ShareAspace

Looking Outside the Core of PLM to Deliver Value With PLM

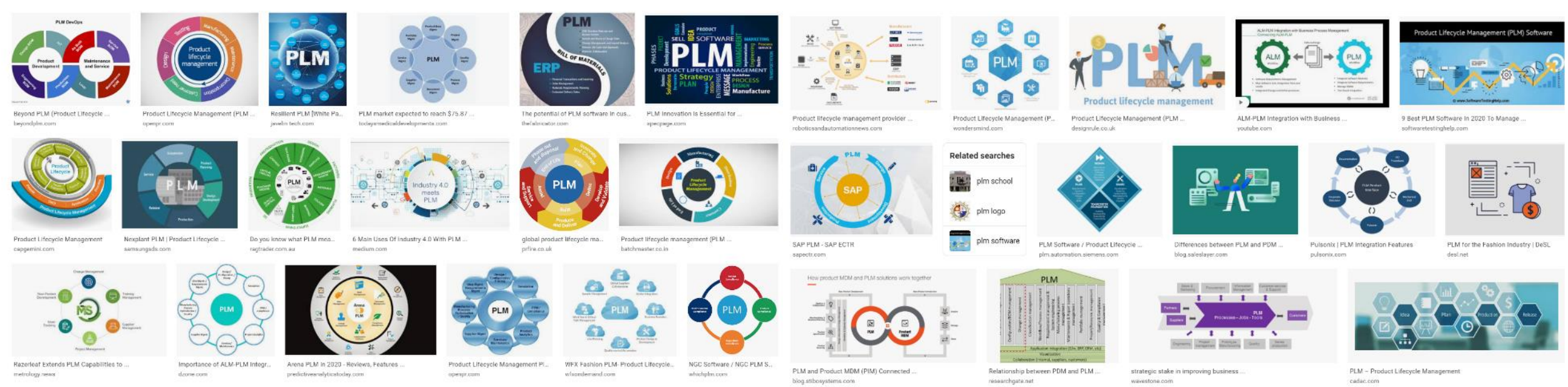Nigel Shaw

18 November 2020

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Outside the core of PLM?

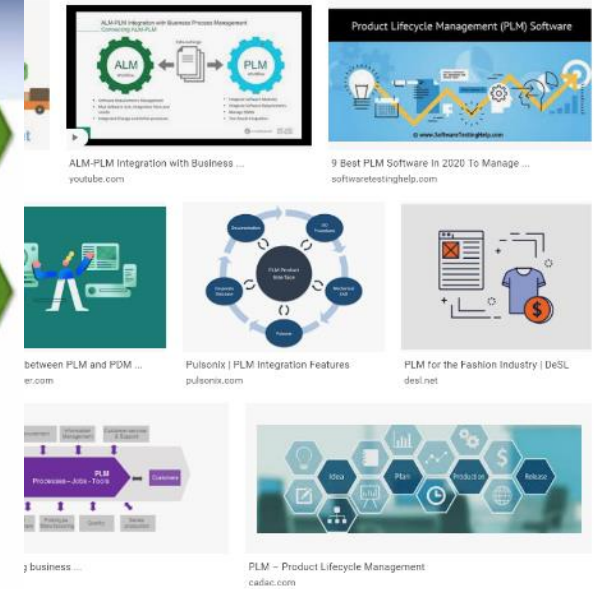There are many views of PLM …

Outside the core of PLM?

