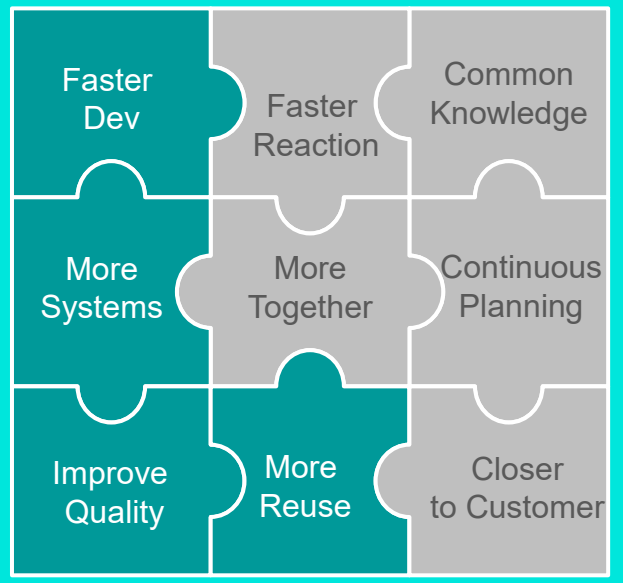
Reuse of Requirements



Where to place potential reused requirements?

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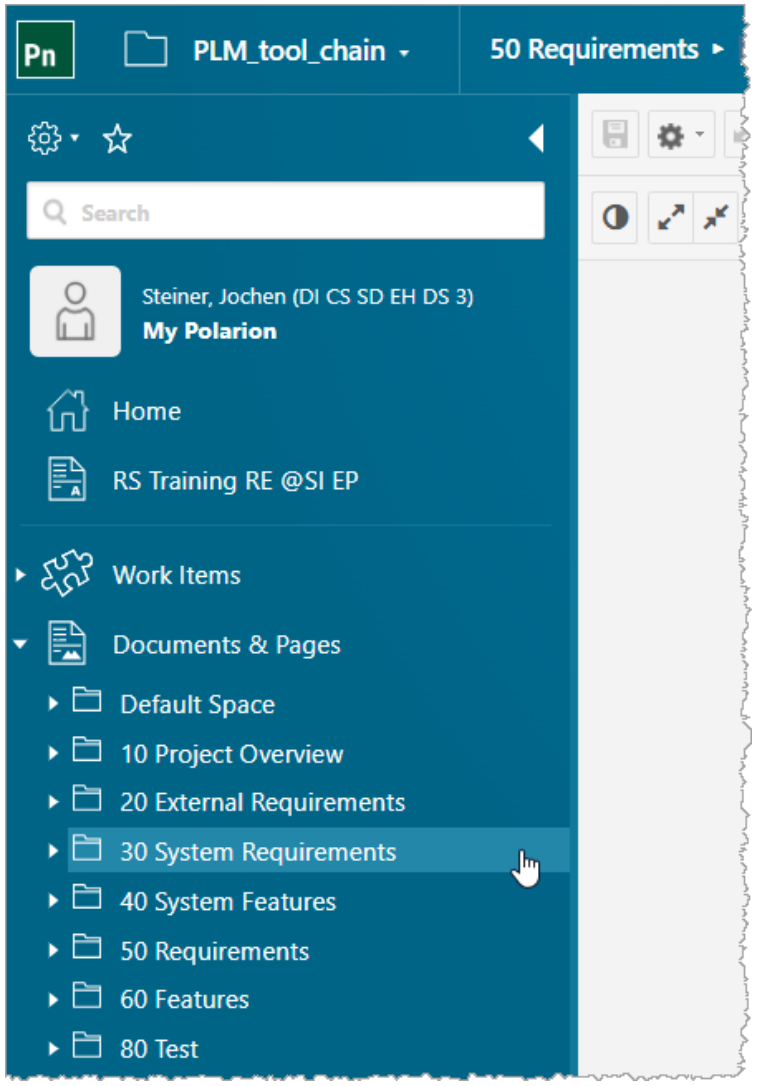
What are we talking about?



When do we start?

PM 100 … QPM 200

Where to place my requirement specifications?

