
**Information technology — Guidelines
for the application of ISO 9001:2008
to IT service management and its
integration with ISO/IEC 20000-1:2011**

*Technologies de l'information — Lignes directrices pour l'application
de l'ISO 9001:2008 pour la gestion des services IT et son intégration à
la norme ISO/CEI 20000-1:2011*



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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.

In exceptional circumstances, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide to publish a Technical Report. A Technical Report is entirely informative in nature and shall be subject to review every five years in the same manner as an International Standard.

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/TR 90006 was prepared by the Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*.

Introduction

This Technical Report provides guidelines for the application of ISO 9001:2008 to IT service management. It also provides guidelines for the integration of a quality management system (QMS) and a service management system (SMS).

This Technical Report describes the similarities and differences between the requirements of ISO 9001:2008 and ISO/IEC 20000-1:2011. This Technical Report supports the adoption and audit of management systems developed following the requirements of ISO 9001:2008 alone or of an integrated management system for both ISO 9001:2008 and ISO/IEC 20000-1:2011.

This Technical Report uses the terminology used in ISO 9001:2008 when referring to that International Standard. It uses the terminology used in ISO/IEC 20000-1:2011 when referring to that International Standard. For example, ISO/IEC 20000-1 refers to services and service providers; ISO 9001 refers to products and organizations.

Information technology — Guidelines for the application of ISO 9001:2008 to IT service management and its integration with ISO/IEC 20000-1:2011

1 Scope

This Technical Report provides guidelines for the application of ISO 9001:2008 to service management for IT services. Examples provided in the guidelines are for service management of IT services.

Because ISO/IEC 20000-1 and ISO 9001 can be applied not only to IT services but to all services, they do not use terminology referring to IT services. Throughout this Technical Report, the terminology of ISO/IEC 20000-1 is used without reference to IT, i.e. service, service management and service provider. The guidelines in this Technical Report can also be useful to support a QMS, SMS or integrated management system for other non-IT services.

Additionally, this Technical Report provides guidelines for the alignment and integration of a QMS and SMS in organizations where services are being delivered to internal or external customers. The guidelines about integration provided in [Annex C](#) can be applicable to a scope including IT services and other non-IT services as required.

This Technical Report provides a comparison of the requirements of ISO 9001:2008 and ISO/IEC 20000-1:2011. It highlights those areas where there is the greatest similarity between the two management systems, and where there are differences between the two.

This Technical Report cites and explains the requirements of ISO 9001:2008 in its application to service management and its integration with ISO/IEC 20000-1:2011, but does not add to or otherwise change the requirements of ISO 9001 or ISO/IEC 20000-1.

The guidelines provided in this Technical Report are not intended to be used as criteria for conformity assessments or audits.

This Technical Report can apply to organizations of all sizes, sectors, and types with different organizational forms or business models.

This Technical Report can be used by:

- a) auditors and assessors looking for guidelines on audits for ISO 9001:2008 with a scope that includes services and service management;
- b) auditors and assessors looking for guidelines on integrated audits for ISO 9001:2008 and ISO/IEC 20000-1:2011 with a scope that includes services and service management;
- c) organizations implementing a QMS with a scope that includes services and service management;
- d) organizations implementing an integrated management system using the requirements of ISO 9001:2008 and ISO/IEC 20000-1:2011.

This Technical Report does not describe the requirements of ISO 9001 or ISO/IEC 20000-1 comprehensively. This Technical Report is intended for use by persons with knowledge of both ISO 9001:2008 and ISO/IEC 20000-1:2011. Text that has been quoted from ISO 9001:2008 is enclosed in a box. Text from ISO 9000:2005 and ISO/IEC 20000-1:2011 is not reproduced extensively. Additional guidance is listed in the bibliography.

[Clause 5](#) of this Technical Report provides an introduction to ISO 9001 and ISO/IEC 20000-1, an overview of their similarities and differences and how they can be used together or separately.

[Clause 6](#) of this Technical Report includes all of the clauses of ISO 9001:2008 with details of related clauses from ISO/IEC 20000-1:2011 and provides guidelines for the application of ISO 9001:2008 to service management.

For ease of use, [Clause 6](#) of this Technical Report is numbered in the sequence of ISO 9001:2008. For example:

- a) [Clause 6.3](#) of this Technical Report relates to Clause 3 in ISO 9001:2008;
- b) [Clause 6.4.1](#) of this Technical Report relates to Clause 4.1 in ISO 9001:2008;
- c) [Clause 6.4.2.2](#) of this Technical Report relates to Clause 4.2.2 in ISO 9001:2008.

[Clause 7](#) of this Technical Report provides information about the clauses in ISO/IEC 20000-1:2011 that do not have corresponding requirements in ISO 9001:2008.

[Annexes A](#) and [B](#) of this Technical Report provide detailed tables showing a comparison between the requirements of ISO 9001:2008 and ISO/IEC 20000-1:2011.

[Annex C](#) of this Technical Report provides guidelines on the integration of a QMS and an SMS.

2 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 9000:2005, *Quality management systems — Fundamentals and vocabulary*

ISO 9001:2008, *Quality management systems — Requirements*

ISO/IEC 20000-1:2011, *Information technology — Service management — Part 1: Service management system requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 9000:2005, ISO/IEC 20000-1:2011 and the following apply.

NOTE 1 Throughout the text of this Technical Report, wherever the term 'product' occurs, it can also mean 'service'.

NOTE 2 [Clause 6.3](#) of this Technical Report provides an analysis of the terms and definitions from ISO 9000:2005 and ISO/IEC 20000-1:2011.

3.1 information technology

IT

resources required to acquire, process, store and disseminate information

Note 1 to entry: Includes Communication Technology (CT) and the composite term Information and Communication Technology (ICT).

[SOURCE: ISO/IEC 38500:2008]

4 Abbreviated terms

IT	Information Technology;
PDCA	Plan-Do-Check-Act;
QMS	Quality Management System (from ISO 9000:2005);
SMS	Service Management System (from ISO/IEC 20000-1:2011).

5 Introduction to ISO 9001 and ISO/IEC 20000-1

5.1 Introduction to the International Standards

5.1.1 Introduction to ISO 9001

The ISO 9000 series has been developed to assist organizations of all types and sizes to implement and operate an effective QMS. The adoption of a QMS should be a strategic decision for an organization. ISO 9001 specifies requirements for a QMS when an organization wishes to demonstrate its ability to provide products that fulfil customer and applicable statutory and regulatory requirements and aims to enhance customer satisfaction.

The ISO 9000 series includes the following parts:

- ISO 9000:2005, *Quality management systems — Fundamentals and vocabulary*;
- ISO 9001:2008, *Quality management systems — Requirements*;
- ISO 9004:2009, *Managing for the sustained success of an organization — A quality management approach*.

There are other International Standards related to ISO 9001 which are listed in the bibliography e.g. ISO 19011:2011, *Guidelines for auditing management systems*.

The intent of ISO 9001 is to encourage the adoption of a process approach to manage an organization. Organizations that adopt a process approach create confidence in the capability of their products and supporting lifecycle processes. This approach provides a basis for continual improvement and can lead to increased satisfaction of customers and other interested parties, and to the success of the organization. ISO 9001 also encourages the adoption of a systems approach to management which requires process integration and alignment to improve the achievement of desired results. The process approach and systems approach to management are common to the design of both a QMS and an SMS.

