

Lifecycle Starts with a BOM

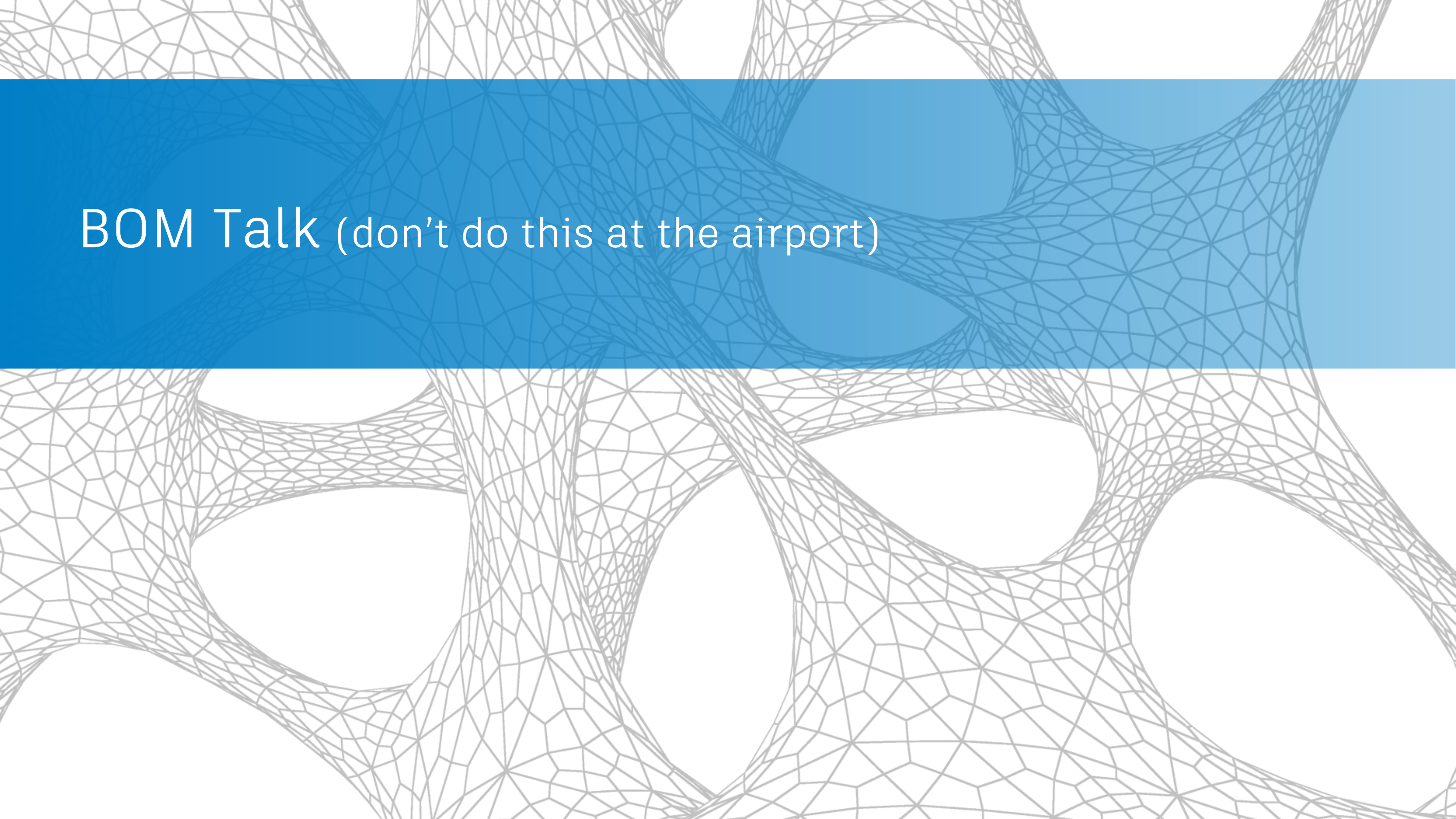
Pete Markovic
Sr. Solutions Consultant

Join the conversation #AU2017



Agenda

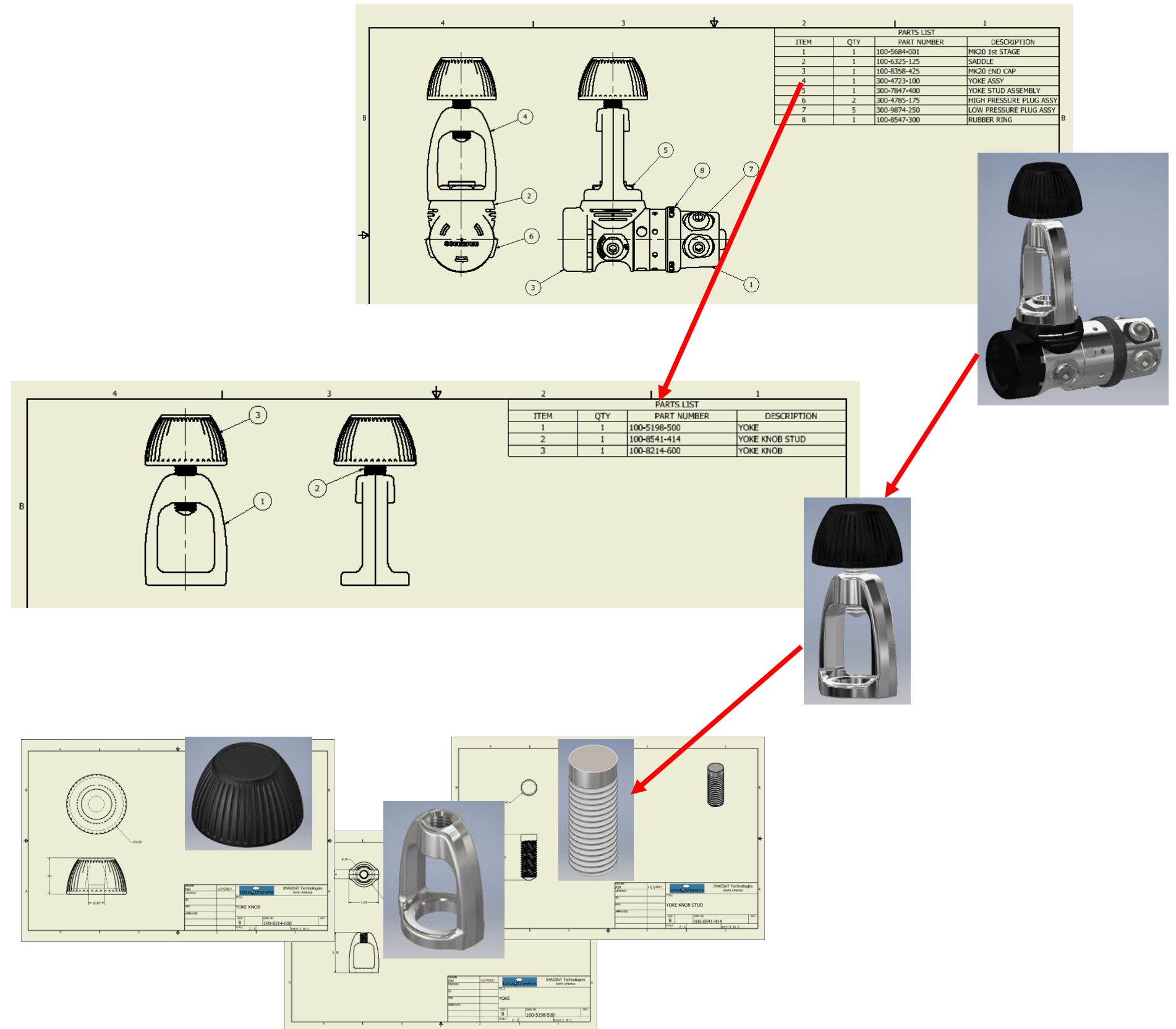
- BOM Talk
- BOM Creation
 - Manual, Import Tools, Cloning & Integration
- BOM Usage
 - BOM Views, Effectivity, Comparison, Roll Ups & Exports
- Advanced Print Views
- Q&A

The background features a complex, grey wireframe mesh that resembles a distorted grid or a complex geometric pattern. A solid blue horizontal band is positioned across the middle of the image, serving as a backdrop for the text.

BOM Talk (don't do this at the airport)

Lifecycle Starts with a BOM

- A bill of materials or product structure (sometimes bill of material, BOM or associated list) 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. (Wikipedia)

