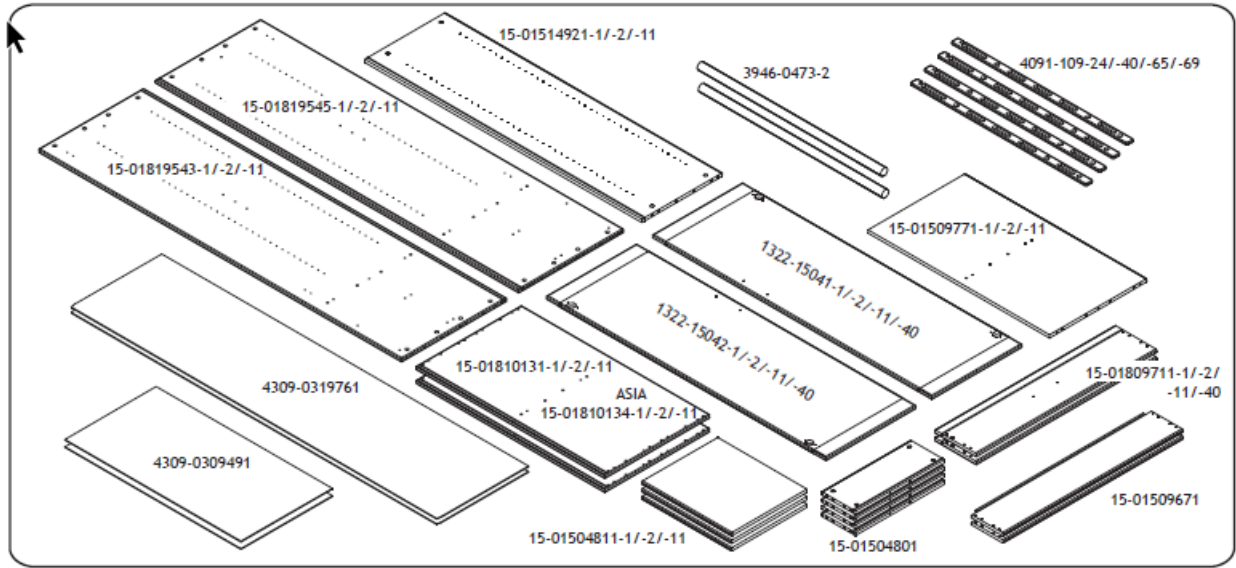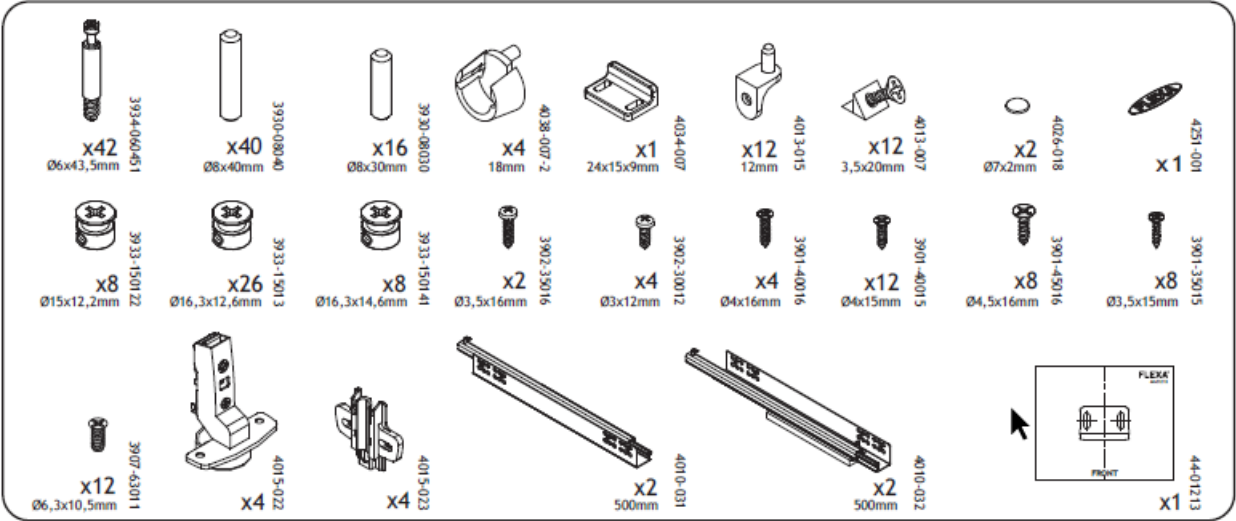# DAIMLER

