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Information Technology — Service Management —

Part 5:

Exemplar implementation plan for ISO/IEC 20000-1:2005

Editor's note:
The title of this document was originally: Information technology Service Management – Part 5: Exemplar of an ISO/IEC 20000 Incremental Implementation Plan. As the use of Incremental created confusion about the difference between this Part 5 and a capability/maturity document the name has been simplified and now more accurately describes the contents.

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electro technical 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC TR 20000-5, which is a Type 2 Technical Report, was prepared by Joint Technical Committee ISO/IEC JTC 1, Information Technology, Subcommittee SC-7, Systems and Software Engineering.

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

−   *Part 1: Requirements*
−   *Part 2: Code of practice*
−   *Part 3: Guidance for the scoping and applicability of ISO/IEC 20000-1*
−   *Part 5: Exemplar implementation plan for ISO/IEC 20000-1*

Introduction

ISO/IEC TR 20000-5 is an exemplar implementation plan providing guidance on how to implement a service management system to meet the requirements of ISO/IEC 20000-1. It includes advice for service providers on a suitable order in which to plan and implement improvements and other necessary changes.

ISO/IEC 20000-1 specifies requirements for a service management system (SMS) to deliver IT services. The requirements are independent of organizational form, type or size. The requirements of ISO/IEC 20000-1 do not change according to the organizational form which provides the management framework within which processes are followed.

The intended users of this part of ISO/IEC 20000 are service providers, but it could also be useful for those advising service providers on how to best achieve the requirements of ISO/IEC 20000-1.

This document should be used only as guidance. No part of this document is mandatory. The service providers have the option of choosing their own implementation sequence to implement the SMS.

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Information technology — Service management —

Part 5:

Exemplar implementation plan for ISO/IEC 20000-1

1   Scope of this document

The applicability of ISO/IEC 20000-1 applies to organizations of all sizes, sectors, types and many different organizational forms or business models.

ISO/IEC 20000-1 specifies requirements for a set of integrated Service Management processes. This part of ISO/IEC 20000 gives guidance on a suitable sequence of activities and phases for implementing the service management system to fulfil the requirements of ISO/IEC 20000-1, including the integration of the processes.

This part of ISO/IEC 20000 proposes a phased approach to implement a SMS. The phased approach provides a structured framework to prioritise and manage the implementation activities. This document suggests, as an example, a generic three phase approach to manage the implementation. The organization may tailor the phases to suit its needs and its constraints.

Implementing the processes one-by-one will not provide the expected short-term benefits because of the inter-relationship between them. This report also includes advice on development of a business case, the start up project and other activities necessary for the implementation to be successful.

The main activities for the development of the business case and start up of the implementation project are shown in Annex A. A list of the main activities required to implement ISO/IEC 20000-1 are in three phases, as shown in Annex B. Many ISO/IEC 20000-1 requirements need to be met by actions over more than one phase, with each phase building upon the achievements of the earlier phase. This part of ISO/IEC 20000 indicates where this is advisable. Once the final phase is completed, the service provider's organization will have an effective SMS. Supporting information that may be useful for the implementation project is provided, including developing objectives, developing policies, document and record management and sample process documentation.

A service provider should ensure that ISO/IEC 20000-1 is applicable to their circumstances. The scope of a service provider's service management system is very important and should be identified and agreed early in the plans for implementing ISO/IEC 20000-1. Guidance on defining the scope or changing an agreed scope of a service management system is provided in ISO/IEC 20000-3: Guidance for the scoping and applicability of ISO/IEC 20000-1. The phasing described in this part of ISO/IEC 20000 does not change the intended scope of the service provider's service management system, i.e. the scope itself is not subject to phased changes as a result of adopting the advice in this part of ISO/IEC 20000. Instead, each phase improves the service management system needed for the service providers agreed scope, building on the results of the previous phase.

This part of ISO/IEC 20000 may also be used in conjunction with ISO/IEC 20000-2: Code of Practice, ISO/IEC TR 20000-4: Process reference model for IT service management and ISO/IEC TR 15504-8: Process assessment model for IT service management.

2   Terms and definitions

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

3   Benefits of a phased approach

Conformity to ISO/IEC 20000-1 is only possible if all requirements of the standard are fulfilled for the scope covered by the SMS. There are many reasons for a phased approach. Phasing is based on identification of a suitable sequence of improvements, each designed to assist in meeting one or more of the ISO/IEC 20000-1 requirements. This presents a much lower risk than attempting to make all the improvements and other changes in one single large phase.

A phased approach allows costs to be incurred over a longer period of time, is more easily funded using revenue budgets instead of the activities being funded from capital budgets and can generate benefits as early as Phase 1. Early benefits can assist in encouraging involvement and funding later phases.

Additional benefits can include:

a)   illustrating the requirements of each phase in a way that can be understood easily by all parties involved or affected by the changes;

b)   allowing the service provider to gain experience with a smaller set of implementation project activities, rather than attempting everything in one big phase;

c)   involving phased use of resources that can be scarce, expensive or already committed to other projects;

d)   increasing customers' confidence in the delivered services;

e)   increasing mutual and long-term trust between the service provider and customers and the service provider and suppliers;

f)   allowing flexible management of events, such as a new service, customer or major incidents;

g)   allow key achievements to be met in a planned sequence.

4   Approach

4.1   Overview

To identify a suitable approach to achieving the requirements of ISO/IEC 20000-1 the following should be considered:

a)   understanding ISO/IEC 20000-1 principles, objectives and requirements;

b)   the objectives and the needs of the business using the IT services;

c)   the experience of the current use of IT from the users point of view;

d)   the current risks and management of risks;

e)   the service provider's business model and objectives;

f)   scope and applicability of ISO/IEC 20000-1;

g)   the current status of the service management system;

h)   current effectiveness of service management processes;

i)   the clarity and suitability of current accountabilities, authorities, roles and responsibilities;

j)   the responsiveness and flexibility of the service provider when changes are necessary;

k)   expected major changes made by or made to the service provider;

74   l)   other conflicting priorities within the service provider;

75   m)   the financial and human resources available for each phase or any constraints that will affect the project.

4.2   Key considerations

77   When implementing the service management system, it should be implemented with the right design and
78   sized to suit business and customer needs and their requirements. To get support and goodwill from the
79   customer, start by implementing those processes where they experience issues.

80   In addition, service providers should consider the impact on people working with the service management
81   system when changing the processes. For example, the service provider should ensure that there is sufficient
82   time allocated for communication, training for people to understand how their day to day activities are to
83   change, the long term benefits and why this is important. This cannot be achieved if the implementation of
84   ISO/IEC 20000-1 relies mainly on document production and procedure descriptions. However documents and
85   descriptions remain important for a successful implementation.

86   One of the risks during implementation of ISO/IEC 20000-1 is that the production of documents can be
87   considered   more   important   than   cultural   change.   Implementing   ISO/IEC 20000-1   should   focus   on
88   understanding and changing practices. Required documents should be viewed as a tool to support the change
89   and should be appropriate to the size and complexity of the organisation.

90   The approach is divided into 3 phases, each one building on the achievements of its predecessor. The
91   structuring of each phase allows important and measurable evidence of achievements against the
92   requirements of ISO/IEC 20000-1.   The phases described below are recommended but may differ from
93   organization to organization.

4.3   Understanding ISO/IEC 20000-1

95   The success of an ISO/IEC 20000-1 implementation relies on people involved understanding the requirements
96   and supporting guidance in the rest of the ISO/IEC 20000 series, the business objectives, the customer needs
97   and requirements and the changing practice. This also includes the principles and objectives of the standard.

4.4   Scope and applicability

99   In the planning activity, the service provider should ensure that ISO/IEC 20000-1 is applicable to their
100   circumstances. This should take into account the scope of the services, activities and the contribution of
101   suppliers.

102   The service provider should perform an initial analysis to identify and agree a suitable scope for their service
103   management system, using the advice in ISO/IEC 20000-3.

4.5   Changes to scope

105   Service providers may plan to implement ISO/IEC 20000-1 for only part of their services and then to expand
106   the scope to a larger proportion of their total activities. The guidance in this document is based on the scope
107   being unchanged during all three phases.

