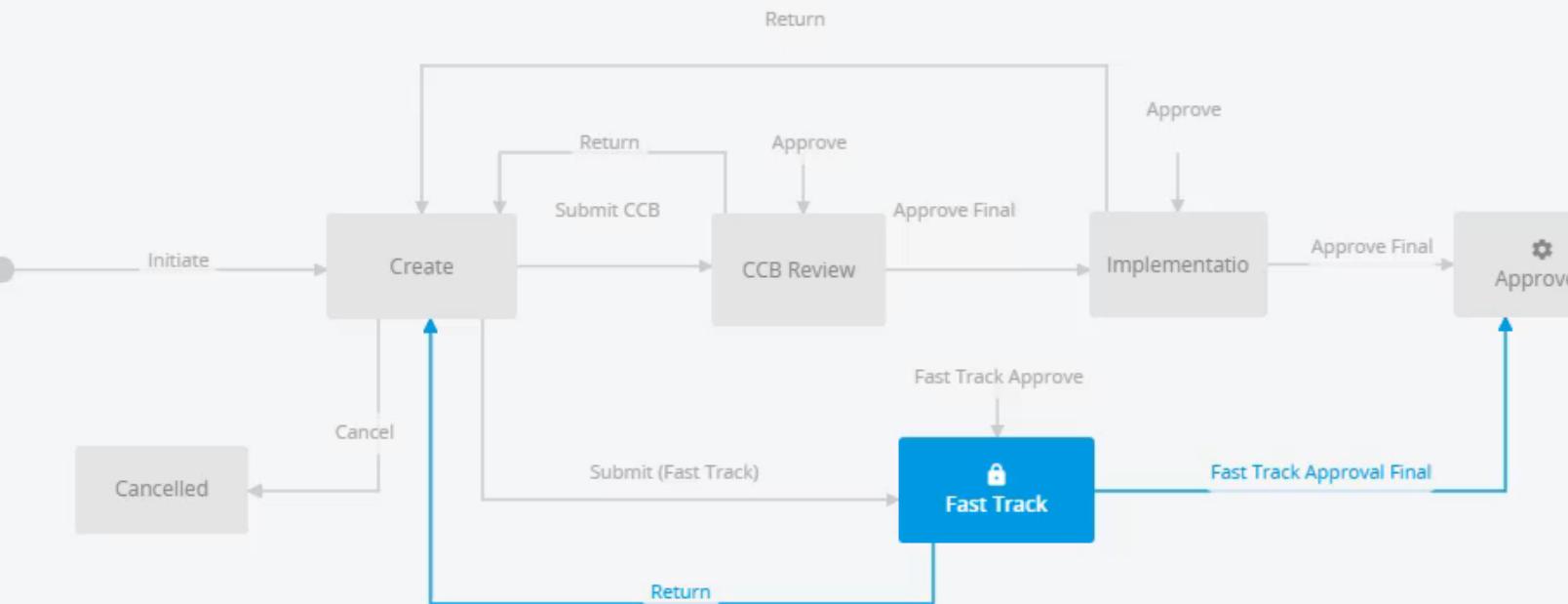
## Attachment

Approval Workflow

## Workflow

## Milestone:

## Change Log



# The Product BoM



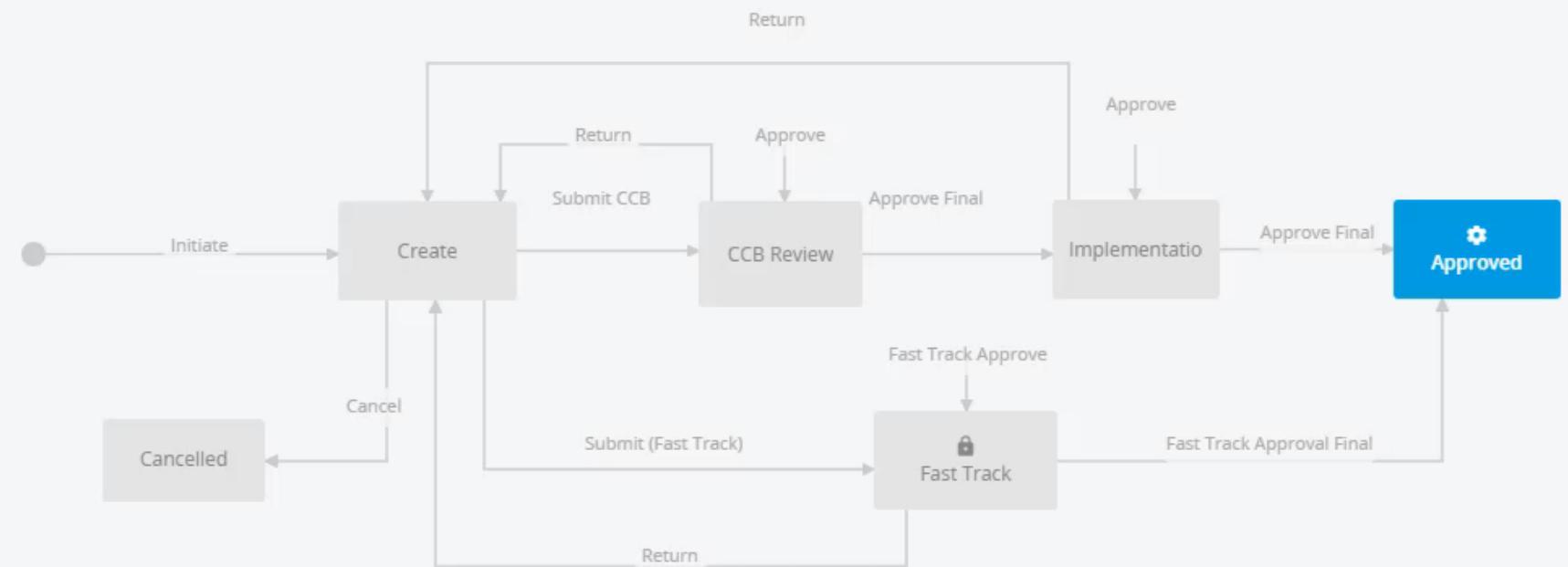
Home > Change Orders

^ v ★ Actions

## CO000023 - Amended harness with additional crimps and altered wire lengths.

Locked | Approved

Details Affected Items Material Disposition Attachments Approval Workflow Workflow Milestones Change Log



Fusion Lifecycle x Fusion Lifecycle x d2m3 x

Secure | https://d2m3eaves.autodeskplm360.net/plm/workspaces/57/items/bom/nested?view=split&tab=bom&mode=view&itemId=urn%60adsk,plm%60tenant,workspace,item%60D2M3EAVES,57,17126

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# AUTODESK FUSION - Lifecycle

Home > Items and BOMs

## ASY00070 - MDF CNC LASER ENGRAVER [REV:w]

Pending | Unreleased

Item Descriptor	Item Number	Details	Attachments	Bill of Materials	Where Used	Related Changes	Associated Design Reviews	Milestones	Change Log
ASY00070 - MDF CNC LASER ENGRAVER	ASY00070	<a href="#">Edit</a>	<a href="#">Add</a>	<a href="#">Remove</a>	<a href="#">...</a>				
ASY00069 - Large BED CNC LASER ENGRAVER	ASY00069								
ASY00068 (A) - CNC Aluminium Base LASER ENGR...	ASY00068 (A)								
ASY00057 - Medium Sized CNC LASER ENGRAVER	ASY00057								

Default View Full as of Today using the Released Revisions configuration

#	Descriptor	Material	Quantity	Units	Lifecycle
> 1.15	ASY00058 - LASER ACTUATOR [REV:A]		1.00	EA	mBOM
1.16	PRT00149 - ENCLOSURE, BUTTON FACE [REV:A]	MDF Medium Den...	1.00	EA	mBOM
1.17	Arduino - ARDUINO UNO [REV:A]	Generic	1.00	EA	mBOM
