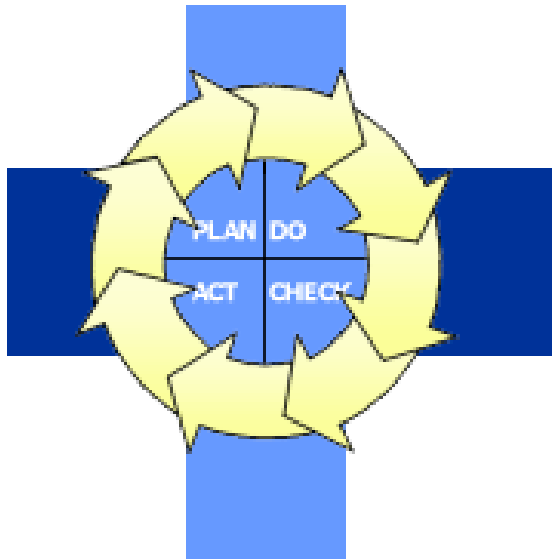
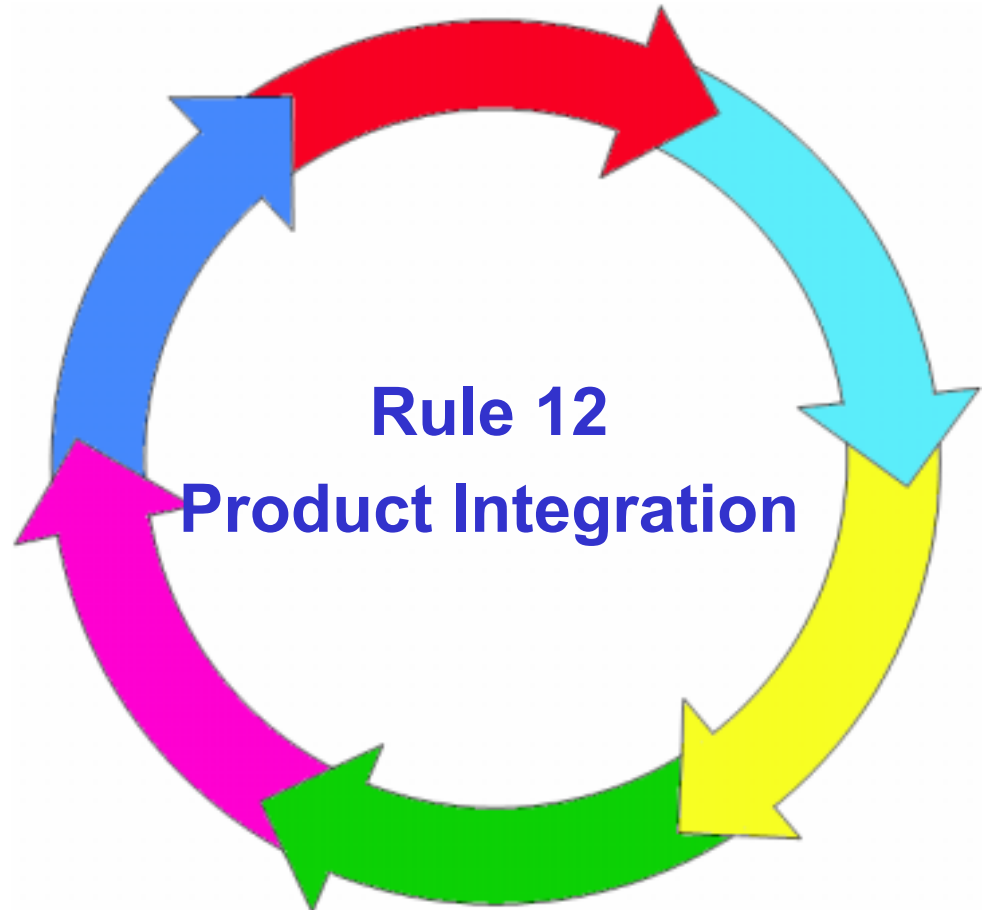


AVL Software Process Training



Dr. Ernest Wallmüller
Wolfgang Höh

Qualität & Informatik
www.itq.ch



How to Build a Pyramid?

