TECHNICAL REPORT

ISO/IEC TR 20000-5

First edition
2010-05-01

Information technology — Service management —

Part 5: Exemplar implementation plan 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

Reference number
ISO/IEC TR 20000-5:2010(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Figures

Tables

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2. The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

In exceptional circumstances, the joint technical committee may propose the publication of a Technical Report of one of the following types:

— type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;

— type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;

— type 3, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

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 Technical Report of type 2, was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 7, *Software and systems engineering*.

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

— *Part 1: Specification*

— *Part 2: Code of practice*

— *Part 3: Guidance on scope definition and applicability of ISO/IEC 20000-1* [Technical Report]

— *Part 4: Process reference model* [Technical Report]

— *Part 5: Exemplar implementation plan for ISO/IEC 20000-1* [Technical Report]

Process assessment model for service management will form the subject of a future Part 8.

Introduction

ISO/IEC 20000-1 specifies the requirements for a service management system (SMS) to deliver IT services and applies to organizations of all sizes, sectors, types and many different organizational forms or business models.

This part of ISO/IEC 20000 is an exemplar implementation plan providing guidance on how to implement an SMS to fulfil the requirements of ISO/IEC 20000-1. 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 fulfil the requirements of ISO/IEC 20000-1.

Included in this part of ISO/IEC 20000 is advice for service providers on a suitable order in which to plan and implement improvements and other necessary changes. It suggests, as an example, a generic three-phase approach to managing the implementation and gives guidance on a sequence of activities and phases for implementing the SMS to fulfil the requirements of ISO/IEC 20000-1, including the integration of processes. The service provider may choose their own sequence to implement the SMS. Also included is advice on the development of a business case, the start up project and other activities necessary for the implementation to be successful.

The phasing described in this part of ISO/IEC 20000 does not change the intended scope of the service provider's SMS, 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 SMS needed for the service provider's agreed scope, building on the results of the previous phase.

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 to implement the SMS based on ISO/IEC 20000-1, in three phases, is shown in Annex B. Many of the requirements of ISO/IEC 20000-1 need to be met by actions over more than one phase, with each phase building upon the achievements of the earlier phase. Once the final phase is completed, the service provider's organization will have an SMS that meets the requirements of ISO/IEC 20000-1. Supporting information for the implementation project is provided.

Information technology — Service management —

Part 5:
Exemplar implementation plan for ISO/IEC 20000-1

1 Scope

This part of ISO/IEC 20000 gives guidance on a phased approach to implement an SMS that fulfils the requirements specified in ISO/IEC 20000-1. The phased approach provides a structured framework to agree priorities and manage the implementation activities.

This part of ISO/IEC 20000 illustrates a generic, three-phase approach to manage the implementation. The service provider can tailor the phases to suit its needs and its constraints.

This part of ISO/IEC 20000 can also be used with ISO/IEC 20000-2, ISO/IEC TR 20000-3 and ISO/IEC TR 20000-4.

2 Normative references

The following referenced document is indispensable for the application of this part of ISO/IEC 20000. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 20000-1:2005, *Information technology — Service management — Part 1: Specification*

3 Terms and definitions

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

4 Benefits of a phased approach

Conformity to ISO/IEC 20000-1 is only possible if all requirements of the standard are fulfilled 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 fulfilling one or more of the requirements of ISO/IEC 20000-1. This allows better and more efficient risk management than attempting to make all the improvements and other changes in one single phase.

A phased approach allows costs to be incurred over a longer period of time, is more easily funded using revenue budgets instead of all 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 of later phases.

Additional benefits can include:

a) illustrating 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) encouraging key achievements being met in a planned sequence.

5 Approach

5.1 Overview

To identify a suitable approach to fulfilling 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;

l) other conflicting priorities within the service provider;

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

n) statutory and regulatory requirements and contractual obligations.

5.2 Key considerations

When implementing the SMS a key consideration is that the system is implemented with the appropriate design to meet the service requirements, based on a statement of the business needs, customer requirements, the needs and limitations of the business and the needs of the service provider, including service levels, statutory and regulatory requirements and contractual obligations.

To get support and goodwill from the customer it can be a good idea to start by establishing and implementing those processes where the customer experiences issues.

In addition, service providers should consider the change process concerning the people working with the SMS. For example the service provider should ensure that there is sufficient time allocated for communication and training and for people to understand how their day to day activities are to change and the long term benefits. This cannot be achieved if the implementation of ISO/IEC 20000-1 relies mainly on document production and procedure descriptions. However documents and descriptions remain important to successful implementation.

One of the risks during implementation of ISO/IEC 20000-1 is that the production of documents can be considered more important than changing how people work. It is important to focus on understanding and changing practices when implementing ISO/IEC 20000-1. Required documents should be viewed as a tool to support the change and should be appropriate to the size and complexity of the organization.

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

5.3 Understanding ISO/IEC 20000-1

The success of an ISO/IEC 20000-1 implementation relies on the people involved understanding the requirements and supporting guidance in the ISO/IEC 20000 series, the service requirements and the changes to practices that will be necessary.