1.18	Laser Diode Module - 50mW LASER MODULE [REV:A]	Generic	1.00	EA	mBOM
1.19	Switching power supply - STEP AP214 [REV:A]	Generic	1.00	EA	mBOM
1.20	Emergency stop switch - E-STOP SWITCH [REV:A]	Generic	1.00	EA	mBOM
1.21	ON_Off Switch - STEP AP203 [REV:A]	Generic	1.00	EA	mBOM
> 1.22	ASY00063 - RED PUSH BUTTON [REV:A]		1.00	EA	mBOM
> 1.23	ASY00064 - GREEN PUSH BUTTON [REV:A]		1.00	EA	mBOM
> 1.24	ASY00065 - YELLOW PUSH BUTTON [REV:A]		1.00	EA	mBOM
1.25	PRT00153 - TOP HAT [REV:A]	MDF Medium Den...	1.00	EA	mBOM
1.26	STEPPER DRIVER - ULN2003 DRIVER BOARD [REV:A]	Generic	2.00	EA	mBOM
> 1.27	ASY00057.Harness2 - HARNESS ASSEMBLY [REV:C]		1.00	EA	mBOM
1.28	Screw GB 823 M5 x 14 - Cross recessed small pan head screws ...		1.00	EA	mBOM
1.29	Screw GB 823 M5 x 20 - Cross recessed small pan head screws ...		15.00	EA	mBOM

Views: Default View Full

05/06/2017

Fusion Lifecycle x d2m3

Secure | https://d2m3eaves.autodeskplm360.net/plm/workspaces/57/items/bom/nested?view=split&tab=bom&mode=view&itemId=urn%60adsk,plm%60tenant,workspace,item%60D2M3EAVES,57,17126

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# AUTODESK FUSION - Lifecycle

Home > Items and BOMs

**ASY00070 - MDF CNC LASER ENGRAVER** [REV:w] ▾

Pending | Unreleased

Details Attachments Bill of Materials Where Used Related Changes Associated Design Reviews Milestones Change Log

Views: Default View Full ▾

Item Descriptor ▾ Item Number

Item Descriptor	Item Number
ASY00070 - MDF CNC LASER ENGRAVER	ASY00070
ASY00069 - Large BED CNC LASER ENGRAVER	ASY00069
ASY00068 (A) - CNC Aluminium Base LASER ENGR...	ASY00068 (A)
ASY00057 - Medium Sized CNC LASER ENGRAVER	ASY00057