It depends ;-)

- 20 External Requirements
- 30 System Requirements
- 50 Requirements

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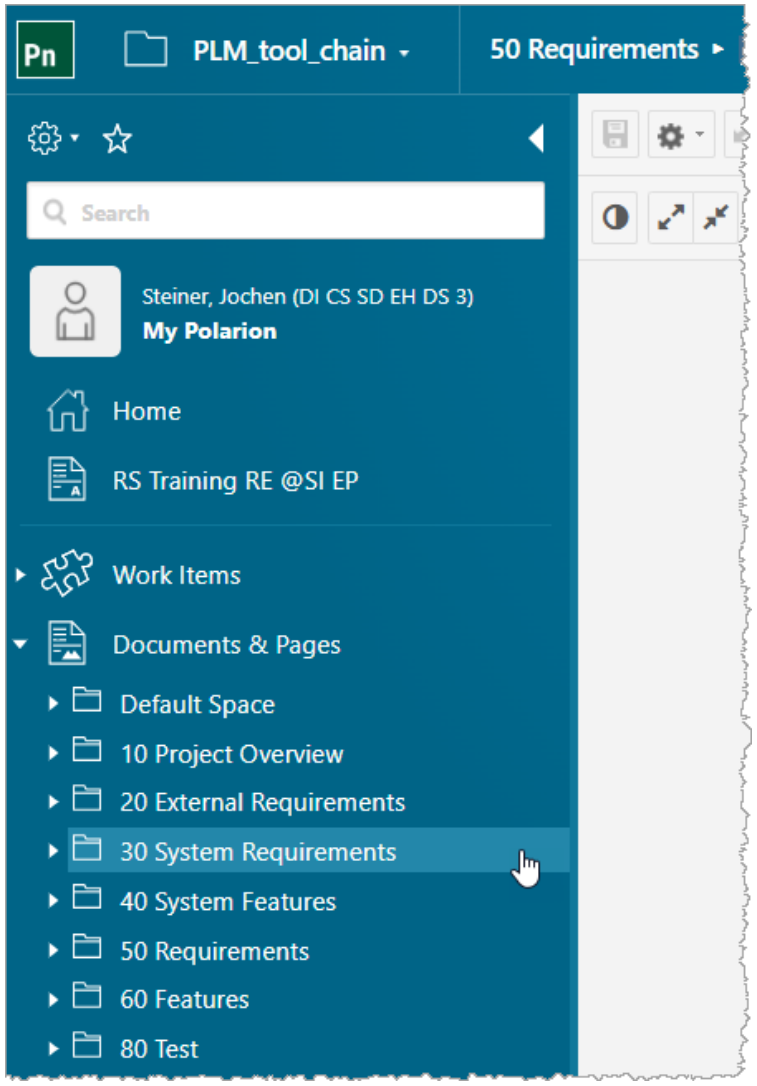
What are we talking about?



All requirements specifications that we expect below this folder:

30 System Requirements

Requirements that belong to

- a classical system, means overall behavior not component behavior

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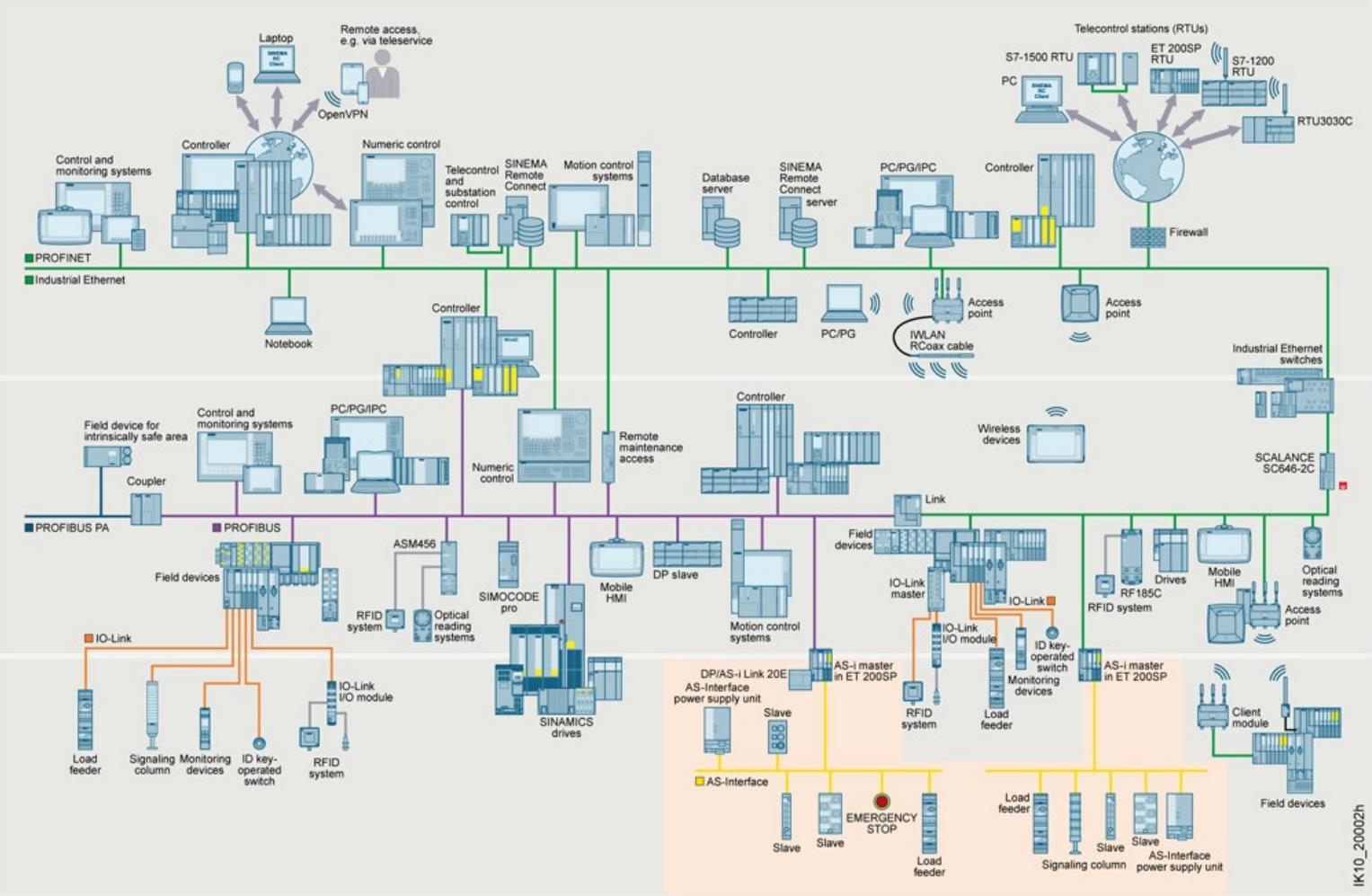
Requirements for a classical system



