IS0/IEC 20000-1: 2018 信息技术服务管理

第一部分：

服务管理体系要求

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目 录

前言

ISO （国际标准化组织）和 IEC （国际电工委员会）形成了世界范围的专业标准化体系。各国家机构作为 ISO 或 IEC 的成员，通过技术委员会参与国际标准的制定,这些技术委员会由相关组织设立， 从事特定领域的技术活动。ISO 和 IEC 技术委员会在共同关心的领域合作。其它与 ISO 和 IEC 有联系 的政府和非政府的国际组织也可以参与这项工作。在信息技术领域，ISO 和 IEC 已成立了一个联合技 术委员会，IS0/IECJTC1 。

ISO/IEC 导则第 1 部分描述了用于开发本标准以及用于进一步维护该标准的过程。特别应注意的是，不同类型的文件需要不同的批准标准。本标准是根据 ISO/IEC 导则第 2 部分的规则起草，导则第2 部分。

本文件中的某些内容有可能涉及一些专利权问题，对此应引起注意，ISO/IEC 不负责识别任何这样的专利权问题。在本标准编写过程中确定的任何专利权的细节将在所收到的专利声明的介绍和/或ISO 清单中。

在本文件中所使用的任何标识都是为了方便用户而提供的信息，并不构成认可。

关于标准的自愿性的解释，ISO 有关合格评定的具体术语和表达的含义，以及关于 ISO 在技术性贸易壁垒（TBT）中遵守世界贸易组织（WT0）原则的信息。

本文件是由 ISO/IEC JTC 1——信息技术部分和 SC 40——IT 服务管理和 IT 治理部分，共同编写。第三版取消和替代了第二版（ISO/IEC 20000-1：2011），已进行了技术性修订。

和前一个版本比较，主要变化如下：

a） 使用适用于所有管理系统的标准的高阶结构（ISO/IEC 导则第一部分 ISO 补充规定的附件 SL） 进行重新编排。也引进了新的通用要求，包括组织环境，策划实现目标应对风险和机遇的措施。一 些通用要求更新了前一版本的要求，如，保留成文信息，资源，能力和意识。

b） 考虑服务管理的发展趋势，包括服务商品化、内部、外部服务集成者管理多个供应商、确定服务对客户价值的需求等主题。

c） 删除一些关于"做什么"条款的细节，允许组织灵活的决定如何满足要求。

d） 包括一些新的特点，如增加的关于知识和策划服务的要求。

e） 事件管理、服务请求管理、服务连续性管理、服务可用性管理、服务级别管理、服务目录管理、能力管理、需求管理等，以前组合的条款被拆分。

f） "治理其他方运行的过程"更名为"控制服务生命周期的相关方"，并更新了关于服务、服务组件和流程的要求。澄清了如果其他方用于提供或运行服务管理体系范围内的所有服务、服务组件或流程，组织不能证明符合本标准要求。

g) 条款 3（术语与定义）拆分为管理系统术语和服务管理术语子条款。定义有许多变化，关键的变化包括：

1）为附件 SL,增加一些新术语。如"目标"，"方针"，增加一些服务管理的有关术语，如"资产"，"用户"。

2）术语"服务提供者"已经被"组织"取代以符合附件 SL 通用文本。

3）术语"内部团队"已经被"内部供应商"取代，术语"供应商"已经被"外部供应商"取代。

4）"信息安全"的定义已经和IS0/IEC 27000 保持一致，术语"可用性"已经被"服务可用 性"取代，以区别"信息安全"中使用的术语"可用性"。

h) 最小化保留成文信息的要求，保留关键的成文信息，如服务管理计划。其它成文信息变化包 括：

1） 取消了能力管理计划文件的要求，用策划能力要求取代；

2） 取消了可用性计划文件的要求，用可用性要求和目标文件取代；

3） 取消了配置管理数据库要求，用配置信息要求取代；

4） 取消了发布策略要求，用定义发布类型和频率的要求取代；

5） 取消了持续改进方针的要求，用确立改进机会的评估标准取代。

i) 更新和重新编号图 2 与图 3 至图 1 与图2。移除图1 和不是附件 SL 指定使用的 PDCA 循环引用，因为管理体系有多个可以使用的改进方法。

j) 服务报告条款对服务报告的详细要求移动至服务报告可能产生的场合。

ISO/IEC 20000 系列标准的全部标准可以访问 ISO 的 WEB 站点。

引言

本标准提供建立、实现、维护和持续改进服务管理体系的要求。服务管理体系支持服务生命周期的管理，包括策划、设计、转换、交付和改进服务，以满足协定的要求和为客户、用户、提供服务组织交付价值。

采用服务管理体系是组织的一项战略性决策。组织服务管理体系的建立和实现受组织的目标、监管机构、服务生命周期中的其它相关方、服务有效性和弹性需求的影响。

实施和运行服务管理体系提供了持续不断的可视化，服务控制以及有效性与效率的更大的改进。服务管理的改进适用于服务管理体系与服务。

本标准有意的不依赖任何特定的指南。组织可以结合组织自身经验和通用的框架使用，本标准要求和通用的改进方法保持一致，合适的服务管理工具可以支持服务管理体系的运行。

ISO/IEC 20000-2 提供本标准的应用指南，包括如何满足本标准的要求。ISO/IEC 20000-10 提供了 ISO/IEC 20000 系列标准的有关信息，效益、误解和其它相关的标准。ISO/IEC 20000-10 定义了本标准使用的术语和定义，除此之外，还包括 ISO/IEC 20000 系列标准中其它标准使用的术语和定义。

条款结构（如条款顺序）、条款3.1 的术语和许多要求来自 ISO/IEC 导则第一部分 IS。补充规定的附件 SL，也称作管理系统标准的通用高阶结构。高阶结构的使用可以使组织统一和集成多个管理体系标准。例如，服务管理体系可以与质量管理体系 ISO 9001 或信息安全管理体系 ISO/IEC 27001 整合。

如图 1 所示，该图包括了本标准的条款构成的服务管理体系。它不代表层次结构、顺序和权限等级。本标准没有要求该结构应用于组织的服务管理体系。也没有要求组织使用的术语用本标准的术语取代。组织可以选择使用适合组织的术语。

条款的结构用意是提供一个要求的整合表示，而不是一个组织的方针、目标和过程的文件模型。每一个组织可以选择如何整合要求到过程。每一个组织和它的客户、用户、其他相关方间的关系影响过程如何实施。组织设计的服务管理体系不能排除本标准的任何要求。

1 范围

1.1 总则

本标准规定了组织建立、实现、维护和持续改进服务管理体系的要求。本标准规定的要求包括 服务的策划、设计、转换、交付和改进，以满足服务要求和交付价值。本标准可被应用于：

a） 寻求服务，并要求保证其服务要求能得到满足的客户；

b） 要求所有服务提供者在服务生命周期中采用一致性方法的客户，包括供应链上的服务提供方；

c） 用以证实对服务进行设计、转换、交付和改进的能力的组织；

d） 对其服务管理体系和服务进行监视、测量和评审的组织；

e） 通过有效的实施和运行服务管理体系，来改进服务的设计、转换和交付的组织；

f） 将本标准要求作为符合性评估的组织或其他方；

g） 服务管理的咨询和培训服务提供者。

本标准的术语"服务"是服务管理体系范围内的一个或者多个服务。本标准的术语"组织"是 服务管理体系范围内管理和交付服务给客户的组织。服务管理体系范围内的"组织"可能是组织的 一部分，例如：一个大型公司的一个部门。管理和交付服务给客户的组织或者组织的一部分也可以 称作服务提供者。术语"服务"和"组织"在本标准中有不同的使用意图的任何地方，会有明确的区分。

1.2 应用

本标准规定的要求是通用的，适用于各种类型、规模或交付各种性质服务的的组织。当组织声 称符合本标准时，无论组织的性质如何，不能删减条款 4 到条款 10 中所规定的任何要求；

本标准的要求可以由组织自身提供满足本标准要求的证明。

组织需要自身提供证据证明符合本标准的条款 4 和条款 5,然而，组织可以由其他方提供支持，例如，其他方代表组织实施内部审核或者支持管理体系的准备工作。

可选的，当其他方涉及到满足本标准的条款 6 至条款 10 （见 8.2.3）的要求时，组织可以提供满足供本标准要求的保持责任的证明。例如，组织证明对提供或运营基础架构服务组件和运营服务台，包括事件管理流程的其他方进行控制的证据。

