



BSI Standards Publication

Systems and software engineering — Life cycle management

Part 2: Guide to the application of ISO/IEC 15288 (System life cycle processes)

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National foreword

This Published Document is the UK implementation of ISO/IEC TR 24748-2:2011. It supersedes PD ISO/IEC TR 19760:2003 which is withdrawn.

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

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**Systems and software engineering — Life
cycle management —**

Part 2:

**Guide to the application of ISO/IEC 15288
(System life cycle processes)**

Ingénierie des systèmes et du logiciel — Gestion du cycle de vie —

*Partie 2: Guide pour l'application de l'ISO/CEI 15288 (Processus du
cycle de vie du système)*

Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directive – Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard (“state of the art”, for example), it may decide to publish a Technical Report. A Technical Report is entirely informative in nature and shall be subject to review every five years in the same manner as an International Standard.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/IEC TR 24748-2 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*.

This first edition of ISO/IEC TR 24748-2 cancels and replaces ISO/IEC TR 19760:2003, which has been technically revised.

ISO/IEC TR 24748 consists of the following parts, under the general title *Systems and software engineering — Life cycle management*:

- *Part 1: Guide for life cycle management*
- *Part 2: Guide to the application of ISO/IEC 15288 (System life cycle processes)*
- *Part 3: Guide to the application of ISO/IEC 12207 (Software life cycle processes)*

Introduction

ISO/IEC 12207:1995 (*Information technology — Software life cycle processes*) and ISO/IEC 15288:2002 (*Systems engineering — System life cycle processes*) have application guides (ISO/IEC TR 15271:1998 and ISO/IEC 19760:2003, respectively) for the use of each International Standard individually. However, both International Standards were re-published in 2008 after significant revisions to align their terminology and structure. As a consequence, the two published application guides no longer relate to their respective standards and can not provide the guidance intended.

ISO/IEC TR 24748-1 (*Systems and software engineering — Life cycle management — Part 1: Guide for life cycle management*) was published in 2010 to facilitate the joint usage of the process content of ISO/IEC 15288:2008 and ISO/IEC 12207:2008 by providing unified and consolidated guidance on the cycle management of systems and software. This helps ensure consistency in system concepts and life cycle concepts, models, stages, processes, process application, key points of view, adaptation and use in various domains as the two standards are used in combination. That in turn helps a project design a life cycle model for managing the progress of its project. ISO/IEC TR 24748-1 also aids in identifying and planning use of life cycle processes described in ISO/IEC 15288 and ISO/IEC 12207 that enable the product or service project to be completed successfully, meeting its objectives/requirements for each stage and for the overall project.

This part of ISO/IEC TR 24748 supports use of ISO/IEC 15288:2008 and replaces ISO/IEC TR 19760. This part of ISO/IEC TR 24748 and its companion, ISO/IEC TR 24748-3 (*Guide to the application of ISO/IEC 12207*) — which replaces ISO/IEC TR 15271 — continue and make use of the alignment effort evident in the two revised International Standards. Both terminology and structure in the guides are identical wherever possible and content is aligned consistent with that in the two International Standards. Consequently, the users of ISO/IEC 12207:2008 and ISO/IEC 15288:2008 will benefit from having documents complementarily addressing all aspects of products or services over their life cycle.

Besides the above, there is also increasing recognition of the importance of ensuring that all life cycle stages, and all aspects within each stage, are supported with enough guidance enabling alignment with any process documents subsequently created that focus on areas besides systems and software. This could include hardware, humans, processes (e.g. review process), procedures (e.g. operator instructions), facilities and naturally occurring entities (e.g. water organisms, minerals). The concept and structure of the ISO/IEC TR 24748 series of Technical Reports is intended to allow its extension to such additional domains where that will provide value to users.

Systems and software engineering — Life cycle management —

Part 2:

Guide to the application of ISO/IEC 15288 (System life cycle processes)

1 Scope

This part of ISO/IEC TR 24748 is a guide for the application of ISO/IEC 15288:2008. It addresses system, life cycle, process, organizational, project, and adaptation concepts, principally through reference to ISO/IEC TR 24748-1 and ISO/IEC 15288:2008. It then gives guidance on applying ISO/IEC 15288:2008 from the aspects of strategy, planning, application in organizations, and application on projects.

This part of ISO/IEC TR 24748 is intentionally aligned with both ISO/IEC TR 24748-1 and ISO/IEC TR 24748-3 (*Guide to the application of ISO/IEC 12207*) in its terminology, structure and content.

2 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 12207:2008, ISO/IEC 15288:2008 and ISO/IEC TR 24748-1:2010, apply.

3 Overview of ISO/IEC 15288:2008

3.1 General

ISO/IEC 15288:2008, Systems and software engineering – System life cycle processes, establishes a common framework for system life cycle processes, with well-defined terminology, that can be referenced by the systems engineering industry. It applies to the acquisition of systems, which can be comprised of products, services, or both, as well as to the supply, development, operation, maintenance, and disposal of systems, whether performed internally or externally to an organization.

ISO/IEC 15288:2008 may be used stand alone or jointly with other International Standards, such as ISO/IEC 12207, and supplies a process reference model that supports process capability assessment in accordance with ISO/IEC 15504-2 (Process assessment).

The purpose of ISO/IEC 15288:2008 is to provide a defined set of processes to facilitate communication among acquirers, suppliers and other stakeholders in the life cycle of a system. ISO/IEC 15288:2008 is written for acquirers of systems and for suppliers, developers, operators, maintainers, managers, quality assurance managers, and users of systems.

3.2 Structure of ISO/IEC 15288:2008

ISO/IEC 15288:2008 contains requirements in two Clauses:

- Clause 6, which defines the requirements for the system life cycle processes,
- Annex A that provides requirements for tailoring of ISO/IEC 15288:2008.