5.4 Scope and applicability

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

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

5.5 Changes to scope

It can happen that a service provider initially plans to implement an SMS based on the requirements of ISO/IEC 20000-1 for only part of their total activities. The service provider then generalizes the implementation to a larger proportion of their activities. The guidance in this part of ISO/IEC 20000 is based on the defined scope being unchanged during all three phases, not on a phased increase in scope of the SMS.

When a service provider decides to increase the scope of the SMS, it can be useful to follow the guidance in this part of ISO/IEC 20000. This is also normally faster as the service provider by this time has gained practical experience and may extend what has already been done to the larger scope.

5.6 Developing the business case

The implementation of ISO/IEC 20000-1 requires management commitment and ownership through all phases. Based on initial analysis, a business case will help establish understanding and commitment. Establishing management support and commitment should also be done as soon as possible when developing the business case. 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 an SMS based on the requirements of ISO/IEC 20000-1;

b) recommendation on formal, independent conformity assessment;

c) proposed scope of the SMS;

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

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

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

g) direct or indirect benefits such as customer satisfaction, employee satisfaction, reduced business risks;

h) timescales;

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

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

k) risks assessment and recommendations for risk management;

l) costs and use of external resources;

m) proposed terms of reference, project support and commitment and project governance.

5.7 Project support and commitment

To ensure the successful implementation of the SMS based on the requirements of ISO/IEC 20000-1, the project should have the support and commitment of the top management. This will ensure a focus on service requirements and constraints, including statutory and regulatory requirements and contractual obligations, and will ensure appropriate priorities are allocated. The understanding and the involvement of all interested parties is necessary during all phases, not just during the first phase.

5.8 Gap analysis

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

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

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

   1) policies;

   2) process documentation;

   3) procedures;

   4) service level agreements;

   5) supplier contracts;

   6) records of actual achievements by the service provider and suppliers;

c) actual working practices;

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

e) workload characteristics and actual service levels;

f) recent or current service improvement plans;

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

h) assessment of the service provider's culture;

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

j) relevant statutory and regulatory requirements and contractual obligations.

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

5.9 Implementation governance

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

The establishment of clear governance for the project within the service provider's overall governance is a critical aspect of a successful implementation. To assist with governance a group of people should be identified, including management representation, which have the responsibility of managing the project. The roles, authorities, responsibilities and accountabilities of this group should be agreed before the project starts. This can be done as a terms of reference. Although this part of ISO/IEC 20000 refers throughout to 'the project', in practice there may be several projects working closely together during each phase of the implementation. Coordination and governance of multiple projects is part of this group's responsibilities.

During the project this group is responsible for the governance of the service and for the development of the SMS. After the last phase is completed it is important to ensure the continual improvement of the SMS. The group that had responsibility for the governance of the service may become responsible for the continual improvement or a new group should be created to take responsibility.

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

5.10 Project readiness

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

a) timeframe;

b) resources concerns such as:

   1) skills and competence of the implementation project team;

   2) accommodation, travel, facilities and tools required/available for the implementation;

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

d) risks such as any issues that can cause conflicting priorities;

e) identify individuals that will receive the outputs of the project and involve them early in the project;

f) the service management maturity of the organisation;

g) receptiveness of the organization to change i.e. the aptitude to change within the organization and the ability of the organization to absorb and manage the change successfully;

h) communication;

i) procurement;

j) review procedures.

5.11 Project team

To ensure a smooth change during the three phases described in Clause 6, the project team should have strong leadership and expertise in establishing and implementing service management processes and continual improvement principles.

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

a) making use of the experience of staff involved in the existing 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:

a) designing and implementing management systems;

b) process definition for new or changed processes;

c) process establishment, implementation and integration;

d) minimizing impact on day-to-day activities;

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

f) organizational change and communication.

The effectiveness of the SMS depends on the overall integration of service management processes. Defining the processes and how they are integrated at the beginning of the project will help in implementing the SMS based on the requirements of ISO/IEC 20000-1 in a coherent manner.

Service owners, process owners and operational managers play an important role in identify and encouraging changes to improve processes and services. As process owners and service owners are identified they should contribute and support the group managing the project.

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 specialist interests and responsibilities. Service providers should give consideration to coordinating this larger 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 Overview of phases

