



# EcoSystems Engineering & Integrated Product Support (IPS)

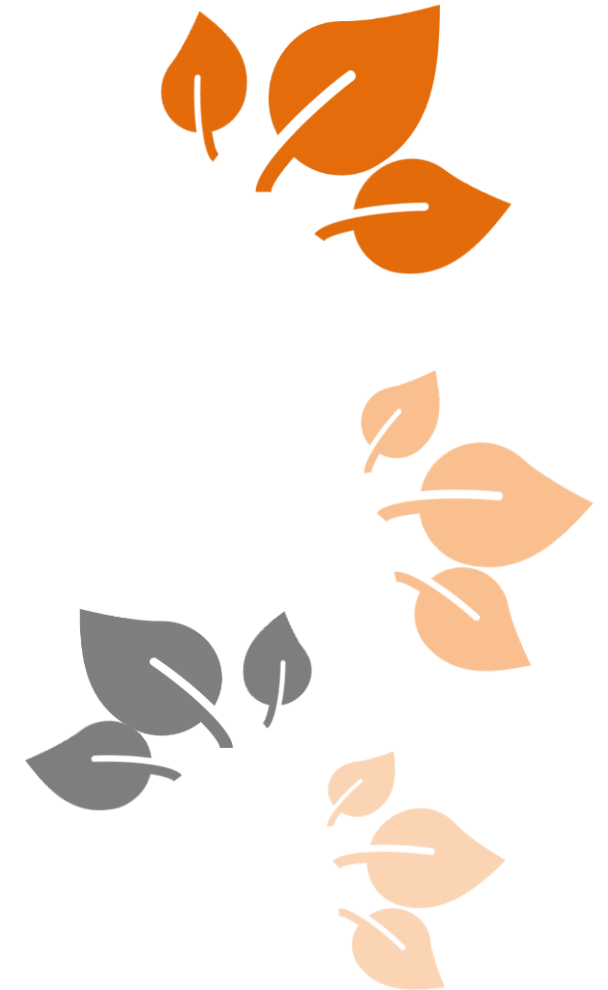
## ISO 15288 & IPS Suite

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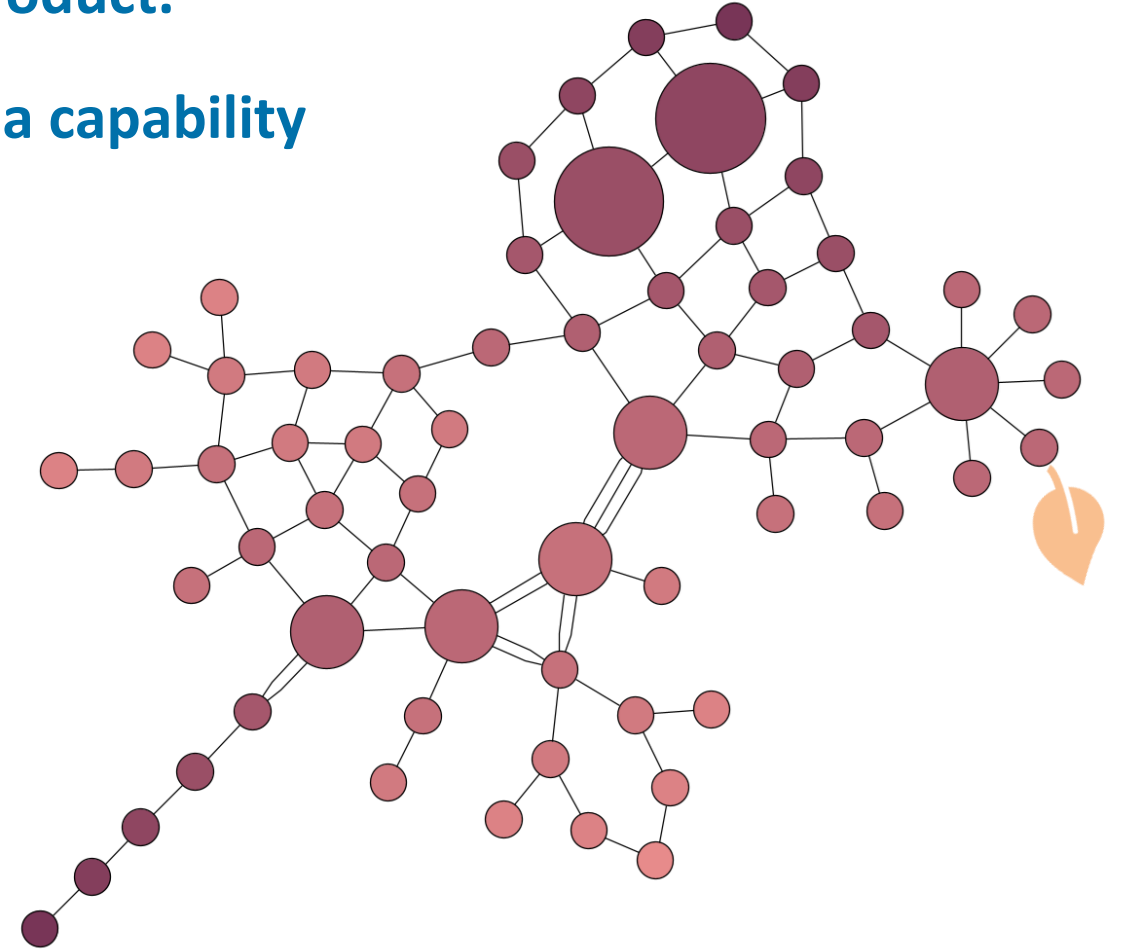
## The challenges