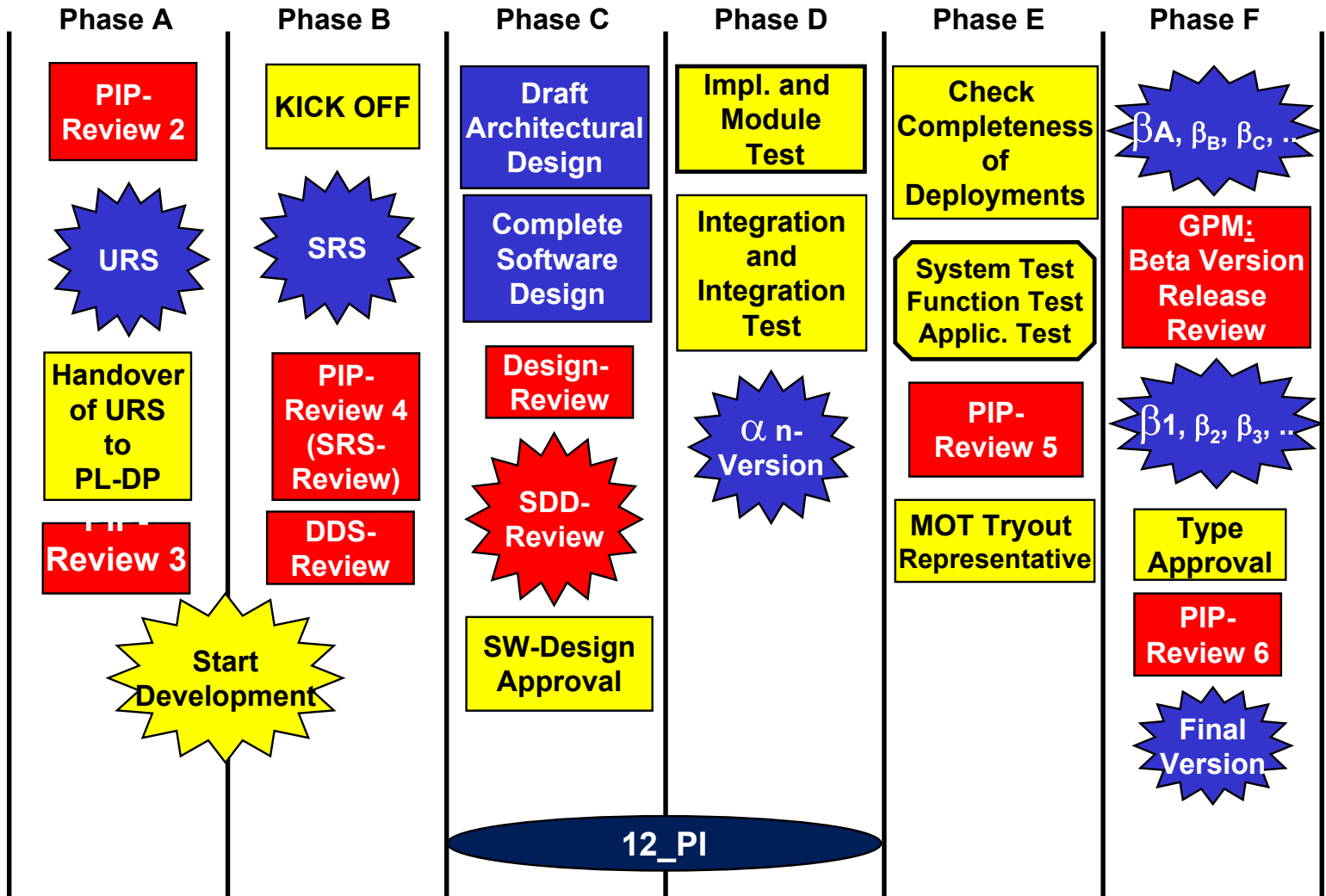
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SW Development Overview: Rule 12 (PI)

