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信息技术—服务管理—

第一部分： 规范

信息技术----服务管理---第一部分：规范
Information Technology---- Service management---Part 1: Specification

1 范围	**1 Scope**
本标准规定了服务管理的过程，并作为评估管理的 IT 服务的基础。	This part of ISO/IEC 20000 defines the requirement for a service provider to deliver managed services of an acceptable quality for its customers.
它可以用于：	It may be used :
a) 对外的服务投标；	a) By business that are going out to tender for their services;
b) 要求供应链中的所有服务提供商采用一致性方法；	b) By business that require a consistent approach by all service providers in a supply chain;
c) 作为服务提供商的 IT 服务管理的基准；	c) By service providers to benchmark their IT service management;
d) 作为独立评估的基础；	d) As the basis for an independent assessment;
e) 需要证明有能力提供满足客户需求服务的组织；	e) By an organization which needs to demonstrate the ability to provide services that meet customer requirements ; and
旨在通过流程的有效应用来改进服务，并监控和提高服务质量的组织；	By an organization which aims to improve service through the effective application of processes to monitor and improve service quality

Figure 1 --- Service management processes

能力管理	**服务交付流程**	信息安全管理
	服务级别管理	
服务持续性和可用性管理	服务报告	IT 服务预结算
	控制流程	
	配置管理	
	变更管理	
发布流程		信息安全管理
发布管理	信息安全管理	业务关系管理
	事故管理	供应商管理
	问题管理	

图 1 --- 服务管理流程

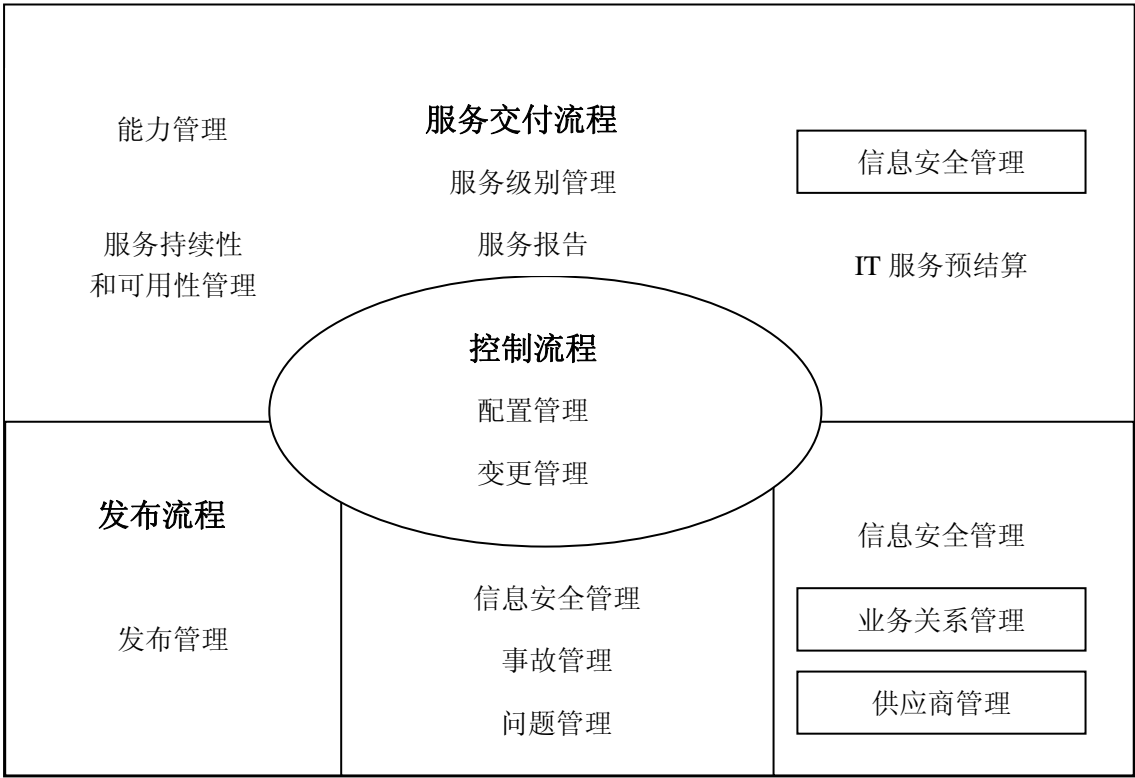|	
ISO/IEC 20000 中本部分指定了大量紧密相关的服务管理流程，如图 1 所示； 流程之间的关系依赖于组织的应用，通常比上图所述的模型更复杂； 目标和控制项的清单包含在 ISO/IEC 20000 的本部分中，组织可以考虑增加所需要的目标和控制项，以满足他们特殊的业务需求。服务提供方和业务之间的特征决定了如何实施 ISO/IEC 20000 的本部分中的要求，以满足整体目标； 基于 ISO/IEC 20000 的本部分中的流程并不提供产品的评估，可是，组织开发服务管理工具、产品和系统可以使用在 ISO/IEC 20000 的本部分和实践指南中，帮助他们开发工具、产品和系统以支持最好的服务管理实践。	This part of ISO/IEC 20000 specifies a number of closely related service management processes, as shown in Figure 1. The relationships between the processes depend on the application within an organization and are generally too complex to model and therefore relationships between processes are not shown in this diagram. The list of objectives and controls contained in this part of ISO/IEC 20000 are not exhaustive, and an organization may consider that additional objectives and controls are necessary to meet their particular business needs. The nature of the business relationship between the service provider and business will determine how the requirements in this part of ISO/IEC 20000 are implemented in order to meet the overall objective. As a process based standard this part of ISO/IEC 20000 is not intended for product assessment. However, organizations developing service management tools, products and system may use both this part of ISO/IEC 20000 and the code of practice to help them develop tools, products and systems that support best practice service management.