The model of a process-based QMS shown in [Figure 1](#) illustrates the process linkages presented in ISO 9001. In addition, the methodology known as 'Plan-Do-Check-Act' (PDCA) can be applied to all processes in ISO 9001. This illustration shows that customers play a significant role in defining requirements as inputs. Monitoring of customer satisfaction requires the evaluation of information relating to customer perception about whether the organization has met the customer requirements.

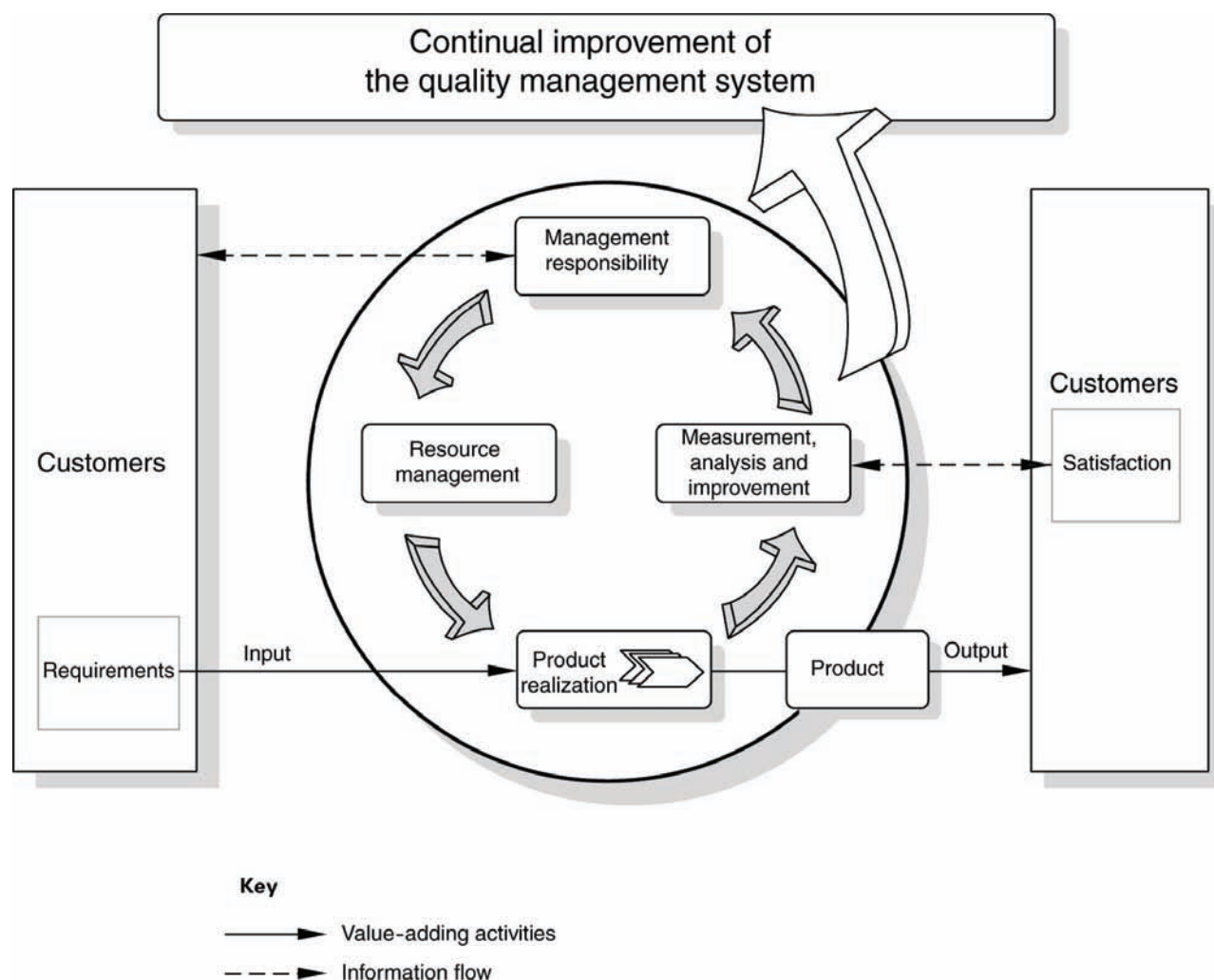


Figure 1 — Model of a process-based quality management system

The parties involved in quality management as defined in ISO 9001 are shown in [Figure 2](#). The organization that supplies products to the customer can be the subject of the requirements of ISO 9001.

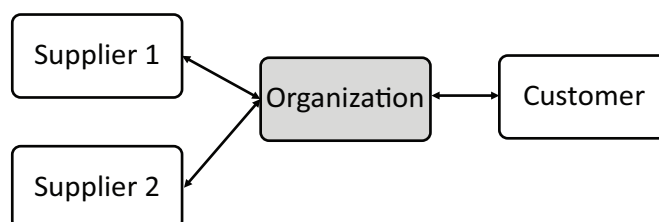


Figure 2 — The parties involved in quality management

While the organization itself can be the subject of the requirements of ISO 9001, mutually beneficial supplier relationships can represent a fundamental quality principle within ISO 9000 which can enhance the ability to create value.

5.1.2 Introduction to ISO/IEC 20000-1

ISO/IEC 20000 is the International Standard for service management. Service management is the set of capabilities, including processes, required to direct and control a service provider's activities and resources to fulfil service requirements as agreed with their customer. ISO/IEC 20000 includes

requirements for the design, transition, delivery and improvement of services that fulfil service requirements and provide value for both the customer and the service provider. The adoption of an SMS should be a strategic decision for an organization.

In service management, the organization providing services is known as a service provider. The customer should be responsible for defining its service requirements and agreeing the services to be delivered. The user can access and use the service. The customer can also be a user.

In a business environment, the service provider delivers services to the customer. The service provider manages the services to fulfil the customer requirements. For example, a financial business unit customer can access financial application services hosted in the cloud from his desk top computer. The service provider is responsible for designing and developing the service, making the transition from development into the live environment and then operating the service to deliver it to the customers.

A service can be visible to customers e.g. an email service. A service can also be invisible to customers but necessary to support other services e.g. an infrastructure maintenance service.

ISO/IEC 20000 includes 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*;
- *Part 4: Process reference model* [Technical Report];
- *Part 5: Exemplar implementation plan for ISO/IEC 20000-1* [Technical Report];
- *Part 10: Concepts and terminology* [Technical Report].

ISO/IEC TR 20000-10 establishes a common framework for helping organizations to understand the purpose of all the parts of ISO/IEC 20000 and the relationships between the parts. It also identifies other documents that have relationships with ISO/IEC 20000-1 and identifies common areas between standards to aid the use and integration of multiple standards in organizations.

The parties that can be involved in service management as defined in ISO/IEC 20000-1 are shown in [Figure 3](#). The service provider should be the part of the organization that delivers services to the customers and can be the subject of the requirements of ISO/IEC 20000-1. Other parties that can support the service provider are suppliers, internal groups or customers acting as suppliers.