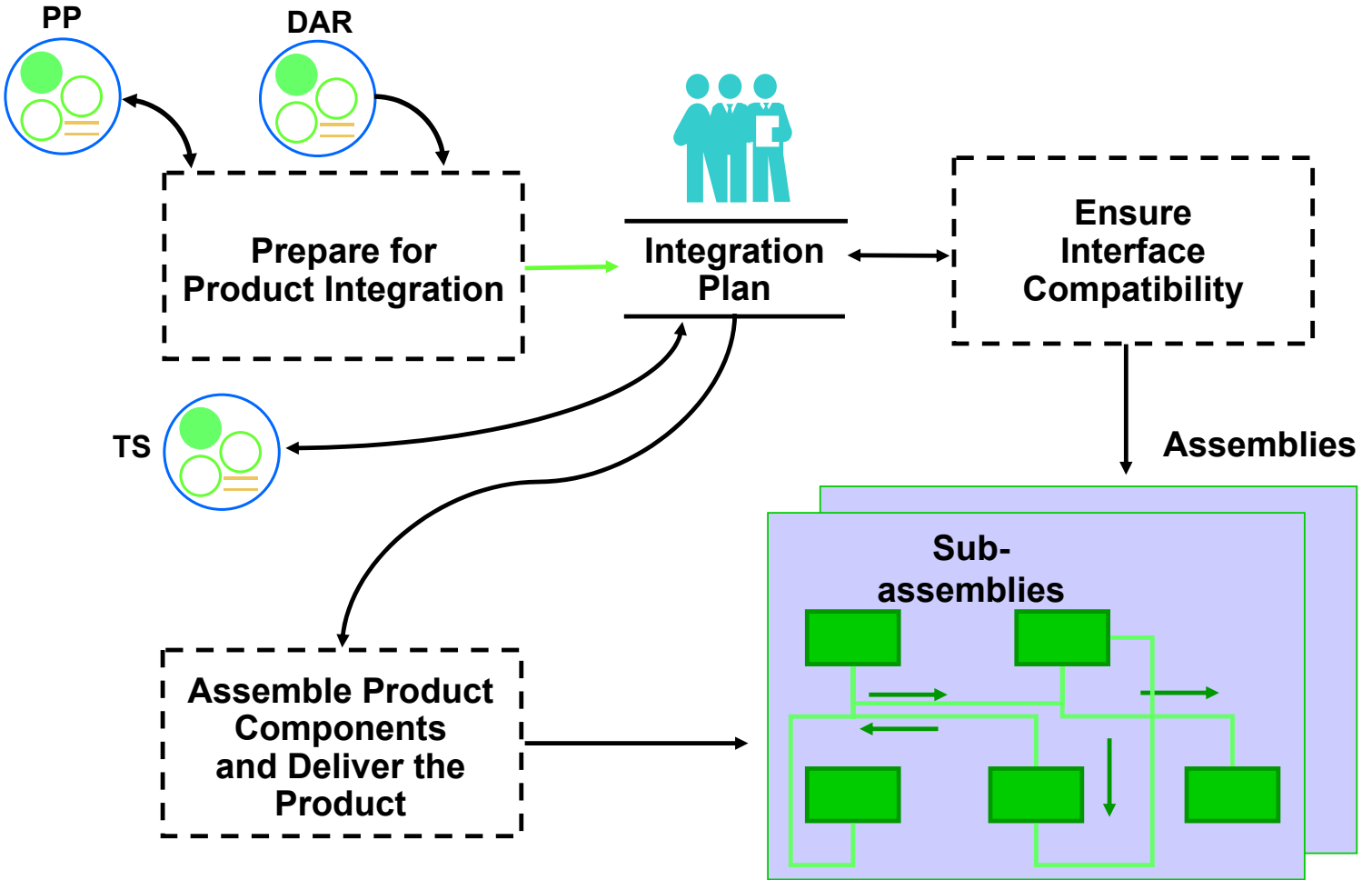


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PI Process Context

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■ Policy

According to the Standard Software Development Process the policy establishes the following:

- Ensure that product components are ready for assembly.
- Assembly of product components into complete products.
- Ensure that the product functions properly.
- Management of internal and external interfaces of the product and product components.

■ Scope

All software-producing units in AVL SBU MES.

■ Purpose

The purpose of Product Integration is to assemble the product from the product components, ensure that the product, as integrated, functions properly and deliver the product to system test.

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- **Method:** *Plenum*
- **Timing:** *10'*
- **Form:** *Brainstorming and discussion*
- **Documents:** *none*
- **Deliverable:** *Documentation on flipchart (Trainer)*

- **Questions:**

- I. What are your experiences with configuration management?*
- II. What worked well in the past?*
- III. What did not work so well?*



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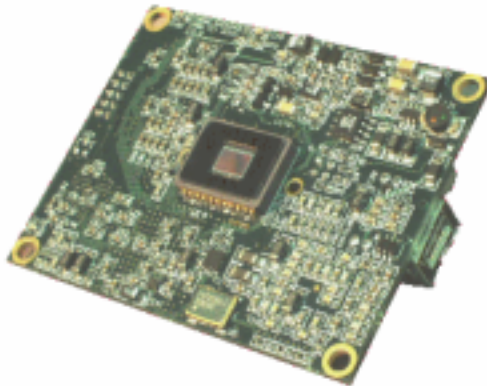
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- **Method:** *Individual*
- **Timing:** *15'*
- **Form:** *Individual elaboration*
- **Documents:** *Process Rule 12; form: next foil*
- **Deliverable:** *Filled in form*

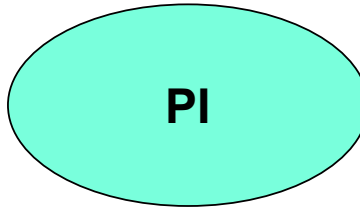
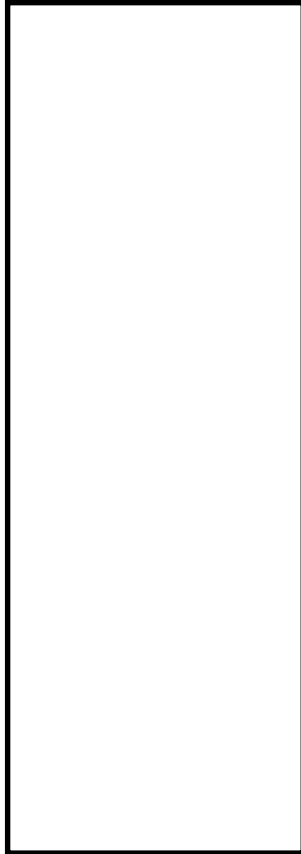
Question:

- I. Based on your experience, the prior discussion and the **PI** process definition list the involved roles, the performed activities, and the produced work products.*



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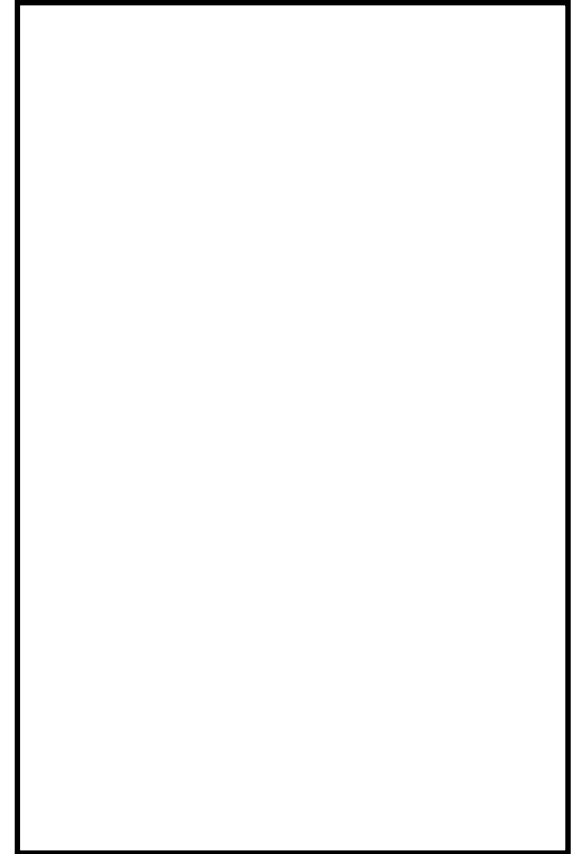
Roles



