



ShareAspace

Looking Outside the Core of PLM to Deliver Value With PLM

Nigel Shaw

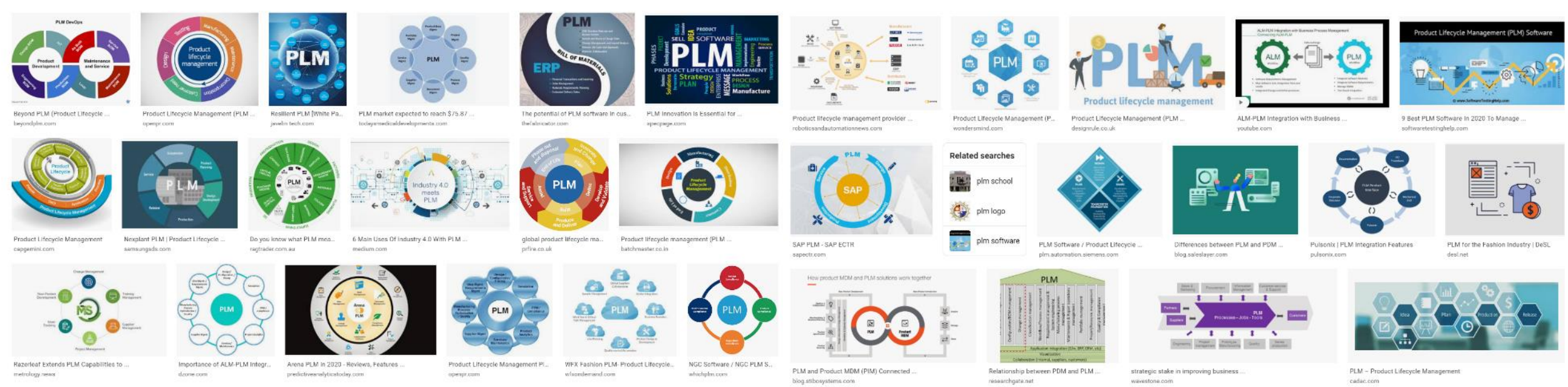
18 November 2020



© Eurostep Group

Outside the core of PLM?

There are many views of PLM ...



Outside the core of PLM?

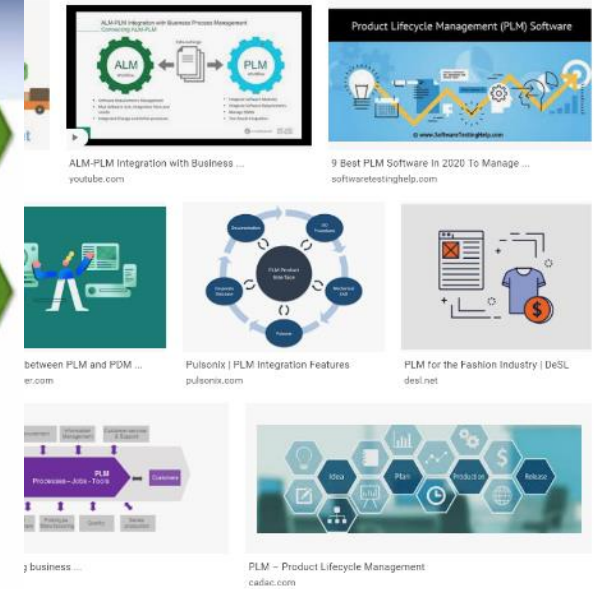
There are many views of PLM ...

So what do we mean by the core of PLM?

CIMdata's Definition of PLM

Digital transformation of the lifecycle—enabled by a product innovation platform

- Strategic business approach
 - **NOT** just technologies
 - Consistent set of business solutions
- Collaborative creation, use, management & dissemination of product related *intellectual assets*
 - All product/plant definition information – the virtual product
 - AEC, MCAD, EDA, ALM, SE, requirements, simulations, analytics, portfolio, formulas...
 - All product/plant process definitions – the virtual processes
 - Processes that plan, design, produce, operate, support, decommission, recycle...
- An innovation platform that supports the extended enterprise
- Spans the full lifecycle, from idea/concept through life

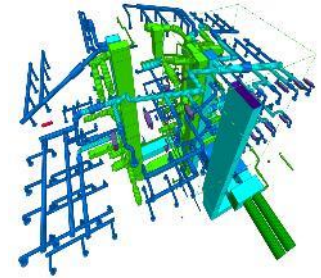


CIMdata®

Copyright © 2020 by CIMdata, Inc.

