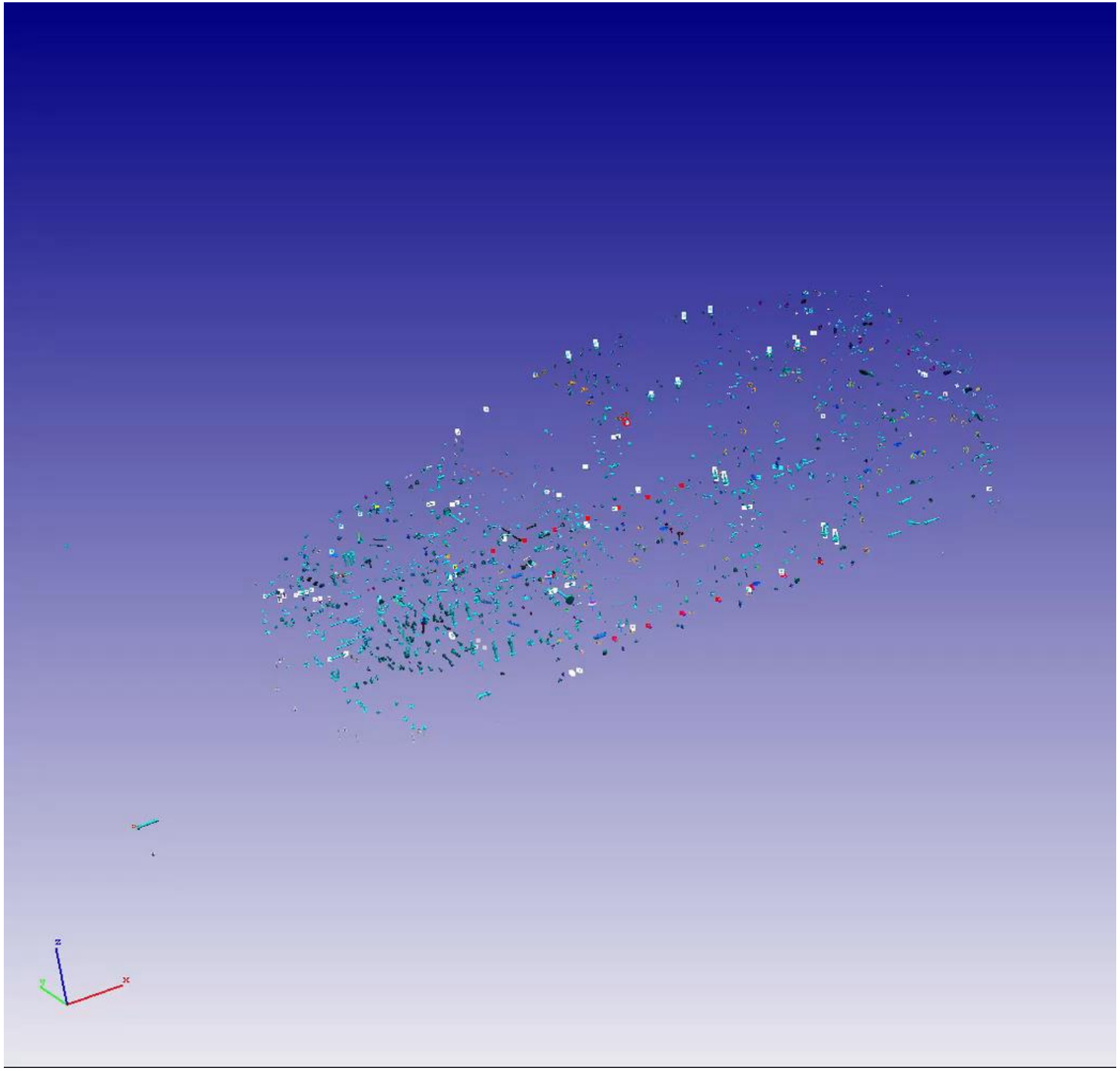
Use Cases for xMCF, Deployment Status & Challenges