Activities



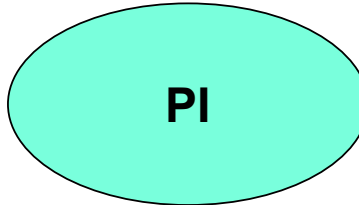
Work Products



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Roles

- CCB
- PL-DP
- PIR
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- GPM



Activities

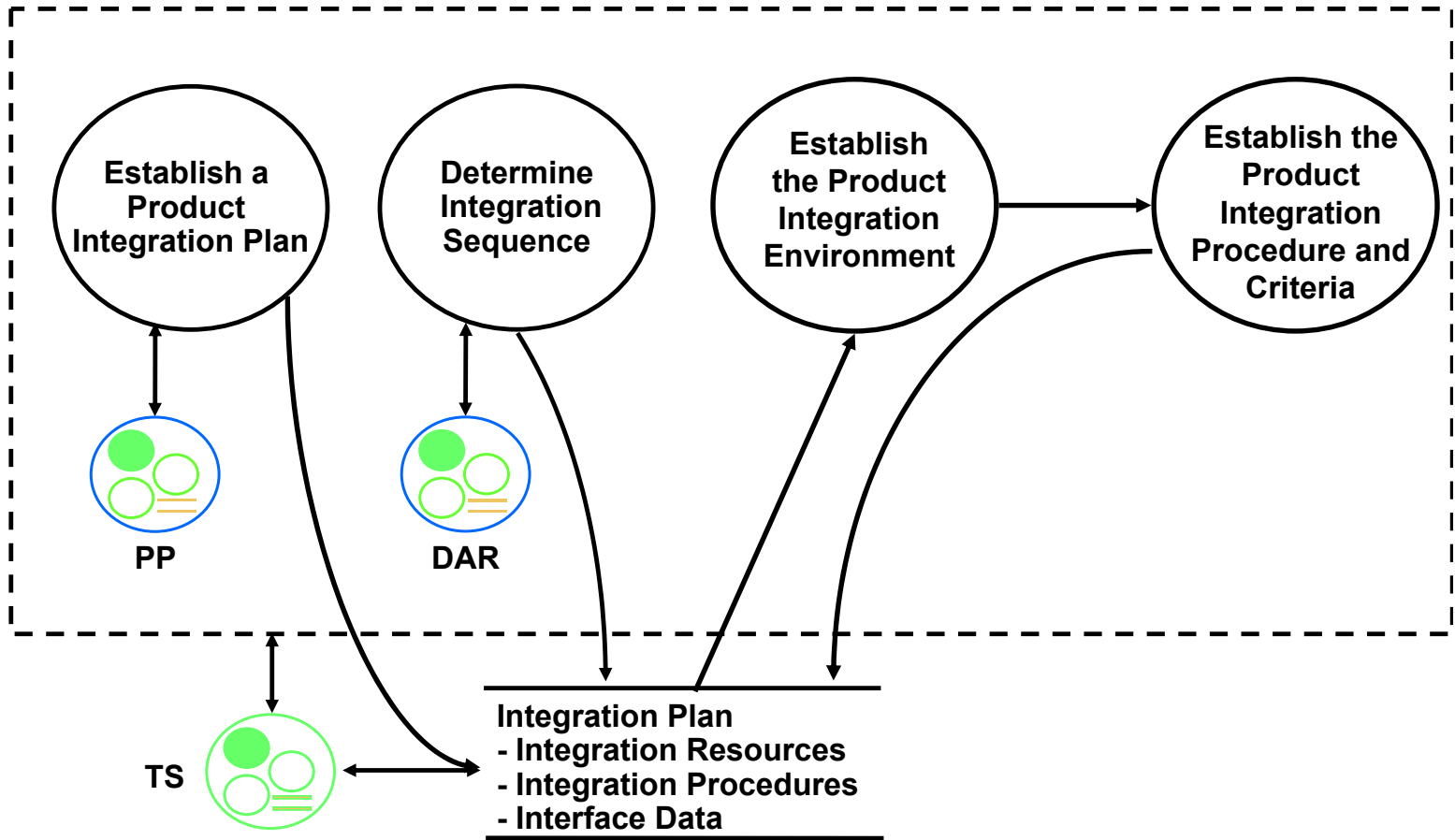
- Establish a Product Integration Plan
- Determine Integration Sequence
- Plan and Establish the Product Integration Environment
- Establish the Product Integration Procedure and Criteria
- Review Interface Descriptions for Completeness
- Manage Interfaces
- Confirm Readiness of Product Components
- Assemble Product Components
- Evaluate Assembled Product
- Package and Deliver the Product

Work Products

- Product Integration plan
- List of interfaces and their relationships
- Assembled product
- Approved product
- Final product ready for delivery

