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Wednesday, 4 March 2026 - Webinar # 190

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INCOSE Webinar 190

Beyond Documents: Configuration Management and PLM in a Model-Centric Enterprise



Jos Voskuil



Joep Mintjens



Sandrine Gonthier

About the Webinar

- Piloted in 2008
- A virtual offering aimed to provide relevant technical information and topics on systems engineering, on a regular basis and on an easy to access platform
- Held once a month (normally on the 3rd Wednesday)

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You can claim 1 PDU credit towards your INCOSE Systems Engineering Professional (SEP) renewal by attending this entire webinar.	Claim PDUs 
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This Webinar is being recorded.



The full recording and slide deck will be made available to all INCOSE members and CAB Associates within 10-12 business days from original air date in the INCOSE Library.

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INCOSE Webinar 190

Beyond Documents: Configuration Management and PLM in a Model-Centric Enterprise

Our guest



Jos Voskuil

CM WG interviewers



Sandrine Gonthier



Joep Mintjens

A wide-angle photograph of a wooden boardwalk that curves through a vast, grassy dune landscape. The boardwalk is made of light-colored wooden planks and leads the eye from the foreground into the distance. The dunes are covered in tall, green grass with patches of sand visible. In the background, a line of trees marks the horizon under a heavy, overcast sky.

Program

- Introduction (5 mn)
- Presentation ($\approx$ 40 mn)
 - What is a model-based enterprise?
 - From coordinated to connected...
 - Coordinated
 - Connected
 - Coordinated/connected: what does it mean for a business and what impacts on CM and PLM
- Q&A (15 mn)
- Closure

Don't hesitate to raise your questions in the Q & A

INTRODUCTION



The INCOSE Configuration Management Working Group started to propose webinars after **IW2025** at **Seville**.

Today, we invite you to travel to the Netherlands to meet our guest, **Jos Voskuil**, who is continuously enriching the discussions about product lifecycle management and configuration management.

We came to him with a challenging topic... **the evolution of CM and PLM in the era of the increase of the use of (digital) models and digital engineering.**

Two CM working group members will play the roles of the interviewers: Joep from Switzerland, and Sandrine from France.



Here again, we hope to build connections across countries, between people, between past and future, and learn through listening and sharing: **‘Everything is connected’ (Ankosé, Ottawa, IS2026).**

Now let us welcome Jos Voskuil!

Welcome to Jos Voskuil



- Started my career in CAD and data management in **1989**
- Started my private company TacIT in **1999**
Knowledge Management and PLM
- **2001** – 2008 Flying Dutchman mediating in
PDM/PLM implementations
- **2008** – Started my blog: VirtualDutchman.com



- **2011** Lecturer and broader focus – also on larger enterprises
- **2014** – 2018 Focus on Digital Transformation in the PLM Domain
- **2020** Co-founder of the PLM Green Global Alliance
- **2022** Collaboration with SharePLM & podcasts

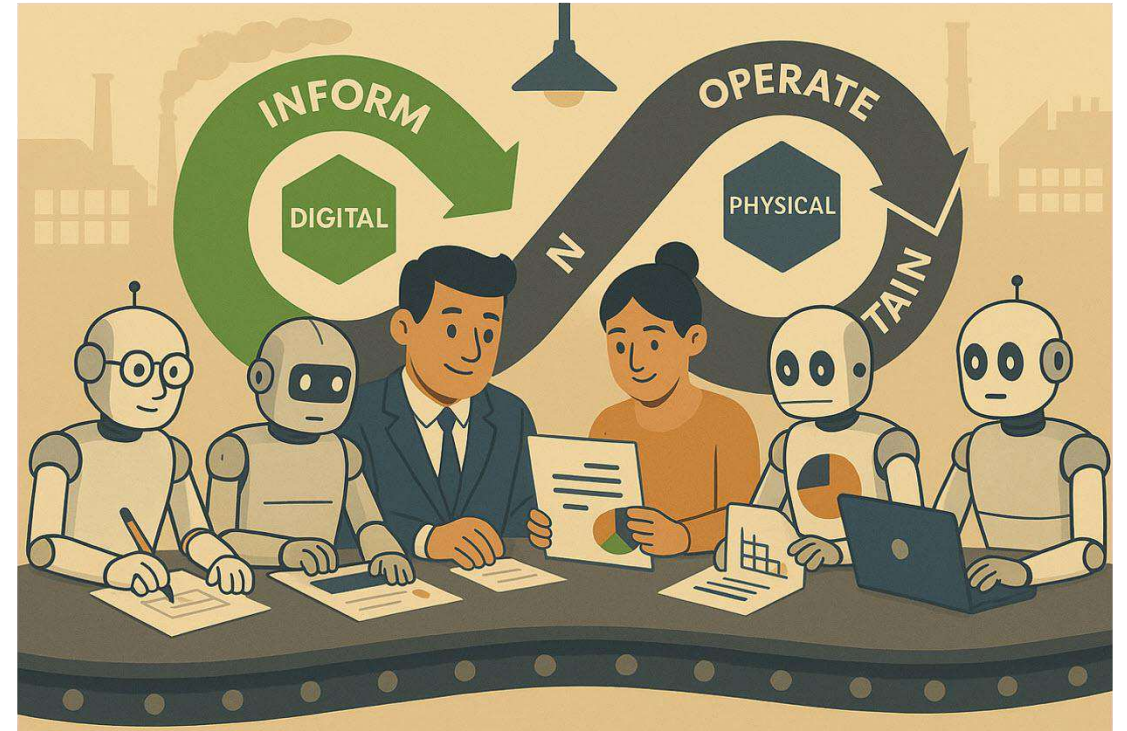


Without further delay, let us deep dive in our topic for today...

