

This is a preview of "ISO/IEC TS 24748-1:2016". Click [here](#) to purchase the full version from the ANSI store.

First edition
2016-05-01

Systems and software engineering — Life cycle management —

Part 1: Guidelines for life cycle management

*Ingénierie des systèmes et du logiciel — Gestion du cycle de vie —
Partie 1: Lignes directrices pour la gestion du cycle de vie*



Reference number
ISO/IEC TS 24748-1:2016(E)

© ISO/IEC 2016



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

This is a preview of "ISO/IEC TS 24748-1:2...". Click here to purchase the full version from the ANSI store.

Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Terms and definitions	1
3 Life cycle-related concepts	10
3.1 System concepts.....	10
3.1.1 General.....	10
3.1.2 Systems.....	10
3.1.3 System structure.....	12
3.1.4 Structure in systems and projects.....	13
3.1.5 Enabling systems.....	14
3.2 Life cycle concepts.....	15
3.2.1 System life cycle model.....	15
3.2.2 System life cycle stages.....	16
3.2.3 Stages in a system-of-interest and its enabling systems.....	17
3.3 Process concepts.....	18
3.3.1 Life cycle processes.....	18
3.3.2 Process responsibility.....	21
3.4 Process application.....	22
3.5 Processes under key views.....	24
4 Life cycle stages	26
4.1 General.....	26
4.2 Concept Stage.....	27
4.2.1 Overview.....	27
4.2.2 Purpose.....	28
4.2.3 Outcomes.....	28
4.3 Development Stage.....	28
4.3.1 Overview.....	28
4.3.2 Purpose.....	29
4.3.3 Outcomes.....	29
4.4 Production Stage.....	30
4.4.1 Overview.....	30
4.4.2 Purpose.....	30
4.4.3 Outcomes.....	30
4.5 Utilization Stage.....	31
4.5.1 Overview.....	31
4.5.2 Purpose.....	31
4.5.3 Outcomes.....	31
4.6 Support Stage.....	31
4.6.1 Overview.....	31
4.6.2 Purpose.....	32
4.6.3 Outcomes.....	32
4.7 Retirement Stage.....	32
4.7.1 Overview.....	32
4.7.2 Purpose.....	33
4.7.3 Outcomes.....	33
5 Life cycle adaptation	33
5.1 General.....	33
5.2 Adaptation sequence.....	34
5.2.1 General.....	34
5.2.2 Identify the project environment and characteristics.....	35
5.2.3 Solicit inputs.....	35

This is a preview of "ISO/IEC TS 24748-1:2...". Click here to purchase the full version from the ANSI store.

5.2.4	Select the appropriate standards	35
5.2.5	Select life cycle model.....	36
5.2.6	Select stages and processes.....	36
5.2.7	Document the adaptation decisions and rationale	36
5.3	Adaptation guidance	37
5.4	Scope adaptation.....	38
5.5	Stage adaptation.....	39
5.6	Process adaptation.....	39
5.7	Life cycle model adaptation for domains, disciplines and specialties.....	39
5.7.1	Adaptation for domains.....	39
5.7.2	Adaptation for disciplines.....	41
5.7.3	Adaptation for specialties.....	41
5.8	Adapting evaluation-related activities	43
6	Relationship with detailed process standards.....	44
Annex A	(informative) Process views	46
Annex B	(informative) Guidance on development strategies and build planning.....	56
Annex C	(informative) Candidate joint management reviews	59
Annex D	(informative) Problem reporting capability	62
Bibliography	64

This is a preview of "ISO/IEC TS 24748-1:2...". Click here to purchase the full version from the ANSI store.

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/IEC JTC 1, *Information technology, SC 7, Software and systems engineering*.

This first edition of ISO/IEC/TS 24748-1 cancels and replaces ISO/IEC/TR 24748-1, which has been technically revised.

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

- *Part 1: Guidelines for life cycle management* [Technical Specification]
- *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)*
- *Part 4: Systems engineering planning* [ISO/IEC/IEEE]
- *Part 5: Software development planning* [ISO/IEC/IEEE]

The following parts are under preparation:

- *Part 6: Guide to system integration engineering*

Introduction

The purpose of this Technical Specification is to facilitate the joint usage of the process content of the latest revisions of ISO/IEC/IEEE 15288 and ISO/IEC 12207, by providing unified and consolidated guidance on life cycle management of systems and software. This is to help 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 International Standards are used in combination. That will in turn help a project team design a life cycle model for managing the progress of their project.

This Technical Specification will also aid in identifying and planning use of life cycle processes described in ISO/IEC/IEEE 15288 and ISO/IEC 12207 that will enable the project to be completed successfully, meeting its objectives/requirements for each stage and for the overall project.

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 thorough guidance to enable alignment with any process documents that might subsequently be created that focus on areas besides systems and software, including hardware, humans, data, processes (e.g. review process), procedures (e.g. operator instructions), facilities and naturally occurring entities (e.g. water, organisms, minerals).

By addressing these needs specifically in this Technical Specification, the users of the process-focused ISO/IEC 12207 and ISO/IEC/IEEE 15288 will not only benefit from having one document complementarily addressing the aspect of product or service life cycle: they will also benefit from a framework that links life cycle management aspects to more than just the systems or software aspects of products or services.

ISO/IEC/IEEE 15288 and ISO/IEC 12207 also have published guidelines (ISO/IEC/TR 24748-2 and ISO/IEC/TR 24748-3), respectively, to support use of the two revised International Standards individually.