ISO/IEC 20000-1

Septembre 2018

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Contacter :
AFNOR – Norm'Info
11, rue Francis de Pressensé
93571 La Plaine Saint-Denis Cedex
Tél : 01 41 62 76 44
Fax : 01 49 17 92 02
E-mail : norminfo@afnor.org

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Third edition
2018-09

Information technology — Service management —

Part 1: Service management system requirements

Technologies de l'information — Gestion des services —

Partie 1: Exigences du système de management des services

Reference number
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CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
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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.

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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

This document was prepared by ISO/IEC JTC 1, *Information technology*, SC 40, *IT Service Management and IT Governanc*e.

This third edition cancels and replaces the second edition (ISO/IEC 20000-1:2011) which has been technically revised.

The main changes compared to the previous edition are as follows.

a) Restructured into the high level structure used for all management system standards (from Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives Part 1). This has introduced new common requirements for context of the organization, planning to achieve objectives and actions to address risks and opportunities. There are some common requirements that have updated previous requirements, for example, documented information, resources, competence and awareness.

b) Taken into account the growing trends in service management including topics such as the commoditisation of services, the management of multiple suppliers by an internal or external service integrator and the need to determine value of services for customers.

c) Removed some of the detail to concentrate on what to do and allow organizations the freedom of how to meet the requirements.

d) Included new features such as the addition of requirements about knowledge and planning the services.

e) Separated out clauses that were previously combined for incident management, service request management, service continuity management, service availability management, service level management, service catalogue management, capacity management, demand management.

f) Renamed “Governance of processes operated by other parties” to “Control of parties involved in the service lifecycle” and updated the requirements to include services and service components as well as processes. Clarified that the organization cannot demonstrate conformity to the requirements

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specified in this document if other parties are used to provide or operate all services, service components or processes within the scope of the service management system (SMS).

g) Separated Clause 3 (Terms and definitions) into sub-clauses for management system terms and service management terms. There are many changes to definitions. The key changes include:

   1) some new terms have been added for Annex SL, e.g. “objective”, “policy”, and some have been added specifically for service management, e.g. “asset”, “user”;

   2) the term “service provider” has been replaced by “organization” to fit with the Annex SL common text;

   3) the term “internal group” has been replaced by “internal supplier” and the term “supplier” has been replaced by “external supplier”;

   4) the definition of “information security” has been aligned with ISO/IEC 27000. Subsequently the term “availability” has been replaced by “service availability” to differentiate from the term “availability” which is now used in the revised definition of “information security”.

h) Minimised the required documented information leaving only key documents such as the service management plan. Other documented information changes include:

   1) removed requirement for documented capacity plan and replaced with requirement to plan capacity;

   2) removed requirement for documented availability plan and replaced with requirement to document service availability requirements and targets;

   3) removed requirement for a configuration management database and replaced with requirements for configuration information;

   4) removed requirement for a release policy and replaced with a requirement to define release types and frequency;

   5) removed requirement for a continual improvement policy and replaced with a requirement to determine evaluation criteria for opportunities for improvement.

i) Updated and renumbered Figures 2 and 3 to Figures 1 and 2. Removed Figure 1 and references to Plan-Do-Check-Act as this is not specifically used in Annex SL because many improvement methods can be used with management system standards.

j) Moved detailed reporting requirements from the service reporting clause into the clauses where the reports are likely to be produced.

A list of all parts in the ISO/IEC 20000 series can be found on the ISO website.

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

This document has been prepared to specify requirements for establishing, implementing, maintaining and continually improving a service management system (SMS). An SMS supports the management of the service lifecycle, including the planning, design, transition, delivery and improvement of services, which meet agreed requirements and deliver value for customers, users and the organization delivering the services.

The adoption of an SMS is a strategic decision for an organization and is influenced by the organization's objectives, the governing body, other parties involved in the service lifecycle and the need for effective and resilient services.

Implementation and operation of an SMS provides ongoing visibility, control of services and continual improvement, leading to greater effectiveness and efficiency. Improvement for service management applies to the SMS and the services.

This document is intentionally independent of specific guidance. The organization can use a combination of generally accepted frameworks and its own experience. The requirements specified in this document align with commonly used improvement methodologies. Appropriate tools for service management can be used to support the SMS.

ISO/IEC 20000-2 provides guidance on the application of service management systems including examples of how to meet the requirements specified in this document. ISO/IEC 20000-10 provides information on all of the parts of the ISO/IEC 20000 series, benefits, misperceptions and other related standards. ISO/IEC 20000-10 lists the terms and definitions included in this document in addition to terms not used in this document but used in other parts of the ISO/IEC 20000 series.

The clause structure (i.e. clause sequence), terms in 3.1 and many of the requirements are taken from Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives Part 1, known as the common high level structure (HLS) for management system standards. The adoption of the HLS enables an organization to align or 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.

Figure 1 illustrates an SMS showing the clause content of this document. It does not represent a structural hierarchy, sequence or authority levels. There is no requirement in this document for its structure to be applied to an organization's SMS. There is no requirement for the terms used by an organization to be replaced by the terms used in this document. Organizations can choose to use terms that suit their operations.

The structure of clauses is intended to provide a coherent presentation of requirements, rather than a model for documenting an organization's policies, objectives and processes. Each organization can choose how to combine the requirements into processes. The relationship between each organization and its customers, users and other interested parties influences how the processes are implemented. However, an SMS as designed by an organization, cannot exclude any of the requirements specified in this document.

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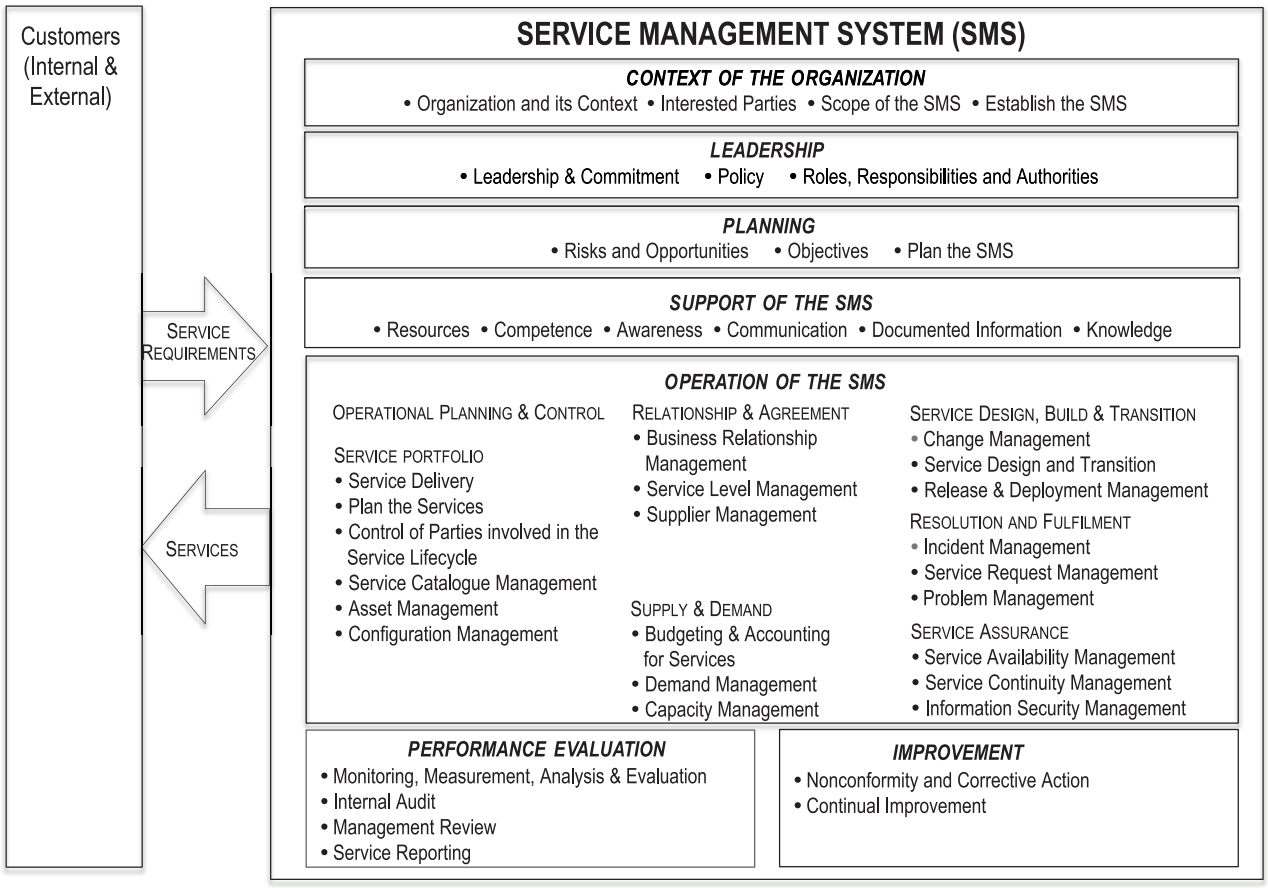