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

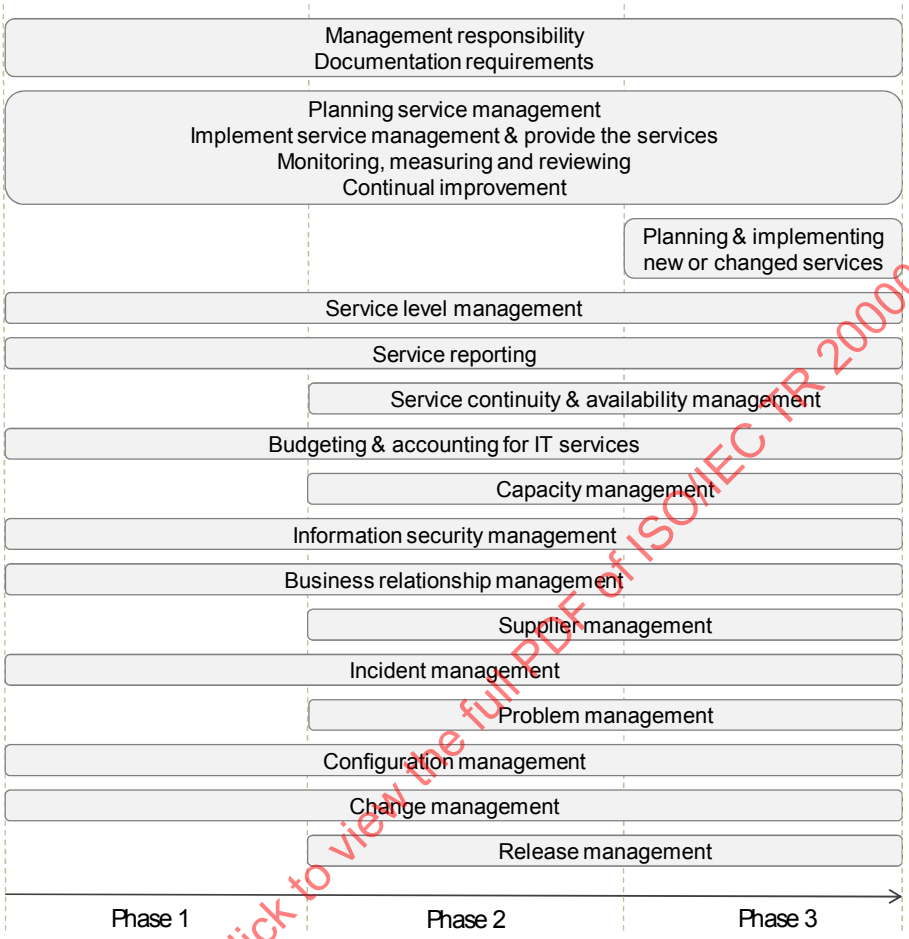

Figure 1 — Important components within each of the three phases

The plan represents a generic approach and a service provider should adapt the phases and plan to suit their individual circumstances based on the output from the recommended initial gap analysis.

For example, if the service provider has already implemented processes and has experience of several projects for planning and implementing new services, rather than being implemented in Phase 3 the process should be improved during Phase 1. In later phases only improvements need to be implemented, such as effective interfaces to new or improved processes.

The processes should be:

a) established;

b) documented;

c) implemented;

d) operated and managed;

e) monitored (through an appropriate measurement system);

f) reviewed / audited;

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

The Plan-Do-Check-Act cycle, that forms the core requirements of ISO/IEC 20000-1, should be used for monitoring, reviewing and improving the SMS, which includes the service management processes and the services.

7 Taxonomy of each phase

7.1 Objectives of each phase

The table below introduces general objectives defined for each phase. These objectives have driven the 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 established and implemented including service management plan, initial policies, commitment/accountability, crisis management/reactive processes.	Revision of policies, additional processes, integration of existing 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 fulfil the requirements of ISO/IEC 20000-1 for a basic SMS, with the focus 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 service requirements, in order to incorporate their needs into its plans.	The service provider will have developed a service culture and a good understanding of the customer's business and service requirements. Measurement of the effectiveness and efficiency of the services and processes will occur, including customers' satisfaction and continual improvement of delivered services. The service provider will have understood and established business relationships with both suppliers and customers. As a result, the service provider will conform to all 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 SMS will provide the basis for Phase 2.	By the end of Phase 2 the SMS will provide the basis for Phase 3.	By the end of Phase 3 the SMS will provide the basis for stabilization and continual improvements.

7.2 Key characteristics of each phase

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

Table 2 — Key characteristics of each phase

ISO/IEC 20000-1 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 and process-specific policies and plan are defined.	Service management policy and process-specific policies and plan are updated to include a more reliable service.	Service management policy and process-specific policies and plan are updated to include continual improvement.
Document and record management	Service management policy and process-specific policies and objectives are documented. Implemented processes and procedures are documented.	Updated service management policy and process-specific policies and objectives are documented. Implemented processes and procedures are documented. Additional processes and procedures are documented and existing ones updated.	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.
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.	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.
Plan the SMS and the service	Customers are identified and documented. The scope of SMS is defined.	Risks are documented and managed.	Effectiveness of SMS is measured
Implement the SMS and provide the service	SMS is established and implemented.	SMS is extended.	SMS is completed.
Monitor, measure, review and internal audit	Events and requests are recorded and analysed.	Reports on the performance of the delivered processes are produced and reviewed.	The performance of the processes is monitored and corrective action taken as required. Internal audit and management reviews take place.
Improvement programme	The concept of service improvement is understood.	Improvements are identified recorded, planned and implemented.	The effectiveness of planned improvements is monitored.
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 service delivered 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.	Reports on the performance of the delivered processes are produced.	Customer satisfaction reports are produced.

