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Australian/New Zealand Standard™

Information technology—Process assessment

Part 2: Performing an assessment

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The following are represented on Committee IT-015:

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Australian Software Metrics Association
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New Zealand Organisation for Quality
Software Engineering Australia (Qld)
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-015, Software and Systems Engineering to supersede AS 15504.2(Int)—1998, *Information technology—Software process assessment,* Part 2: *A reference model for processes and process capability.*

This Standard is identical with, and has been reproduced from ISO/IEC 15504-2:2003, *Information technology—Process assessment*—Part 2: *Performing an assessment*.

The objective of this Standard is to specify the assessment of process and the application of process assessment for improvement and capability determination. It defines the minimum set of requirements for performing an assessment that will ensure assessment results are objective, impartial, consistent, repeatable and representative of the assessed processes.

This Standard is Part 4 of AS/NZS 15504, *Information technology—Process assessment*, which is published in parts as follows:

Part 2: Performing an assessment (this Standard)
Part 3: Guidance on performing an assessment
Part 4: Guidance on use for process improvement and process capability determination

The terms 'normative' and 'informative' are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

As this Standard is reproduced from an international standard, the following applies:

(a) Its number appears on the cover and title page while the international standard number appears only on the cover

(b) In the source text 'this part of ISO/IEC 15504' should read 'this Australian/New Zealand Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
ISO/IEC		AS/NZS	
12207	Information technology—Software life cycle processes	12207	Information technology—Software life cycle processes
15288	Systems engineering—System life cycles processes	15288	Systems engineering—System life cycles processes

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INTRODUCTION

This part of ISO/IEC 15504 defines the basis for process assessment. Other parts of ISO/IEC 15504 contain guidance that will provide a more detailed understanding of the subject. It is primarily addressed to the competent assessor and other stakeholders, such as the sponsor of the assessment, who need to be assured that the requirements of this International Standard have been met. It will also be of value to developers of assessment methods and of tools to support an assessment.

ISO/IEC 15504-2 sets out the minimum requirements for performing an assessment that ensure consistency and repeatability of the ratings. The requirements help to ensure that the assessment output is self-consistent and provides evidence to substantiate the ratings and to verify compliance with the requirements.

ISO/IEC 15504-1 provides a general introduction to the concepts of process assessment and a glossary for assessment related terms.

ISO/IEC 15504-3 provides guidance for interpreting the requirements for performing an assessment.

This part of ISO/IEC 15504 identifies the measurement framework for process capability and the requirements for:

a) performing an assessment;

b) Process Reference Models;

c) Process Assessment Models;

d) verifying conformity of process assessment.

Process assessment, as defined in this International Standard, is based on a two dimensional model containing a process dimension and a capability dimension. The process dimension is provided by an external Process Reference Model, which defines a set of processes characterized by statements of process purpose and process outcomes. The capability dimension consists of a measurement framework comprising six process capability levels and their associated process attributes.

The assessment output consists of a set of process attribute ratings for each process assessed, termed the process profile, and may also include the capability level achieved by that process.

Process assessment is applicable in the following circumstances:

a) by or on behalf of an organization with the objective of understanding the state of its own processes for process improvement;

b) by or on behalf of an organization with the objective of determining the suitability of its own processes for a particular requirement or class of requirements;

c) by or on behalf of one organization with the objective of determining the suitability of another organization's processes for a particular contract or class of contracts.

As described in ISO/IEC 15504-4, process assessment is an activity that can be performed either as part of a process improvement initiative or as part of a capability determination approach. The formal entry to the assessment process occurs with the compilation of the assessment input which defines the purpose of the assessment (why it is being carried out), the scope of the assessment, what constraints apply to the assessment and any additional information that needs to be gathered. The assessment input also defines the responsibility of the various parties in the performance of an assessment. An assessor who has the necessary

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competence and skills oversees the assessment. Assessors may be from within the organization, external to the organization or a combination of both.

An assessment is carried out against a defined assessment input utilizing conformant Process Assessment Model(s) related to one or more conformant or compliant Process Reference Models. ISO/IEC TR 15504-5 contains an exemplar Process Assessment Model that is based upon the Process Reference Model defined in ISO/IEC 12207:1995/Amd.1, Annex F.

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AUSTRALIAN/NEW ZEALAND STANDARD

Software engineering — Process assessment —

Part 2:
Performing an assessment

1 Scope

This part of ISO/IEC 15504 addresses the assessment of process and the application of process assessment for improvement and capability determination. It defines the minimum set of requirements for performing an assessment that will ensure assessment results are objective, impartial, consistent, repeatable and representative of the assessed processes. Results of conformant process assessments may be compared when the scopes of the assessments are considered to be similar. For guidance on this matter, refer to ISO/IEC 15504-4.

The requirements for process assessment defined in this part of ISO/IEC 15504 form a structure which:

a) facilitates self-assessment;

b) provides a basis for use in process improvement and capability determination;

c) takes into account the context in which the assessed process is implemented;

d) produces a process rating;

e) addresses the ability of the process to achieve its purpose;

f) is applicable across all application domains and sizes of organization;

g) may provide an objective benchmark between organizations.

NOTE Copyright release: users of this part of ISO/IEC 15504 may freely reproduce relevant material as part of any Process Assessment Model, or as part of any demonstration of conformance with this International Standard, so that it can be used for its intended purpose.

2 Normative references

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

ISO/IEC 12207:1995/Amd.1:2002, *Information technology — Software life cycle processes*

ISO/IEC TR 15504-9, *Information technology — Software process assessment — Part 9: Vocabulary*[1)]

ISO/IEC 15288:2002, *Systems engineering — System life cycle processes*

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1) A revision of this document is in preparation under the following reference: ISO/IEC 15504-1.

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