108   When a service provider decides to increase the scope, it is normally easier to do this by following the phases
109   described in this document. It is also normally faster as the service provider by this time has gained practical
110   experience and can extend what has already been done to the larger scope.

4.6   Developing the business case

112   The implementation of ISO/IEC 20000-1 requires management commitment, ownership and sponsorship
113   through all phases.   Based on initial analysis, a business case will help establish understanding and
114   commitment.

115   Gaining management support should be made as soon as possible in the process. For example, management
116   commitment during the development of the business case should ensure the service provider's organizational

goals are aligned with business needs. It will also help sustain commitment and support for each phase and therefore minimize the risks to the success of the planned changes. The business case should include:

a) clear objectives for implementing ISO/IEC 20000-1;

b) recommendation on formal, independent conformity analysis;

c) proposed scope of the service management system;

d) predicted service levels (or changes to service levels) from improved service management processes;

e) changes to workloads, processes, increased use of the service or proactive reduction in support needs;

f) potential cost savings, overall and as unit costs;

g) timescales;

h) estimated resources, including the people directly involved in the project;

i) interested parties affected by or who will be involved in the implementation;

j) risks assessment and recommendations for risk management;

k) costs and use of external resources;

l) proposed terms of reference, project sponsorship and project governance;

m) other direct or indirect benefits such as customer satisfaction, reduced business risks.

4.7   Project sponsorship

To ensure the successful implementation of ISO/IEC 20000-1 the project should have the support and commitment of the top management. This will ensure a focus on business objectives, requirements and constraints including regulatory, contractual and statutory requirements and ensure appropriate prioritisation.

The understanding and the involvement of all interested parties is necessary during all phases, not just during the first phase.

4.8   Gap analysis

The service provider should perform a detailed analysis to evaluate the gap between the current status and ISO/IEC 20000-1 requirements of the scope activities. This should quantify the status of:

a) management system(s) that have already been established, including the scope of each;

b) existence and quality of both documents and records, including:

–   policies;

–   process documentation;

–   procedures;

–   service level agreements;

–   supplier contracts,

–   records of actual achievements by the service provider and suppliers.

c) actual working practices;

d) service reviews, internal audits, conformity analysis that can contribute useful information;

151   e)   workload characteristics and actual service levels;

152   f)   recent or current service improvement plans;

153   g)   accuracy of definitions of roles, responsibilities and authorities, skills and competence of available staff;

154   h)   assessment of the service provider's culture;

155   i)   any major changes planned to the structure, service and/or technology;

156   j)   relevant regulatory, contractual and statutory requirements.

157   The detail in which the analysis is conducted should be tailored to the needs of the service provider and of the
158   service provider's customer base.

4.9   Implementation governance

160   The organization's governance principles and policies, culture and structure should be understood, in addition
161   any other standards, regulatory, contractual and statutory requirements that could impact the delivered service
162   should be considered.

163   The establishment of clear governance for the project within the service provider's overall governance is a
164   critical aspect of a successful implementation. To assist with governance a group of people, managing the
165   project and including management representation, should be identified and allocated this responsibility.

166   The roles, responsibilities, authority and accountability of this group should be agreed before the project starts.
167   This may be done as a terms of reference. Although this document refers throughout to 'the project', in
168   practice there may be several projects working closely together during each phase of the implementation.
169   Coordination and governance of multiple projects is part of this group's responsibilities.

170   During the project this group is responsible for the governance of the service and for the development of the
171   SMS. After the last phase if satisfactorily completed this group may become the group that has responsibility
172   for ensuring the continual improvement cycle is effective. In case, it does not, a new group should be created
173   to ensure efficient continual improvement of the SMS.

174   Part of the implementation governance should be the appointment of a project leader who should have
175   appropriate project management and service management skills.

4.10   Project Readiness

177   Based on both, business case and gap analysis, the project leader, when developing the project plan should
178   take into account the following considerations:

179   a)   timeframe;

180   b)   resources concerns such as:

181   –   skills and competence of implementation project team;

182   –   accommodation, travel, facilities and tools required/available for the implementation.

183   c)   finances including any known constraints on funding the implementation (e.g. capital expenditure not yet
184   in the budget);

185   d)   quality;

186   e)   risks such as issues that can cause conflicting priorities;

187   f)   receptiveness of the organization to cultural change, i.e. the attitude to change within the organization.

188   g)   communication;

189   h)   procurement;

190   i)   procedures review.

4.11   The project team

To ensure a smooth change during the three phases described in chapter 5, the project team should have strong leadership and expertise in implementing service management process and continual improvement principles.

The project leader should balance two following factors when selecting members to the project team:

a)   making use of the experience of staff involved in the established day-to-day activities;

b)   avoiding conflicting priorities for a person involved in both the project and in day-to-day activities.

This is particularly important when day-to-day workloads are unpredictable.

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

1)   designing and implementing management systems;

2)   process definition for new or changed processes;

3)   process implementation and integration;

4)   minimising impact on day-to-day activities;

5)   testing and measuring the effectiveness of processes, including the continual improvement process;

6)   organizational / cultural change and communication.

The effectiveness of the service management system depends on the overall integration of service management processes. Defining the processes and how they are integrated at the beginning of the projects will help in delivering the implementation of ISO/IEC 20000-1 in a coherent manner.

It is important to identify service owners, process owners and operational managers and encourage changes to improve processes and services. As process owners and service owners are identified they should contribute and support the group managing the project as referenced in 4.9.

For small service providers several processes may be owned by a single individual, who may also be an operational manager. For larger service providers there can be benefits from having people involved with more specific interests and responsibilities. Service providers should give special consideration to coordinating this large group of people, especially if they are based at different locations.

Operational managers should also be represented on the project team. This is to ensure that plans are realistic and that staff managers involved in day to day operations are kept aware of any changes that can affect the way they are expected to work.

6

220

5   Overview of phases

222 Figure 1 presents the high level view of the most important ISO/IEC 20000-1 components within each phase,
223 as defined in Annex B.

Management responsibility Documentation requirements Competence, awareness and training

Planning Service Management Implement Service Management & Provide the Services Monitoring, measuring and reviewing Continual improvement

Planning & implementing new or changed services

Service Level Management

Service Reporting

Service Continuity & availability Management

Budgeting & accounting for IT Services

Capacity Management

Information Security Management

Business relationship management

Supplier management

Incident Management

Problem Management

Configuration Management

Change Management

Release Management

Phase 1   Phase 2   Phase 3

Figure 1 — Important components within each of the three phases

224 The plan represents a generic approach and a service provider should adapt the phases and plan to suit their
225 individual circumstances. This will be determined by the recommended initial gap analysis.

226 For example, if the service provider has already implemented processes and has experience of several
227 projects for planning and implementing new services, this will not be required as part of phase 3. Instead of
228 being implemented in phase 3 it should be improved during phase 1 and in later phases will only need
229 improvements such as effective interfaces to new or improved processes such as change management.
230 Development of each of the processes will be very similar in principle.

231 The processes should all be:

232 a) defined;

233 b) documented;

234 c) implemented;

235 d) managed;

236 e) monitored (through an appropriate measurement system);

7

237   f)   reviewed / audited;

238   g)   improved if the review identifies it is necessary to do so.

239   The Plan-Do-Check-Act cycle that forms the core of the service management system requirements of
240   ISO/IEC 20000-1 will be required for monitoring, reviewing and improvement.

6   Taxonomy of each phase

6.1   Objectives of each phase

243   The table below introduces general objectives defined for each phase. Those objectives have driven the
244   definition of the three implementation phases described in Annex B.

