TECHNICAL SPECIFICATION

ISO/IEC TS 20000-5

First edition

Information technology — Service management —

Part 5: Implementation guidance for ISO/IEC 20000-1

Technologies de l'information — Gestion des services — Partie 5: Exemple de plan de mise en application pour l'ISO/CEI 20000-1

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Foreword

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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 or www.iec.ch/members_experts/refdocs).

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 40, *IT Service Management and IT Governance*.

This first edition cancels and replaces the second edition (ISO/IEC TR 20000-5:2013), which has been technically revised.

The main changes are as follows:

— updated relevant content based on the release of ISO/IEC 20000-1:2018;

— taken into account organizations which are not mature in service management;

— revised a three-phased plan to manage a service management system (SMS) implementation.

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

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 and www.iec.ch/national-committees.

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Introduction

This document provides guidance for organizations on how to implement 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. ISO/IEC 20000-1:2018 specifies requirements for planning, establishing, implementing, maintaining and continually improving an SMS.

This document focuses on providing the key considerations and different approaches for organizations which want to plan and implement an SMS for the first time or improve an existing implementation. These organizations, also known as service providers, can provide different types of services using technology and digital information. They can be of any size, sector or type, with different organizational structures or business models.

Organizations can approach the implementation of an SMS in any way: as part of a programme, a major project, or in a more incremental manner with different phases or iterations. The results of any gap analysis will determine which approach is appropriate for each organization. Organizations can use different methodologies for an SMS implementation.

This document addresses the typical steps for implementation of a phase or a whole project including project initiation, planning, implementation, evaluation and future action. Implementation of an SMS based on three maturity levels is also described in this document.

During the implementation of an SMS, an organization will potentially face many challenges. This document illustrates some of the challenges and the key considerations to overcome them.

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Information technology — Service management —

Part 5:
Implementation guidance for ISO/IEC 20000-1

1 Scope

This document provides guidance for organizations on how to implement a service management system (SMS). Organizations can use this document to implement the entire SMS in order to conform to the requirements specified in ISO/IEC 20000-1, or parts of an SMS for a selected subset of requirements. This document illustrates a generic plan to manage implementation activities for an SMS.

The intended users of this document are:

a) organizations that require support on how to implement an SMS;

b) consultants and advisors who support an organization during SMS implementation.

This document can be used together with the other parts of ISO/IEC 20000 series.

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2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO/IEC 20000-10, *Information technology — Service management — Part 10: Concepts and vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 20000-1 and ISO/IEC 20000-10 apply.

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

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

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

4 Key considerations

4.1 Understanding ISO/IEC 20000-1:2018

The success of an SMS implementation depends on top management commitment and the organization's personnel understanding:

a) ISO/IEC 20000-1 requirements;

b) service management policies and objectives;

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c) service requirements;

d) any new or changed practices, roles or organizational structures implemented to support the SMS.

4.2 Appropriate use of an SMS

Appropriate implementation and use of an SMS ensures that:

a) the requirements of all service level agreements and contractual obligations are defined, implemented and tracked;

b) new and existing customers' needs and expectations will be met by demonstrating the ability to meet the organization's commitments;

c) new services and changes to existing services to meet customer requirements are introduced without disrupting current service provision or affecting the integrity of the services;

d) all levels of management are aware of the resources and capacity (such as human, technology and financial) needed by an organization to meet current and future customer requirements;

e) the activities of all parties involved in the service lifecycle are coordinated and integrated in order to meet service requirements;

f) service personnel comply with the organization's policies and top management priorities as stated in the service management objectives;

g) a common service management vocabulary between the organization and all interested parties is established;

h) a feedback mechanism is established to manage the outcomes of the SMS and the services;

i) communication with customers and other interested parties is established and continually improved;

j) all internal or external parties who contribute to service provision enhance the organization's capability to meet agreed requirements and deliver value for customers, users and the organization;

k) when performance issues with infrastructure and service components are identified, the organization takes corrective actions in order to continue to meet all service requirements and contractual obligations;

l) the service portfolio is developed and maintained to support organizational objectives and ensure budgets for services are established, accounted for and managed;

m) the organization maintains or improves its reputation by demonstrating delivery of services against commitments;

n) personnel, whose work affects performance and effectiveness of service management and the services, are competent and their competence is monitored and improved;

o) all levels of the organization understand the service requirements and performance commitments.