6

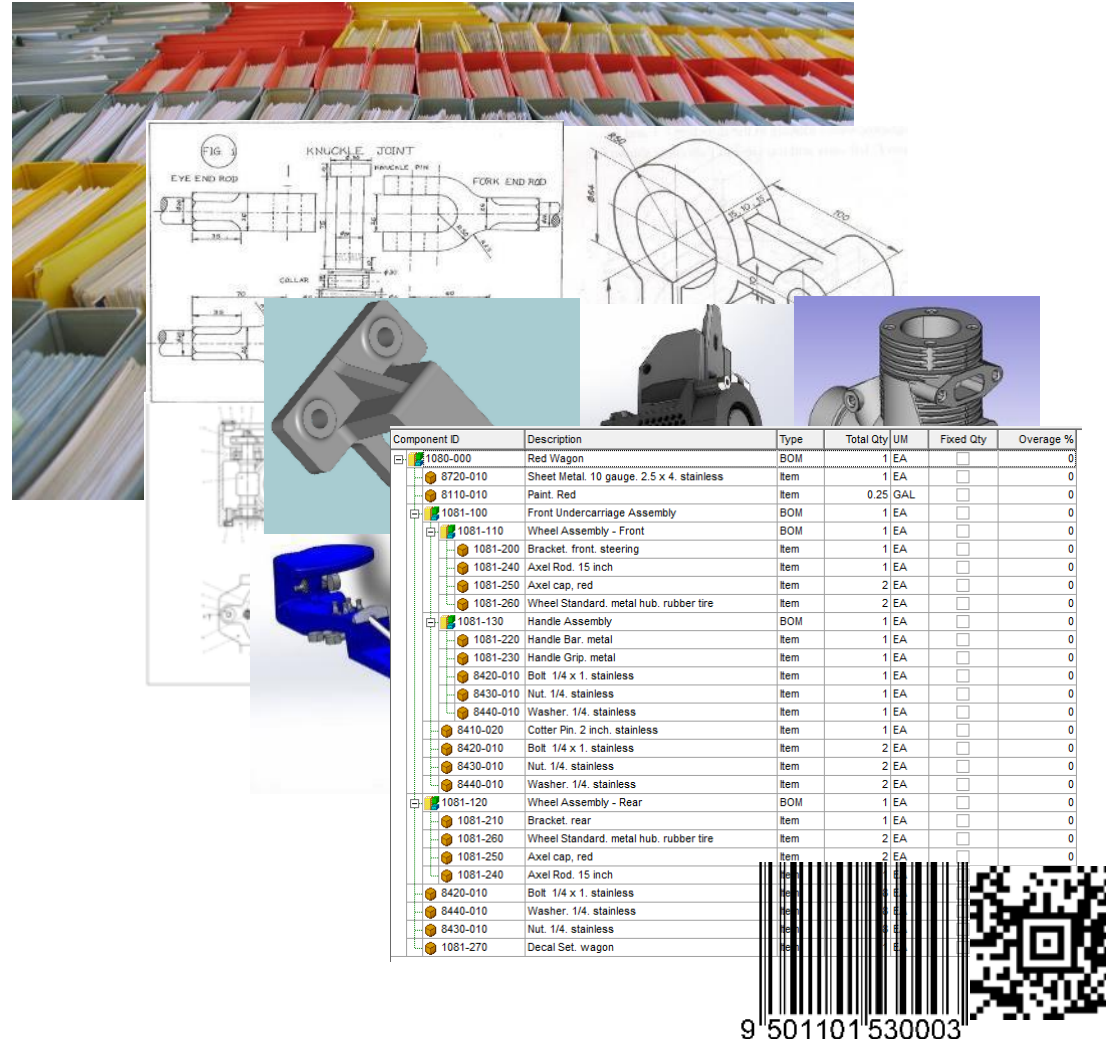
Scope – a *-eurostep-* perspective



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?



