



IDEAL PLM

Digital Twin in PLM: Product evolution in digital platform

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Let's start with an example from nature

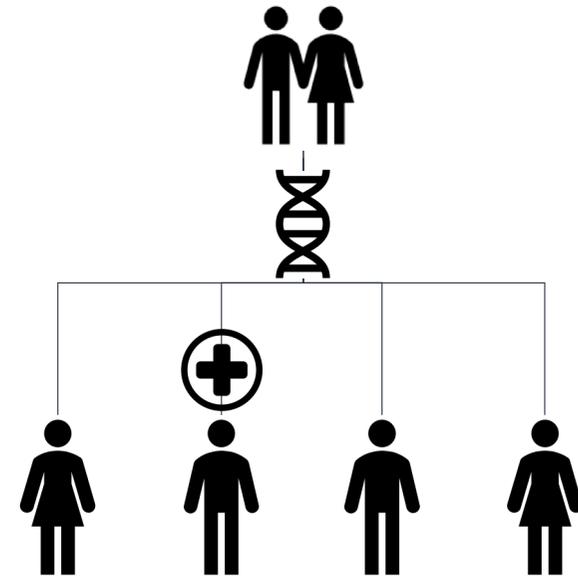
Parents have four children of which one has been discovered a medical condition.

Question raised whether this is caused by the environment and individual habits or can this something that is inherited.

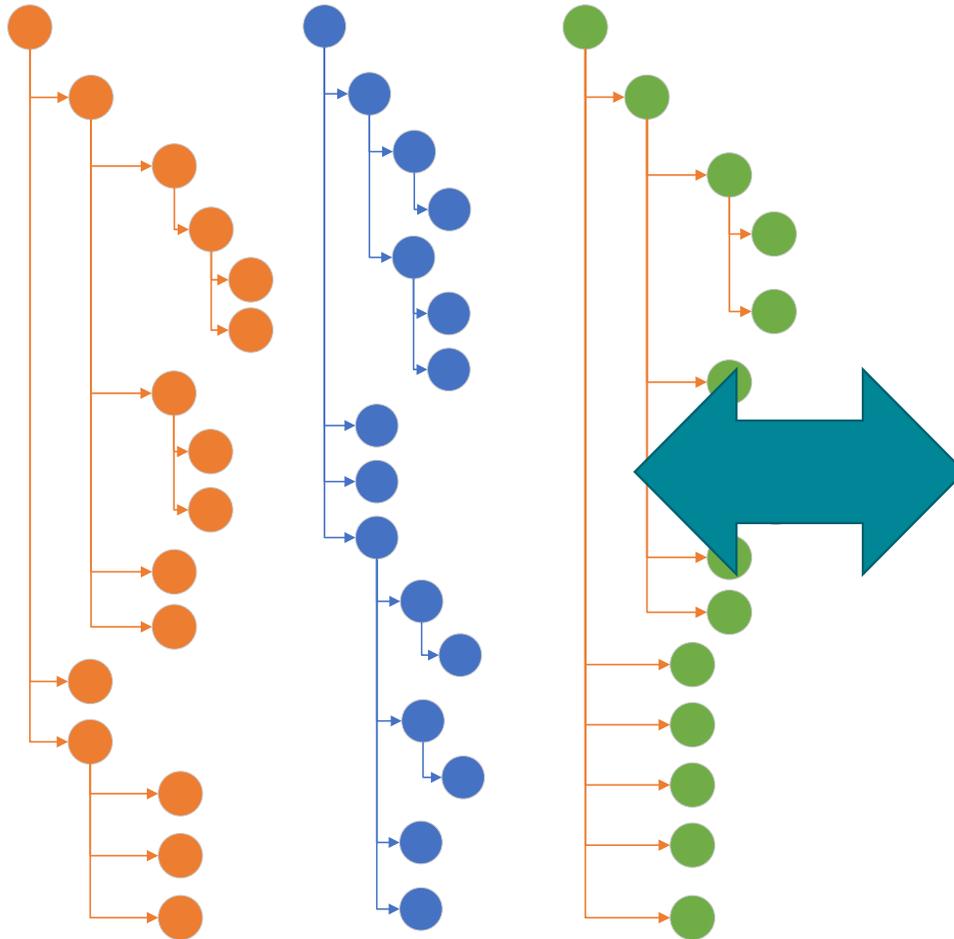
To be sure the DNA is tested to discover if hereditary disease and all siblings need to be investigated.