The model-based enterprise from a PLM perspective

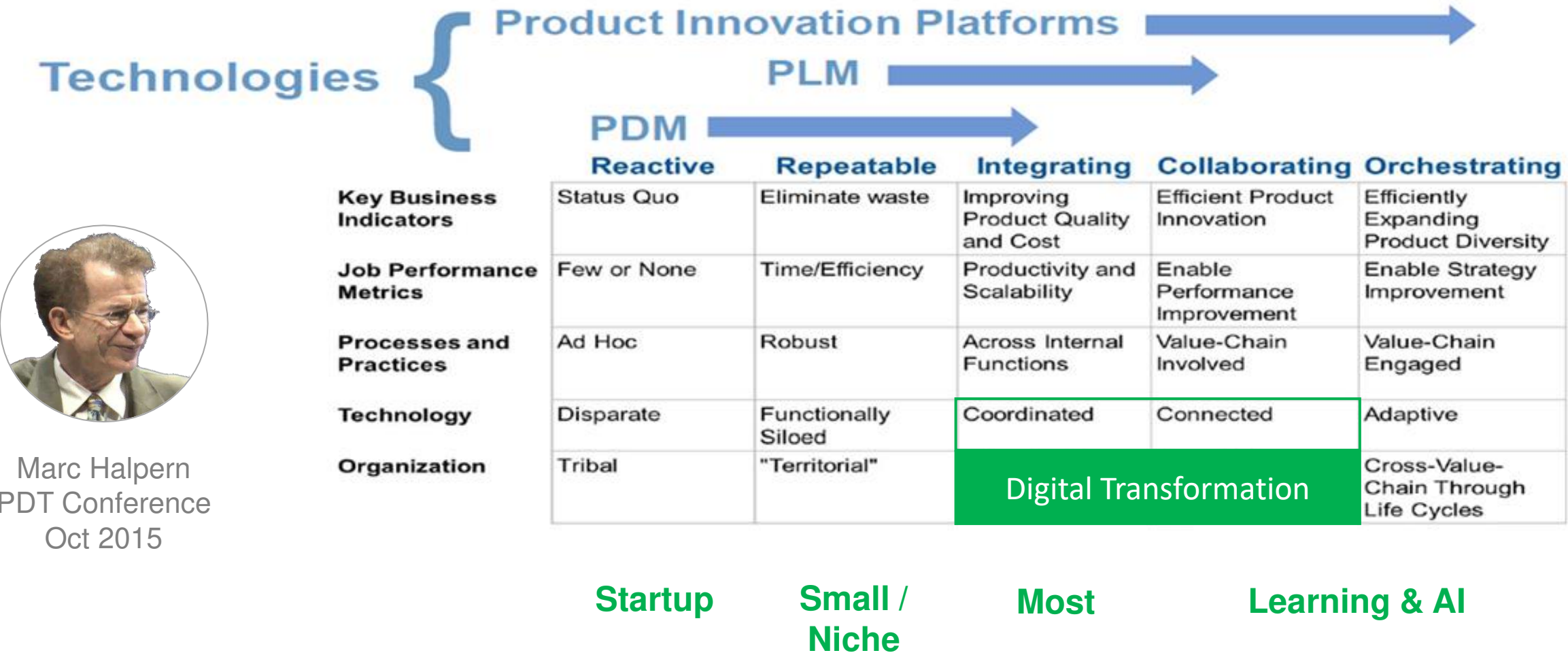
**What do you mean by
data/model-based centric
enterprise, in particular
in the PLM domain?**
(Joep)

Every company does product lifecycle management



Finding the optimal balance between people, processes and tools available

Digital Transformation in the PLM domain



Marc Halpern
PDT Conference
Oct 2015

From Coordinated to Connected

Coordinated:

Providing the right information at the right time
in the right context

Connected:

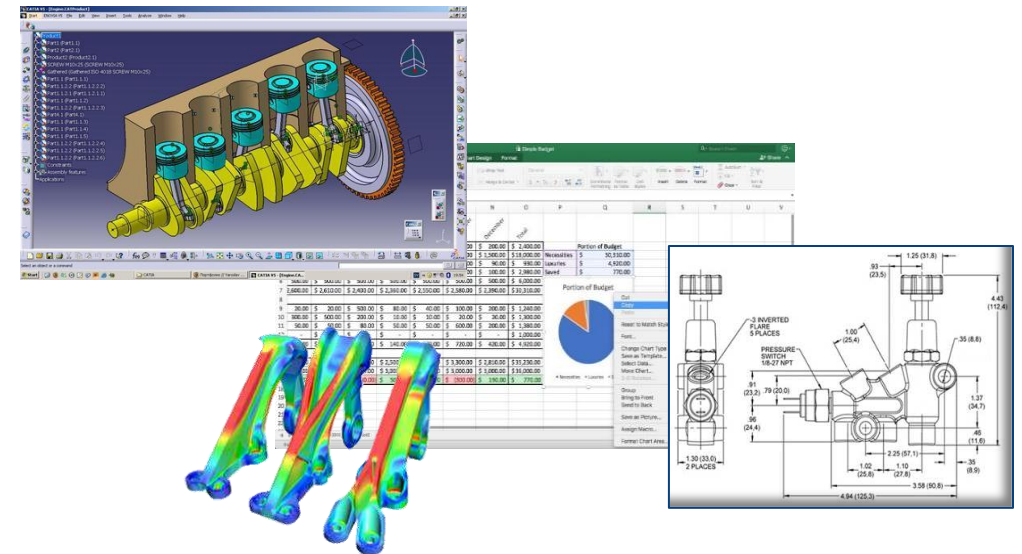
Providing actual information for anyone connected
in any relevant context

Coordinated

Providing the **right information** at the right time in the right context

Requires:

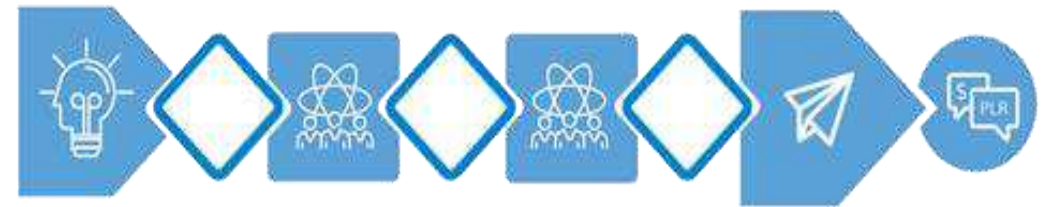
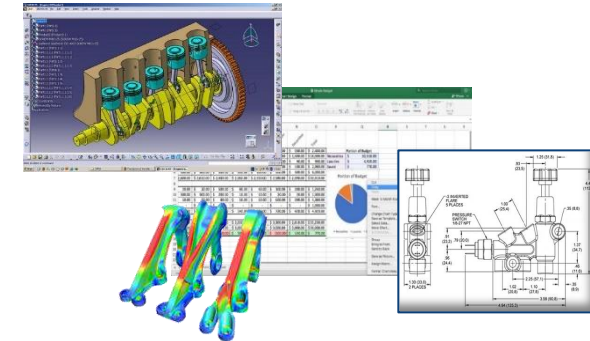
- An understanding/agreement on what's needed
Delivered in documents / files



Coordinated

Providing the right information at the **right time** in the right context

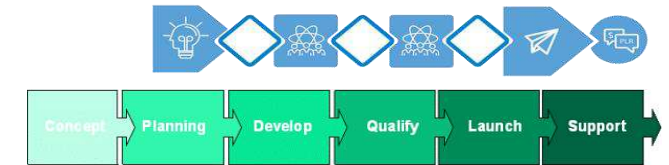
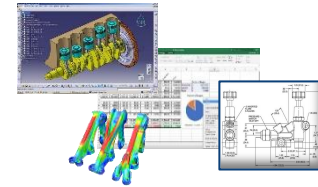
- **Delivered in documents / files**
- Activities that drive the delivery of the information
Predefined processes / workflows



Coordinated

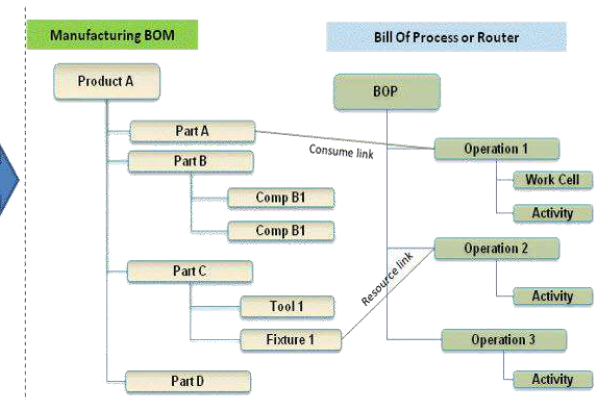
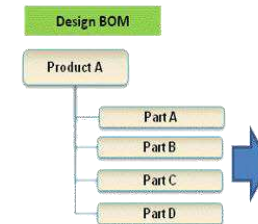
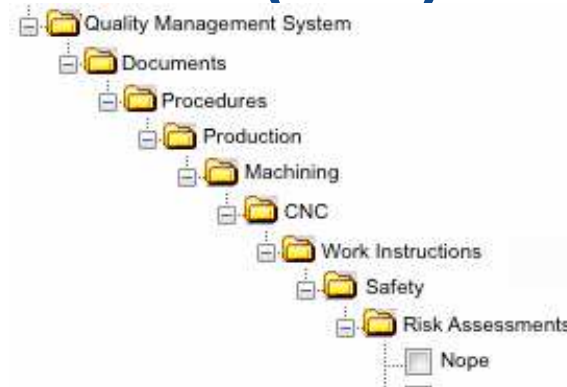
Providing the right information at the right time in the **right context**

- Delivered in documents / files
- Predefined processes / workflows



Using:

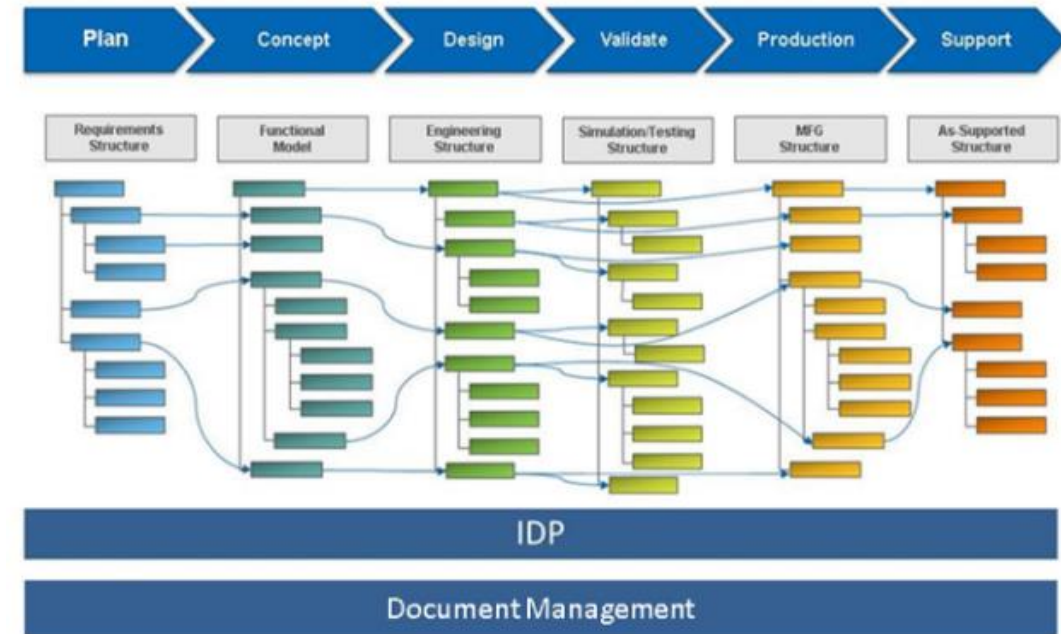
- Folders or PLM (BOM) structures



Coordinated in an evolutionary scope

Providing the **right information** at the **right time** in the **right context**

