BSI Standards Publication

Systems and software engineering — Life cycle management

Part 4: Systems engineering management planning

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National foreword

This British Standard is the UK implementation of ISO/IEC/IEEE 24748-4:2026. It supersedes BS ISO/IEC/IEEE 24748-4:2016, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee IST/15, Software and systems engineering.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Part 4: Systems engineering management planning

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*, in cooperation with the Systems and Software Engineering Standards Committee of the IEEE Computer Society, under the Partner Standards Development Organization cooperation agreement between ISO and IEEE.

This second edition cancels and replaces the first edition (ISO/IEC/IEEE 24748-4:2016), which has been technically revised.

The main changes are as follows:

— aligns with updates to ISO/IEC/IEEE 15288:2023, ISO/IEC/IEEE 24748-1:2024, ISO/IEC/IEEE 24748-2:2024, ISO/IEC/IEEE 16085:2021, and ISO/IEC/IEEE 29148:2018;

— streamlines and reduces redundancies from the publication of ISO/IEC/IEEE 16326:2019;

— maintains harmonization with new documents within the SC 7 portfolio, including ISO/IEC/IEEE 15289, ISO/IEC/IEEE 15939, ISO/IEC/IEEE 21839, ISO/IEC/IEEE 21840, ISO/IEC/IEEE 21841, ISO/IEC/IEEE 24748-7 and ISO/IEC/IEEE 24748-8;

— addresses feedback from users and the advancement of system-related technologies, including systems of systems and model-based systems and software engineering;

— adds a new annex with example information item content mapping tables;

— removes provisions for conformance to process.

A list of all parts in the ISO/IEC/IEEE 24748 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

ISO/IEC/IEEE 15288 provides a common process framework covering the life cycle of human-made systems, from the conception of ideas through to the retirement of a system. It provides the processes for acquiring and supplying systems. In addition, this framework provides for the assessment and improvement of the life cycle processes. This common framework improves communication and cooperation among the parties that create, utilize, and manage modern systems in order that they can work in an integrated, coherent fashion.

The acquisition or supply of a system is usually done within a project. A project prepares and implements the technical planning, resources and schedules necessary to guide the project toward accomplishment of its objectives and proper conclusion. The project's authorization and objectives are documented in an information item typically identified as a systems engineering management plan (SEMP).

This document defines a SEMP as the key vehicle for representing a project's application of systems life cycle processes. In this document, the terms technical planning and systems engineering (SE) planning are used interchangeably to emphasize or differentiate technical contributions in the processes under discussion.

In many organizations, the various responsibilities of technical management are assigned to more than one person. Where the term "technical manager" or "systems engineering manager" is used in this document, the guidance, advice or normative requirement applies to the applicable role within the project or organization.

NOTE ISO/IEC/IEEE 24748-1 and ISO/IEC/IEEE 24748-2 provide guidance on the application of ISO/IEC/IEEE 15288, including definition or expansion of important organization, project, process, and life cycle model concepts and their adaptation for successful project implementation.

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Part 4: Systems engineering management planning

1 Scope

This document:

— provides an expanded view of the processes from ISO/IEC/IEEE 15288 that implement systems engineering (SE) management for the life cycles of technical solutions;

— describes a required information item, termed the systems engineering management plan (SEMP) for the technical management and execution of the SE of technical solutions,

— provides requirements and guidance for the content of the required information item.

This document is applicable to:

— those who use or plan to use ISO/IEC/IEEE 15288 on projects dealing with human-made systems, products and services;

— those who are responsible for the technical management of projects concerned with the engineering of systems;

— those responsible for planning or executing ISO/IEC/IEEE 15288 system life cycle processes at a project level;

— organizations and individuals involved with a technical project management effort;

— anyone developing engineering management documentation to complete technical planning aspects of their project's processes.

This document is intended to provide guidance for two-party situations and can be equally applied where the two parties are from the same organization. This document can also be used by a single party as self-imposed tasks.

This document can also serve as guidance in multi-party situations, where high risks are inherent in the supply and integration of complex systems, and procurement can involve several suppliers, organizations or parties.

2 Normative references

There are no normative references in this document.

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.