There are many views of PLM ...   So what do we mean by the core of PLM?
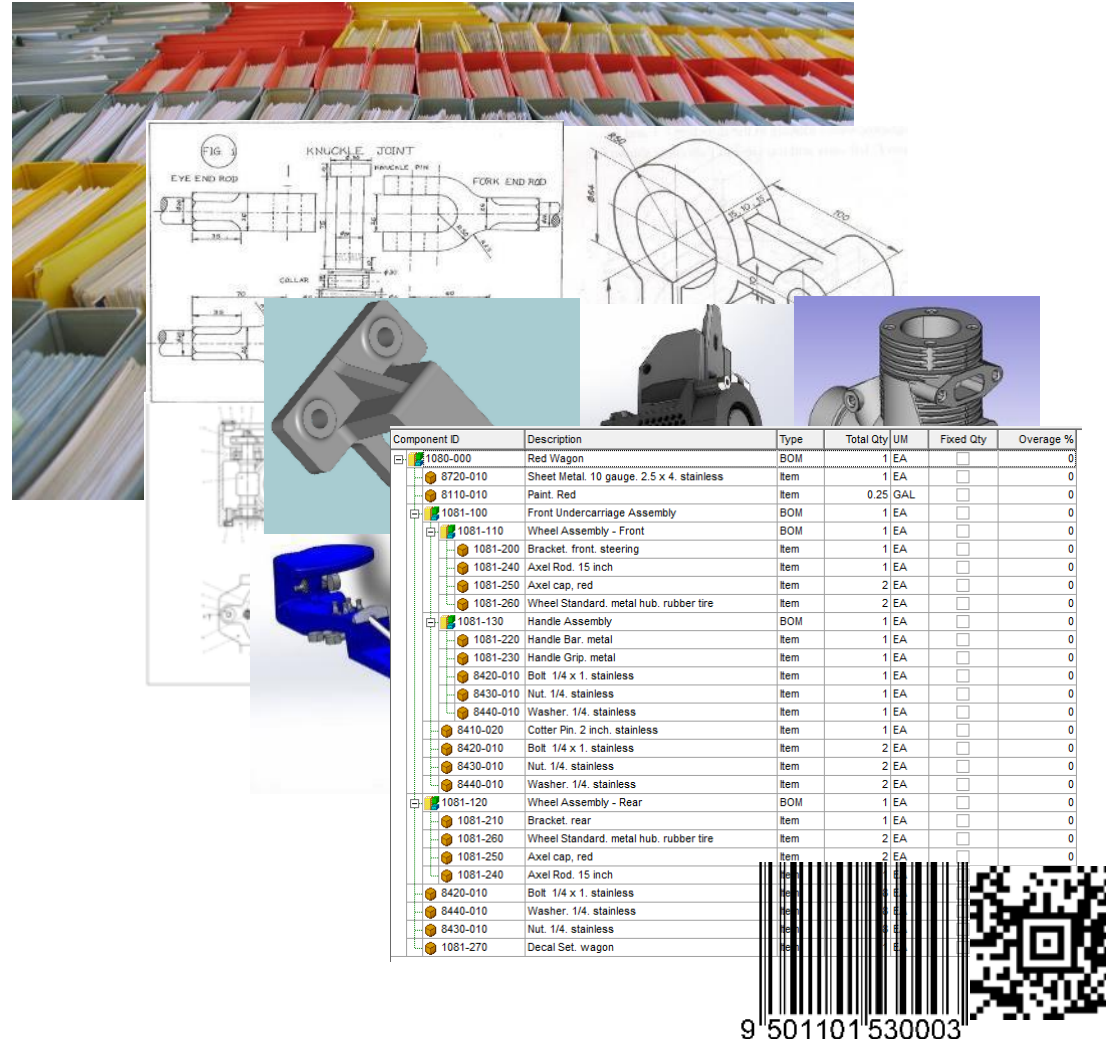
Scope – a *eurostep* perspective
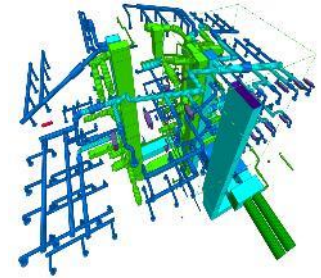
Mix of OEMs and Product owner/operators

The core of PLM?

- Document Management
  - Technical Publications
  - File management
    - Drawings
    - CAD
- BOMs
  - Configurations and baselines
- Manufacturing data
- Individual structures

Who benefits?
- Design/Engineering
- Manufacturing/ Construction

PDM

Plus
- Organization
- Ownership
- Export Control
- Change
- Process support
- ...

Outside of the core?

Requirements Management

Systems Engineering & MBSE

Everything Model Based & Software based

Carbon Engineering & Circular Economy

Obsolescence Management

Value Engineering

Simulation and Model Management

Supplier Integration

Integrated Logistics

Quality Management

Who benefits?
- The Business
- Other businesses
- The Community & the Environment

and many more!