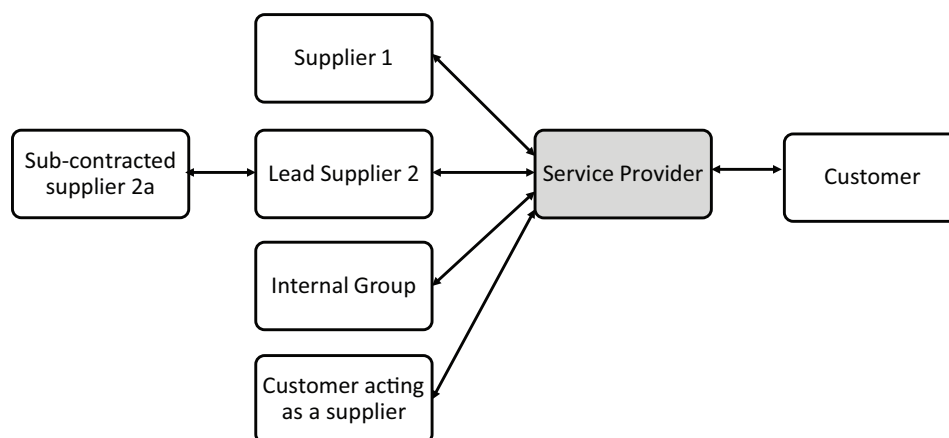


Figure 3 — The parties involved in service management

ISO/IEC 20000-1 specifies an integrated process approach when the service provider plans, establishes, implements, operates, monitors, reviews, maintains and improves an SMS. ISO/IEC 20000-1 specifies

the application of the methodology known as 'Plan-Do-Check-Act' to all parts of the SMS including the service management processes specified in Clauses 5 to 9 of ISO/IEC 20000-1, and the services. This is shown in [Figure 4](#).

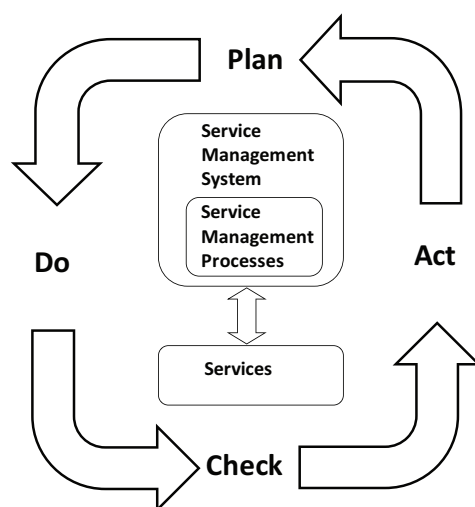


Figure 4 — PDCA methodology applied to service management

5.1.3 Defining scope for a QMS and an SMS

ISO 9001 and ISO/IEC 20000-1 differ significantly on the requirements for scope of the management system.

The scope of a QMS can include all or a part of the activities of an organization. The scope of an SMS applies to the design, transition, delivery and improvement of services.

[Figure 5](#) illustrates 3 possible scenarios for the related scope of a QMS and an SMS. Figure 5.1 shows a scope with a partial overlap. Figure 5.2 shows the SMS scope wholly within the scope of the QMS. Figure 5.3 shows the same scope for both the QMS and the SMS. Examples are also provided.

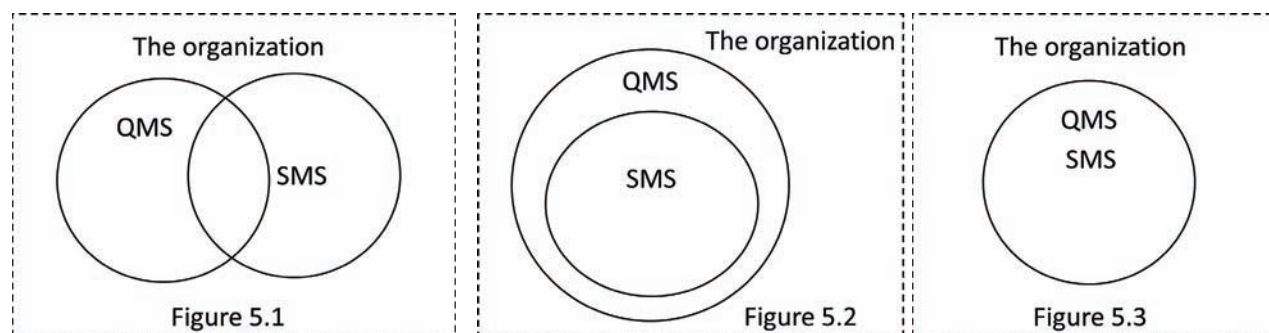


Figure 5 — Scope scenarios for a QMS and an SMS

EXAMPLE 1 An organization in Figure 5.1 has a QMS for both the manufacturing of products and a service required for the manufacturing process. The organization also has an SMS with a scope of the service for the product manufacturing process and other services. The scope of the SMS overlaps partially with the scope of the QMS.

EXAMPLE 2 An organization in Figure 5.2 has a QMS for all insurance business processes and all services. The organization also has an SMS for all services. The scope of the SMS is a subset of the scope of the QMS.

EXAMPLE 3 A service organization in Figure 5.3 has a QMS for all services provided. This organization also has an SMS for all services. The scope is identical for the QMS and the SMS.

NOTE Further guidance on scope for ISO/IEC 20000-1 is available in ISO/IEC 20000-3:2012 – Guidance on scope definition and applicability of ISO/IEC 20000-1.

5.2 The application of ISO 9001 to services and service management

Customers can require products with characteristics that satisfy their needs and expectations. In ISO 9001, whenever the term product occurs, it can also mean service. These needs and expectations are expressed in product specifications and can be collectively referred to as customer requirements. Because customer needs and expectations can change and because of competitive pressures and technical advances, organizations should be driven to continually improve their products and processes.

The QMS approach encourages organizations to analyse customer requirements, define the processes that contribute to the achievement of a product which is acceptable to the customer, and keep these processes under control.

ISO 9001 specifies requirements for a QMS that can be used for internal application by organizations, for conformity assessments or for third party audits. It focuses on the effectiveness of the QMS in providing products and services that meet customer requirements.

Clause 4.1 of ISO 9001 includes requirements for the organization to determine the processes required for the QMS. When ISO 9001 is applied to services and service management, the organization can include all or some of the processes from ISO/IEC 20000-1.

ISO 9001 can be applied to service management. The application of ISO 9001 to service management can be useful where an organization wishes to demonstrate conformity of its service management to an International Standard but cannot meet all of the requirements of ISO/IEC 20000-1 e.g. the organization only operates six service management processes and the other service management processes are not operated.

There can also be a scenario where an organization wants to demonstrate conformity to ISO 9001 for all parts of the organization including service management and other activities. It should be possible to incorporate all or some of the requirements of ISO/IEC 20000-1 as customer requirements in the QMS.

Demonstrating conformity to ISO 9001 for a scope including service management may not mean that an organization has demonstrated conformity to all the requirements of ISO/IEC 20000-1. The organization can demonstrate that it meets the requirements of ISO 9001 against the customer requirements for the service management activities included in the scope. For example, the organization can choose to incorporate in the customer requirements, the requirements from the service level management process and incident and service request management process specified in ISO/IEC 20000-1 but can choose not to include the other requirements specified in ISO/IEC 20000-1. Processes from other models can also be used.