2 术语及定义

针对本标准，下列术语及定义被应用：

2.1 可用性

在特定时间或一段时间内，组件或服务执行它的功能的能力；

注：可用性通常被描述为服务实际可用时间和承诺服务时间的比率；

2.2 基线

在某个时间点上服务状态或单个配置项的快照（见 2.4）

2.3 变更记录

记录包含受到影响的配置项（2.4）的详细信息和如何受到授权变更的影响。

2.4 配置项（CI）

架构或条款的组件是，或将是配置管理的控制项。

注：配置项可以广泛的涉及整个系统（包括硬件、软件、文档、单一模块或最小的硬件组件）的复杂性、尺寸、类型和范围。

2.5 配置管理

识别和定义系统中配置、记录和报告配置的状态及验证配置的正确性、完整性的过程；

2.6 文件

信息和存储信息的媒体；

注 1：本标准中，应区分记录与文件（见 2.9），记录是活动的证据，文件是目标的证据；

注 2：文件的例子，如策略声明、计划、程序、服务级别协议和合同；

2.7 事故

不属于服务标准操作的事件， 将导致，或可能导致中断、或降低服务的质量。

注：可能包括请求问题，象"我要怎么做……?"的问题。

2.8 问题

引发一个或多个事故的未知因素；

2.9 记录

描述完成结果的文件或执行活动的证据；

注 1：在本标准中，应区分记录与文件，记录是活动的证据，文件是目标的证据；

注 2：记录的例子，如审核报告、变更请求、事故响应、人员培训记录和寄给客户的发票；

2 Terms and definitions

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

2.1 availability

ability of a component or service to perform its required function at a stated instant or over a stated period of time

NOTE Availability is usually expressed as a ratio of the time that the service is actually available for use by the business to the agreed service hours.

2.2 baseline

Snapshot of the state of a service or individual configuration items at a point in time(see 2.4).

2.3 change record

record containing details of which configuration items(2.4) are affected and how they are affected by an authorized change.

2.4 configuration item (CI)

component of an infrastructure or an item which is, or will be, under the control of configuration management

NOTE Configuration items may vary widely in complexity, size and type, ranging from an entire system including all hardware, software and documentation, to a single module or a minor hardware component.

2.5 configuration management database(CMDB)

Database containing all the relevant details of each configuration item and details of the important relationships between them..

2.6 document

information and its supporting medium

NOTE 1 In this standard, records(see 2.9) are distinguished from documents by the fact that they function as evidence of activities, rather than evidence of intentions.

NOTE 2 Examples of documents include policy statements, plans, procedures, service level agreements and contracts.

2.7 incident

any event which is not part of the standard operation of a service and which causes or may cause an interruption to, or a reduction in, the quality of that service

NOTE This may include request questions such as "How do I…?" calls.

2.8 problem

Unkown underlying cause of one or more incidents.

2.9 record

Document stating results achieved or providing evidence of activities performed.

NOTE1 In this standard, records are distinguished from documents by the fact that they function as evidence of activities, rather than evidence of intentions.

NOTE2 Examples of records include audit report, requests for change, incident reports, individual training records and invoices sent to customers.

2.10 发布

新的或变更的配置项的集合被测试，并引入到生产环境中。

2.11 变更请求

用于详细记录服务和基础架构中配置项的变更请求的表单。

2.12 服务台

面向客户的支持团队，完成大部分的支持工作。

2.13 服务水平协议 （SLA）

服务供应商与客户的协议，它把服务和协议服务级别文件化。

2.14 服务管理

达到业务需求的服务管理。

2.15 服务供应商

为了达到 ISO/IEC20000 标准的组织。

2.10 release

Collection of new and/or changed configuration items which are tested and introduced into the live environment together.

2.11 request for change

Form or screen used to record details of a request for a change to any configuration item within a service or infrastructure.

2.12 service desk

Customer facing support group who do a high proportion of the total support work.

2.13 service level agreement(SLA)

Written agreement between a service provider and a customer that documents services and agreed service levels.

2.14 service management

Management of services to meet the business requirements.

2.15 service provider

The organization aiming to achieve ISO/IEC 20000.

3 管理系统要求

目标：提供包括策略和架构的管理系统，使IT服务被有效的管理和实施。

3.1 管理层责任

通过领导和措施，在组织业务和客户需求范围内，高层管理层应提供它承诺的开发、实施、改进服务管理能力的证据；

管理层应：

a) 建立服务器管理策略、目标和计划；

b) 沟通达到服务管理目标和持续改进需求的重要性；

c) 确保客户需求被定义，并达到提高客户满意度的目标；

d) 指定协调和管理所有服务的管理者代表；

e) 决定和提供资源以计划、实施、监控、评审和改进服务交付和管理，如聘用适当的人员、管理人员调整；

f) 管理服务管理组织和服务的风险；

g) 按计划间隔执行服务管理的评审，确保其持续的稳定、充分和有效；

3.2 文件要求

服务供应商应提供文件和记录来确保有效的计划、运作和控制服务管理，应包括：

a) 文件化的服务管理的策略和计划；

b) 文件化的服务级别协议；

c) 文件化的本标准所需的流程和程序；

d) 本标准所需的记录；

应对建立、评审、申请、维护、报废、控制各种文件和记录制定程序及职责；

注：文件可以保存于任何形式或类型的媒体。

3.3 能力、意识和培训

应定义和维护所有服务管理的角色、职责及有效执行它们需要的能力；

应评审和管理员工能力和培训，使员工有效的履行他们的角色；

高级管理层应确保员工认识他们活动的相关性和重要性，以及他们如何为达到服务管理目标做出贡献。

3 Requirements for a management system

Objective: To provide a management system, including policies and a framework to enable the effective management and implementation of all IT service.

3.1 management responsibility

Through leadership and actions, top/executive management shall provide evidence of its commitment to developing, implementing and improving its service management capability within the context of the organization's business and customers' requirements.

Management shall:

a) Establish the server management policy, objectives and plans;

b) Communicate the importance of meeting the service management objectives and the need for continual improvement;

c) Ensure that customer requirement are determined and are met with the aim of improving customer satisfaction;

d) Appoint a member of management responsible for the co-ordination and management of all services;

e) Determine and provide resources to plan, implement, monitor, review and improve service delivery and management e.g. recruit appropriate staff, manage staff turnover;

f) Manage risks to the service management organization and services; and

g) Conduct reviews of service management, at planned intervals, to ensure continuing suitability, adequacy and effectiveness.

3.2 Documentation requirements

Service provider shall provide documents and records to ensure effective planning, operation and control of service management. This shall include:

a) Documented service management policies and plans;

b) Documented service level agreements;

c) Documented processes and procedures required by this standard; and

d) Records required by this standard.

Procedures and responsibilities shall be established for the creation, review, approval, maintenance, disposal and control of the various types of documents and records.

NOTE: The documentation can be in any form or type of medium.

3.3 Competence, awareness and training

All service management roles and responsibilities shall be defined and maintained together with the competencies required to execute them effectively.

Staff competencies and training needs shall be reviewed and managed to enable staff to perform their role effectively.