Validation Properties for High Fidelity JT Data

JT Day on 05.11.2019 in Sindelfingen

Bernd Watzal (Daimler AG)

Online Shopping – Wardrobe Example
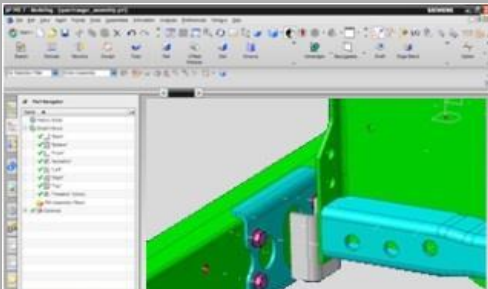
Von Bremen in die Welt: Ihr neuer Mercedes.

Big Picture: Role and Usage of JT Data @Daimler
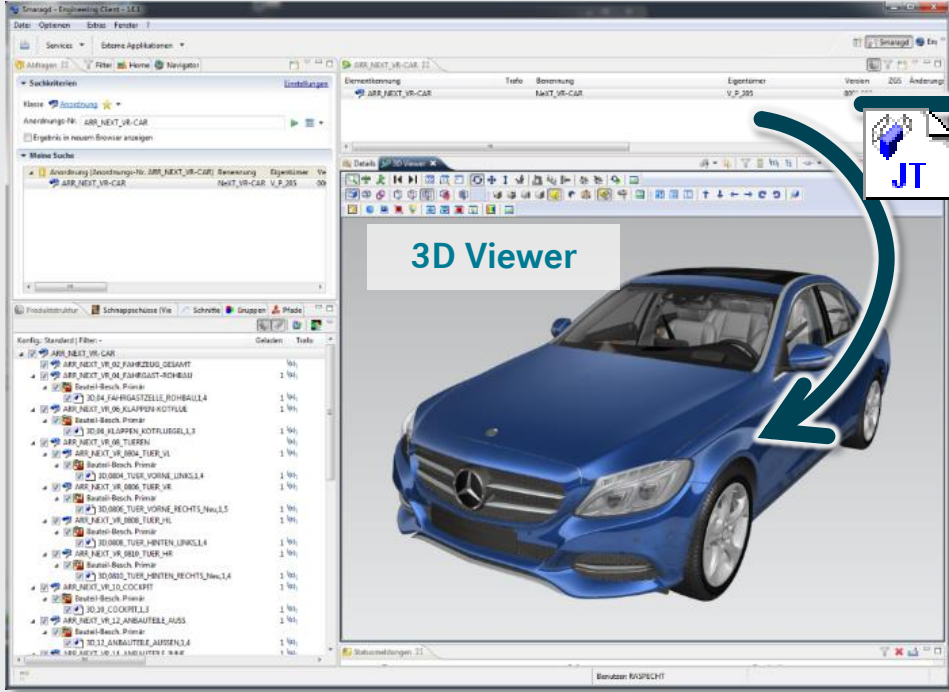

Data Generation

Suppliers & Partners

or

Design in Context

Digital Prototype

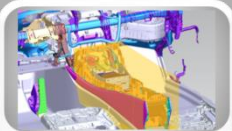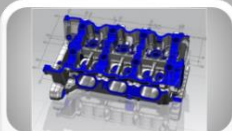**Daimler PDM System**

