AS ISO/IEC 25001:2019

Australian STANDARD

Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Planning and management

STANDARDS Australia

AS ISO/IEC 25001:2019

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Preface

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee IT-015, Software and Systems Engineering, to supersede AS/NZS ISO/IEC 25001:2013.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to provide requirements and recommendations for an organization responsible for implementing and managing the systems and software product quality requirements specification and evaluation activities through the provision of technology, tools, experiences, and management skills.

This Standard is identical with, and has been reproduced from, ISO/IEC 25001:2014, *Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Planning and management*.

As this document has been reproduced from an International Standard, the following applies:

(a) In the source text "this International Standard" should read "this Australian Standard".

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

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms "normative" and "informative" are used in Standards to define the application of the appendices or annexes to which they apply. A "normative" appendix or annex is an integral part of a Standard, whereas an "informative" appendix or annex is only for information and guidance.

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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.

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

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

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.

ISO/IEC 25001 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Systems and software engineering*.

This second edition cancels and replaces the first edition (ISO/IEC 25001:2007), of which it constitutes a minor revision.

The SQuaRE series of standards consists of the following divisions under the general title *Systems and Software Quality Requirements and Evaluation (SQuaRE)*:

— ISO/IEC 2500n, *Quality Management Division*,

— ISO/IEC 2501n, *Quality Model Division*,

— ISO/IEC 2502n, *Quality Measurement Division*,

— ISO/IEC 2503n, *Quality Requirements Division*, and

— ISO/IEC 2504n, *Quality Evaluation Division*.

ISO/IEC 25050 to ISO/IEC 25099 are reserved to be used for SQuaRE extension International Standards and/or Technical Reports.

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Introduction

This International Standard provides details about the planning and management requirements associated with systems and software product quality requirements and evaluation.

While this International Standard is mainly concerned with systems and software product quality requirements and evaluation, wherever it is relevant the corresponding process requirements and evaluation activities are also discussed.

This International Standard aims to clarify the requirements, which should be identified by the organisation in order to ensure the success of specifying systems and software quality requirements and executing the evaluation.

This International Standard is intended to be used in conjunction with the other documents of the ISO/IEC 25000 SQuaRE series of standards. The ISO/IEC 25000 SQuaRE series replaces the ISO/IEC 9126 series and the ISO/IEC 14598 series.

This International Standard complies with the technical processes identified in ISO/IEC 15288:2008 and ISO/IEC 12207:2008 related to quality requirements definition and analysis.