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

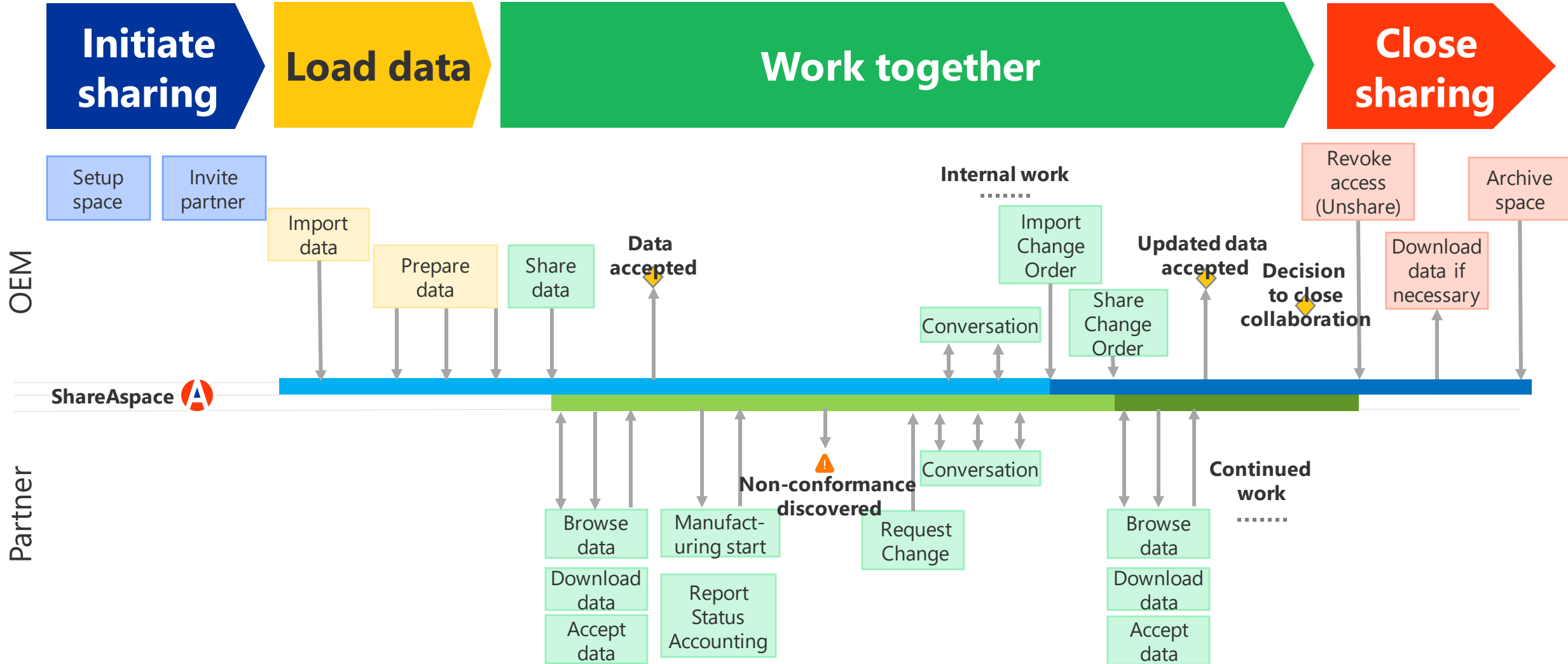
**Initiate
sharing**

Load data

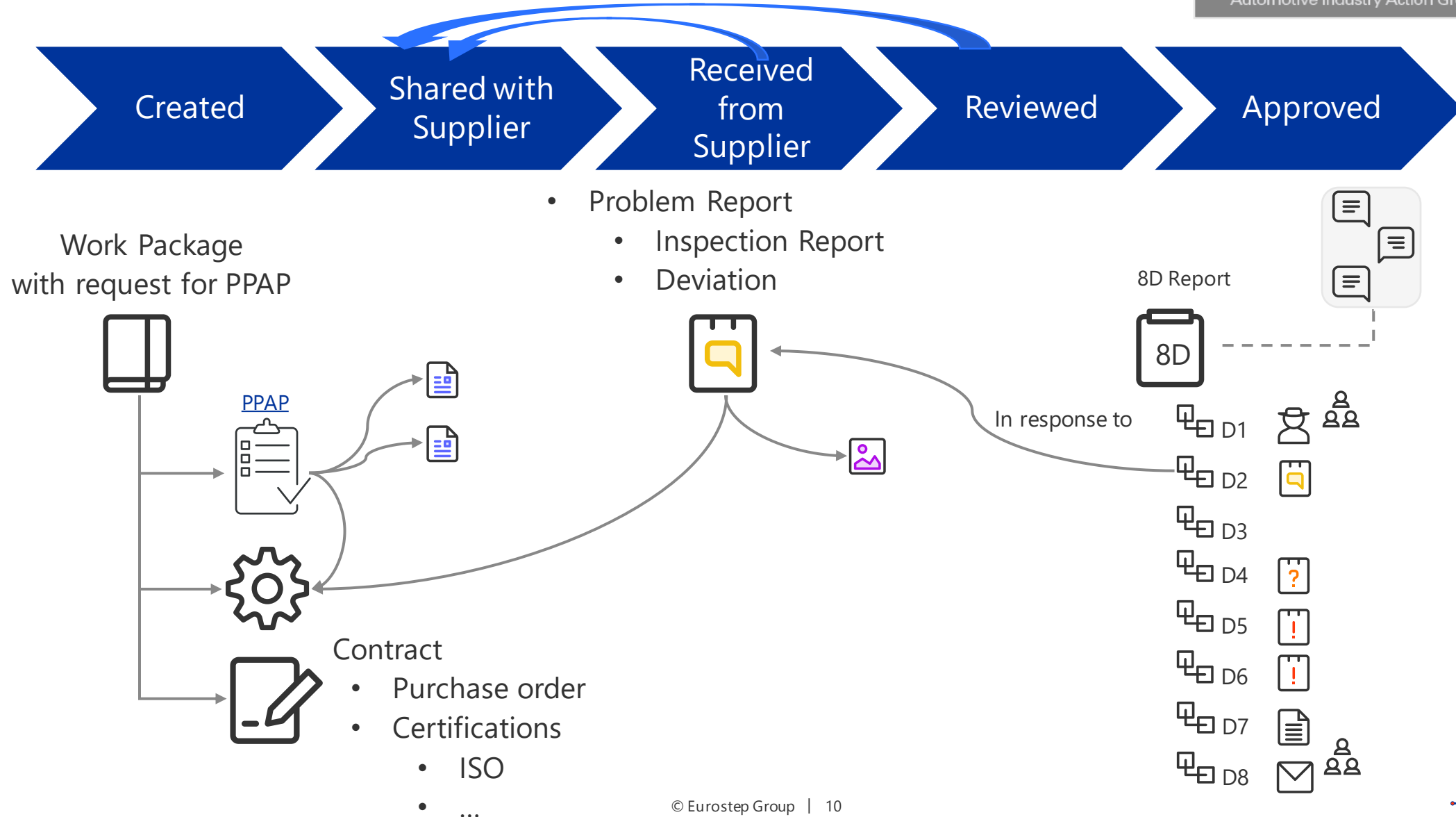
**Work
together**

Close sharing

Design to Manufacturing – Build-to-print process



Production Part Approval Process(PPAP)