3D Viewer

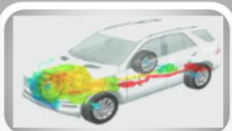**Downstream**

Packaging

Digital Process Chain PT

Thermo Management
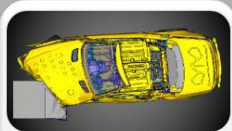
Passive Safety
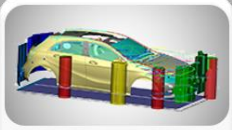
Legal Standards
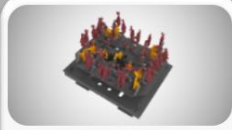
Clamping and Fixture
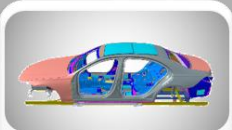
Assembly Sequence
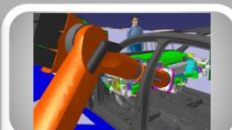
Construction Validation

JT is Leading Downstream Process Format for 3D

Process Today

Supplier/Internal — Data Generation

HQM Check Tool — Data Quality Check

PDM System — Archive & Convert

Downstream — Data Usage

Digital transformation and automation require
- ➤ High data quality and
- ➤ **High Fidelity JT Data!**

– Geometry –
– PMIs –
– Attributes –

- • Geometry ?
- • PMIs ?
- • Attributes ?