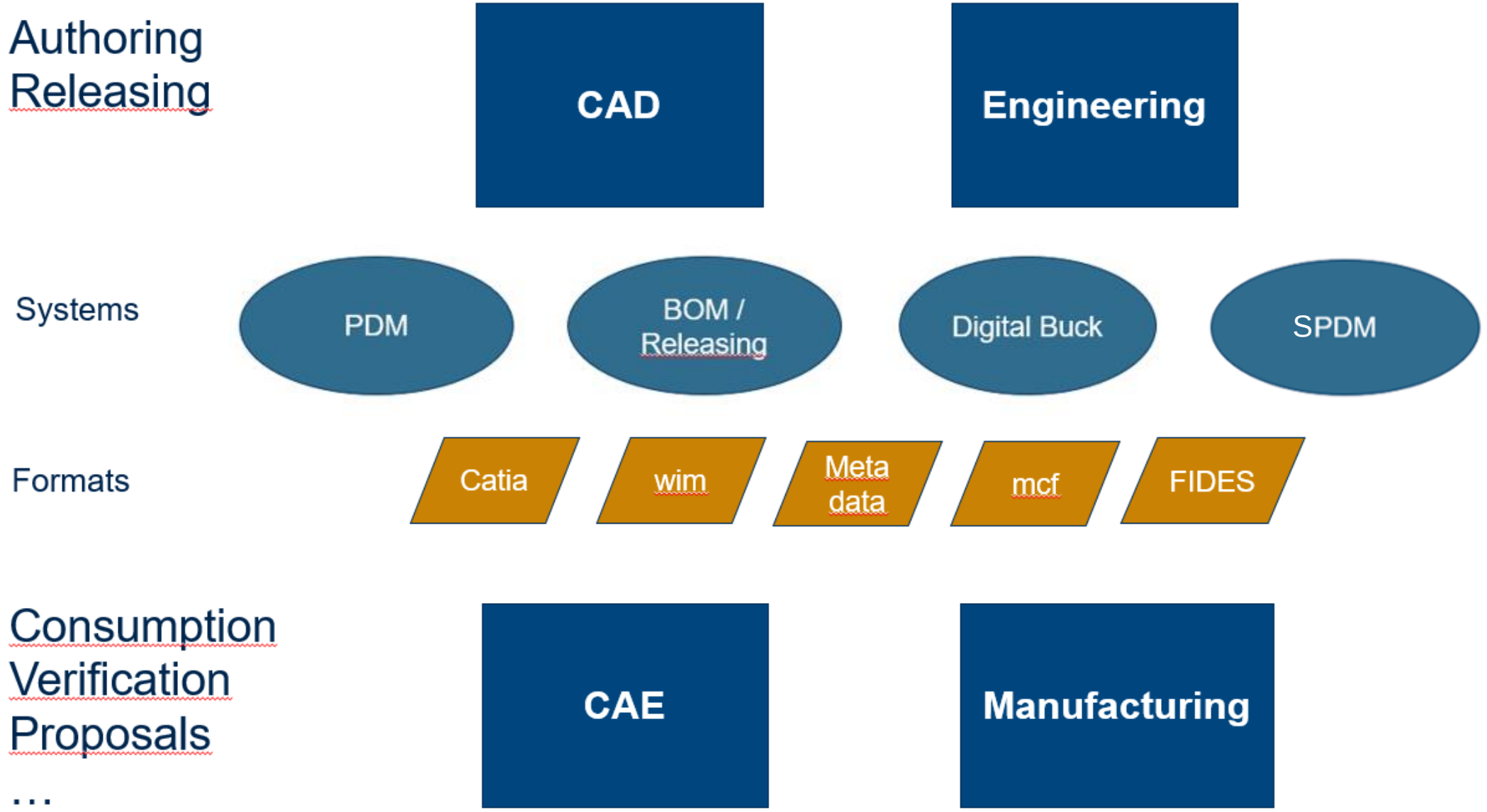
FAT xMCF Workshop, Köln, 11 December 2019