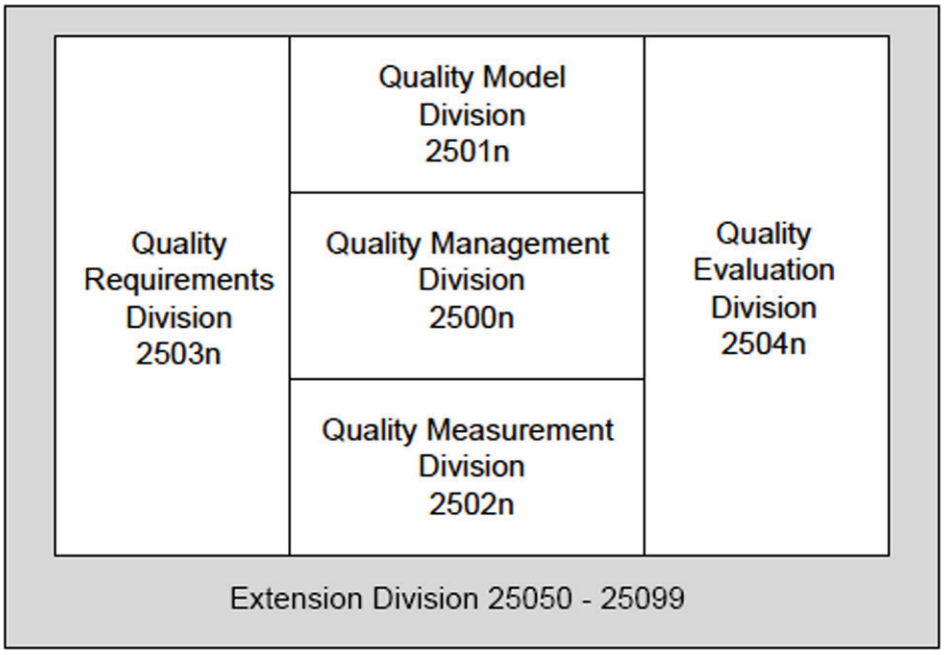


Figure 1 — Organization of SQuaRE series of standards

Figure 1 (quoted after ISO/IEC 25000) illustrates the organisation of the SQuaRE series representing families of standards, further called Divisions.

The Divisions within SQuaRE model are:

— **ISO/IEC 2500n - Quality Management Division**. The International Standards that form this division define all common models, terms and definitions referred to by all other standards from the SQuaRE series. Referring paths (guidance through SQuaRE documents) and high level practical suggestions in applying proper standards to specific application cases offer help to all types of users. The division also provides requirements and guidance for a supporting function, which is responsible for the management of product requirements specification and evaluation.

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— **ISO/IEC 2501n - Quality Model Division**. The International Standards that form this division present detailed quality models for systems and software product, quality in use and data. Practical guidance on the use of the quality model is also provided.

— **ISO/IEC 2502n - Quality Measurement Division**. The International Standards that form this division include a system and software product quality measurement reference model, mathematical definitions of quality measures, and practical guidance for their application. This division presents internal measures of software quality, external measures of system or software product quality and quality in use measures. Quality measure elements forming foundations for the latter measures are defined and presented.

— **ISO/IEC 2503n - Quality Requirements Division**. The International Standard that forms this division helps specifying quality requirements. These quality requirements can be used in the process of quality requirements elicitation for a product to be developed or as inputs for an evaluation process. The requirements definition process is mapped to Stakeholder Requirements Definition Process in Technical Processes defined in ISO/IEC 15288:2008 and ISO/IEC 12207:2008.

— **ISO/IEC 2504n - Quality Evaluation Division**. The International Standards that form this division provide requirements, recommendations and guidelines for product evaluation, whether performed by independent evaluators, acquirers or developers. The support for documenting a measure as an Evaluation Module is also presented.

— **ISO/IEC 25050-25099 - Extension Division.** SQuaRE extension (ISO/IEC 25050 to ISO/IEC 25099) is designated to contain system or software product quality International Standards and/or Technical Reports that address specific application domains or that can be used to complement one or more SQuaRE International Standards.

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Australian Standard®

Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Planning and management

1 Scope

This International Standard provides requirements and recommendations for an organization responsible for implementing and managing the systems and software product quality requirements specification and evaluation activities through the provision of technology, tools, experiences, and management skills.

The role of the evaluation group includes motivating employees and training them for the requirements specification and the evaluation activities, preparing appropriate documents, identification or development of required methods, and responding to queries on relevant technologies.

Technology management is related to the planning and management of a systems and software quality requirements specification and evaluation process, measurements and tools. This includes the management of development, acquisition, standardisation, control, transfer and feedback of requirements specification and evaluation technology experiences within the organisation.

The intended users of this International Standard are those responsible for:

— managing technologies used for requirements specification and evaluation execution,

— specifying systems and software product quality requirements,

— supporting systems and software product quality evaluation,

— managing systems and software development organisations,

as well as those in a quality assurance function. However, it is also applicable to managers involved in other systems or software related activities.

2 Conformance

In order to conform to this International Standard, an organisation shall apply requirements from clause 6 giving the reasons for any exclusion, or describe its own recommendations and provide a mapping to the original requirements.

3 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 25000:2014, *Software Engineering — Software product Quality Requirements and Evaluation (SQuaRE) — Guide to SQuaRE*

ISO/IEC 25010:2011, *Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — System and software quality models*

ISO/IEC 25020:2007, *Software engineering — Software product Quality Requirements and Evaluation (SQuaRE) — Measurement reference model and guide*

ISO/IEC 25021:2012, *Systems and software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Quality measure elements*

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