Figure 1 — Service management system

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Information technology — Service management —

Part 1:
Service management system requirements

1 Scope

1.1 General

This document specifies requirements for an organization to establish, implement, maintain and continually improve a service management system (SMS). The requirements specified in this document include the planning, design, transition, delivery and improvement of services to meet the service requirements and deliver value. This document can be used by:

a) a customer seeking services and requiring assurance regarding the quality of those services;

b) a customer requiring a consistent approach to the service lifecycle by all its service providers, including those in a supply chain;

c) an organization to demonstrate its capability for the planning, design, transition, delivery and improvement of services;

d) an organization to monitor, measure and review its SMS and the services;

e) an organization to improve the planning, design, transition, delivery and improvement of services through effective implementation and operation of an SMS;

f) an organization or other party performing conformity assessments against the requirements specified in this document;

g) a provider of training or advice in service management.

The term “service” as used in this document refers to the service or services in the scope of the SMS. The term “organization” as used in this document refers to the organization in the scope of the SMS that manages and delivers services to customers. The organization in the scope of the SMS can be part of a larger organization, for example, a department of a large corporation. An organization or part of an organization that manages and delivers a service or services to internal or external customers can also be known as a service provider. Any use of the terms “service” or “organization” with a different intent is distinguished clearly in this document.

1.2 Application

All requirements specified in this document are generic and are intended to be applicable to all organizations, regardless of the organization’s type or size, or the nature of the services delivered. Exclusion of any of the requirements in Clauses 4 to 10 is not acceptable when the organization claims conformity to this document, irrespective of the nature of the organization.

Conformity to the requirements specified in this document can be demonstrated by the organization itself showing evidence of meeting those requirements.

The organization itself demonstrates conformity to Clauses 4 and 5. However, the organization can be supported by other parties. For example, another party can conduct internal audits on behalf of the organization or support the preparation of the SMS.

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Alternatively, the organization can show evidence of retaining accountability for the requirements specified in this document and demonstrating control when other parties are involved in meeting the requirements in Clauses 6 to 10 (see 8.2.3). For example, the organization can demonstrate evidence of controls for another party who is providing infrastructure service components or operating the service desk including the incident management process.

The organization cannot demonstrate conformity to the requirements specified in this document if other parties are used to provide or operate all services, service components or processes within the scope of the SMS.

The scope of this document excludes the specification for products or tools. However, this document can be used to help the development or acquisition of products or tools that support the operation of an SMS.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

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

3.1 Terms specific to management system standards

3.1.1
audit
systematic, independent and documented *process* (3.1.18) for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled

Note 1 to entry: An audit can be an internal audit (first party) or an external audit (second party or third party), and it can be a combined audit (combining two or more disciplines).

Note 2 to entry: An internal audit is conducted by the *organization* (3.1.14) itself, or by an external party on its behalf.

Note 3 to entry: “Audit evidence” and “audit criteria” are defined in ISO 19011.

3.1.2
competence
ability to apply knowledge and skills to achieve intended results

3.1.3
conformity
fulfilment of a *requirement* (3.1.19)

Note 1 to entry: Conformity relates to requirements in this document as well as the organization’s SMS requirements.

Note 2 to entry: The original Annex SL definition has been modified by adding Note 1 to entry.

3.1.4
continual improvement
recurring activity to enhance *performance* (3.1.16)

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3.1.5
corrective action
action to eliminate the cause or reduce the likelihood of recurrence of a detected *nonconformity* (3.1.12) or other undesirable situation

Note 1 to entry: The original Annex SL definition has been changed by adding text to the original "action to eliminate the cause of a nonconformity and to prevent recurrence".

3.1.6
documented information
information required to be controlled and maintained by an *organization* (3.1.14) and the medium on which it is contained

EXAMPLE *Policies* (3.1.17), plans, process descriptions, *procedures* (3.2.11), *service level agreements* (3.2.20) or contracts.

Note 1 to entry: Documented information can be in any format and media and from any source.

Note 2 to entry: Documented information can refer to:

— the *management system* (3.1.9), including related *processes* (3.1.18);

— information created in order for the organization to operate (documentation);

— evidence of results achieved (*records* (3.2.12)).

Note 3 to entry: The original Annex SL definition has been modified by adding examples.

3.1.7
effectiveness
extent to which planned activities are realized and planned results achieved

3.1.8
interested party
person or *organization* (3.1.14) that can affect, be affected by, or perceive itself to be affected by a decision or activity related to the *SMS* (3.2.23) or the *services* (3.2.15)

Note 1 to entry: An interested party can be internal or external to the organization.

Note 2 to entry: Interested parties can include parts of the organization outside the scope of the SMS, *customer*s (3.2.3), *user*s (3.2.28), community, *external supplier*s (3.2.4), regulators, public sector bodies, nongovernment organizations, investors or employees.

Note 3 to entry: Where interested parties are specified in the *requirement*s (3.1.19) of this document, the interested parties can differ depending on the context of the requirement.

Note 4 to entry: The original Annex SL definition has been modified by deleting the admitted term "stakeholder", adding "related to the SMS or the services" to the definition and by adding Notes 1, 2 and 3 to entry.

3.1.9
management system
set of interrelated or interacting elements of an *organization* (3.1.14) to establish *policies* (3.1.17) and *objectives* (3.1.13) and *processes* (3.1.18) to achieve those objectives

Note 1 to entry: A management system can address a single discipline or several disciplines.

Note 2 to entry: The management system elements include the organization's structure, roles and responsibilities, planning, operation, policies, objectives, plans, processes and *procedures* (3.2.11).

Note 3 to entry: The scope of a management system may include the whole of the organization, specific and identified functions of the organization, specific and identified sections of the organization, or one or more functions across a group of organizations.

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Note 4 to entry: The original Annex SL definition has been modified by clarifying that the system is a management system and listing further elements in Note 2 to entry.

3.1.10
measurement
process (3.1.18) to determine a value

3.1.11
monitoring
determining the status of a system, a *process* (3.1.18) or an activity

Note 1 to entry: To determine the status there may be a need to check, supervise or critically observe.

3.1.12
nonconformity
non-fulfilment of a *requirement* (3.1.19)

Note 1 to entry: Nonconformity relates to requirements in this document as well as the organization's SMS requirements.

3.1.13
objective
result to be achieved

Note 1 to entry: An objective can be strategic, tactical, or operational.

Note 2 to entry: Objectives can relate to different disciplines [such as financial, health and safety, *service management* (3.2.22) and environmental goals] and can apply at different levels [such as strategic, organization-wide, *service* (3.2.15), project, product and *process* (3.1.18)].

Note 3 to entry: An objective can be expressed in other ways, e.g. as an intended outcome, a purpose, an operational criterion, as a service management objective or by the use of other words with similar meaning (e.g. aim, goal, or target).