A **system** refers to the complete set of components, processes, and interactions that are designed to achieve specific objectives or functions.

Normal requirement specification focuses on a single product or component.

System Requirement Specification looks at the system as a whole, defining the overall requirements and functionality of the entire system

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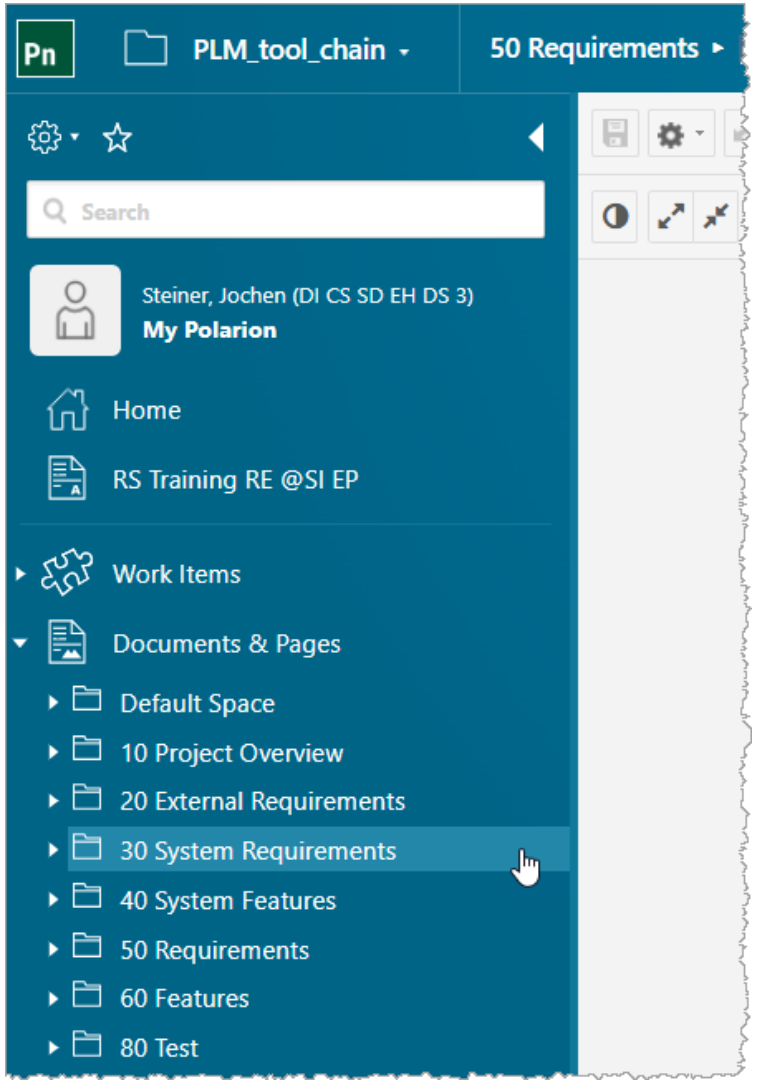
What are we talking about?