Default View Full as of Today using the Released Revisions configuration

#	Descriptor	Material	Quantity	Units	Lifecycle
0.0	ASY00070 - MDF CNC LASER ENGRAVER [REV:w]		0.00		Working
1.1	PRT00131 - BASE PLATE [REV:A]	MDF Medium Den...	1.00	EA	mBOM
1.2	PRT00143 - CASE - LEFT SIDE [REV:A]	MDF Medium Den...	1.00		mBOM
	LEFT SIDE [REV:A]	MDF Medium Den...	1.00		mBOM
	SHAF...	MDF Medium Den...	1.00		mBOM
1.3	PRT00140 - ENCLOSURE COVER [REV:A]	MDF Medium Den...	1.00	EA	mBOM
1.4	PRT00141 - ENCLOSURE LID [REV:A]	MDF Medium Den...	1.00	EA	mBOM
1.5	PRT00138 - X-AXIS SHAFT SUPPORT W/MOTOR [REV:A]	MDF Medium Den...	1.00	EA	mBOM
1.6	PRT00142 - ENCLOSURE RIGHT SIDE [REV:A]	MDF Medium Den...	1.00	EA	mBOM
1.7	NEMA 17 with T5 Pulley - MOTOR [REV:A]		1.00	EA	mBOM
1.8	PRT00146 - Threaded rods [REV:A]	Steel, Mild	1.00	EA	mBOM
1.9	PRT00147 - ASY00059 - 12MM SHAFT SUPPORT [REV:A]		4.00	EA	mBOM
1.10	PRT00148 - M10 THREADED BAR [REV:A]	Generic	2.00	EA	mBOM
1.11	ASY00062 - MOTOR [REV:A]		1.00	EA	mBOM
1.12	SKF B7200 BE - Single row angular contact ball bearings SK...		1.00	EA	mBOM
1.13					
1.14					




Excel

06/06/2017

# Item & BoM Management with Lifecycle Control

Comprehensive information about component parts and assemblies is managed in a single, secure environment.

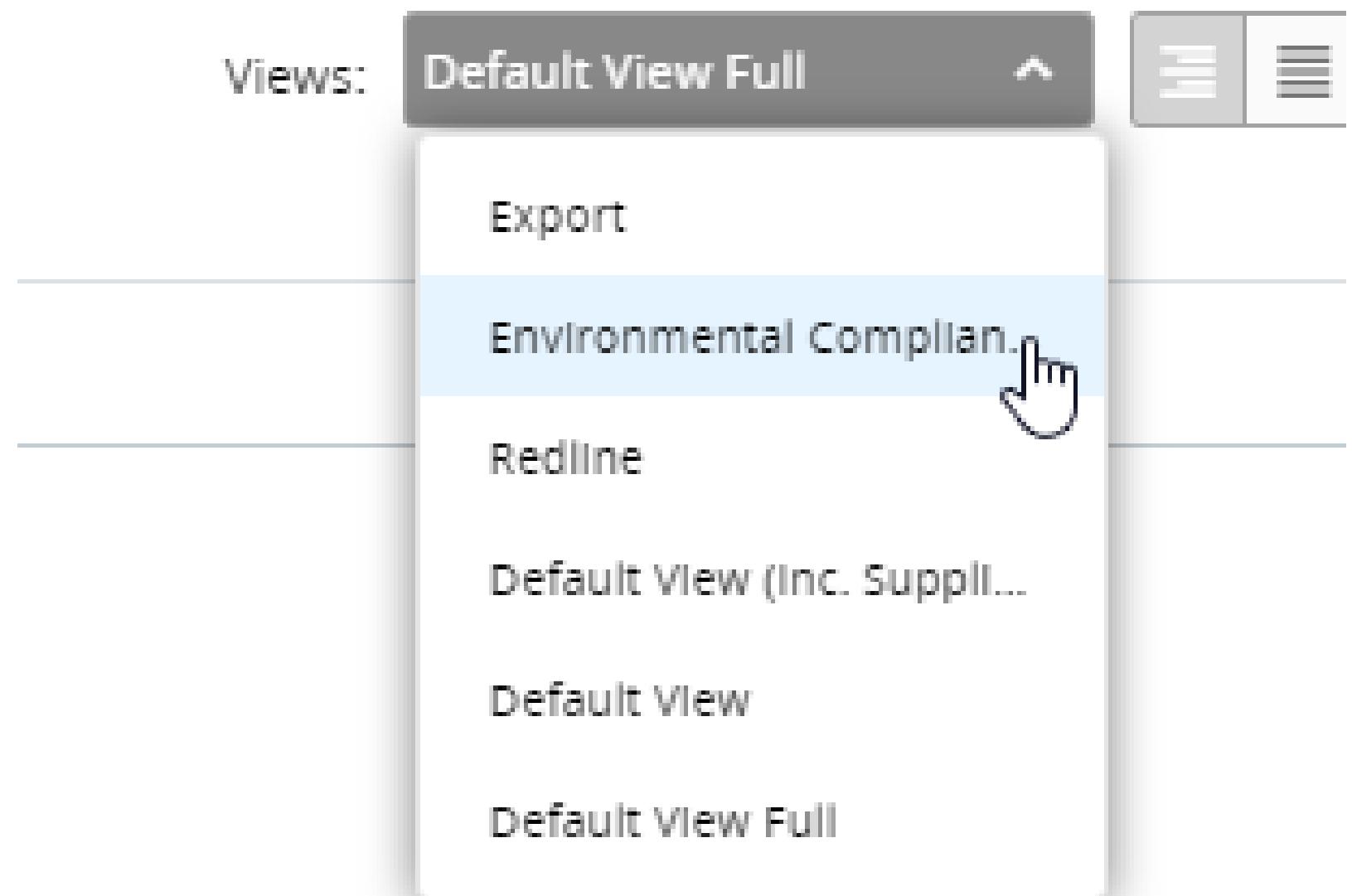
- Enable stakeholders to quickly and easily find and understand items
- Revision control ensures everyone is referencing the correct version
- Reduce the risk of downstream errors and re-work.