Note 4 to entry: In the context of an *SMS* (3.2.23), service management objectives are set by the organization, consistent with the service management *policy* (3.1.17), to achieve specific results.

Note 5 to entry: The original Annex SL definition has been modified by adding "service management" and "service" to Note 2 to entry.

3.1.14
organization
person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its *objectives* (3.1.13)

Note 1 to entry: The concept of organization includes, but is not limited to sole-trader, company, corporation, firm, enterprise, authority, partnership, charity or institution, or part or combination thereof, whether incorporated or not, public or private.

Note 2 to entry: An organization or part of an organization that manages and delivers a *service* (3.2.15) or services to internal or external *customers* (3.2.3) can be known as a *service provider* (3.2.24).

Note 3 to entry: If the scope of the *SMS* (3.2.23) covers only part of an organization, then organization, when used in this document, refers to the part of the organization that is within the scope of the SMS. Any use of the term organization with a different intent is distinguished clearly.

Note 4 to entry: The original Annex SL definition has been modified by adding Notes 2 and 3 to entry.

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3.1.15
outsource, verb
make an arrangement where an external *organization* (3.1.14) performs part of an organization's function or *process* (3.1.18)

Note 1 to entry: An external organization is outside the scope of the *SMS* (3.2.23), although the outsourced function or process, is within the scope.

3.1.16
performance
measurable result

Note 1 to entry: Performance can relate either to quantitative or qualitative findings.

Note 2 to entry: Performance can relate to the management of activities, *processes* (3.1.18), products, *services* (3.2.15), systems or *organizations* (3.1.14).

Note 3 to entry: The original Annex SL definition has been modified by adding "services" to Note 2 to entry.

3.1.17
policy
intentions and direction of an *organization* (3.1.14) as formally expressed by its *top management* (3.1.21)

3.1.18
process
set of interrelated or interacting activities that use inputs to deliver an intended result

Note 1 to entry: Whether the "intended result" of a process is called output, product or *service* (3.2.15) depends on the context of the reference.

Note 2 to entry: Inputs to a process are generally the outputs of other processes and outputs of a process are generally the inputs to other processes.

Note 3 to entry: Two or more interrelated and interacting processes in series can also be referred to as a process.

Note 4 to entry: Processes in an *organization* (3.1.14) are generally planned and carried out under controlled conditions to add value.

Note 5 to entry: The original Annex SL definition has been changed from "set of interrelated or interacting activities which transforms inputs into outputs". The original Annex SL definition has also been modified by adding Notes 1 to 4 to entry. The revised definition and Notes 1 to 4 to entry are sourced from ISO 9000:2015, 3.4.1.

3.1.19
requirement
need or expectation that is stated, generally implied or obligatory

Note 1 to entry: "Generally implied" means that it is custom or common practice for the *organization* (3.1.14) and *interested parties* (3.1.8) that the need or expectation under consideration is implied.

Note 2 to entry: A specified requirement is one that is stated, for example, in *documented information* (3.1.6).

Note 3 to entry: In the context of an *SMS* (3.2.23), *service requirements* (3.2.26) are documented and agreed rather than generally implied. There can also be other requirements such as legal and regulatory requirements.

Note 4 to entry: The original Annex SL definition has been modified by adding Note 3 to entry.

3.1.20
risk
effect of uncertainty

Note 1 to entry: An effect is a deviation from the expected — positive or negative.

Note 2 to entry: Uncertainty is the state, even partial, of deficiency of information related to understanding or knowledge of, an event, its consequence, or likelihood.

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Note 3 to entry: Risk is often characterized by reference to potential *events* (as defined in ISO Guide 73:2009, 3.5.1.3) and consequences (as defined in ISO Guide 73:2009, 3.6.1.3), or a combination of these.

Note 4 to entry: Risk is often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood (as defined in ISO Guide 73:2009, 3.6.1.1) of occurrence.

3.1.21
top management
person or group of people who directs and controls an *organization* (3.1.14) at the highest level

Note 1 to entry: Top management has the power to delegate authority and provide resources within the organization.

Note 2 to entry: If the scope of the *management system* (3.1.9) covers only part of an organization then top management refers to those who direct and control that part of the organization.

3.2 Terms specific to service management

3.2.1
asset
item, thing or entity that has potential or actual value to an *organization* (3.1.14)

Note 1 to entry: Value can be tangible or intangible, financial or non-financial, and includes consideration of *risks* (3.1.20) and liabilities. It can be positive or negative at different stages of the asset life.

Note 2 to entry: Physical assets usually refer to equipment, inventory and properties owned by the organization. Physical assets are the opposite of intangible assets, which are non-physical assets such as leases, brands, digital assets, use rights, licences, intellectual property rights, reputation or agreements.

Note 3 to entry: A grouping of assets referred to as an asset system could also be considered as an asset.

Note 4 to entry: An asset can also be a *configuration item* (3.2.2). Some configuration items are not assets.

[SOURCE: ISO/IEC 19770-5:2015, 3.2, modified — Note 4 to entry contains new content.]

3.2.2
configuration item
CI
element that needs to be controlled in order to deliver a *service* (3.2.15) or services

3.2.3
customer
organization (3.1.14) or part of an organization that receives a *service* (3.2.15) or services

EXAMPLE Consumer, client, beneficiary, sponsor, purchaser.

Note 1 to entry: A customer can be internal or external to the organization delivering the service or services.

Note 2 to entry: A customer can also be a *user* (3.2.28). A customer can also act as a supplier.

3.2.4
external supplier
another party that is external to the organization that enters into a contract to contribute to the planning, design, *transition* (3.2.27), delivery or improvement of a *service* (3.2.15), *service component* (3.2.18) or *process* (3.1.18)

Note 1 to entry: External suppliers include designated lead suppliers but not their sub-contracted suppliers.

Note 2 to entry: If the organization in the scope of the SMS is part of a larger organization, the other party is external to the larger organization.

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3.2.5
incident
unplanned interruption to a *service* (3.2.15), a reduction in the quality of a service or an event that has not yet impacted the service to the *customer* (3.2.3) or *user* (3.2.28)

3.2.6
information security
preservation of confidentiality, integrity and availability of information

Note 1 to entry: In addition, other properties such as authenticity, accountability, non-repudiation and reliability can also be involved.

[SOURCE: ISO/IEC 27000:2018, 3.28]

3.2.7
information security incident
single or a series of unwanted or unexpected *information security* (3.2.6) events that have a significant probability of compromising business operations and threatening information security

[SOURCE: ISO/IEC 27000:2018, 3.31]

3.2.8
internal supplier
part of a larger *organization* (3.1.14) that is outside the scope of the *SMS* (3.2.23) that enters into a documented agreement to contribute to the planning, design, *transition* (3.2.27), delivery or improvement of a *service* (3.2.15), *service component* (3.2.18) or *process* (3.1.18)

EXAMPLE Procurement, infrastructure, finance, human resources, facilities.

Note 1 to entry: The internal supplier and the organization in the scope of the SMS are both part of the same larger organization.

3.2.9
known error
problem (3.2.10) that has an identified root cause or a method of reducing or eliminating its impact on a *service* (3.2.15)

3.2.10
problem
cause of one or more actual or potential *incidents* (3.2.5)

3.2.11
procedure
specified way to carry out an activity or a *process* (3.1.18)

Note 1 to entry: Procedures can be documented or not.

[SOURCE: ISO 9000:2015, 3.4.5]

3.2.12
record, noun
document stating results achieved or providing evidence of activities performed

EXAMPLE *Audit* (3.1.1) reports, *incident* (3.2.5) details, list of training delegates, minutes of meetings.

Note 1 to entry: Records can be used, for example, to formalize traceability and to provide evidence of verification, preventive action and *corrective action* (3.1.5).

Note 2 to entry: Generally, records need not be under revision control.

[SOURCE: ISO 9000:2015, 3.8.10, modified — EXAMPLE has been added.]