Top management shall ensure that its employees are aware of the relevance and importance of their activities and how they contribute to the achievement of the service management objectives.

| 4 服务管理规划和实施	4 Planning and implementing service management
注：PDCA 原理用于全部流程，PDCA 被描述为：	NOTE:The methodology known as "Plan-Do-Check-Act"(PDCA) can be applied to all processes. PDCA can be described as follows:
a) 计划：根据客户要求和组织策略建立目标和流程；	a) Plan: establish the objectives and processes necessary to deliver results in accordance with customer requirements and the organization's policies;
b) 实施：实施流程；	b) Do: implement the processes;
c) 检查：针对于策略、目标和要求对过程和服务进行监控、测量，并报告结果；	c) Check: monitor and measure processes and services against policies, objectives and requirements and report the results;
d) 改进：采取措施以持续改进流程性能；	d) Act: take actions to continually improve process performance.
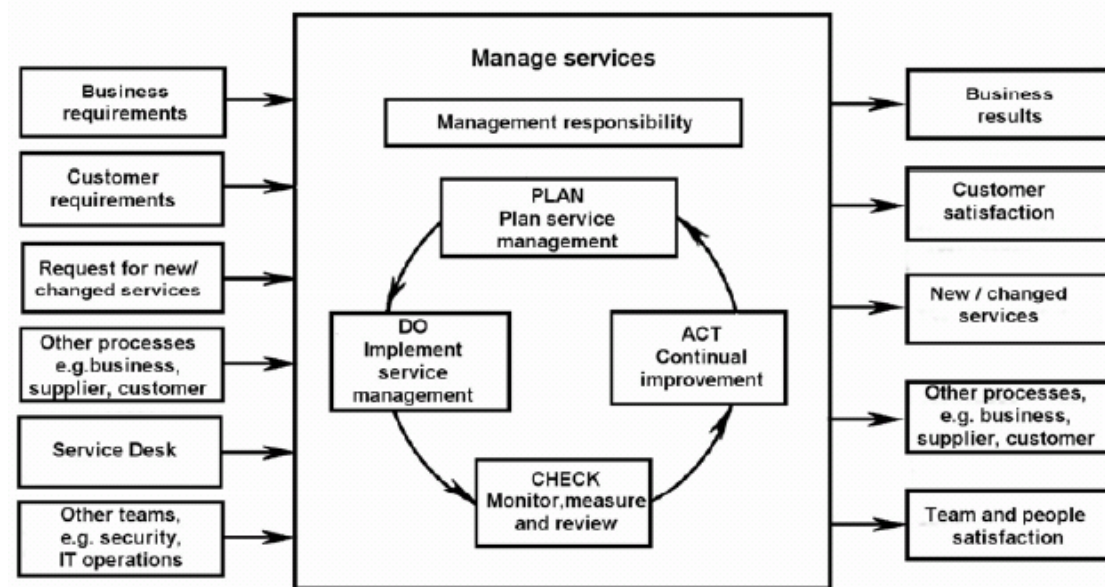
The model shown in Figure 2 illustrates the process and process linkages presented in clauses 4 to 10.
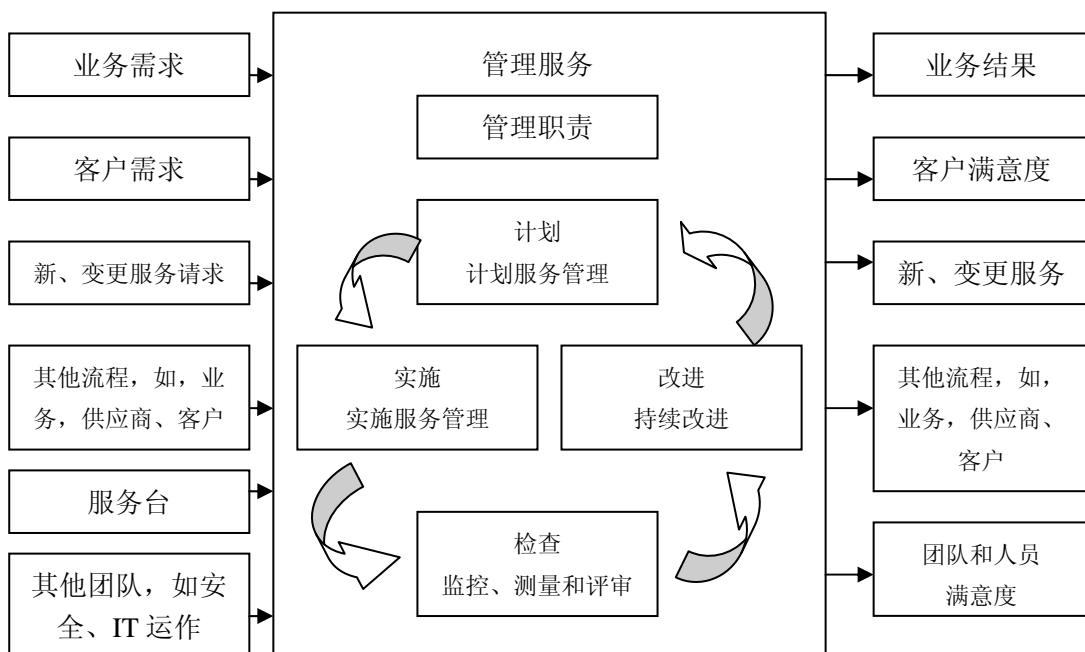
图 2 模型所示在条款 4 至 10 中，流程和流程之间的关联

4.1 计划服务管理（计划）

目标：计划服务管理的实施和交付。

应计划服务管理，计划至少应定义：

a) 服务提供方的服务管理范围；

b) 服务管理实现的目标和需求；

c) 需要执行的流程；

d) 管理角色和职责的框架，包括高级职责所有者、流程所有者和供应商管理层；

e) 服务管理流程和活动协调方式的交互界面；

f) 采取识别、评估、管理问题和风险的方法达到预定目标；

g) 创建或修改服务的项目之间接口连接的方法；

h) 达到预定目标所需的资源、设备和预算；

i) 支持流程的合适工具；

j) 服务质量如何管理、审核和改进；

针对评审、授权、沟通、实施和维护计划，应有清晰的管理方向和文件化的职责；

任何流程计划的制定应与服务管理计划一致。

4.2 实施服务管理和提供服务（实施）

目标：实施服务管理目标和计划；

服务提供方应实施服务管理计划，并管理和交付服务，包括：

a) 资金和预算的分配；

b) 角色和职责的分配；

c) 针对于每一个流程或一组流程，进行文件化和维护策略、计划、程序和定义；

d) 识别服务的风险管理；

e) 团队管理，如：聘用和培养适当的员工和持续的人员管理；

f) 管理设备和预算；

g) 管理团队（包括服务台和运作）；

h) 报告计划的进展；

i) 服务管理流程的协作；

4.3 监控、测量、评审（检查）

目标：监控、测量和评审服务管理目标和计划的完成。

4.1 Plan service management (Plan)

Objective: To plan the implementation and delivery of service management.

