INTERNATIONAL STANDARD

ISO/IEC 33001

Second edition
2015-03-01

Information technology — Process assessment — Concepts and terminology

Technologies de l'information — Évaluation du processus — Concepts et terminologie

Reference number
ISO/IEC 33001:2015(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

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 second edition cancels and replaces ISO/IEC 15504-1:2004, which has been technically revised.

Introduction

This International Standard provides a glossary of terms related to the performance of process assessment, together with an overall introduction to the concepts and standards framework for process assessment. This International Standard identifies the principal components supporting the performance of process assessment, describes the results of process assessment, and gives an overview of the ways in which the results of assessment can be applied.

This International Standard is part of a set of International Standards designed to provide a consistent and coherent framework for the assessment of process quality characteristics, based on objective evidence resulting from implementation of the processes. The framework for assessment covers processes employed in the development, maintenance, and use of systems across the information technology domain and those employed in the design, transition, delivery, and improvement of services. The set of International Standards, as a whole, addresses process quality characteristics of any type. Results of assessment can be applied for improving process performance, benchmarking, or for identifying and addressing risks associated with application of processes.

The set of International Standards ISO/IEC 33001:2015, ISO/IEC 33099, termed the ISO/IEC 330xx family, defines the requirements and resources needed for process assessment. The overall architecture and content of the series is described in this International Standard. General issues relating to the application of conformity assessment to process capability and organizational process maturity are addressed in ISO/IEC 29169.

Several International Standards in the ISO/IEC 330xx family of standards for process assessment are intended to replace and extend parts of the ISO/IEC 15504 series of Standards[13]. Annex A in this Standard provides a detailed record of the relationship between the ISO/IEC 330xx family and the ISO/IEC 15504 series.

Information technology — Process assessment — Concepts and terminology

1 Scope

This International Standard provides a repository for key terminology relating to process assessment. It gives overall information on the concepts of process assessment, the application of process assessment for evaluating the achievement of process quality characteristics, and the application of the results of process assessment to the conduct of process management. This International Standard provides an introduction to the ISO/IEC 330xx family of standards for process assessment; it describes how the parts of the family of standards for process assessment fit together and provides guidance for their selection and use. It explains the requirements contained within the suite and their applicability to performing assessments.

Readers of this International Standard should familiarize themselves with the terminology and structure of the document suite and then reference the appropriate elements of the suite for the context in which they propose to conduct an assessment.

NOTE This International Standard addresses terms used in ISO/IEC 33001 to ISO/IEC 33019 of the ISO/IEC 330xx family, as well as key terms used in other documents in the family. Terms specific to documents from ISO/IEC 33020 to ISO/IEC 33099 are defined in each document.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC/IEEE 24765:2010, *Systems and software engineering — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC/IEEE 24765 and the following apply.

3.1 Terms relating to processes and process management

3.1.1
acquirer
stakeholder that acquires or procures a product or service from a supplier

[SOURCE: ISO/IEC 15288:2008, 4.1]

3.1.2
defined process
implemented process that is managed and tailored from the organization's set of standard processes according to the organization's tailoring guidelines

Note 1 to entry: A defined process has a process description that is documented and maintained and contributes work products, measures, and other process improvement information to the organization's process assets. A project's defined process provides a basis for planning, performing, and improving the project's tasks and activities of the project.

3.1.3
effectiveness
extent to which planned activities are realized and planned results are achieved

[SOURCE: ISO 9000:2005, 3.2.14]

3.1.4
information item
separately identifiable body of information that is produced, stored, and delivered for human use

Note 1 to entry: An information item can be produced in several versions during a system, software, or service life cycle. *Syn:* information product.

[SOURCE: ISO/IEC 15289:2011, 5.11; Note has been modified.]

3.1.5
organization
group of people and facilities with an arrangement of responsibilities, authorities, and relationships

[SOURCE: ISO 9000:2005, 3.3.1]

3.1.6
process
set of interrelated or interacting activities which transforms inputs into outputs

[SOURCE: ISO 9000:2005, 3.4.1]

3.1.7
process improvement
actions taken to improve the quality of the organization's processes aligned with the business needs and the needs of other concerned parties

3.1.8
standard process
set of definitions of the processes used to guide processes in an organization

Note 1 to entry: These process definitions cover the fundamental process elements (and their relationships to each other) that must be incorporated into the defined processes that are implemented in projects across the organization. A standard process establishes consistent activities across the organization and is desirable for long-term stability and improvement.

Note 2 to entry: The organization's set of standard processes describe the fundamental process elements that will be part of the projects' defined processes. It also describes the relationships (for example, ordering and interfaces) between these process elements.

Note 3 to entry: Process elements are the entities that are assembled to make up a process. They can be sub-processes, activities, tasks, etc.

3.1.9
supplier
an organization or an individual that enters into an agreement with the acquirer for the supply of a product or service

Note 1 to entry: Other terms commonly used for supplier are contractor, producer, seller, or vendor.

Note 2 to entry: The acquirer and the supplier can be part of the same organization.