Supplier Portal

Search Partners

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

Partners



■ Active ■ In-active

RFI / RFQ



■ Active ■ In Review ■ Stopped

Certificates



■ Valid ■ Expired ■ About to expire

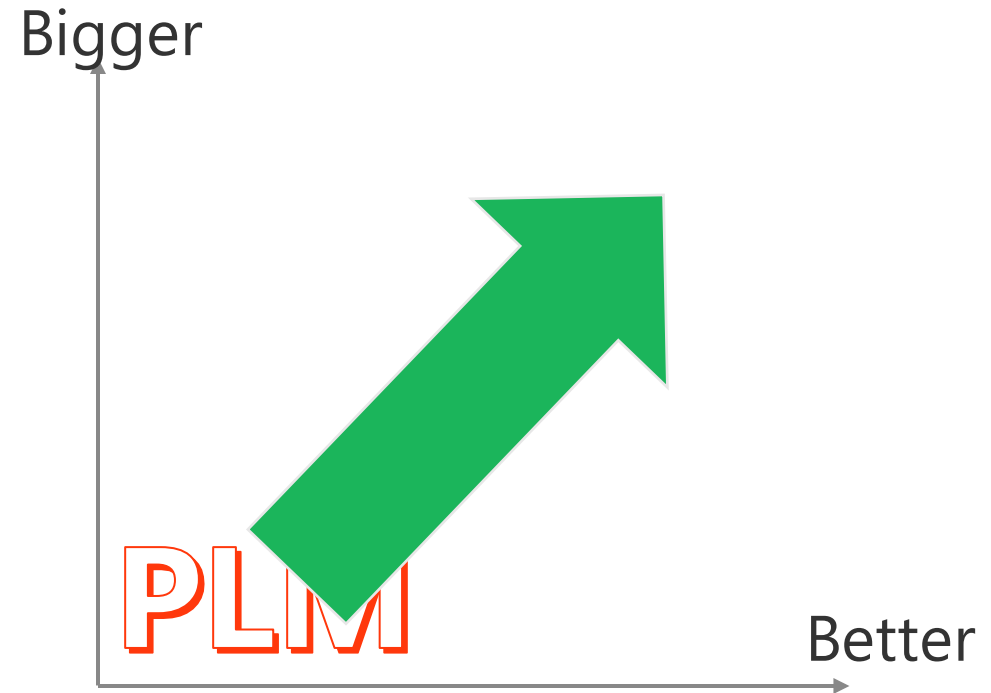
Purchase Order



■ Active ■ Done ■ Rejected

Means to extend PLM: Technologies

- **Business Intelligence (BI)**
- **Visualization**
- IoT and feedback data
- Big data perspective
- 5G



Integration of BI into PLM

ShareAspace / webinar

Project Administrator@OEM

Project Managem...

Analytics View

CAD View

Building

Name:

Description:

Selected

2h(69)x(66)g8jj4(78)(82)(71)6zz(68)Q(82)(69)m(66)

Name:

Level 7

Description:

undefined

Work Order

Create Work Order

33126549717

Create

Building storey

Level 1

Level 2

Level 3

Level 4

Level 5

Level 6

Level 7A

ShareAspace / webinar

Project Administrator@OEM

Project Managem...

Analytics View

Byggdel

Supplier1

Supplier2

Supplier3

Supplier4

Supplier5

Total

Basic Wall:Exterior - Metal Panel on Mtl. Stud:756033	164.06	235.61	201.07	303.45	184.42	1,088.61
Basic Wall:Exterior - Metal Panel on Mtl. Stud:760395	142.04	203.99	174.08	262.72	159.66	942.50
Basic Wall:Exterior - Metal Panel on Mtl. Stud:779163	54.20	77.83	66.42	100.24	60.92	359.61
Basic Wall:Exterior - Metal Panel on Mtl. Stud:779199	197.43	283.52	241.96	365.17	221.92	1,310.00
Basic Wall:Exterior - Metal Panel on Mtl. Stud:779228	47.35	68.00	58.03	87.57	53.22	314.17
Basic Wall:Exterior - Metal Panel on Mtl. Stud:780719	497.02	713.77	609.14	919.31	558.69	3,297.93
Basic Wall:Exterior - Metal Panel on Mtl. Stud:780751	142.62	204.82	174.79	263.80	160.32	946.35
Basic Wall:Exterior - Metal Panel on Mtl. Stud:805806	2,618.94	3,761.03	3,209.67	4,844.05	2,943.84	17,377.53
Basic Wall:Exterior - Metal Panel on Mtl. Stud:813370	15,060.20	21,627.81	18,457.24	27,855.71	16,928.57	99,929.53
Basic Wall:Exterior - Metal Panel on Mtl. Stud:813378	115,126.50	165,332.04	141,094.88	212,940.74	129,409.11	763,903.26
Basic Wall:Exterior - Metal Panel on Mtl. Stud:913988	359.10	515.70	440.10	664.20	403.65	2,382.75
Basic Wall:Interior - 123mm Partition	8,477,557.59	4,811,586.74	7,014,694.22	7,349,566.56	6,503,573.29	34,156,978.41
Basic Wall:Interior - 123mm Partition:315309	12,216.46	6,933.67	10,108.42	10,590.98	9,371.88	49,221.40
Basic Wall:Interior - 123mm Partition:315360	11,120.84	6,311.83	9,201.86	9,641.14	8,531.37	44,807.03
Basic Wall:Interior - 123mm Partition:317109	56,297.16	31,952.44	46,582.68	48,806.48	43,188.47	226,827.24
Basic Wall:Interior - 123mm Partition:318369	11,323.14	6,426.64	9,369.25	9,816.52	8,686.56	45,622.12
Basic Wall:Interior - 123mm Partition:322446	8,799.03	4,994.04	7,280.69	7,628.26	6,750.19	35,452.22
Basic Wall:Interior - 123mm Partition:322622	10,322.26	5,858.58	8,541.08	8,948.82	7,918.74	41,589.48
Basic Wall:Interior - 123mm Partition:365827	85,525.92	48,541.74	70,767.81	74,146.17	65,611.36	344,593.00
Basic Wall:Interior - 123mm Partition:408795	12,051.77	6,840.19	9,972.15	10,448.21	9,245.54	48,557.85
Basic Wall:Interior - 123mm Partition:408863	70,244.60	39,868.56	58,123.39	60,898.13	53,888.27	283,022.95
Basic Wall:Interior - 123mm Partition:415773	11,460.71	6,504.73	9,483.08	9,935.79	8,792.10	46,176.41
Total	13,650,733.57	8,465,244.63	10,794,624.06	11,339,401.85	11,824,699.87	56,074,703.97