- Delivered in documents
- Predefined processes
- Using (BOM) structures



- Overlay structures

Part of the enterprise backbone - all vendors propose a solution

→ The **Coordinated** Digital Thread

The coordinated approach exists already and is very close to current Configuration Management practices.

What are the advantages of working in a coordinated way?
(Sandrine)

Jos' answers will be included in the final PDF content.

The **Coordinated** approach – summary

Advantages

- A logical evolution of traditional analog processes
- No limitations on tool usage (systems/excel/...) as long as results can be shared (neutral formats/pdf/ data table)
- The PLM system is the System of Record for governance, traceability, and compliance, providing the Single Source of Truth

Disadvantages

- Information details are locked in specific systems/files/applications
- Requires human effort and time to share and discover relevant information
- People are the weakest link

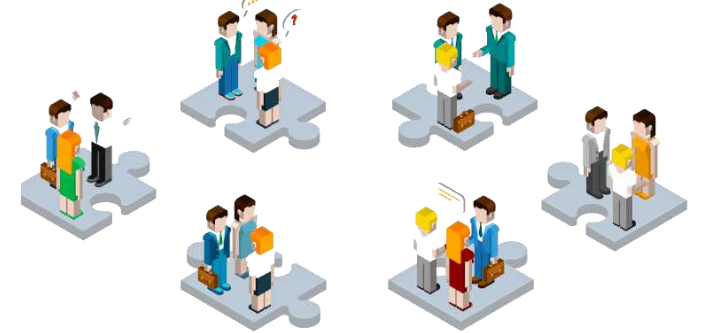
Connected

Providing **actual information** for anyone connected in any relevant context

Requires:

- **Data(sets) created by accountable persons**

Breaking silos – Think about the quality and consumers of data.
A dataset can also be geometry.

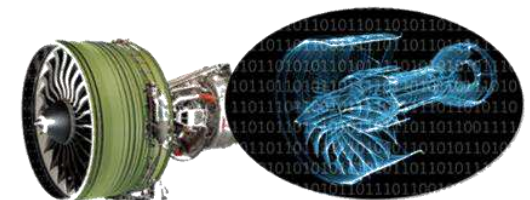
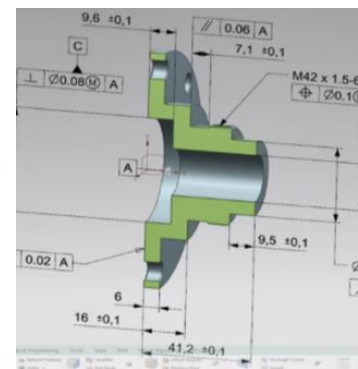
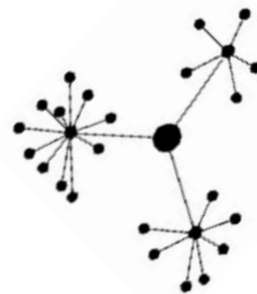
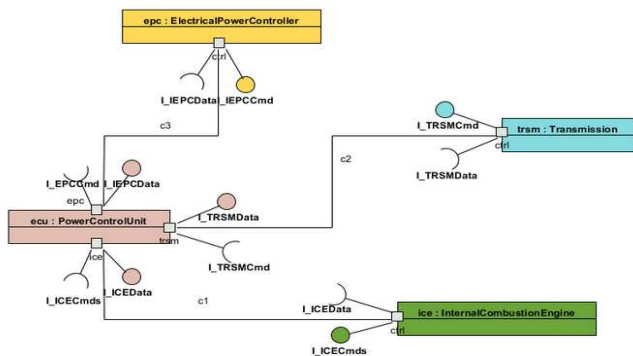
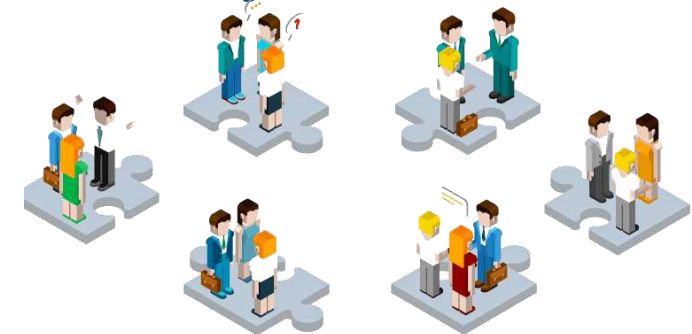