NX A2560111600_19 JT sourcefile
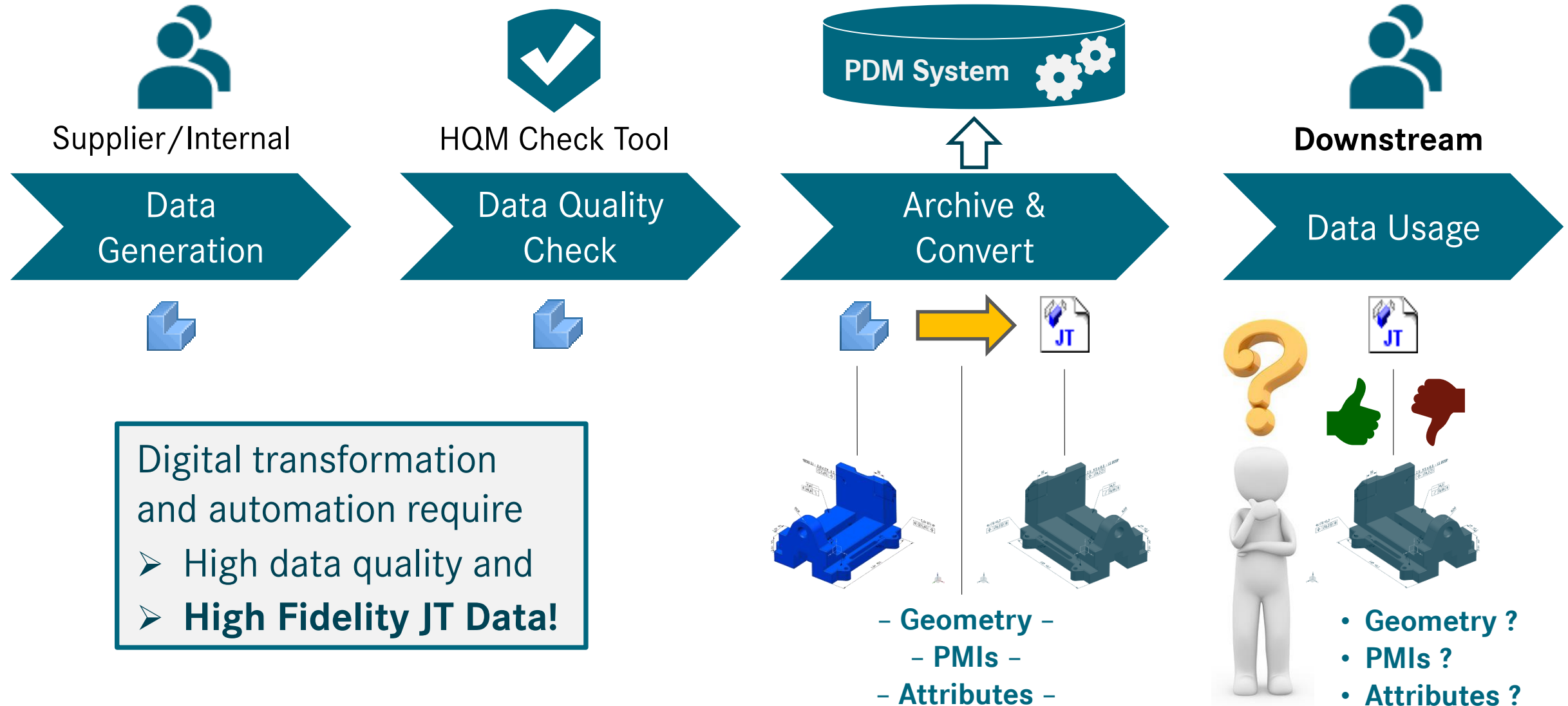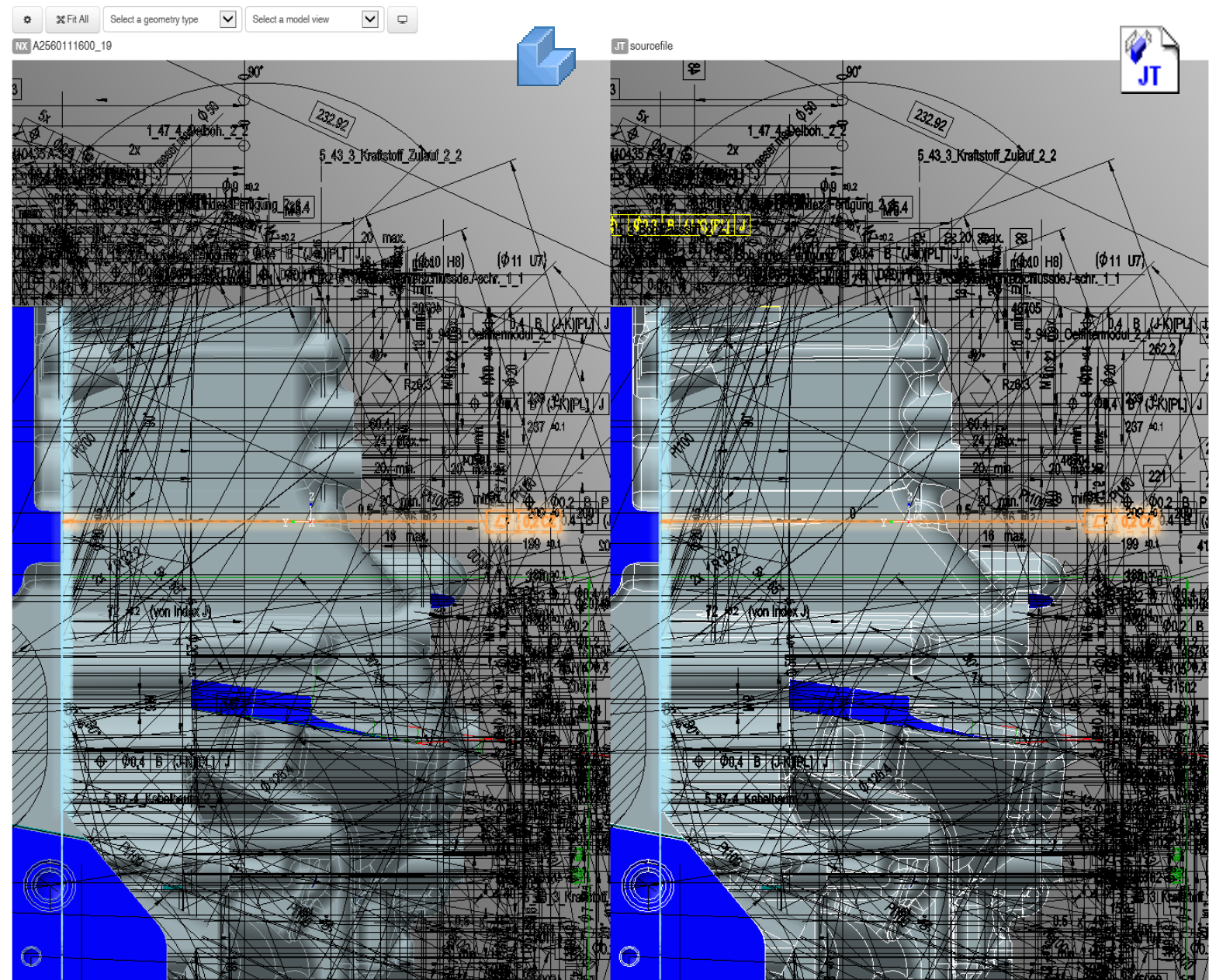
Assembly Tree | Detail List