[Clause 6](#) of this Technical Report provides guidance on how specific clauses of ISO 9001 can potentially be applied to service management.

5.3 The integration of ISO 9001 and ISO/IEC 20000-1

Organizations can benefit from integrating their management systems to create one management system. These benefits can be experienced whether one management system is implemented before the other, or all management systems are implemented simultaneously. Management and organizational processes, in particular, can derive benefit from integrating the similar requirements and defining common objectives for all management systems.

An ideal option for an organization can be to produce a viable integrated management system which enables the organization to demonstrate conformity to ISO 9001 and ISO/IEC 20000-1. The goal is not to compare the two International Standards or to determine which is best or right. Where there is conflict between the two International Standards, this should be resolved in a way which satisfies the requirements of ISO 9001 and ISO/IEC 20000-1, and ensures that the organization achieves continual improvement of its QMS and SMS. The ideal integrated management system should be based on the most effective approach using ISO 9001 and ISO/IEC 20000-1 applied appropriately. This is also supported by use of additional details found in one of the International Standards to supplement the other. Care should be taken to retain everything necessary for conformity to ISO 9001 and ISO/IEC 20000-1.

One business benefit of an integrated management system can be that the organization does not have two management systems with duplication and contradictory requirements. Other key benefits of an integrated implementation of quality and service management include:

- a) the credibility of an effective and quality assured service which meets customer requirements for internal or external customers;
- b) the lower cost of setting up, operating and auditing an integrated management system where achieving both high quality and effective service delivery are part of the organization's strategy;
- c) a reduction in implementation time due to the development of integrated processes common to ISO 9001 and ISO/IEC 20000-1;
- d) the avoidance of conflicts and isolated improvements in the organization arising from separate management systems;
- e) a greater understanding of both quality management and service management with one set of objectives leading to more effective and efficient working;
- f) a reduction in implementation time due to complementary requirements so that demonstrating conformity to ISO 9001 means that the organization has fulfilled some of the requirements of ISO/IEC 20000-1;
- g) a reduction in management time with a single management review instead of one for each management system.

An organization should have a good understanding of the characteristics, similarities and differences of ISO 9001 and ISO/IEC 20000-1 before planning an integrated management system that conforms to both International Standards.

ISO 9001 and ISO/IEC 20000-1 have specific requirements and purposes. For example, ISO 9001 does not include specific requirements for information security management.

ISO/IEC 20000-1 specifies that it '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 systems. For example, an SMS can be integrated with a QMS based on ISO 9001 or an information security management system based on ISO/IEC 27001'.

Conformity can be demonstrated for ISO 9001 and ISO/IEC 20000-1 independently. To demonstrate conformity to ISO 9001, all the requirements should be fulfilled. Conformity to ISO 9001 for a scope that includes service management may not be sufficient for an organization to claim conformity to all of the requirements of ISO/IEC 20000-1 as ISO/IEC 20000-1 contains differing and additional requirements beyond those specified in ISO 9001.

To demonstrate conformity to ISO/IEC 20000-1, all the requirements should be fulfilled. The organization can choose to name and arrange the requirements into processes in a different way from that shown in ISO/IEC 20000-1. Conformity to ISO/IEC 20000-1 for service management may not be sufficient for an organization to be able to claim conformity to all of the requirements of ISO 9001 as ISO 9001 contains differing and additional requirements beyond those specified in ISO/IEC 20000-1. If an organization cannot meet all the requirements of ISO/IEC 20000-1, the SMS is incomplete and the full benefits of an SMS cannot be realized.

All requirements from ISO 9001 and ISO/IEC 20000-1 can be implemented in an integrated management system which can be used to demonstrate conformity to both ISO 9001 and ISO/IEC 20000-1. There are some clauses which have a lot of requirements in common and some clauses which have a minority of requirements in common. There are some requirements that are in only one of ISO 9001 or ISO/IEC 20000-1. This is illustrated in [Figure 6](#).

This Technical Report identifies the common requirements and requirements which are specified in only one of ISO 9001 or ISO/IEC 20000-1. [Annex C](#) provides further guidance about the integration of ISO 9001 and ISO/IEC 20000-1.

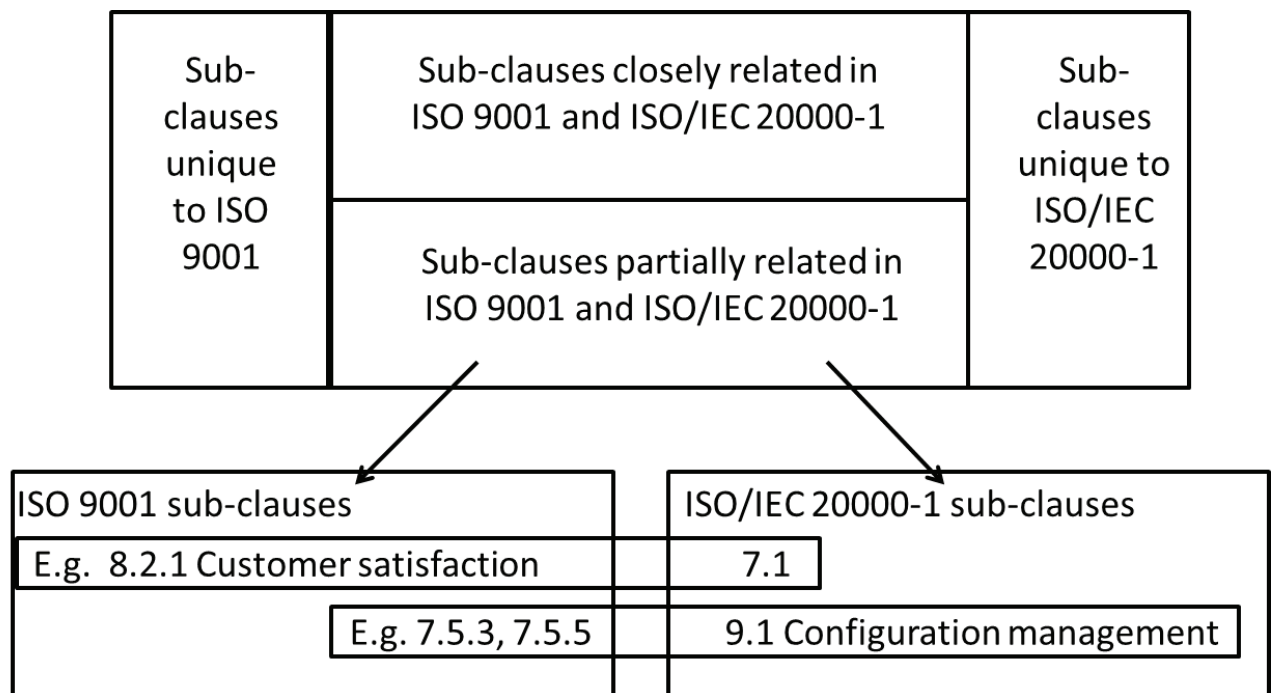


Figure 6 — The integration of quality management and service management systems

NOTE ISO/IEC 27013 provides guidance for the integration of ISO/IEC 20000-1 and ISO/IEC 27001.

