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IEEE Standard—Adoption of ISO/IEC 20000-1:2011, Information technology—Service management—Part 1: Service management system requirements

IEEE Computer Society

Sponsored by the
Software & Systems Engineering Standards Committee

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Approved 3 May 2013

IEEE-SA Standards Board

Abstract: ISO/IEC 20000-1:2011, a service management system (SMS) standard, is adopted by the IEEE in this standard. It specifies requirements for the service provider to plan, establish, implement, operate, monitor, review, maintain and improve an SMS. The requirements include the design, transition, delivery, and improvement of services to fulfill agreed service requirements.

This standard can be used by the following:

— An organization seeking services from service providers and requiring assurance that their service requirements will be fulfilled.
— An organization that requires a consistent approach by all its service providers, including those in a supply chain.
— A service provider that intends to demonstrate its capability for the design, transition, delivery, and improvement of services that fulfill service requirements.
— A service provider to monitor, measure, and review its service management processes and services.
— A service provider to improve the design, transition, delivery, and improvement of services through the effective implementation and operation of the SMS.
— An assessor or auditor as the criteria for a conformity assessment of a service provider's SMS to the requirements in this standard.

Keywords: adoption, business relationship management, capacity management, configuration management, IEEE 20000-1, information security management, release management, service continuity and availability management, service delivery, service level management, service management system, service provider, service reporting, SMS, supplier management

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Contents of IEEE Adoption of ISO/IEC 20000-1:2011

IEEE Standard—Adoption of ISO/IEC 20000-1:2011, Information technology—Service management—Part 1: Service management system requirements

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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 20000-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*. This second edition cancels and replaces the first edition (ISO/IEC 20000-1:2005), which has been technically revised. The main differences are as follows:

— closer alignment to ISO 9001;

— closer alignment to ISO/IEC 27001;

— change of terminology to reflect international usage;

— addition of many more definitions, updates to some definitions and removal of two definitions;

— introduction of the term “service management system”;

— combining Clauses 3 and 4 of ISO/IEC 20000-1:2005 to put all management system requirements into one clause;

— clarification of the requirements for the governance of processes operated by other parties;

— clarification of the requirements for defining the scope of the SMS;

— clarification that the PDCA methodology applies to the SMS, including the service management processes, and the services;

— introduction of new requirements for the design and transition of new or changed services.

ISO/IEC 20000 consists of the following parts, under the general title *Information technology — Service management:*

— *Part 1: Service management system requirements*

— *Part 2: Guidance on the application of service management systems*[1)]

1) To be published. (Technical revision of ISO/IEC 20000-2:2005.)

— *Part 3: Guidance on scope definition and applicability of ISO/IEC 20000-1* [Technical Report]

— *Part 4: Process reference model* [Technical Report]

— *Part 5: Exemplar implementation plan for ISO/IEC 20000-1* [Technical Report]

A process assessment model for service management will form the subject of a future Part 8.

Introduction

The requirements in this part of ISO/IEC 20000 include the design, transition, delivery and improvement of services that fulfil service requirements and provide value for both the customer and the service provider. This part of ISO/IEC 20000 requires an integrated process approach when the service provider plans, establishes, implements, operates, monitors, reviews, maintains and improves a service management system (SMS).

Co-ordinated integration and implementation of an SMS provides ongoing control and opportunities for continual improvement, greater effectiveness and efficiency. The operation of processes as specified in this part of ISO/IEC 20000 requires personnel to be well organized and co-ordinated. Appropriate tools can be used to enable the processes to be effective and efficient.

The most effective service providers consider the impact on the SMS through all stages of the service lifecycle, from strategy through design, transition and operation, including continual improvement.

This part of ISO/IEC 20000 requires the application of the methodology known as “Plan-Do-Check-Act” (PDCA) to all parts of the SMS and the services. The PDCA methodology, as applied in this part of ISO/IEC 20000, can be briefly described as follows.

Plan: establishing, documenting and agreeing the SMS. The SMS includes the policies, objectives, plans and processes to fulfil the service requirements.

Do: implementing and operating the SMS for the design, transition, delivery and improvement of the services.