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3.2.13
release, noun
collection of one or more new or changed *services* (3.2.15) or *service components* (3.2.18) deployed into the live environment as a result of one or more changes

3.2.14
request for change
proposal for a change to be made to a *service* (3.2.15), *service component* (3.2.18) or the *SMS* (3.2.23)

Note 1 to entry: A change to a service includes the provision of a new service, transfer of a service or the removal of a service that is no longer required.

3.2.15
service
means of delivering value for the *customer* (3.2.3) by facilitating outcomes the customer wants to achieve

Note 1 to entry: Service is generally intangible.

Note 2 to entry: The term service as used in this document means the service or services in the scope of the *SMS* (3.2.23). Any use of the term service with a different intent is distinguished clearly.

3.2.16
service availability
ability of a *service* (3.2.15) or *service component* (3.2.18) to perform its required function at an agreed time or over an agreed period of time

Note 1 to entry: Service availability can be expressed as a ratio or percentage of the time that the service or service component is actually available for use compared to the agreed time.

3.2.17
service catalogue
documented information about services that an organization provides to its customers

3.2.18
service component
part of a *service* (3.2.15) that when combined with other elements will deliver a complete service

EXAMPLE Infrastructure, applications, documentation, licences, information, resources, supporting services.

Note 1 to entry: A service component can include *configuration items* (3.2.2), *assets* (3.2.1) or other elements.

3.2.19
service continuity
capability to deliver a *service* (3.2.15) without interruption, or with consistent availability as agreed

Note 1 to entry: Service continuity management can be a subset of business continuity management. ISO 22301 is a management system standard for business continuity management.

3.2.20
service level agreement
SLA
documented agreement between the *organization* (3.1.14) and the *customer* (3.2.3) that identifies *services* (3.2.15) and their agreed performance

Note 1 to entry: A service level agreement can also be established between the organization and an *external supplier* (3.2.4), an *internal supplier* (3.2.8) or a customer acting as a supplier.

Note 2 to entry: A service level agreement can be included in a contract or another type of documented agreement.

3.2.21
service level target
specific measurable characteristic of a *service* (3.2.15) that an *organization* (3.1.14) commits to

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3.2.22
service management
set of capabilities and *processes* (3.1.18) to direct and control the *organization*'s (3.1.14) activities and resources for the planning, design, *transition* (3.2.27), delivery and improvement of *services* (3.2.15) to deliver *value* (3.2.29)

Note 1 to entry: This document provides a set of requirements that are split into clauses and sub-clauses. Each organization can choose how to combine the requirements into processes. The sub-clauses can be used to define the processes of the organization's SMS.

3.2.23
service management system
SMS
management system (3.1.9) to direct and control the *service management* (3.2.22) activities of the *organization* (3.1.14)

Note 1 to entry: An SMS includes service management *policies* (3.1.17), *objectives* (3.1.13), plans, *processes* (3.1.18), documented information and resources required for the planning, design, *transition* (3.2.27), delivery and improvement of services to meet the *requirements* (3.1.19) specified in this document.

3.2.24
service provider
organization (3.1.14) that manages and delivers a *service* (3.2.15) or services to *customers* (3.2.3)

3.2.25
service request
request for information, advice, access to a *service* (3.2.15) or a pre-approved change

3.2.26
service requirement
needs of *customers* (3.2.3), *users* (3.2.28) and the *organization* (3.1.14) related to the *services* (3.2.15) and the *SMS* (3.2.23) that are stated or obligatory

Note 1 to entry: In the context of an *SMS* (3.2.23), service requirements are documented and agreed rather than generally implied. There can also be other requirements such as legal and regulatory requirements.

3.2.27
transition
activities involved in moving a new or changed *service* (3.2.15) to or from the live environment

3.2.28
user
individual or group that interacts with or benefits from a *service* (3.2.15) or services

Note 1 to entry: Examples of users include a person or community of people. A *customer* (3.2.3) can also be a user.

3.2.29
value
importance, benefit or usefulness

EXAMPLE Monetary value, achieving service outcomes, achieving *service management* (3.2.22) *objectives* (3.1.13), customer retention, removal of constraints.

Note 1 to entry: The creation of value from *services* (3.2.15) includes realizing benefits at an optimal resource level while managing *risk* (3.1.20). An *asset* (3.2.1) and a *service* (3.2.15) are examples that can be assigned a value.

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4 Context of the organization

4.1 Understanding the organization and its context

The organization shall determine external and internal issues that are relevant to its purpose and that affect its ability to achieve the intended outcome(s) of its SMS.

NOTE The word “issue” in this context can be factors which have a positive or negative impact. These are important factors for the organization in the context of its ability to deliver services of an agreed quality to its customers.

4.2 Understanding the needs and expectations of interested parties

The organization shall determine:

a) the interested parties that are relevant to the SMS and the services;

b) the relevant requirements of these interested parties.

NOTE The requirements of interested parties can include service, performance, legal and regulatory requirements and contractual obligations that relate to the SMS and the services.

4.3 Determining the scope of the service management system

The organization shall determine the boundaries and applicability of the SMS to establish its scope.

When determining this scope, the organization shall consider:

a) the external and internal issues referred to in 4.1;

b) the requirements referred to in 4.2;

c) the services delivered by the organization.

The definition of the scope of the SMS shall include the services in scope and the name of the organization managing and delivering the services.

The scope of the SMS shall be available and be maintained as documented information.

NOTE 1 ISO/IEC 20000-3 provides guidance on scope definition.

NOTE 2 The SMS scope definition states the services which are in scope. This can be all or some of the services delivered by the organization.

4.4 Service management system

The organization shall establish, implement, maintain and continually improve an SMS, including the processes needed and their interactions, in accordance with the requirements of this document.

5 Leadership

5.1 Leadership and commitment

Top management shall demonstrate leadership and commitment with respect to the SMS by:

a) ensuring that the service management policy and service management objectives are established and are compatible with the strategic direction of the organization;

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b) ensuring that the service management plan is created, implemented and maintained in order to support the service management policy, and the achievement of the service management objectives and service requirements;

c) ensuring that appropriate levels of authority are assigned for making decisions related to the SMS and the services;

d) ensuring that what constitutes value for the organization and its customers is determined;

e) ensuring there is control of other parties involved in the service lifecycle;

f) ensuring the integration of the SMS requirements into the organization's business processes;

g) ensuring that the resources needed for the SMS and the services are available;

h) communicating the importance of effective service management, achieving the service management objectives, delivering value and conforming to the SMS requirements;

i) ensuring that the SMS achieves its intended outcome(s);

j) directing and supporting persons to contribute to the effectiveness of the SMS and the services;

k) promoting continual improvement of the SMS and the services;

l) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

NOTE Reference to "business" in this document can be interpreted broadly to mean those activities that are core to the purposes of the organization's existence.

5.2 Policy

5.2.1 Establishing the service management policy

Top management shall establish a service management policy that:

a) is appropriate to the purpose of the organization;

b) provides a framework for setting service management objectives;

c) includes a commitment to satisfy applicable requirements;

d) includes a commitment to continual improvement of the SMS and the services.

5.2.2 Communicating the service management policy

The service management policy shall:

a) be available as documented information;

b) be communicated within the organization;

c) be available to interested parties, as appropriate.

5.3 Organizational roles, responsibilities and authorities

Top management shall ensure that the responsibilities and authorities for roles relevant to the SMS and the services are assigned and communicated within the organization.

Top management shall assign the responsibility and authority for:

a) ensuring that the SMS conforms to the requirements of this document;

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b) reporting on the performance of the SMS and the services to top management.

6 Planning

6.1 Actions to address risks and opportunities

6.1.1 When planning for the SMS, the organization shall consider the issues referred to in 4.1 and the requirements referred to in 4.2 and determine the risks and opportunities that need to be addressed to:

a) give assurance that the SMS can achieve its intended outcome(s);

b) prevent, or reduce, undesired effects;

c) achieve continual improvement of the SMS and the services.