Count of Column1.data.Id by Byggdel

Filters

Search

Filters on this visual

Byggdel is (All)

Column1.data.Name is (All)

Excluded (1) (Tom) (Organization.Column1.data.i d)

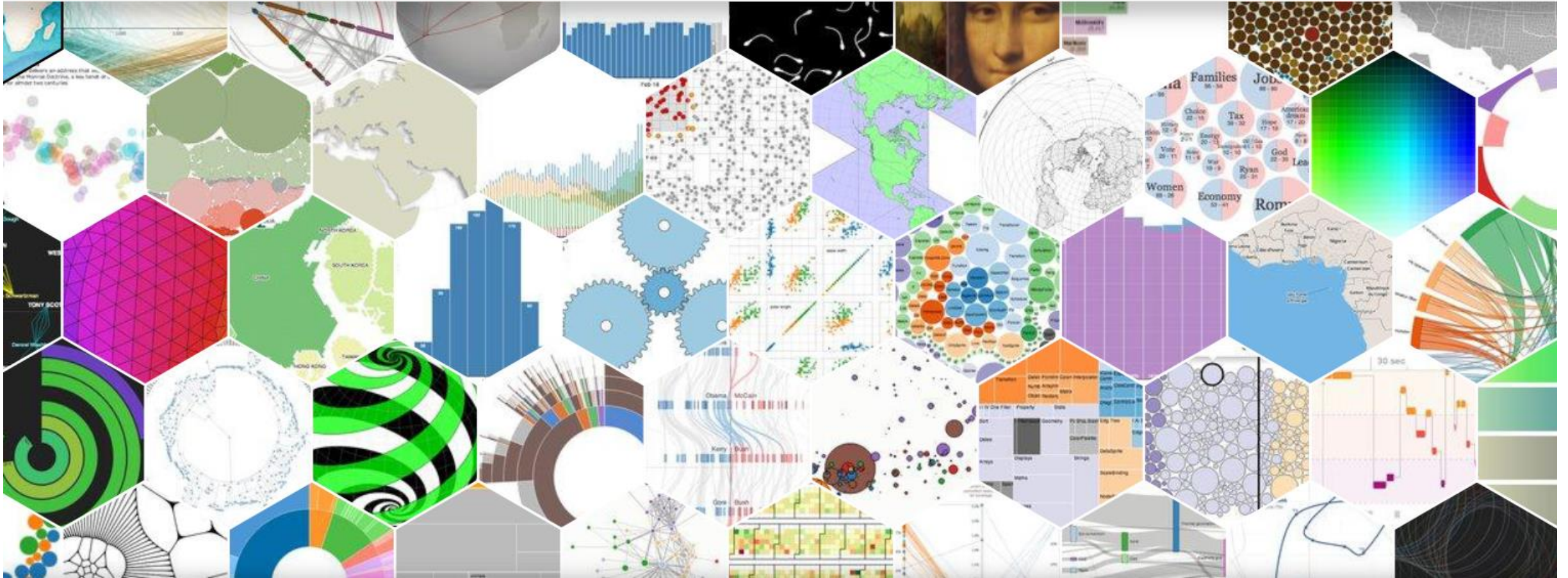
Kostnad is (All)

Organization.Column... is (All)