Connected

Providing actual information for anyone **connected** in any relevant context

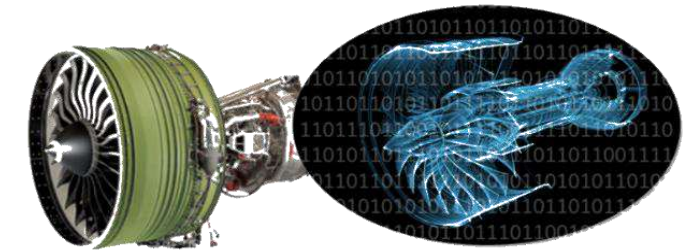
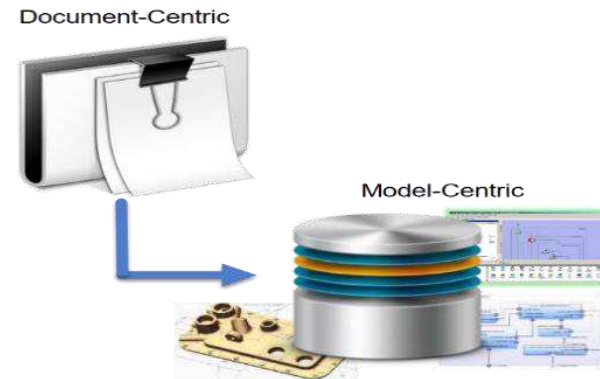
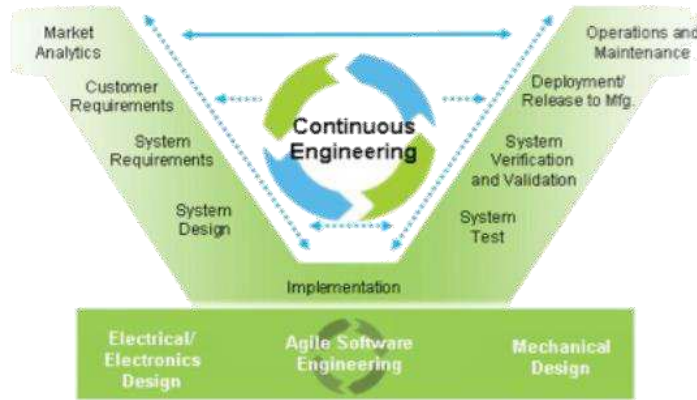
Requires:

- Data(sets) created by accountable persons
 - Other formats than documents/files
- Using Apps & Models for datasets to share



Connected

From documents to connected models – three domains



Model-Based Systems Engineering

needed to define complex products / systems where hardware & software are involved.

Virtual product definition, simulation and testing before committing to the physical world

Model-Based Definition

Provide a digital continuity between engineering and manufacturing by using a shared parameter-driven 3D model

No more drawings – **Product Managed Information** stored around a 3D Model

Digital Twin

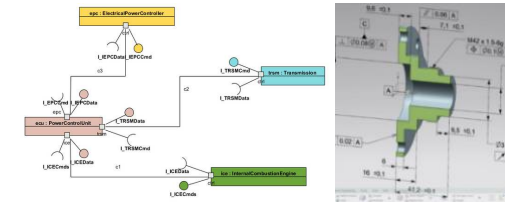
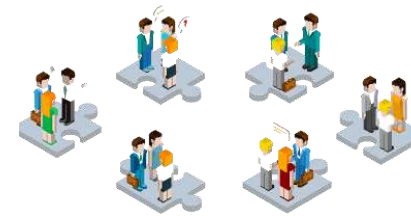
Managing a virtual definition related to a physical product in order to analyze performance, predict maintenance and use collected data to improve products

Connected

Providing actual information for anyone connected in any relevant **context**

Requires:

- **Data(sets) created by accountable persons**
- **Using Apps & Models for datasets to share**
- The need for Master Data Management,
Standards and Data Governance

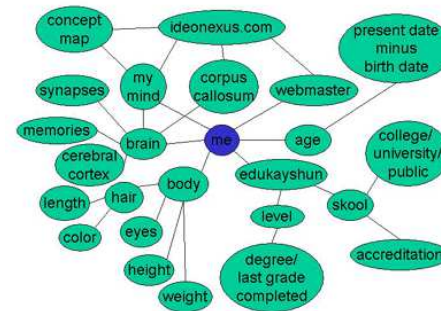
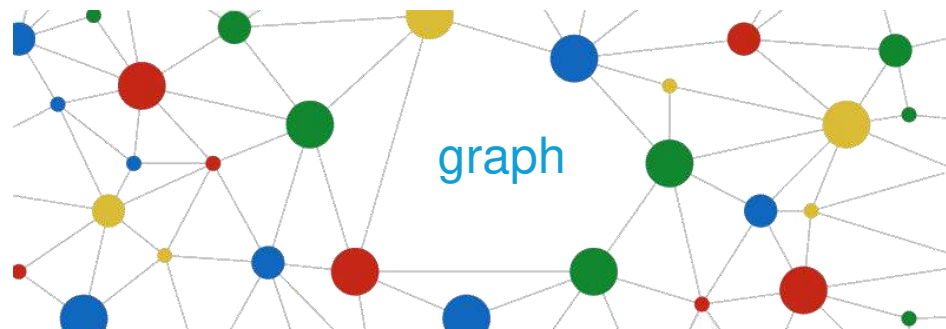
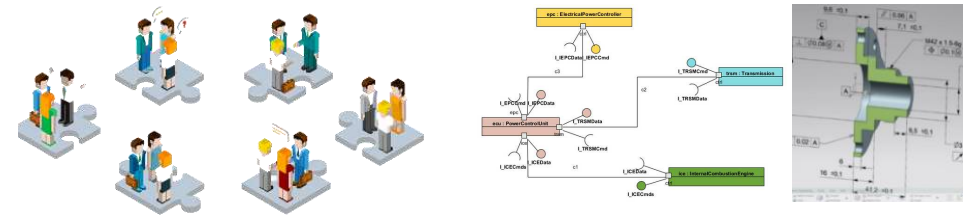


Connected

Providing actual information for anyone connected in any relevant **context**

Requires:

- Data(sets) created by accountable persons
- Using Apps & Models for datasets to share
- Standards and Data Governance
- The importance of an enterprise architecture

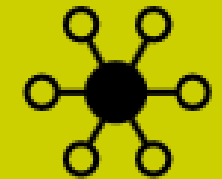


**But why would we go to
the connected approach,
which sounds difficult
and challenging?
(Joep)**

Jos' answers will be included in the final PDF content.