Sharing - A Cross-Enterprise Process
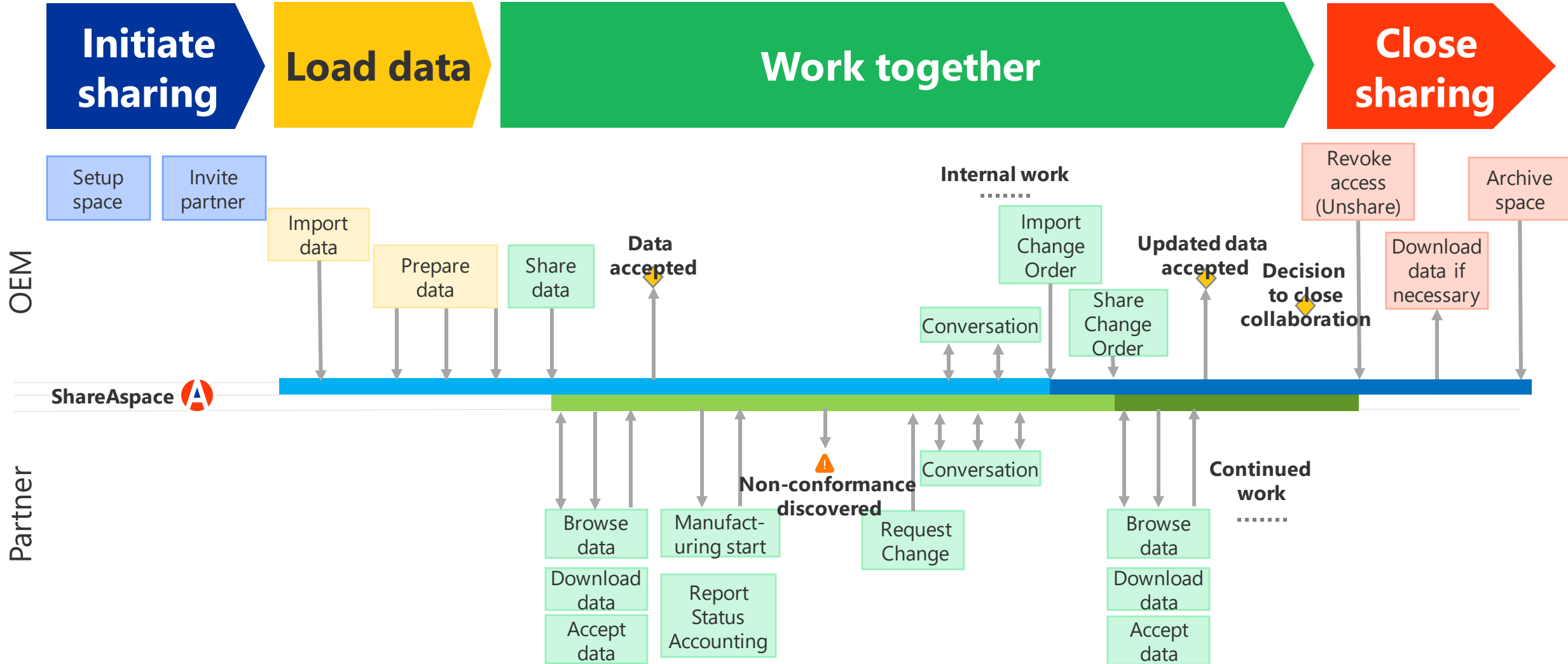
Design to Manufacturing – Build-to-print process
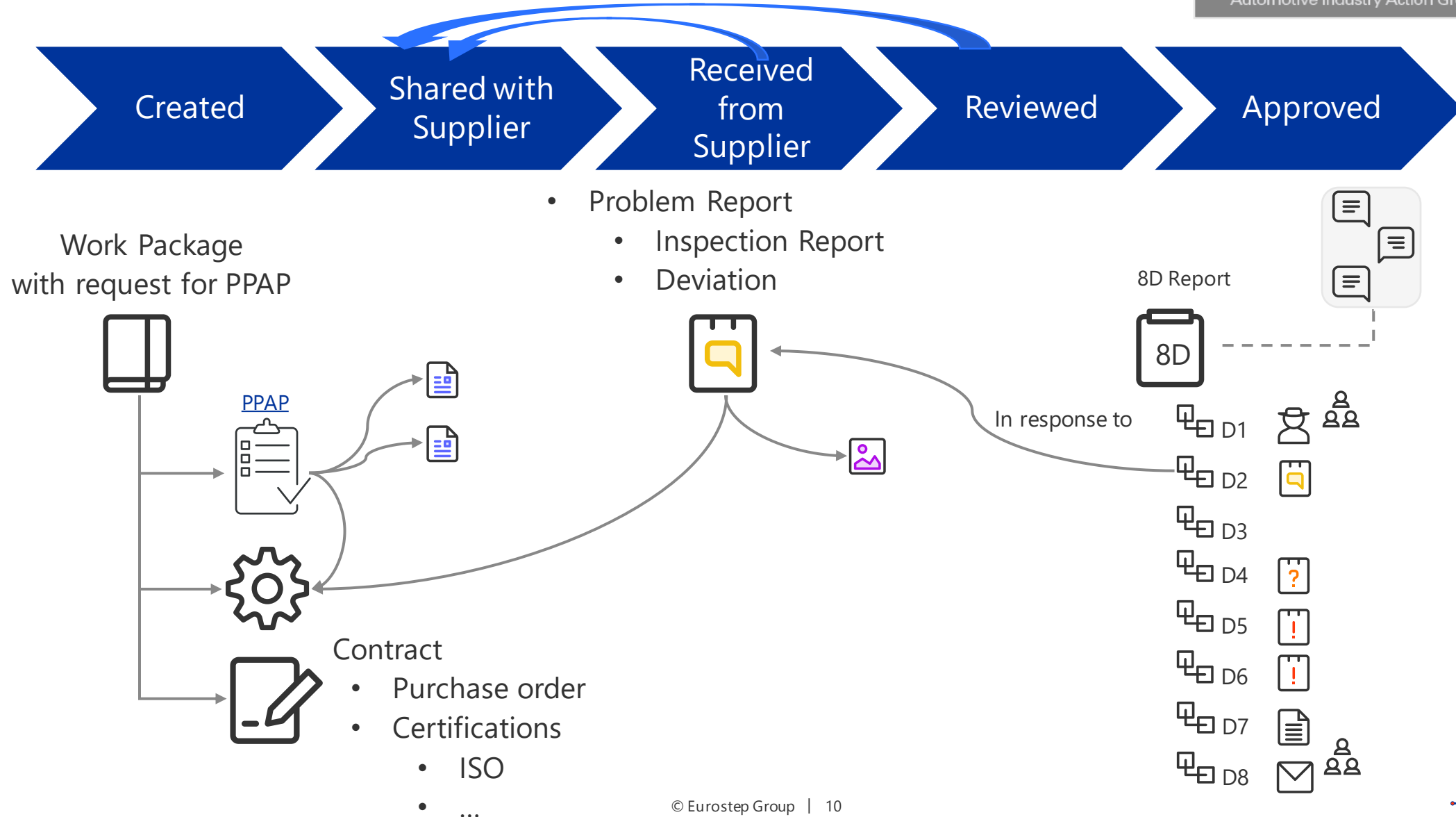
Initiate sharing → Load data → Work together → Close sharing