如果其他方用于提供或者运行服务管理体系范围内的所有服务、服务组件或者流程，组织不能证明符合本标准的要求。

本标准范围不包括对产品或工具的规范。组织可以使用本标准帮助他们开发用来支持服务管理体系运行的产品或工具。

2 规范性引用文件

无规范引用文件

3 术语和定义

下列的术语和定义适用于本文件。

ISO 和 IEC 在下列地址维护适用的术语和定义数据库：

3.1 有关管理体系标准的术语

3.1.1 审计审核

为获得客观证据并对其进行客观的评价，以确定满足审核准则的程度所进行的系统的、独立的，并形成文件的过程。

注 1：审核可以是内部（第一方）审核，或外部（第二方或第三方）审核，也可以是结合审核或联合审核。

注 2：内部审核，有时称为第一方审核，由组织自己或以组织的名义进行。

注 3："审核证据"和"审核准则"的定义参考 ISO 19011。

3.1.2 能力 competence

应用知识和技能实现预期结果的本领。

3.1.3 符合（合格）conformity

满足要求。

3.1.4 持续改进 continual improvement

提高绩效的循环活动。

3.1.5 纠正措施 corrective action

为消除不合格的原因并防止再发生所采取的措施。

注 1：这是 ISO/IEC 导则第 1 部分的 ISO 补充规定的附件 SL 中给出的 ISO 管理体系标准中的通用 术语及核心定义之一，最初的定义已经通过增加"消除不合格的原因并防止再发生"而修订。

3.1.6 成文信息 documented information

组织需要控制并保持的信息及其载体。

例如：方针、计划、过程描述、程序、服务级别协议或者合同。

注 1：形成成文的信息可以以任何格式和载体存在，并可来自任何来源。

注 2：形成成文的信息可涉及：

——管理体系，包括相关过程；

——为组织运行而创建的信息（一组文件）；

——实现结果的证据。

注 3： ISO/IEC 导则，第 1 部分的 ISO 补充规定的附件 SL 中给出的 ISO 管理体系标准中的通用术 语以通过增加示例而修订。

3.1.7 有效性 effectiveness

实现策划的活动并取得策划的结果的程度。

3.1.8 相关方 interested party

能够影响决策或活动、受决策或活动影响，或感知自身受到服务或服务管理体系影响的个人或 组织。

注 1：相关方可以是组织内部或外部的。

注 2：相关方可以包括组织服务管理体系范围外的一部分，客户、用户、团体、外部供应商、监 管机构、公共机构、非政府机构、投资者或员工。

注 3：需要确定相关方的要求条款，相关方因组织环境不同而不同。

注 4： ISO/IEC 导则，第 1 部分的 ISO 补充规定的附件 SL 中给出的 ISO 管理体系标准中的通用术 语通过删除"利益相关者"和增加"服务或服务管理体系''而修订，并且增加注释 1, 2, 3o

3.1.9 管理体系 management system

组织建立方针和目标以及实现这些目标的过程的相互关联或相互作用的一组要素。 注 1：一个管理体系可以针对单一的领域或几个领域。

注 2：管理体系要素确定了组织的结构、岗位和职责、策划、运行、方针、目标、过程和程序。

注 3：管理体系的范围可能包括整个组织，组织中特定的和已识别的职能，组织中特定的和已识 别的部门，或者组织中一个或多个跨团队的职能。

注 4：这是 ISO/IEC 导则，第1部分的ISO 补充规定的附件SL 中给出的 ISO 管理体系标准中的通用术语及核心定义之一，最初的定义已经通过修订注 2 被修订。

3.1.10 测量 measurement

确定数值的过程。

3.1.11 监视 monitoring

确定体系、过程或活动的状态。

注 1：为确定状态，需要检查、监控或者关键的观察。

3.1.12 不符合 nonconformity

未满足要求。

注 1：未满足的要求和服务管理体系要求有关。

3.1.13 目标 objective

要实现的结果。

注 1：目标可能是战略性的、战术性的或运行层面的。

注 2：目标可能涉及不同的领域(例如：财务、健康安全、服务管理以及环境的目标)，并可应 用于不同层次(如：战略、组织整体、服务、项目、产品和过程)。

注 3：可以采用其他的方式表述目标，例如：预期结果、目的、运行准则、服务管理目标，或使 用其它意思相近的词语。如：目的、终点或指标)。

注 4：在服务管理体系(3.5.4）中，组织(3.2.1)制定的服务管理目标(3.7.2)，与服务方针(3.5.9) 保持一致，以实现特定的结果。

注 5：这是 ISO/IEC 导则第 1 部分的 ISO 补充规定的附件 SL 中给出的 ISO 管理体系标推中的通用 术语及核心定义之一。原定义已通过修订注 2 增加"服务管理"和"服务"被修订。

3.1.14 组织 organization

为实现其目标，通过职责、权限和相互关系而拥有其自身职能的一个人或一组人。

注 1：组织的概念包括但不限于代理商、公司、集团、商行、企事业单位、政府机构、合资公司、社团、慈善机构或研究机构，或上述组织的部分或组合，无论是否具有法人资格、公有的或私有的。

注 2：管理、交付一个或多个服务给内部客户或者外部客户的组织或者组织的一部分，被称作服务提供者。

注 3：如果服务管理体系覆盖组织的一部分，组织代表在服务管理体系范围内的部分组织。有不同使用意图的术语"组织"会做明确的区分。

注 4：原有的 ISO 补充规定的附件 SL 中给出定义通过增加注释 2 和注释 3 修改。

3.1.15　外包　outsource, verb

安排外部组织执行组织的部分职能或过程。

注 1：尽管外包的职能或过程在管理体系范围之内，但是外包组织不在管理体系覆盖范围内。

3.1.16　绩效　performance

可测量的结果

注 1：绩效可能与定量的或定性的结果有关。

注 2：绩效可能与活动、过程、产品、服务、体系或组织的管理有关。

注 3：这是 ISO/IEC 导则第 1 部分的 ISO 补充规定的附件 SL 中给出的 ISO 管理体系标准中的通用术语及核心定义之一，最初的定义已经通过增加"服务"到注 2 而修订。

3.1.17　方针　policy

由最高管理者正式发布的组织的宗旨和方向。

3.1.18　过程　process

利用输入产生预期结果的相互关联或相互作用的一组活动。

注 1：过程的"预期结果"称为输出，还可称为产品或服务，需随相关语境而定。

注 2：一个过程的输入通常是其他过程的输出，而一个过程的输出又通常是其他过程的输入。

注 3：两个或两个以上相互关联和相互作用的连续过程也可作为一个过程。

注 4：组织为了增值通常对过程进行策划并使其在受控条件下运行。

注 5：这是 ISO/IEC 导则第 1 部分的 ISO 补充规定的附件 SL 中给出的 ISO 管理体系标准中的通用 术语及核心定义之一，最初的定义已经被修订，以避免过程和输出之间循环解释，并增加了注 1 至 注 4。

3.1.19   要求 requirement

明示的、通常隐含的或必须履行的需求或期望。

注 1：   "通常隐含"是指组织和相关方的惯例或一般做法，所考虑的需求或期望是不言而喻的。

注 2：   规定要求是经明示的要求，如：在形成文件的信息中阐明。

注 3：   在服务管理体系环境中，服务要求通常是成文信息和达成一致的，而不是隐含的，也可以 有其它的要求，如法律法规的要求。

注 4：   原来的高阶附件的定义已通过增加注释 3 修订。

3.1.20   风险 risk

不确定性的影响

注 1：   影响是指偏离预期，可以是正面的或负面的。

注 2：   不确定性是指对事件及其后果或可能性的信息缺失或了解片面的的状态。

注 3：   通常用潜在节件和后果，或者两者的组合来表现风险的特性。

注 4：   通常用事件后果（包括情形的变化）和相应事件发生可能性的组合来表示风险。

3.1.21   最高管理者 top management

在最高层指挥和控制组织的一个人或一组人。

注 1：   最高管理者有权在组织内部授权并提供资源。

注 2：若管理体系的范围仅涵盖组织的一部分，则最高管理者是指那些指挥并控制组织该部分的 人员。

3.2   有关服务管理的术语

3.2.1   资产 asset

对组织有潜在或实际价值的物品、事物或实体。

注 1：价值可以是有形的或者无形的，财务或非财务的，包括考虑风险和义务，在资产生命周期 的各个阶段，可以是正面的或者负面的。

注 2：物理资产通常指组织拥有的设备、库存和财产。物理资产和无形资产相对应，无形资产 通常包括租约、商标、数字资产、用户权利、许可、知识产权、声誉和协议。

注 3：一组资产被称作资产系统，亦可以称作一项资产。

注 4：资产可以是配置项，一些配置项不是资产。

［来源：ISO/IEC 19770-5： 2015, 3.2,修订注释 4 包括了新内容。］

3.2.2 配置项 configuration item

为交付一项或多项服务需要控制的元素。

3.2.3 客户 customer

接受一项或多项服务的组织或组织的一部分。

例如：消费者、客户、受益人、赞助者、购买者。

注 1：对于服务提供方组织来说，客户可以是内部的或外部的。

注 2：客户可以是用户，客户可以担任供应商。

3.2.4 外部供应商 external supplier

通过合同约定，对策划、设计、转换，不交付或者改进服务、服务组件或者流程的提供协助的 组织外部的其他方

注 1：外部供应商包括指定的主供应商，但不包括分包商。

注 2：如果服务管理体系范围的组织是大型组织的一部分，其他方指大型组织外的相关方。

3.2.5 事件 incident

计划外的服务中断、服务质量下降或尚未对客户服务造成影响的事态。

3.2.6 信息安全 information security

保护信息的保密性，完整性和可用性

注 1：其它属性，例如可认证，可审计，不可否认性和可靠性也会被涉及。

［来源：ISO/IEC 27000： 2018, 3.28]