6.1.2 The organization shall determine and document:

a) risks related to:

   1) the organization;

   2) not meeting the service requirements;

   3) the involvement of other parties in the service lifecycle;

b) the impact on customers of risks and opportunities for the SMS and the services;

c) risk acceptance criteria;

d) approach to be taken for the management of risks.

6.1.3 The organization shall plan:

a) actions to address these risks and opportunities and their priorities;

b) how to:

   1) integrate and implement the actions into its SMS processes;

   2) evaluate the effectiveness of these actions.

NOTE 1 Options to address risks and opportunities can include: avoiding the risk, taking or increasing the risk in order to pursue an opportunity, removing the risk source, changing the likelihood or consequence of the risk, mitigating the risk through agreed actions, sharing the risk with another party or accepting the risk by informed decision.

NOTE 2 ISO 31000 provides principles and generic guidance on risk management.

6.2 Service management objectives and planning to achieve them

6.2.1 Establish objectives

The organization shall establish service management objectives at relevant functions and levels. The service management objectives shall:

a) be consistent with the service management policy;

b) be measurable;

c) take into account applicable requirements;

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d) be monitored;

e) be communicated;

f) be updated as appropriate.

The organization shall retain documented information on the service management objectives.

6.2.2 Plan to achieve objectives

When planning how to achieve its service management objectives, the organization shall determine:

a) what will be done;

b) what resources will be required;

c) who will be responsible;

d) when it will be completed;

e) how the results will be evaluated.

6.3 Plan the service management system

The organization shall create, implement and maintain a service management plan. Planning shall take into consideration the service management policy, service management objectives, risks and opportunities, service requirements and requirements specified in this document.

The service management plan shall include or contain a reference to:

a) list of services;

b) known limitations that can impact the SMS and the services;

c) obligations such as relevant policies, standards, legal, regulatory and contractual requirements, and how these obligations apply to the SMS and the services;

d) authorities and responsibilities for the SMS and the services;

e) human, technical, information and financial resources necessary to operate the SMS and the services;

f) approach to be taken for working with other parties involved in the service lifecycle;

g) technology used to support the SMS;

h) how the effectiveness of the SMS and the services will be measured, audited, reported and improved.

Other planning activities shall maintain alignment with the service management plan.

7 Support of the service management system

7.1 Resources

The organization shall determine and provide the human, technical, information and financial resources needed for the establishment, implementation, maintenance and continual improvement of the SMS and the operation of the services to meet the service requirements and achieve the service management objectives.

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7.2 Competence

The organization shall:

a) determine the necessary competence of persons doing work under its control that affects the performance and effectiveness of the SMS and the services;

b) ensure that these persons are competent on the basis of appropriate education, training or experience;

c) where applicable, take actions to acquire the necessary competence and evaluate the effectiveness of the actions taken;

d) retain appropriate documented information as evidence of competence.

NOTE Applicable actions can include, for example: the provision of training to, the mentoring of, or the reassignment of currently employed persons; or the hiring or contracting of competent persons.

7.3 Awareness

Persons doing work under the organization's control shall be aware of:

a) the service management policy;

b) the service management objectives;

c) the services relevant to their work;

d) their contribution to the effectiveness of the SMS, including the benefits of improved performance;

e) the implications of not conforming with the SMS requirements.

7.4 Communication

The organization shall determine the internal and external communications relevant to the SMS and the services including:

a) on what it will communicate;

b) when to communicate;

c) with whom to communicate;

d) how to communicate;

e) who will be responsible for the communication.

7.5 Documented information

7.5.1 General

The organization's SMS shall include:

a) documented information required by this document;

b) documented information determined by the organization as being necessary for the effectiveness of the SMS.

NOTE The extent of documented information for an SMS can differ from one organization to another due to:

— the size of organization and its type of activities, processes, products and services;

— the complexity of processes, services and their interfaces;

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— the competence of persons.

7.5.2 Creating and updating documented information

When creating and updating documented information, the organization shall ensure appropriate:

a) identification and description (e.g. a title, date, author or reference number);

b) format (e.g. language, software version, graphics) and media (e.g. paper, electronic);

c) review and approval for suitability and adequacy.

7.5.3 Control of documented information

7.5.3.1 Documented information required by the SMS and by this document shall be controlled to ensure:

a) it is available and suitable for use, where and when it is needed;

b) it is adequately protected (e.g. from loss of confidentiality, improper use or loss of integrity).

7.5.3.2 For the control of documented information, the organization shall address the following activities, as applicable:

a) distribution, access, retrieval and use;

b) storage and preservation, including preservation of legibility;

c) control of changes (e.g. version control);

d) retention and disposition.

Documented information of external origin determined by the organization to be necessary for the planning and operation of the SMS shall be identified as appropriate and controlled.

NOTE Access can imply a decision regarding the permission to view the documented information only, or the permission and authority to view and change the documented information.

7.5.4 Service management system documented information

The documented information for the SMS shall include:

a) scope of the SMS;

b) policy and objectives for service management;

c) service management plan;

d) change management policy, information security policy and service continuity plan(s);

e) processes of the organization's SMS;

f) service requirements;

g) service catalogue(s);

h) service level agreement(s) (SLA);

i) contracts with external suppliers;

j) agreements with internal suppliers or customers acting as a supplier;

k) procedures that are required by this document;

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l) records required to demonstrate evidence of conformity to the requirements of this document and the organization's SMS.

NOTE Clause 7.5.4 provides a list of the key documents for an SMS. There are other specified requirements in this document for information to be held as documented information, to be documented or to be recorded. ISO/IEC 20000-2 provides additional guidance.

7.6 Knowledge

The organization shall determine and maintain the knowledge necessary to support the operation of the SMS and the services.

The knowledge shall be relevant, usable and available to appropriate persons.

NOTE Knowledge is specific to the organization, its SMS, services and interested parties. Knowledge is used and shared to support the achievement of the intended outcome(s) and the operation of the SMS and the services.

8 Operation of the service management system

8.1 Operational planning and control

The organization shall plan, implement and control the processes needed to meet requirements and to implement the actions determined in Clause 6 by:

a) establishing performance criteria for the processes based on requirements;

b) implementing control of the processes in accordance with the established performance criteria;

c) keeping documented information to the extent necessary to have confidence that the processes have been carried out as planned.

The organization shall control planned changes to the SMS and review the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary (see 8.5.1).

The organization shall ensure that outsourced processes are controlled (see 8.2.3).

8.2 Service portfolio

8.2.1 Service delivery

The organization shall operate the SMS ensuring co-ordination of the activities and the resources. The organization shall perform the activities required to deliver services.

NOTE A service portfolio is used to manage the entire lifecycle of all services including proposed services, those in development, live services defined in the service catalogue(s) and services that are to be removed. The management of the service portfolio ensures that the service provider has the right mix of services. Service portfolio activities in this document include planning the services, control of parties involved in the service lifecycle, service catalogue management, asset management and configuration management.

8.2.2 Plan the services

The service requirements for existing services, new services and changes to services shall be determined and documented.

The organization shall determine the criticality of services based on the needs of the organization, customers, users and other interested parties. The organization shall determine and manage dependencies and duplication between services.

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The organization shall propose changes where needed to align the services with the service management policy, service management objectives and service requirements, taking into consideration known limitations and risks.

The organization shall prioritize requests for change and proposals for new or changed services to align with business needs and service management objectives, taking into consideration available resources.

8.2.3 Control of parties involved in the service lifecycle

8.2.3.1 The organization shall retain accountability for the requirements specified in this document and the delivery of the services regardless of which party is involved in performing activities to support the service lifecycle.

The organization shall determine and apply criteria for the evaluation and selection of other parties involved in the service lifecycle. Other parties can be an external supplier, an internal supplier or a customer acting as a supplier.

Other parties shall not provide or operate all services, service components or processes within the scope of the SMS.