ISO/IEC 20000-1 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		Business plans, SLAs and risk assessments are used to develop an availability plan. Business plans, SLAs and risk assessments are used to develop a service continuity plan which is tested. The availability of services is measured.	The 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		Service requirements 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 service performance is 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 (including request fulfilment)	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.	The effectiveness of problem resolution is monitored.
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 post-implementation.	
Release and deployment management		Releases are planned in conjunction with the customer and reviewed.	

8 Post-implementation

8.1 Continuing governance of the SMS and improving service

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

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 the assessment of any risks associated with a change proposed by one group and how it can affect the area of responsibility of another group.

8.2 Plan-Do-Check-Act

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

In order to ensure that the requirements of ISO/IEC 20000-1 continue to be fulfilled the following activities should be performed continually:

a) monitoring of the services and performance of processes;

b) internal audit and management reviews;

c) improvement of the services and processes.

8.3 Interfaces to projects for new and changed services

The service provider should ensure that the planning and deployment of new and changed services is kept up to the required level of good practice. For a service provider with a relatively stable environment, where services are rarely changed or new services are rarely deployed, this aspect of the ISO/IEC 20000-1 requirements is not always understood. Therefore its importance can be underestimated, with too little attention given to reaching the required standard.

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

Annex A
(informative)

Start up and business case development

The table below lists the main activities of 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 — Basis for three phases

Project initiation activities	Which manager?
a) Understanding of: 1) principles, objectives and requirements of ISO/IEC 20000-1; 2) scope of a SMS to fulfil ISO/IEC 20000-1 requirements, including all relevant suppliers; 3) applicability of ISO/IEC 20000-1 to the service provider's circumstances understood.	Top
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 the requirements of ISO/IEC 20000-1: 1) status of the current SMS (if present); 2) current documents and records; 3) results of service reviews, internal audits or other conformity review; 4) workload characteristics; 5) actual service levels; 6) recent or current service improvement plans; 7) numbers, skills and competences of available staff; 8) major changes that can clash with the implementation of ISO/IEC 20000-1; 9) other priorities that can take precedence over the implementation; 10) relevant statutory and regulatory requirements and contractual obligations; 11) experience of other service providers in similar circumstances.	Project
e) Implementation business case based on the gap analysis and projected cost-benefits: 1) objectives for implementing ISO/IEC 20000-1; 2) recommendations on formal independent conformity review; 3) proposed scope of the service management system; 4) predicted service levels (or changes to service levels); 5) predicted changes to workloads; 6) cost savings as overall costs and unit costs; 7) other direct or indirect benefits; 8) estimated implementation project resources, including the project team; 9) interested parties affected by or involved in the implementation; 10) risk assessments and risk management recommendations; 11) proposed terms of reference, project sponsorship and project governance.	Project
f) Implementation business case approved, including costs and benefits from each phase: 1) top manager and other interested parties confirmed as project sponsors; 2) project governance agreed; 3) project team leader agreed; 4) project team structure and resourcing agreed.	Top
g) Implementation project planned in detail, including for each phase: 1) timescales and phasing; 2) attitude of managers towards changes required to implement ISO/IEC 20000-1; 3) assessment of the organizational culture and ability to adapt; 4) numbers, skills and competences of the available implementation project team; 5) financial constraints on funding for the implementation project; 6) accommodation, facilities and other tools available for the implementation project; 7) service owner(s) and process owners identified.	Project
h) Implementation project plan agreed ensuring the availability of resources.	Top

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 an SMS based on the requirements of ISO/IEC 20000-1;

b) top management are 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 achievement 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 of the next phase.

In the table below each activity within a phase is identified, as are the team, group or function responsible for ensuring that each activity is completed. Some activities are repeated in several phases, as the scope of the actual SMS aligns with the planned scope of the SMS.