#	Descriptor	Material
▼ 0.0	ASY00070 - MDF CNC LASER ENGRAVER [REV:w]	
1.1	PRT00131 - BASE PLATE [REV:A]	MDF Medium Density Fiberboard
1.2	PRT00143 - CASE - LEFT SIDE [REV:A]	MDF Medium Density Fiberboard
1.3	PRT00144 - CASE - LEFT SIDE [REV:A]	MDF Medium Density Fiberboard
1.4	PRT00137 - X-AXIS SHAFT SUPPORT [REV:A]	MDF Medium Density Fiberboard
1.5	PRT00132 - REAR COVER [REV:A]	MDF Medium Density Fiberboard
1.6	PRT00141 - ENCLOSURE LID [REV:A]	MDF Medium Density Fiberboard
1.7	PRT00138 - X-AXIS SHAFT SUPPORT W/MOTOR [REV:A]	MDF Medium Density Fiberboard
1.8	PRT00142 - ENCLOSURE RIGHT SIDE [REV:A]	MDF Medium Density Fiberboard
▼ 1.9	NEMA 17 with T5 Pulley - MOTOR [REV:A]	
2.1	Base - MOTOR BODY_2 [REV:A]	solidworks materials   Acero aleado
2.2	Cuerpo - MOTOR BODY_1 [REV:A]	solidworks materials   Acero aleado
2.3	Tapa - TAPA [REV:A]	solidworks materials   Acero aleado
2.4	Eje - MOTOR BODY [REV:A]	solidworks materials   Acero aleado
1.10	PRT00146 - Threaded rods [REV:A]	Steel, Mild
▼ 1.11	ASY00059 - 12MM SHAFT SUPPORT [REV:A]	
2.1	SHF12 - SHAFT FITTING [REV:A]	Aluminum
2.2	ISO 4762 - M3 x 10 - Hexagon Socket Head Cap Screw [REV:A]	
1.12	PRT00148 - M10 THREADED BAR [REV:A]	Generic

# Configurable, context-specific BoM views

Multiple, configurable views of BoM structures can easily be defined.

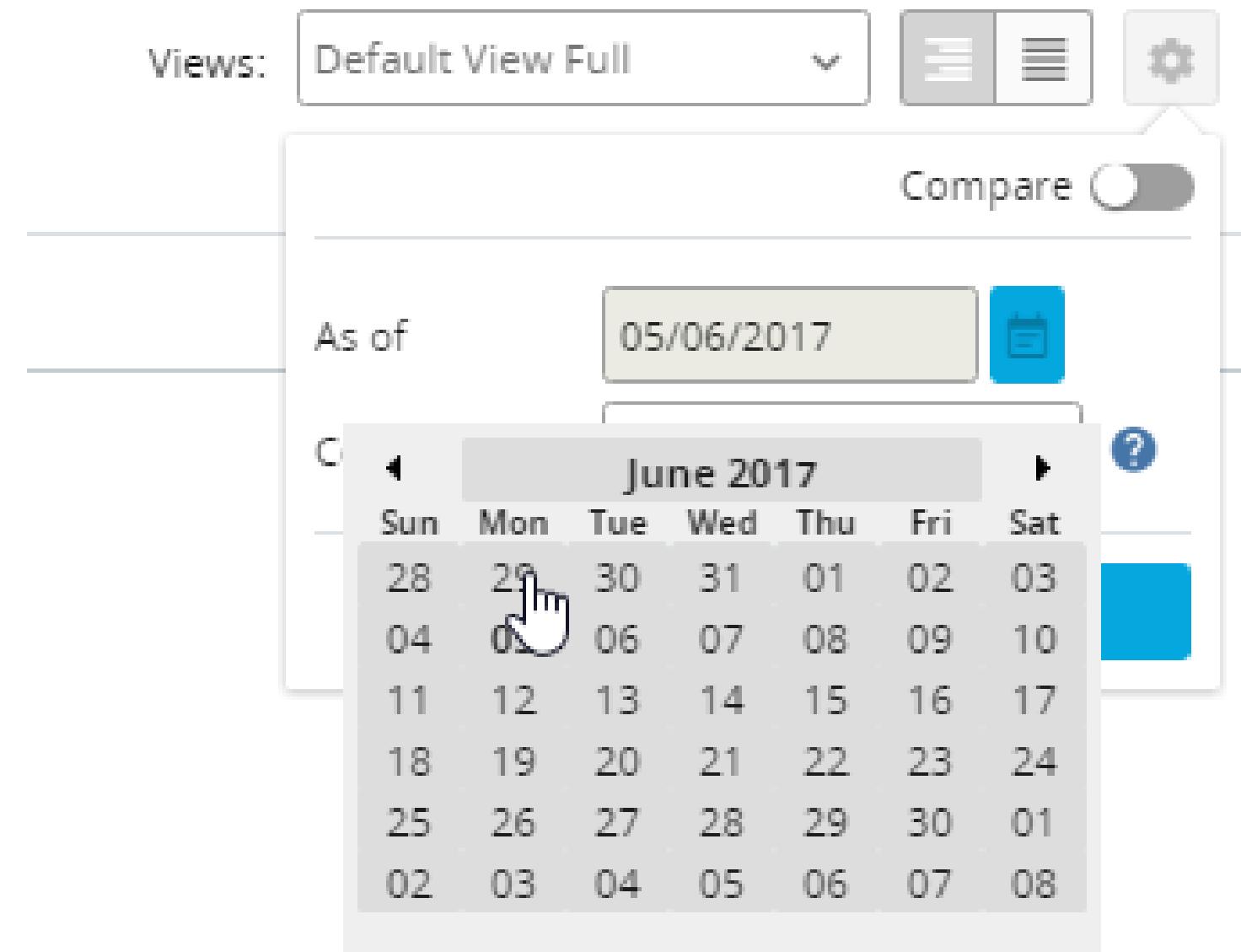
- Enables users to view BoMs in the right context, viewing only relevant information to them
- Provides stakeholders across the organization with the real-time product information needed to make accurate decisions