The organization shall determine and document:

a) services that are provided or operated by other parties;

b) service components that are provided or operated by other parties;

c) processes, or parts of processes, in the organization's SMS that are operated by other parties.

The organization shall integrate services, service components and processes in the SMS that are provided or operated by the organization or other parties to meet the service requirements. The organization shall co-ordinate activities with other parties involved in the service lifecycle including the planning, design, transition, delivery and improvement of services.

8.2.3.2 The organization shall define and apply relevant controls for other parties from the following:

a) measurement and evaluation of process performance;

b) measurement and evaluation of the effectiveness of services and service components in meeting the service requirements.

NOTE ISO/IEC 20000-3 provides guidance on the control of other parties involved in the service lifecycle.

8.2.4 Service catalogue management

The organization shall create and maintain one or more service catalogues. The service catalogue(s) shall include information for the organization, customers, users and other interested parties to describe the services, their intended outcomes and dependencies between the services.

The organization shall provide access to appropriate parts of the service catalogue(s) to its customers, users and other interested parties.

8.2.5 Asset management

The organization shall ensure that assets used to deliver services are managed to meet the service requirements and the obligations in 6.3 c).

NOTE 1 ISO 55001 and ISO/IEC 19770-1 specify requirements to support the implementation and operation of asset and IT asset management.

NOTE 2 In addition, see configuration management when an asset is also a configuration item (CI).

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8.2.6 Configuration management

The types of CI shall be defined. Services shall be classified as CIs.

Configuration information shall be recorded to a level of detail appropriate to the criticality and type of services. Access to configuration information shall be controlled. The configuration information recorded for each CI shall include:

a) unique identification;

b) type of CI;

c) description of the CI;

d) relationship with other CIs;

e) status.

CIs shall be controlled. Changes to CIs shall be traceable and auditable to maintain the integrity of the configuration information. The configuration information shall be updated following the deployment of changes to CIs.

At planned intervals, the organization shall verify the accuracy of the configuration information. Where deficiencies are found, the organization shall take necessary actions.

Configuration information shall be made available for other service management activities as appropriate.

8.3 Relationship and agreement

8.3.1 General

The organization may use suppliers to:

a) provide or operate services;

b) provide or operate service components;

c) operate processes, or parts of processes, that are in the organization's SMS.

Figure 2 illustrates the usage, agreements and relationships between business relationship management, service level management and supplier management.

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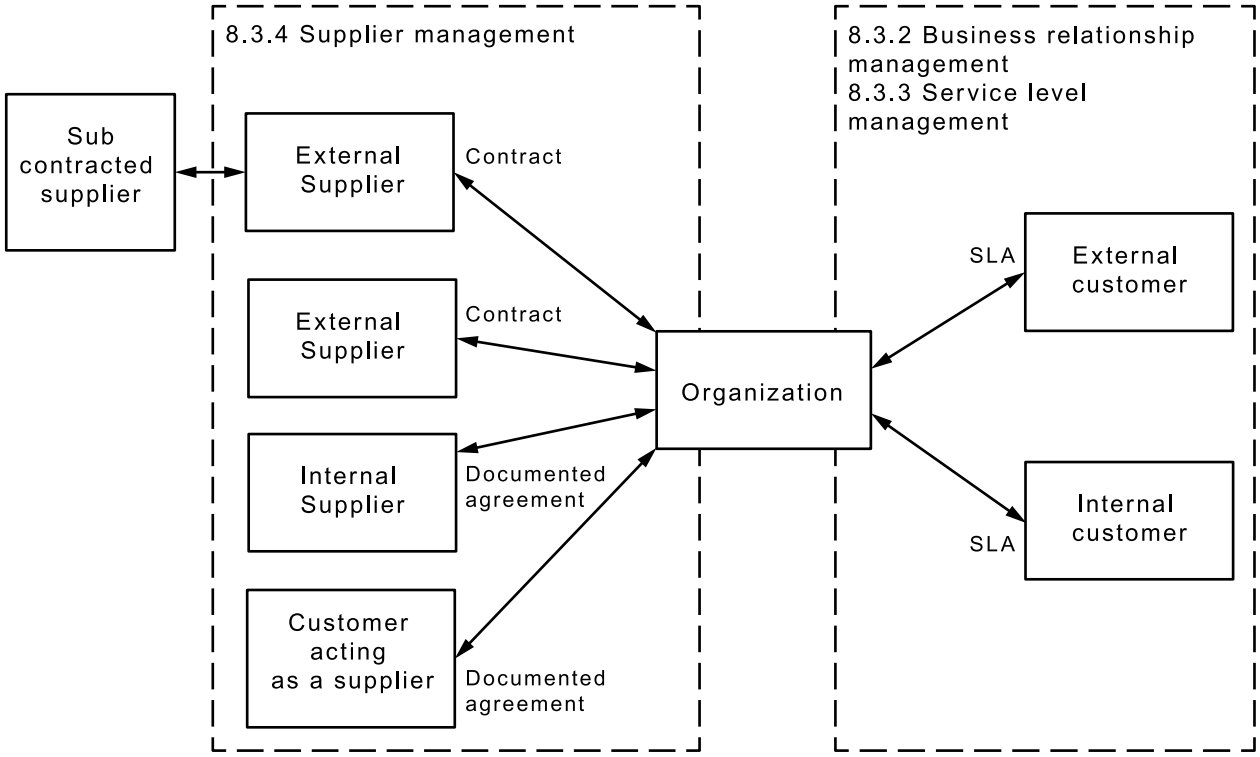

Figure 2 — Relationships and agreements between parties involved in the service lifecycle

NOTE 1 ISO/IEC 20000-3 includes examples of supply chain relationships with their potential applicability and scope.

NOTE 2 Supplier management in this document excludes the procurement of suppliers.

8.3.2 Business relationship management

The customers, users and other interested parties of the services shall be identified and documented. The organization shall have one or more designated individuals responsible for managing customer relationships and maintaining customer satisfaction.

The organization shall establish arrangements for communicating with its customers and other interested parties. The communication shall promote understanding of the evolving business environment in which the services operate and shall enable the organization to respond to new or changed service requirements.

At planned intervals, the organization shall review the performance trends and the outcomes of the services.

At planned intervals, the organization shall measure satisfaction with the services based on a representative sample of customers. The results shall be analysed, reviewed to identify opportunities for improvement and reported.

Service complaints shall be recorded, managed to closure and reported. Where a service complaint is not resolved through the normal channels, a method of escalation shall be provided.

8.3.3 Service level management

The organization and the customer shall agree the services to be delivered.

For each service delivered, the organization shall establish one or more SLAs based on the documented service requirements. The SLA(s) shall include service level targets, workload limits and exceptions.

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At planned intervals, the organization shall monitor, review and report on:

a) performance against service level targets;

b) actual and periodic changes in workload compared to workload limits in the SLA(s).

Where service level targets are not met, the organization shall identify opportunities for improvement.

NOTE Agreement of the services to be delivered between the organization and its customers can take many forms such as a documented agreement, minutes of verbal agreement in a meeting, agreement indicated by email or agreement to terms of service.

8.3.4 Supplier management

8.3.4.1 Management of external suppliers

The organization shall have one or more designated individuals responsible for managing the relationship, contracts and performance of external suppliers.

For each external supplier, the organization shall agree a documented contract. The contract shall include or contain a reference to:

a) scope of the services, service components, processes or parts of processes to be provided or operated by the external supplier;

b) requirements to be met by the external supplier;

c) service level targets or other contractual obligations;

d) authorities and responsibilities of the organization and the external supplier.

The organization shall assess the alignment of service level targets or other contractual obligations for the external supplier against SLAs with customers, and manage identified risks.

The organization shall define and manage the interfaces with the external supplier.

At planned intervals, the organization shall monitor the performance of the external supplier. Where service level targets or other contractual obligations are not met, the organization shall ensure that opportunities for improvement are identified.