4.3 Scope of an SMS

Before any detailed planning activity starts, the organization should ensure that ISO/IEC 20000-1 is applicable to the organization. This applicability should take into account the scope of the services, service management activities and the contribution of other parties (see ISO/IEC 20000-1:2018, 1.2).

The organization should identify and agree a suitable scope for its SMS, using requirements from ISO/IEC 20000-1:2018, 4.3 and the guidance on scope definition and applicability provided in ISO/IEC 20000-3. Even when an organization is using ISO/IEC 20000-1 to implement just one process or a group of processes, the scope of the SMS should be defined.

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An organization can initially plan to implement its SMS based on the requirements specified in ISO/IEC 20000-1 for only part of its services. The organization can decide in the future to extend the current SMS scope (including covered services). It should be noted that the guidance in this document is based on the defined scope that remains unchanged during implementation. When an organization decides to define or extend the scope of the SMS, the approaches defined in ISO/IEC 20000-3 can be followed. Implementation timeframes can be shortened in future improvement efforts, as the organization gains practical experience and can extend what has already been done to a larger scope of the SMS and the services covered.

4.4 An SMS as a goal-oriented system

An SMS is neither an abstract or conceptual system, nor a process model, or a collection of processes. It is a set of interrelated or interacting elements of an organization used to establish service management policies and objectives aligned with the organization's strategic direction. The essence of an SMS is 'togetherness': the drawing together of various elements and interactions producing a whole system rather than a collection of silos connected solely by information systems and shared facilities.

An SMS is a goal-oriented system with specified elements and outcomes which work together to be efficient and effective. These elements include people, competence, plans, processes, policies, infrastructures, knowledge, tools and facilities. The potential outcomes can include trust, reputation, customer loyalty, competence and competitive advantage.

Organizations implement an SMS to take inputs, for example, customer requirements and use a set of interrelated or interacting activities to deliver intended outcomes. Feedback loops provide information on these activities to drive sustainable improvements of performance which can require changes to the SMS or the organization. The SMS is resilient and adaptable, able to respond to changing requirements as well as internal or external, anticipated or unanticipated events. In addition, audits and reviews provide the opportunity to maintain or improve an SMS.

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4.5 Support and commitment

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The ISO/IEC 20000-1 requirements place significant responsibility on top management to demonstrate its leadership, with respect to service management objectives and policies, aligned with an organization's strategic direction.

Effective leadership is required for organizations to implement and operate an SMS. Without effective leadership, the direction of an organization's SMS may be defined separately by different management groups, resulting in inconsistency.

Top management is accountable for the performance, efficiency and effectiveness of the SMS and the services. The successful implementation of an SMS depends on the commitment of all personnel with different levels of authority. Commitment starts with top management and extends across the organization.

Top management should adopt a way of thinking about the performance, efficiency and effectiveness of the SMS and services. This strongly influences personnel activities and motivates them to support and participate actively in achieving SMS objectives.

It is not an option for top management to act as an observer with respect to an SMS and the services. However, accountability does not mean that all decisions are made by top management. Where responsibility for achieving objectives and delivering services is delegated within the organization or contracted to a third party, top management always remains accountable for the SMS and delivery of services.

Although incremental implementation is a suitable way of SMS adoption, for some organizations successful implementation of an SMS requires a major change in thinking and communicating across all interested parties. For more mature organizations, the implementation of an SMS may require smaller adjustments to their ways of working.

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The successful implementation of an SMS is highly dependent on management support and commitment. Establishing management support and commitment should be achieved as soon as possible and sustained during all the SMS implementation phases as well as SMS operations. Based on initial analysis, a business case can help clarify understanding and establish commitments. It can help sustain support and commitment for each phase and, therefore, effectively address risks related to the success of planned changes.

Management should ensure that priorities are defined appropriately. The organization should aim to maintain the understanding and involvement of all interested parties during all phases, not just at the start.

4.6 Risk-based thinking

Risk-based thinking is not new and is now embedded in ISO management systems standards such as ISO 9001, ISO/IEC 27001 and ISO/IEC 20000-1.