Service management shall be planned. The plans shall at a minimum define:

a) The scope of the service provider's service management;

b) The objectives and requirements that are to be achieved by service management;

c) The processes that are to be executed;

d) The framework of management roles and responsibilities, including the senior responsible owner, process owner and management of suppliers;

e) The interfaces between service management processes and the manner in which the activities are to be co-ordinated;

f) The approach to be taken in identifying, assessing and managing issues and risks to the achievement of the defined objectives;

g) The approach for interfacing to projects that are creating or modifying services;

h) The resources, facilities and budget necessary to achieve the defined objectives;

i) Tools as appropriate to support the processes; and

j) How the quality of the service will be managed, audited and improved.

There shall be clear management direction and documented responsibilities for reviewing, authorising, communicating, implementing and maintaining the plans.

Any process specific plans produced shall be compatible with this service management plan.

4.2 Implement service management and provide the service (Do)

Objective: To implement the service management objectives and plan.

The service provider shall implement the service management plan to manage and deliver the services, including:

a) Allocation of funds and budgets;

b) Allocation of roles and responsibilities;

c) Documenting and maintaining the policies, plans, procedures and definitions for each process or set of processes;

d) Identification and management of risks to the service;

e) Managing teams, e.g. recruiting and developing appropriated staff and managing staff continuity;

f) Managing facilities and budget;

g) Managing the teams including service desk and operations;

h) Reporting progress against the plans; and

i) Co-ordination of service management process.

4.3 Monitoring, measuring and reviewing (Check)

Objective: To monitor, measure and review that the service management objectives and plan are being achieved.

服务提供方应使用适当的方法监控、测量服务管理流程，这些方法能证明流程能达到预计的结果；

管理层应按预定时间间隔执行评审，决定服务管理需求是否：

a) 与服务管理计划一致，并达到本标准的要求；

b) 有效的实施和维护；

应制定审核计划，考虑被审核流程和区域的重要性和状态，以及上次审核的结果。应在程序中定义审核标准、范围、频率和方法。审核员的选择和审核的执行都要确保审核过程的公正性和客观性。审核员不能审核自己的工作；

服务管理目标的评审、评估和审核应被记录，以及审核和评审的发现、任何定义的补救措施也都应被记录。任何重要区域的不符合项和观察项应与相关方沟通。

4.4 持续改进（改进）
目标：提高服务交付和管理的效果和效率。

4.4.1 策略
发布服务改进的策略。任何不符合标准或服务管理计划的都应被纠正。清晰的定义服务改进活动的角色和职责。

4.4.2 改进管理
所有建议的服务改进措施应被评估、记录、区分优先次序和授权。计划用于控制活动。
服务提供方应有适当的流程去定义、测量、报告和管理改进活动，应包括：

a) 单独流程的改进由流程的所有者使用普通员工资源进行实施，改进，如：执行单独的纠正和预防措施；

b) 不同组织或不同流程之间的改进；

4.4.3 活动
服务提供方应执行下列活动：

a) 收集和分析数据作为服务提供方能力的基线和标杆，管理和交付服务和服务管理流程；

The service provider shall apply suitable methods for monitoring and, where applicable, measurement of the service management processes. These methods shall demonstrate the ability of the processes to achieve planned results.

Management shall conduct reviews at planned intervals to determine whether the service management requirements:

a) Conform with the service management plan and to the requirements of this standard; and

b) Are effectively implemented and maintained.

An audit programme shall be planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. The audit criteria, scope, frequency and methods shall be defined in a procedure. The selection of auditors and conduct of audits shall ensure objectivity and impartiality of the audit process. Auditors shall not audit their own work.

The objective of service management reviews, assessments and audits shall be recorded together with the findings of such audits and reviews and any remedial actions identified. Any significant areas of non-compliance or concern shall be communicated to relevant parties.

4.4 Continual improvement (Act)
Objective: To improve the effectiveness and efficiency of service delivery and management.

4.4.1 Policy
There shall be a published policy on service improvement. Any non-compliance with the standard or the service management plans shall be remedied. Roles and responsibilities for service improvement activities shall be clearly defined.

4.4.2 Management of improvements
All suggested service improvements shall be assessed, recorded, prioritized and authorized. A plan shall be used to control the activity.
The service provider shall have a process in place to identify, measure, report and manage improvement activities on an ongoing basis. This shall include:

a) Improvements to an individual process that can be implemented by the process owner with the usual staff resources, e.g. performing individual corrective and preventive actions; and

b) Improvements across the organization or across more than one process.

4.4.3 Activities
The service provider shall perform activities to :

a) Collect and analyse data to baseline and benchmark the service provider's capability to manage and deliver service and service management processes;

b) Identify, plan and implement improvements;

b) 识别、计划和实施改进；	c) Consult with all parties involved;
c) 与所有相关方协商；	d) Set targets for improvements in quality, costs and resource utilization;
d) 设置质量、成本和资源利用的改进目标；	e) Consider relevant inputs about improvements from all the service management processes;
e) 考虑所有服务管理流程改进的相关输入；	
f) 服务改进的测量、报告和沟通；	f) Measure, report and communicate the service improvements;
g) 修订服务管理策略、流程、程序和计划；	g) Revise the service management policies, processes, procedures and plans where necessary; and
h) 确保所有批准的措施被交付，并能达到预期目标。	h) Ensure that all approved actions are delivered and that they achieve their intended objectives.

5 规划和实施新服务或变更服务 目标：确保新服务和变更服务以协议成本和服务质量来交付和管理。 新服务或变更服务的提议要考虑由服务发布和管理产生的成本、组织、技术和商业影响。 通过正式的变更管理来计划和核准新服务或变更服务（包括关闭服务）的实施； 计划和实施应包含足够的资金和资源，满足服务交付和管理变更的需要；	**5 Planning and implementing new or changed services** Objectives: To ensure that new services and changes to services will be deliverable and manageable at the agreed cost and service quality. Proposals for new or changed services shall consider the cost, organizational, technical and commercial impact that could result from service delivery and management. The implementation of new or changed services, including closure of a service, shall be planned and approved through formal change management. The planning and implementation shall include adequate funding and resources to make the changes needed for service delivery and management.
计划包括： a) 实施、运作、维护新服务和变更服务（包括客户和供应商所执行的活动）的角色和职责 b) 更改已存在的服务管理框架和服务； c) 与相关方的沟通； d) 新的或变更的合同和协议与商业需求一致； e) 人力和招聘需求； f) 技能和培训需求，如用户、技术支持； g) 使用与新服务或变更服务相关的流程、测量、方法和工具，如能力管理、财务管理； h) 预算和时间范围 i) 服务接收标准； j) 在可测量的条件下快速运作新服务所期望的结果；	The plans shall include: a) The roles and responsibilities for implementing, operating and maintaining the new or changed service including activities to be performed by customers and suppliers; b) Changes to the existing service management framework and services; c) Communication to the relevant parties; d) New or changed contracts and agreements to align with the changes in business need; e) Manpower and recruitment requirements; f) Skills and training requirements, e.g. users, technical support; g) Processes, measures, methods and tools to be used in connection with the new or changed service, e.g. capacity management, financial management; h) Budgets and time-scales; i) Service acceptance criteria; and j) The expected outcomes from operating the new service expressed in measurable terms.
新服务和变更服务实施到现实环境之前，应被服务提供方接收； 服务提供方应报告新服务或变更服务按计划实施所达到的结果，通过变更管理流程，执行实施评审，比较实际结果与期望结果。	New or changed services shall be accepted by the service provider before being implemented into the live environment. The service provider shall report on the outcomes achieved by the new or changed service against those planned following its implementation. A post implementation review comparing actual outcomes against those planned shall be performed through the change management process.