[SOURCE: ISO/IEC 15288:2008, 4.30]

3.1.10
tailored process
process developed by tailoring a standard process

3.1.11
tailoring guideline
instructions that enable an organization to adapt standard processes appropriately to meet specific needs

Note 1 to entry: Tailoring a process adapts the process description for a particular end. For example, a project creates its defined process by tailoring the organization's set of standard processes to meet the objectives, constraints, and environment of the project. The organization's set of standard processes is described in a general level that might not be directly usable to perform a process. Tailoring guidelines aid those who establish the defined processes for specific needs.

Note 2 to entry: Tailoring guidelines describe what can and cannot be modified and identify process components that are candidates for modification.

3.2 Terms relating to process assessment

3.2.1
assessment body
body that performs an assessment

Note 1 to entry: A body can be an organization or part of an organization that performs the assessment.

[SOURCE: ISO/IEC 17020:2000, 2.2]

3.2.2
assessment constraints
restrictions placed on the use of the assessment outputs and on the assessment team's freedom of choice regarding the conduct of the assessment

3.2.3
assessment input
information required before a process assessment can commence

Note 1 to entry: The assessment input can change over the course of an assessment.

3.2.4
assessment output
all of the tangible results from an assessment (see *assessment record*)

3.2.5
assessment participant
individual who has responsibilities within the scope of the assessment

Note 1 to entry: Examples include, but are not limited to, the assessment sponsor, assessors, and/or organization units and their members.

3.2.6
assessment purpose
statement provided as part of the assessment input, which defines the reasons for performing the assessment

3.2.7
assessment record
orderly documented collection of the information which is pertinent to the assessment and adds to the understanding and verification of the process profiles generated by the assessment

3.2.8
assessment scope
definition of the boundaries of the assessment, provided as part of the assessment input, encompassing the boundaries of the organizational unit for the assessment, the processes to be included, the quality level for each process to be assessed, and the context within which the processes operate (see *process context*)

3.2.9
assessment sponsor
individual or entity, internal or external to the organizational unit being assessed, who requires the assessment to be performed and provides financial or other resources to carry it out

3.2.10
assessment team
one or more individuals who jointly perform a process assessment

3.2.11
assessor
individual who participates in the rating of process attributes

3.2.12
lead assessor
assessor who has demonstrated the competencies to conduct an assessment and to monitor and verify the conformance of a process assessment

3.2.13
objective evidence
data supporting the existence or verity of something

Note 1 to entry: Objective evidence can be obtained through observation, measurement, test, or other means.

[SOURCE: ISO 9000:2005, 3.8.1]

3.2.14
organizational unit
identified part of an organization that deploys one or more processes that operate within a coherent set of business goals and which forms the basis for the scope of an assessment

Note 1 to entry: An organizational unit is typically part of a larger organization, although in a small organization, the organizational unit can be the whole organization.

3.2.15
process assessment
disciplined evaluation of an organizational unit's processes against a process assessment model

3.2.16
process context
set of factors, documented in the assessment input, that influence the judgment, comprehension, and comparability of process attribute ratings

3.2.17
process instance
single specific and identifiable execution of a process

3.2.18
process profile
set of process attribute ratings for an assessed process

3.2.19
process quality determination
systematic assessment and analysis of selected processes against a target process profile

3.2.20
target process profile
process profile specifying which process attributes are required and the rating necessary for each process attribute for a required process

3.3 Terms relating to process models

3.3.1
assessment indicator
sources of objective evidence used to support the assessor's judgment in rating process attributes

Note 1 to entry: Examples include practice, information item, or resource.

3.3.2
base practice
activity that, when consistently performed, contributes to achieving a specific process purpose

3.3.3
basic maturity level
lowest level of achievement in a scale of organizational process maturity

3.3.4
basic process set
set of processes that ensure the achievement of the basic maturity level

Note 1 to entry: The set of processes are drawn from specified process assessment models.

Note 2 to entry: A basic process set will include a minimum set of processes, together with additional and optional processes determined by the organizational context for the assessment.

3.3.5
extended process set
set of processes specific to a maturity level higher than the basic maturity level that ensures the achievement of the relevant process profile

Note 1 to entry: The set of processes are drawn from specified process assessment models.

Note 2 to entry: An extended process set will include a minimum set of processes, together with additional and optional processes determined by the organizational context for the assessment.

3.3.6
generic practice
activity that, when consistently performed, contributes to the achievement of a specified process attribute

3.3.7
maturity model
model derived from one or more specified process assessment model(s) that identifies the process sets associated with the levels in a specified scale of organizational process maturity

3.3.8
practice
specific type of activity that contributes to the execution of a process

[SOURCE: PMBOK Guide, 4th Edition]

3.3.9
process assessment model
model suitable for the purpose of assessing a specified process quality characteristic, based on one or more process reference models

Note 1 to entry: Process assessment models addressing a specific process quality characteristic can include the identification of the characteristic in the title; for example, a process assessment model addressing process capability can be termed a "process capability assessment model".