Design to Manufacturing – Build-to-print process

Production Part Approval Process(PPAP)

Supplier Portal

Search Partners

- Veo
- VBG
- ABAX Dörrsystem AB
- Gnotech Kinnared
- Pelles verkstad
- Jimmy's workshop

Partners

6

- Active
- In-active

RFI / RFQ

32

- Active
- In Review
- Stopped

Certificates

23

- Valid
- Expired
- About to expire

Purchase Order

114

- Active
- Done
- Rejected

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Means to extend PLM: Technologies

- **Business Intelligence (BI)**

- **Visualization**

- IoT and feedback data

- Big data perspective

- 5G

Bigger

Better

PLM

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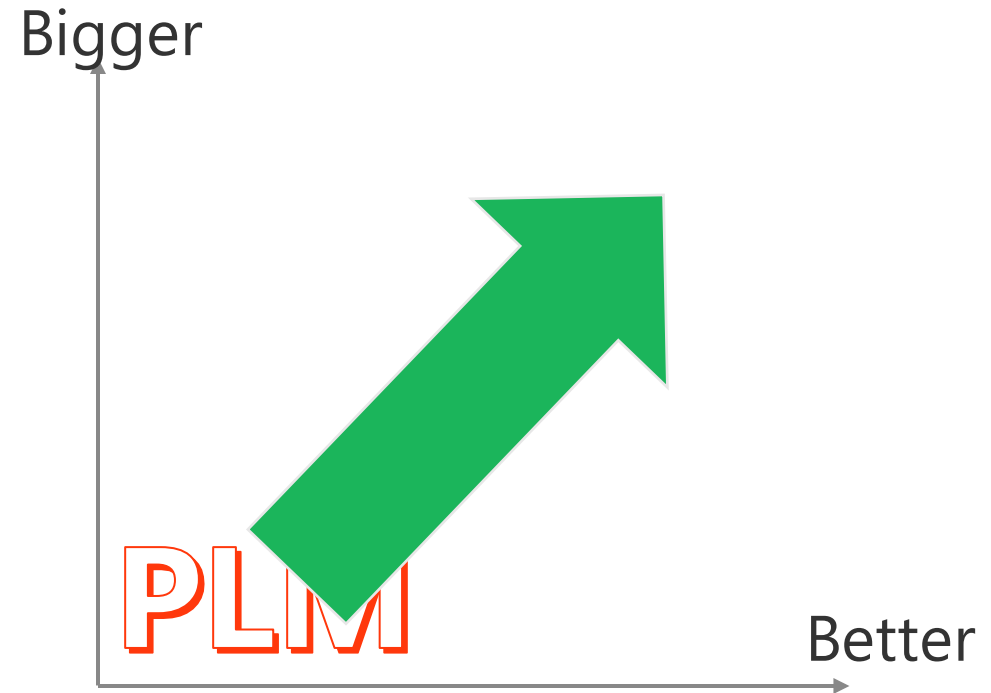
Integration of BI into PLM