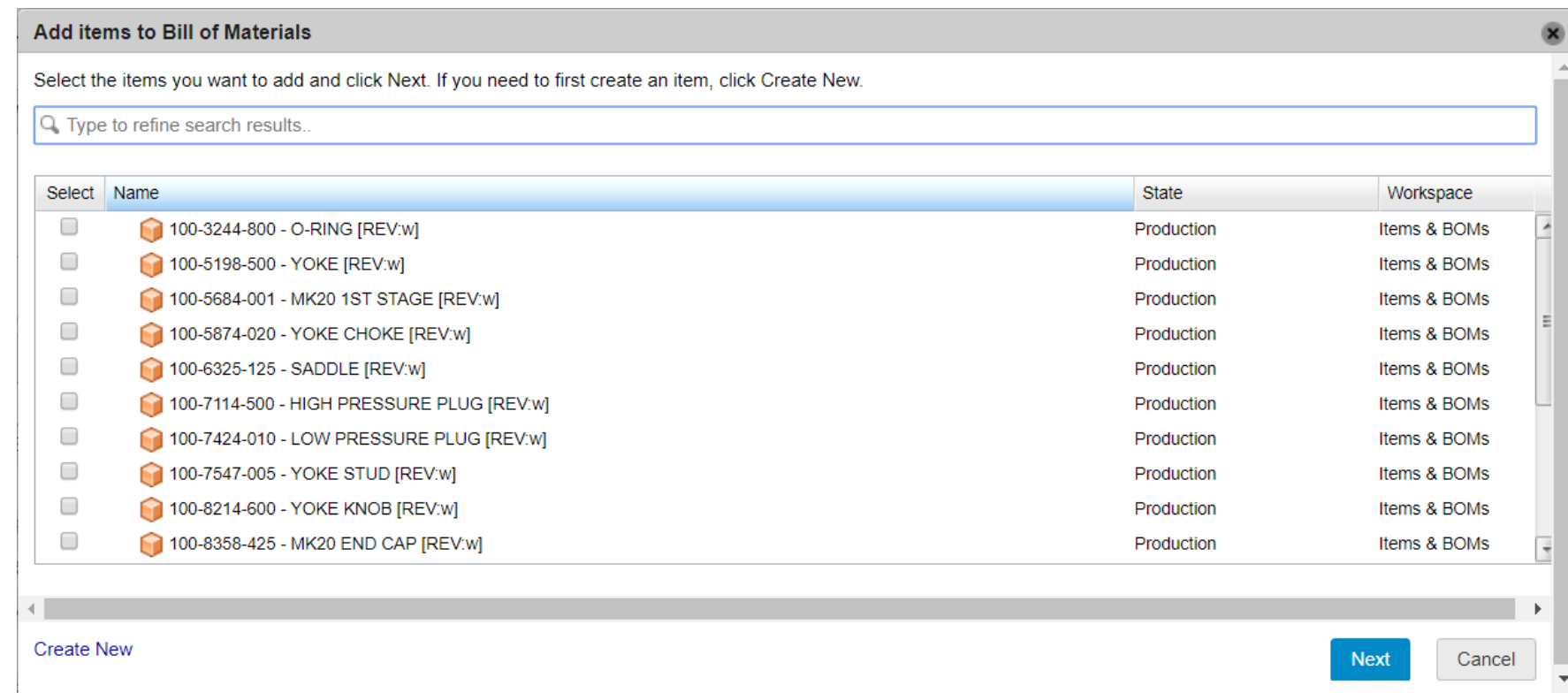
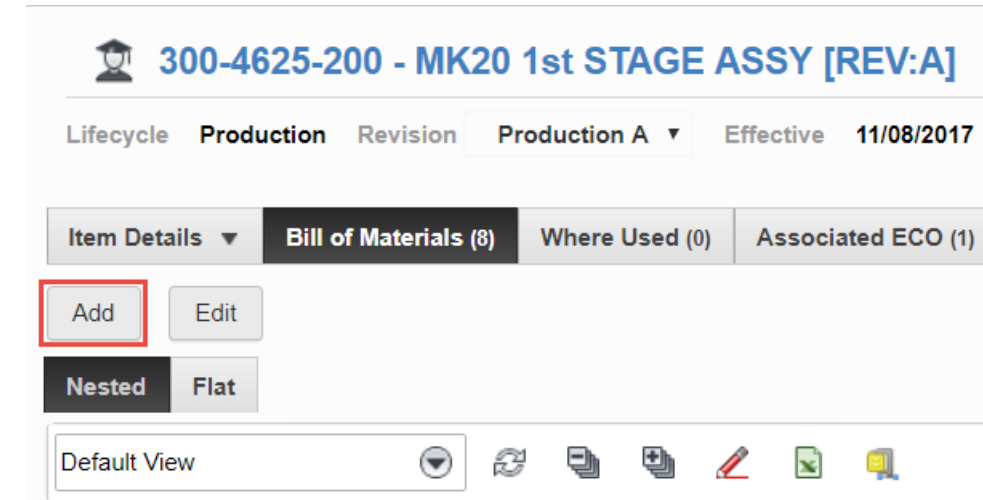




Creating a BOM

Import Tools – Manual

- Small Structures
- Build Bottom Up
- Generally Used for Editing
- Working Versions



Import Tools – Parent Child

- Items must already exist
 - Only the BOM structure is created
- Confusing Format
- Not a common Export
- Lifecycles & Revisions not supported

Parent	Child	Part Number	QTY	Description	Estimated Cost	UOM
888-4625-200		888-4625-200	1	MK20 1st STAGE ASSY - PC		Each
888-4625-200	888-5684-001	888-5684-001	1	MK20 1st STAGE	26.54	Each
888-4625-200	888-6325-125	888-6325-125	1	SADDLE	1.67	Each
888-4625-200	888-8358-425	888-8358-425	1	MK20 END CAP	1.34	Each
888-4625-200	888-8547-300	888-8547-300	1	RUBBER RING	.85	Each
888-4625-200	888-4723-100	888-4723-100	1	YOKE ASSY		Each
888-4723-100	888-5198-500	888-5198-500	1	YOKE	6.57	Each
888-4723-100	888-8541-414	888-8541-414	1	YOKE KNOB STUD	1.86	Each
888-4723-100	888-8214-600	888-8214-600	1	YOKE KNOB	3.98	Each
888-4625-200	888-7847-400	888-7847-400	1	YOKE STUD ASSEMBLY		Each
888-7847-400	888-7547-005	888-7547-005	1	YOKE STUD	4.65	Each
888-7847-400	888-5874-020	888-5874-020	1	YOKE CHOKE	2.85	Each
888-4625-200	888-4785-175	888-4785-175	2	HIGH PRESSURE PLUG ASSY		Each
888-4785-175	888-3244-800	888-3244-800	1	O-RING	0.08	Each
888-4785-175	888-7114-500	888-7114-500	1	HIGH PRESSURE PLUG	1.57	Each
888-4625-200	888-9874-250	888-9874-250	5	LOW PRESSURE PLUG ASSY		Each
888-9874-250	888-7424-010	888-7424-010	1	LOW PRESSURE PLUG	1.18	Each
888-9874-250	888-3244-800	888-3244-800	1	O-RING	0.08	Each