The introduction of risk-based thinking allows management to prioritize customer requirements and define the effect of those requirements on service provision. It ensures that the risks, including the potential advantages or disadvantages of any specific course of action, are fully understood before making a decision. In applying risk-based thinking, both short-term and long-term benefits are considered. It is possible to sacrifice a short-term benefit to achieve a long-term one.

The risks and opportunities identified by an assessment of the organizational context are addressed during SMS planning to give assurance that the SMS can achieve its intended results. Having assessed the risks and addressed them in the implementation plan, organizations can implement an SMS with confidence. If the effects of the identified risks turn out differently, the organization can need to revise the implementation plan.

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Risk assessment is the overall process of identification, analysis, evaluation and treatment of risks. ISO 31000, ISO/IEC 20000-2 and other sources provide advice on risk assessment.

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Categorizing risks and maintaining their historical data makes assessment and treatment of similar risks in the future much easier.

4.7 Project readiness

Based on the business case and gap analysis described in Clause 5, the following items should be considered when developing the project management plan:

a) scope of the SMS;

b) timeframe and schedule;

c) human resources;

d) data, information and tools;

e) allocation of financial resources;

f) identification of risks and issues that impact the project and cause conflicting priorities;

g) early identification and engagement of interested parties, both for the services in the scope of the SMS and the SMS implementation project;

h) service management maturity within the organization;

i) receptiveness to change within the organization and the ability of the organization to manage the changes successfully;

j) project management and control methods;

k) procurement requirements;

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l) project review procedures to identify achievements and opportunities for improvement.

4.8 Project team

A project team should have strong leadership and expertise in establishing and implementing service management policies, processes and continual improvement activities.

Selecting personnel for the project team who are also involved in day-to-day operational activities can lead to conflicting priorities. To avoid impact on a project, management should support their new roles and responsibilities and control workloads.

The project team should have expertise in and be responsible for:

a) managing projects;

b) designing and implementing an SMS;

c) defining the procedure for developing and implementing new or changed processes;

d) developing, implementing and integrating processes within the scope of the SMS;

e) minimizing the impact of the SMS implementation on day-to-day activities;

f) testing and measuring the efficiency, effectiveness and continual improvement of processes;

g) managing organizational change, communication and training.

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The project team should be aware that the effectiveness of the SMS depends on the integration of the service management processes. Defining the processes and understanding their integration at the beginning of the project can help ensure the coherent implementation of the SMS based on the requirements specified in ISO/IEC 20000-1. It is also vital to ensure the integration of the SMS requirements and processes into the organization's business processes so that the SMS requirements are not additional to, but part of, business as usual for the organization.

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Process owners and operational managers can play an important role in identifying and managing changes to improve processes. As process owners are identified, they should contribute to and support the project team. Service owners should also support the implementation of the SMS to ensure that it will be able to deliver high-quality services in an efficient way throughout the service lifecycle. Operational managers, who are also process managers, should contribute to the SMS implementation by providing accurate information about the operational level of each process and performing improvement activities to achieve the target level.

For some organizations, the process owner can often be the same individual for multiple processes. Although the process owner role can be combined with the process manager role, there is a risk when one person holds both the owner and manager role within the same process. In some organizations, it can be difficult to separate the roles of process owner and process manager, in which case, additional controls will be required. Other organizations can find benefits in identifying people with increased process specialization and responsibilities. In these organizations, a process owner is only responsible for a single process.

Operational managers, if different from the process owners and service owners, should also be represented on the project team. This ensures they are kept aware of any changes affecting operations. Their involvement also ensures that the plans are realistic and that they minimize the impact on day-to-day operations.

NOTE Guidance on the responsibilities of process owners, process managers and service owners is provided in ISO/IEC 20000-2. For convenience, the definitions are shown here.

— A process owner role is responsible for the design of the process, ensuring adherence to the process and the measurement and improvement of the process.

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— A process manager is responsible for the operation of the process and the management of the process management resources.

— A service owner role (can be a member of top management or an operational manager) is responsible for a service throughout the service lifecycle, including planning, design, transition, delivery, improvement and retirement.