U. Fox, Ford Motor Company

Typical Scene of Vehicle Fasteners

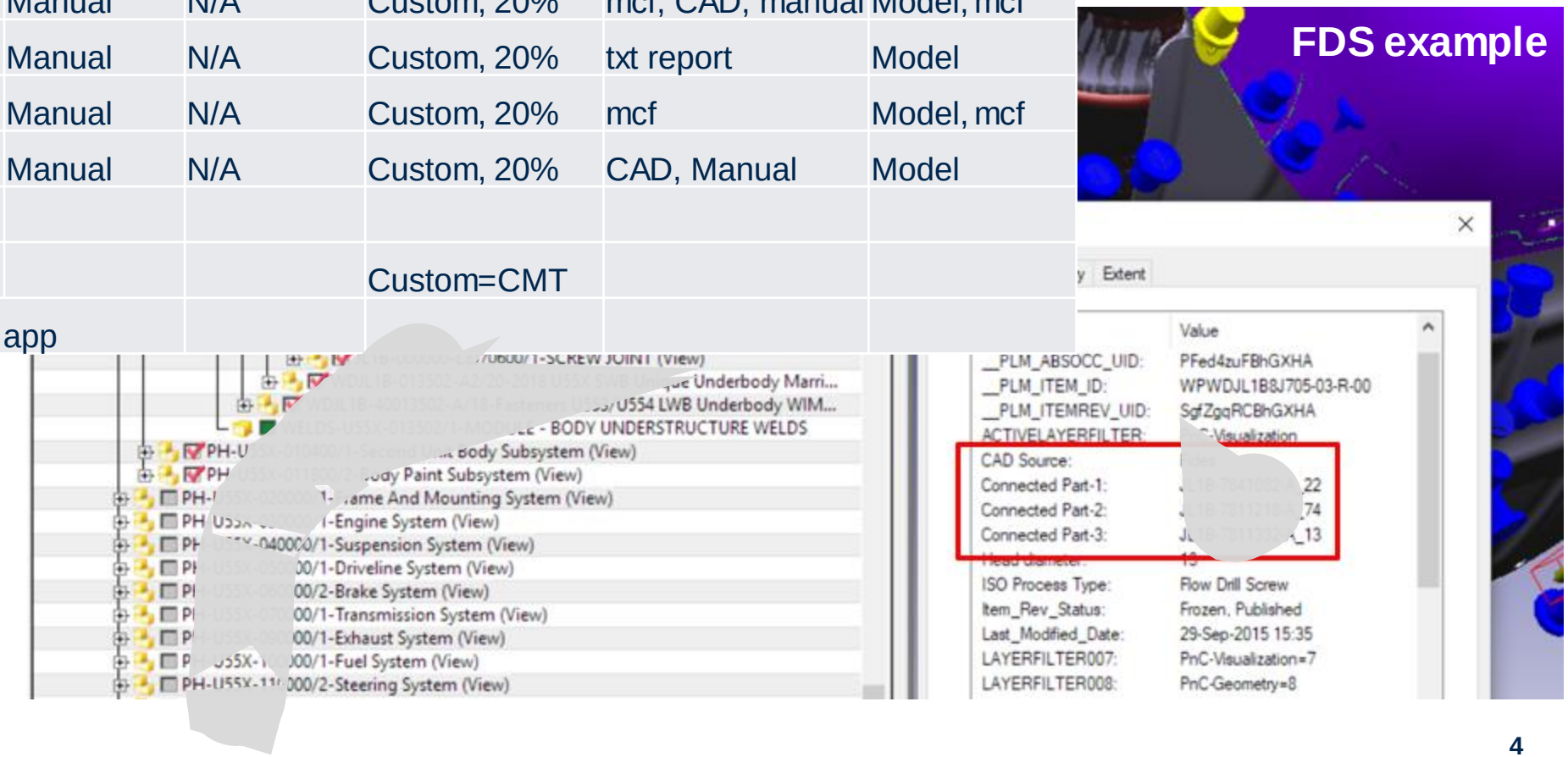


Connection Authoring & Consumption Environment



Current Connection Data Exchange at FMC

	CAD2PDM	CAD2BOM	PDM2BOM	BOM2PDM	PDM2CAE	CAE2CAE
Adhesive	OOTB, 30%	Manual	N/A	Custom, 20%	CAD, Manual	Model
Bolted	OOTB, 30%	Manual	N/A	Custom, 20%	CAD, Manual	Model
FDS	Custom, 80%	Manual	N/A	Custom, 20%	txt report	Model
MIG	Custom, 30%	Manual	N/A	Custom, 20%	mcf, CAD, manual	Model, mcf
Rivet	Custom, 100%	Manual	N/A	Custom, 20%	txt report	Model
Spotweld	Custom, 100%	Manual	N/A	Custom, 20%	mcf	Model, mcf
Clipped	OOTB, 30%	Manual	N/A	Custom, 20%	CAD, Manual	Model
	OOTB=TCIC			Custom=CMT		
	Custom=plmxml app					



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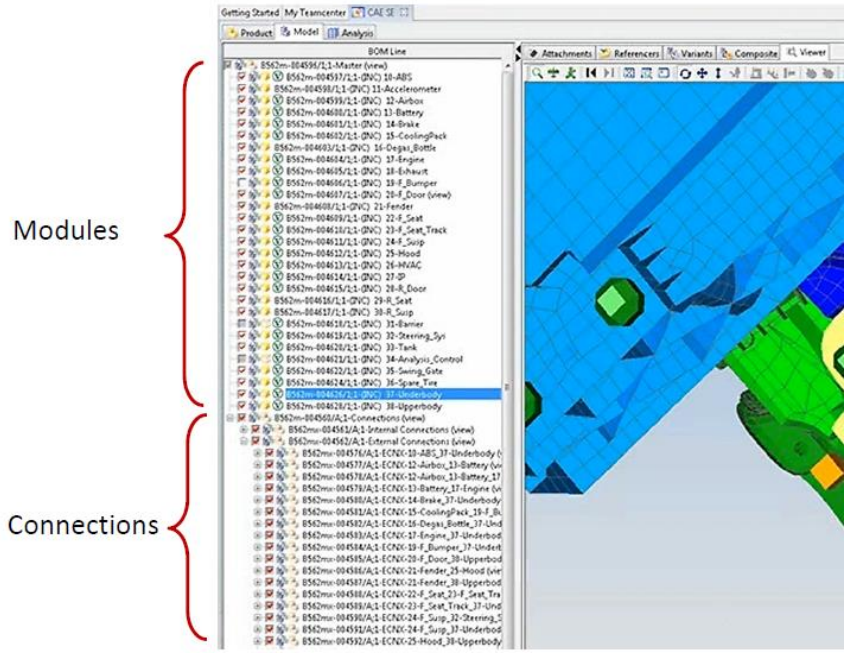
Options to Deploy xMCF Now



Key Connection Authoring Tool Challenges

- Authoring Tool (Does Not Author All Informations)
- Manage Relations to CAD Data
- PDM Storage (Data Model and Interfaces)
- Connection Variant Coding (vs. Variant Coding of CAD Data)
- BOM Alignment
- Utilize/Manage X Variant Commonality
- Validation of Connection Data

Key Opportunities

- Documentation of Verification Results
- Model Build Automation
- Reuse Of Previous, Reliable Model Information
- Fast Access to Latest Data
- Automation During Connection Authoring
- Avoid Waste (Reproduced Information)
- Facilitate VW/Ford Collaboration
- Facilitate Targeted Connection CAE Realization Methods
- Efficiency to Adopt CAE Proposals
- …

What Would Best Accelerate Propagation of xMCF ?

- OOTB Connection Authoring Solutions?
  - Only if They Work in The Customers‘ Existing Environments
- Standardization of Connection Exchange?
  - Authoring Tools Need to Support All Use Cases for All Customers (I.E. Different Systems) Based on the Standards
- Deployment on the Consumption Side ?
  - Not Sufficient (to Drive Changes On The Authoring Side)

Next FMC Steps

- Utilize DET Departments Energy Room to Adress Current Waste (1Q2020)
- AS-IS Analysis for Current Connection Data Sources
- Detail Out Connection Authoring, Consumption and Verification Use Cases
- Identify Opportunities for CAE X-Departmental Use of xMCF