# Revision Effectivity

Components and sub-assemblies added to a BoM can be made effective from a specific date.

- New versions of an existing part can be phased in on a future date for easier production planning
- View a BoM configuration as active on a historic date offering an aspect of traceability
- Determine exactly what was manufactured or delivered on a particular day



# BoM Comparison

Easily perform BoM comparisons on different revisions and configurations

- Quickly identify what's changed when releasing a new version of your product
- The BoM compare features offers an easy-to-understand, graphical indication of differences
- Meet compliance requirements by analysing previous iterations and history of a product

		Descriptor	Material	Quantity	Units	Lifecycle
Comparing: ASY00057.Harness2 - HARNESS ASSEM... revision: C Against: ASY00057.Harness2 - HARNESS ASSEM... revision: A					as of Today with Released Revisions as of 04/06/2017 with Released Revisions	
0.0		ASY00057.Harness2 - HARNESS ASSEMBLY [REV:C] <del>ASY00057.Harness2 - HARNESS ASSEMBLY [REV:A]</del>		0.00		mBOM
1.1		10AWG-RED.Wire4 - 10AWG-RED [REV:A]	Generic	400.00	mm	mBOM
1.2		10AWG-RED.Wire8 - 10AWG-RED [REV:A]	Generic	150.00	mm	mBOM
1.3		10AWG-RED.Wire11 - 10AWG-RED [REV:A]	Generic	425.00	mm	mBOM
1.4		10AWG-RED.Wire12 - 10AWG-RED [REV:A]	Generic	400.00	mm	mBOM
1.5		10AWG-GRY.Wire17 - 10AWG-GRY [REV:A]	Generic	350.00	mm	mBOM
1.6		10AWG-GRY.Wire20 - 10AWG-GRY [REV:A]	Generic	200.00	mm	mBOM

# Which means...

Fewer Mistakes...

- And when they happen the impact is reduced...

Increase Competitiveness...