Table 1 — Objectives of each phase

Phase 1	Phase 2	Phase 3
Incorporates the findings of the gap analysis and the business case.	Adjustment of plans based on achievement analysis at the end of phase 1.	Adjustment of plans based on achievement analysis at the end of phase 2.
SMS structure implemented including service management plan, initial policies, commitment/accountability, crisis management/reactive processes.	Revision of policies, additional processes, integration of established processes, procedures and other supporting documentation.	Revision of policies, final processes (proactive), integration of all processes, documentation of under-pinning procedures and supporting documents.
On completion of Phase 1 the service provider will have implemented policies, processes and procedures to meet the requirements of ISO/IEC 20000-1 for a basic SMS that focuses on reacting quickly and effectively to service disruptions and requests. The service provider has knowledge of all the services and related components that enable it to react to these service disruptions or requests.	The service provider will have implemented activities, processes, procedures and control of components that enable it to anticipate and avoid service disruptions and requests on completion of Phase 2. The service provider will have stabilized its processes and activities in order to provide a more reliable service to its customers. It will have begun discussing with its customers their future requirements in order to incorporate their need into its plans.	The service provider will have developed a service culture and a good understanding of the customer's business and needs. The effectiveness and efficiency of the services and processes will be measured, including customers' satisfaction and continual improvement of delivered services. Business relationships with both suppliers and customers will be well understood and established. As a result, the service provider will comply with all the requirements of ISO/IEC 20000-1.
Analysis of status at the end of phase 1.	Analysis of status at the end of phase 2.	Analysis of the status at the end phase 3, including a full internal audit and, where appropriate, preparation for conforming to the standard.
By the end of phase 1 the service management system will provide the basis for phase 2.	By the end of phase 2 the service management system will provide the basis for phase 3.	By the end of phase 3 the service management system will provide the basis for stabilization and continual improvements.

246

6.2   Key characteristics of each phase

248 The table below introduces key characteristics used as a basis for defining the three implementation phases
249 described in Annex B.

Table 2 — Characteristics of each phase

ISO/IEC 20000 component	1: React to service disruptions or requests quickly and effectively	2: Anticipate service disruptions or requests and provide a reliable service	3: Fully integrate processes and Improvement in process and procedures
Management responsibility	Service management policy, process specific policies and plan are defined.	Service management policy, process specific policies and plan are updated to include a more reliable service.	Service management policy, process specific policies and plan are updated to include continual improvement.
Documentation requirements	Service management policy and process specific policies and objectives are documented. Established processes and procedures are documented.	Updated service management policy and process specific policies and objectives are documented. Additional processes and procedures are documented and existing ones updated. All service management roles and responsibilities are agreed and documented.	Updated service management policy and process specific policies and objectives are documented. Additional processes and procedures are documented and existing ones updated.
Competence, awareness and training	Service provider personnel understand the services offered to customers. The project team; key line managers, process owners and service owners are aware of ISO/IEC 20000, their role in service management and their responsibilities in the implementation to achieve ISO/IEC 20000.	all service management roles and responsibilities are agreed and documented.	Service provider personnel are aware of ISO/IEC 20000, their role in service management and they are competent to perform their service management activities.
Planning Service Management	Customers are identified and documented. The scope of SMS is defined.	Risks are documented and managed.	
Implement Service Management & provide the services	SMS is established.	SMS is extended.	SMS is completed.
Monitor, measure, reviewing	Events and requests are recorded and analysed.	Reports on the performance of the delivered processes are produced and reviewed.	The performance of the processes are monitored and corrective action taken as required. Internal audit and management reviews take place.
Continual Improvement			A plan to improve the services is developed and implemented.
Planning & implementing new or changed services			The introduction of new or changed services is managed.
Service level management	A basic overview of the Services is documented in a service catalogue;	Targets for the delivered service to the customers are documented and agreed with the customer in SLAs;	Performance of the service is reviewed and areas for improvement identified.
Service reporting	Reports on the performance of the delivered service are produced.	Reports on the performance of the delivered processes are produced.	Customer satisfaction reports are produced.

ISO/IEC 20000 component	1: React to service disruptions or requests quickly and effectively	2: Anticipate service disruptions or requests and provide a reliable service	3: Fully integrate processes and Improvement in process and procedures
Service continuity and availability management		The customer's business needs are used to develop an availability plan. The customer's service continuity requirements are used to develop a service continuity plan which is tested. The availability of services is measured.	Service continuity plan is tested;
Budgeting and accounting for services	Costs are understood and tracked at a simple level.	Budgets and costs are available for each service.	
Capacity management		The customer's business needs are used to develop a capacity plan; The capacity of services is measured.	
Information security management		Security events are recorded and analysed.	Security audits take place
Business relationship management		The performance of the services are reviewed with the customer.	Customer satisfaction is measured and managed; complaints procedure is implemented
Supplier management	Suppliers are identified and documented.	Service targets for services from suppliers are included in a new contract (if revisions are necessary). The performance of the services delivered to the service provider is reviewed with its suppliers.	
Incident management	Events and requests are recorded and analysed.	Recorded events and requests and their resolution are analysed in order to identify action to reduce potential problems and ensure the effectiveness of their solution.	
Problem management		Trend analysis is performed on the incident records.	Monitor the effectiveness of problem resolution.
Configuration management	A list of configuration item categories is produced.	Configuration items are recorded in a CMDB.	Audits of the configuration items take place.
Change management	Changes are recorded and basic risk assessment and scheduling is performed;	Changes are reviewed.	
Release management		Releases are planned in conjunction with the customer and reviewed.	

7 Post implementation

7.1 Continuing governance of SMS and improving service

Having implemented all the changes and improvements needed to achieve the requirements of ISO/IEC 20000-1, the service provider should ensure that these requirements continue to be met.

One method is to appoint a group of interested parties to ensure continuing governance and commitment to continual improvements, including any projects necessary for improvements to the SMS and services provided. This group should include process owners and service owners, with a senior manager who is accountable for the services delivered using the SMS.

The change management process should be applied to assessment of any risks associated with a change proposed by a group and how it can affect the area of responsibility of other groups.

261   **7.2   Plan-Do-Check-Act**

262   One of the most important activities after phase 3 is the continual improvement cycle from application of Plan-
263   Do-Check-Act as described in ISO/IEC 20000-1. This is also how the service provider ensures that the
264   ISO/IEC 20000-1 requirements continue to be met long after the implementation is complete.

265   In order to ensure that the requirements of the standard are maintained, monitored, measured and reviewed,
266   the following activities should be performed:

267   a)   continual monitoring of the services and processes performance,

268   b)   internal audit and management reviews,

269   c)   implementation of plans to improve the services and continually update it.

270   **7.3   Interfaces to projects for new and changed services**

271   The service provider should also ensure that the planning and implementing new and changed services
272   process is maintained to the required level of good practice defined in ISO/IEC 20000-2. For a service
273   provider with a relatively stable environment where services are rarely changed or new services introduced,
274   this aspect of the ISO/IEC 20000-1 requirements will not always understood and therefore its importance can
275   be underestimated and too little attention given to reaching the required standard.

276   The service provider should seek information on changes to the customers' business plans or other changes
277   that can affect the services, both services that are produced in house as well as services received from
278   suppliers or sub-contracted suppliers. It is also important for the business and the customer to inform the
279   service provider about changes, and involve the service provider as early as possible.

280   The service provider should be involved as early as possible in the design of a new service. The service
281   provider should also seek information on changes to the customers' business plans and changes that can
282   affect the services they receive from suppliers and sub-contracted suppliers.

Annex A
(informative)
Start up and business case development

The table below lists the main activities for the start-up project and business case development. This should be considered in the context of the service provider's business needs and business model.

Table A.1 — Project initiation

Project initiation activities	Which manager?
a) Understanding of:	Top
− principles, objectives and requirements of ISO/IEC 20000-1;	
− scope of a service management system to meet ISO/IEC 20000-1 requirements (for all 3 phases), including all relevant suppliers;	
− applicability of ISO/IEC 20000-1 to the service provider's circumstances established.	
b) Business case for gap analysis developed, including costs of gap analysis	Project
c) Business case and funding for gap analysis approved	Top
d) Gap analysis performed of current status against ISO/IEC 20000-1 requirements:	Project
− status of the current service management system (if present);	
− current documents and records;	
− results of service reviews, internal audits or other conformity review;	
− workload characteristics;	
− actual service levels;	
− recent or current service improvement plans;	
− numbers, skills and competences of available staff;	
− major changes that can clash with the implementation;	
− other priorities that can take precedence over the implementation;	
− relevant regulatory, contractual and statutory requirements;	
− experience of other service providers in similar circumstances.	
e) Implementation business case based on the gap analysis and projected cost-benefits developed:	Project
− objectives for implementing ISO/IEC 20000-1;	
− recommendations on formal independent conformity review;	
− proposed scope of the service management system;	
− predicted service levels (or changes to service levels);	
− predicted changes to workloads;	
− cost savings as overall costs and unit costs;	
− other direct or indirect benefits;	
− estimated implementation project resources, including the project team;	
− interested parties affected by or involved in the implementation;	
− risk assessments;	
− risk management recommendations;	
− proposed terms of reference, project sponsorship and project governance.	
f) Implementation business case approved, including costs and benefits from each phase.	Top
g) Decision to implement ISO/IEC 20000-1, based on the business case:	Top
− top manager and other interested parties confirmed as project sponsors;	
− project governance agreed;	
− project team leader agreed;	
− project team structure and resourcing agreed.	
h) Implementation project planned in detail, including for each phase:	Project
− timescales and phasing	
− attitude of managers towards changes to implement ISO/IEC 20000-1;	
− assessment of the organizational culture and ability to adapt;	
− numbers, skills and competences of available implementation project team;	
− financial constraints on funding for the implementation project;	
− accommodation, facilities and other tools available for the implementation project;	
− service owner(s) identified;	
− process owners identified.	
i) Implementation project plan agreed:	Top
− ensures the availability of resources.	