Import Tools – Hierarchy

- Common export from ERP
- Items & BOM relationships can be created on same Import

Hierarchy	Part Number	QTY	Description	Estimated Cost	UOM
1	999-4625-200	1	MK20 1st STAGE ASSY - Hierarchy		Each
1.1	999-5684-001	1	MK20 1st STAGE	26.54	Each
1.2	999-6325-125	1	SADDLE	1.67	Each
1.3	999-8358-425	1	MK20 END CAP	1.34	Each
1.4	999-8547-300	1	RUBBER RING	.85	Each
1.5	999-4723-100	1	YOKE ASSY		Each
1.5.1	999-5198-500	1	YOKE	6.57	Each
1.5.2	999-8541-414	1	YOKE KNOB STUD	1.86	Each
1.5.3	999-8214-600	1	YOKE KNOB	3.98	Each
1.6	999-7847-400	1	YOKE STUD ASSEMBLY		Each
1.6.1	999-7547-005	1	YOKE STUD	4.65	Each
1.6.2	999-5874-020	1	YOKE CHOKE	2.85	Each
1.7	999-4785-175	2	HIGH PRESSURE PLUG ASSY		Each
1.7.1	999-3244-800	1	O-RING	0.08	Each
1.7.2	999-7114-500	1	HIGH PRESSURE PLUG	1.57	Each
1.8	999-9874-250	5	LOW PRESSURE PLUG ASSY		Each
1.8.1	999-7424-010	1	LOW PRESSURE PLUG	1.18	Each
1.8.2	999-3244-800	1	O-RING	0.08	Each

Import Tools – Level

- Preferred Method
- Easy to Format / Easy to Understand
- Items & BOM relationships can be created on same Import
- Supports Revision & Lifecycles
 - Import all Revision History together

Level	Part Number	QTY	Description	Estimated Cost	UOM
0	777-4625-200	1	MK20 1st STAGE ASSY - Level		Each
1	777-5684-001	1	MK20 1st STAGE	26.54	Each
1	777-6325-125	1	SADDLE	1.67	Each
1	777-8358-425	1	MK20 END CAP	1.34	Each
1	777-8547-300	1	RUBBER RING	.85	Each
1	777-4723-100	1	YOKE ASSY		Each
2	777-5198-500	1	YOKE	6.57	Each
2	777-8541-414	1	YOKE KNOB STUD	1.86	Each
2	777-8214-600	1	YOKE KNOB	3.98	Each
1	777-7847-400	1	YOKE STUD ASSEMBLY		Each
2	777-7547-005	1	YOKE STUD	4.65	Each
2	777-5874-020	1	YOKE CHOKE	2.85	Each
1	777-4785-175	2	HIGH PRESSURE PLUG ASSY		Each
2	777-3244-800	1	O-RING	0.08	Each
2	777-7114-500	1	HIGH PRESSURE PLUG	1.57	Each
1	777-9874-250	5	LOW PRESSURE PLUG ASSY		Each
2	777-7424-010	1	LOW PRESSURE PLUG	1.18	Each
2	777-3244-800	1	O-RING	0.08	Each