What is the point of this?

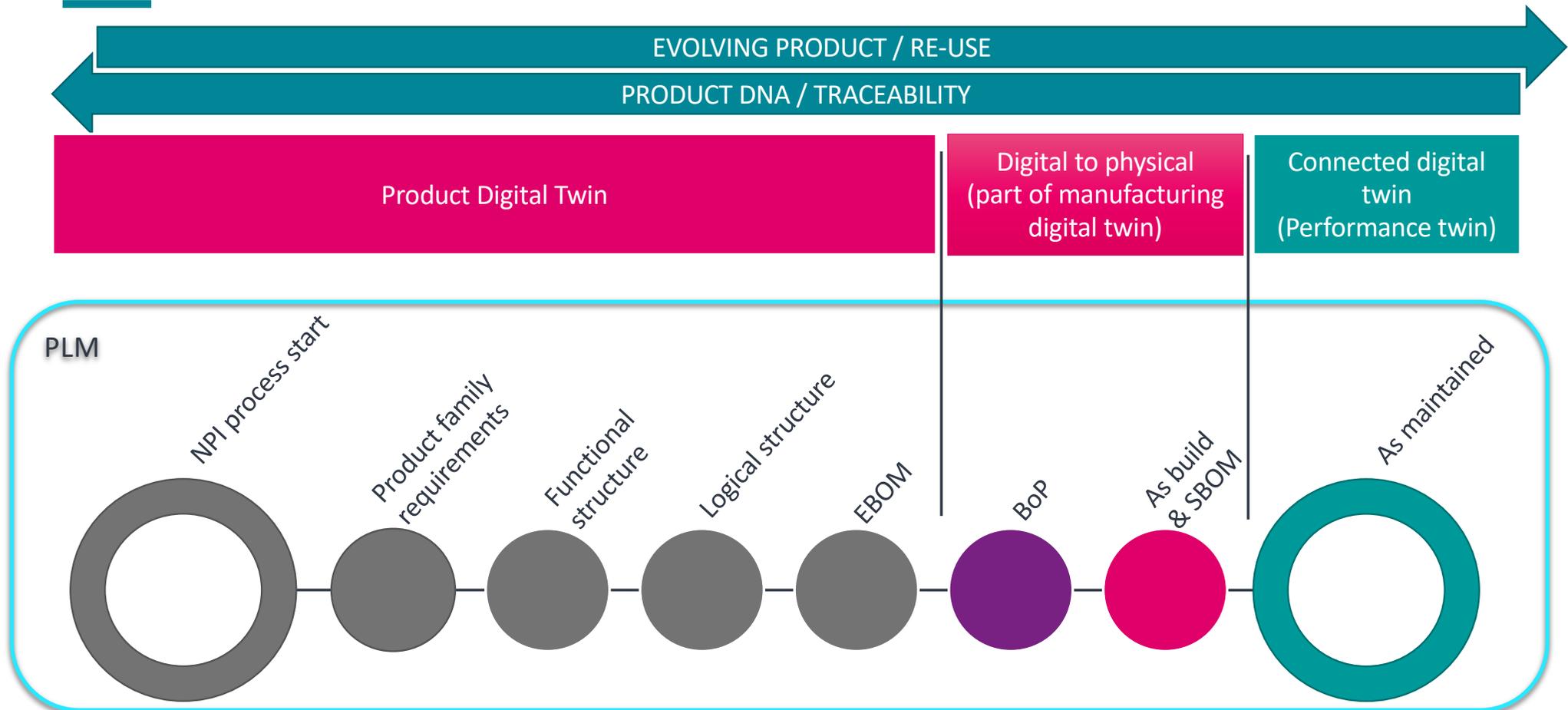
- If parents represent generic product family
- Kids are then delivered products
- DNA is holding all the important building blocks and connects certain individual features to the product family