5.4 Comparison of ISO 9001 and ISO/IEC 20000-1

5.4.1 Approach to the comparison

The clauses and sub-clauses which contain similar or different requirements between ISO 9001 and ISO/IEC 20000-1 are explained in [Clauses 6](#) and [7](#) of this Technical Report and summarized in [Table 1](#), [Annexes A](#) and [B](#).

There are some clauses which are similar in wording or intent. Other clauses are either unique or different in either wording or intent in ISO 9001 and ISO/IEC 20000-1. A closely related clause means that the majority of the requirements of ISO 9001 and ISO/IEC 20000-1 are similar. For example, Clause 5.3 of ISO 9001, quality policy, is similar to Clause 4.1.2 of ISO/IEC 20000-1, service management policy, because they have similar wording and have the same intent. A partially related clause means that only a minority of the requirements of ISO 9001 and ISO/IEC 20000-1 are similar. For example, Clause 8.2.1 of ISO 9001, customer satisfaction, is similar only to the last paragraph in Clause 7.2 of ISO/IEC 20000-1, business relationship management.

Another example is that there are no requirements in ISO 9001 specifically for budgeting and accounting. Therefore, the ISO/IEC 20000-1 process of budgeting and accounting for services is shown in [Table B.1](#) as not having corresponding requirements with any clauses in ISO 9001. Clause 4.1 of ISO 9001 includes requirements for the organization to determine the processes required for the QMS and these can include budgeting and accounting for services. The organization can also choose to include the requirements from the budgeting and accounting for services process in ISO/IEC 20000-1 as product requirements in Clause 7.2.1 of ISO 9001.

Some requirements in ISO 9001 are shown to be similar to requirements in multiple clauses of ISO/IEC 20000-1. For example, Clause 5.2 of ISO 9001 specifies 'Top management shall ensure that

customer requirements are determined and are met with the aim of enhancing customer satisfaction'. This is similar to some of the requirements of Clauses 4.1.4 and 4.4.1 of ISO/IEC 20000-1.

Another example is in Clause 5.5.2 of ISO 9001 which is similar to some of the requirements of Clauses 4.1.1 and 4.1.4 in ISO/IEC 20000-1. Clause 4.1.4 of ISO/IEC 20000-1 does not include Clause 5.5.2 c) of ISO 9001 requirements for 'the promotion of awareness of customer requirements throughout the organization'. This is in Clause 4.1.1 of ISO/IEC 20000-1. This demonstrates the need for the comparison to sometimes show more than one clause from ISO/IEC 20000-1.

5.4.2 High level comparison of ISO 9001 and ISO/IEC 20000-1

As shown in [Table 1](#), [Annexes A](#) and [B](#), ISO 9001 and ISO/IEC 20000-1 both have some unique requirements. A 'nil' in the tables indicates that the requirements of a clause in one International Standard are not found in the other International Standard. Clauses in ISO 9001 and ISO/IEC 20000-1 with no related clause are:

a) ISO 9001:

- 5.4.1 Quality objective;
- 6.4 Work environment;
- 7.4.2 Purchasing information;
- 7.5.4 Customer property;

b) ISO/IEC 20000-1:

- 6.3 Service continuity and availability management;
- 6.4 Budgeting and accounting for services;
- 6.5 Capacity management;
- 6.6 Information security management.

[Table 1](#) shows a high level comparison between ISO 9001 and ISO/IEC 20000-1. This table shows the comparison of the clauses and sub-clauses down to the first level of ISO 9001 e.g. 4.1. It does not show the comparison for any lower sub-clauses e.g. 4.2.1. Additional details are provided in [Clause 6](#) and [Annexes A](#) and [B](#) of this Technical Report. [Annex B](#) is similar to [Annex A](#), but with ISO/IEC 20000-1 as the base.

Table 1 — High level comparison of ISO 9001:2008 and ISO/IEC 20000-1:2011

ISO 9001:2008		ISO/IEC 20000-1:2011	
Scope	1	1	Scope
Normative references	2	2	Normative references
Terms and definitions	3	3	Terms and definitions
Quality management system	4		
General requirements	4.1	4.1.1	Management commitment
		4.2	Governance of processes operated by other parties
		4.4.1	Provision of resources
		4.5.2	Plan the SMS (Plan)
		4.5.3	Implement and operate the SMS (Do)
		4.5.4.1	General (Monitor and review the SMS (Check))
		4.5.5.2	Management of improvements

Table 1 (continued)

ISO 9001:2008		ISO/IEC 20000-1:2011	
Documentation requirements	4.2	4.3 4.5.1 4.5.2 9.1	Documentation management Define scope Plan the SMS (Plan) Configuration management
Management responsibility	5		
Management commitment	5.1	4.1.1	Management commitment
Customer focus	5.2	4.1.4 4.4.1 7.1	Management representative Provision of resources Business relationship management
Quality policy	5.3	4.1.2	Service management policy
Planning	5.4	4.1.1	Management commitment
Responsibility, authority and communication	5.5	4.1.1 4.1.3 4.1.4	Management commitment Authority, responsibility and communication Management representative
Management review	5.6	4.5.4.1 4.5.4.3	General (Monitor and review the SMS (Check)) Management review
Resource management	6		
Provision of resources	6.1	4.4.1	Provision of resources
Human resources	6.2	4.4.2	Human Resources
Infrastructure	6.3	4.4.1	Provision of resources
Work environment	6.4	nil	nil
Product realization	7		
Planning of product realization	7.1	5.1 5.2	General (Design and transition of new or changed services) Plan new or changed services
Customer-related processes	7.2	4.1.3 4.1.4 4.5.2 5.1 5.2 5.3 6.1 6.2 7.1 8.1 9.2	Authority, responsibility and communication Management representative Plan the SMS (Plan) General (Design and transition of new or changed services) Plan new or changed services Design and development of new or changed services Service level management Service reporting Business relationship management Incident and service request management Change management

Table 1 (continued)

ISO 9001:2008		ISO/IEC 20000-1:2011	
Design and development	7.3	5.1	General (Design and transition of new or changed services)
		5.2	Plan new or changed services
		5.3	Design and development of new or changed services
		5.4	Transition of new or changed services
		9.2	Change management
		9.3	Release and deployment management
Purchasing	7.4	5.1	General (Design and transition of new or changed services)
		5.2	Plan new or changed services
		6.1	Service level management
		7.2	Supplier management
Product and service provision	7.5	4.5.2	Plan the SMS (Plan)
		4.5.3	Implement and operate the SMS (Do)
		5.1	General (Design and transition of new or changed services)
		5.3	Design and development of new or changed services
		5.4	Transition of new or changed services
		9.1	Configuration management
		9.2	Change management
		9.3	Release and deployment management
Control of monitoring and measuring equipment	7.6	4.5.4.1	General (Monitor and review the SMS (Check))
		5.2	Plan new or changed services
		5.3	Design and development of new or changed services
		5.4	Transition of new or changed services
		6.2	Service reporting
		9.3	Release and deployment management
Measurement, analysis and improvement	8		
General	8.1	4.5.2	Plan the SMS (Plan)
		4.5.4.1	General (Monitor and review the SMS (Check))
		4.5.5	Maintain and improve the SMS (Act)
		6.1	Service level management
		6.2	Service reporting
Monitoring and measurement	8.2	4.5.4.1	General (Monitor and review the SMS (Check))
		4.5.4.2	Internal audit
		4.5.5.1	General (Maintain and improve the SMS (Act))
		5.4	Transition of new or changed services
		6.2	Service reporting
		7.1	Business relationship management
		9.3	Release and deployment management

