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This document was prepared by Joint Technical Committee ISO/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 24748-8:2019), which has been technically revised.

The main changes are as follows:

— aligned document structure, terminology, etc. with related ISO standards (e.g. ISO/IEC/IEEE 15288:2023);

— reorganized and consolidated text for more consistent wording and to support different acquisition life cycles and organizations;

— added information to support software using highly iterative and incremental (agile) life cycles;

— defined common processes for technical reviews and audits on defence projects;

— defined review and audit topics associated with technical reviews and audits, replacing acceptability criteria;

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— updated to reflect current best practices (e.g. digital engineering);

— removed selected guidance material (e.g. annexes describing optional reviews);

— updated definitions, acronyms and bibliography to be consistent with revised text.

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This document responds to the needs of defence projects to have more specific and detailed requirements for technical reviews and audits as part of the assessment of projects during their life cycle. The requirements and guidance in this document have been written at the most general level possible so that they can meet the needs of defence agencies in different countries, either by direct application or by tailoring for an agency's specific needs.

Defence projects can be different from typical commercial projects in several ways:

— Defence systems can have hazards to human safety, the environment and national security that make their ownership and use prohibited outside of a defence organization. This can constrain the ability of projects to develop and deploy solutions for test and operational use;

— Acquisition teams can require comprehensive, cohesive technical data for systems and system elements, particularly plans, requirements and architectural descriptions (e.g. for certification activities or organic support);

— Acquisition teams using public funds often need extensive visibility into the definition and execution of supplier processes to support their fiduciary responsibilities.

These differences can result in the need to support more stakeholders in the review and audit process (6.6) and the need to review and audit more information items than found in typical commercial projects. However, non-defence projects are encouraged to apply it if useful.

This document can be used in one or more of the following modes:

— by an acquirer and a supplier, to help develop an agreement on the contribution of each party to the technical reviews and audit approach;

— by a project, to help establish and execute a technical review and audit approach for that project;

— by an organization, to help establish a desired approach to technical reviews and audits that can be applied across multiple projects;

— by process assessors, to serve as a reference for use in the performance of process assessments that support organizational process improvement.

NOTE Several tables in this document include a unique identifier (ID) for each table entry. This identifier can be used as desired to support compact references to the table entry in tailoring descriptions, checklists, etc.

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