

# IEEE Standard—Adoption of ISO/IEC 20000-2:2012, Information technology—Service management— Part 2: Guidance on the application of service management systems

IEEE Computer Society

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3 Park Avenue  
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**IEEE Standard—Adoption of  
ISO/IEC 20000-2:2012, Information  
technology—Service management—  
Part 2: Guidance on the application of  
service management systems**

Sponsor

**Software and Systems Engineering Standards Committee  
of the  
IEEE Computer Society**

Approved 3 May 2013

**IEEE-SA Standards Board**

**Abstract:** Guidance on the application of service management systems (SMS) based on the requirements in IEEE Std 20000-2-2013 (ISO/IEC 20000-1) is provided in this adoption of ISO/IEC 20000-2:2012.

This standard enables organizations and individuals to interpret ISO/IEC 20000-1 more accurately and therefore to use it more effectively. The guidance includes examples and suggestions to enable organizations to interpret and apply ISO/IEC 20000-1, including references to other parts of ISO/IEC 20000 and other relevant standards.

This includes guidance on the use of an SMS for the planning, design, transition, delivery and improvement of the SMS and services. At a minimum this includes service management policies, objectives, plans, service management processes, process interfaces, documentation, and resources. The SMS provides ongoing control, greater effectiveness, efficiency, and opportunities for continual improvement of service management and of services. It enables an organization to work effectively with a shared vision.

**Keywords:** adoption, continual service improvement, IEEE 20000-2, service management system, SMS

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**Information technology — Service  
management —**

**Part 2:  
Guidance on the application of service  
management systems**

*Technologies de l'information — Gestion des services —*

*Partie 2: Directives relatives à l'application des systèmes de  
management des services*



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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 20000-2 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 20000-2:2005), which has been technically revised. The major differences are as follows:

- closer alignment to ISO 9001 and ISO/IEC 27001;
- changes in terminology to reflect international usage;
- new guidance on governance of processes operated by other parties;
- more guidance on defining the scope of the SMS;
- more guidance on continual improvement of the SMS and services;
- more guidance on 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*
- *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]

## Introduction

This part of ISO/IEC 20000 provides guidance on the application of service management systems (SMS) based on ISO/IEC 20000-1. This part of ISO/IEC 20000 does not add any requirements to those stated in ISO/IEC 20000-1 and does not state explicitly how evidence can be provided to an assessor or auditor. The intent of this part of ISO/IEC 20000 is to enable organizations and individuals to interpret ISO/IEC 20000-1 more accurately, and therefore use it more effectively.

An SMS is defined in ISO/IEC 20000-1 as a management system to direct, monitor and control the service management activities of the service provider. The SMS should include what is required for the planning, design, transition, delivery and improvement of services. At a minimum this includes service management policies, objectives, plans, processes, process interfaces, documentation and resources. The SMS encompasses all the processes as an over-arching management system, with the service management processes as part of the SMS.

Coordinated integration and implementation of an SMS provides ongoing control, greater effectiveness, efficiency and opportunities for continual improvement. It enables an organization to work effectively with a shared vision. The operation of processes as specified in Clauses 5 to 9 requires personnel to be well organized and coordinated. Appropriate tools may be used to enable the service management processes to be effective and efficient. The most effectual organizations consider the impact of the SMS through all stages of the service lifecycle, from planning and design to transition and operation, including continual improvement.

This part of ISO/IEC 20000 provides examples and suggestions to enable organizations to interpret and apply ISO/IEC 20000-1, including references to other parts of ISO/IEC 20000 and other relevant standards.

Users of International Standards are responsible for their correct application. It is important for organizations and individuals using ISO/IEC 20000 to understand the points listed below.

- ISO/IEC 20000-1 does not purport to include all necessary statutory and regulatory requirements, or all contractual obligations of the service provider. Conformity to ISO/IEC 20000-1 does not of itself confer immunity from statutory obligations.
- ISO/IEC 20000-1 is applicable to internal and external, large and small, and commercial and non-commercial service providers.
- ISO/IEC 20000-1 promotes the adoption of an integrated process approach when planning, establishing, implementing, operating, monitoring, measuring, reviewing, maintaining and improving an SMS for the design, transition, improvement and delivery of services that fulfil service requirements.

ISO/IEC 20000 promotes the application of the methodology known as “Plan-Do-Check-Act” (PDCA) to the SMS and the services. The PDCA methodology, shown in Figure 1, can be briefly described as follows:

**Plan:** establishing, documenting and agreeing the SMS including the policies, objectives, plans and processes necessary to design and deliver services in accordance with business needs, customer requirements and the service provider's policies.

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

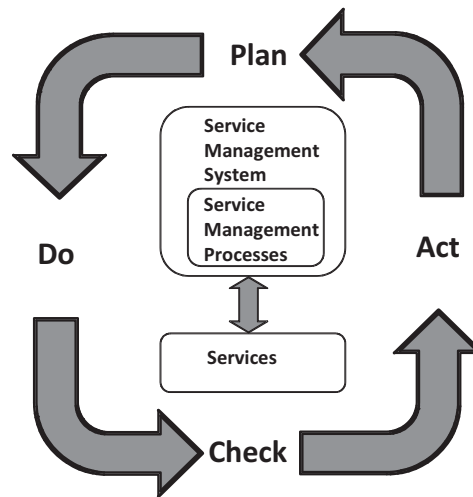
**Check:** monitoring, measuring and reviewing the SMS and the services against the plans, policies, objectives and requirements and reporting the results.

**Act:** taking actions to continually improve performance of the SMS. This includes the service management processes 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.

Where other management systems are present, the implementation of an SMS, with the adoption of a process approach and the PDCA methodology, enables the service provider to align or fully integrate the organization's management systems. For example, it is possible to integrate ISO/IEC 20000 with a quality management system based upon ISO 9001 and/or an information security management system based upon ISO/IEC 27001. An integrated management system approach increases efficiency, establishes clear accountability and traceability and enhances organizational planning, communication and control.



**Figure 1 — PDCA methodology applied to service management**

As stated in ISO/IEC 20000-1:

*“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 their service providers, including those in a supply chain;*
- c) *the 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, delivery and improvement of services through the effective implementation and operation of the SMS;*
- f) *an assessor as the criteria for a conformity assessment of a service provider's SMS to the requirements in this part of ISO/IEC 20000.”*

## ISO/IEC 20000-2:2012(E)

This part of ISO/IEC 20000 can be used by an organization looking for guidance on how to improve service management, whether or not it is interested in seeking certification.