3.2.7 信息安全事件 information security incident

单个或一系列意外或突发的、具有损害业务运营和威胁信息安全的极大可能性的事态。

［来源：ISO/IEC 27000： 2018, 3.28]

3.2.8 内部供应商 internal supplier

通过成文的协议约定，对策划、设计、转换、交付或者改进服务、服务组件或者流程提供协助 的服务管理体系范围外的大型组织的一部分

例如采购、基础设施、财务、人员、设备。

注 1：内部供应商和服务管理体系范围内的组织，是更大组织的组成部分。

3.2.9 已知错误 known error

已识别根本原因或已有方法可降低或消除其对服务的影响的问题

3.2.10 问题 problem

造成一个或多个事件的根本原因

3.2.11 程序 procedure

为进行某项活动或过程所规定的途径

注 1：程序可以成文或者不成文。

3.2.12 记录 record

阐明所取得的结果或提供所完成活动的证据的文件。

例如：审计报告、事件记录、培训记录、会议纪要。

注 1：记录可用于正规化可追溯性活动，并为验证、预防措施和纠正措施提供证据。

注 2：通常记录不需要控制版本。

〔来源：ISO 9000： 2015, 18.10,修订——增加示例〕

3.2.13 发布 release

作为一项或多项变更的结果，将一个或多个新的或变更的配置项部署到实际运行环境。

3.2.14 变更请求 request for change

对服务、服务组件或服务管理体系进行变更的提议。

注 1：服务变更包括提供一项新服务、转移服务或删除一项不再需要的服务。

3.2.15 服务 service

通过帮助客户达成其期望的结果而向客户交付价值的手段。

注 1：服务一般是无形的。

注 2：服务指服务管理体系范围内的一个或者多个服务。任何有不同用途的术语"服务"会明确 的说明。

3.2.16 服务可用性 service availability

一项服务或服务组件在指定的时间或时间段完成要求的功能的能力。

注 1：可用性通常可以用客户实际使用服务或服务组件的时间与约定服务时间的比率或百分比来 表 ZJ、。

3.2.17 服务目录 service catalogue

组织提供给客户服务的成文信息。

3.2.18 服务组件 service component

一项服务的单个单元，该单元与其它单元结合可交付一项完整的服务。

例如：基础设施、应用、许可证、信息、资源或支持服务。

注 1：服务组件可以由配置项、资产、或其它要素构成。

3.2.19   服务连续性 service continuity

按照商定的服务可用性或连续无中断交付服务的能力。

注 1：服务连续性管理是业务连续性管理的一个子过程，ISO 22301 是业务连续性管理体系的标 准。

3.2.20   服务级别协议 service level agreement SLA

服务提供方和客户之间定义服务和服务指标的形成文件的协议。

注 1：服务级别协议也可在服务提供方均外部供应商、与内部供应商、或与作为供应商的客户之 间签订。

注 2：服务级别协议可以包含在合同或其它类型的书面协议中。

3.2.21   服务级别目标 service level target

确定组织提供服务的可测量的特性。

3.2.22　服务管理　service management

一组能力和过程，用以指挥和控制服务提供方设计、转换、交付和改进服务的活动和资源，以满足服务要求。

注 1：本标准的要求分为主条款和子条款，组织可以根据要求组织过程，子条款用于定义服务管 理体系的过程。

3.2.23　服务管理体系　service management system SMS

指挥和控制服务提供方的服务管理活动的管理体系。

注 1：包括所有的设计、转换、提供和改进服务和为满足本标准要求所需要的服务管理策略、目 标、计划、过程、文件和资源。

3.2.24　服务提供者　service provider

为客户提供一项服务或多项服务的组织。

3.2.25　服务请求　service requirement

请求提供信息、建议、服务访问或预先批准的变更。

3.2.26　服务要求　service requirement

客户和用户对服务的需求，包括服务级别要求，以及服务提供方的需求和服务管理体系要求以 及义务。

注 1：在服务管理体系环境中，服务要求通常是成文信息且达成一致的，而不是隐含的，也可以 有其它的要求，如法律法规的要求。

3.2.27　转换　transition

将一项新的或变更的服务移入或移出实际运行环境所涉及的活动。

3.2.28　用户　user

通过和一项或多项服务交互或受益的个人或组织。

注 1：用户包括个人用户，社区用户，充当用户的客户。

3.2.29　价值　value

重要性，收益或有用性。

例如财务价值，取得服务结果，取得服务管理目标，客户保留，移除约束。

注 1：服务创造价值是在管理风险的前提下，在优化资源管理的水平上实现收益。资产和服务是 赋予价值的示例。

4 组织环境

4.1 理解组织及其环境

组织应确定与其宗旨和战略相关并且影响其实现服务管理体系预期结果的能力的外部和内部因素。

注：这些因素可能是正面或负面影响的因素，对于组织交付协定服务质量用户，这是很重要的。

4.2 理解相关方的需求和期望

组织应确定：

a) 服务管理体系及服务的相关方；

b) 相关方的要求。

注：相关方的要求可包括与服务管理体系及服务相关的服务、绩效、法律、法规要求和合同义务。

4.3 确定服务管理体系范围

组织应确定服务管理体系的边界及其适用性，以建立其范围。

在确定范围时，组织应考虑：

a) 4.1 中提及的外部和内部因素；

b) 4.2 中提及的要求；

c) 组织交付的服务。

服务管理体系的范围定义应包括范围内的服务以及管理和交付服务的组织名称

服务管理体系的范围应保留成文信息，可获得并得到保持。

注 1： ISO/IEC 20000-3 提供服务管理体系范围定义指南。

注 2：服务管理体系范围描述那一个服务在范围内，可以是组织交付的全部或者部分服务。

4.4 服务管理体系

组织应按照本标准的要求，建立、实现、维护和持续改进服务管理体系，包括其所需要过程及 相互作用。

5 领导

5.1 领导和承诺

最高管理者应通过以下方面证实其对服务管理体系的领导作用和承诺：

a) 确保制定服务管理体系的服务方针和服务目标，与战略方向一致；

b) 确保服务管理计划的创建、实施和维护，以支持服务管理方针，实现服务管理目标和服务要 求；

c) 确保关于服务管理体系和服务的决策授权合理分配；

d) 确保为组织和确定的客户创造价值；

e) 确保对服务生命周期的相关方进行控制和管理；

f) 确保将服务管理体系要求整合到组织过程中；

g) 确保服务管理体系及服务所需资源可用；

h) 沟通有效的服务管理的重要性，实现服务管理目标，交付价值和符合服务管理体系要求；

i) 确保服务管理体系达到预期结果；

j) 指导并支持相关人员为服务管理体系和服务的有效性做出贡献；

k) 促进服务管理体系和服务持续改进；

l) 支持其他相关管理者在其职责范围内发挥领导作用，以证实他们在其责任范围内的领导作用。

5.2 方针

5.2.1 制定服务管理方针

最高管理者应制定服务管理方针，该方针应：

a) 适应组织的宗旨和环境并支持其战略方向；

b) 为建立服务管理目标提供框架；

c) 包括对满足适用的服务管理相关要求的承诺；

d) 包括对持续改进服务管理体系及服务的承诺。

5.2.2 沟通服务管理方针

服务管理方针应：

e) 可获取并保持成文信息；

f) 在组织内得到沟通；

g) 适用时，可为相关方获取。

5.3 组织的角色，责任和权限

最高管理层应确保与服务管理体系及服务相关岗位的责任和权限得到分配和沟通。

最高管理层应分配责任和权限，以：

a) 确保服务管理体系符合本标准的要求；

b) 向最高管理者报告服务管理体系和服务绩效。

6 策划