Annex B
(informative)
Three phases of the implementation project

Phase 1, described in this Annex, starts when:

a)   there is commitment to the implementation of ISO/IEC 20000-1;

b)   top management is committed;

c)   plans have been developed for the implementation project, based on the gap analysis;

d)   necessary funds and other resources have been made available;

e)   a group has been established for governance of the implementation project that also gives direction and support.

Each phase ends with an analysis, similar to the gap analysis done during the development of the business case. The results of the analysis are used to adjust the plan and activities for the next phase.

In the table below each task within a phase is identified. Some tasks are repeated different phases, or all three phases, as the scope of the actual SMS aligns with the planned scope of the SMS.

Table B.1— Phases of the implementation project

Activity	Who?	Phase 1	Phase 2	Phase 3
Management responsibility				
a) Ensure SMS polices are defined.	Top management	●	●	●
b) Ensure that the service management policy is appropriate to:				
– the circumstances of the service provider and the stage of implementation reached;	Top management	●	●	●
– policies include a commitment to conform with the requirements of ISO/IEC 20000-1;	Top management	●	●	●
– continually improve the effectiveness of the SMS;	Top management	●	●	●
– provide a framework for reviewing service management objectives.	Top management	●	●	●
c) Ensure the service management policy is reviewed for continual suitability.	Top management	●	●	●
d) Ensure service management objectives are defined.	Top management	●	●	●
e) Ensure service management objectives are reviewed for continuing suitability.	Top management	●	●	●
f) The service management plan is created and maintained in order to achieve the service management policy and objectives.	Top management	●	●	●
g) The importance of meeting customer as well as regulatory, contractual and statutory requirements is communicated.	Top management	●	●	●
h) Ensure that:				
– appropriate communication procedures are established;	Project (or Team member)	●		
– service requirements are determined, documented and met from the business needs and customer requirements;	Business Relationship		●	●
– risks to the services are assessed and managed;	Audit		●	●
– reviews and audits are conducted at planned intervals adequate for the service requirements, service management policy, objectives and current performance;	Audit			●
– assets, including licences, used to deliver the services are managed according to applicable regulatory, contractual and statutory requirements.	Configuration	●	●	●
i) Communication of the service management policy, objectives and plans.	Top management	●	●	●

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Activity	Who?	Phase 1	Phase 2	Phase 3
j) A member of the service provider's management, irrespective of other responsibilities, has:				
– authorities and responsibilities for ensuring that processes needed to support the SMS are established;	Implementation board	●		
– responsibility for reporting to top management on the performance of the SMS, processes and services;	Implementation board	●		
– responsibility for recommending identified improvement to the SMS or service.	Implementation board		●	
Documentation requirements				
a) Obsolete documents and records have been archived or appropriately disposed of.	Project (or Team member) Document	●		
b) A document library is available.	Project (or Team member) Document	●		
c) A document management policy, process(s) and procedure(s) covering the management of both documents and records, including:				
– authorities and responsibilities for the control of documents and records;	Project (or Team member)	●		
– security, legibility and identification of documents and records, including those archived;	Project (or Team member)	●		
– review and updating documents only by authorised individuals;	Project (or Team member)	●		
– availability of a change log for each document;	Project (or Team member)	●		
– controls for authorisation of new versions of documents prior to issue,	Project (or Team member)	●		
– availability of documents and records at points of use;	Project (or Team member)	●		
– control of browse access and updating rights for records and documents;	Project (or Team member)	●		
– identification and management of documents and records under the same process and procedures for internal documents and records;	Project (or Team member)	●		
– archiving and/or disposal of all obsolete or inaccurate documents and records to prevent incorrect use.	Project (or Team member)	●		
d) Documents and records are available and suitable for effective planning, operation and control of the SMS including:				
– Documented service management policy and process specific policies, objectives and service management plan;	Project (or Team member) Documentation	●	●	●
– Documented policies and plans specific to service management processes;	Project (or Team member) Documentation	●	●	●
– Documented processes and procedures are available for all implemented processes;	Project (or Team member) Documentation	●	●	●
– Service documents, including service level agreements, catalogue of services and supplier contracts;	Project (or Team member) Documentation		●	●
– Records needed are available;	Project (or Team member) Documentation	●	●	●
– Documents and records of external origin needed for effective planning, operation and control of the service provider's SMS are available.	Project (or Team member) Documentation		●	●
e) Documents required by the SMS are controlled under the agreed processes and procedures.	Project (or Team member) Documentation	●	●	●
f) Records required by the SMS are controlled under the agreed processes and procedures.	Project (or Team member) Documentation		●	●
g) Documents remain legible, readily identifiable, secure and retrievable.	Documentation		●	●
h) Records remain legible, readily identifiable, secure and retrievable.	Documentation		●	●
Competence, awareness and training				
a) Service management roles, authorities and responsibilities are defined, documented, managed and maintained.	Project (or Team member) Documentation Human resource	●	●	●
b) The necessary competence for personnel performing work affecting service quality are determined.	Project (or Team member) Documentation	●	●	●
c) Appropriate records of education, training, skills and experience are maintained.	Human resource Documentation	●	●	●
d) Human resources are provided as needed to implement the SMS and continually improve its effectiveness.	Top management	●	●	●
e) Support personnel are fully aware of the relevance and importance of their	Top Implementation board		●	●

Activity	Who?	Phase		
		1	**2**	**3**
activities and how they contribute to the achievement of the service objectives.				
f) Training is provided to ensure staff have the correct skills and competences.	Top Implementation board		●	●
g) Human resources are provided as needed to maintain the SMS and continually improve its effectiveness.	Top management		●	●
h) Human resources are determined and provided as needed to enhance customer satisfaction by meeting customer requirements.	Top management			●
Planning Service Management				
a) The scope of the SMS is confirmed and used for planning.	Project (or Team member) Documentation	●		
b) The service provider plans service management in the context of the SMS policies, business needs, customer requirements, regulatory, contractual and statutory requirements, and the requirements of ISO/IEC 20000-1.	Project (or Team member) Documentation	●		
c) The service provider creates and maintains a documented service management plan including:				
– the objectives, requirements and targets that are to be achieved;	Project (or Team member) Documentation	●		
– the internal and external policies, standards, regulatory, contractual and statutory requirements;	Project (or Team member) Documentation		●	
– the processes that are to be operated;	Project (or Team member) Documentation	●		
– the framework of management roles, authorities and responsibilities, owners for each process and managers of suppliers;	Project (or Team member) Documentation	●		
– authorities and responsibilities to establish, implement, operate, monitor, review and improve the processes, plans and services;	Project (or Team member) Documentation		●	
– the interfaces between service management processes;	Project (or Team member) Documentation	●		
– the process for identifying, assessing and managing risks and adverse events to the achievement of the defined objectives and customer requirements;	Project (or Team member) Documentation		●	
– the approach for interfacing to projects that are designing and developing new or changed services;	Project (or Team member) Documentation		●	
– the human, technical, information and financial resources necessary to achieve the defined objectives;	Project (or Team member) Documentation		●	
– service management tools as appropriate to support the processes;	Project (or Team member) Documentation	●		
– how the effectiveness of the SMS, processes and services will be managed, measured, audited and improved.	Project (or Team member) Documentation			●
d) Where a supplier(s) operates some parts of processes within the scope of the SMS, the service provider should plan for how they demonstrate governance of all processes.	Top Project (or Team member)	●		
e) The service provider can demonstrate accountability for and governance of processes, including:				
– control of the definition and interfaces;	Top Project (or Team member)		●	●
– planning and execution of service and process improvements;	Top Project (or Team member)		●	●
– authority to require adherence to the process and provide knowledge and evidence of the execution of the process.	Top Project (or Team member)		●	●
f) Any process specific plans are aligned with the service management plan.	Project (or Team member)		●	●
g) Plans are reviewed at planned intervals and, if applicable, updated.	Project (or Team member)		●	●
Implement Service Management & provide the services				
a) The service provider implements and operates the SMS to deliver services through activities including:				
– management of funds and budgets;	Top Project (or Team member)	●	●	●
– assignment of authorities, roles and responsibilities;	Project (or Team member)	●	●	●
– documentation and maintenance of the policies, plans, processes and procedures under the document management policy, process and procedure(s);	Project (or Team member)	●	●	●
– management of human, technical and information resources;	Service owner	●	●	●