Leverantörspris

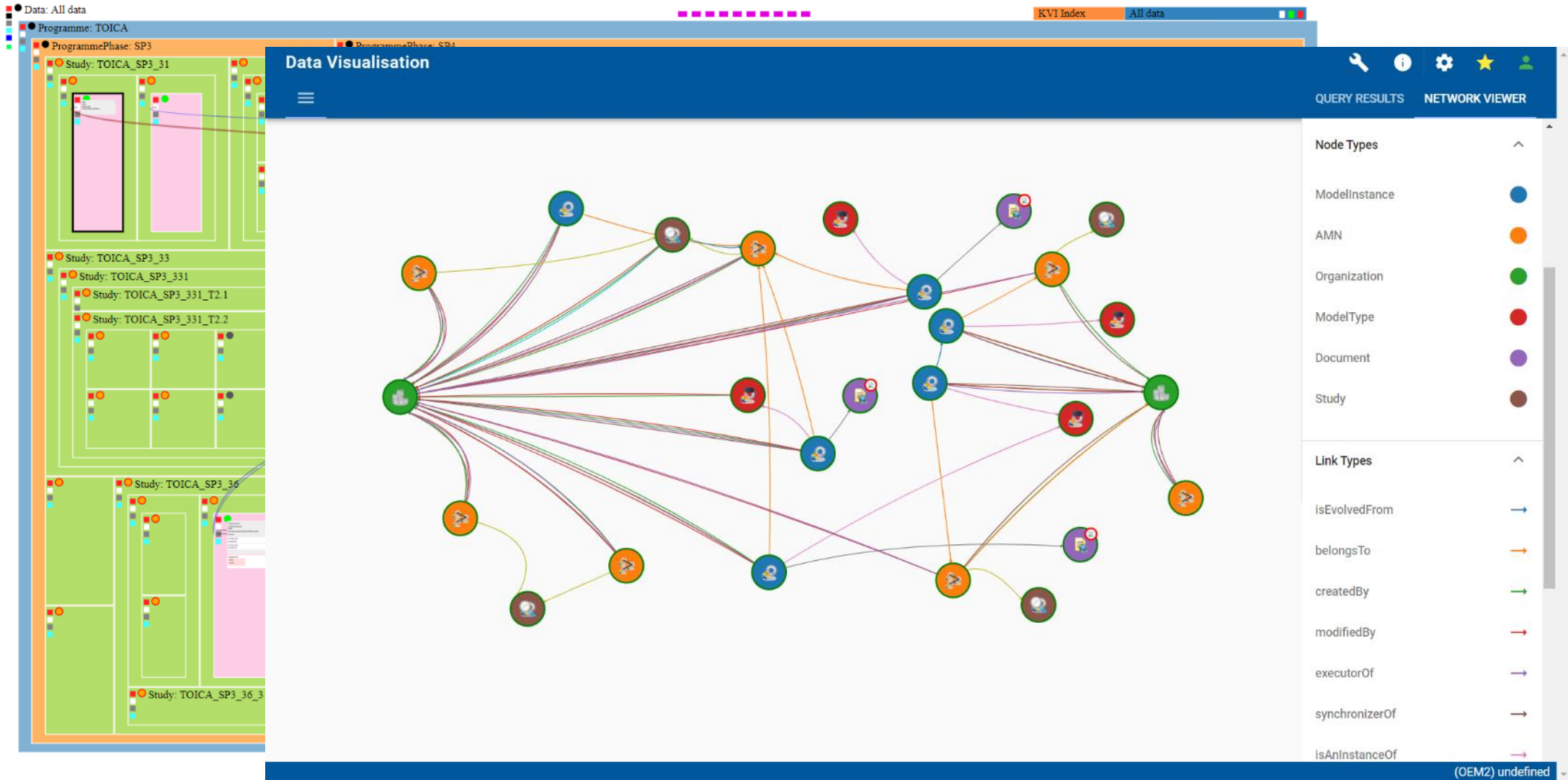


Visualization

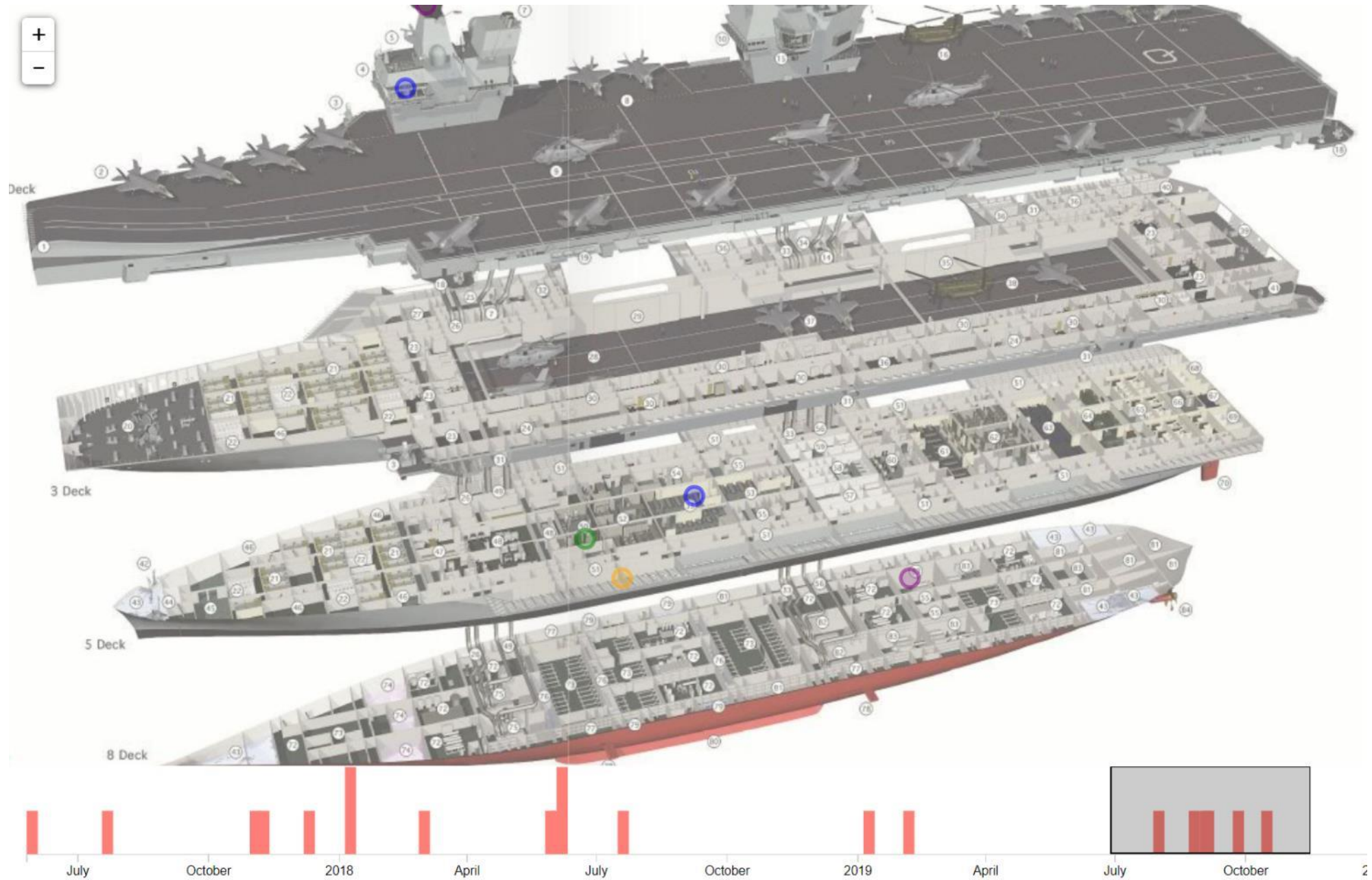


Credit: D3 and Mike Bostock

Data patterns



Prototype
visualization
(using
dummy data)





**CHALLENGES
AHEAD**

- Escaping document based processes
- **Handover to support**
- Feedback loops
- Data quality
 - Consistency
- **Going fine-grained**
- Interoperability
- Communication
- ...