Visualization

Credit: D3 and Mike Bostock

Data patterns
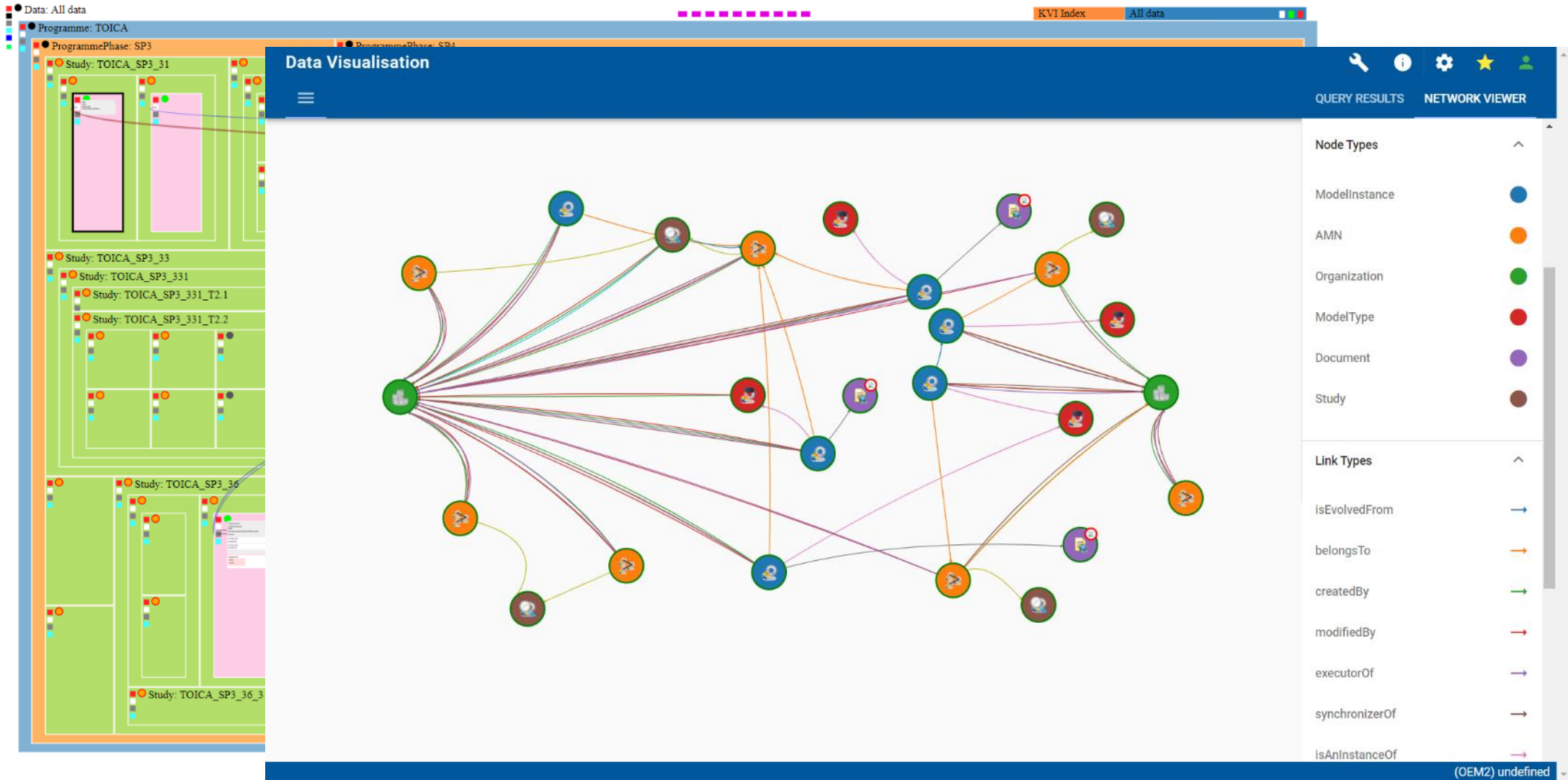
Prototype
visualization
(using
dummy data)
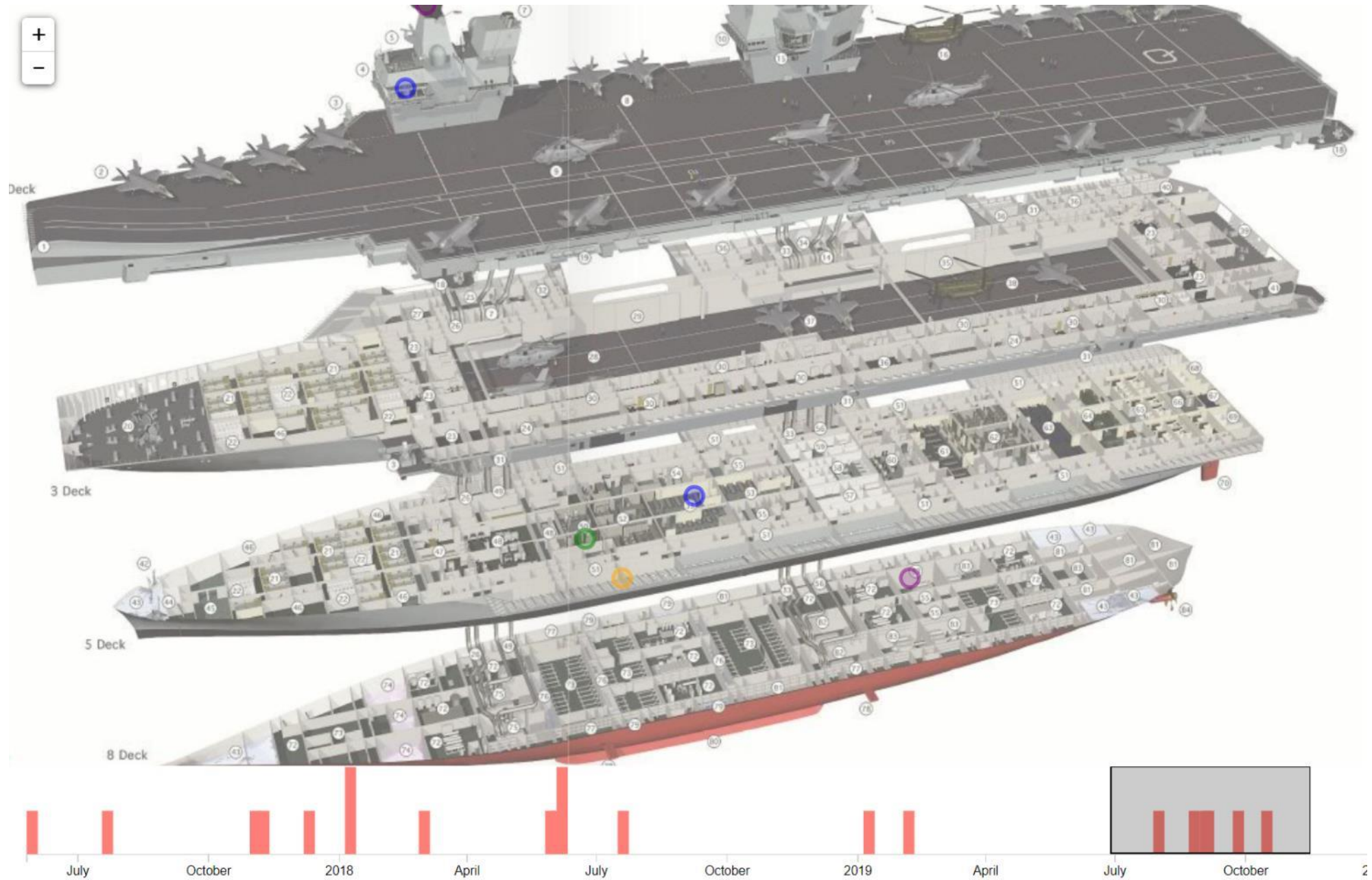
- Escaping document based processes
- **Handover to support**
- Feedback loops
- Data quality
  - Consistency
- **Going fine-grained**
- Interoperability
- Communication
- ...