Table B.1 — Activities in three phases

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

Activity	Phase 1	Phase 2	Phase 3	Responsibility
j) A member of the service provider's management, irrespective of other responsibilities, has:				Implementation board
1) authorities and responsibilities for ensuring that processes needed to support the SMS are known;	•			
2) responsibility for reporting to top management on the performance of the SMS, processes and services;	•			
3) responsibility for recommending identified improvements to the SMS or service.		•		
Document and record management				
a) Obsolete documents and records have been archived or appropriately disposed of.	•	•	•	Project (or team member) Documentation management
b) A document library is available.	•			
c) A document and record management policy, process(s) and procedure(s) are agreed, including:				Project (or team member)
1) authorities and responsibilities for the control of documents and records;	•			
2) security, legibility and identification of documents and records, including those archived;	•			
3) review and update of documents is done only by individuals who have been given the authority to make changes;	•			
4) availability of a change log for each document;	•			
5) controls for approval of new versions of documents before issue;	•			
6) availability of documents and records at points of use;	•			
7) control of browse access and updating rights for records and documents;	•			
8) identification and management of documents and records under the same process and procedures for internal documents and records;	•			
9) archiving and/or disposal of all obsolete or inaccurate documents and records to prevent incorrect use.	•			
d) Documents and records are available and suitable for effective planning, operation and control of the SMS including:				Project (or team member) Documentation management
1) documented service management policy and process-specific policies, objectives and service management plan;	•	•	•	
2) documented policies and plans specific to service management processes;	•	•	•	
3) documented processes and procedures are available for all implemented processes;	•	•	•	
4) service documents, including service level agreements, catalogue of services and supplier contracts;		•	•	
5) records needed are available;	•	•	•	
6) documents and records of external origin needed for effective planning, operation and control of the service provider's SMS are available.		•	•	
e) Documents required by the SMS are controlled under the agreed processes and procedures.	•	•	•	Project (or team member) Documentation management
f) Records required by the SMS are controlled under the agreed processes and procedures.		•	•	
g) Documents remain legible, readily identifiable, secure and retrievable.		•	•	Documentation management
h) Records remain legible, readily identifiable, secure and retrievable.		•	•	
Competence, awareness and training				
a) Service management roles, authorities and responsibilities are defined, documented, managed and maintained.	•	•	•	Project (or team member) Documentation management Human resources
b) The necessary competence for personnel performing work affecting service quality is determined.	•	•	•	Project (or team member) Documentation management
c) Appropriate records of education, training, skills and experience are maintained.	•	•	•	Human resource manager Documentation management
d) Human resources are provided as needed to implement the SMS and continually improve its effectiveness.	•	•	•	Top management

Activity	Phase 1	Phase 2	Phase 3	Responsibility
e) Support personnel are fully aware of the relevance and importance of their activities and how they contribute to the achievement of the service objectives.		•	•	Top management Implementation board
f) Training is provided to ensure staff have the correct skills and competences.		•	•	
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 business needs and customer requirements.			•	
Plan the SMS and the service				
a) The scope of the SMS is confirmed and used for planning.	•			Project (or team member) Documentation management
b) The service provider plans service management in the context of the SMS policies, business needs, customer requirements, statutory and regulatory requirements, contractual obligations, and requirements of ISO/IEC 20000-1.	•			
c) The service provider creates and maintains a documented service management plan including:				
1) the objectives, service requirements and targets that are to be achieved;	•			
2) the internal and external policies, standards, statutory and regulatory requirements and contractual obligations;		•		
3) the processes that are to be operated;	•			
4) the framework of management roles, authorities and responsibilities, owners for each process and managers of suppliers;	•			
5) authorities and responsibilities to establish, implement, operate, monitor, review and improve the processes, plans and services;		•		
6) the interfaces between service management processes;	•			
7) the process for identifying, assessing and managing risks and adverse events to the achievement of the defined objectives and service requirements		•		
8) the approach for interfacing to projects that are designing and developing new or changed services;		•		
9) the human, technical, information and financial resources necessary to achieve the defined objectives;		•		
10) service management tools as appropriate to support the processes;	•			
11) how the effectiveness of the SMS, processes and services is to be managed, measured, audited and improved.			•	
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 management Project (or team member)
e) The service provider can demonstrate accountability for and governance of processes, including:				
1) control of the definition and interfaces;		•	•	
2) planning and execution of service and process improvements;		•	•	
3) the power to require adherence to the process and provide knowledge and evidence of the execution of the process.		•	•	
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.		•	•	
h) Implement the SMS and provide the service				
i) The service provider implements and operates the SMS to deliver services through activities including:				
1) management of funds and budgets;	•	•	•	Top management Project (or team member)
2) assignment of authorities, roles and responsibilities;	•	•	•	Project(or team member)
3) documentation and maintenance of the policies, plans, processes and procedures under the document management policy, process and procedure(s);	•	•	•	

Activity	Phase			Responsibility
	1	2	3	
4) management of human, technical and information resources;	•	•	•	Service owner
5) identification, recording and management of risks and adverse events to the services;	•	•	•	
6) reporting on progress against the plans;	•	•	•	Project (or team member) Service owner
7) management of interfaces between service management processes.		•	•	
Monitor, measure, review and internal audit				
a) The service provider monitors, measures and reports on services and the service management processes.	•	•	•	Project (or team member) Service Improvement management
b) The SMS is reviewed at planned intervals, to ensure its continuing suitability, adequacy and effectiveness to meet the plan and objectives.		•	•	Top management Service Improvement management
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.		•	•	
f) Records from the management reviews are maintained.		•	•	
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 a record of audit activity.			•	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 demonstrates conformity to:				
1) the agreed service requirements;			•	
2) the requirements of ISO/IEC 20000-1.			•	
Improvement programme				
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.		•		
c) Approved improvements identified by review, internal audit or other means are allocated a priority, planned and controlled.		•	•	Process owner Service improvement management
d) The management responsible for the area where improvements are to be made ensures there is no undue delay.		•	•	Process owner Service improvement management Functional management
e) All improvement activities are measured, reported and managed on an ongoing basis.			•	Service improvement management
f) Activities following an internal audit include verification of the actions taken and the reporting of verification results.			•	Audit
g) The service provider performs activities to:				
1) set targets for improvements in quality, value, capabilities, costs, productivity, resource utilization or risk reduction as appropriate;			•	Top management Service owner Service improvement management
2) consult with all parties involved;			•	Service improvement management Process owners
3) ensure that all approved improvements are delivered and that they achieve their intended objectives;			•	Service improvement management Service owner