6 服务交付流程	**6 Service delivery process**
6.1 服务水平管理	**6.1 service level management**
目标：定义、协商、记录和管理服务级别。	Objective: To define, agree, record and management levels of service.
提供服务的全部范围、相关服务水平目标及工作量特征应与相关方达到协议，并予以记录；	The full range of services to be provided together with the corresponding service level targets and workload characteristics shall be agree by the parties and recorded.
每个提供的服务应定义、协商和文件化成一个或多个服务级别协议（SLAs）；	Each service provided shall be defined, agreed and documented in one or more service level agreements (SLAs).
SLA、支持服务协议、供应商合同及相关程序应与所有相关方达成协议，并予以记录；	SLAs, together with supporting service agreements, supplier contacts and corresponding procedures, shall be agreed by all relevant parties and recorded.
SLA 应由相关方按时间间隔进行评审，确保它们被更新和保持有效；	The SLAs shall be maintained by regular reviews by the parties to ensure that they are up-to-date and remain effective over time.
针对目标去监控和报告服务级别，显示当前和发展趋势信息；	Service levels shall be monitored and reported against targets, showing both current and trend information.
报告和评审不符合项的原因，记录此流程中识别的改进措施，并作为服务改进计划的输入。	The reasons for non-conformance shall be reported and reviewed. Actions for improvement identified during this process shall be recorded and provide input into a plan for improving the service.
6.2 服务报告	**6.2 Service reporting**
目标：产生经协商、及时、可靠、准确的报告，以支持决策和有效沟通。	Objective: To produce agreed, timely, reliable, accurate reports for informed decision making and effective communication.
应清晰描述每份服务报告的特性、目的、读者及数据来源的详细资料；	There shall be a clear description of each service report including its identity, purpose, audience and details of the data source.
应编制服务报告以满足已定义的需求和客户要求，服务报告应包括：	Service reports shall be produced to meet identified needs and customer requirements. Service reporting shall include:
a) 执行服务级别目标；	a) performance against service level targets;
b) 不符合项和结论，如违反 SLA、安全事件；	b) non-compliance and issues, e.g. against the SLA, security breech;
c) 工作量特征，如，数量、资源利用；	c) workload characteristics, e.g. volume, resource utilization;
d) 报告下列主要事件，如，主要事故、变更；	d) performance reporting following major events, e.g. major incidents and changes;
e) 趋势信息；	e) trend information;
f) 满意度分析；	f) satisfaction analysis.
在服务报告中，发现应考虑管理决策和纠正措施，并应与相关方沟通。	Management decisions and corrective actions shall take into consideration the findings in the service reports and shall be communicated to relevant parties.
6.3 服务持续性和可用性管理	**6.3 Service continuity and availability management**
目标：确保在所有环境下达到承诺给客户的服务持续性和可用性；	Objective: To ensure that agreed service continuity and availability commitments to customers can be met in all circumstances.
可用性和服务持续性需求作为业务计划、SLA 和风险评估的基础；需求就包括访问权限、响应时间以及端到端的系统组件的可用性；	Availability and service continuity requirements shall be identified on the basis of business plans, SLAs and risk assessments. Requirements shall include access rights and response times as well as end to end availability of system components.

应开发可用性和服务持续性计划，并至少一年评审一次，以确保从普通环境到服务重大损失的各种环境下能达到协商的需求。计划应进行维护，确保能反映业务需求的改变；

当业务环境发生重大变化时，应重新测试可用性和服务持续性计划；

变更管理流程应评估可用性和服务持续性计划任何变更的影响；

可用性应被测量和记录，未计划的不可用应被调查，并采取适当措施；

注：应预知可能的、潜在的问题，并采取预防措施。

服务持续性计划、合同清单和配置管理数据库应有效，但要避免普通办公人员访问，服务持续计划应包括恢复到正常工作状态；

应根据业务需求测试服务持续计划，应记录全部持续测试，并对失败的测试阐述计划采取的措施。

6.4 IT 服务预算和结算

目标：提供服务成本的预算和结算。

注：本部分涉及 IT 服务的预算和结算。实际上，许多服务提供商为这些服务进行计费。这些服务计费是灵活选择的，因此，并不包括本标准中。服务提供方推荐应充分的定义计费机制，并获得所有相关方理解。结算活动应与服务提供方组织的结算活动一致。

应有清晰的策略和流程：

a) 应对所有部分进行预算和结算，包括 IT 资产、共享资源、管理费用、额外提供服务、人员、保险和许可证。

b) 服务直接成本和间接成本的分配；

c) 有效的财务控制和授权；

应详细的预算成本，确保有效财务控制和进行决策；

服务提供方应监控和报告预算成本，评审财务预测和管理成本；

应计算服务变更成本，并通过变更管理流程进行批准。

Availability and service continuity plans shall be developed and reviewed at least annually to ensure that requirements are met as agreed in all circumstances from normal through to a major loss of service. These plans shall be maintained to ensure that they reflect agreed changes required by the business.

The availability and service continuity plans shall be re-tested at every major change to the business environment.

The change management process shall assess the impact of any change on the availability and service continuity plan.

Availability shall be measured and recorded. Unplanned non-availability shall be investigated and appropriate actions taken.

NOTE Where possible, potential issues should be predicted and preventive action taken.

Service continuity plans, contact lists and the configuration management database shall be available when normal office access is prevented. The service continuity plan shall include the return to normal working.

The service continuity plan shall be tested in accordance with business needs.

All continuity tests shall be recorded and test failures shall be formulated into action plans.

6.4 Budgeting and accounting for IT services

Objective: To budget and account for the cost of service provision.