At planned intervals, the organization shall review the contract against current service requirements. Changes identified for the contract shall be assessed for the impact of the change on the SMS and the services before the change is approved.

Disputes between the organization and the external supplier shall be recorded and managed to closure.

8.3.4.2 Management of internal suppliers and customers acting as a supplier

For each internal supplier or customer acting as a supplier, the organization shall develop, agree and maintain a documented agreement to define the service level targets, other commitments, activities and interfaces between the parties.

At planned intervals, the organization shall monitor the performance of the internal supplier or the customer acting as a supplier. Where service level targets or other agreed commitments are not met, the organization shall ensure that opportunities for improvement are identified.

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8.4 Supply and demand

8.4.1 Budgeting and accounting for services

The organization shall budget and account for services or groups of services in accordance with its financial management policies and processes.

Costs shall be budgeted to enable effective financial control and decision-making for services.

At planned intervals, the organization shall monitor and report on actual costs against the budget, review the financial forecasts and manage costs.

NOTE Many, but not all, organizations charge for their services. Budgeting and accounting for services in this document excludes charging, to ensure applicability to all organizations.

8.4.2 Demand management

At planned intervals, the organization shall:

a) determine current demand and forecast future demand for services;

b) monitor and report on demand and consumption of services.

NOTE Demand management is responsible for understanding current and future customer demand for services. Capacity management works with demand management to plan and provide sufficient capacity to meet the demand.

8.4.3 Capacity management

The capacity requirements for human, technical, information and financial resources shall be determined, documented and maintained taking into consideration the service and performance requirements.

The organization shall plan capacity to include:

a) current and forecast capacity based on demand for services;

b) expected impact on capacity of agreed service level targets, requirements for service availability and service continuity;

c) timescales and thresholds for changes to service capacity.

The organization shall provide sufficient capacity to meet agreed capacity and performance requirements. The organization shall monitor capacity usage, analyse capacity and performance data and identify opportunities to improve performance.

8.5 Service design, build and transition

8.5.1 Change management

8.5.1.1 Change management policy

A change management policy shall be established and documented to define:

a) service components and other items that are under the control of change management;

b) categories of change, including emergency change, and how they are to be managed;

c) criteria to determine changes with the potential to have a major impact on customers or services.

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8.5.1.2 Change management initiation

Requests for change, including proposals to add, remove or transfer services, shall be recorded and classified.

The organization shall use service design and transition in 8.5.2 for:

a) new services with the potential to have a major impact on customers or other services as determined by the change management policy;

b) changes to services with the potential to have a major impact on customers or other services as determined by the change management policy;

c) categories of change that are to be managed by service design and transition according to the change management policy;

d) removal of a service;

e) transfer of an existing service from the organization to a customer or other party;

f) transfer of an existing service from a customer or other party to the organization.

Assessing, approving, scheduling and reviewing of new or changed services in the scope of 8.5.2 shall be managed through the change management activities in 8.5.1.3.

Requests for change not being managed through 8.5.2 shall be managed through the change management activities in 8.5.1.3.

8.5.1.3 Change management activities

The organization and interested parties shall make decisions on the approval and priority of requests for change. Decision-making shall take into consideration the risks, business benefits, feasibility and financial impact. Decision making shall also consider potential impacts of the change on:

a) existing services;

b) customers, users and other interested parties;

c) policies and plans required by this document;

d) capacity, service availability, service continuity and information security;

e) other requests for change, releases and plans for deployment.

Approved changes shall be prepared, verified and, where possible, tested. Proposed deployment dates and other deployment details for approved changes shall be communicated to interested parties.

The activities to reverse or remedy an unsuccessful change shall be planned and, where possible, tested. Unsuccessful changes shall be investigated and agreed actions taken.

The organization shall review changes for effectiveness and take actions agreed with interested parties.

At planned intervals, request for change records shall be analysed to detect trends. The results and conclusions drawn from the analysis shall be recorded and reviewed to identify opportunities for improvement.

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8.5.2 Service design and transition

8.5.2.1 Plan new or changed services

Planning shall use the service requirements for the new or changed services determined in 8.2.2 and shall include or contain a reference to:

a) authorities and responsibilities for design, build and transition activities;

b) activities to be performed by the organization or other parties with their timescales;

c) human, technical, information and financial resources;

d) dependencies on other services;

e) testing needed for the new or changed services;

f) service acceptance criteria;

g) intended outcomes from delivering the new or changed services, expressed in measurable terms;

h) impact on the SMS, other services, planned changes, customers, users and other interested parties.

For services that are to be removed, the planning shall additionally include the date(s) for the removal of the services and the activities for archiving, disposal or transfer of data, documented information and service components.

For services that are to be transferred, the planning shall additionally include the date(s) for the transfer of the services and the activities for the transfer of data, documented information, knowledge and service components.

The CIs affected by new or changed services shall be managed through configuration management.

8.5.2.2 Design

The new or changed services shall be designed and documented to meet the service requirements determined in 8.2.2. The design shall include relevant items from the following:

a) authorities and responsibilities of the parties involved in the delivery of the new or changed services;

b) requirements for changes to human, technical, information and financial resources;

c) requirements for appropriate education, training and experience;

d) new or changed SLAs, contracts and other documented agreements that support the services;

e) changes to the SMS including new or changed policies, plans, processes, procedures, measures and knowledge;

f) impact on other services;

g) updates to the service catalogue(s).

8.5.2.3 Build and transition

The new or changed services shall be built and tested to verify that they meet the service requirements, conform to the documented design and meet the agreed service acceptance criteria. If the service acceptance criteria are not met, the organization and interested parties shall make a decision on necessary actions and deployment.

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Release and deployment management shall be used to deploy approved new or changed services into the live environment.

Following the completion of the transition activities, the organization shall report to interested parties on the achievements against the intended outcomes.

8.5.3 Release and deployment management

The organization shall define the types of release, including emergency release, their frequency and how they are to be managed.

The organization shall plan the deployment of new or changed services and service components into the live environment. Planning shall be co-ordinated with change management and include references to the related requests for change, known errors or problems which are being closed through the release. Planning shall include the dates for deployment of each release, deliverables and methods of deployment.

The release shall be verified against documented acceptance criteria and approved before deployment. If the acceptance criteria are not met, the organization and interested parties shall make a decision on necessary actions and deployment.

Before deployment of a release into the live environment, a baseline of the affected CIs shall be taken.

The release shall be deployed into the live environment so that the integrity of the services and service components is maintained.

The success or failure of releases shall be monitored and analysed. Measurements shall include incidents related to a release in the period following deployment of a release. The results and conclusions drawn from the analysis shall be recorded and reviewed to identify opportunities for improvement.

Information about the success or failure of releases and future release dates shall be made available for other service management activities as appropriate.

8.6 Resolution and fulfilment

8.6.1 Incident management

Incidents shall be:

a) recorded and classified;

b) prioritized taking into consideration impact and urgency;

c) escalated if needed;

d) resolved;

e) closed.

Records of incidents shall be updated with actions taken.

The organization shall determine criteria to identify a major incident. Major incidents shall be classified and managed according to a documented procedure. Top management shall be kept informed of major incidents. The organization shall assign responsibility for managing each major incident. After the incident has been resolved, the major incident shall be reported and reviewed to identify opportunities for improvement.

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8.6.2 Service request management

Service requests shall be:

a) recorded and classified;

b) prioritized;

c) fulfilled;

d) closed.

Records of service requests shall be updated with actions taken.

Instructions for the fulfilment of service requests shall be made available to persons involved in service request fulfilment.

8.6.3 Problem management

The organization shall analyse data and trends on incidents to identify problems. The organization shall undertake root cause analysis and determine potential actions to prevent the occurrence or recurrence of incidents.

Problems shall be:

a) recorded and classified;

b) prioritized;

c) escalated if needed;

d) resolved if possible;

e) closed.