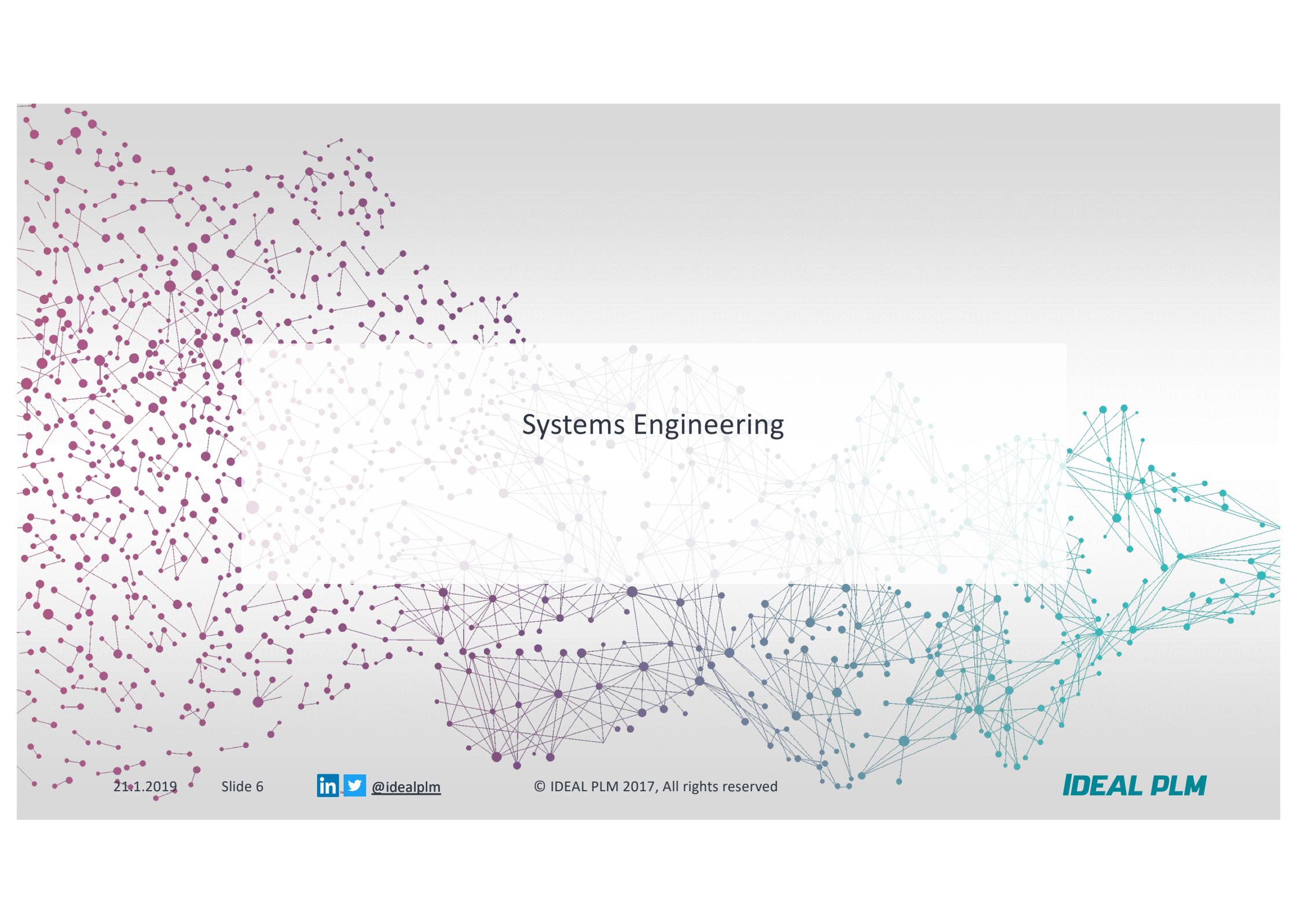


Digital twin holds the information from whole product life cycle



Product evolution in digital platform





Systems Engineering

The Objective of Systems Modeling

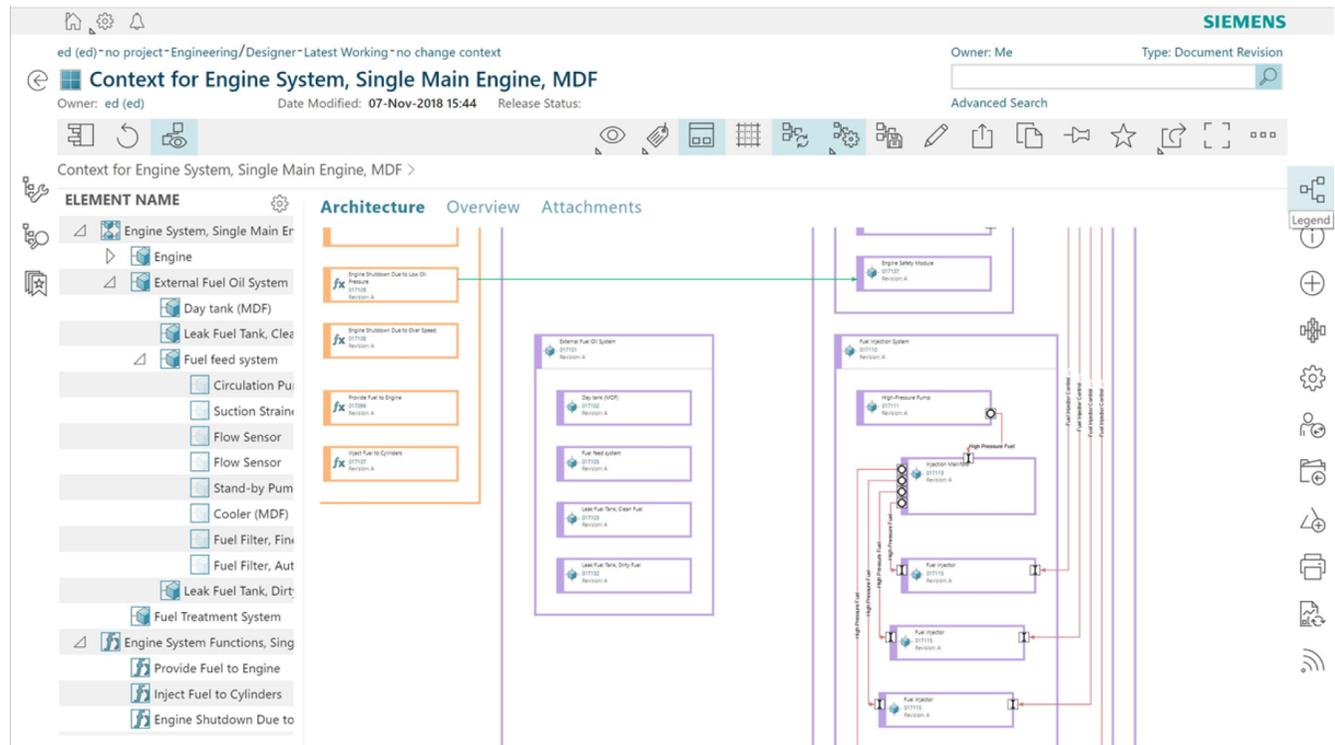
- Systems modeling is an approach that focuses on the conceptual design early in product line engineering
- Systems modeling focuses on the first three levels of system specifications
 - Requirements
 - Functional
 - Logical
- Systems modeling activity results in a functional black box model and its interface specification
- System model acts as a governing specification to the activities of physical design and analysis where 1D simulation, E/E engineering, software development, 3D design, and CAE happen

Systems modelling in traceable and re-usable way

Requirements are defining what are the needs of the system (goals, limitations & functional/not functional requirements)