Digital PLM – the WHY

Advantages



Connected

Unprecedented real-time visibility resulting in an intelligent supply network and evolving operating models



Scalable

Seamless operations with unparalleled organizational flexibility and personalized experiences



Intelligent

Innovative actionable insights and decision making leveraging analytics, cognitive tools and smart apps



Rapid

Exceptional speed to market due to extraordinary responsiveness and proactive prevention

The **Connected** approach – summary

Advantages

Allows for near real-time collaboration (speed)

Democratization of information (connected / scalable / 360 °)

Information can be consumed by software and algorithms

Connected environments, the Systems of Engagement, provide a data-driven, user-friendly environment – introducing the Authoritative Source of Truth

Disadvantages

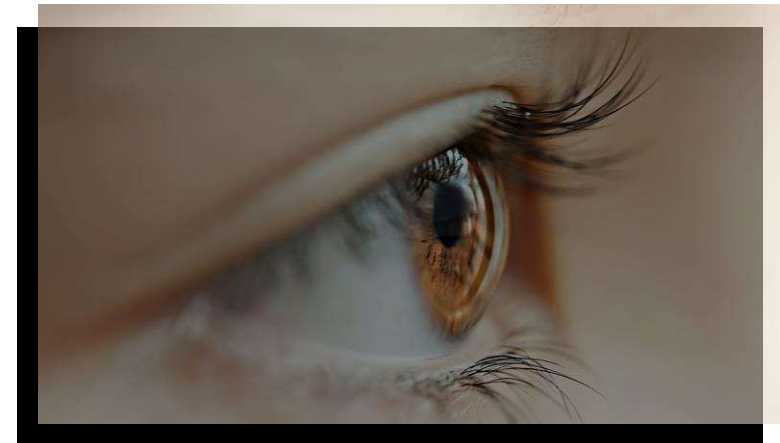
Information is much more granular and requires new processes and skills

A new approach without a history of 60+ years of experience

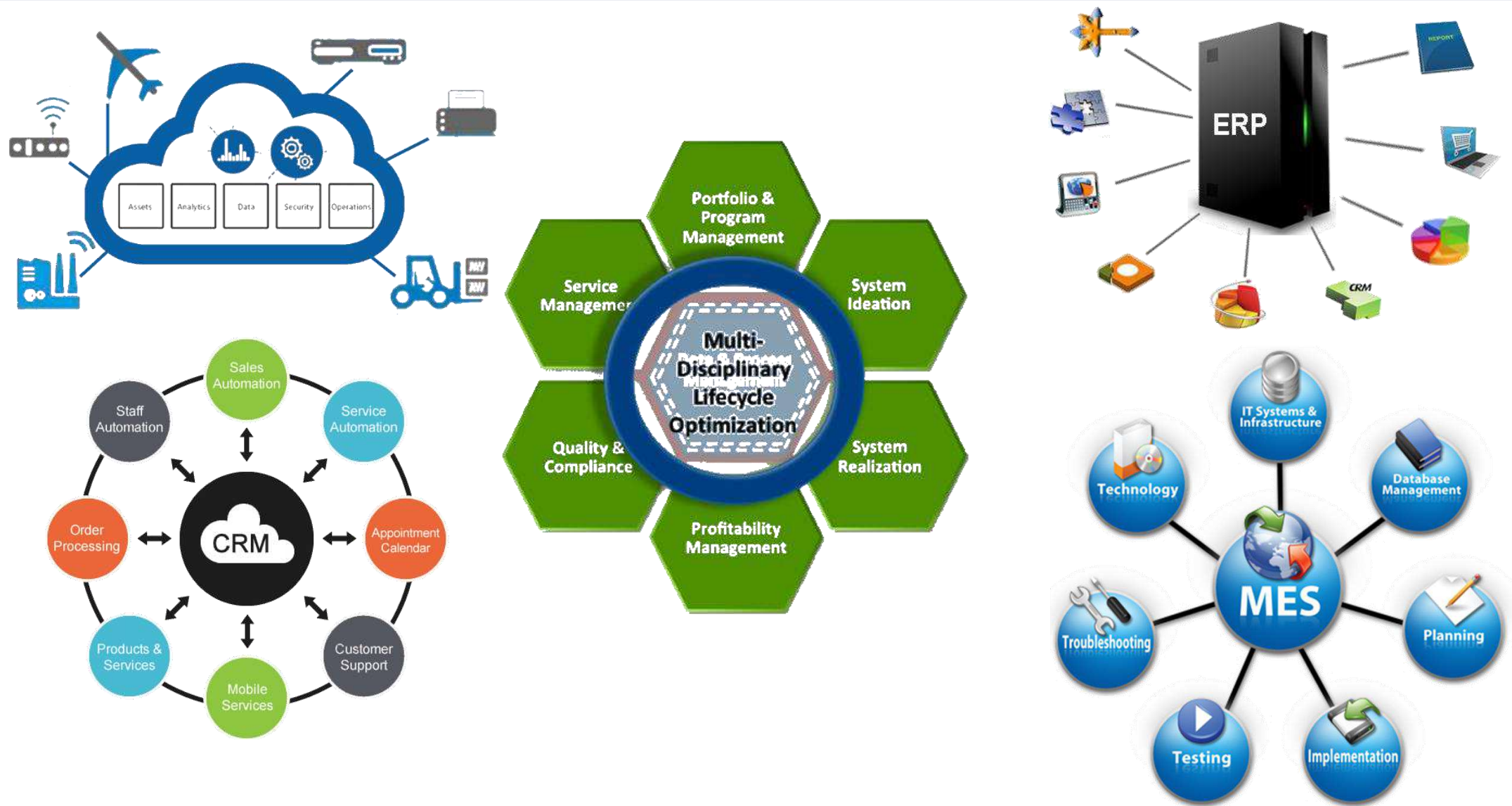
You will need to connect to the Systems of Record

Now, how to introduce the connected way of working

- 1) What does it mean for a business?
- 2) What are the impact on PLM and CM?