Activity	Phase 1	Phase 2	Phase 3	Responsibility
4) implement the approved improvements;			•	Service improvement management Process owners
5) measure, report and communicate the improvements;			•	Service improvement management Service owner Process owners
6) compare performance with other reference data such as historic trends or external data;			•	Service improvement management
7) revise the policies and plans where necessary;			•	Top management Service owner
8) revise the processes and procedures where necessary.			•	Service improvement management Process owners
New or changed services				
a) There is a policy stating criteria that identify new or changed services which can have a major impact on services and customers.			•	Top management Project (or team member)
b) As part of designing and developing a new or changed service the following are considered:				New service project team
1) cost;			•	
2) organizational impact;			•	
3) technical impact;			•	
4) commercial impact.			•	
c) The closure of a service is planned and approved through the change management process.			•	New service project team Change management
d) Planning for the design and development of the new or changed services also includes planning for roles and responsibilities for:				New service project team
1) agreement and allocation of budget;			•	
2) identification, assessment and management of risks;			•	
3) recruitment required by the customer, service provider and supplier(s);			•	
4) new skills/competencies required by the customer, service provider and supplier(s);			•	
5) activities to be performed by customers, including training or user acceptance;			•	
6) activities to be performed by the service provider, including any changes to service hours, workloads, service level agreements, processes and procedures;			•	
7) activities to be performed by suppliers, including any changes to supplier contracts or services;			•	
8) changes to the technology used to deliver the service;			•	
9) communication on the new/changed services;			•	
10) timescales;			•	
11) agreed service acceptance criteria (by the service provider, of the service);			•	
12) the expected outcomes from delivering the new or changed services, expressed in measurable terms.			•	
e) Design, development, test and implementation of new or changed services are planned and approved through the change management process.			•	Change management
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 management Release management Configuration management

Activity	Phase			Responsibility
	1	2	3	
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) Outcomes achieved by the new or changed services against the planned outcomes, following the deployment, are reported to interested parties.			•	
Service level management				
a) The services are documented and agree with the customer.	•	•	•	Project (or team member) Service level management
b) The inter-dependencies of the services are documented and agreed with the customer.		•	•	
c) Each service provided is defined, documented and agreed by the customer and service provider in one or more service level agreements (SLAs).		•	•	
d) SLAs contain service level targets, workload characteristics, and agreed exceptions.		•	•	
e) The needs of the customer, the business and the service provider are taken into consideration when agreeing service level targets.		•	•	
f) Changes to the list of services and SLAs are planned and approved using the change management process.		•	•	Service level management Change management
g) The list of services and SLAs are reviewed with the customer at planned intervals and are maintained to ensure that they are up to date and remain effective over time.			•	Service level management
h) The service levels against targets are monitored, including performance and trend information at regular planned intervals.		•	•	
i) Results are recorded and reviewed to identify improvements.			•	
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 management
b) Service reports are produced to meet identified service requirements and service provider's information requirements.	•	•	•	
c) Service reporting includes:				Project (or team member) Service reporting management
1) performance against service level targets;		•	•	
2) nonconformities;		•	•	
3) workload characteristics including volumes and periodic changes in workload;		•	•	
4) performance information following significant events including major incidents, new or changed services, or service continuity being invoked;		•	•	
5) trend information;		•	•	
6) customer satisfaction measurements, formal service complaints and results of analysis.			•	
d) Based on the findings in the service reports, decisions are made and appropriate actions initiated and completed.		•	•	
e) The decisions and actions are communicated to relevant interested parties.		•	•	Service reporting management
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 management Availability management
b) Service continuity and availability requirements include access rights, service response times and end to end availability of services.		•	•	
c) Service continuity and availability plans are developed and reviewed at planned intervals to ensure that requirements are met as agreed.		•	•	
d) Service continuity plans include recovery requirements and documented procedures to be followed in the event of a major loss of service.		•	•	Service continuity management
e) The plans are maintained to ensure that they reflect all approved and implemented requests for change.		•	•	
f) The impact of any requested change to a service is assessed on the service continuity and availability plans.		•	•	Service continuity management Availability management

