



**International
Standard**

ISO/IEC 26565

**Software and systems
engineering — Methods and
tools for product line maturity
framework**

*Ingénierie logiciel et système – Outils et méthodes pour un cadre
de maturité d'une ligne de produits*

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Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Abbreviated terms	2
5 Reference model for product line maturity framework	2
5.1 Overview.....	2
5.2 Constituents of reference model for product line maturity framework.....	3
6 Product line maturity framework management	7
6.1 General.....	7
6.2 Product line maturity framework planning.....	7
6.2.1 Principal constituents.....	7
6.2.2 Identify product line maturity framework adoption strategies.....	8
6.2.3 Assign responsibility for product line maturity framework operationalization.....	9
6.2.4 Define success measures for product line maturity framework operationalization.....	9
6.2.5 Estimate resources required to operate product line maturity framework.....	10
6.2.6 Document the product line maturity framework operationalization plan.....	10
6.3 Product line maturity framework enabling.....	11
6.3.1 Principal constituents.....	11
6.3.2 Enable facilitators for product line maturity framework operationalization.....	11
6.3.3 Enable measurement environment for quantifying product line maturity framework operationalization.....	12
6.4 Product line maturity framework managing.....	12
6.4.1 Principal constituents.....	12
6.4.2 Review product line maturity framework operationalization status with success measures.....	13
6.4.3 Control issues on product line maturity framework operationalization.....	13
6.4.4 Perform corrective actions on product line maturity framework operationalization.....	13
7 Product line maturity framework operationalization	14
7.1 General.....	14
7.2 Preparation for product line maturity framework adoption.....	14
7.2.1 Principal constituents.....	14
7.2.2 Identify participants for product line maturity framework operationalization.....	15
7.2.3 Mobilize resources for product line maturity framework operationalization.....	15
7.2.4 Identify organization-specific requirements for product line maturity framework.....	15
7.2.5 Adopt the best fit product line maturity framework for the organization.....	15
7.3 Product line maturity framework construction.....	16
7.3.1 Principal constituents.....	16
7.3.2 Construct a product line maturity framework that best fits for the organization.....	16
7.3.3 Define processes and measures of product line maturity framework.....	17
7.3.4 Define roles and responsibilities for the processes and measures of product line maturity framework.....	17
7.3.5 Determine a roadmap and improvement path for product line maturity framework.....	17
7.3.6 Document the constructed product line maturity framework.....	17
7.4 Product line maturity framework training.....	17
7.4.1 Principal constituents.....	17
7.4.2 Decide product line training modules of product line maturity framework.....	18
7.4.3 Synchronize PL training modules with PL organizational improvement needs.....	18

ISO/IEC 26565:2026(en)

	7.4.4 Provide training on product line maturity framework.....	19
	7.4.5 Verify effectiveness of product line maturity framework training.....	19
7.5	Product line maturity framework operation.....	19
	7.5.1 Principal constituents.....	19
	7.5.2 Decide product line operational components for product line maturity framework.....	20
	7.5.3 Synchronize operational components for organization-specific improvement requirements.....	21
	7.5.4 Execute operational components for product line maturity framework.....	21
	7.5.5 Measure effectiveness of product line maturity framework operation.....	21
	7.5.6 Document the results of product line maturity framework operation.....	21
7.6	Product line maturity framework appraisal.....	22
	7.6.1 Principal constituents.....	22
	7.6.2 Decide PL appraisal components of product line maturity framework.....	23
	7.6.3 Synchronize appraisal components for organizational improvement requirements.....	23
	7.6.4 Execute product line maturity framework appraisal components.....	23
	7.6.5 Verify effectiveness and efficiency of product line maturity framework appraisal.....	23
	7.6.6 Document the application results of product line maturity framework.....	23
7.7	Product line maturity framework improvement.....	24
	7.7.1 Principal constituents.....	24
	7.7.2 Collate product line maturity framework adoption and operation results.....	24
	7.7.3 Analyse product line maturity framework adoption and operation results with product line objectives.....	25
	7.7.4 Improve product line maturity framework for resolving issues.....	25
	7.7.5 Report product line maturity framework improvement results.....	25
8	Product line maturity framework support.....	26
	8.1 General.....	26
	8.2 Quality assurance for product line maturity framework.....	26
	8.2.1 Principal constituents.....	26
	8.2.2 Objectively evaluate product line maturity framework enabled for domain engineering.....	27
	8.2.3 Objectively evaluate product line maturity framework enabled for application engineering.....	27
	8.2.4 Communicate quality and non-compliance issues of product line maturity framework.....	27
	8.3 Decision support for product line maturity framework.....	28
	8.3.1 Principal constituents.....	28
	8.3.2 Establish comprehensive references to product line maturity framework and its applications.....	28
	8.3.3 Tailor decision procedure for product line maturity framework.....	28
	8.3.4 Guide decision-making for product line maturity framework.....	29
	8.3.5 Document the rationale for decisions made regarding product line maturity framework.....	29
	8.4 Information and data management for product line maturity framework.....	29
	8.4.1 Principal constituents.....	29
	8.4.2 Collect data for addressing concerns related to product line maturity.....	30
	8.4.3 Structure and process the captured data of product line maturity.....	30
	Annex A (Informative) Exemplary product line maturity framework.....	31
	Bibliography.....	33