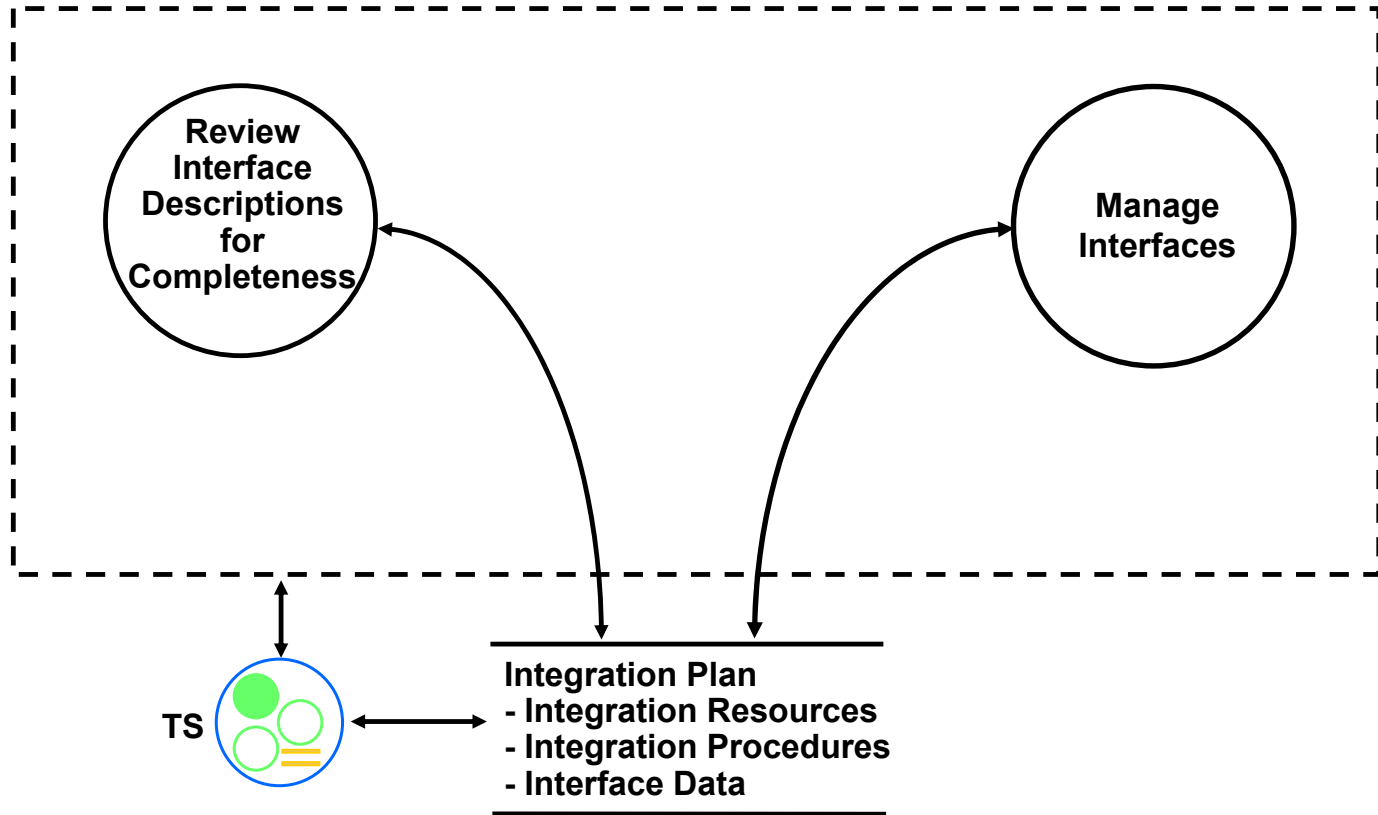
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Prepare for Product Integration