Activity	Who?	Phase 1	Phase 2	Phase 3
– identification, recording and management of risks and adverse events to the services;	Service owner	●	●	●
– reporting on progress against the plans;	Project (or Team member) Service owner	●	●	●
– management of interfaces between service management processes.	Project (or Team member) Service owner		●	●
Monitor, measure, reviewing				
a) The service provider monitors, measures and reports on services and the service management processes.	Project (or Team member) Service Improvement	●	●	●
b) The SMS is reviewed at planned intervals, to ensure its continuing suitability, adequacy and effectiveness to meet the plan and objectives.	Top Service Improvement		●	●
c) The review includes assessing opportunities for improvement and the need for changes to the SMS, including the service management policy and objectives.	Top management		●	●
d) The findings of management reviews are considered and any remedial actions identified.	Audit		●	●
e) Concerns are communicated to relevant interested parties.	Audit		●	●
f) Records from the management reviews are maintained.	Audit		●	●
g) Internal audit criteria, scope, frequency and methods are defined in a policy.	Project (or Team member)			●
h) The selection of auditors and conduct of audits is objective and impartial.	Audit			●
i) There is a documented procedure with responsibilities for planning and conducting internal audits, reporting results and maintaining audit records.	Project (or Team member)			●
j) Internal audit plans take into account the importance of the processes and areas to be audited, as well as the results of previous internal audits.	Audit			●
k) Internal audits are conducted at planned intervals to determine whether the SMS meets:				
– the agreed customer requirements;	Audit			●
– the requirements of ISO/IEC 20000-1.	Audit			●
Continual Improvement				
a) There is a published policy on service improvement.	Project (or Team member)	●		
b) Responsibilities and authorities for improvement identification, assessment, management, monitoring and review are defined.	Project (or Team member)		●	
c) Authorized improvements identified by review, internal audit or other means are prioritized, planned and controlled.	Process Owner Service Improvement		●	●
d) The management responsible for the area where improvements are to be made ensures there is no undue delay.	Process Owner Service Improvement Functional/department		●	●
e) All improvement activities are measured, reported and managed on an ongoing basis.	Service Improvement			●
f) Activities following an internal audit include verification of the actions taken and the reporting of verification results.	Audit			●
g) Activities following an internal audit include verification of the actions taken and the reporting of verification results.	Audit			●
h) The service provider performs activities to:				
– set targets for improvements in quality, value, capabilities, costs, productivity, resource utilization or risk reduction as appropriate;	Top Service owner Service Improvement			●
– consult with all parties involved;	Service Improvement process owners			●
– ensure that all authorized improvements are delivered and that they achieve their intended objectives;	Service Improvement Service owner			●
– implement the authorized improvements;	Service Improvement Process owners			●
– measure, report and communicate the improvements;	Service Improvement Service owner Process owners			●
– compare performance with other reference data such as historic trends or external data;	Service Improvement			●

Activity	Who?	Phase		
		1	2	3
− revise the policies and plans where necessary;	Top Service owner			●
− revise the processes and procedures where necessary.	Service Improvement Process owners			●
Planning & implementing new or changed services				
a) There is a policy stating criteria that identifies new or changed services that can have a major impact on services and customers.	Top Project (or Team member)			●
b) As part of designing and developing a new or changed service the following are considered:				
− cost;	New Service Project Team			●
− organizational impact;	New Service Project Team			●
− technical impact;	New Service Project Team			●
− commercial impact.	New Service Project Team			●
c) The closure of a service is planned and approved through the change management process.	New Service Project Team Change			●
d) Planning for the design and development of the new or changed services also includes planning for roles and responsibilities for:				
− agreement and allocation of budget;	New Service Project Team			●
− identification, assessment and management of risks;	New Service Project Team			●
− recruitment required by the customer, service provider and supplier(s);	New Service Project Team			●
− new skills/competencies required by the customer, service provider and supplier(s);	New Service Project Team			●
− activities to be performed by customers, including training or user acceptance;	New Service Project Team			●
− activities to be performed by the service provider, including any changes to service hours, workloads, service level agreements, processes and procedures;	New Service Project Team			●
− activities to be performed by suppliers, including any changes to supplier contracts or services;	New Service Project Team			●
− changes to the technology used to deliver the service;	New Service Project Team			●
− communication on the new/changed services;	New Service Project Team			●
− timescales;	New Service Project Team			●
− agreed service acceptance criteria (by the service provider, of the service);	New Service Project Team			●
− the expected outcomes from delivering the new or changed services, expressed in measurable terms.	New Service Project Team			●
e) The design, development, test and implementation of new or changed services are planned and approved through the change management process.				●
f) The planned human, technical, information and financial resources are provided.	Top management			●
g) The build and test of the new or changed services are coordinated and supported by the change management, the release and deployment management and the configuration management processes.	Change Release Configuration			●
h) The acceptance of the new or changed services by the service provider and relevant interested parties is recorded against agreed service acceptance criteria before deployment into the live environment.	New Service Project Team			●
i) The outcomes achieved by the new or changed services against the planned outcomes following the deployment are reported to relevant interested parties.	New Service Project Team			●
Service level management				
a) The services are documented and agree with the customer.	Project (or Team member) Service Level	●	●	●
b) The inter-dependencies of the services are documented and agree with the customer.	Project (or Team member) Service Level		●	●

Activity	Who?	Phase		
		1	2	3
c) Each service provided is defined, documented and agreed by the customer and service provider in one or more service level agreements (SLAs).	Project (or Team member) Service Level		●	●
d) SLAs should contain service level targets, workload characteristics, and agreed exceptions.	Project (or Team member) Service Level		●	●
e) The needs of the customer, the business and the service provider are taken into consideration when agreeing service level targets.	Project (or Team member) Service Level		●	●
f) Changes to the list of services and SLAs are planned and authorized using the change management process.	Service Level Change		●	●
g) The list of services and SLAs are reviewed with the customer at planned intervals and maintains them to ensure that they are up to date and remain effective over time.	Service Level			●
h) The service levels against targets are monitored including performance and trend information at regular planned intervals.	Service Level		●	●
i) Results are recorded and reviewed to identify improvements.	Service Level			●
Service reporting				
a) There is an agreed description of each service report including its identity, purpose, audience, frequency and details of the data source.	Project (or Team member) Service reporting	●		
b) Service reports are produced to meet identified business needs, service provider information requirements and customer requirements.	Project (or Team member) Service reporting	●	●	●
c) Service reporting includes:				
– performance against service level targets;	Project (or Team member) Service reporting		●	●
– nonconformities;	Project (or Team member) Service reporting		●	●
– workload characteristics including volumes and periodic changes in workload;	Project (or Team member) Service reporting		●	●
– performance information following significant events including major incidents, new or changed services, or service continuity being invoked;	Project (or Team member) Service reporting		●	●
– trend information;	Project (or Team member) Service reporting		●	●
– customer satisfaction measurements, formal service complaints and results of analysis.	Project (or Team member) Service reporting			●
d) Based on the findings in the service reports decisions are made and appropriate actions initiated and completed.	Project (or Team member) Service Reporting		●	●
e) The decisions and actions are communicated to relevant interested parties.	Service Reporting		●	●
Service continuity and availability management				
a) Service continuity and availability requirements are identified and agreed on the basis of business plans, SLAs and risk assessments.	Service continuity Availability		●	●
b) Service continuity and availability requirements include access rights, service response times and end to end availability of services.	Service continuity Availability		●	●
c) Service continuity and availability plans are developed and reviewed at planned intervals to ensure that requirements are met as agreed.	Service continuity Availability		●	●
d) Service Continuity plans include recovery requirements and documented procedures to be followed in the event of a major loss of service.	Service continuity		●	●
e) These plans are maintained to ensure that they reflect all authorized and implemented requests for change.	Service continuity		●	●
f) The impact of any requested change to a service are assessed on the service continuity and availability plans.	Service continuity Availability		●	●
g) Availability is recorded and compared to agreed requirements	Availability		●	●
h) Unplanned non-availability is recorded, investigated and appropriate actions taken.	Availability		●	●
i) Service continuity and availability plans, contact lists and the configuration management database are available when access to normal locations is prevented.	Service continuity Availability		●	●
j) The service continuity plan includes the return to normal working and agreed availability requirements.	Service continuity		●	●
k) Service continuity and availability plans are tested in accordance with business needs and customer requirements.	Service continuity Availability			●
l) Service continuity and availability are re-tested at every major change to the environment in which the service provider operates.	Service continuity Availability			●