6.1 应对风险和机遇的措施

6.1.2 当策划服务管理体系时，组织应考虑到 4.1 中提及的因素和 4.2 中提及的要求，并确定需要应对 的风险和机遇，以：

a) 确保服务管理体系可达到预期结果；

b) 预防或减少不利影响；

c) 实现服务管理体系和服务的持续改进。

6.1.2 组织应确认和文件化：

a) 有关的风险：

　　1) 组织；

　　2) 不满足服务要求；

　　3) 服务生命周期中的相关方；

b) 风险对客户的影响和服务管理体系及服务的机遇；

c) 风险接受标准；

d) 风险管理的方法。

6.1.3 组织应策划：

a) 应对风险和机遇的措施及优先级；

b) 如何：

    1) 将这些措施整合到服务管理体系过程中，并予以实现；

    2) 评价这些措施的有效性。

注 1：应对风险和机遇的措施包括：避免风险，接受增加的风险以追求机遇，通过协定的措施移 除风险源，改变风险的后果和可能性，降低风险，和其他方共担风险或通过充分的信息决策接受风 险。

注 2： ISO/IEC 31000 提供风险管理的原则和通用指南。

6.2 服务管理目标及其实现策划

6.2.1 制定目标

组织应在相关职能和层级上制定服务管理目标。

服务管理目标应：

a) 与服务管理方针保持一致；

b) 可测量；

c) 考虑适用的要求；

d) 予以监视

e) 予以沟通；

f) 适当时更新。

组织应保留有关服务管理目标的成文信息。

6.2.2 策划实现目标

在策划如实现服务管理目标时，组织应确定：

a) 要做什么；

b) 需要什么资源；

c) 由谁负责；

d) 什么时候完成；

e) 如何评价结果。

6.3 策划服务管理体系

组织应制定、实施和维护服务管理计划。计划应考虑到服务管理方针，服务管理目标，风险与 机遇，

服务要求和本标准的要求。

服务管理计划应包含或引用以下内容：

a） 服务清单

b） 影响服务管理体系和服务的已知限制；

c） 有关的方针、标准和法律法规要求、合同的义务；

d） 服务管理体系和服务的权限、职责；

e） 运行服务管理体系和服务所需要的人员、技术、信息和财务资源；

f） 服务生命周期中和相关方采取的工作方法；

g） 支持服务管理体系的技术；

h） 如何测量、审核、报告和改进服务管理体系和服务的有效性。

其它的计划应与服务管理计划相一致。

7 支持

7.1 资源

组织应确定并提供建立、实现、维护和持续改进服务管理体系和运行服务所需的人员、技术、 信息和财务资源，以满足服务要求和实现服务管理目标。

7.2 能力

组织应：

a） 确定在组织控制下工作人员所需要的能力，这些人员从事的工作会影响绩效和服务管理体系 及服务的有效性；

b） 基于适当的教育、培训或经验，确保这些人员是胜任的；

c） 适用时，采取措施以获得所需的能力，并评价措施的有效性；

d） 保留适当的成文信息，作为人员能力的证据。

注：适用的措施可包括：例如针对在职人员提供培训、辅导和重新分配；或者聘任、外包胜任 的人员。

7.3 意识

组织应确保在其控制下的工作人员知晓：

a） 服务管理方针；

b) 服务管理目标；

c) 与工作有关的服务；

d) 其对服务管理体系有效性的贡献，包括改进绩效带来的益处；

e) 不符合服务管理体系要求带来的后果。

7.4 沟通

组织应确定与服务管理体系和其范围内的服务相关的内部和外部的沟通，包括：

a) 沟通什么；

b) 何时沟通；

c) 与谁沟通；

d) 如何沟通；

e) 谁负责沟通。

7.5 成文信息

7.5.1 总则

组织的服务管理体系应包括：

a) 本标准所要求的成文信息；

b) 组织所确定的、为确保服务管理体系的有效性必要的成文信息。

注：不同组织相关服务管理体系成文信息的详略程度可以是不问的，这是由于：

　　1) 组织的规模及其活动、过程、产品利服务的类型：

　　2) 过程及其相互作用的复杂性：

　　3) 人员的能力。

7.5.2 创建和更新

创建和更新成文信息时，组织应确保适当的：

a) 标识和描述（例如标题、日期、作者或索引编号）；

b）　格式（例如语言、软件版本、图表）和介质（例如纸质、电子）；

c）　评审和批准，以保持适宜性和充分性。

7.5.3 成文信息的控制

7.53.1 服务管理体系及本标准所要求的成文信息应得到控制，以确保：

a）　在需要的场合和时机，均可获得并适用；

b）　予以妥善保护（如防止泄密、不当使用、或者缺失等）。

7.5.3.2 为控制成文信息，适用时，组织应进行下列活动：

a）　分发，访问，检索和使用；

b）　存储和保护，包括保持可读性；

c）　变更控制（例如版本控制）；

d）　保留和处置。

对于组织确定的策划和运行服务管理体系所必需的来自外部的成文信息，应得到适当的识别，并予以控制。

注：对成文信息的"访问"可能意味着仅允许查阅，或意味着允许查阅并授权修改。

7.5.4 服务管理系统成文信息

服务管理体系的成文信息应包括：

a）　服务管理体系范围；

b）　服务管理的方针和目标；

c）　服务管理计划；

d）　变更管理方针、信息安全方针和服务连续性计划（一个或多个）；

e）　服务管理体系的过程；

f）　服务要求；

g）　服务目录；

h）　服务级别协议（SLA）；

i）　与外部供应商的合同；

j）　与内部供应商和充当供应商的客户的协议；

k）　本标准要求的程序；

l）　证明符合本标准和服务管理体系要求的记录。

注:条款 7.5.4 提供了服务管理体系的重要成文信息列表。对于成文信息和记录还打其它的要求，ISO/IEC 20000-2 提供了额外的指南。

7. 6 知识

组织应确定和保持必要的知识，以运行服务管理体系和服务。

这些知识对适用的人员应是相关的、可用的、有用的。

注：知识是与服务管理体系、服务和相关方有关的，使用和共享知识以实现预期结果和运行服 务管理体系及服务。

8 运行

8.1 运行策划和控制

组织应策划、实现和控制满足要求所需要的过程，通过下列内容以及实现条款 6 中确定的措施：

a） 基于要求，建立过程的准则；

b） 按照准则实施过程控制；

c） 组织应保持成文信息达到必要的程度，以确信这些过程按计划得到执行。

组织应控制策划的变更并评审非预期变更的后果，必要时，采取措施减轻不利影响（见 8.5.1）。组织应确保外包过程受控（见 8.2.3）。

8.2 服务组合

8.2.1 服务交付

组织应运行服务管理体系，确保协作活动和资源，组织应执行交付服务所需要的活动。

注：服务组合通常管理服务生命周期中的所有服务，包括提议的、开发中的、服务目录中的在 线服务和即将停止的服务。服务组合管理确保服务提供者有正确的服务构成。服务组合管 理活动包括服务策划，控制服务生命周期的相关方、服务目录管理、资产管理和配置管理。

8.2.2 策划服务

已存在服务、新服务、服务变更的要求应确认和保留成文信息。

组织应基于组织、客户、用户和相关方的需求确认服务的关键性。组织应确认和管理服务间的 依赖关系和复制关系。

考虑已知限制和风险，组织应提议服务变更，以便服务与服务管理方针、服务管理目标和服务 要求保持一致。

考虑可用资源，组织应对服务变更进行优先排序和提议新服务、服务变更，以便服务管理目标 和业务目标保持一致。

8.2.3 控制服务生命周期的相关方

8.2.3.1 无论任何相关方涉及到在支持服务生命周期中执行*割，组织应对本标准的要求和交付的服 务负责。

组织应确认和应用本标准评估和选择服务生命周期中的其它相关方。其它相关方可以是外部供应商、内部供应商和客户充当的供应商。

其它相关方不应提供和运行服务管理体系范围内所有的服务、服务组件或流程。

组织应确认和文件化下列内容：

a) 其它相关方提供和运行的服务；

b) 其它相关方提供和运行的服务组件；

c) 其它扣关方运行的服务管理体系范围内的流程或部分流程。

组织应集成组织自身或其它相关方提供和运行的服务管理体系范围内的服务、服务组件和流程。 以满足服务要求。组织应进行协调包括服务生命周期中，策划、设计、转换、交付和改进活动的其 它相关方。