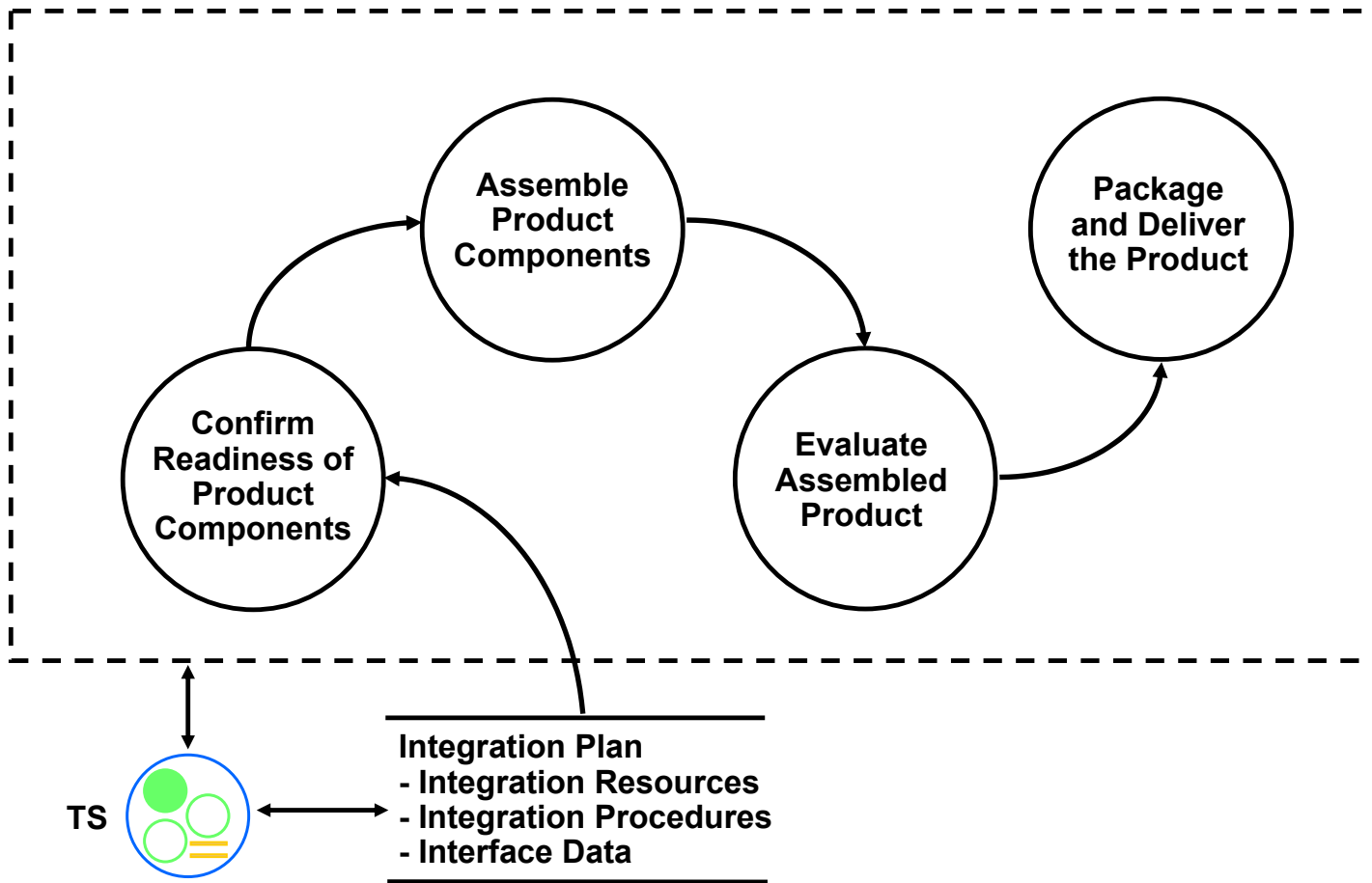
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Ensure Interface Compatibility

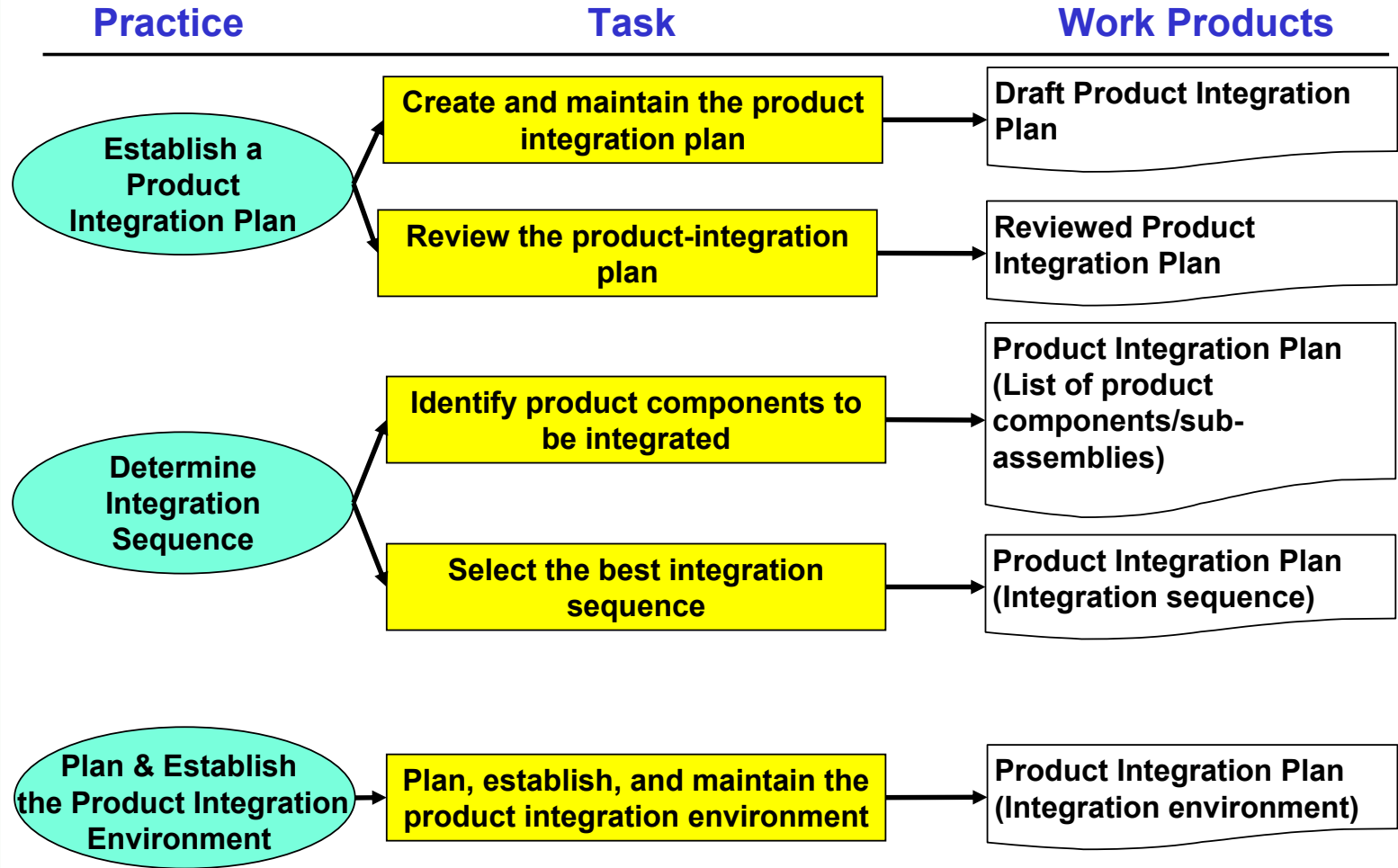


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Assemble Product Components and Deliver Product