Five platforms working together: coordinated & connected

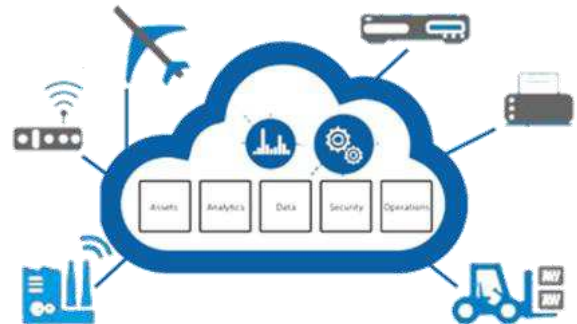


The Connected Digital Thread – the building blocks

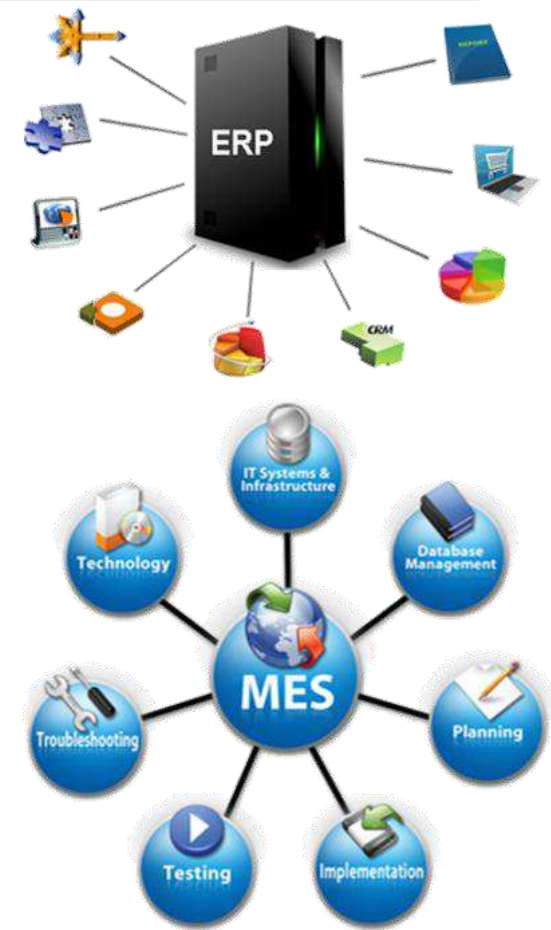


Microservices
APIs / Low Code platforms

Dashboards
Apps

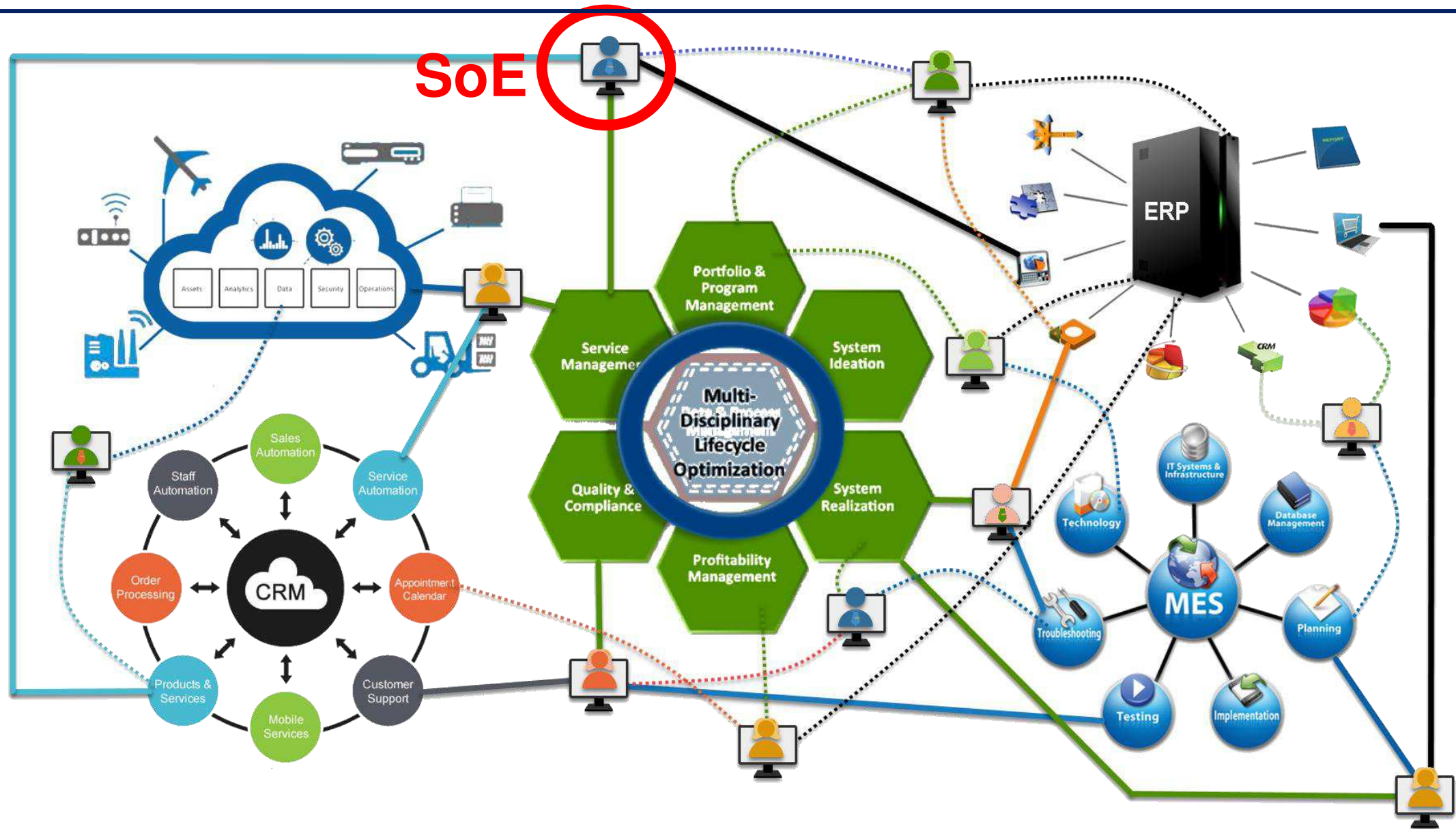


Product Innovation Platform



An infrastructure with
Systems of Record (SoR) and Systems of Engagement (SoE)

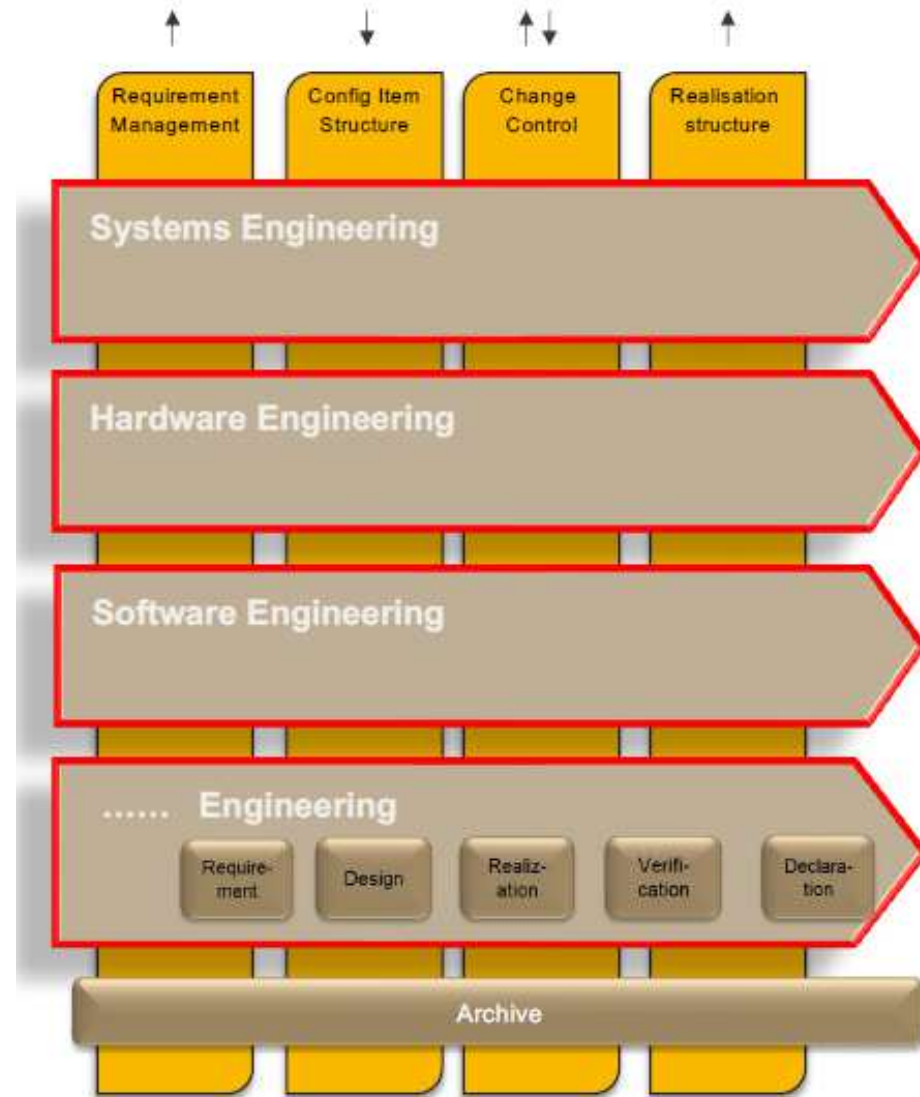
A paradigm change: From a Single Source of Truth to The Nearest Source of Truth and Single Source of Change!



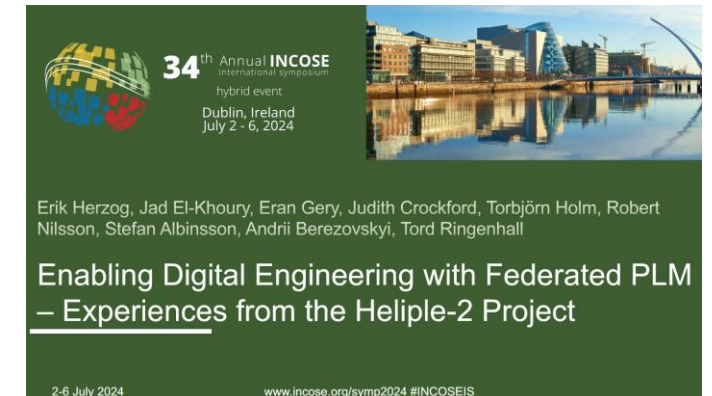
The future example: Federated PLM

The PLM infrastructure is a mix of:

- A traditional PLM System:
System of Record
- Extended with other real-time domains optimized for collaboration between a certain target group:
Systems of Engagement



IS2024 presentation



Q & A

Time to have a look at the questions...



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- All the previous webinars are now located in the [INCOSE Library](#)
- Attending a Webinar does count as a 1PDU credit towards your SEP renewal.

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