8.2.3.2 组织应对其它相关方定义和应用下列控制措施：

a) 测量和评估过程绩效；

b) 测量和评估服务、服务组件满足服务要求的有效性。

注：ISO/IEC20000-3 提供了服务生命周期中控制其它相关方的指南。

8.2.4 服务目录管理

组织应创建和维护一个或多个服务服务目录。服务目录应包括描述服务的组织、客户、用户和 其它相关方的信息、它们预期的结果和服务间的依赖关系。

组织应对客户、用户和其它相关方提供合适的访问（部分）服务目录的渠道。

8.2.5 资产管理

组织应确保管理用于交付服务的资产以满足服务要求和条款 6.3c）规定的义务。

注：ISO 55001 和 ISO/IEC 19770-1 确定了支持实施、运营资产和 IT 资产管理的要求。

注：另外，资产作为配置项时，参考配置管理。

8.2.6 配置管理

配置项的类型应定义，服务应分类为配置项。

配置信息应记录到适合服务关键性和类型的详细程度，访问配置信息应受控。每个配置项的配 置信息应包括：

a） 唯一性标识；

b） 配置项类型；

c） 配置项描述；

d） 与其它配置项的关系：

e） 状态。

配置项应受控，配置项的变更应可追溯和可审计的，以维护配置信息的完整性。配置项的变更 发布后，配置项应更新。

适用时，配置信息应对其它服务管理活动可用。

8.3 关系与协议

8.3.1 总则

组织使用供应商以：

a） 提供和运行服务；

b） 提供和运行服务组件：

c） 运行服务管理体系范围内的流程或部分流程。

图-2 表示了用途、协议和业务关系管理、服务级别管理、供应商管理的关系。
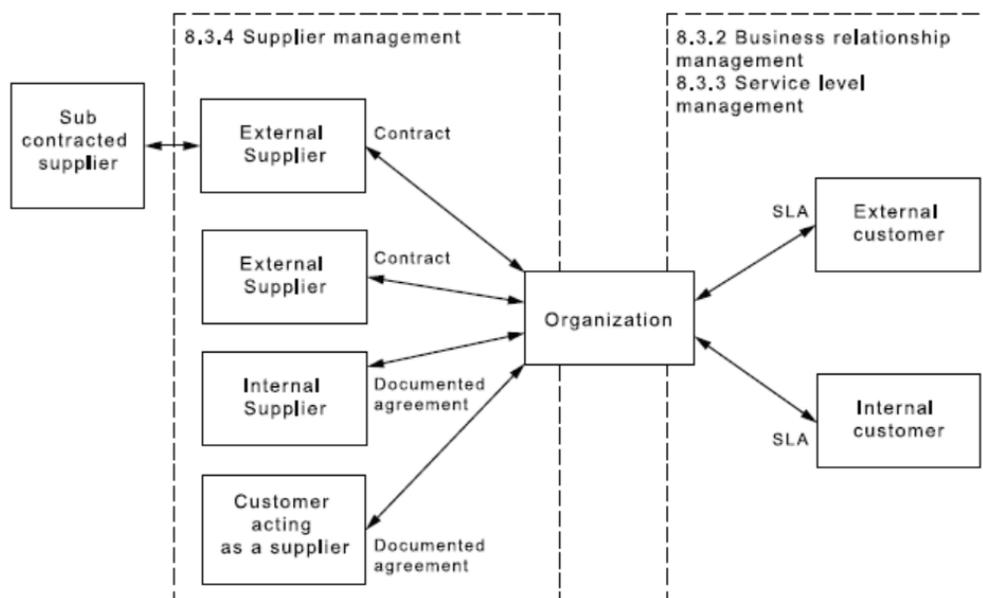
注：ISO/IEC 20000-3 包括潜在场景和范围的供应链关系的示例。