Table 1 (continued)

ISO 9001:2008		ISO/IEC 20000-1:2011	
Control of nonconforming product	8.3	4.5.5.1	General (Maintain and improve the SMS (Act))
		5.4	Transition of new or changed services
		8.1	Incident and service request management
		8.2	Problem management
		9.3	Release and deployment management
Analysis of data	8.4	4.5.4.1	General (Monitor and review the SMS (Check))
		4.5.5.1	General (Maintain and improve the SMS (Act))
		6.2	Service reporting
		7.2	Supplier management
Improvement	8.5	4.5.5	Maintain and improve the SMS (Act)
		8.2	Problem management

6 Management system requirements in ISO 9001 related to ISO/IEC 20000-1

6.1 Scope

6.1.1 General

1.1 Scope - General

This International Standard specifies requirements for a quality management system where an organization

- a) needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements, and
- b) aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.

NOTE 1 In this International Standard, the term “product” only applies to

- a) product intended for, or required by, a customer,
- b) any intended output resulting from the product realization processes.

NOTE 2 Statutory and regulatory requirements can be expressed as legal requirements.

The intent of this clause in ISO 9001 is to provide general information about the scope and usage of the International Standard.

The related clause in ISO/IEC 20000-1 is:

— 1.1 General (Scope).

This is a standard clause for International Standards. Both ISO 9001 and ISO/IEC 20000-1 are specific about their scope in this clause.

As described in [Clause 3](#) of this Technical Report, when applying ISO 9001 to service management, the term ‘service’ can be substituted for ‘product’ in the ISO 9001 requirements.

ISO/IEC 20000-1 includes a specific set of processes for service management in Clauses 5 to 9, which are part of the SMS. The ISO/IEC 20000-1 processes are shown in [Figure 7](#) which is from Clause 1.1 of ISO/IEC 20000-1.

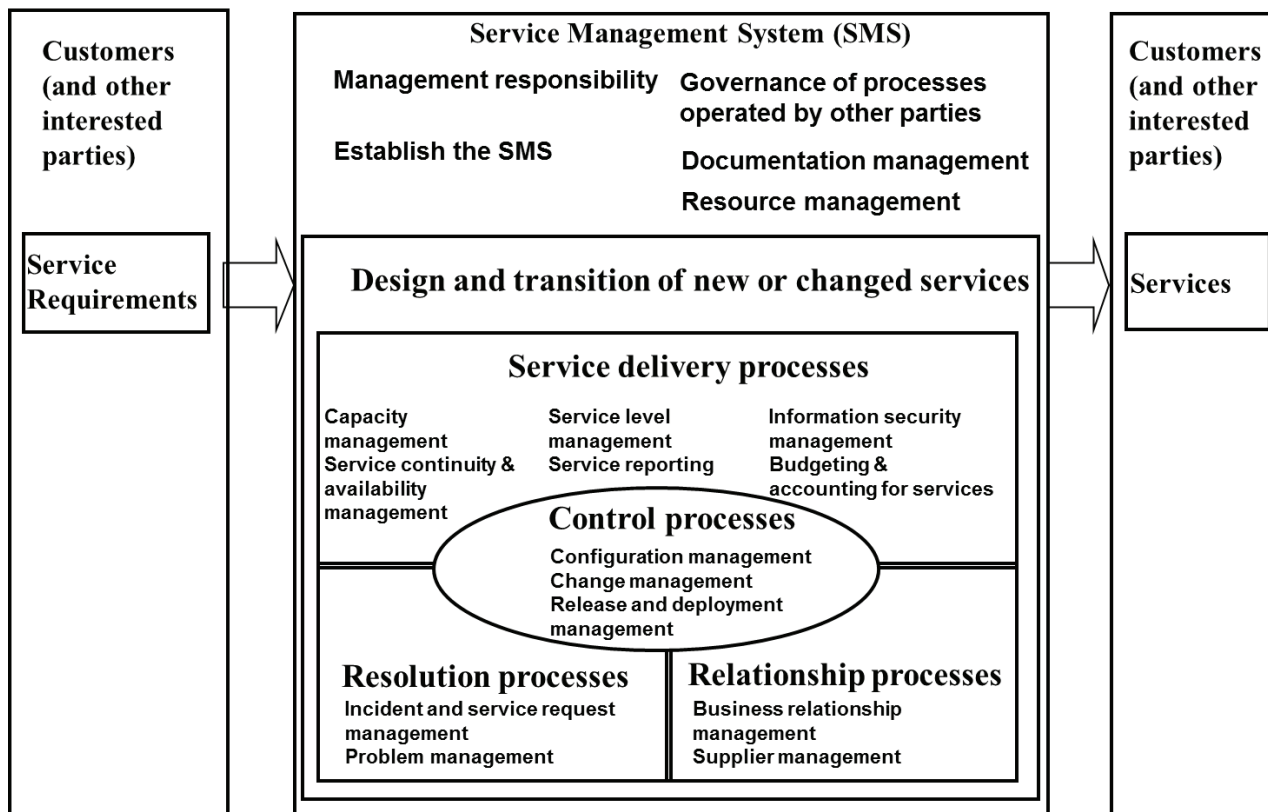


Figure 7 — Service management system

6.1.2 Application

1.2 Application

All requirements of this International Standard are generic and are intended to be applicable to all organizations, regardless of type, size and product provided.

Where any requirement(s) of this International Standard cannot be applied due to the nature of an organization and its product, this can be considered for exclusion.

Where exclusions are made, claims of conformity to this International Standard are not acceptable unless these exclusions are limited to requirements within Clause 7, and such exclusions do not affect the organization's ability, or responsibility, to provide product that meets customer and applicable statutory and regulatory requirements.

The intent of this clause in ISO 9001 is to provide information about where the International Standard can be applied and any possible exclusions.

The related clause in ISO/IEC 20000-1 is:

— 1.2 Application.

ISO 9001 and ISO/IEC 20000-1 are specific about how they can be applied. ISO 9001 and ISO/IEC 20000-1 can apply to any type or size of organization.

While ISO 9001 allows some exclusions, restricted to Clause 7 in certain circumstances, ISO/IEC 20000-1 does not allow any exclusions. If the service management activities in scope for the QMS use some of the processes from ISO/IEC 20000-1, the application of any exclusion for Clause 7 of ISO 9001 can apply to the related processes from ISO/IEC 20000-1. (See Annex A for correspondence between ISO 9001 and ISO/IEC 20000-1). If the organization is seeking to demonstrate conformity to ISO/IEC 20000-1, no exclusions are allowed from the requirements of ISO/IEC 20000-1.

ISO/IEC 20000-1 is specific that it is the service provider that should demonstrate conformity to Clause 4. It is also specific about how conformity to the requirements can be demonstrated when some of the processes and activities are operated by other parties as specified in Clause 4.2 of ISO/IEC 20000-1. Clause 4.1 of ISO 9001 includes requirements to ensure control over any processes which are outsourced.