Activity	Phase			Responsibility
	1	2	3	
g) Availability is recorded and compared to agreed requirements..		•	•	Availability management
h) Unplanned non-availability is recorded, investigated and appropriate actions taken.		•	•	
i) Service continuity and availability plans, contact lists and the configuration management database are available when access to normal locations is prevented.		•	•	Service continuity management Availability management
j) The service continuity planning includes the return to normal working and agreed availability requirements.		•	•	Service continuity management
k) Service continuity and availability plans are tested in accordance with requirements.			•	
l) Service continuity and availability are re-tested at every major change to the environment in which the service provider operates.			•	Service continuity management Availability management
m) All tests are recorded.			•	
n) Following test failures, corrective actions are identified, agreed, planned and implemented.			•	
Budgeting and accounting for services				
a) There is a defined interface between the 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:				
1) assets, including licences, used to provide the service(s);		•		
2) shared resources;			•	
3) overheads;		•		
4) externally supplied services;		•		
5) personnel.		•		
c) There are policies and documented procedures apportioning indirect costs and allocating direct costs to services, to provide an overall cost for each service.			•	
d) There are policies and documented procedures for effective financial control and approval.		•		
e) Costs are budgeted in sufficient detail to enable effective financial control and decision making.		•	•	Finance management
f) The service provider monitors and reports costs against the budget, reviews the financial forecasts and manages costs.		•	•	
g) Information is provided to support the costing of any requested change to a service.		•	•	

Activity	Phase 1	Phase 2	Phase 3	Responsibility
Capacity management				
a) Sufficient capacity has been provided to meet current and future agreed service requirements.		•	•	Capacity management
b) A capacity plan has been created and maintained taking into account human, technical and information resources.		•	•	
c) Current and forecast agreed demand for services is taken into account when addressing the capacity and performance requirements.		•	•	
d) The impact on the capacity and performance of agreed service requirements for availability, continuity and service levels is taken into account when addressing the capacity and performance requirements.		•	•	
e) Identified time-scales, thresholds and costs for upgrades to service capacity are included when addressing the capacity and performance requirements.			•	
f) The forecast of the impact on capacity and performance of service upgrades and requests for change is included when addressing the capacity and performance requirements.			•	
g) The potential impact of new technologies and new techniques is included when addressing the capacity and performance requirements.			•	
h) Evaluation of the potential impact of statutory, regulatory, contractual obligations or organizational changes and data and documented procedures is included to enable predictive analysis.			•	
i) Methods, procedures and techniques are implemented to monitor capacity, analyse data and tune performance to provide adequate capacity.		•	•	Project (or team member) Capacity management
Information security management				
a) Information security management objectives and plans to implement the security policy and the controls are agreed.	•			Project (or team member)
b) Information security requirements have been communicated to all appropriate personnel in the service provider, customers and suppliers.	•	•	•	
c) The criteria for assessment of information security risks and the acceptable level of risk has been agreed.	•	•		
d) Regular information security risk assessments are conducted.		•	•	Security management
e) Internal information security audits are conducted, the results are reviewed and any identified improvements recorded, agreed and implemented.			•	
f) Appropriate information security controls that 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 management
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 management
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.			•	
j) Requests for change are assessed to identify new or changed information security risks and for impact on existing information security controls.		•	•	Security management
k) Information security incidents are managed through the incident management and request fulfilment process.	•	•	•	Incident management
Business relationship management				
a) There is a named individual(s) who is responsible for managing the relationship and customer satisfaction for each customer.			•	Business relationship management
b) The customers and relevant interested parties of the services are identified and documented.	•	•	•	Project (or team member) Business relationship management
c) Review 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) and service requirements.		•	•	Business relationship management
d) Resulting changes to the contract(s) and SLA(s), if required, follow from these reviews.		•	•	

Activity	Phase 1	Phase 2	Phase 3	Responsibility
e) Any changes to the contract(s) are subject to the change management process.		•	•	Business relationship management Change management
f) Any changes to the SLA(s) are co-ordinated through the service level management process.		•	•	
g) The service provider has implemented a communication mechanism with the customers to aid understanding about the business environment in which the service operates including service requirements and major changes, in order to prepare to respond to these needs.			•	Business relationship management
h) The definition of a formal service complaint has been agreed with the customers.			•	Project (or team member)
i) The service provider has implemented a documented procedure to deal with service complaints from the customer(s).			•	
j) The service provider records, investigates, acts upon, reports and closes the formal service complaints in accordance with the complaints procedure.			•	Business relationship management
k) Where a service complaint has not been resolved through the normal channels, escalation is available to the customers.			•	
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.			•	
Supplier management				
a) There is a named individual(s) who is responsible for managing the relationship, the contract and performance of each supplier.		•	•	Supplier management
b) The service 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) are agreed and documented.		•	•	Project (or team member) Supplier management
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.		•		
e) The supplier's service commitments support, and are compatible with, the SLA(s) between the service provider and the customers.		•	•	Service level management
f) The interfaces between processes used by each party are documented and agreed.		•	•	Project (or team member)
g) All roles and relationships between lead and subcontracted suppliers are documented.		•	•	
h) Lead suppliers can demonstrate procedures to manage the subcontracted suppliers to meet contractual obligations.		•	•	Supplier management
i) There is a review of the contracts or formal agreements at planned intervals to ensure that business needs, customer requirements, statutory and regulatory requirements and contractual obligations are being met and remain relevant.		•	•	
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.		•	•	
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 management
Incident management (including request fulfilment)				
a) Incidents and service requests are recorded.	•			Incident management
b) All incidents and service requests are recorded.		•	•	