NOTE This section covers budgeting and accounting for IT services. In practice, many service providers will be involved in charging for such services. However, since charging is an optional activity, it is not covered by the standard. Service providers are recommended that where charging is in use, the mechanism for doing so is fully defined and understood by all parties. All accounting practices in use should be aligned to the wider accountancy practices of the service provider's organization.

There shall be clear policies and processes for:

a) budgeting, and accounting for all components including IT assets, shared resources, overheads, externally supplied service, people, insurance and licences;

b) apportioning indirect costs and allocating direct costs to services;

c) effective financial control and authorization.

Costs shall be budgeted in sufficient detail to enable effective financial control and decision making.

The service provider shall monitor and report costs against the budget, review the financial forecasts and manage costs accordingly.

Changes to services shall be costed and approved through the change management process.

6.5 能力管理

目标：确保服务供应商一直保持有效的能力去满足当前和未来客户业务需求。

能力管理应制定和维护能力计划；

能力管理应描述业务需求，包括：

a) 当前和预计的能力和性能需求；

b) 针对服务升级所定义的时间表，阀值和成本；

c) 评估预期的服务升级、变更请求、新技术和技术能力的效果；

d) 预计外部变更的影响，如，法律；

e) 对数据和流程进行预先分析；

应定义监控服务能力、调整服务性能和提供充分能力的方法、程序和技术；

6.6 信息安全管理

目标：有效的管理所有服务活动的信息安全。

注：ISO/IEC 17799，信息技术—安全技术—信息安全管理实践指南提供了信息安全管理的指南。

适当的授权管理的信息安全策略应被批准，并与所有相关人员和客户进行沟通。

应运行适当的安全控制：

a) 实施信息安全策略的需求；

b) 管理访问服务或系统的风险；

应文档化安全控制，文档应描述相关控制的风险，及运行和维护控制的方式；

在控制变更实施之前，应评估其影响；

安排（包括外部组织）访问信息系统和服务时，应基于定义所有必要安全需求的正式协议；

应报告和记录安全事故，并尽可能符合事故管理程序。程序应确保调查所有安全事故，并采取管理措施；

应确定量化和监控安全事故的类型、数量和影响的适当机制。流程中定义的改进措施应被记录，并输入服务改进计划；

6.5 Capacity management

Objective: To ensure that the service provider has, at all times, sufficient capacity to meet the current and future agreed demands of the customer's business needs.

Capacity management shall produce and maintain a capacity plan.

Capacity management shall address the business needs and include:

a) current and predicted capacity and performance requirements;

b) identified time-scales, thresholds and costs for service upgrades;

c) evaluation of effects of anticipated service upgrades, requests for change, new technologies and techniques on capacity;

d) predicted impact of external changes, e.g. legislative;

e) data and processes to enable predictive analysis.

Methods, procedures and techniques shall be identified to monitor service capacity, tune service performance and provide adequate capacity.

6.6 Information security management

Objective: To manage information security effectively within all service activities.

NOTE ISO/IEC 17799, Information technology — Security techniques — Code of practice for information security management provides guidance on information security management.

Management with appropriate authority shall approve an information security policy that shall be communicated to all relevant personnel and customers where appropriate.

Appropriate security controls shall operate to:

a) implement the requirements of the information security policy;

b) manage risks associated with access to the service or systems.

Security controls shall be documented. The documentation shall describe the risks to which the controls relate, and the manner of operation and maintenance of the controls.

The impact of changes on controls shall be assessed before changes are implemented.

Arrangements that involve external organizations having access to information systems and services shall be based on a formal agreement that defines all necessary security requirements.

Security incidents shall be reported and recorded in line with the incident management procedure as soon as possible. Procedures shall be in place to ensure that all security incidents are investigated, and management action taken.

Mechanisms shall be in place to enable the types, volumes and impacts of security incidents and malfunctions to be quantified and monitored. Actions for improvements identified during this process shall be recorded and provide input into a plan for improving the service.

7 关系流程

7.1 总则

关系流程包括两个方面：供应商管理和业务关系管理。

7.2 业务关系管理

目标：在理解客户和他们的业务基础之上，服务提供方与客户之间建立和维护良好的关系。

服务提供方应识别和文件化服务的利益相关方和客户；

服务提供方和客户每年应参加服务评审，讨论服务范围、SLA、合同或业务需求的变化，并在协商的时间间隔内举行中间会议，讨论性能、成绩、结果和措施计划。这些会议应文件化；

服务的其他利益相关方也应被邀请参加会议；

如果合同发生变更，在会议上应对 SLA 相应改变。变更应依据变更管理流程；

服务提供方为了准备响应，应保持理解业务需求和主要变更；

应有投诉流程。正式服务投诉的定义应经客户同意，提供方应记录、调查、反应、报告和关闭所有正式服务投诉。如投诉不能通过正常渠道解决，应针对客户采取进一步措施；

服务提供方应指定人员负责管理客户满意度和整体业务关系流程。应有流程去获得和反应定期衡量客户满意度的反馈。记录流程中定义的改进措施，并输入服务改进计划。

7.3 供应商管理

目标：管理供应商，以确保无缝的、有品质的服务。

注 1：本标准的范围不包括供应商的选择；

注 2：供应商通常由服务提供方提供部分服务，服务提供方需要证明与供应商管理流程一致；下图是复杂关系示范的例子：

7 Relationship processes

7.1 General

Relationship processes describe the two related aspects of Supplier Management and Business Relationship Management.

7.2 Business relationship management

Objective: To establish and maintain a good relationship between the service provider and the customer based on understanding the customer and their business drivers.

The service provider shall identify and document the stakeholders and customers of the services.

The service provider and customer shall attend a service review to discuss any changes to the service scope, SLA, contract (if present) or the business needs at least annually and shall hold interim meetings at agreed intervals to discuss performance, achievements, issues and action plans. These meetings shall be documented.

Other stakeholders in the service may also be invited to the meetings.

Changes to the contract(s), if present, and SLA(s) shall follow from these meetings as appropriate. These changes shall be subject to the change management process.

The service provider shall remain aware of business needs and major changes in order to prepare to respond to these needs.

There shall be a complaints process. The definition of a formal service complaint shall be agreed with the customer. All formal service complaints shall be recorded by the service provider, investigated, acted upon, reported and formally closed. Where a complaint is not resolved through the normal channels, escalation shall be available to the customer.

The service provider shall have a named individual or individuals who are responsible for managing customer satisfaction and the whole business relationship process. A process shall exist for obtaining and acting upon feedback from regular customer satisfaction measurements. Actions for improvement identified during this process shall be recorded and input into a plan for improving the service.

7.3 Supplier management

Objective: To manage suppliers to ensure the provision of seamless, quality services.

NOTE 1 The scope of this standard excludes the procurement of the suppliers.