All requirements specifications that we expect below this folder:

Requirements that belong to

- a **classical system**,
  means overall behavior not component behavior
- a **product family or product line** with similar functions and behavior, so they can be reused in the product specific requirements specification

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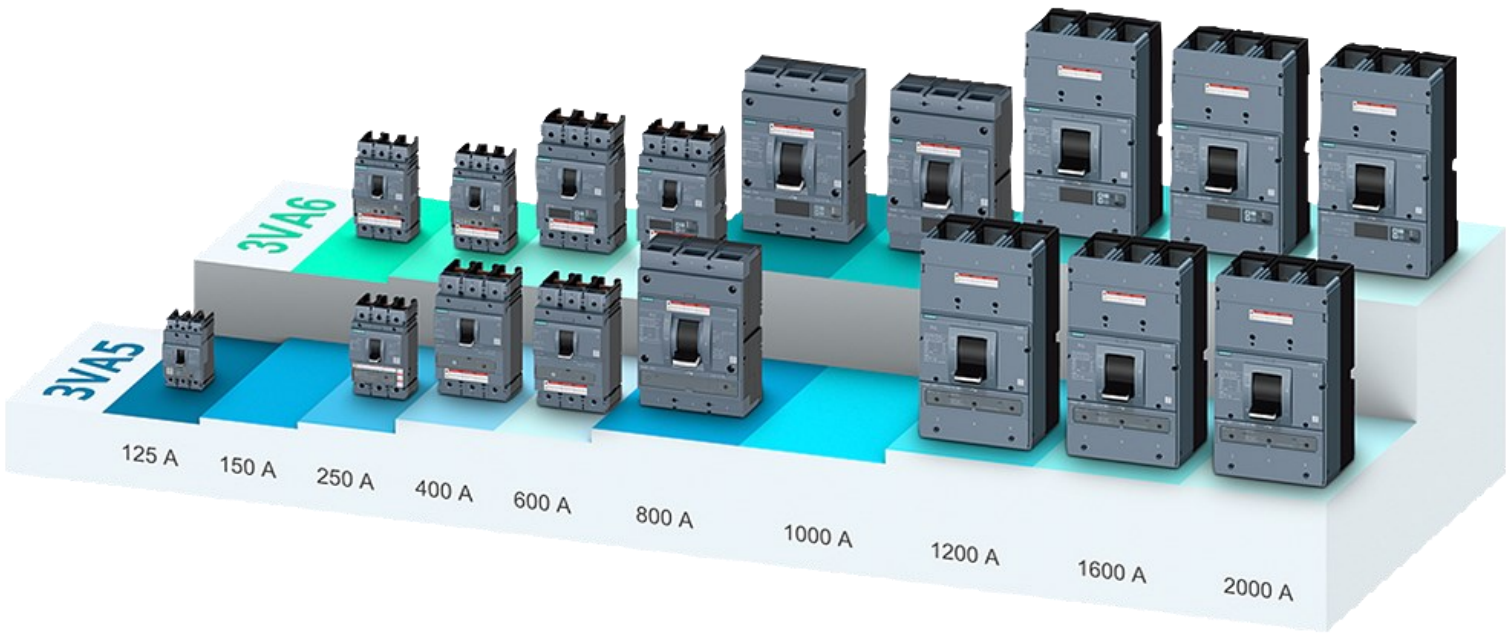
Requirements for a product family or product line



E.g.: Product line overview: 3VA UL Molded case circuit breaker

A **Product Line / Family Requirements Specification** defines the requirements for a whole portfolio of related products, rather than a single system.

It identifies the core assets shared across the product line or family, as well as the points of variation.

Goal: Product requirements can reuse existing product line requirements or derived with more detailed information.