Activity	Who?	Phase		
		1	2	3
m) All tests are recorded.	Service continuity Availability			●
n) Following test failures, corrective actions are identified, agreed, planned and implemented.	Service continuity Availability			●
Budgeting and accounting for services				
a) There is a defined interface between Budgeting and Accounting process and any other financial management processes in the service provider's organization.	Project (or Team member)		●	
b) There are policies and documented procedures for budgeting, and accounting for all service components including:				
– assets, including licences, used to provide the service(s);	Project (or Team member)		●	
– shared resources;	Project (or Team member)			●
– overheads;	Project (or Team member)		●	
– externally supplied services;	Project (or Team member)		●	
– personnel.	Project (or Team member)		●	
c) There are policies and documented procedures apportioning indirect costs and allocating direct costs to services to provide an overall cost for each service.	Project (or Team member)			●
d) There are policies and documented procedures for effective financial control and authorization.	Project (or Team member)		●	
e) Costs are budgeted in sufficient detail to enable effective financial control and decision making.	Finance		●	●
f) The service provider monitors and reports costs against the budget, reviews the financial forecasts and manages costs.	Finance		●	●
g) Information is provided to support the costing of any requested change to a service.	Finance		●	●
Capacity management				
a) Sufficient capacity has been provided to meet current and future agreed requirements.	Capacity		●	●
b) A capacity plan has been created and maintained taking into account human, technical and information resources.	Capacity		●	●
c) Current and forecast agreed demand for services is taken into account when addressing the capacity and performance requirements.	Capacity		●	●
d) The impact on capacity and performance of agreed requirements for availability, continuity and service levels is taken into account when addressing the capacity and performance requirements.	Capacity		●	●
e) Identified time-scales, thresholds and costs for upgrades to service capacity are included when addressing the capacity and performance requirements	Capacity			●
f) The forecast of the impact on capacity and performance of service upgrades and requests for change are included when addressing the capacity and performance requirements.	Capacity			●
g) The potential impact of new technologies and new techniques are included when addressing the capacity and performance requirements.	Capacity			●
h) Evaluation of the potential impact of regulatory, contractual, statutory, industry or organizational changes and data and documented procedures are included to enable predictive analysis.	Capacity			●
i) Methods, procedures and techniques should be implemented to monitor capacity, analyse data and tune performance to provide adequate capacity.	Project (or Team member) Capacity		●	●
Information security management				
a) Information security management objectives and plans are established to implement the security policy and the controls.	Project (or Team member)	●		
b) Information security requirements have been communicated to all appropriate personnel in the service provider, customers and suppliers.	Project (or Team member)	●	●	●
c) The criteria for assessment of information security risks and the acceptable level of risk has been agreed.	Project (or Team member)	●	●	
d) Regular information security risk assessments are conducted.	Security		●	●

Activity	Who?	Phase		
		1	2	3
e) Internal information security audits are conducted, the results are reviewed and any identified improvements recorded, agreed and implemented.	Security			●
f) Appropriate information security controls have been implemented and operated to manage risks related to information security meet the requirements of the information security policy.	Project (or Team member) Security		●	●
g) Information security controls are documented and describe the risks to which the controls relate, their operation and maintenance of the controls.	Project (or Team member)		●	
h) All necessary information security requirements have been documented and agreed with external organizations that need to access, utilise or manage the service provider's information and services in order to reduce risks which can be caused by external parties.	Project (or Team member) Security			●
i) Information security controls are in place to enable the types, volumes and impacts of information security incidents to be quantified, reported and improvements identified.	Project (or Team member) Security			●
j) Requests for change are assessed to identify new or changed information security risks and for impact on existing information security controls.	Security		●	●
k) Information security incidents are managed through the incident management and request fulfilment process.	Incident	●	●	●
Business relationship management				
a) Named individual(s) who is responsible for managing the relationship and customer satisfaction for each customer.	Business Relationship			●
b) The customers and relevant interested parties of the services are identified and documented.	Project (or Team member) Business Relationship	●	●	●
c) Reviews with the customer, at planned intervals, the overall performance of the services and identify any changes required to the service scope, SLA, contract (if present), business needs or the customer requirements.	Business Relationship		●	●
d) Resulting changes to the contract(s) and SLA(s), if required, follow from these reviews.	Business Relationship		●	●
e) Any changes to the contract(s) are subject to the change management process.	Business Relationship Change		●	●
f) Any changes to the SLA(s) are co-ordinated through the service level management process.	Business Relationship Change		●	●
g) The service provider has established a communication mechanism with the customers to aid understanding about the business environment in which the service operates including business needs, customer requirements and major changes, in order to prepare to respond to these needs.	Business Relationship			●
h) The definition of a formal service complaint has been agreed with the customers.	Project (or Team member)			●
i) The service provider has established a documented procedure to deal with service complaints from the customer(s).	Project (or Team member)			●
j) The service provider records, investigate, act upon, report and close the formal service complaints in accordance with the complaints procedure.	Business Relationship			●
k) Where a service complaint has not been resolved through the normal channels, escalation is available to the customers.	Business Relationship			●
l) The service provider regularly measures, reviews and acts upon feedback from regular customer satisfaction surveys including formal surveys of a representative sample of users to cover all services.	Business Relationship			●
Supplier management				
a) There is a named individual(s) who is responsible for managing the relationship, the contract and performance of each supplier.	Supplier		●	●
b) The requirements, scope of the service to be provided by the supplier, list of services and their inter-dependencies, service level targets, workload characteristics, agreed exceptions and communication to be provided by the supplier(s) is agreed and documented.	Project (or Team member) Supplier		●	●
c) The agreement includes the responsibilities of the service provider and the supplier.	Project (or Team member)		●	
d) The agreement includes activities and responsibilities for the expected termination of the contract, early termination of the contract or transfer of service to another party.	Project (or Team member)		●	
e) The supplier's service commitments support and are compatible with the SLA(s) between the service provider and the customers.	Service Level		●	●
f) The interfaces between processes used by each party are documented and	Project (or Team member)		●	●