NOTE 2 Suppliers may be used by the service provider for provision of some part of the service. It is the service provider who needs to demonstrate conformity to these supplier management processes. Complex relationships may be present as demonstrated in the diagram below which is used as an example:
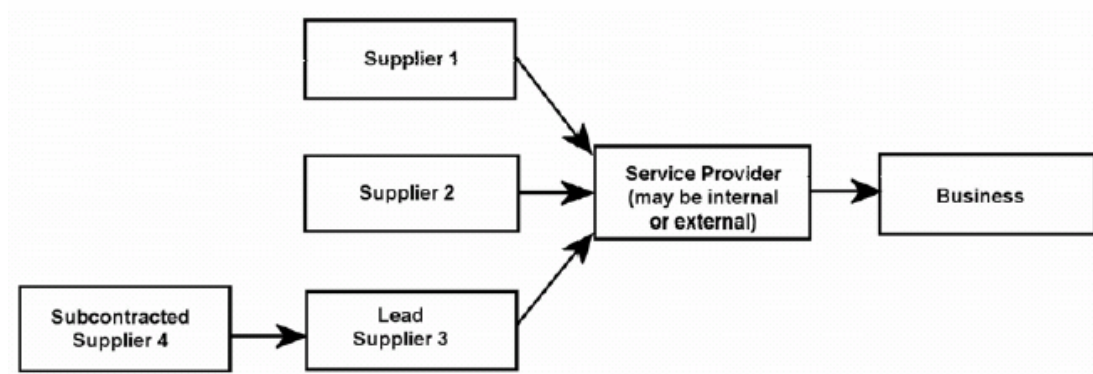
Figure 3 — Example of relationship between service providers and suppliers

图 3 服务提供方与供应商之间关系

| 服务提供方应有文件化的服务供应商管理流程，并指定合同经理负责不同的供应商。 供应商提供的需求、范围、服务水平和沟通流程应文件化在 SLA 或其他文件中，并获得所有相关方的同意； 供应商的 SLA 应于业务的 SLA 相关联； 各方流程之间的接口应文件化并进行协商； 在直接供应商和分包供应商之间的所有角色和关系应清晰的文件化。直接供应商应能保证确保分包供应商达到合同要求的流程。 应有适当的流程去定义至少一年一次评审合同或正式协议，以确保能满足业务需求和合同责任； 如果存在合同变更，在评审中（或其他指定时间）应对 SLA 相应改变。变更应依据变更管理流程； 应有流程处理合同纠纷； | The service provider shall have documented supplier management processes and shall name a contract manager responsible for each supplier. The requirements, scope, level of service and communication processes to be provided by the supplier(s) shall be documented in SLAs or other documents and agreed by all parties. SLAs with the suppliers shall be aligned with the SLA(s) with the business. The interfaces between processes used by each party shall be documented and agreed. All roles and relationships between lead and subcontracted suppliers shall be clearly documented. Lead suppliers shall be able to demonstrate processes to ensure that subcontracted suppliers meet contractual requirements. A process shall be in place for a major review of the contract or formal agreement at least annually to ensure that business needs and contractual obligations are still being met. Changes to the contract(s), if present, and SLA(s) shall follow from these reviews as appropriate or at other times as required. Any changes shall be subject to the change management process. A process shall exist to deal with contractual disputes. |

应有适当的流程处理服务正常终止、服务提前终止或服务转移到其他方；	A process shall be in place to deal with the expected end of service, early end of the service or transfer of service to another party.
应监控和评审服务水平目标的执行，记录流程中定义的改进措施，并输入服务改进计划。	Performance against service level targets shall be monitored and reviewed. Actions for improvement identified during this process shall be recorded and input into a plan for improving the service.
8 解决方案流程 **8.1 背景** 事故和问题管理是独立流程，虽然它们有紧密的联系。	**8 Resolution processes** **8.1 Background** Incident and problem management are separate processes, although they are closely linked.
8.2 事故管理 目标：尽可能快的恢复承诺的服务或响应服务请求。 所有的事故应被记录； 应采用程序管理事故的影响； 程序应规定所有事故的记录、优先级、分类、更新、调整、解决方案和正式关闭； 应保持通知客户事故报告或服务请求的进展，如果不能达到承诺的服务水平，应提前警告并采取承诺的措施； 与事故管理有关的所有员工应有权访问相关信息，如，知名错误、问题解决方案和配置管理数据库（CMDB）； 主要的事故应分类并按流程管理；	**8.2 Incident management** Objective: To restore agreed service to the business as soon as possible or to respond to service requests. All incidents shall be recorded. Procedures shall be adopted to manage the impact of incidents. Procedures shall define the recording, prioritization, business impact, classification, updating, escalation, resolution and formal closure of all incidents. The customer shall be kept informed of the progress of their reported incident or service request and alerted in advance if their service levels cannot be met and an action agreed. All staff involved in incident management shall have access to relevant information such as known errors, problem resolutions and the configuration management database (CMDB). Major incidents shall be classified and managed according to a process.
8.3 问题管理 目标：主动的识别和分析事故的原因，减少对业务的破坏，并管理问题的关闭。 所有识别的问题应记录； 应建立程序以识别、最小化或避免服务问题的影响。程序应规定所有问题的记录、优先级、分类、更新、调整、解决和关闭； 应采取预防措施减少潜在问题，如，事故数量和类型的趋势分析； 为了纠正问题的潜在原因，通过变更管理流程执行所需要的变更； 问题解决方案应监视、评审并报告问题解决方案的有效性； 问题管理应确保及时更新知名错误和纠正问题的信息，并对事故管理有效； 应记录本流程定义的改进措施，并输入服务改进计划。	**8.3 Problem management** Objective: To minimize disruption to the business by proactive identification and analysis of the cause of incidents and by managing problems to closure. All identified problems shall be recorded. Procedures shall be adopted to identify, minimize or avoid the impact of incidents and problems. They shall define the recording, classification, updating, escalation, resolution and closure of all problems. Preventive action shall be taken to reduce potential problems, e.g. following trend analysis of incident volumes and types. Changes required in order to correct the underlying cause of problems shall be passed to the change management process. Problem resolution shall be monitored, reviewed and reported on for effectiveness. Problem management shall be responsible for ensuring up-to-date information on known errors and corrected problems is available to incident management. Actions for improvement identified during this process shall be recorded and input into a plan for improving the service.