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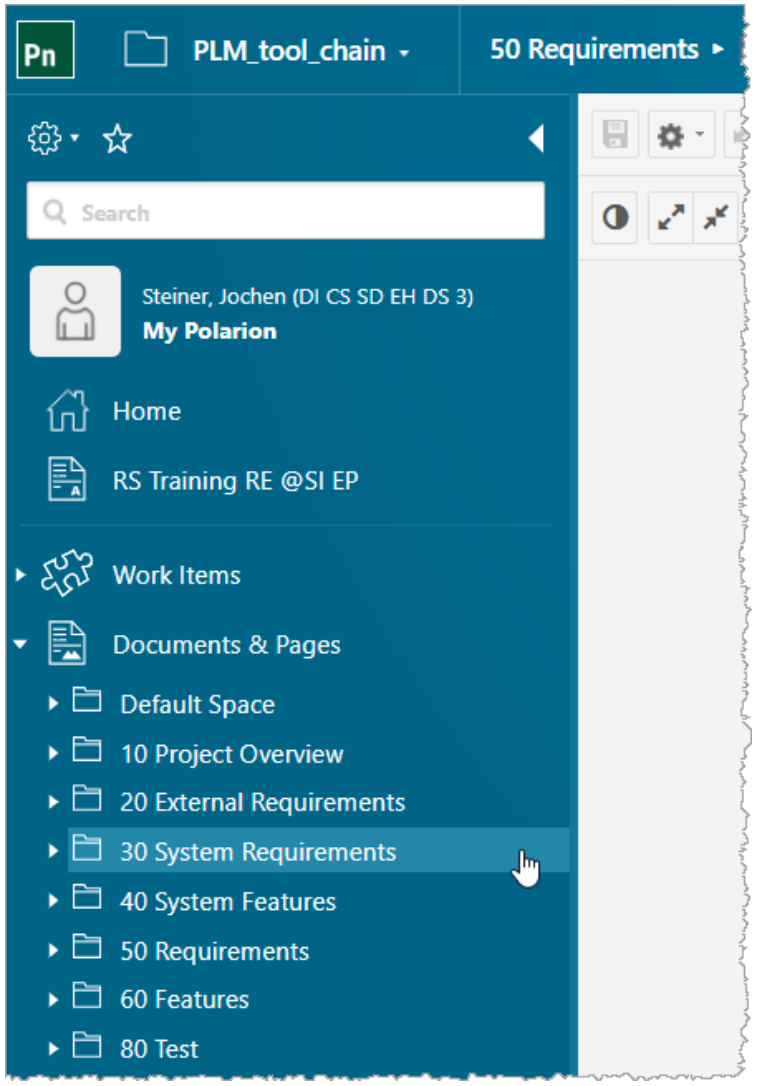
What are we talking about?



All requirements specifications that we expect below this folder:

Requirements that belong to

- a **classical system**,
  means overall behavior not component behavior
- a **product family or product line** with similar functions and behavior, so they can be reused in the product specific requirements specification
- a **specific aspect of many products**,
  so, they can reuse these defined constraints or requirements with the main goal of a topic specific repository

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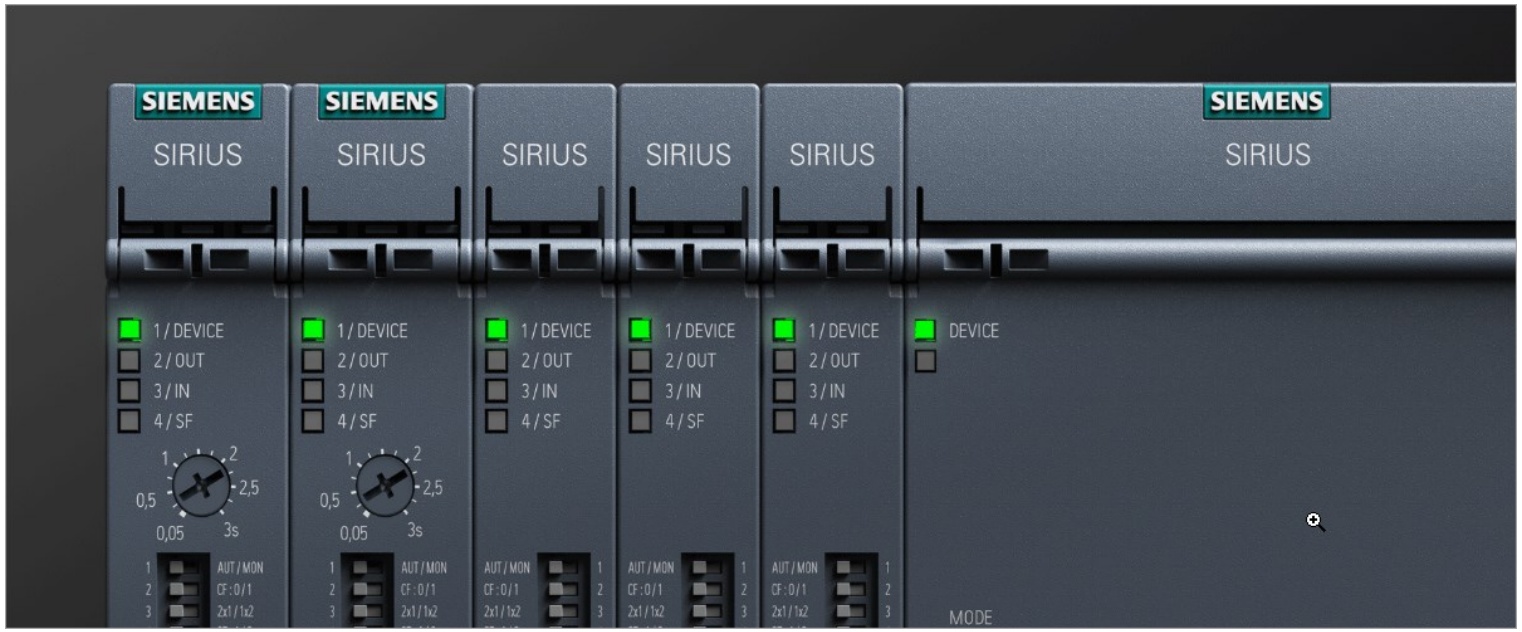
Requirements for a specific aspect of many products



E.g. Hardware design requirements

A **Cross-Product Requirements Specification** focuses on a specific aspect or capability that spans across multiple products.