Records of problems shall be updated with actions taken. Changes needed for problem resolution shall be managed according to the change management policy.

Where the root cause has been identified, but the problem has not been permanently resolved, the organization shall determine actions to reduce or eliminate the impact of the problem on the services. Known errors shall be recorded. Up-to-date information on known errors and problem resolutions shall be made available for other service management activities as appropriate.

At planned intervals, the effectiveness of problem resolution shall be monitored, reviewed and reported.

8.7 Service assurance

8.7.1 Service availability management

At planned intervals, the risks to service availability shall be assessed and documented. The organization shall determine the service availability requirements and targets. The agreed requirements shall take into consideration relevant business requirements, service requirements, SLAs and risks.

Service availability requirements and targets shall be documented and maintained.

Service availability shall be monitored, the results recorded and compared with the targets. Unplanned non-availability shall be investigated and necessary actions taken.

NOTE Risks identified in 6.1 can provide input to the risks for service availability, service continuity and information security.

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8.7.2 Service continuity management

At planned intervals, the risks to service continuity shall be assessed and documented. The organization shall determine the service continuity requirements. The agreed requirements shall take into consideration relevant business requirements, service requirements, SLAs and risks.

The organization shall create, implement and maintain one or more service continuity plans. The service continuity plan(s) shall include or contain a reference to:

a) criteria and responsibilities for invoking service continuity;

b) procedures to be implemented in the event of a major loss of service;

c) targets for service availability when the service continuity plan is invoked;

d) service recovery requirements;

e) procedures for returning to normal working conditions.

The service continuity plan(s) and list of contacts shall be accessible when access to the normal service location is prevented.

At planned intervals, the service continuity plan(s) shall be tested against the service continuity requirements. The service continuity plan(s) shall be re-tested after major changes to the service environment. The results of the tests shall be recorded. Reviews shall be conducted after each test and after the service continuity plan(s) has been invoked. Where deficiencies are found, the organization shall take necessary actions.

The organization shall report on the cause, impact and recovery when the service continuity plan(s) has been invoked.

8.7.3 Information security management

8.7.3.1 Information security policy

Management with appropriate authority shall approve an information security policy relevant to the organization. The information security policy shall be documented and take into consideration the service requirements and the obligations in 6.3 c).

The information security policy shall be made available as appropriate. The organization shall communicate the importance of conforming to the information security policy and its applicability to the SMS and the services to appropriate persons within:

a) the organization;

b) customers and users;

c) external suppliers, internal suppliers and other interested parties.

8.7.3.2 Information security controls

At planned intervals, the information security risks to the SMS and the services shall be assessed and documented. Information security controls shall be determined, implemented and operated to support the information security policy and address identified information security risks. Decisions about information security controls shall be documented.

The organization shall agree and implement information security controls to address information security risks related to external organizations.

The organization shall monitor and review the effectiveness of information security controls and take necessary actions.

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8.7.3.3 Information security incidents

Information security incidents shall be:

a) recorded and classified;

b) prioritized taking into consideration the information security risk;

c) escalated if needed;

d) resolved;

e) closed.

The organization shall analyse the information security incidents by type, volume and impact on the SMS, services and interested parties. Information security incidents shall be reported and reviewed to identify opportunities for improvement.

NOTE The ISO/IEC 27000 series specifies requirements and provides guidance to support the implementation and operation of an information security management system. ISO/IEC 27013 provides guidance on the integration of ISO/IEC 27001 and ISO/IEC 20000-1 (this document).

9 Performance evaluation

9.1 Monitoring, measurement, analysis and evaluation

The organization shall determine:

a) what needs to be monitored and measured for the SMS and the services;

b) the methods for monitoring, measurement, analysis and evaluation, as applicable, to ensure valid results;

c) when the monitoring and measuring shall be performed;

d) when the results from monitoring and measurement shall be analysed and evaluated.

The organization shall retain appropriate documented information as evidence of the results.

The organization shall evaluate the SMS performance against the service management objectives and evaluate the effectiveness of the SMS. The organization shall evaluate the effectiveness of the services against the service requirements.

9.2 Internal audit

9.2.1 The organization shall conduct internal audits at planned intervals to provide information on whether the SMS:

a) conforms to:

   1) the organization's own requirements for its SMS;

   2) the requirements of this document;

b) is effectively implemented and maintained.

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9.2.2 The organization shall:

a) plan, establish, implement and maintain an audit programme(s), including the frequency, methods, responsibilities, planning requirements and reporting, which shall take into consideration:

   1) the importance of the processes concerned;

   2) changes affecting the organization;

   3) the results of previous audits;

b) define the audit criteria and scope for each audit;

c) select auditors and conduct audits to ensure objectivity and the impartiality of the audit process;

d) ensure that the results of the audits are reported to relevant management;

e) retain documented information as evidence of the implementation of the audit programme(s) and the audit results.

NOTE ISO 19011 provides guidelines on auditing management systems.

9.3 Management review

Top management shall review the organization's SMS and the services, at planned intervals, to ensure their continuing suitability, adequacy and effectiveness.

The management review shall include consideration of:

a) the status of actions from previous management reviews;

b) changes in external and internal issues that are relevant to the SMS;

c) information on the performance and effectiveness of the SMS, including trends in:

   1) nonconformities and corrective actions;

   2) monitoring and measurement results;

   3) audit results;

d) opportunities for continual improvement;

e) feedback from customers and other interested parties;

f) adherence to and suitability of the service management policy and other policies required by this document;

g) achievement of service management objectives;

h) performance of the services;

i) performance of other parties involved in the delivery of the services;

j) current and forecast human, technical, information and financial resource levels, and human and technical resource capabilities;

k) results of risk assessment and the effectiveness of actions taken to address risks and opportunities;

l) changes that can affect the SMS and the services.

The outputs of the management review shall include decisions related to continual improvement opportunities and any need for changes to the SMS and the services.

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The organization shall retain documented information as evidence of the results of management reviews.

9.4 Service reporting

The organization shall determine reporting requirements and their purpose.

Reports on the performance and effectiveness of the SMS and the services shall be produced using information from the SMS activities and delivery of the services. Service reporting shall include trends.

The organization shall make decisions and take actions based on the findings in service reports. The agreed actions shall be communicated to interested parties.

NOTE The reports that are required are specified in the relevant clauses of this document. Additional reports can also be produced.

10 Improvement

10.1 Nonconformity and corrective action

10.1.1 When a nonconformity occurs, the organization shall:

a) react to the nonconformity, and as applicable:

   1) take action to control and correct it;

   2) deal with the consequences;

b) evaluate the need for action to eliminate the causes of the nonconformity in order that it does not recur or occur elsewhere by:

   1) reviewing the nonconformity;

   2) determining the causes of the nonconformity;

   3) determining if similar nonconformities exist, or could potentially occur;

c) implement any action needed;

d) review the effectiveness of any corrective action taken;

e) make changes to the SMS, if necessary.

Corrective actions shall be appropriate to the effects of the nonconformities encountered.

10.1.2 The organization shall retain documented information as evidence of:

a) the nature of the nonconformities and any subsequent actions taken;

b) the results of any corrective action.

10.2 Continual improvement

The organization shall continually improve the suitability, adequacy and effectiveness of the SMS and the services.

The organization shall determine evaluation criteria to be applied to the opportunities for improvement when making decisions on their approval. Evaluation criteria shall include alignment of the improvement with service management objectives.

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Opportunities for improvement shall be documented. The organization shall manage approved improvement activities that include:

a) setting one or more targets for improvement in areas such as quality, value, capability, cost, productivity, resource utilization and risk reduction;

b) ensuring that improvements are prioritized, planned and implemented;

c) making changes to the SMS, if necessary;

d) measuring implemented improvements against the target(s) set and where target(s) are not achieved, taking necessary actions;

e) reporting on implemented improvements.

NOTE Improvements can include reactive and pro-active actions such as correction, corrective action, preventive action, enhancements, innovation and re-organization.

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