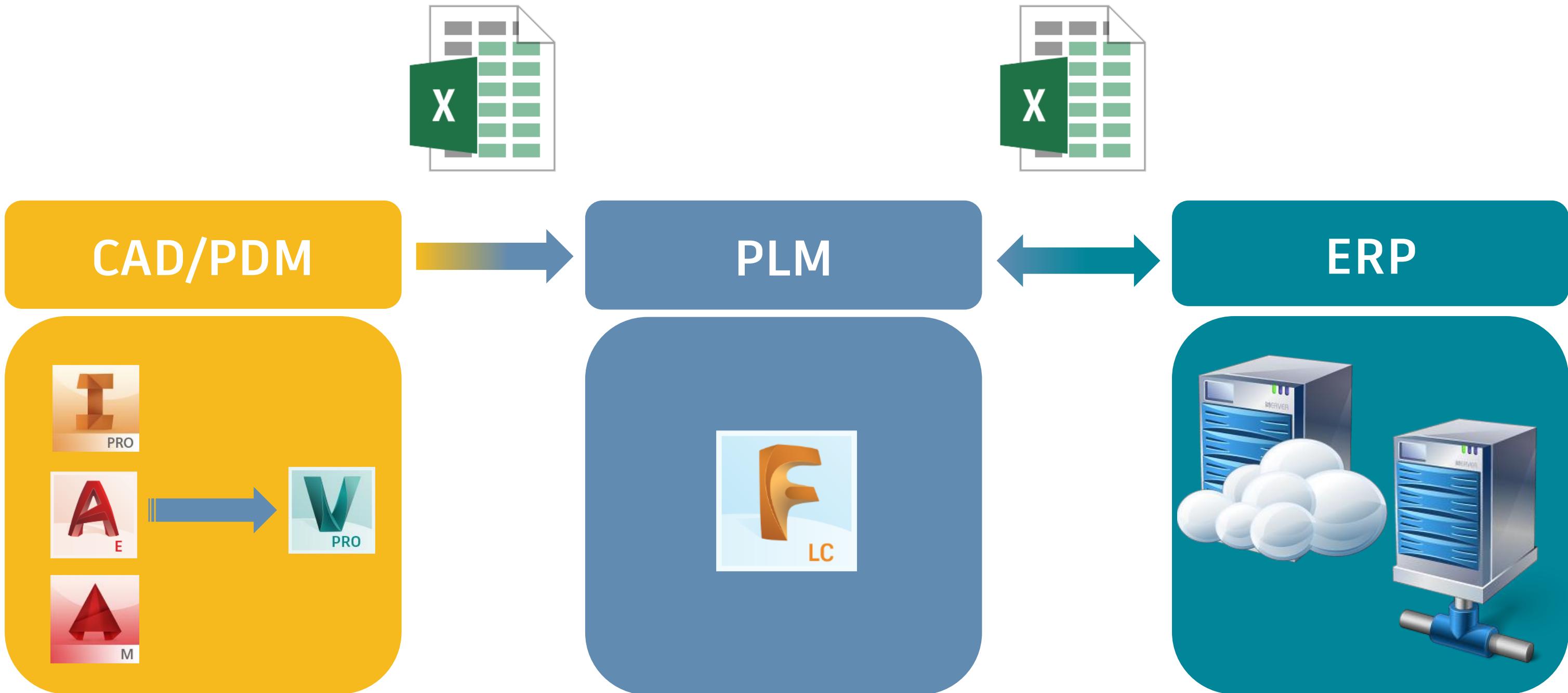
- Be Faster to Market
- And More Profitable
- Offering Better Quality Products





# Accelerate the Process

# Data Integration - Manual Process



# Data Integration – Accelerate the Process

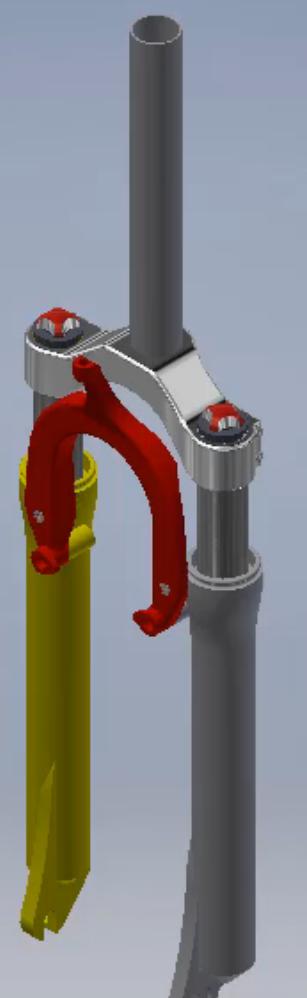


Suspensi... Search Help & Commands... Simon@Cada... File Assemble Simplify Design 3D Model Sketch Inspect Tools Manage View Environments Data Standard Get Started Vault

Autodesk Vault Log In Log Out Open Place Refresh Check In Check Out Data Mapping Vault Options Update Properties Change Category Change State Get Revision Revise Control File Status

Vault

Designs\_2017.ipj (Released) (Simple Release Process)  
Suspension-Fork\_Complete.iam (Work in Progress) (Flexible Release Process)  
Dial-Elastomer.iam (Work in Progress) (Flexible Release Process)  
Dial-Base.upt (Work in Progress) (Flexible Release Process)  
Dial-cap.upt (Work in Progress) (Flexible Release Process)  
Dial-Cover.upt (Work in Progress) (Flexible Release Process)  
Dial.upt (Work in Progress) (Flexible Release Process)  
Elastomer.upt (Work in Progress) (Flexible Release Process)  
Spacer.upt (Work in Progress) (Flexible Release Process)  
Fork-Brace.upt (Work in Progress) (Flexible Release Process)  
Fork-Crown.upt (Work in Progress) (Flexible Release Process)  
Fork-Damper.upt (Work in Progress) (Flexible Release Process)  
Fork-Damper\_MIR.upt (Work in Progress) (Flexible Release Process)  
Fork-Piston.upt (Work in Progress) (Flexible Release Process)  
Fork-Piston\_MIR.upt (Work in Progress) (Flexible Release Process)  
Fork-Slider.upt (Work in Progress) (Flexible Release Process)  
Fork-Slider\_MIR.upt (Work in Progress) (Flexible Release Process)  
Fork-Tube.upt (Work in Progress) (Flexible Release Process)  
Fork-Tube\_MIR.upt (Work in Progress) (Flexible Release Process)  
Head Tube.upt (Work in Progress) (Flexible Release Process)  
NF E 25-125 - M3 x 10.upt (Released) (Simple Release Process)  
UNI 5933 - M4 x 12.upt (Released) (Simple Release Process)