This could be things like communication protocols, serviceability, security, user experience, etc.

Goal: Product requirements can reuse existing requirements and probably the provided Solution concepts in the System Feature Specification

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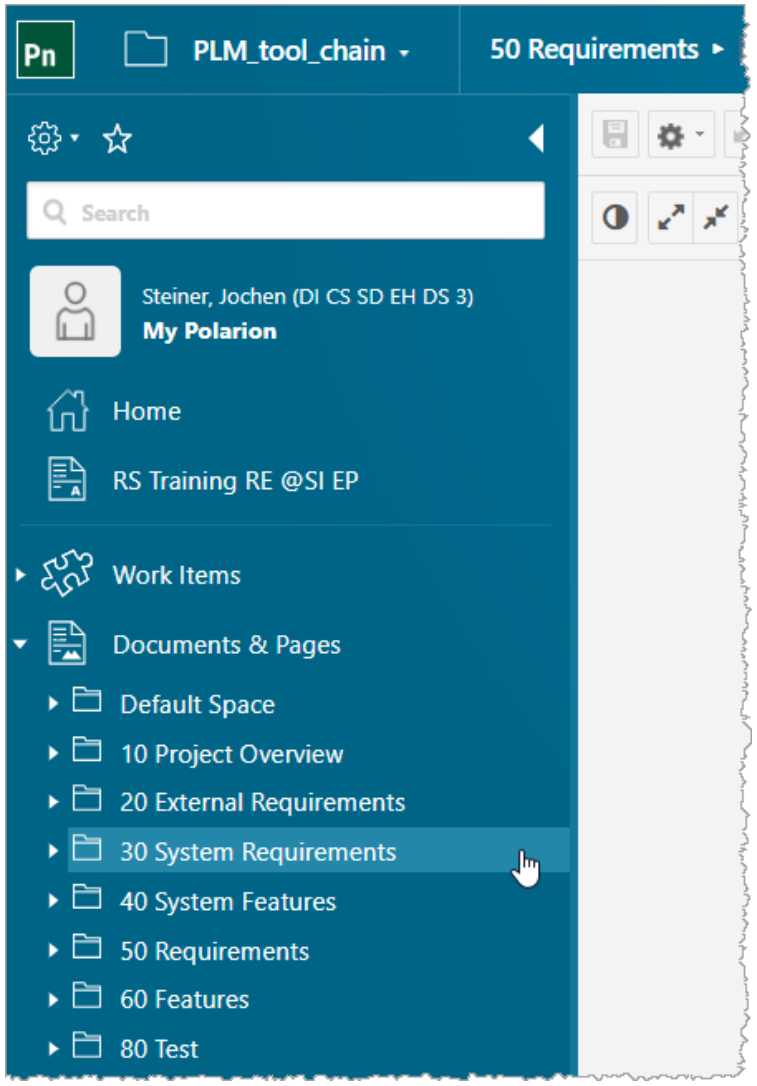
What are we talking about?



All requirements specifications that we expect below this folder:

Requirements that belong to

- a **classical system**,
  means overall behavior not component behavior
- a **product family or product line** with similar functions and behavior, so they can be reused in the product specific requirements specification
- a **specific aspect of many products**,
  so, they can reuse these defined constraints or requirements with the main goal of a topic specific repository
- a **platform**, so that the solution can directly be reused