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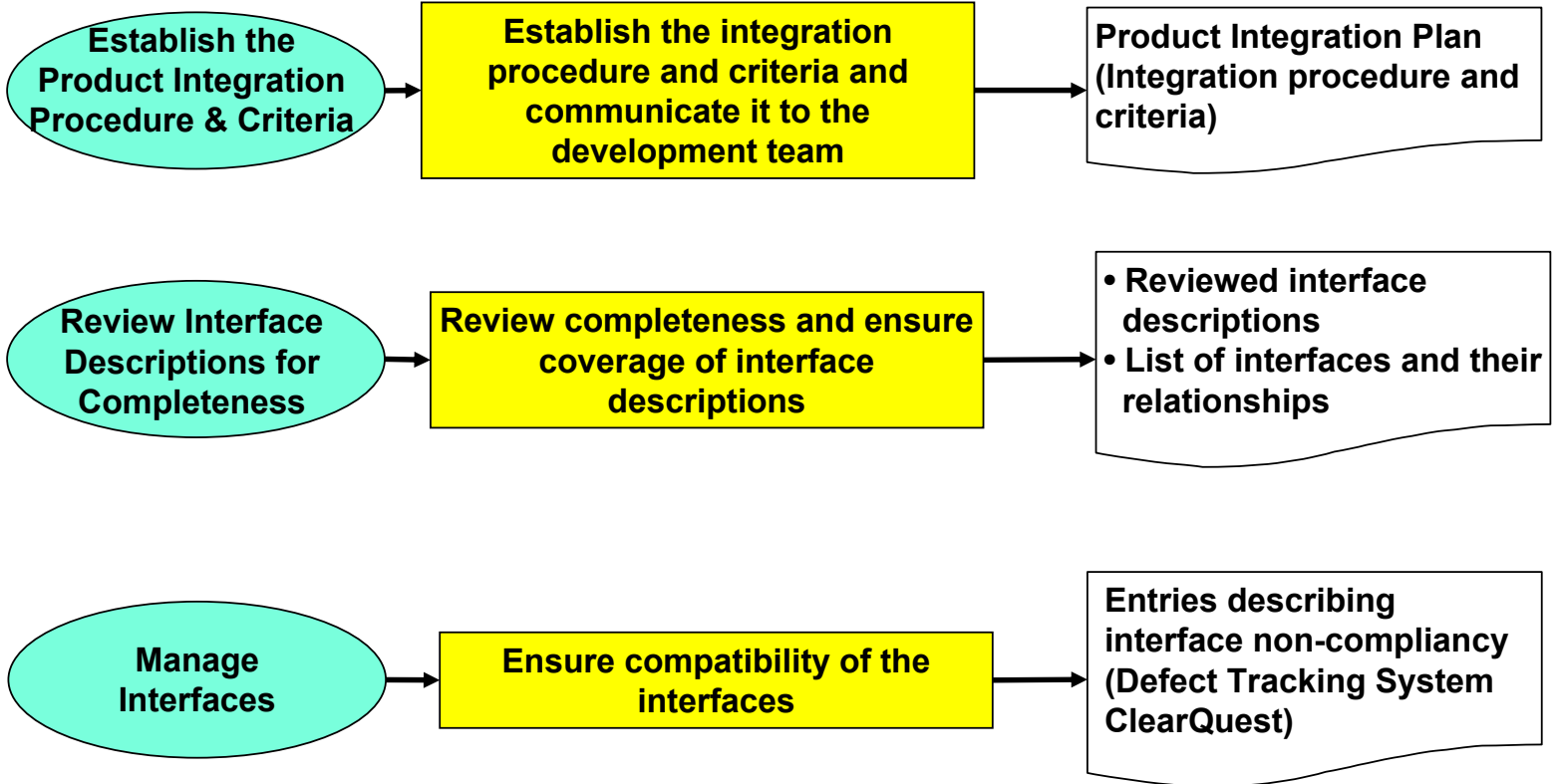