6.2 Normative references

2 Normative references

The following referenced documents are indispensable for the application 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 9000:2005, *Quality management systems — Fundamentals and vocabulary*

The intent of this clause in ISO 9001 is to list the essential documents to be read with ISO 9001.

The related clause in ISO/IEC 20000-1 is:

— 2 Normative references.

This is a standard clause for an International Standard. Although the clause title is the same, there are no normative references in ISO/IEC 20000-1.

6.3 Terms and definitions

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 9000 apply.

Throughout the text of this International Standard, wherever the term “product” occurs, it can also mean “service”.

6.3.1 Introduction to terms and definitions

The intent of this clause in ISO 9001 is to define the terms used in the International Standard.

The related clause in ISO/IEC 20000-1 is:

— 3 Terms and definitions.

This is a standard clause for an International Standard.

This Technical Report does not list all of the terms used in ISO 9001:2008 as defined in ISO 9000:2005, or the terms used and defined in ISO/IEC 20000-1:2011. Instead it lists and explains defined terms and other words which are aligned, adapted or can cause conflict.

If a word or term has not been defined in an International Standard, it is used as defined in commonly available English language dictionaries. For example, ‘service management plan’ has a meaning based on ‘service management’ as defined in ISO/IEC 20000-1:2011, definition 3.30 and the word ‘plan’ used in its normal English sense.

For implementation, a conformity assessment or an audit against ISO 9001:2008, the terms from ISO 9000:2005 should be used. For implementation, a conformity assessment or an audit against ISO 9001 and ISO/IEC 20000-1, the relevant terms from ISO 9000:2005 or ISO/IEC 20000-1:2011 should be used. Guidance on the differences between terms and definitions in ISO 9000:2005 and ISO/IEC 20000-1:2011 with the impact this can have is provided in [Tables 2](#) and [3](#).

6.3.2 Terms used in both ISO 9001 and ISO/IEC 20000-1

The terms defined in ISO/IEC 20000-1:2011 which are copied exactly from ISO 9000:2005 are:

- a) effectiveness;
- b) nonconformity;
- c) organization;
- d) procedure;
- e) process.

The terms defined in ISO/IEC 20000-1:2011 which are adapted from ISO 9000:2005 are shown with the adapted definition and reason for the adaptation in [Table 2](#).

Table 2 — Defined terms in ISO/IEC 20000-1:2011 adapted from ISO 9000:2005

Defined term in ISO/IEC 20000-1:2011	Definition in ISO/IEC 20000-1 which has been adapted from ISO 9000:2005	Commentary
Continual improvement	recurring activity to increase the ability to fulfil service requirements	'Requirements' in the ISO 9000 definition has been replaced by 'service requirements' which is a defined term in ISO/IEC 20000-1.
Corrective action	action to eliminate the cause or reduce the likelihood of recurrence of a detected nonconformity or other undesirable situation	The adaptation has added 'or reduce the likelihood of recurrence' as it is not always possible or justifiable to eliminate the cause of a detected nonconformity in service management. When ISO 9001 is being implemented alone, the definition from ISO 9000 should be used. When applying ISO 9001 to service management, this means that there can be some failure to do corrective action as defined in ISO 9000 if it is not possible or beneficial to go as far as eliminating the cause. This can result in a nonconformity to ISO 9001.
Customer	organization or part of an organization that receives a service(s) NOTE 1 A customer can be internal or external to the service provider's organization.	'Person' in the ISO 9000 definition has been replaced by 'part of an organization'. 'Product' in the ISO 9000 definition has been replaced by 'service'. The examples shown in ISO 9000 have been omitted in ISO/IEC 20000-1 as they are not all relevant to service management. Note 1 has been changed to refer to the 'service provider's organization' instead of the 'organization'. The service provider can be a whole organization or part of a wider organization.

Table 2 (continued)

Defined term in ISO/IEC 20000-1:2011	Definition in ISO/IEC 20000-1 which has been adapted from ISO 9000:2005	Commentary
Document	information and its supporting medium EXAMPLE Policies, plans, process descriptions, procedures, service level agreements, contracts or records. NOTE 1 The documentation can be in any form or type of medium. NOTE 2 In this International Standard, documents, except for records, state the intent to be achieved.	The definition is the same as in ISO 9000. The example and Note 1 have been adapted to be specific to service management. Notes 2 and 3 from ISO 9000 have not been used. A new Note 2 has been added for ISO/IEC 20000-1. The definitions of document and record have the same intent in ISO 9001 and ISO/IEC 20000-1.
Interested party	person or group having a specific interest in the performance or success of the service provider's activity(ies) EXAMPLE Customers, owners, management, people in the service provider's organization, suppliers, bankers, unions or partners. NOTE 1 A group can comprise an organization, a part thereof, or more than one organization.	Interest in the 'organization' in the ISO 9000 definition has been replaced by interest in the 'service provider's activities'. The example has been adapted to change 'people in an organization' to 'people in a service provider's organization' and delete 'or society'. The term 'interested party' is not used in ISO 9001.
Preventive action	action to avoid or eliminate the causes or reduce the likelihood of occurrence of a potential nonconformity or other potential undesirable situation	The adaptation has added 'action to avoid or reduce the likelihood of occurrence' as it is not always possible or justifiable to eliminate the cause of a potential nonconformity in service management. When ISO 9001 is being implemented alone, the definition from ISO 9000 should be used. When applying ISO 9001 to service management, this means that there can be some failure to do complete preventive action as defined in ISO 9000 if it is not possible or beneficial to go as far as eliminating the cause of a potential nonconformity.
Record	document stating results achieved or providing evidence of activities performed EXAMPLE Audit reports, incident reports, training records or minutes of meetings.	The definition is the same as in ISO 9000. The notes from ISO 9000 have not been used. Relevant examples have been added.

Table 2 (continued)

Defined term in ISO/IEC 20000-1:2011	Definition in ISO/IEC 20000-1 which has been adapted from ISO 9000:2005	Commentary
Service management system SMS	management system to direct and control the service management activities of the service provider NOTE 1 A management system is a set of interrelated or interacting components to establish policy and objectives and to achieve those objectives. NOTE 2 The SMS includes all service management policies, objectives, plans, processes, documentation and resources required for the design, transition, delivery and improvement of services and to fulfil the requirements in this part of ISO/IEC 20000.	The definition is adapted from the definition of 'quality management system' in ISO 9000 to refer to service management activities of the service provider. Note 1 has been added to provide clarity on the term 'management system'. The words are taken directly from the ISO 9000 definitions of 'system' and 'management system'. Note 2 has been added to provide clarity on the contents of an SMS.
Top management	person or group of people who direct and control the service provider at the highest level	'Organization' in the ISO 9000 definition has been replaced by 'service provider' in ISO/IEC 20000-1. This makes it clear that 'top management' is part of the service provider's organization and can, in some cases, not be the top management of the whole organization.

6.3.3 Terms which differ in use between ISO 9001 and ISO/IEC 20000-1

There are some defined terms and other words used in ISO/IEC 20000-1:2011 which differ from the definitions in ISO 9000:2005 and usage in ISO 9001:2008 which can cause conflict. These are shown with a commentary in [Table 3](#).