4.9 Outsourcing some part of implementation

When some of the service management implementation activities are outsourced, it is important to ensure that all parties:

— contribute to a successful SMS implementation by taking an active role;

— communicate effectively throughout the implementation;

— understand and confirm the role(s) and responsibilities in implementation;

— agree clear terms and conditions for their part in the implementation of the SMS;

— participate in decision making effectively.

Accountability for the implementation project and its success cannot be delegated in any way to an external supplier. The implementation project team plans and executes under the organization's control and stewardship. If a supplier is unwilling or unable to participate, it may be necessary to find an alternative, if possible. Additionally, the following subclauses in ISO/IEC 20000-1:2018 can be of use when considering outsourcing in an SMS implementation project:

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a) Subclause 4.2 — Understanding the needs and expectations of interested parties;

b) Subclause 6.2 — Service management objectives and planning to achieve them;

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c) Subclause 6.3 — Plan the service management system;

d) Subclause 7.4 — Communication;

e) Subclause 7.5.4 — Service management system documented information;

f) Subclause 8.2.3 — Control of parties involved in the service lifecycle;

g) Subclause 8.3 — Relationship and agreement.

NOTE General guidance for outsourcing is provided in ISO 37500.

4.10 Tools

All organizations will use a variety of toolsets to support their existing operations. Some can be sophisticated, fully able to support an SMS implementation, while others are less able to do this.

For some organizations, the decision to implement an SMS can drive a toolset review and the acquisition of new ones that are better able to support the work.

ISO/IEC 20000-1 does not specify that any particular tool or toolset should be used. Each organization should decide what works best, given their specific requirements and circumstances, e.g. budget limits.

The toolsets should be assessed to ensure that they can support the operation of the SMS as stated in ISO/IEC 20000-1:2018, Clause 8.

In addition, the following subclauses in ISO/IEC 20000-1 can be of particular use:

a) Subclause 7.1 — Resources;

b) Subclause 7.5 — Documented information;

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c) Subclause 7.6 — Knowledge.

4.11 Very small entities

For very small entities (VSEs), there will be challenges in implementing an SMS. These can include staffing of roles and responsibilities, defining the benefits versus the costs and not taking a strict interpretation of the requirements in ISO/IEC 20000-1. For example, ISO/IEC 20000-1 only states that “configuration information shall be recorded to a level of detail appropriate to the criticality and type of services". This does not mean that a VSE is required to buy an expensive configuration management toolset when a spreadsheet can be good enough.

NOTE A VSE is an organization or unit of fewer that 25 people (as defined in ISO/IEC TR 29110-1).

A VSE considering the implementation of an SMS based on ISO/IEC 20000-1 should ask itself questions such as, “How do we manage changes now?”, “How can we improve?” and “What are the benefits of ISO/IEC 20000-1 for us?”.

The requirements in ISO/IEC 20000-1:2018, Clause 8 should be assessed for their applicability in the context of the VSE.

In addition, the following clauses and subclauses in ISO/IEC 20000-1:2018 can be of particular use to a VSE in an SMS implementation project:

a) Subclause 4.3 — Determining the scope of the service management system;

b) Subclause 5.3 — Organizational roles, responsibilities and authorities;

c) Clause 6 — Planning (covered in Clause 5 of this document);

d) Clause 7 — Support of the service management system.

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4.12 Integration with other management systems

Organizations that decide to implement an SMS can already have experience implementing other management systems or can decide to implement an SMS together with another management system such as ISO 9001 or ISO/IEC 27001.

In order to reduce redundancy and become more efficient, one option for organizations is to implement an integrated management system. Although the idea of implementing an integrated management system has many advantages, it can require additional resources, such as longer timelines, timescales and higher costs. The added complexity can expose the organization to new risks. If the organization is unable to manage the risks or allocate additional resources, it will not benefit from implementing an integrated management system. It can also fail to implement an SMS. Understanding the current state of the organization is important in making a decision to implement the SMS separately or to integrate it with other management systems. The following factors should be considered and documented in a business case before making any decision:

— the risks and opportunities (separated and integrated);

— the scope and objectives of an SMS and other management systems (common, partially overlapping or completely separate scope and/or objectives);

— the need to implement an integrated management system (operational or strategic factors);

— the organizational maturity in implementing management systems;

— the impacts of implementing an integrated management system on:

  — customers or interested parties,

  — organizational operations,