My Home Suspension-Fork...iam

Ready

F Fusion Lifecycle

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AUTODESK FUSION - Lifecycle

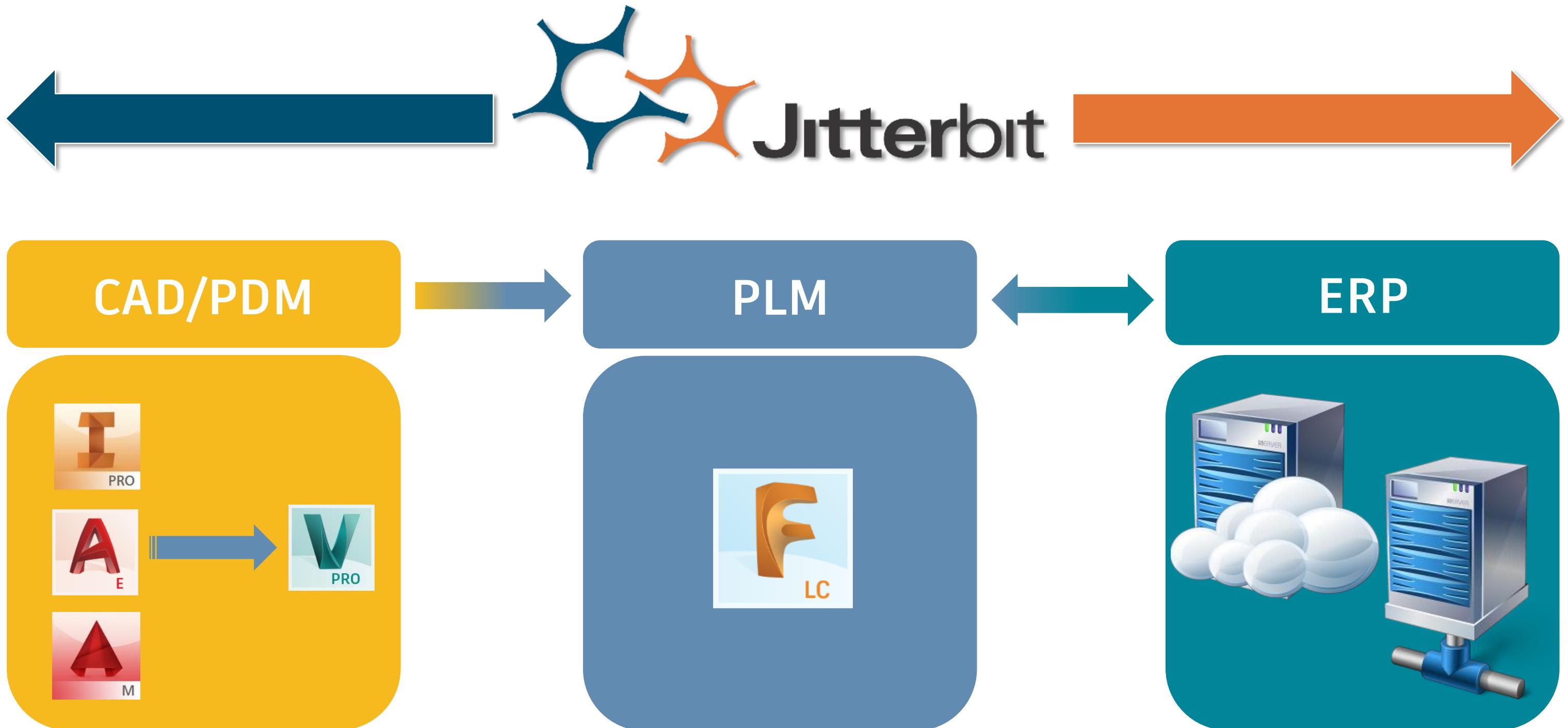
Home > Items and BOMs

Create All Items

Item Descriptor	Item Number	Release Letter	Description	Lifecycle
065-000335 - Panel ...	065-000335		Panel Mount Barrier Ter...	Unreleased
094-000001 - TEST I...	094-000001	A	TEST Item	mBOM
10AWG-BLK.Wire27...	10AWG-BLK.Wire27	B	10AWG-BLK	mBOM
10AWG-BLK.Wire31...	10AWG-BLK.Wire31	B	10AWG-BLK	mBOM
10AWG-BLK.Wire_3...	10AWG-BLK.Wire_38	B	10AWG-BLK	mBOM
10AWG-BLK.Wire_5 ...	10AWG-BLK.Wire_5	A	10AWG-BLK	mBOM
10AWG-BLU.Wire23...	10AWG-BLU.Wire23	A	10AWG-BLU	mBOM
10AWG-BLU.Wire28...	10AWG-BLU.Wire28	A	10AWG-BLU	mBOM
10AWG-BLU.Wire32...	10AWG-BLU.Wire32	A	10AWG-BLU	mBOM
10AWG-BLU.Wire_2...	10AWG-BLU.Wire_24	A	10AWG-BLU	mBOM
10AWG-BLU.Wire_3 ...	10AWG-BLU.Wire_3	A	10AWG-BLU	mBOM
10AWG-BLU.Wire_3...	10AWG-BLU.Wire_36	A	10AWG-BLU	mBOM
10AWG-BRN.Wire29...	10AWG-BRN.Wire29	A	10AWG-BRN	mBOM
10AWG-BRN.Wire33...	10AWG-BRN.Wire33	A	10AWG-BRN	mBOM
10AWG-BRN.Wire_2...	10AWG-BRN.Wire_2	A	10AWG-BRN	mBOM
10AWG-BRN.Wire_3...	10AWG-BRN.Wire_35	A	10AWG-BRN	mBOM
10AWG-GRN.Wire13..	10AWG-GRN.Wire13	A	10AWG-GRN	mBOM
10AWG-GRN.Wire14..	10AWG-GRN.Wire14	A	10AWG-GRN	mBOM