Table 3 — Terms which differ in use between ISO 9001:2008 and ISO/IEC 20000-1:2011

ISO/IEC 20000-1:2011 term	ISO/IEC 9001:2008 term	Commentary
Incident unplanned interruption to a service, a reduction in the quality of a service or an event that has not yet impacted the service to the customer	Defect non-fulfilment of a requirement related to an intended or specified use NOTE 1 The distinction between the concepts defect and nonconformity is important as it has legal connotations, particularly those associated with product liability issues. Consequently, the term 'defect' should be used with extreme caution.	The term 'defect' is defined in ISO 9000 but not used in ISO 9001 or ISO/IEC 20000-1. The term 'deficiency' is used in Clause 7.5.2 of ISO 9001 but is not a defined term. The term 'incident' is not used in ISO 9001 but is used extensively in ISO/IEC 20000-1, especially in the incident and service request management process. The concept and purpose of an incident and a defect differ in some aspects. An incident is an event that is an unexpected failure of a service or service component. A defect is a deviation from a product requirement, or a flaw in a component or system that is not apparent until after the product is in use or the service is delivered. A defect can be undetected for a long time until a certain set of circumstances occur which show up the defect either as an incident or during a verification or validation exercise. Not every incident is caused by a defect e.g. an activity fails due to the failure of a power supply which is a failure of a component outside the scope of the SMS. The focus and priorities of defect management and incident management also differ in some aspects. Defect management focuses on correcting the product or service to conform to the agreed product specification. Corrections should be prioritized to address defects based upon agreed criteria including business objectives. Incident management focuses on returning the service to normal operation as quickly as possible and minimizing the impact of the incident on the customer. Incidents should be prioritized based upon a defined and agreed understanding of the impact and urgency of the incident for the customer. In ISO/IEC 20000-1, problem management is used to investigate and correct the underlying cause of incidents and known errors are recorded for problems that are not yet corrected and have a method of working around the problem. The use of problem management should be considered to support the removal of defects in services. As in Note 1 of the definition of 'defect', the term 'defect' can have legal connotations. The term 'incident' can also have legal connotations. Incidents usually have specified time targets for resolution in a service level agreement which can be legally binding if these are specified in a contract when the service provider is external to the customer. Incidents can also show a failure of other legal requirements e.g. data protection.
Release collection of one or more new or changed configuration items deployed into the live environment as a result of one or more changes	Release permission to proceed to the next stage of a process	In ISO 9001, 'release' is a verb; in ISO/IEC 20000-1, 'release' is a noun. Although a 'release' in ISO/IEC 20000-1 is deployed into the next stage which is the live environment, the term is not used to give permission to make this move. When ISO 9001 is being implemented alone, the definition from ISO 9000 should be used. When applying ISO 9001 to service management, care needs to be taken to distinguish between the two terms which can both be used.
Scope of the SMS (not a defined term)	Scope of the QMS (not a defined term)	The term 'scope' is used in the same way in ISO 9001 and ISO/IEC 20000-1 as indicated in their respective Clause 1 descriptions. Additionally in ISO/IEC 20000-1, there are specific requirements about defining scope of the SMS in Clause 4.5.1.

Table 3 (continued)

ISO/IEC 20000-1:2011 term	ISO/IEC 9001:2008 term	Commentary
Service means of delivering value for the customer by facilitating results the customer wants to achieve NOTE 1 Service is generally intangible. NOTE 2 A service can also be delivered to the service provider by a supplier, an internal group or a customer acting as a supplier.	Product result of a process NOTE 1 There are four generic product categories: services, software, hardware, processed materials. Many products comprise elements belonging to different generic product categories. Whether the product is then called services, software, hardware or processed materials depends on the dominant element. NOTE 2 Service is the result of at least one activity necessarily performed at the interface between the supplier and customer and is generally intangible. Software consists of information and is generally intangible and can be in the form of approaches, transactions or procedures e.g. computer program, dictionary. Hardware is generally tangible and its amount is a countable characteristic e.g. tyres.	Clause 3 of ISO 9001 includes the sentence: ‘Throughout the text of this International Standard, wherever the term “product” occurs, it can also mean “service”.’ Examples of hardware in ISO/IEC 20000-1 include computers or network equipment. Examples of software in ISO/IEC 20000-1 include computer programs.
Service management set of capabilities and processes to direct and control the service provider’s activities and resources for the design, transition, delivery and improvement of services to fulfil the service requirements	Quality management co-ordinated activities to direct and control an organization with regard to quality	The terms differ primarily in focus as shown in the definitions.
Service management plan (not a defined term)	Quality manual document specifying the quality management system of an organization	In ISO 9001, the ‘quality manual’ is the primary document. Similarly in ISO/IEC 20000-1, the ‘service management plan’ is a primary document. These two documents have some equivalent contents. However, ISO/IEC 20000-1 includes additional requirements for the contents of the ‘service management plan’ as well as the requirements that ISO 9001 includes for the ‘quality manual’.
Service provider organization or part of an organization that manages and delivers a service or services to the customer	Organization group of people and facilities with an arrangement of responsibilities, authorities and relationships	In ISO 9001, the ‘organization’ is the subject of the requirements. In ISO/IEC 20000-1, the ‘service provider’ is the subject of the requirements. Depending on the context, the term ‘service provider’s organization’ is also used in ISO/IEC 20000-1 to mean the wider ‘organization’ that the service provider is part of. The service provider’s organization is not the subject of the requirements of ISO/IEC 20000-1.

Table 3 (continued)

ISO/IEC 20000-1:2011 term	ISO/IEC 9001:2008 term	Commentary
Service requirement needs of the customer and the users of the service, including service level requirements, and the needs of the service provider	Requirement need or expectation that is stated, generally implied or obligatory NOTE 1 "Generally implied" means that it is custom or common practice for the organization, its customers and other interested parties, that the need or expectation under consideration is implied. NOTE 2 A qualifier can be used to denote a specific type of requirement, e.g. product requirement, quality management requirement, customer requirement. NOTE 3 A specified requirement is one that is stated, for example in a document (3.7.2). NOTE 4 Requirements can be generated by different interested parties (3.3.7). NOTE 5 This definition differs from that provided in 3.12.1 of ISO/IEC Directives, Part 2:2004.	The definition of 'service requirement' in ISO/IEC 20000-1 is much more specific than the definition of 'requirement' in ISO 9000. When ISO 9001 is being implemented alone, the definition from ISO 9000 should be used. When applying ISO 9001 to service management, the 'requirement' can also include the elements listed in the definition of 'service requirement'.
Supplier organization or part of an organization that is external to the service provider's organization and enters into a contract with the service provider to contribute to the design, transition, delivery and improvement of a service or services or processes	Supplier organization or person that provides a product	The ISO/IEC 20000-1 definition effectively incorporates the ISO 9000 definition but then goes on to be very specific about where a 'supplier' fits in relation to a service provider and that a contract is required. When ISO 9001 is being implemented alone, the definition from ISO 9000 should be used. When applying ISO 9001 to service management, an internal group as defined in ISO/IEC 20000-1 that is providing a product or service can also be classified as a supplier in ISO 9001.