Organizational barriers: Design hand over to support

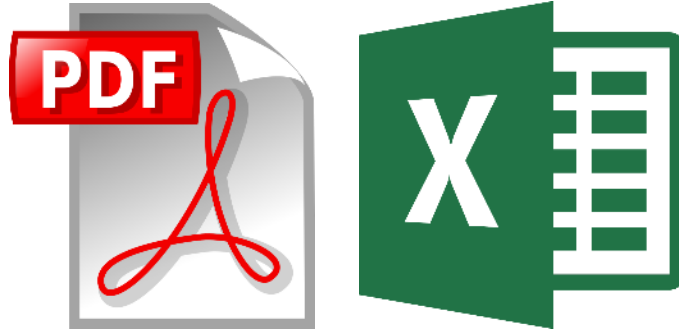


Design & Build



Operate & Maintain

Going fine-grained



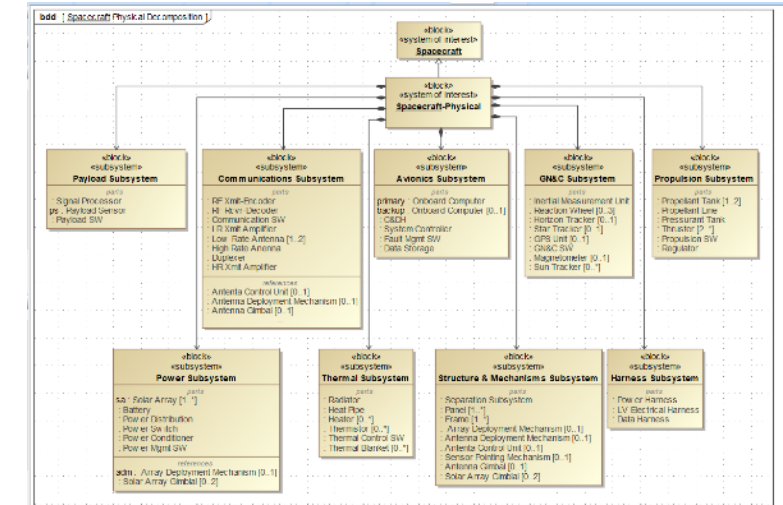
What is the right level at which to manage change?

Vs.

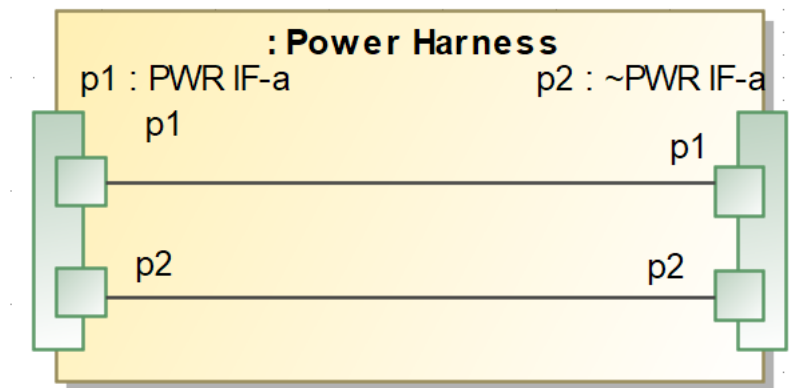
Requirement

Id: 2011278

Text: As Administrator the user shall be able to add new collaborating organizations.