Cloning

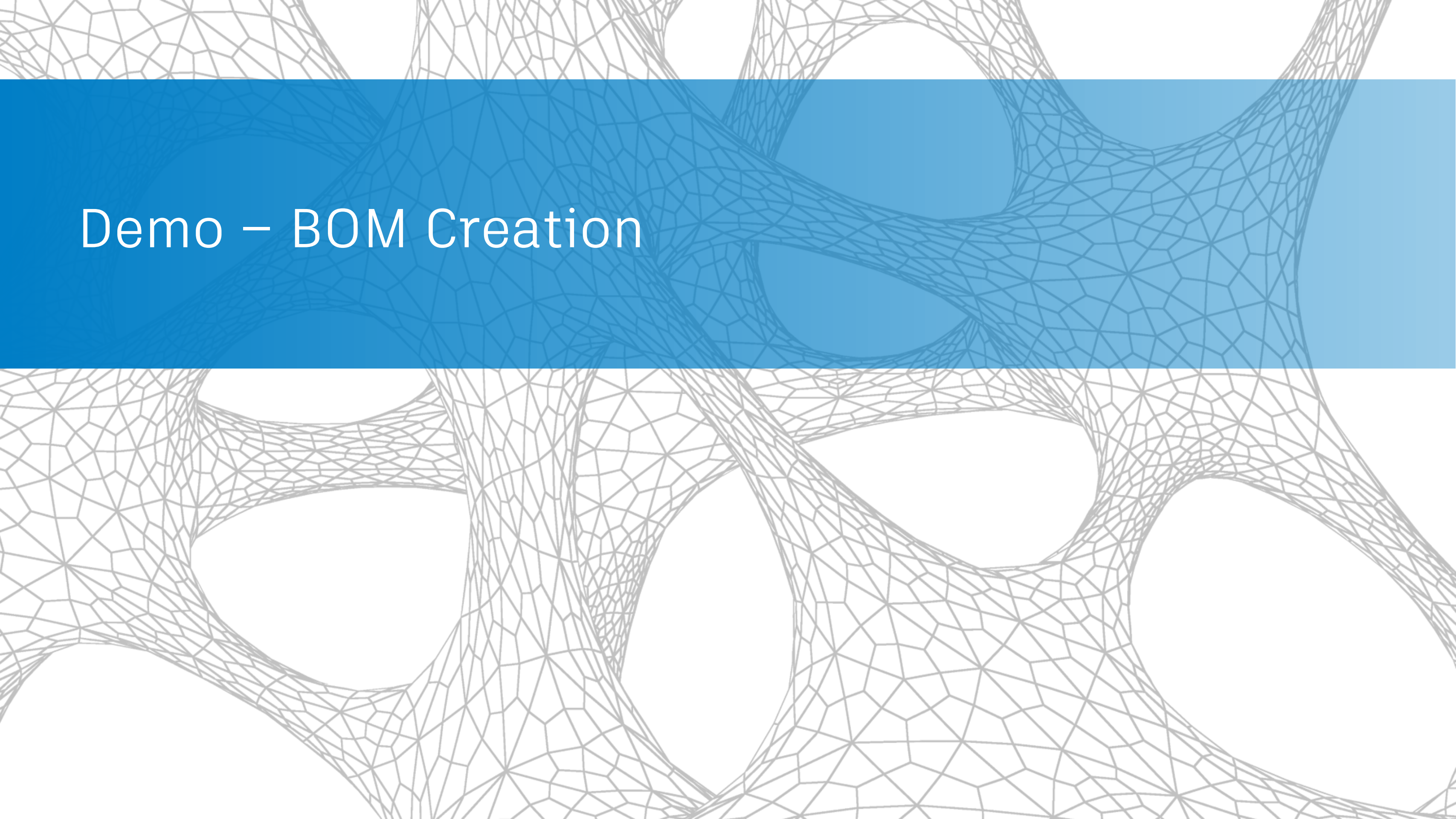
- Not 'Copy Design'
- Top Level Only
 - Clone Bottom Up
- Attachments Optional
- Fast
- On Create Scripts for Part Numbering / Sequencing



Save Save & New Save & Clone Cancel

▼ Cloning Options - Clone 300-4625-200 - MK20 1st STAGE ASSY [REV:A]

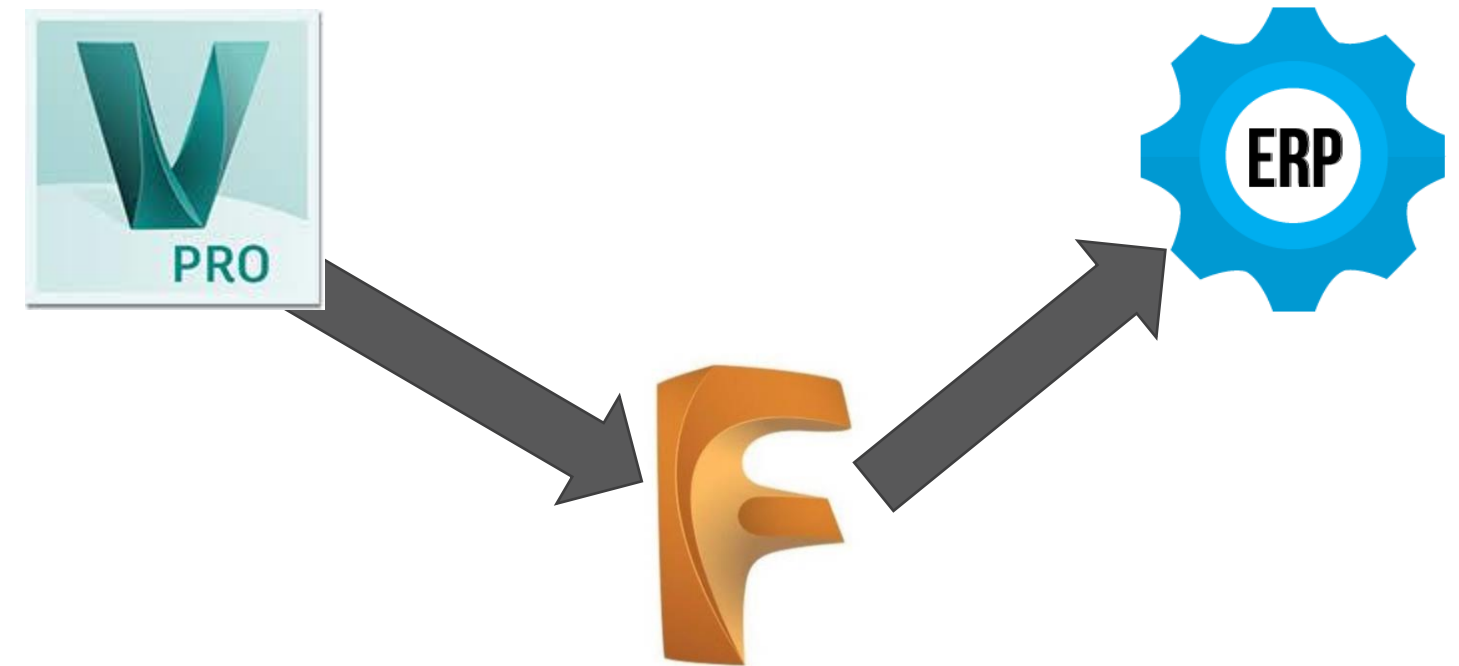
Clone Bill of Materials	☐
Clone Attachments	☐



