

Topics

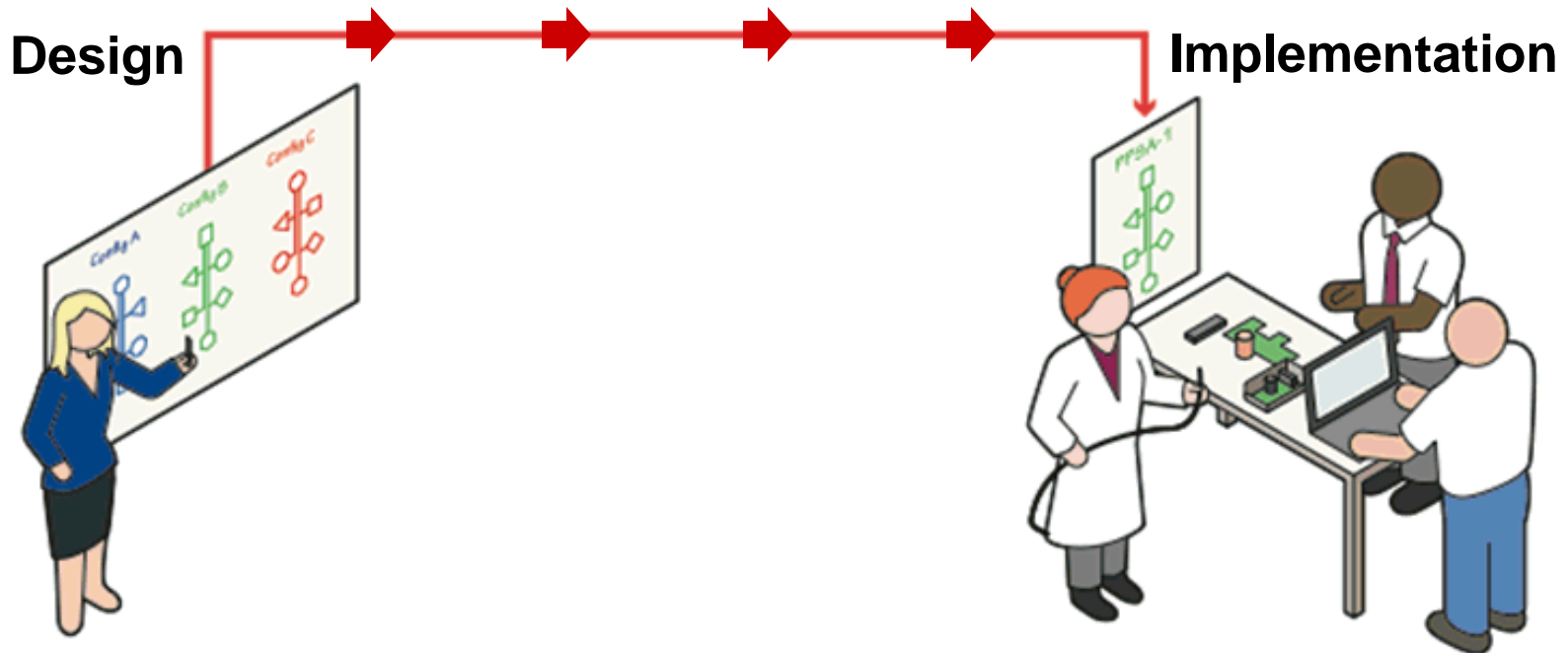
- Product Development 2 Process Areas
- Technical Solution (TS)
- Product Integration (PI)
- Verification (VER)
- Validation (VAL)
- Product Development 2 Summary
- Exercise 4: Impact of an Engineering Change

Technical Solution (TS)

An Engineering Process Area at Maturity Level 3

Purpose

Select, design, and implement solutions to requirements. Solutions, designs, and implementations encompass products, product components, and product related lifecycle processes either singly or in combinations as appropriate.



Relevant Terminology

Product Related Lifecycle Processes

Processes associated with a product or service throughout one or more phases of its life (e.g., from conception through disposal), such as manufacturing and support processes

Sustainment

The processes used to ensure that a product or service remains operational

When Technical Solution Is Not Done Well...

An ineffective solution is chosen.

Products may not meet technical performance requirements or user needs.

Increased testing and rework is required to resolve design issues.

The product may not be able to accommodate technology upgrades and future growth if the technical solution is not well conceived.

Technical Solution Goals

SG 1

Select Product Component Solutions

Product or product component solutions are selected from alternative solutions.

SG 2

Develop the Design

Product or product component designs are developed.