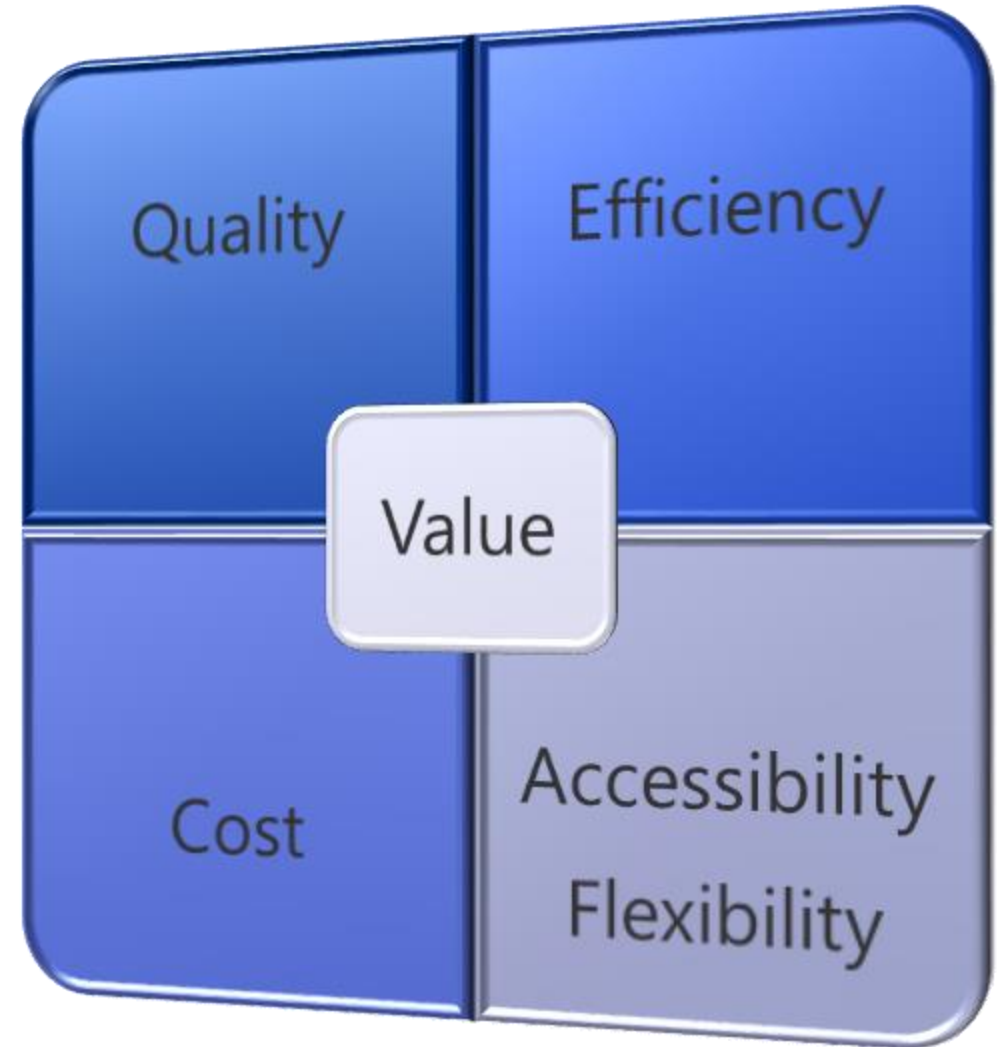


Vs.

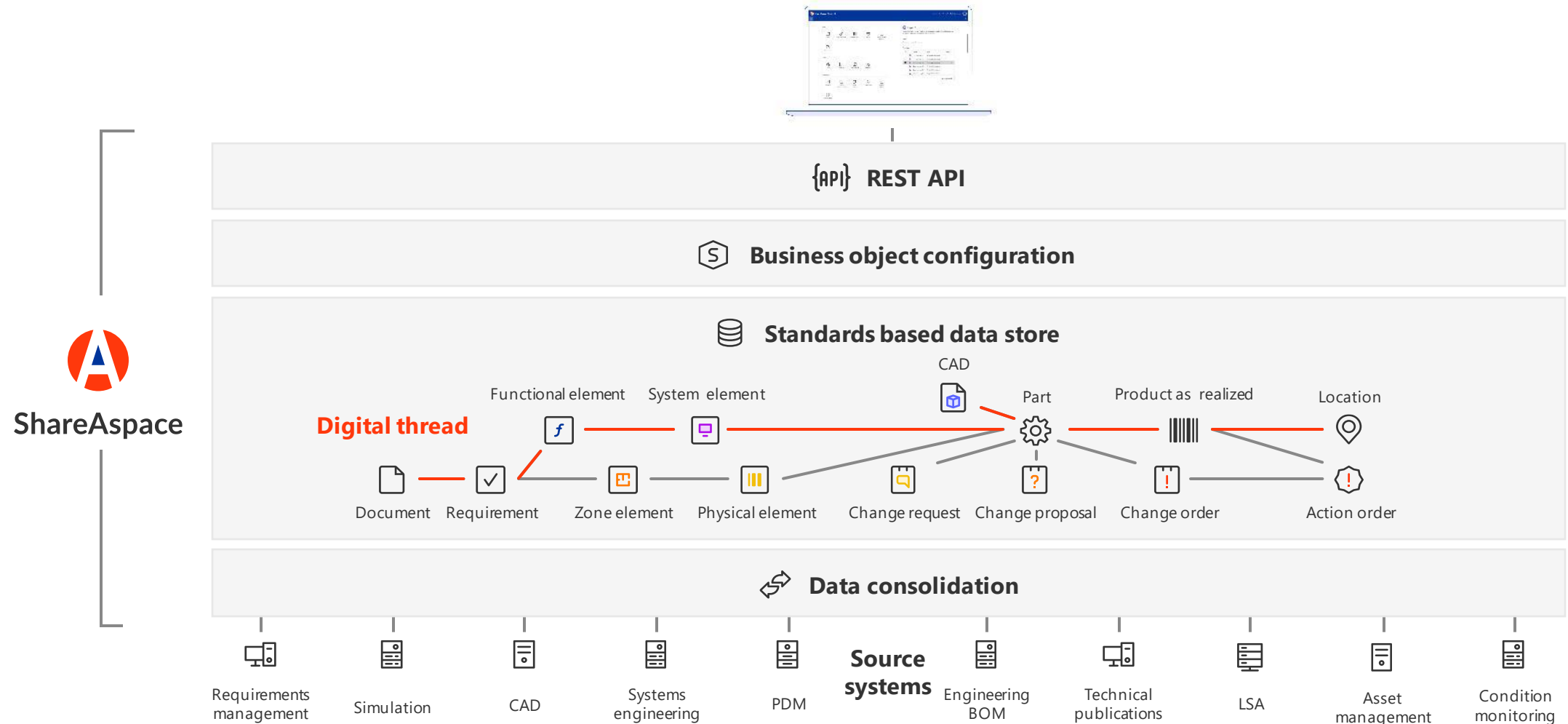


Delivering value...

- 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



Keys to achieve Flexibility and Accessibility

- Standards



- Open APIs





Thanks! Any questions?