Demo – BOM Creation

Integration

- The 'Cadillac'
- Least amount of data re-entry and clerical errors
- Trigger points / Events
- Standardized Data Structure
- Validate before Automate

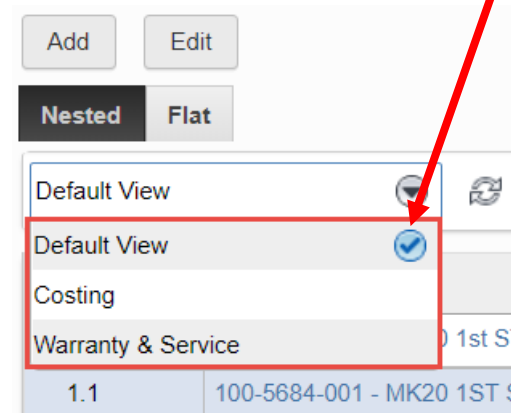




BOM Usage

BOM Views

- Configured by your Admin
- Reduce the amount of visual data
- Rows Don't Change
- Views for Exporting
- Expanded & Flat
- BOM 'only' Fields



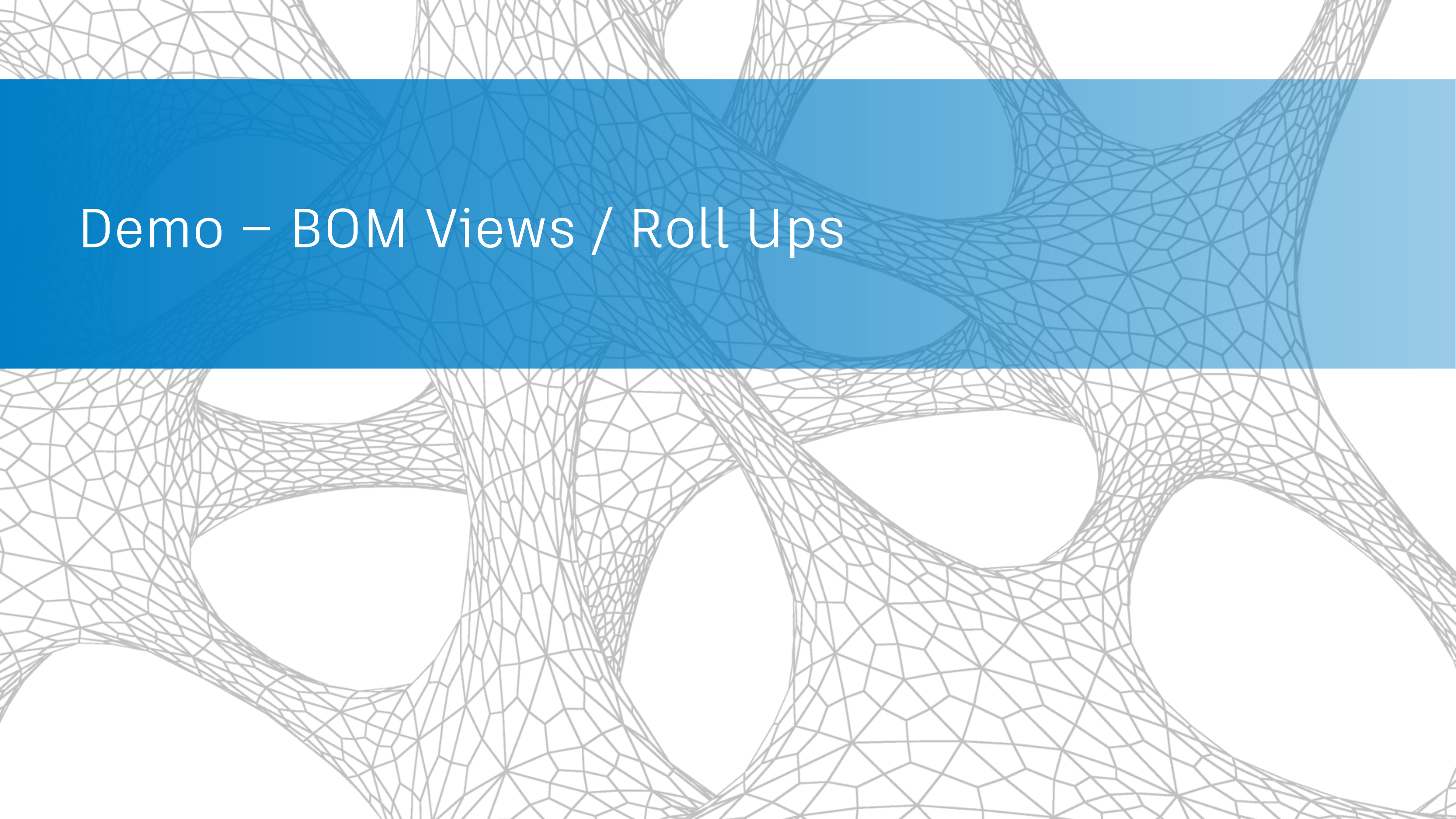
This screenshot shows the BOM view for item 300-4625-200 - MK20 1st STAGE ASSY [REV:A]. The view is set to 'Nested' and 'Default View'. The BOM view as of date is 11/12/2017. The table below lists the components of the assembly.