Organizational barriers: Design hand over to support

Design & Build

PLM

Operate & Maintain

Going fine-grained

Vs.

Requirement
Id: 2011278
Text: As Administrator the user shall be able to add new collaborating organizations.
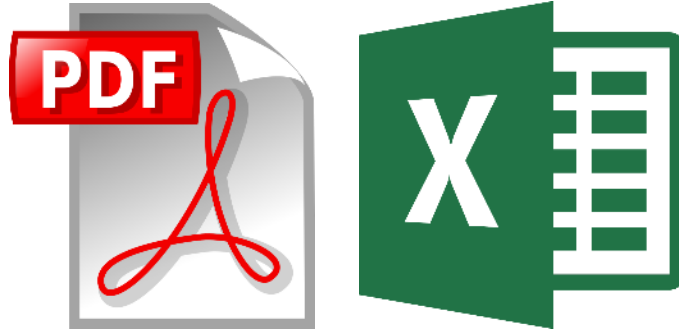
What is the right level at which to manage change?
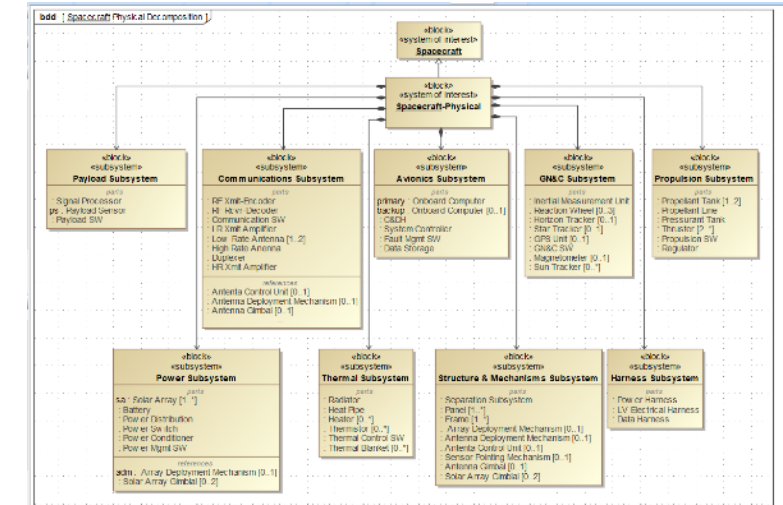
Vs.
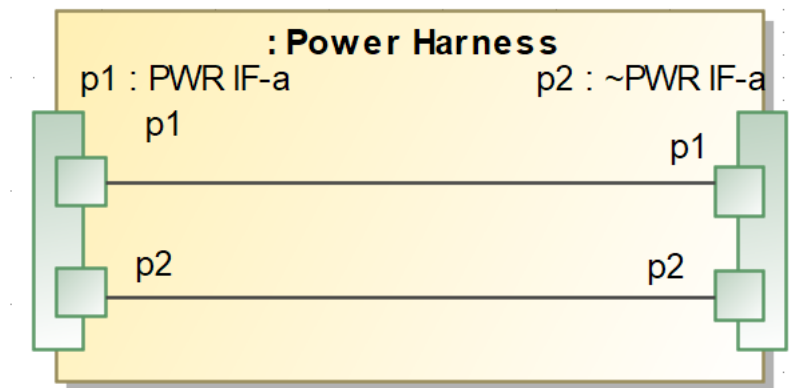
Delivering value…