Foreword

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Introduction

Software and systems product line (SSPL) engineering and management creates, exploits, and manages a common platform to develop a family of products (e.g. software products, systems architectures) at a lower cost, with reduced time to market and better quality. As a result, it has gained increasing global attention since the 1990s.

To achieve the objectives of SSPL adoption, the performance of SSPL engineering and management should be evaluated and improved based on the results. The product line maturity framework guides to adopt and construct required constituents of product line process assessment and improvement, and it operates, appraises, and improves product line processes to align with the product line objectives. The product line maturity framework deals with a product family, so its focuses are on SSPL specific aspects such as domain and application engineering, variability management, business involvement, and collaboration among these aspects. Processes, activities, and tasks are necessary to utilize the product line maturity framework, and methods and tools to support them are required for enhancing the efficiency, collaboration, and application quality of the maturity framework.

This document can be used in the following modes:

- by organizations that want to adopt SSPL for producing their products – to provide guidance on how to adopt, construct, operate, appraise, and improve product line maturity framework;
- by a product line organization – to provide guidance on the evaluation and selection of methods and tools for adopting, constructing, operating, appraising, and improving product line maturity framework;
- by providers of either methods or tools, or both – to provide guidance on implementing or developing either methods or tools, or both, by specifying a comprehensive set of methods and tools capabilities for adopting, constructing, operating, appraising, and improving product line maturity framework.

Documents on product line engineering and management developed by ISO/IEC JTC 1 address both engineering and management processes and capabilities of methods and tools, in terms of the critical characteristics of product line development. This document provides processes and capabilities of methods and tools for adopting, constructing, operating, appraising, and improving product line maturity framework. Standards in the ISO/IEC 26550 family include ISO/IEC 26550, ISO/IEC 26551, ISO/IEC 26552, ISO/IEC 26553, ISO/IEC 26554, ISO/IEC 26555, ISO/IEC 26556, ISO/IEC 26557, ISO/IEC 26558, ISO/IEC 26559, ISO/IEC 26560, ISO/IEC 26561, ISO/IEC 26562, ISO/IEC 26563, ISO/IEC 26564, and ISO/IEC 26566.

- Processes and capabilities of methods and tools for domain requirements engineering and application requirements engineering are provided in ISO/IEC 26551;
- Processes and capabilities of methods and tools for domain design and application design are provided in ISO/IEC 26552;
- Processes and capabilities of methods and tools for domain realization and application realization are provided in ISO/IEC 26553;
- Processes and capabilities of methods and tools for domain testing and application testing are provided in ISO/IEC 26554;
- Processes and capabilities of methods and tools for technical management are provided in ISO/IEC 26555;
- Processes and capabilities of methods and tools for organizational management are provided in ISO/IEC 26556;
- Processes and capabilities of methods and tools for variability mechanisms are provided in ISO/IEC 26557;
- Processes and capabilities of methods and tools for variability modelling are provided in ISO/IEC 26558;
- Processes and capabilities of methods and tools for variability traceability are provided in ISO/IEC 26559;
- Processes and capabilities of methods and tools for product line product management are provided in ISO/IEC 26560;

ISO/IEC 26565:2026(en)

- Processes and capabilities of methods and tools for product line technical probe are provided in ISO/IEC 26561;
- Processes and capabilities of methods and tools for product line transition management are provided in ISO/IEC 26562;
- Processes and capabilities of methods and tools for product line configuration management are provided in ISO/IEC 26563;
- Processes and capabilities of methods and tools for product line measurement are provided in ISO/IEC 26564;
- Processes and capabilities of methods and tools for product line texture are provided in ISO/IEC 26566 (International Standard under development);
- Others (ISO/IEC 26567 to ISO/IEC 26599): To be developed.

Software and systems engineering — Methods and tools for product line maturity framework

1 Scope

This document, within the context of methods and tools that support adoption, construction, operation, and management of product line maturity framework, specifies:

- processes for managing, operationalizing, and supporting product line maturity framework adoption (those processes are described in terms of purpose, inputs, tasks, and outcomes);
- method capabilities to support the defined tasks of each process;
- tool capabilities that automate or semi-automate tasks and methods.

This document does not concern the processes and capabilities of methods and tools for a single system but rather deals with those for a family of products.

2 Normative references

There are no normative references in this document.

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