SG 3

Implement the Product Design

Product components, and associated support documentation, are implemented from their designs.

The process area also has generic goals to support institutionalization.

Technical Solution Specific Practices

SG 1

Select Product Component Solutions

- SP 1.1 Develop Alternative Solutions and Selection Criteria
- SP 1.2 Select Product Component Solutions

SG 2

Develop the Design

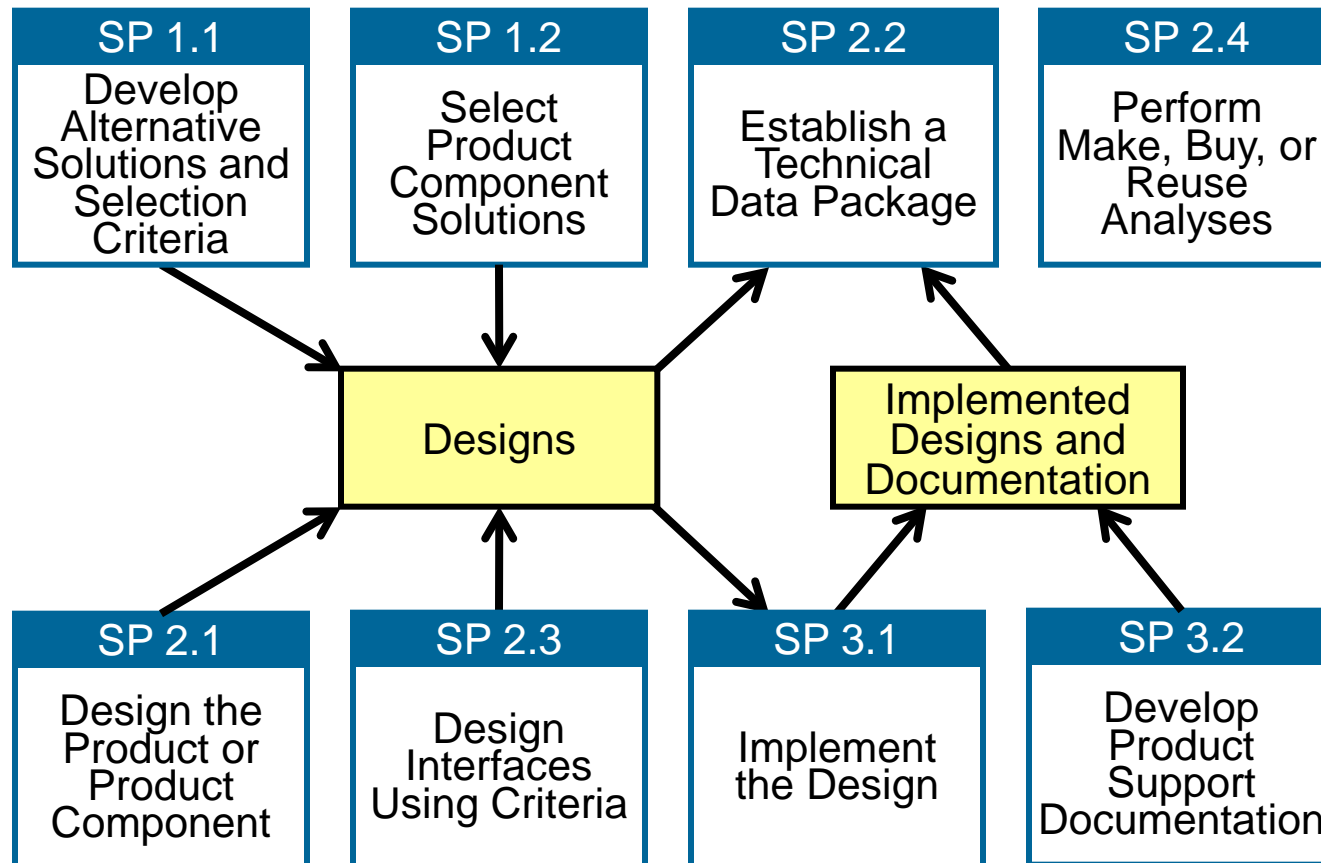
- SP 2.1 Design the Product or Product Component
- SP 2.2 Establish a Technical Data Package
- SP 2.3 Design Interfaces Using Criteria
- SP 2.4 Perform Make, Buy, or Reuse Analyses

SG 3

Implement the Product Design

- SP 3.1 Implement the Design
- SP 3.2 Develop Product Support Documentation

Technical Solution Sampling of Work Products



Technical Solution Sampling of PA and GP Relationships