Geometry PMI Attributes Clear Selection Show All

Property	Result	Value (First Model)	Value (Second Model)
Visibility	Ref	ON	ON
Semantic Representation			
Name	Same	Feature Control Frame (4569)	Feature Control Frame (4569)
Related elements	Same	Face.8845 Face.8846 Face.9337	Face.8845 Face.8846 Face.9337
Number of rows	Same	1	1
All around	Same	OFF	OFF
Unit system	Same	empty	Millimeter
Geometric characteristic symbol [1]	Same	Flatness	Flatness
Suffix [1]	Same	CZ	CZ
Tolerance [1]	Same	0.2	0.2
Decimal [1]	Diff	1	0
Free state modifier (F) [1]	Same	OFF	OFF
Projected tolerance modifer (P) [1]	Same	OFF	OFF
Tangent plane modifier (T) [1]	Same	OFF	OFF
Statistical tolerance modifier (ST) [1]	Same	OFF	OFF
Between modifier (<=>) [1]	Same	OFF	OFF
Material condition [1]	Same	None	empty
Primary datum Free state modifier (F) [1]	Same	empty	OFF
Primary datum Projected tolerance modifer (P) [1]	Same	empty	OFF
Primary datum Tangent plane modifier (T) [1]	Same	empty	OFF
Primary datum Statistical tolerance modifier (ST) [1]	Same	empty	OFF
Primary datum Between modifier (<=>) [1]	Same	empty	OFF
Primary compound datum Free state modifier (F) [1]	Same	empty	OFF
Primary compound datum Projected tolerance modifier (P) [1]	Same	empty	OFF
Primary compound datum Tangent plane modifier (T) [1]	Same	empty	OFF
Primary compound datum	Same	empty	OFF