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# Data Integration – Accelerate with Jitterbit

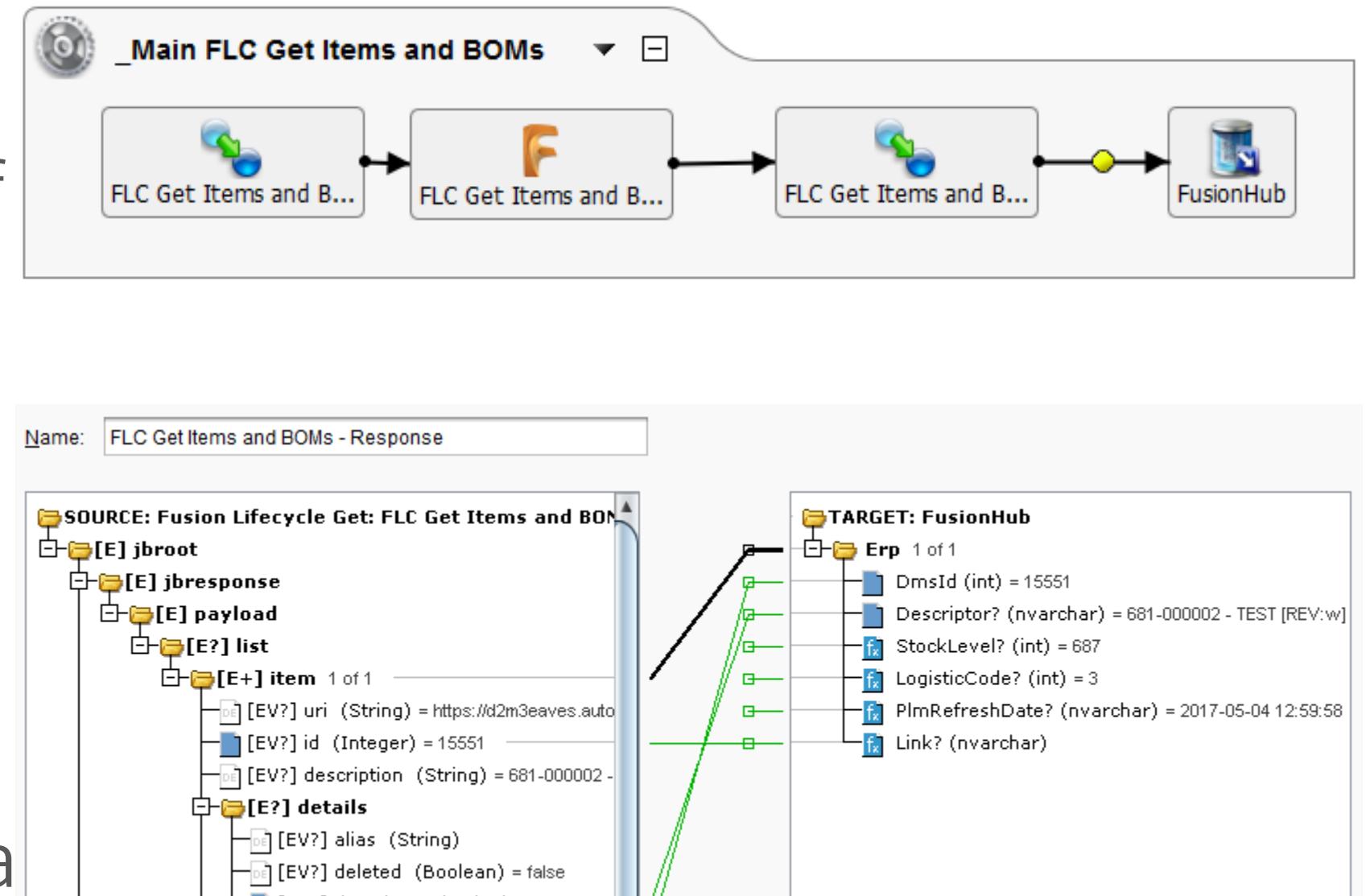


# Jitterbit Integrations



# Jitterbit Integrations

- Cloud based – always on
- Connectors for a wide variety of major applications and both traditional and SaaS
- Used by major organisation to securely move large volumes of data.
- Visual interface to ‘wire up’ data transformations



# Summary

# Accelerating your BoM from Design through to Production.

- Attendees of this class have learnt how to take an Autodesk Inventor BoM and use Fusion Lifecycle to modify, review and release the BoM into production.
- You can identify the importance of accurate BoMs through the design and manufacturing process.
- You can identify the challenges in producing accurate BoM information without automation.
- You now understand how Fusion Lifecycle can reduce mistakes and improve productivity.
- You have learnt what tools and APIs are available to help ensure BoM accuracy and improve automation.

Thank You....



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