9 控制流程

9.1 配置管理

目标：定义并控制服务和基础设施的组件，维护准确的配置信息。

使用集成原理来变更和配置管理计划；

服务提供商应定义财务资产统计流程的接口；

注：财务资产统计超出本标准范围；

应定义配置项和组成要素的流程；

应记录每个被定义的项目，包括针对有效服务管理的关系和所需文档；

配置管理应提供机制去识别、控制和跟踪被识别的服务和构架组件的版本。应确保控制程度达到业务需求、失败的风险和服务危险程度；

配置管理应提供给变更管理流程的关于服务和基础架构配置请求变更影响的信息，配置项的变更应被适当的追踪和评审，如，软件和硬件的变更和迁移；

配置控制程序应确保维护系统、服务和服务组件的完整性；

在发布到现实环境之前，应采用合适的配置项的基线；

数字的配置项主要拷贝应控制在安全的物理环境或电子资料库中，并参考配置记录，如，软件、测试产品和支持文档；

所有配置项应有唯一的标识和记录在配置管理数据库（CMDB），并严格控制更新，应对 CMDB 积极管理和验证，确保其可靠和准确。相关人员应可以访问配置项的状态、版本、位置、相关变更、问题和相关文档；

配置评审程序应缺陷记录、执行纠正措施和报告结果。

9.2 变更管理

目标：确保以受控的方式去评估、批准、实施和评审所有的变更。

服务和架构变更应有清晰定义的和文件化的范围；

所有的变更请求应被记录和分类，如，急迫、紧急、主要、次要。变更请求应评估其风险、影响和业务利益；

变更管理流程应包括变更不成功时的修订和

9 Control processes

9.1 Configuration management

Objective: To define and control the components of the service and infrastructure and maintain accurate configuration information.

There shall be an integrated approach to change and configuration management planning.

The service provider shall define the interface to financial asset accounting processes.

NOTE Financial asset accounting falls outside the scope of this section.

There shall be a policy on what is defined as a configuration item and its constituent components.

The information to be recorded for each item shall be defined and shall include the relationships and documentation necessary for effective service management.

Configuration management shall provide the mechanisms for identifying, controlling and tracking versions of identifiable components of the service and infrastructure. It shall be ensured that the degree of control is sufficient to meet the business needs, risk of failure and service criticality.

Configuration management shall provide information to the change management process on the impact of a requested change on the service and infrastructure configurations. Changes to configuration items shall be traceable and auditable where appropriate, e.g. for changes and movements of software and hardware.

Configuration control procedures shall ensure that the integrity of systems, services and service components are maintained.

A baseline of the appropriate configuration items shall be taken before a release to the live environment.

Master copies of digital configuration items shall be controlled in secure physical or electronic libraries and referenced to the configuration records, e.g. software, testing products, support documents.

All configuration items shall be uniquely identifiable and recorded in a CMDB to which update access shall be strictly controlled. The CMDB shall be actively managed and verified to ensure its reliability and accuracy. The status of configuration items, their versions, location, related changes and problems and associated documentation shall be visible to those who require it.

Configuration audit procedures shall include recording deficiencies, initiating corrective actions and reporting on the outcome.

9.2 Change management

Objective: To ensure all changes are assessed, approved, implemented and reviewed in a controlled manner.

Service and infrastructure changes shall have a clearly defined and documented scope.

All requests for change shall be recorded and classified, e.g. urgent, emergency, major, minor. Requests for changes shall be assessed for their risk, impact and business benefit.

The change management process shall include the manner in which the change

补救方式； 变更应被批准和检查，并以受控方式实施； 变更实施后，应评审所有变更是否成功和采取的措施； 应有策略和程序去控制紧急变更的授权和实施； 计划实施日期的变更通常应基于变更和发布计划。包含所有变更详细信息的计划的执行应被批准，建议实施的日期应被维护和与相关方沟通； 应有规律的分析变更记录，检查变更增加的级别、频繁发生的类型、呈现的趋势和其他相关信息。变更分析的结果和结论应被记录； 应记录由变更管理定义的改进措施，并输入服务改进计划。	shall be reversed or remedied if unsuccessful. Changes shall be approved and then checked, and shall be implemented in a controlled manner. All changes shall be reviewed for success and any actions taken after implementation. There shall be policies and procedures to control the authorization and implementation of emergency changes. The scheduled implementation dates of changes shall be used as the basis for change and release scheduling. A schedule that contains details of all the changes approved for implementation and their proposed implementation dates shall be maintained and communicated to relevant parties. Change records shall be analysed regularly to detect increasing levels of changes, frequently recurring types, emerging trends and other relevant information. The results and conclusions drawn from change analysis shall be recorded. Actions for improvement identified from change management shall be recorded and input into a plan for improving the service.
10 发布流程 **10.1 版本管理流程** 目标：交付、分发和跟踪版本进入现实环境时的一个或多个变更。 注：版本管理流程应集成到配置和变更管理流程。 发布策略描述版本的频率和类型应被文件化和协商； 服务提供方根据业务情况计划服务、系统、软件和硬件版本的发布。实施版本的计划应由所有相关方同意和授权，如客户、用户、运作和支持人员。 流程应包括失败后的版本修订和补救方式， 计划应记录发布日期、交付、相关变更请求、知名错误和问题。版本管理流程应传递适当信息给事故管理流程。 应评估变更请求对发布计划的影响。版本管理程序应包括配置信息的升级和变更，并做记录。紧急发布应根据已定义的紧急变更管理流程进行管理。 应建立可控的验收测试环境，在所有版本发布前进行演练和测试。 应设计、执行版本和发布，保证在安装、处理、包装和交付时硬件和软件的完整性得到维护。 成功或失败的发布应可测量，测量应包括发布	**10 Release process** **10.1 Release management process** Objective: To deliver, distribute and track one or more changes in a release into the live environment. NOTE The release management process should be integrated with the configuration and change management processes. The release policy stating the frequency and type of releases shall be documented and agreed. The service provider shall plan with the business the release of services, systems, software and hardware. Plans on how to roll out the release shall be agreed and authorized by all relevant parties, e.g. customers, users, operations and support staff. The process shall include the manner in which the release shall be reversed or remedied if unsuccessful. Plans shall record the release dates and deliverables and refer to related change requests, known errors and problems. The release management process shall pass suitable information to the incident management process. Requests for change shall be assessed for their impact on release plans. Release management procedures shall include the updating and changing of configuration information and change records. Emergency releases shall be managed according to a defined process that interfaces to the emergency change management process. A controlled acceptance test environment shall be established to build and test all releases prior to distribution. Release and distribution shall be designed and implemented so that the integrity of hardware and software is maintained during installation, handling, packaging and delivery. Success and failure of releases shall be measured. Measurements shall include

| 期间的相关事故。数据分析应包括业务影响的评估、IT 运作和支持的人力资源，并输入到改进服务计划。 | incidents related to a release in the period following a release. Analysis shall include assessment of the impact on the business, IT operations and support staff resources, and shall provide input to a plan for improving the service. |

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