- **Increasing complexity of Systems**
- **Increasing requirements**
- **Lacking skilled people**
- **Tighter budgets**
- **Digitization of design environment**
- **Services instead of hardware**



## The REAL challenge

- **A customer is not interested in a system or product.**
- **A customer is interested in the availability of a capability**
  - **during a period of time**
  - **in combination with other capabilities.**
- **A Product is a part of this capability**



## Solution

- There is no “Engineering” and “ILS/IPS”
- There is a single effort to design a capability within a context.

### This means

- Standardization of processes
- Repeating analysis patterns
- Tailor as needed



# Systems Engineering pattern

Capability

Use Cases

Stakeholders

Requirements

Functions

Functional architecture

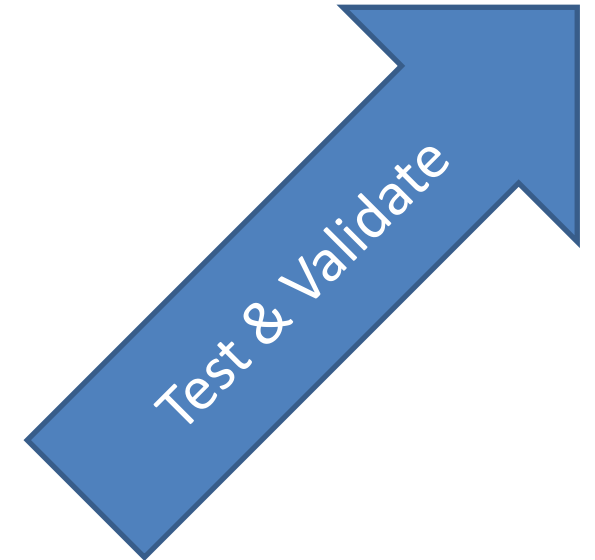
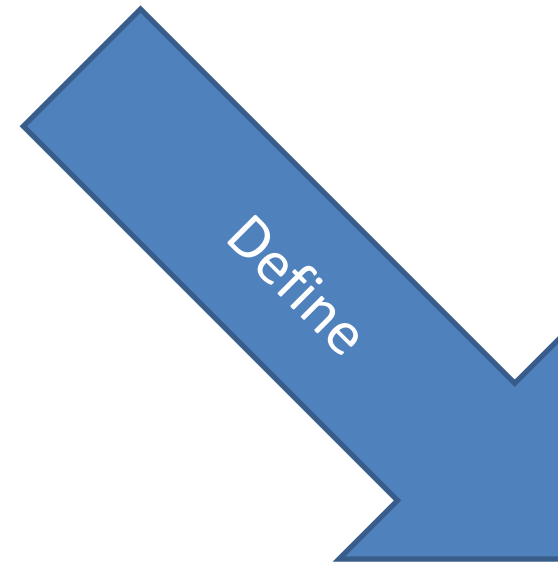
Logical grouping

Logical architecture

Physical implementation

Physical architecture

Discrete artefacts/objects



# IPS pattern

Breakdowns

Functions

Functional architecture

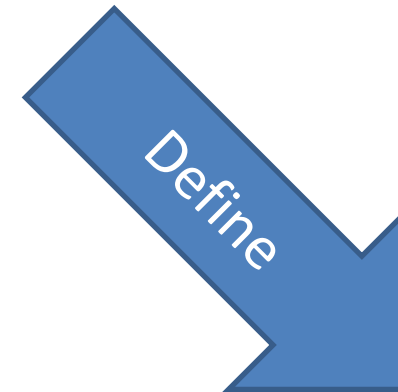
Functional/ Technical/ Damage/ LSA FMECA

Failure modes

Task requirements

Tasks

Data modules



## EcoSystem pattern

- **Standardization of requirements**
- **Standardization of knowledge domains**  
Knowledge domain has an expert
- **Standardization of configuration management**
- **Standardization of workflow**
- **The design process becomes a workflow where each domain expert adds/edits**
- **Both customer and contractor define requirements and validate the results**
- **Both customer and contractor define knowledge domains**





# Thank You

for your attention!

# Questions?



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