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

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National foreword

This British Standard is the UK implementation of ISO/IEC 25001:2014. It supersedes BS ISO/IEC 25001:2007 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee IST/15, Software and systems engineering.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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INTERNATIONAL STANDARD

ISO/IEC 25001

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

Ingénierie des systèmes et du logiciel — Exigences de qualité et évaluation des systèmes et du logiciel (SQuaRE) — Planning et gestion

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Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
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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.

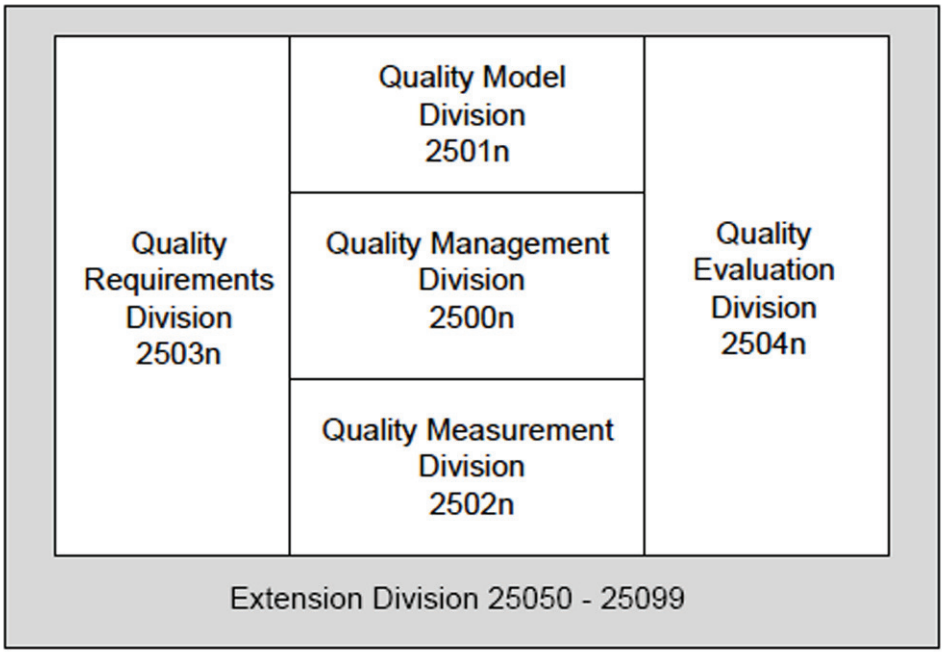

Figure 1 — Organization of SQuaRE series of standards

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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