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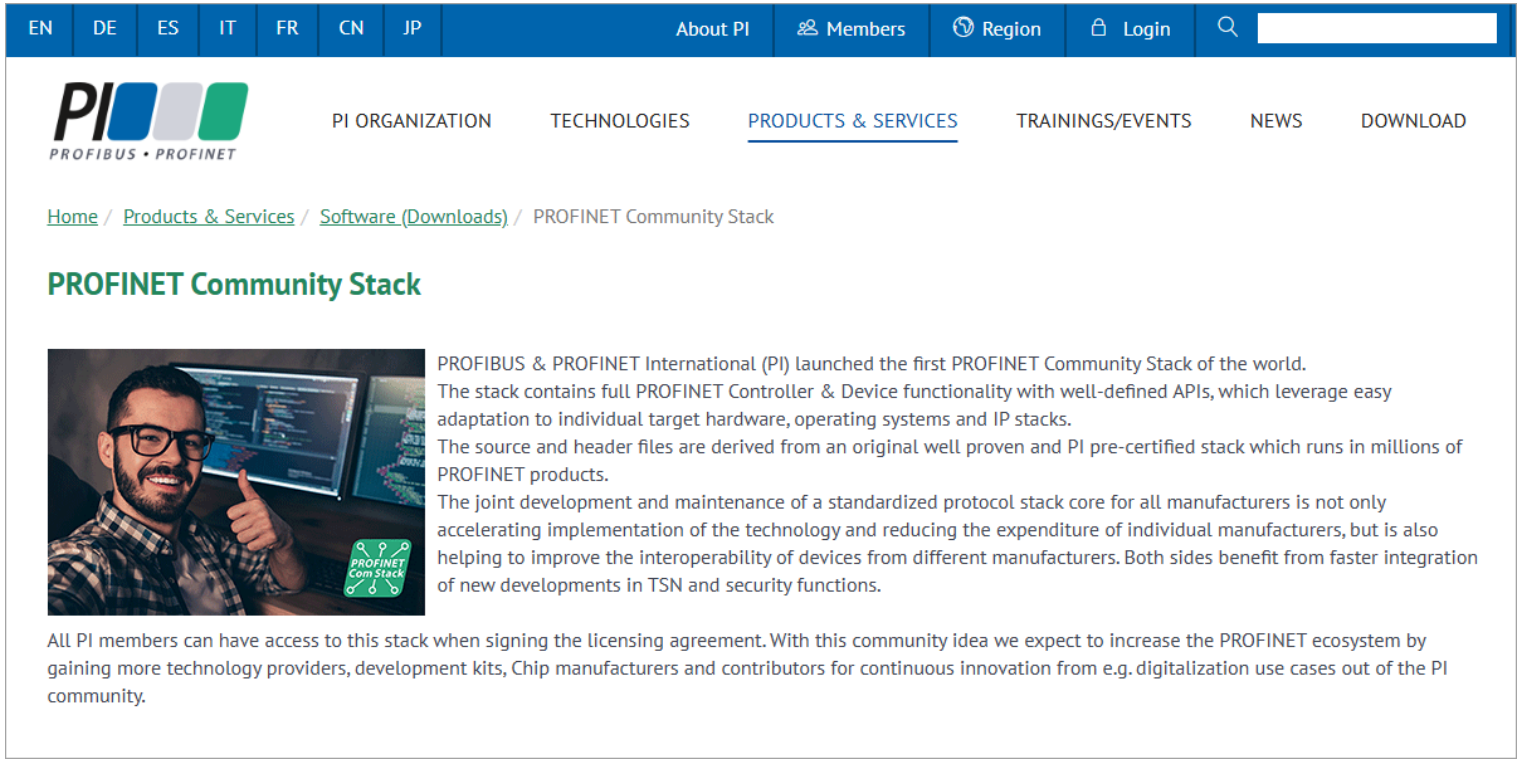
Requirements for a platform project



E.g. PROFINET Communication Stack

A **Platform Requirements Specification** needs to strike a balance between defining the core, reusable capabilities and providing the flexibility and extensibility for diverse products to be built on top of the platform. This requires a more abstract, modular, and forward-looking approach.

Due to the high rate of derived we recommend to place it as SRS.

Goal: a platform is the highest level of reuse!

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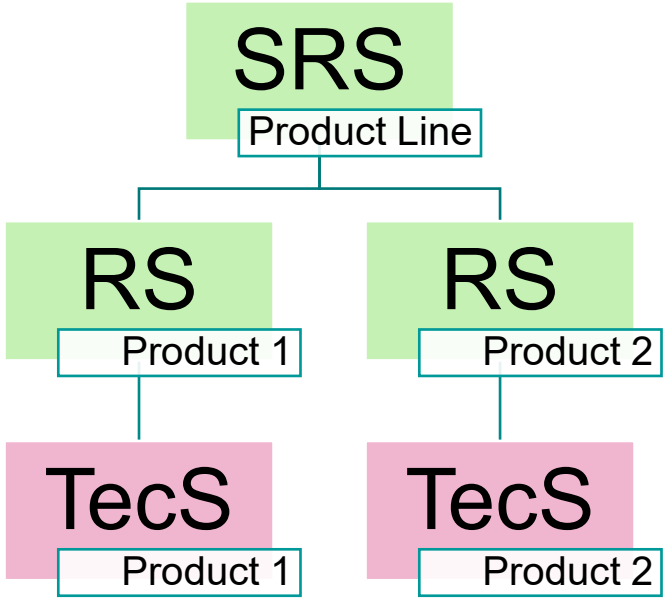
Reuse is the goal!

