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Information technology — Process assessment — Process Reference Model (PRM) for quality management

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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.

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).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Systems and Software Engineering*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

The purpose of this document is to facilitate the development of a process assessment model described in ISO/IEC TS 33073.

ISO/IEC 33002 describes the requirements for the conduct of an assessment. ISO/IEC 33004 describes the requirements for process reference, process assessment and maturity models. ISO/IEC 33020 describes the measurement scale for assessing the process quality characteristic of process capability. ISO/IEC 33001 describes the concepts and terminology used for process assessment.

A process reference model is a model comprising definitions of processes described in terms of process purpose and outcomes, together with an architecture describing the relationships between the processes. Using the process reference model in a practical application can require additional elements suited to the environment and circumstances.

The process reference model specified in this document describes the processes including the quality management system processes implied by ISO 9001. Each process of this process reference model is described in terms of a purpose and outcomes, and provides traceability to requirements. The process reference model does not attempt to place the processes in any specific environment nor does it pre-determine any level of process capability required to fulfil the ISO 9001 requirements. The process reference model is not intended to be used for a conformity assessment audit or as a process implementation reference guide.

The relationships between ISO 9001, ISO/IEC TR 24774, ISO/IEC 33002, ISO/IEC 33004, ISO/IEC 33020, ISO/IEC TS 33053 and ISO/IEC TS 33073 are shown in Figure 1.

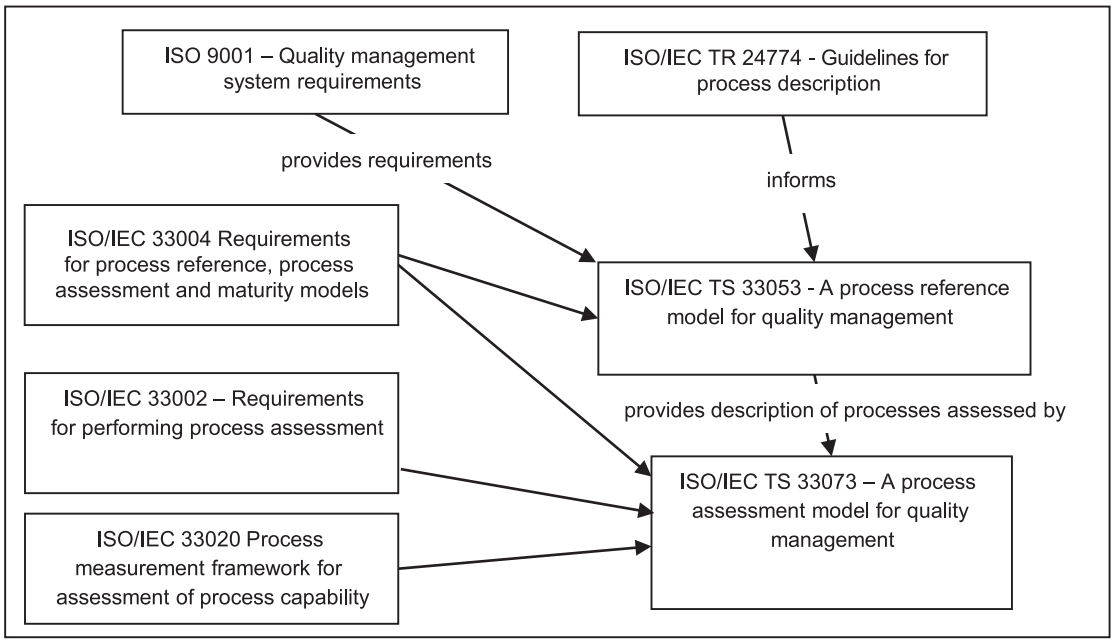

Figure 1 — Relationships between relevant standards

Any organization can define processes with additional elements in order to suit it to its specific environment and circumstances. Some processes cover general management aspects of an organization. These processes have been identified in order to give coverage to the requirements of ISO 9001.

The process reference model does not provide the evidence required by ISO 9001. The process reference model does not specify the interfaces between the processes.

This document describes a process reference model for quality management with descriptions of processes in Clause 5. Annex A describes the relationship between management system requirements

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and process model elements. Annex B provides the statement of conformity in accordance with ISO/IEC 33004.

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Information technology — Process assessment — Process Reference Model (PRM) for quality management

1 Scope

This document defines a process reference model for the domain of quality management.

The model specifies a process architecture for the domain and comprises a set of processes. Each process is described in terms of process purpose and outcomes.

NOTE Users of this document can freely reproduce the detailed descriptions contained in this process reference model as part of any tool or other material to support the performance of process assessments, so that it can be used for its intended purpose.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 33001, *Information technology — Process assessment — Concepts and terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 33001 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Overview of the process reference model

This clause describes the structure of a process reference model to support quality management. The process reference model includes processes, which can already exist in the context of a quality management system of a service provider.

Figure 2 identifies the processes derived from ISO 9001 requirements. Three process groups are identified, namely, common processes, technical processes and organizational processes. The term "common processes" refers to those processes identified with the text in the management system subclauses that is common to all management system standards. The term "technical processes" refers to processes associated with the technical domain of the application standard. In the present case of ISO 9001, the technical processes underpin the implementation of those requirements associated with the creation or support of products and services. "organizational processes" refers to those processes that support the implementation of the requirements for products and services.

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