Target Process for Validated JT Data

PDM System

ELYSIUM

Compare Tool

Downstream

Archive & Convert

JT Validation

Data Usage

Validation Properties

– **Geometry** –
– **PMIs** –
– **Attributes** –

Overall status
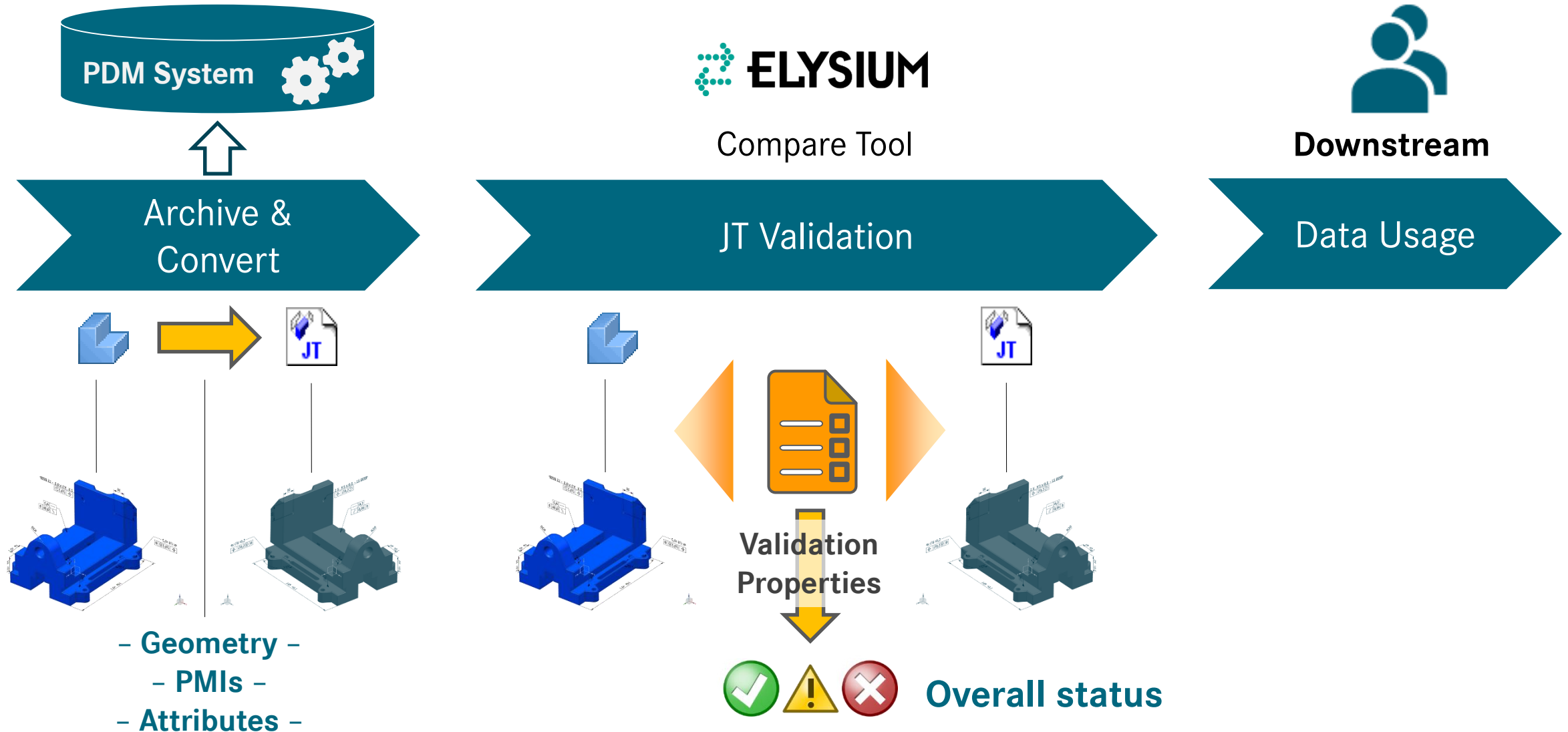
Validation Properties – Some Examples