注：本标准的供应商管理不包括供应商的采购过程。

8.3.2 业务关系管理

服务的客户、用户和相关方应予以识别，并保留成文信息。

组织应指定一个或多个专人负责管理客户关系和维护客户满意度。

组织应与确定客户和相关方沟通的安排，沟通应促进对不断进化的服务运行的业务环境的理解，应使组织能够响应新的或变更的服务的要求。

组织应与客户按策划的时间间隔评审服务绩效趋势和结果。

组织应按照策划的时间间隔，基于对服务的客户进行抽样，调查客户满意度。应对结果进行分析和评审以识别改进机会。

服务投诉应予以记录、管理直至关闭和报告。当服务投诉通过正常渠道得不到解决，应升级处理。

8.3.3 服务级别管理

组织应与客户约定交付的服务。

对于所交付的每项服务,组织应基于服务要求与客户协商确定一个或多个服务级别协议（SLAs）o 服务级别协议应包括服务级别目标，工作量和例外情况。

组织应按照策划的时间间隔监控、评审和汇报：

a） 服务级别目标的绩效；

b） 与服务级别目标的工作量比较，实际和周期性的工作量的变更。

服务级别目标未满足时，组织应识别改进机会。

注：组织和客户交付服务的协议可以以多种形式存在，如成文的协议，会议中的口头协定，电子邮件形式的协议或同意服务许可协议的形式。

8.3.4 供应商管理

8.3.4.1 管理外部供应商

组织应指定一个或多个专人负责管理与外部供应商的关系、合同和绩效。

组织和外部供应商应协商形成成文的合同。合同中应包含或引用以下内容：

a） 外部供应商提供或者运行的服务范围、服务组件、流程或部分流程；

b） 外部供应商需要满足的要求；

c) 服务等级目标或其它合同义务；

d）组织外部供应商的职责马权限。

组织应评估外部供应商的服务等级目标或若其它合同义务与客户的服务等级目标保持一致，和 管理己识别的风险。

组织应按照策划的时间间隔监视外部供应商的绩效。服务等级目标和其他合同义务未满足的场 合，组织应确保识别改进机会。

组织应按照策划的时间间隔依据当前的服务要求评审合同。变更授权前，合同的变更对服务管 理体系和服务的影响应予以评估。

组织和外部供应商的争议应予以记录、管理直至关闭。

8.3.4.2 管理内部供应商和充当供应商的客户

对于每一个内部供应商和充当供应商的客户，组织应开发、协商和维护成文的协议，以定义服 务等级目标、其它承诺、活动和相互间的接口。

组织应按照策划的时间间隔监视内部供应商和充当供应商的客户的绩效。服务等级目标和其它 约定的承诺未满足的情况，组织应确保识别改进机会。

8.4 供应与需求

8.4.1 服务预算与核算

组织应在保持与财务管理方针和流程一致的情况下进行单个服务或一组服务的预算和核算。

应对服务成本进行预算，使提供的服务能有效地进行财务控制和决策。

按照策划的时间间隔，组织应依据预算来监视和报告实际成本，审核财务预测并管理成本。

注：很多情况下，不是所有组织会对服务进行计费。服务的预算和核算过程不包括计费，以确 保适用于所有组织。

8.4.2 需求管理

按照策划的时间间隔，组织应：

a) 确定服务当前需求和预测未来需求；

b) 监视和评审需求与服务使用情况。

注：需求管理负责理解客户当前和未来的需求。能力管理与需求管理配合，策划和提供充足的 能力以满足需求。

8.4.3 能力管理

考虑服务和性能要求，人员、技术、信息和财务资源的能力要求应予以确定、保留成文信息和 维护。组织应对能为进行策划，包括：

a) 基于服务需求，当前和预测的能力；

b) 对约定的服务等级目标、服务可用性、服务连续性要求的预期影响；

c) 能力变更的时间跨度和阀值。

组织应提供充分的容量满足商定的容量和性能要求。组织应监视能力的使用，分析能力和性能 数据和识别改进机会。

8.5 服务设计、构建与转换

8.5.1 变更管理

8.5.1.1 变更管理方针

变更管理方针应予以制定和保留成文信息，以定义：

a) 在变更管理控制下的服务组件和其它事项；

b) 变更类别，包拈紧急变更，以及如何进行管理；

c) 对客户或服务有潜在重大影响变更的确定标准。

8.5.1.2 变更管理启动

变更请求，包括增加、移除或转移服务，应予以记录和分类。

组织应在下列情况使用 8.5.2 条款的服务设计和转换流程：

a) 由变更管理方针确定的，对客户或其它服务有潜在重大影响的新服务；

b) 由变更管理方针确定的，对客户或其它服务有潜在重大影响的服务变更；

c) 依据变更管理方针，通过服务设计和转换管理的变更类别；

d) 移除服务；

e) 转移已存在的服务至客户或其他方；

f) 从客户或其他方转移已存在的服务至组织；

评估、授权、调度和评审条款 8.5.2 范围内的新服务或变更的服务应通过条款 8.5.1.3 的"变更管 理活动"进行管理。

不在条款 8.5.2 范围内的变更请求应通过条款 8.5.1.3 的"变更管理活动"进行管理。

8.5.1.3 变更管理活动

组织和相关方应就变更请求的授权和优先级做出决策。决策应考虑风险、业务收益、可行性和 财务影响。决策也应考虑变更的潜在影响：

a) 已存在服务；

b) 客户、用户和其它相关方；

c) 本标准要来的方针和计划；

d) 能力、服务可用性、服务连续性和信息安全；

e) 其它变更请求、发布和部署计划。

授权的变更应予以准备、确认，可行的情况下，进行测试。授权变更的建议发布日期和其它细 节应和相关方沟通。

回退或补救不成功变更的活动应予以策划，可行的情况下，进行测试。不成功的变更应予以调 查和采取约定的措施。

组织应评审变更的有效性，与相关方采取约定的措施。

应按照策划的时间间隔分析变更请求记录以识别趋势。分析所得的结果和结论应予以记录和评 审以识别改进机会。

8.5.2 服务设计与转换

8.5.2.1 策划新的或变更的服务

策划应使用条款 8.2.2 确定的新的或者变更的服务的要求，应包括或引用下列内容：

a) 设计、构建和转换活动的权限和职责；

b) 组织以及其他相关方拟执行的活动，包括时间跨度；

c) 人员、技术、信息和财务资源；

d) 与其它服务的依赖关系；

e) 新的服务或变更的服务需要的测试；

f) 服务验收标准；

g) 以可测量的术语表述的交付新的或变更的服务的预期结果；

h) 对服务管理体系、其它服务、计划的变更、客户、用户和其它相关方的影响。

针对将要被移除的服务，组织应进行服务移除的策划。策划额外应包括移除归档、数据的废弃 与转移、文档信息以及服务组件。

受新的或变更的服务影响的配置项应通过配置管理控制。

8.5.2.2 设计

新的或变更的服务应予以设计和保留成文信息以满足条款 **8.2.2** 确定的服务要求。设计应包括下列内容：

a) 交付新的或变更的服务时的各方权限和职责；

b) 对人员、技术、信息和财务资源变更的要求；

c) 对适当的教育、培训和经验的要求；

d) 支持服务的新的或变更的服务等级协议、合同和其他形成文件的协议；

e) 变更对服务管理体系的影响，包括新的或变更的方针、计划、过程、程序、测量或知识；

f) 对其它服务的影响；

g) 更新服务目录（一个成多个）。

8.5.2.3 构建与转换

新的或变更的服务应被构建和测试，以验证其能否满足服务要求，设计文件的要求，以及约定的验收标准。如果不符合服务验收标准，组织和相关方应就必要的措施和部署进行决策。

发布和部署管理应被用于部署已批准的新的或变更的服务到实际运行环境中。

转换活动完成后，组织应向相关方报告所实现的结果，并与预期结果进行对比。

8.5.3 发布与部署管理

组织应定义发布类型，包括紧急发布，发布频率和如何管理。

组织应与对新的或变更的服务和服务组件部署到实际运行环境进行策划。策划应与变更管理过程协调一致，并包含对相关的变更请求、已知错误和通过该发布所关闭问题的引用。策划应包括每个发布的部署日期、交付物和部署方法。

组织应依据成文的验收准则对发布进行验证，并在部署前被授权。如果未能满足验收准则，组织相关方应就采取必要的措施和部署进行决策。

发布部署到实际运行环境前，应建立受影响的配置项的基线。

发布应部署到实际运行环境中，以使服务和服务组件的完整性得到保持。

应监视和分析发布的成功或失败。测量内容应包括发布在部署之后至随后的发布中的事件。分析的结果和结论应予以记录和评审以识别改进机会。

适用时，发布成功成者失败、未来发布日期的信息应对其它服务管理活动可用。

8.6 解决与完成

8.6.1 事件管理

事件应：

a) 记录和分类；

b) 考虑影响和紧急性，进行优先排序；

c) 需要时升级；

d) 解决；

e) 关闭。

事件记录应根据采取的措施进行更新。

组织应确定识别重大事件的标准。重大事件依据成文的程序进行分类和管理。重大事件的信息 应通知最高管理者。组织应分配管理重大事件的责任人。事件解决后，重大事件应予以汇报和评审， 以识别改进机会。

8.6.2 服务请求管理

服务请求应：

a) 记录和分类；

b) 优先排序；

c) 完成；

d) 关闭。

服务请求应根据采取的措施进行更新。

服务请求完成的指南应对服务请求完成的有关人员可用。

8.6.3 问题管理

组织应分析事件数据和趋势，以识别问题。组织应进行根本原因分析和确定潜在的措施，以阻 止事件的重复发生。

问题应：

a) 记录和分类；

b) 优先排序；

c) 需要时升级；

d) 可能时进行解决；

e) 关闭。

问题记录应根据采取的措施进行更新，问题解决的变更应依据变更管理方针进行管理。

根本原因已经识别，但问题没有永久解决时，组织应确认降低和消除问题对服务影响的措施，已知错误应予以记录。适用时，已知错误的最新信息和问题解决方案应对其它服务管理活动可用。

按照策划的时间间隔，问题解决方案的有效性应予以监视、评审和报告。

8.7 服务保障

8.7.1 服务可用性管理

按策划的时间间隔，与服务可用性有关的风险应予以评估和保留成文信息。组织应确定服务可用性要求和目标。协定的要求应考虑相关的业务要求、服务要求、SLA 和风险。

服务可用性的要求和目标应保留成文信息并维护。

服务可用性应予以监控、记录结果和目标作比较。非计划的不可用应予以调查和采取必要的措施。

注：条款 6.1 识别的风险为服务可用性、连续性和信息安全提供输入。

8.7.2 服务连续性管理

按策划的时间间隔，与服务连续性有关的风险应予以评估并保留成文信息。组织应确定服务连续性要求。协定的要求应考虑相关的业务要求、服务要求、SLA 和风险。

组织应建立、实施和维护一个或多个业务连续性计划。业务连续性计划应包括或引用下列内容：

a) 激活服务连续性计划的标准和职责；

b) 在重大服务中断时实施的程序；

c) 激活服务连续性计划时的可用性目标；

d) 服务恢复要求；

e) 返回正常工作条件的程序。

正常服务位置访问被阻止时，服务连续性计划和联系人清单应有可访问的渠道。

按策划的时间间隔，服务连续性计划应按照服务要求进行测试。服务环境有重大变更后，服务连续性计划应重新测试。测试的结果应予以记录。每次测试后和服务连续计划激活后，发现有缺陷或不足时，组织应采取必要的措施。

服务连续性计划已经激活时，组织应报告原因、影响和恢复活动。

8.7.3 信息安全管理

8.7.3.1 信息安全策略

授权的管理者应同意组织的信息安全策略。信息安全策略应保留成文信息并考虑服务要求及 6.3

c）要求的义务。

适用时，信息安全策略应可用和可获取，组织应沟通符合信息安全策略的重要性和应用策略于 服管理体系和服务的下列人员：

a) 组织；

b) 客户和用户；

c) 外部供应商、内部供应商和其它相关方。

8.7.3.2 信息安全控制措施

按策划的时间间隔，与服务管理体系和服务有关的信息安全风险应予以评估并保留成文信息。信息安全控制措施应确认、实施和运行，以支持信息安全策略和应对识别的信息安全风险。信息安 全控制措施的决策应保留成文信息。