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Practice

Task

Work Products

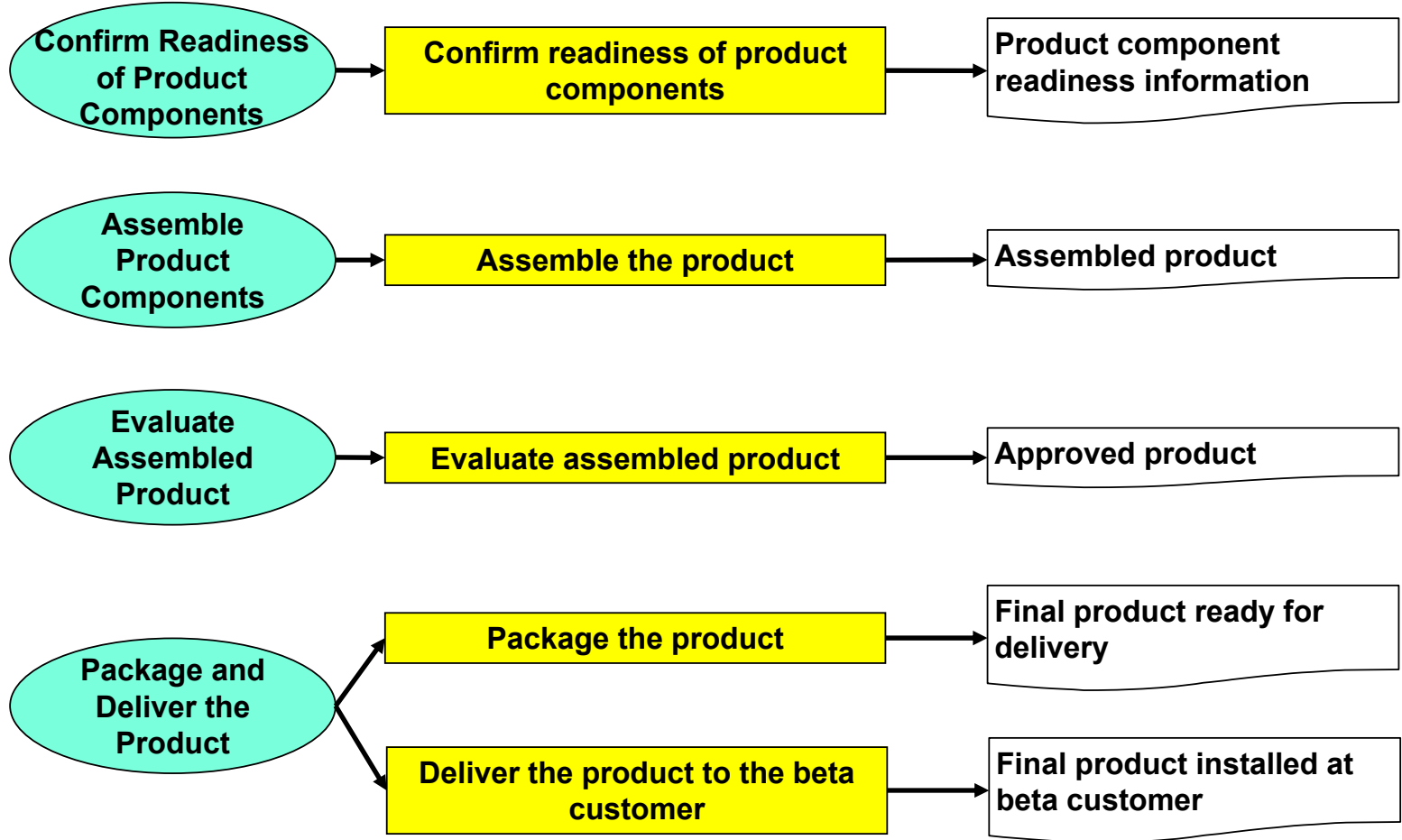


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Practice

Task

Work Products



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- **Method:** *Group work*
- **Timing:** *20' group work, 15' presentation & discussion (comparative discussion of group results)*
- **Form:** *Group elaboration*
- **Documents:** *Process Rule 12: PI*
- **Deliverable:** *Task description on flipchart*

- **Question:**
 - I. *Describe the selected task*
'PI_T05: Establish the integration procedure and criteria and communicate it to the development team'
using the presented description technique (→ next foil).

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Input

ID	Task Name
Description	
Roles	
Tools	
Method/Technique	

Output

Task Details 'Establish the integration procedure and criteria and communicate it to the development team'



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Input

- Project/product parameters (Complexity, Types/ number of contributing development centers, customer milestones etc.)
- Experience of previous projects (lessons learned)

ID PI_T05	Task Name Establish the integration procedure and criteria and communicate it to the development team
Description	
<ul style="list-style-type: none"> • Establish Procedures for Product Component Integration • Establish Criteria for Product Component Integration • Identify Verification Methods for the Product Components to be Integrated • Identify Verification Methods for the Assembled Product • Communicate the Integration procedure and criteria to the development team 	
Roles	
PIR Resp. for task PI_T05	
Tools	
Template: Template_PI_Product Integration Plan.dot	
Method/Technique	
not specified	

Output

- Product Integration Plan (Integration procedure and criteria)
- Communication of the integration procedure and criteria to the project team

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WP Id	Type	Description	Task Id	Resp.	Link to Template
PI_W01	M	Product integration plan <ul style="list-style-type: none">• Integration sequence• Integration procedure• Integration criteria• Integration environment	PI_T01	PIR	Template_PI_Product Integration Plan.dot
PI_W02	M	Product integration environment	PI_T05	PIR	Template_PI_Product Integration Plan.dot
PI_W03	M	List of interfaces and their relationships	PI_T07	PIR	Not yet provided
PI_W04	M	Assembled product	PI_T09	PIR	n.a.
PI_W05	M	Approved product	PI_T10	IT, ST	n.a.
PI_W06	M	Final product ready for delivery	PI_T11	PIR	n.a.

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*What was important for
you concerning this
Process Rule?*



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