Check: monitoring, measuring and reviewing the SMS and the services against the policies, objectives, plans And service requirements and reporting the results.

Act: taking actions to continually improve performance of the SMS and the services.

When used within an SMS, the following are the most important aspects of an integrated process approach and the PDCA methodology:

a) Understanding and fulfilling the service requirements to achieve customer satisfaction;

b) establishing the policy and objectives for service management;

c) designing and delivering services based on the SMS that add value for the customer;

d) monitoring, measuring and reviewing performance of the SMS and the services;

e) continually improving the SMS and the services based on objective measurements.

Figure 1 illustrates how the PDCA methodology can be applied to the SMS, including the service management processes specified in Clauses 5 to 9, and the services. Each element of the PDCA methodology is a vital part of a successful implementation of an SMS. The improvement process used in this part of ISO/IEC 20000 is based on the PDCA methodology.

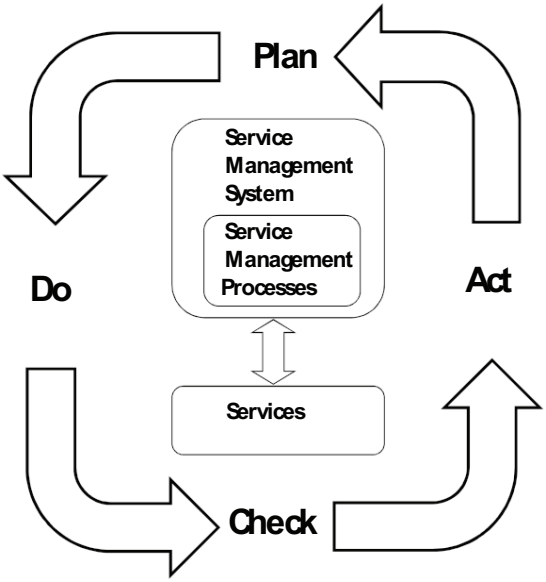

Figure 1 — PDCA methodology applied to service management

This part of ISO/IEC 20000 enables a service provider to integrate its SMS with other management systems in the service provider's organization. The adoption of an integrated process approach and the PDCA methodology enables the service provider to align or fully integrate multiple management system standards. For example, an SMS can be integrated with a quality management system based on ISO 9001 or an information security management system based on ISO/IEC 27001.

ISO/IEC 20000 is intentionally independent of specific guidance. The service provider can use a combination of generally accepted guidance and its own experience.

Users of an International Standard are responsible for its correct application. An International Standard does not purport to include all necessary statutory and regulatory requirements and contractual obligations of the service provider. Conformity to an International Standard does not of itself confer immunity from statutory and regulatory requirements.

For the purposes of research on service management standards, users are encouraged to share their views on ISO/IEC 20000-1 and their priorities for changes to the rest of the ISO/IEC 20000 series. Click on the link below to take part in the online survey.

ISO/IEC 20000-1 online survey

Information technology — Service management —

Part 1:
Service management system requirements

1 Scope

1.1 General

This part of ISO/IEC 20000 is a service management system (SMS) standard. It specifies requirements for the service provider to plan, establish, implement, operate, monitor, review, maintain and improve an SMS. The requirements include the design, transition, delivery and improvement of services to fulfil service requirements. This part of ISO/IEC 20000 can be used by:

a) an organization seeking services from service providers and requiring assurance that their service requirements will be fulfilled;

b) an organization that requires a consistent approach by all its service providers, including those in a supply chain;

c) a service provider that intends to demonstrate its capability for the design, transition, delivery and improvement of services that fulfil service requirements;

d) a service provider to monitor, measure and review its service management processes and services;

e) a service provider to improve the design, transition and delivery of services through effective implementation and operation of an SMS;

f) an assessor or auditor as the criteria for a conformity assessment of a service provider's SMS to the requirements in this part of ISO/IEC 20000.

Figure 2 illustrates an SMS, including the service management processes. The service management processes and the relationships between the processes can be implemented in different ways by different service providers. The nature of the relationship between a service provider and the customer will influence how the service management processes are implemented.