组织应同意和实施信息安全控制措施以应对与外部组织有关的信息安全风险。

组织应监控和评审信息安全控制措施的有效性，必要时，采取措施。

8.7.3.3 信息安全事件

信息安全事件应：

a) 记录和分类；

b) 考虑信息安全风险，进行优先排序；

c) 必要时进行升级；

d) 解决；

e) 关闭。

组织应基于类型、数量、对服务管理体系和相关方的影响分析信息安全事件，信息安全事件应 报告和评审，以发现改进机会。

注：ISO/IEC 27001 系列标准提供了支持实施和运行信息安全管理体系的要求与指南。ISO/IEC

27003 提供了集成实施 ISO/IEC 27001 和 ISO/IEC 20000-1 （本标准）的指南。

9 绩效评价

9.1 监视、测量、分析和评价

组织应确定：

a) 服务管理体系和服务需要监视和测量什么；

b) 需要用什么方法进行监视、策略、分析和评价，以确保结果有效；

c) 何时实施监视和测量；

d) 何时对监视和测量结果进行分析和评价。

组织应保留适当的成文信息，以作为结果的证据。

组织应对服务管理目标评估服务管理管理体系的绩效和有效性。组织应对服务要求评估服务的有效性。

9.2 内部审核

9.2.1 组织应按策划的时间间隔进行内部审核，以提供服务管理体系的下列信息：

a）是否符合：

1） 组织自身对服务管理体系的要求：

2） 本标准的要求。

b）是否得到有效实现和维护。

9.2.2 组织应：

a) 策划、建立、实现和维护审核方案（一个或多个），包括审核频次、方法、责任、策划要求 和报告。应考虑下列内容：

1） 关注流程的重要性；

2） 变更对组织的影响；

3） 以前审核的结果。

b) 规定每次审核的审核准则和范围；

c) 选择审核员并实施审核，以确保审核过程的客观公正；

d) 确保将审核结果报告至相关管理层；

e) 保留成文信息作为实施审核方案以及审核结果的证据。

9.3 管理评审

最高管理层应按策划的时间间隔评审组织的服务管理体系和服务，以确保其持续的适宜性、充分性和有效性。

管理评审应考虑：

a) 以往管理评审提出的措施的实施情况；

b) 与服务管理体系相关的外部和内部因素的变化；

c) 有关信息服务管理体系绩效，包括以下方面的趋势：

    1) 不符合和纠正措施；

    2) 监视和测量结果；

    3) 审核结果；

d) 持续改进的机遇；

e) 客户及其他相关方反馈；

f) 本标准要求的服务管理方针和其他要求的遵守性、适宜性；

g) 实现服务管理目标；

h) 服务绩效；

i) 服务生命周期中其它相关方的绩效；

j) 当前和预测的人员、技术、信息和财务资源级别和人、技术资源的能力；

k) 风险评估的结果、应对风险和机遇措施的有效性；

l) 影响服务管理体系和服务的变更：

管理评审的输出应包括与持续改进机会相关的决定以及变更服务管理体系和服务的任何需求。组织应保留成文信息作为管理评审结果的证据。

9.4 服务报告

组织应确定服务报告的要求和用途

关于服务管理体系和服务绩效、有效性的服务报告应使用服务管理体系和服务交付活动产生的信息。服务报告应包括趋势。

组织应基于服务报告的发现决策和采取措施，已协定的措施应和其他相关方沟通。

注：需要的报告在本标准的相关条款要求，也可以生成额外的报告。

10 改进

10.1 不符合及纠正措施

10.1.1 当发生不符合时，组织应：

  a) 对不符合做出反应，适用时：

    1) 采取措施，以控制并予以纠正；

    2) 处置后果；

  b) 通过以下活动，评价是否需要采取措施，以消除产生不符合的原因，避免其再次发生或在其 他场合发生：

    1) 评审不符合；

    2) 确定不符合的原因；

    3) 确定类似的不符合是否存在，或可能发生；

  c) 实现任何需要的措施：

  d) 评审任何所采取的纠正措施的有效性；

  e) 必要时，对服务管理体系进行变更。

纠正措施应与所产生的不符合的影响相适合。

10.1.2 组织应保留成文信息作为以下方面的证据：

  a) 不符合的性质及所采取的任何后续措施；
  b) 任何纠正措施的结果。

10.2 持续改进

组织应持续改进服务管理体系和服务的适宜性、充分性和有效性。

授权决策时，组织应确定适用于改进机会的评估标准。评估标准应包括和组织服务管理目标保 持一致。

改进机会应保留成文信息。组织应对确认的改进机会进行管理，包括下列活动：

a) 在质量、价值、能力、成本、成果、资源利用率和风险降低等方面设置一个或多个改进目标；

b) 确保改进活动进行优先排序、策划和实施；

c) 必要时，对服务管理体系进行变更；

d) 针对设定的目标，测量实施的改进，目标未满足的场合，采取必要的措施；

e) 汇报实施的改进。

注：改进可以包括被动和主动的措施，例如纠正、纠正措施、预防措施、增强、革新和重组。

INTERNATIONAL STANDARD

ISO/IEC 20000-1

Third edition
2018-09-15

Information technology — Service management —

Part 1:
Service management system requirements

Technologies de l'information — Gestion des services —

Partie 1: Exigences du système de management des services

Contents

Foreword

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

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received . Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT).

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

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

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

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

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

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

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

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

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

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

f) Renamed "Governance of processes operated by other parties" to "Control of parties involved in the service lifecycle" and updated the requirements to include services and service components as well as processes. Clarified that the organization cannot demonstrate conformity to the requirements specified in this document if other parties are used to provide or operate all services, service components or processes within the scope of the service management system (SMS).

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

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

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

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

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

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

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

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

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

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

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

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

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

Introduction

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

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

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

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

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

The clause structure (i.e. clause sequence), terms in 3.1 and many of the requirements are taken from Annex SL of the Consolidated ISO Supplement to the ISO/IEC Directives Part 1, known as the common high level structure (HLS) for management system standards. The adoption of the HLS enables an organization to align or integrate multiple management system standards. For example, an SMS can be integrated with a quality management system based on ISO 9001 or an information security management system based on ISO/IEC 27001.

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

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

SERVICE MANAGEMENT SYSTEM (SMS)

CONTEXT OF THE ORGANIZATION
• Organization and its Context • Interested Parties • Scope of the SMS • Establish the SMS

LEADERSHIP
• Leadership & Commitment • Policy • Roles, Responsibilities and Authorities

PLANNING
• Risks and Opportunities • Objectives • Plan the SMS

SUPPORT OF THE SMS
• Resources • Competence • Awareness • Communication • Documented Information • Knowledge

OPERATION OF THE SMS

OPERATIONAL PLANNING & CONTROL

SERVICE PORTFOLIO
• Service Delivery
• Plan the Services
• Control of Parties involved in the Service Lifecycle
• Service Catalogue Management
• Asset Management
• Configuration Management

RELATIONSHIP & AGREEMENT
• Business Relationship Management
• Service Level Management
• Supplier Management

SUPPLY & DEMAND
• Budgeting & Accounting for Services
• Demand Management
• Capacity Management

SERVICE DESIGN, BUILD & TRANSITION
• Change Management
• Service Design and Transition
• Release & Deployment Management

RESOLUTION AND FULFILMENT
• Incident Management
• Service Request Management
• Problem Management

SERVICE ASSURANCE
• Service Availability Management
• Service Continuity Management
• Information Security Management

PERFORMANCE EVALUATION
• Monitoring, Measurement, Analysis & Evaluation
• Internal Audit
• Management Review
• Service Reporting

IMPROVEMENT
• Nonconformity and Corrective Action
• Continual Improvement

Customers (Internal & External)