Activity	Phase			Responsibility
	1	2	3	
c) Procedures are defined and documented for the recording, allocating priority, classification, updating, escalation, resolution and closure of all incidents and service requests.	•			Project (or team member)
d) Procedures for allocating priority take into account the impact and urgency of incidents and service requests.	•			
e) Procedures are defined and documented to manage the fulfilment of service requests.	•			
f) The customer is kept informed of the progress of their reported incident or service request.		•	•	Incident management
g) The customer is alerted in advance if their service levels will not be met and the escalation procedure is followed.		•	•	
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 management
i) All personnel involved in the incident management and request fulfilment process have access to relevant information such as problem resolutions.		•	•	
j) All personnel involved in the incident management and request fulfilment process have access to relevant information such as the CMDB.			•	
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 management
m) Major incidents are classified and managed according to a documented procedure.		•	•	Project (or team member) Incident management
n) All major incidents are reviewed and the appropriate actions taken.		•	•	Incident management
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, priority, classification, updating, escalation, resolution and closure of all problems.		•		
c) Problems are identified and recorded where the root cause of one or more incidents is unknown.		•	•	Problem management
d) The service provider analyses trends and data on incidents and problems to identify the underlying causes and their potential preventive action.		•	•	
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 management Change management
f) The effectiveness of problem resolution is monitored, reviewed and reported.			•	Problem management
g) All known errors are recorded.		•	•	
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.		•	•	
i) Up-to-date information on known errors and corrected problems is made available to the incident management and request fulfilment process.		•	•	
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.	•			
c) The information to be recorded for each configuration item is defined and includes the documentation and relationships necessary for effective control.	•	•	•	
d) All configuration items are uniquely identifiable and recorded in a CMDB to which update access is strictly controlled.	•	•	•	Project (or team member) Configuration management

Activity	Phase			Responsibility
	1	2	3	
e) The CMDB is managed to ensure its reliability and accuracy.	•	•	•	Configuration management
f) Audits of configuration items are carried out at regular planned intervals and include recording deficiencies, initiating corrective actions and reporting on the outcome.			•	
g) The configuration item status, versions, locations, approved changes, problems, known errors and associated documentation are available to those who require them.		•	•	
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 business needs and customer requirements, risk of failure and how critical the service is to the business.	•			
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 management
k) Changes to configuration items are traceable and auditable to ensure integrity of the data.		•	•	Project (or team member) Configuration management
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 management
n) Master copies of configuration items recorded in the CMDB are controlled in secure physical or electronic libraries and referenced by the configuration records.		•	•	
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 management
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 management
d) Changes have a defined and documented scope.	•	•	•	Project (or team member)
e) Requests for change are recorded and classified.	•			Change management
f) All requests for change are recorded and classified.		•	•	
g) Requests for change are assessed and approved before implementation of the change, taking into account the risks, impacts to services and customers, business benefits, technical feasibility and cost.		•	•	
h) Procedures are documented and used to control the assessment, approval and implementation of emergency changes.	•			Project (or team member)
i) The activities required to reverse or remedy an unsuccessful change are planned.	•	•	•	Change management
j) Changes are reversed or remedied if unsuccessful.		•	•	
k) All unsuccessful changes are investigated and appropriate actions taken.		•	•	
l) A schedule of change containing details of the changes approved for implementation and their proposed implementation dates is agreed and communicated to relevant interested parties.		•	•	
m) The schedule of change is used as the basis for release scheduling.		•	•	
n) All changes are reviewed for effectiveness and any required corrective actions taken as agreed by the customer and service provider.		•	•	
o) Configuration information is updated following successful change implementations.		•	•	Configuration management
p) Records are analysed at planned intervals to detect increasing levels of changes and emerging trends.			•	Change management
q) The results and conclusions drawn from change analysis are recorded and appropriate actions taken.			•	

Activity	Phase			Responsibility
	1	2	3	
Release management (including deployment of the release)				
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 management
c) Plan with the customers and relevant interested parties the deployment of new or changed services and service components.			•	
d) Record the dates for each release, deliverables, methods to be used and references to related requests for change, known errors and problems.		•	•	
e) Provide Information to the change management process to support the evaluation of the impact of requested changes on release plans.		•	•	
f) Manage emergency releases according to a documented procedure that interfaces to the emergency change procedure.		•	•	
g) Test all releases before deployment.		•	•	
h) Establish a controlled acceptance test environment for the building and testing of releases.		•	•	Project (or team member)
i) Releases are approved against defined criteria before deployment.		•	•	Project (or team member) Release management
j) Releases are designed and deployed so that the integrity of hardware, software and other service components is maintained during deployment.		•	•	Release management
k) Activities required to reverse or remedy an unsuccessfully deployed release are planned.		•	•	
l) Deployment of the releases is reversed or remedied if unsuccessful.		•	•	
m) Information about release failures, successes and future release dates is passed to the incident management and request fulfilment process.		•	•	
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.		•	•	