Activity	Who?	Phase 1	Phase 2	Phase 3
agreed.				
g) All roles and relationships between lead and subcontracted suppliers are documented.	Project (or Team member)		●	●
h) Lead suppliers can demonstrate procedures to manage the subcontracted suppliers to meet contractual requirements.	Supplier		●	●
i) There is a review of the contracts or formal agreements at planned intervals to ensure that customer requirements and contractual obligations are being met and remain relevant.	Supplier		●	●
j) Changes to the contract or other documents agreed by the relevant interested parties, including any changes to service commitments, follow from these reviews as appropriate or at other times as required. Any changes are subject to the change management process.	Supplier		●	●
k) Document the procedure to deal with contractual disputes between the service provider and the suppliers.	Project (or Team member)		●	●
l) Monitor and review the performance by the supplier against agreed service level targets and other contractual commitments.	Service Level		●	●
Incident management				
a) Incidents and service requests are recorded.	Incident	●		
b) All incidents and service requests are recorded.	Incident		●	●
c) Procedures are defined and documented for the recording, prioritization, classification, updating, escalation, resolution and closure of all incidents and service requests.	Project (or Team member)	●		
d) Procedures for prioritization take into account the impact and urgency of incidents and service requests.	Project (or Team member)	●		
e) Procedures are defined and documented to manage the fulfilment of service requests.	Project (or Team member)	●		
f) The customer is kept informed of the progress of their reported incident or service request.	Incident		●	●
g) The customer is alerted in advance if their service levels cannot be met and the escalation procedure is followed.	Incident		●	●
h) All personnel involved in the incident management and request fulfilment process have access to relevant information such as known errors.	Project (or Team member) Incident		●	●
i) All personnel involved in the incident management and request fulfilment process have access to relevant information such as problem resolutions.	Project (or Team member) Incident		●	●
j) All personnel involved in the incident management and request fulfilment process have access to relevant information such as the CMDB.	Project (or Team member) Incident			●
k) The definition of a major incident is documented and agreed by the service provider and customer.	Project (or Team member)	●		
l) Top management are made aware of all major incidents and an individual responsible for managing the major incident through to closure and keeping the customer informed of progress is appointed.	Incident		●	●
m) Major incidents are classified and managed according to a documented procedure.	Project (or Team member) Incident		●	●
n) All major incidents are reviewed and the appropriate actions taken.	Incident		●	●
Problem management				
a) Procedures are defined and documented to identify, minimize or avoid the impact of incidents and problems.	Project (or Team member)	●		
b) Procedures define the recording, prioritization, classification, updating, escalation, resolution and closure of all problems.	Project (or Team member)	●		
c) Problems are identified and recorded where the root cause of one or more incidents is unknown.	Problem	●	●	●
d) The service provider analyses trends and data on incidents and problems to identify the underlying causes and their potential preventive action.	Problem		●	●
e) Changes required in order to remove the underlying causes of problems are raised as a request for change and managed through the change management process.	Problem Change		●	●
f) The effectiveness of problem resolution is monitored, reviewed and reported.	Problem			●
g) All known errors are recorded.	Problem		●	●

Activity	Who?	Phase 1	Phase 2	Phase 3
h) Where the underlying cause has been identified but the problem has not been permanently resolved, the service provider identifies and records any recommended actions to minimise the impact of the known error.	Problem		●	●
i) Up-to-date information on known errors and corrected problems is made available to the incident management and request fulfilment process.	Problem		●	●
Configuration management				
a) The interface to financial asset accounting processes is defined.	Project (or Team member)		●	
b) Definition of a configuration item and its constituent service components is documented.	Project (or Team member)	●		
c) The information to be recorded for each configuration item is defined and includes the documentation and relationships necessary for effective control.	Project (or Team member)	●	●	●
d) All configuration items are uniquely identifiable and recorded in a CMDB to which update access is strictly controlled.	Project (or Team member) Configuration	●	●	●
e) The CMDB is managed to ensure its reliability and accuracy.	Configuration	●	●	●
f) Audits of configuration items are carried out at regular planned intervals and includes recording deficiencies, initiating corrective actions and reporting on the outcome.	Configuration			●
g) The configuration item status, versions, locations, authorized changes, problems, known errors and associated documentation are available to those who require them.	Configuration		●	●
h) The procedure for recording, controlling and tracking versions of identifiable service components is documented.	Project (or Team member)		●	●
i) The documented procedure ensures that the degree of control is sufficient to meet the customer requirements, risk of failure and service criticality.	Project (or Team member)	●		
j) Information is provided to the change management process to enable an analysis of the impact of a requested change on the configuration items.	Configuration	●	●	●
k) Changes to configuration items are traceable and auditable to ensure integrity of the data.	Project (or Team member) Configuration		●	●
l) Configuration control procedures ensure that the integrity of services and service components is maintained.	Project (or Team member)	●		
m) The status of the appropriate configuration items and copies of electronic files are taken before deployment to the customer's live environment.	Configuration		●	●
n) Master copies of configuration items recorded in the CMDB are controlled in secure physical or electronic libraries and referenced by the configuration records.	Configuration		●	●
Change management				
a) Changes with a potentially major impact on how the services and customers operate are designed and developed using the design and development of new or changed services process which interfaces to this change management process.	Change			●
b) A change policy is created that defines the assets which are under the control of the change management process.	Project (or Team member)	●		
c) All changes to assets defined in the policy follow the change management process.	Change		●	●
d) Changes have a defined and documented scope.	Project (or Team member)	●	●	●
e) Requests for change are recorded and classified.	Change	●		
f) All requests for change are recorded and classified.	Change		●	●
g) Requests for change are assessed and authorized before implementation, taking into account the risks, impacts to services and customers, business benefits, technical feasibility and cost.	Change		●	●
h) Procedures are documented and used to control the assessment, authorization and implementation of emergency changes.	Project (or Team member)	●		
i) The activities required to reverse or remedy an unsuccessful change are planned.	Change	●	●	●
j) Changes are reversed or remedied if unsuccessful.	Change		●	●
k) All unsuccessful changes are investigated and appropriate actions taken.	Change		●	●

Activity	Who?	Phase 1	Phase 2	Phase 3
l) A schedule of change containing details of the changes authorized for implementation and their proposed implementation dates is established and communicated to relevant interested parties.	Change		●	●
m) The schedule of change is used as the basis for release scheduling.	Change		●	●
n) All changes are reviewed for effectiveness and any required corrective actions taken as agreed by the customer and service provider.	Change		●	●
o) Configuration information is updated following successful change implementations.	Configuration		●	●
p) Records are analysed at planned intervals to detect increasing levels of changes and emerging trends.	Change			●
q) The results and conclusions drawn from change analysis are recorded and appropriate actions taken.	Change			●
Release management				
a) Establish and agree with the customer a release policy stating the frequency and type of releases, including the deployment of releases.	Project (or Team member)		●	
b) Multiple changes are combined into one or more releases.	Release		●	●
c) Plan with the customers and relevant interested parties the deployment of new or changed services and service components.	Release			●
d) Record the dates for each release, deliverables, methods to be used and references to related requests for change, known errors and problems.	Release		●	●
e) Provide Information to the change management process to support the evaluation of the impact of requested changes on release plans.	Release		●	●
f) Manage emergency releases according to a documented procedure that interfaces to the emergency change procedure.	Release		●	●
g) Test all releases prior to deployment.	Release		●	●
h) Establish a controlled acceptance test environment for the building and testing of releases.	Project (or Team member)		●	●
i) Releases are authorized against defined criteria before deployment.	Project (or Team member) Release		●	●
j) Releases are designed and deployed so that the integrity of hardware, software and other service components is maintained during deployment.	Release		●	●
k) Activities required to reverse or remedy an unsuccessfully deployed release are planned.	Release		●	●
l) Deployment of the releases are reversed or remedied if unsuccessful.	Release		●	●
m) Information about release failures, successes and future release dates is passed to the incident management and request fulfilment process.	Release		●	●
n) Success and failure of releases are measured and analysed. Measurements include incidents related to a release in the period following deployment of a release. Analysis includes evaluation of the impact on the customers and service provider's personnel.	Release		●	●

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Annex C
(informative)
Developing policies

C.1 General principles

The service provider planning to implement ISO/IEC 20000-1 should be aware that setting policies is fundamental to the success of the implementation and of the improvements that will be obtained from the SMS when fully implemented.

As required in ISO/IEC 20000-1, a service management policy should provide top management orientation. This policy will then be declined into process specific policies.

A process policy should provide management direction and be linked to and supported by processes. Processes should in turn be linked to and supported by procedures. If this relationship between policy, process and procedure is present the management and outcome of the implementation are linked to and supported by what is done on a day-to-day basis.

A single policy may have several dependent processes and a single process may have several dependent procedures. Policies, processes and procedures should form a logical set, without overlaps. Any components missing from any of policy, process or procedure should be understood, documented and actions' plan defined. During a conformity assessment the assessor will expect to see a coherence and logical set of policies, processes and procedures that are linked to the service provider's objectives and which in total meet all requirements in ISO/IEC 20000-1.