Functions are defining what systems do (functions with inputs/outputs, decomposition and allocations)

Systems are defining what are the boundaries (model structure, functions to components & interfaces between systems)

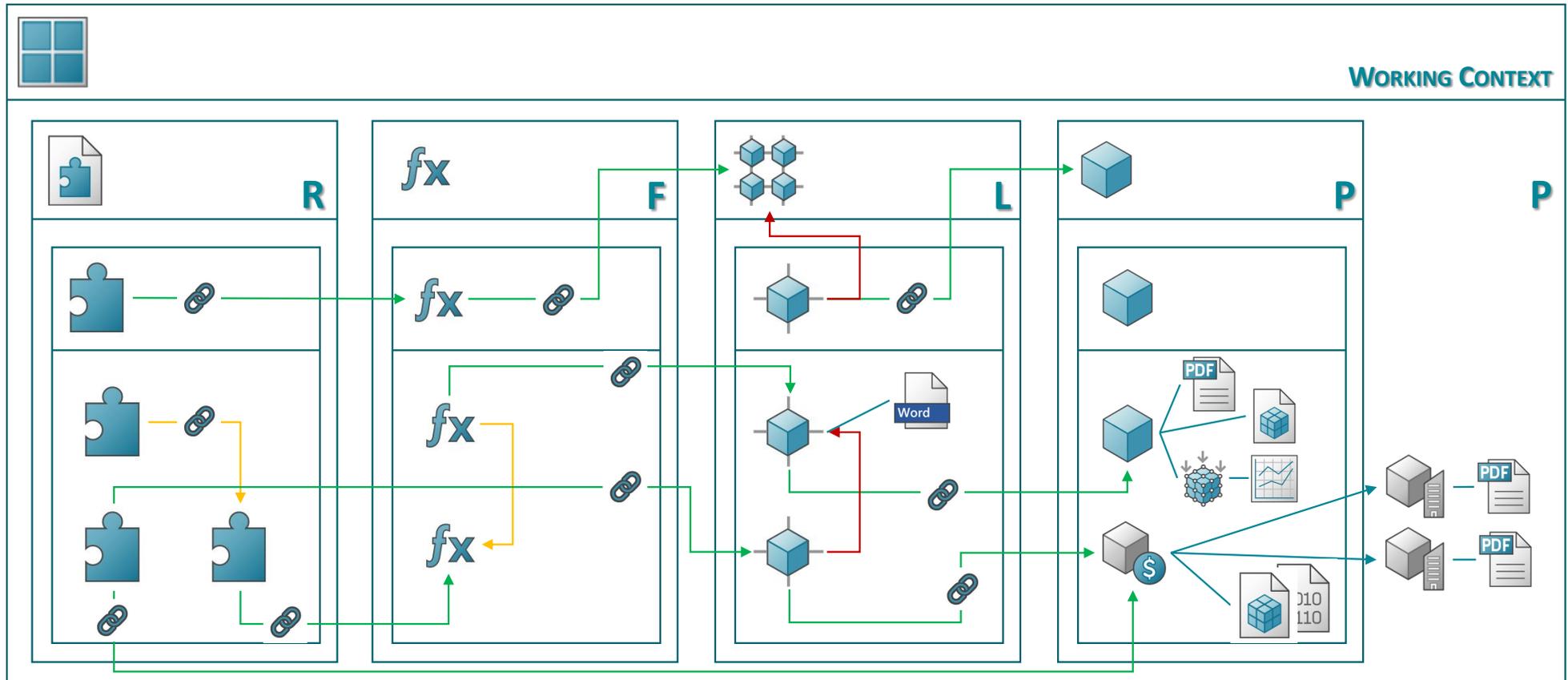


Object Types

- Requirement Specification
- Requirement
- Function
- System Model
- System Block
- Working Context
- Tracelink indicator



Traceability and Connectivity



Connecting the learnings from the field back to the product can be done but value is achieved when have build the product evolution digitally in a traceable way.

THANK YOU!

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