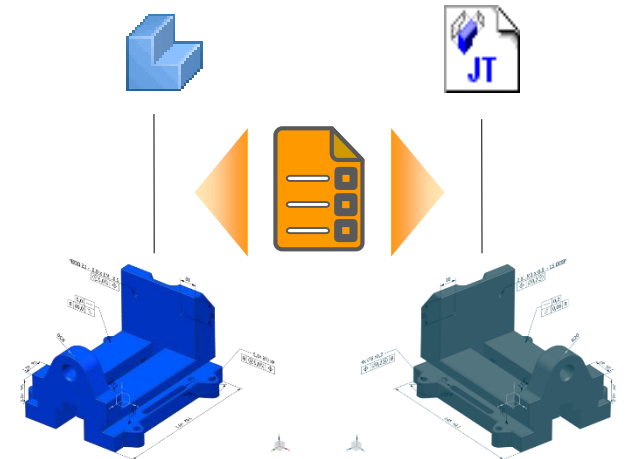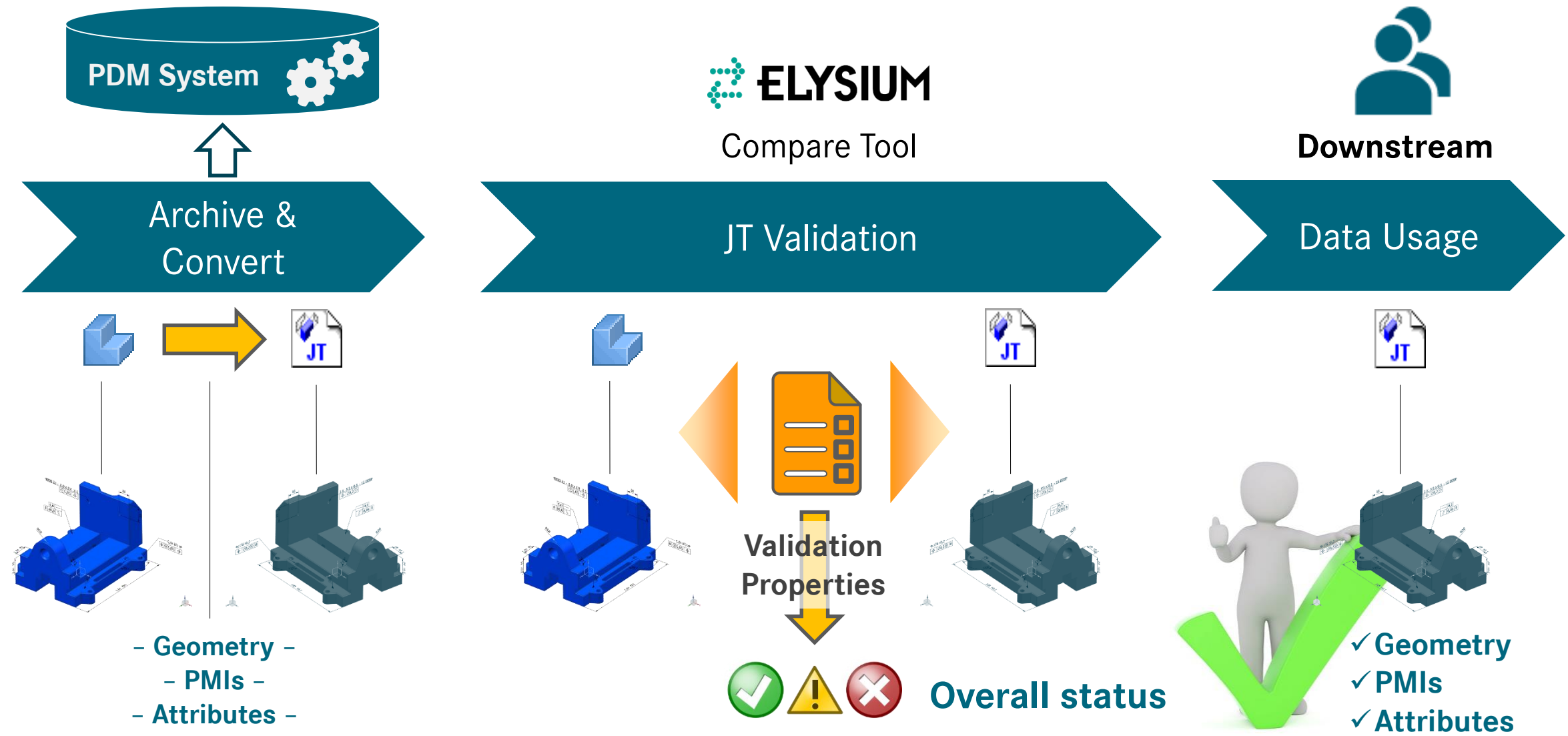|		
1	**Completeness of geometry and LODs**	➢ Volume ➢ Surface ➢ Center of gravity

2	**Completeness of PMIs**	➢ # Different PMI types
		➢ For each PMI note
		    ▪ # associated objects
		    ▪ PMI content complete

3	**Completeness of attributes**	➢ Check attribute mapping ➢ Empty attributes?

Target Process for Validated JT Data

DAIMLER

Thanks for your attention!

Time for your questions...