Policies should be developed to meet the service provider's individual circumstances and be focused on correcting the gaps identified during the initial gap analysis. Policies should then be developed or amended after the initial gap analysis. After each phase of the implementation, policies should be reviewed and revised as the service provider meets more of the requirements of ISO/IEC 20000-1.

After each internal audit that is part of the Plan-Do-Check-Act cycle the policies should again be reviewed and revised when necessary. Similarly, after major changes, for example to the services, technology used to deliver the services, or the service provider's organizational structure, the policies should be reviewed and revised, if necessary. However, once the service provider has an established service management system and an effective continual improvement cycle the policies are much less likely to need revision even after major changes.

Any change to a policy should also initiate a change to process and procedure linked to the revised policy. Similarly, if there is a proposal to change either a process or procedure the decision should take into account whether or not this will still support the policy.

A policy developed by one organization can work very well for that organization's circumstances but be completely inappropriate for another. To adopt another organization's policies can direct the focus of the implementation incorrectly and lead to a failed implementation. Adopting another organization's policies also means the service provider's management and project team have not given enough consideration to what is required for their circumstances, perhaps because they have not been properly understood.

Example policies are provided below to illustrate the differences that can be required across different organizations.

C.2 Example service management policy

This is typically what a service provider should be able to achieve by phase 3, when implementation of ISO/IEC 20000-1 is complete, and the SMS is established. However, it may be developed during phase 1 to set direction for the remaining phases.

a) The service management system will be designed, delivered and maintained under the processes and procedures required by ISO/IEC 20000-1.

b) The interfaces between management processes will be clearly defined, documented and monitored for effectiveness and efficiency.

c) Metrics will be defined to measure the effectiveness and efficiency of processes in the service management system.

d) Annual benchmarking against other leading companies within the same sector will be performed based on developed metrics.

e) The service management policies, processes and procedures will be used to assessing the effectiveness of existing suppliers or to assess the suitability of potential suppliers.

f) Roles and responsibilities will be defined in the service management processes in a consistent and complete manner across all processes.

g) Roles and responsibilities will be used as the basis for training and competence management.

h) Changes to processes or procedures will only be made via the change management process.

i) New staff or those changing roles will be trained to an agreed level of competence in the processes and procedures they perform or are accountable for.

j) The processes and procedures will be regularly reviewed and enhanced to incorporate innovations and improvements beyond the requirements of ISO/IEC 20000-1.

C.3 Example incident management policy

This policy is typical of a service provider in Phase 1, with many of the practices required to meet incident management process requirements, but with many of the other components of the service management system at an earlier stage of implementation or not present at all.

a) The incident management process owner is accountable for the incident management process.

b) All incidents will be allocated a priority and classified by type.

c) The incident management process will use available databases of known problems and frequently asked questions developed or provided by the Service Desk to ensure timely resolution of incidents.

d) All information defined as required in the incident record should be kept up-to-date.

e) Incidents will only be put into 'suspended' status or a change made to the allocated priority of an incident with the formal agreement of the Service Desk, authorized deputy, the user affected by the incident or a representative of the business area affected by a major or high priority incident.

f) The Service Desk will check and correct the classification of incidents before closure and will be responsible for closing of all incident records after agreement with the user affected that the incident has been resolved satisfactorily.

g) Procedures for handling major incidents should be agreed with appointed representatives of the customer, the Service Desk manager and the service owner.

h) Communications on major incidents will be the responsibility of the head of the Service Desk.

i) Service reports will be produced and used to track the efficiency and effectiveness of the incident management process and to identify and recommend additional improvements.

j) Incident resolution that will change any component of the service or infrastructure will be via the change management process.

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Annex D
(informative)
Document and record management

D.1 General principles

Although effective service management is the result of what people actually do, often on a day to day basis, supporting documents and records are important as they provide the continuity of understanding and a basis for training, review and continual improvements.

ISO/IEC 20000 requires and recommends documents and records to be appropriate and available so that staff can perform their roles. The documents do not need to be long or complex for this purpose and in general the service provider should aim to produce documents that are concise, easy to use and understand.

Documents and records also provide some of the evidence for an assessment. Document and record management should be understood and included early in the planning to implement ISO/IEC 20000-1.

D.2 Assessment of documentation

The service provider should include existing documents, records and document management in the gap analysis done for the development of the business case for implementation of ISO/IEC 20000-1.

Common deficiencies that should be checked for during the document assessment include:

a) not all policies required by ISO/IEC 20000-1 are documented;

b) not all processes required by ISO/IEC 20000-1 are documented;

c) not all Procedures required by ISO/IEC 20000-1 are documented;

d) out of date or obsolete documents and records in the same location as current versions;

e) documents including the names of individuals instead of roles or job titles;

f) inclusion of irrelevant details in the body of a document, such as the reasons a new process or procedure was documented;

g) inadequate version control (which risks the wrong version being used in error);

h) no record of why a document was changed in the document history or who authorized the change;

i) excessive numbers of documents and records;

j) documents that are excessively detailed and time consuming to read or difficult to understand;

k) a wide variety of formats, structure and media;

l) missing documents such as plans, objectives, policies, processes, procedures, service level agreements and service records;

m) unnecessary variations on processes and procedures;

n) policies, processes and procedures that are not connected as a logical hierarchy;

o) policies, processes and procedures that overlap or duplicate each other or leave important components of the service management system undocumented;

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427   p)   missing or incomplete records of achievements;

428   q)   a current document or record that in practice has no relationship to reality or expectations;

D.3 Document and record library

A secure document store should be established at the beginning of the implementation project and managed as a valuable resource.

a)   The library may be a single physical library or linked and managed as a single logical library.

b)   Service providers should give thought to the benefits of using electronic documents, intranet and the possibility of creating links between documents or records using hyperlinks.

c)   A service provider may also find it highly beneficial and much easier to manage documents and records by defining documents and records as configuration items and then applying both the change and configuration management processes to them.

d)   The structure of the library should group related documents into a logical set, e.g. (an electronic) folder.

e)   The structure of the library and of documents or records should support easy referencing of dependent documents in a document.

f)   Documents should be based on templates, with a similar structure and format where possible, to simply searching for different parts of each document.

g)   Regulatory, contractual and statutory requirements should be taken into account – for example the period of time a document or record should be retained.

h)   Policies, processes and procedures should be agreed for:

   −   structure of the record library;

   −   the structure and media of the documents;

   −   naming of documents;

   −   version control;

   −   controls and rights on amending or browse only.

i)   Policies, processes and procedures should support control of documents throughout the stages defined in ISO/IEC 20000-1:

   −   creation;

   −   review;

   −   approval;

   −   maintenance;

   −   disposal.

j)   Each stage of the document lifecycle should have a clear set of:

   −   roles;

   −   responsibilities;

   −   accountabilities.

D.4 Document and record planning

In planning the implementation of an SMS, service providers should ensure that there is an appropriate balance between the time allocated to producing documents and the time allocated to changing the way staff and managers behave.

The following should be considered:

a) Out of date or obsolete documents should be archived, or in the last resort, when there is no need for an audit trail of documents to be retained, disposed of.

b) Documents add value only if they represent what should be done in a way that makes them easy and simple to understand and what they describe is effective. Templates, styles and example documents make this easier to do.

c) A record has value if it represents what has been achieved without significant errors and is in a style and format that is easy to understand. It should also record an achievement of interest and add value.

d) The service provider can find that documents vary in format, style or level of detail. For example, policies, processes and procedures should not be inter-mingled in a single document.

e) Procedures previously produced as the result of localized and possibly short-live initiatives normally have little relationship to processes and no relationship to a policy. These should be replaced or amended as part of the logical set of policy, process and procedure.

f) The history of why a process or procedure was documented should be removed from the body of all documents and summarized in a short document history sheet, preferably at the back of the document.

g) The names of individuals should replaced by the role or job title for all documents, except for individuals involved in migrating the document through its lifecycle, for example, the author or manager accountable for authorizing the document for release or disposal.

h) The service provider should ensure that access and retrieval during conformity assessment will possible.