1. Increased Efficiency and Productivity
2. Reduced Development Costs
3. Improved Quality and Reliability
4. Faster Time-to-Market
5. Consistency
6. Reduced Maintenance Overhead
7. Organizational Learning and Knowledge Sharing

Structures for Requirements for reusing common requirements



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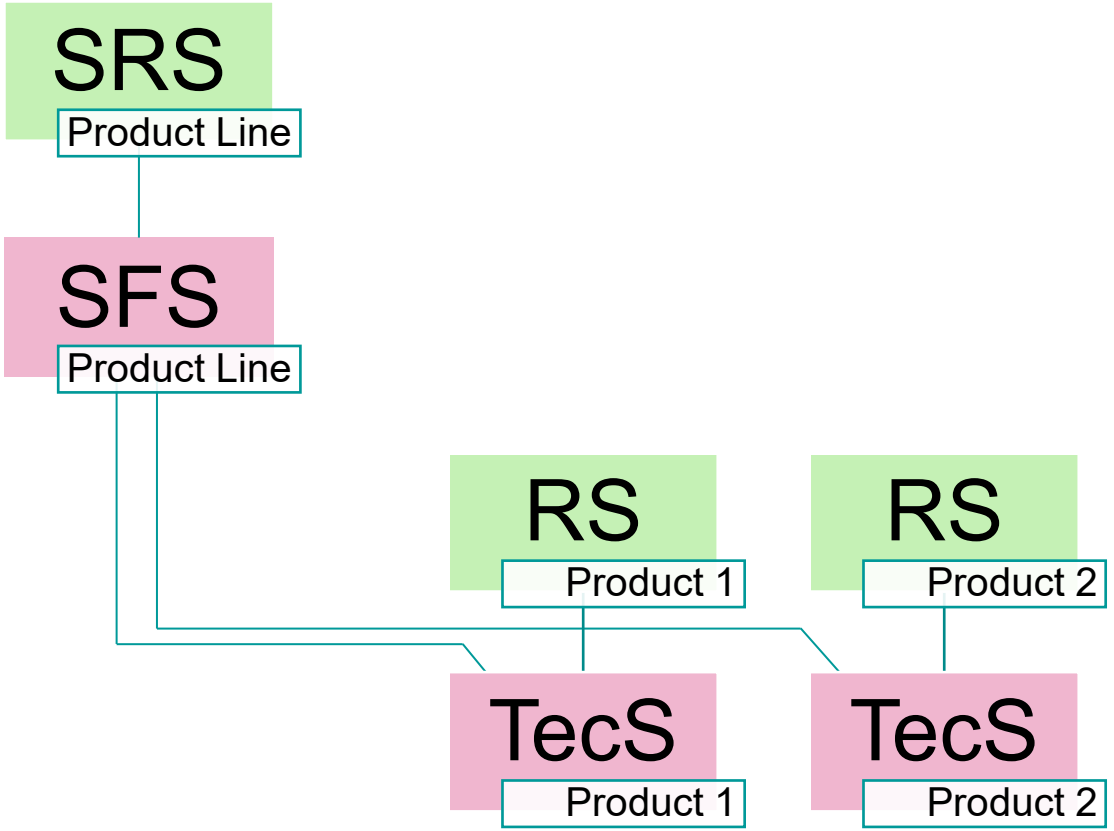
Structures for Requirements with System Feature Specification



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Definition Quiz

Muss ich zu jeder System Requirement Spezifikation eine System Feature Spezifikation erstellen?

- ❑ A Ja
- ❑ B Nein

Mehrere richtige Antworten möglich

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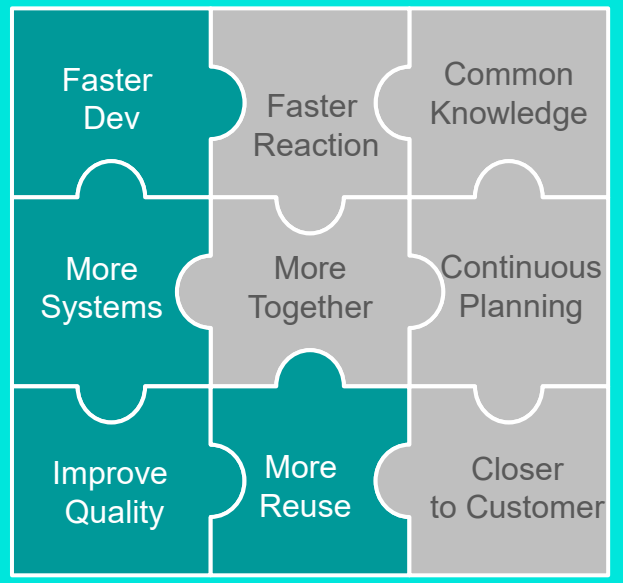
Reuse of Requirements

Where to place potential reused requirements?



Q&A

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