#	Descriptor	Revision				Lifecycle
0.0	300-4625-200 - MK20 1st STAGE ASSY [REV:A]	A			1	Production
1.1	100-5684-001 - MK20 1ST STAGE [REV:A]	A			1	Production
1.2	100-6325-125 - SADDLE [REV:A]	A			1	Production
1.3	100-8358-425 - MK20 END CAP [REV:A]	A			1	Production
1.4	100-8547-300 - RUBBER RING [REV:A]	A			1	Production
▶ 1.5	300-4723-100 - YOKE ASSY [REV:A]	A			1	Production
▶ 1.6	300-7847-400 - YOKE STUD ASSEMBLY [REV:A]	A			1	Production
▶ 1.7	300-4785-175 - HIGH PRESSURE PLUG ASSY [REV:A]	A			1	Production

BOM Roll Ups

- Commonly used for Costing
- Roll up Values or Booleans declared at the Item level, in upper BOM levels
- Check Boxes (Any Checked / All Checked)
- Compliancy
- Override vs Adjustment

[illegible]

The background features a complex, grey wireframe mesh pattern that resembles a distorted grid or a series of interconnected, flowing shapes. A solid blue horizontal band is positioned across the upper middle of the image, serving as a backdrop for the text.

Demo – BOM Views / Roll Ups

BOM Effectivity

- Can be used to drive ERP Effectivity through Change Management
- Working vs Released
- Controlled by a Change Order
- See past & future BOM configurations/changes
- Revision Pinning
- Traceability

BOM View as of: 11/12/2017

Released Revisions

BOM View as of: 11/12/2017

Released Revisions

Released Revisions

Working Revisions

Pending Changes

All Pending Changes

Released Revisions

Status

Latest

Latest

Latest

Latest

Latest

Latest

Latest

BOM Configurations allow you to control what revisions are shown in the BOM

Released Revisions - view the approved state of the assembly at any point in time

Working Revisions - view the working state of the assembly as of today

Pending Changes - view the state of an assembly assuming the change order it is associated with is approved

All Pending Changes - view the state of an assembly assuming all open change orders in the system are approved

BOM Comparison

- Compare Revisions of the same BOM
- Compare BOMS of two different Items
- Works with Effectivity
- Exportable



Default View

Comparing

300-4625-200 - MK20 1st STAGE ASSY

revision

Production A

as of

11/12/2017

Released Revisions

Comparing

300-4625-200 - MK20 1ST STAGE ASSY

revision

Superseded 2

as of

11/07/2017

Released Revisions

Apply

#		Descriptor	Revision					Lifecycle	Status	Quantity	Units	
0.0		300-4625-200 - MK20 1st STAGE ASSY [REV:A] 300-4625-200 - MK20 1ST STAGE ASSY [REV:s2]	A 2	False	-	1		Production Pre-Release	-	-	-	
1.1		100-5684-001 - MK20 1ST STAGE [REV:A] 100-5684-001 - MK20 1ST STAGE [REV:s1]	A 4	False	-	1		Production Pre-Release	Latest Superseded	1.0	EA	
1.2		100-6325-125 - SADDLE [REV:A] 100-6325-125 - SADDLE [REV:s2]	A 2	False	-	1		Production Pre-Release	Latest Superseded	1.0	EA	
1.3		100-8358-425 - MK20 END CAP [REV:A] 100-8358-425 - MK20 END CAP [REV:s1]	A 4	False	-	1		Production Pre-Release	Latest Superseded	1.0	EA	
1.4		100-8547-300 - RUBBER RING [REV:A]	A	False	-	1		Production	Latest	1.0	EA	



Demo – BOM Effectivity / Compare

BOM Exports

- Export to Excel
- Use BOM Views to control exported information
- Reports
 - Zip & Download
 - Print Packages