- There are many routes to deliver process specific value
  - Key Performance Indicators
  - Improved Collaboration
  - Internal & External development
  - Multiple Views
  - …
- For PLM to be successful it has to support them all
- And be flexible to allow change as new or better routes are found

Joined up by the Digital Thread

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{API} REST API

⬡ Business object configuration

🗄 Standards based data store

Digital thread

Functional element — System element — CAD — Part — Product as realized — Location

Document — Requirement — Zone element — Physical element — Change request — Change proposal — Change order — Action order
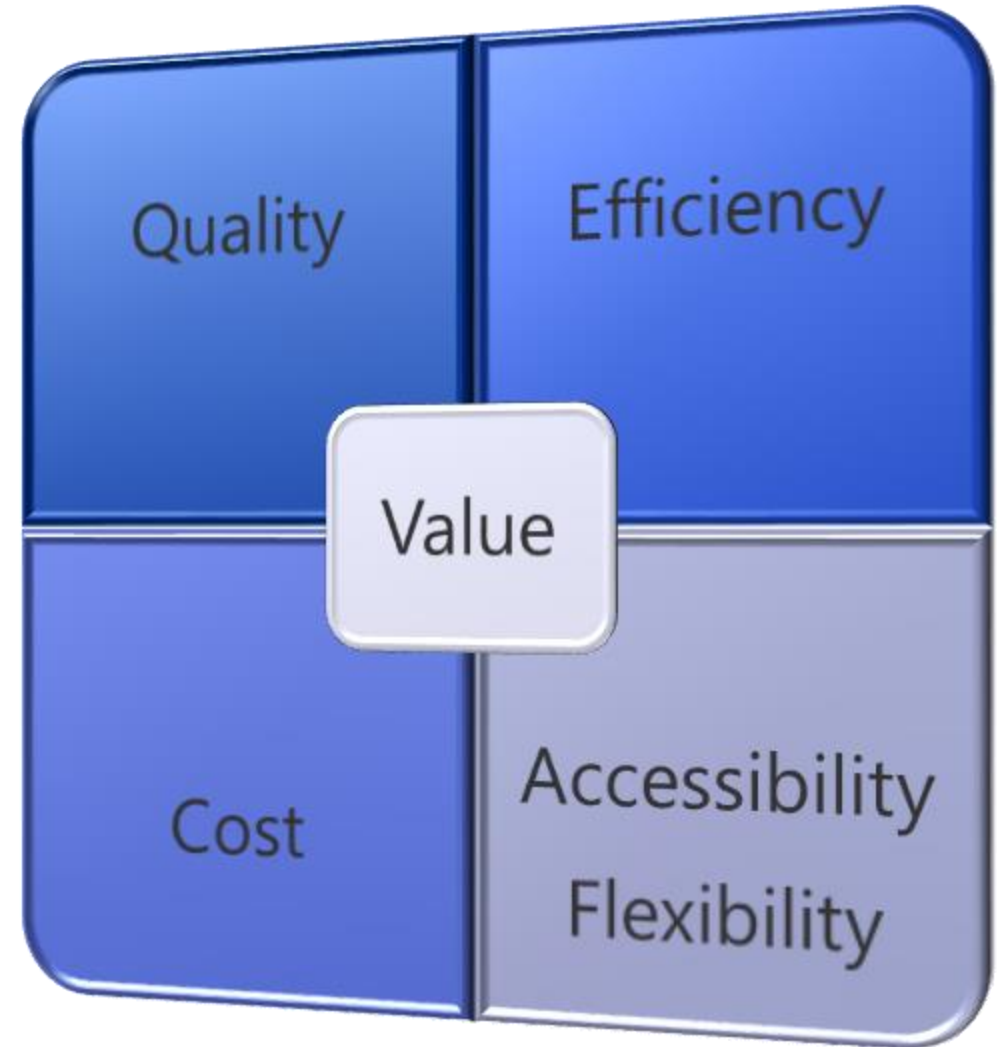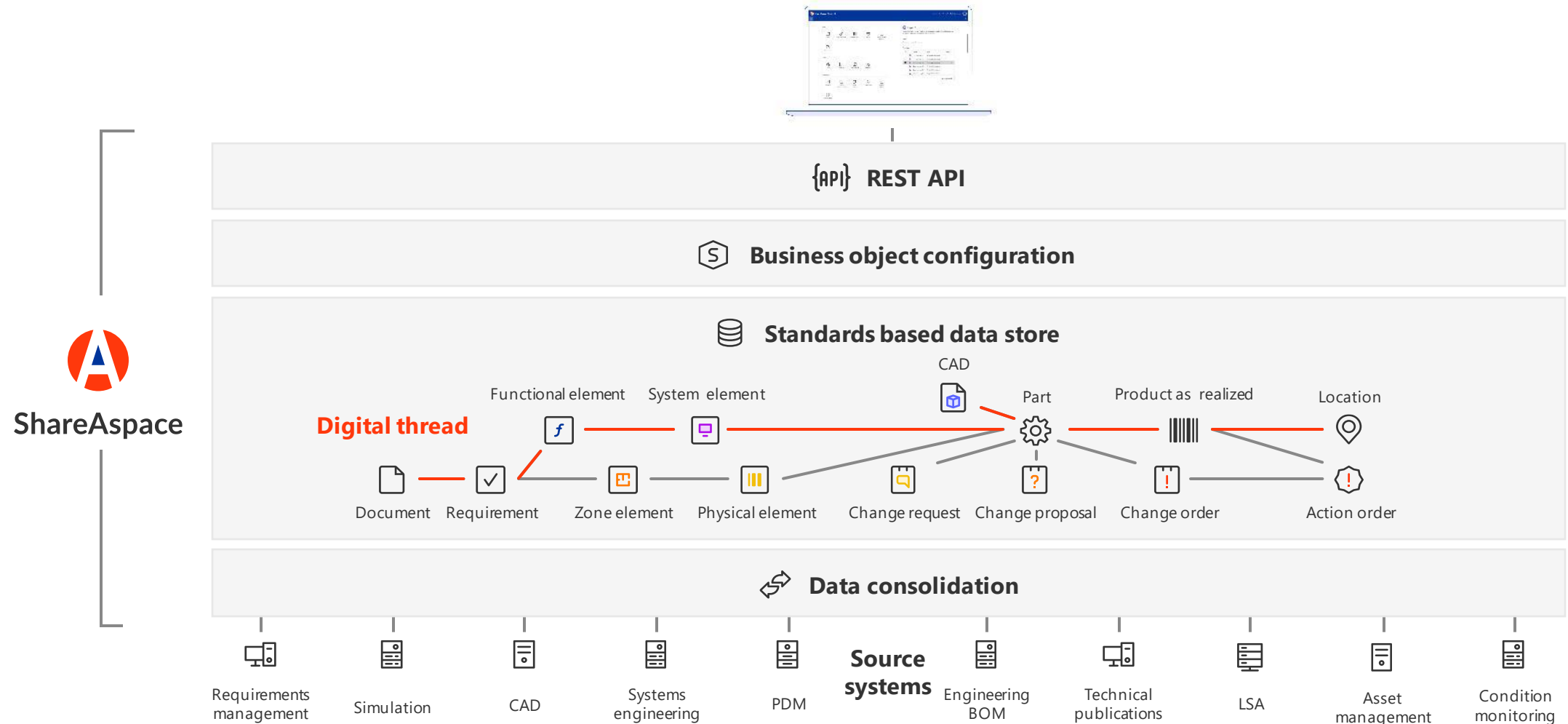
⇄ Data consolidation

Source systems

Requirements management — Simulation — CAD — Systems engineering — PDM — Engineering BOM — Technical publications — LSA — Asset management — Condition monitoring

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Keys to achieve Flexibility and Accessibility

- Standards

- Open APIs

What & How

How   Oil

Application Pool

Thanks! Any questions?