AddEdit

NestedFlat

Export

BOM View as of: 11/13/2017

#	Number	Description	Revision	Lifecycle
0.0	300-4625-200	MK20 1st STAGE ASSY	A	Production
1.1	100-5684-001	MK20 1ST STAGE	A	Production
1.2	100-6325-125	SADDLE	A	Production
1.3	100-8358-425	MK20 END CAP	A	Production
1.4	100-8547-300	RUBBER RING	A	Production
1.5	300-4723-100	YOKE ASSY	A	Production

	A	B	C	D	E	F	G	H
1	300-4625-200 - MK20 1st STAGE ASSY [REV:A] View as of 2017-11-13 Configuration: Released Revisions							
2		#	Number	Description	Revision	Lifecycle	Quantity	Units
3	0	0.0	300-4625-200	MK20 1st STAGE ASSY	A	Production	0.0	
4	1	1.1	100-5684-001	MK20 1ST STAGE	A	Production	1.0	EA
5	2	1.2	100-6325-125	SADDLE	A	Production	1.0	EA
6	3	1.3	100-8358-425	MK20 END CAP	A	Production	1.0	EA
7	4	1.4	100-8547-300	RUBBER RING	A	Production	1.0	EA
8	5	1.5	300-4723-100	YOKE ASSY	A	Production	1.0	EA
9	6	2.1	100-5198-500	YOKE	A	Production	1.0	EA
10	7	2.2	100-8541-414	YOKE KNOB STUD	A	Production	1.0	EA
11	8	2.3	100-8214-600	YOKE KNOB	A	Production	1.0	EA
12	9	1.6	300-7847-400	YOKE STUD ASSEMBLY	A	Production	1.0	EA
13	10	2.1	100-7547-005	YOKE STUD	A	Production	1.0	EA
14	11	2.2	100-5874-020	YOKE CHOKE	A	Production	1.0	EA
15	12	1.7	300-4785-175	HIGH PRESSURE PLUG ASSY	A	Production	2.0	EA
16	13	2.1	100-3244-800	O-RING	A	Production	1.0	EA
17	14	2.2	100-7114-500	HIGH PRESSURE PLUG	A	Production	1.0	EA
18	15	1.8	300-9874-250	LOW PRESSURE PLUG ASSY	A	Production	5.0	EA
19	16	2.1	100-3244-800	O-RING	A	Production	1.0	EA
20	17	2.2	100-7424-010	LOW PRESSURE PLUG	A	Production	1.0	EA
21								

The background features a complex, grey wireframe mesh that forms a series of interconnected, flowing, and somewhat chaotic shapes. A solid, medium-blue horizontal band cuts across the middle of the image, providing a clear area for the text.

Advanced Print Views

Advanced Print Views

- Advanced is in the Title
- HTML Experience Req'd
- Start with Basic Print View
- Images require a repository

ScubaPete's Bill of Materials Form

Mon Nov 13 20:11:47 EST 2017

Number		300-4625-200			
Description		MK20 1ST STAGE ASSY			
Unit of Measure		Each			
Cost		69.31 (\$)			
Bill of Materials					
BOM Level	Number	Description	Quantity	Units	Total Cost
1.1	100-5684-001	MK20 1ST STAGE	1.0	EA	28.52 (\$)
1.2	100-6325-125	SADDLE	1.0	EA	1.67 (\$)
1.3	100-8358-425	MK20 END CAP	1.0	EA	1.34 (\$)
1.4	100-8547-300	RUBBER RING	1.0	EA	0.85 (\$)
[+] 1.5	300-4723-100	YOKE ASSY	1.0	EA	15.78 (\$)
2.1	100-5198-500	YOKE	1.0	EA	7.85 (\$)
2.2	100-8541-414	YOKE KNOB STUD	1.0	EA	1.95 (\$)
2.3	100-8214-600	YOKE KNOB	1.0	EA	5.98 (\$)
[+] 1.6	300-7847-400	YOKE STUD ASSEMBLY	1.0	EA	8.70 (\$)
2.1	100-7547-005	YOKE STUD	1.0	EA	5.85 (\$)
2.2	100-5874-020	YOKE CHOKE	1.0	EA	2.85 (\$)
[+] 1.7	300-4785-175	HIGH PRESSURE PLUG ASSY	2.0	EA	3.30 (\$)
2.1	100-3244-800	O-RING	1.0	EA	0.08 (\$)
2.2	100-7114-500	HIGH PRESSURE PLUG	1.0	EA	1.57 (\$)
[+] 1.8	300-9874-250	LOW PRESSURE PLUG ASSY	5.0	EA	6.30 (\$)
2.1	100-3244-800	O-RING	1.0	EA	0.08 (\$)
2.2	100-7424-010	LOW PRESSURE PLUG	1.0	EA	1.18 (\$)
1.9	757-2546-900	MK20 REPAIR MANUAL	1.0	EA	2.85 (\$)

The background features a complex, grey wireframe mesh that resembles a distorted grid or a topographical map. A solid blue horizontal band cuts across the middle of the image. The text 'Q & A' is centered within this band.

Q & A