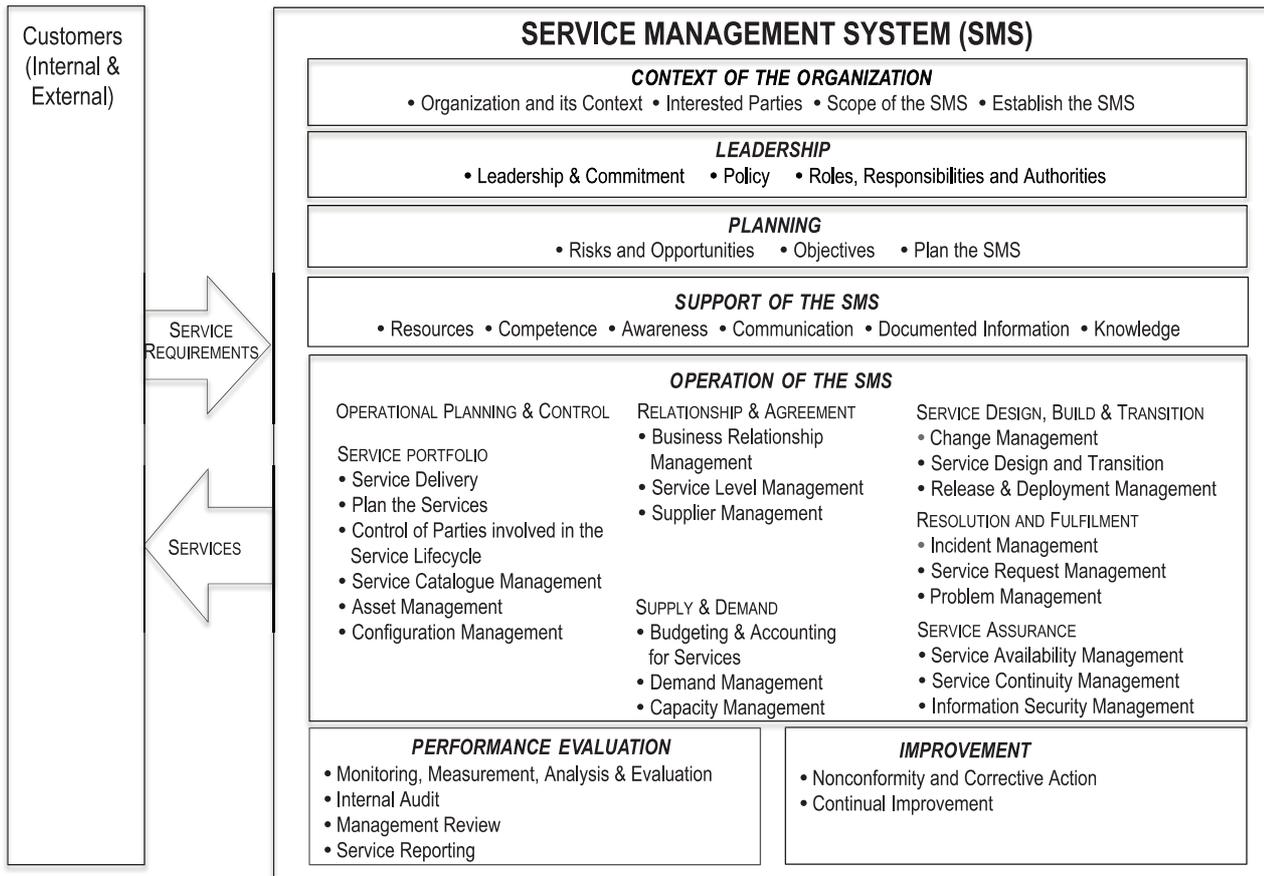SERVICE REQUIREMENTS

SERVICES

Figure 1 — Service management system

Information technology — Service management —

Part 1:
Service management system requirements

1 Scope

1.1 General

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

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

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

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

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

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

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

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

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

1.2 Application

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

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

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

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

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

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

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

3.1 Terms specific to management system standards

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

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

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

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

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

3.1.3
conformity
fulfilment of a *requirement* (3.1.19)

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

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

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

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

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

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

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

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

Note 2 to entry: Documented information can refer to:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.1.10
measurement
process ([3.1.18](#)) to determine a value

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

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

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

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

3.1.13
objective
result to be achieved

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

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

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

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

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

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

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

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

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

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

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

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

3.1.16
performance
measurable result

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.1.20
risk
effect of uncertainty

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

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

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

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

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

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

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

3.2 Terms specific to service management

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

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

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

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

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

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

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

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

EXAMPLE   Consumer, client, beneficiary, sponsor, purchaser.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[SOURCE: ISO 9000:2015, 3.4.5]

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

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

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

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

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

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

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

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

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

Note 1 to entry: Service is generally intangible.

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

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

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

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

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

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

Note 1 to entry: A service component can include *configuration item*s ([3.2.2](#)), *assets* ([3.2.1](#)) or other elements.

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

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

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

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

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

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

3.2.22
service management

set of capabilities and *process*es ([3.1.18](#)) to direct and control the *organization*'s ([3.1.14](#)) activities and resources for the planning, design, *transition* ([3.2.27](#)), delivery and improvement of *services* ([3.2.15](#)) to deliver *value* ([3.2.29](#))

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

3.2.23
service management system
SMS

management system ([3.1.9](#)) to direct and control the *service management* ([3.2.22](#)) activities of the *organization* ([3.1.14](#))

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

3.2.24
service provider

organization ([3.1.14](#)) that manages and delivers a *service* ([3.2.15](#)) or services to *customer*s ([3.2.3](#))

3.2.25
service request

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

3.2.26
service requirement

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

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

3.2.27
transition

activities involved in moving a new or changed *service* ([3.2.15](#)) to or from the live environment

3.2.28
user

individual or group that interacts with or benefits from a *service* ([3.2.15](#)) or services

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

3.2.29
value

importance, benefit or usefulness

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

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

4 Context of the organization

4.1 Understanding the organization and its context

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

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

4.2 Understanding the needs and expectations of interested parties

The organization shall determine:

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

b)   the relevant requirements of these interested parties.

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

4.3 Determining the scope of the service management system

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

When determining this scope, the organization shall consider:

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

b)   the requirements referred to in 4.2;

c)   the services delivered by the organization.

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

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

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

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

4.4 Service management system

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

5 Leadership

5.1 Leadership and commitment

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5.2   Policy

5.2.1   Establishing the service management policy

Top management shall establish a service management policy that:

a) is appropriate to the purpose of the organization;

b) provides a framework for setting service management objectives;

c) includes a commitment to satisfy applicable requirements;

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

5.2.2   Communicating the service management policy

The service management policy shall:

a) be available as documented information;

b) be communicated within the organization;

c) be available to interested parties, as appropriate.

5.3   Organizational roles, responsibilities and authorities

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

Top management shall assign the responsibility and authority for:

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

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

6   Planning

6.1   Actions to address risks and opportunities

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

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

b)   prevent, or reduce, undesired effects;

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

6.1.2   The organization shall determine and document:

a)   risks related to:

   1)   the organization;

   2)   not meeting the service requirements;

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

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

c)   risk acceptance criteria;

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

6.1.3   The organization shall plan:

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

b)   how to:

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

   2)   evaluate the effectiveness of these actions.

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

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

6.2   Service management objectives and planning to achieve them

6.2.1   Establish objectives

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

a)   be consistent with the service management policy;

b)   be measurable;

c)   take into account applicable requirements;

d) be monitored;

e) be communicated;

f) be updated as appropriate.

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

6.2.2 Plan to achieve objectives

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

a) what will be done;

b) what resources will be required;

c) who will be responsible;

d) when it will be completed;

e) how the results will be evaluated.

6.3 Plan the service management system

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

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

a) list of services;

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

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

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

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

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

g) technology used to support the SMS;

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

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

7 Support of the service management system

7.1 Resources

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

7.2   Competence

The organization shall:

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

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

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

d)   retain appropriate documented information as evidence of competence.

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

7.3   Awareness

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

a)   the service management policy;

b)   the service management objectives;

c)   the services relevant to their work;

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

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

7.4   Communication

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

a)   on what it will communicate;

b)   when to communicate;

c)   with whom to communicate;

d)   how to communicate;

e)   who will be responsible for the communication.

7.5   Documented information

7.5.1   General

The organization's SMS shall include:

a)   documented information required by this document;

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

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

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

—   the complexity of processes, services and their interfaces;

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— the competence of persons.

7.5.2 Creating and updating documented information

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

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

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

c) review and approval for suitability and adequacy.

7.5.3 Control of documented information

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

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

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

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

a) distribution, access, retrieval and use;

b) storage and preservation, including preservation of legibility;

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

d) retention and disposition.

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

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

7.5.4 Service management system documented information

The documented information for the SMS shall include:

a) scope of the SMS;

b) policy and objectives for service management;

c) service management plan;

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

e) processes of the organization's SMS;

f) service requirements;

g) service catalogue(s);

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

i) contracts with external suppliers;

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

k) procedures that are required by this document;

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

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

7.6 Knowledge

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

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

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

8 Operation of the service management system

8.1 Operational planning and control

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

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

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

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

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

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

8.2 Service portfolio

8.2.1 Service delivery

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

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

8.2.2 Plan the services

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

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

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

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

8.2.3 Control of parties involved in the service lifecycle

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

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

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

The organization shall determine and document:

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

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

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

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

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

a) measurement and evaluation of process performance;

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

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

8.2.4 Service catalogue management

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

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

8.2.5 Asset management

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

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

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

8.2.6   Configuration management

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

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

a)   unique identification;

b)   type of CI;

c)   description of the CI;

d)   relationship with other CIs;

e)   status.

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

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

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

8.3   Relationship and agreement

8.3.1   General

The organization may use suppliers to:

a)   provide or operate services;

b)   provide or operate service components;

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

Figure 2 illustrates the usage, agreements and relationships between business relationship management, service level management and supplier management.
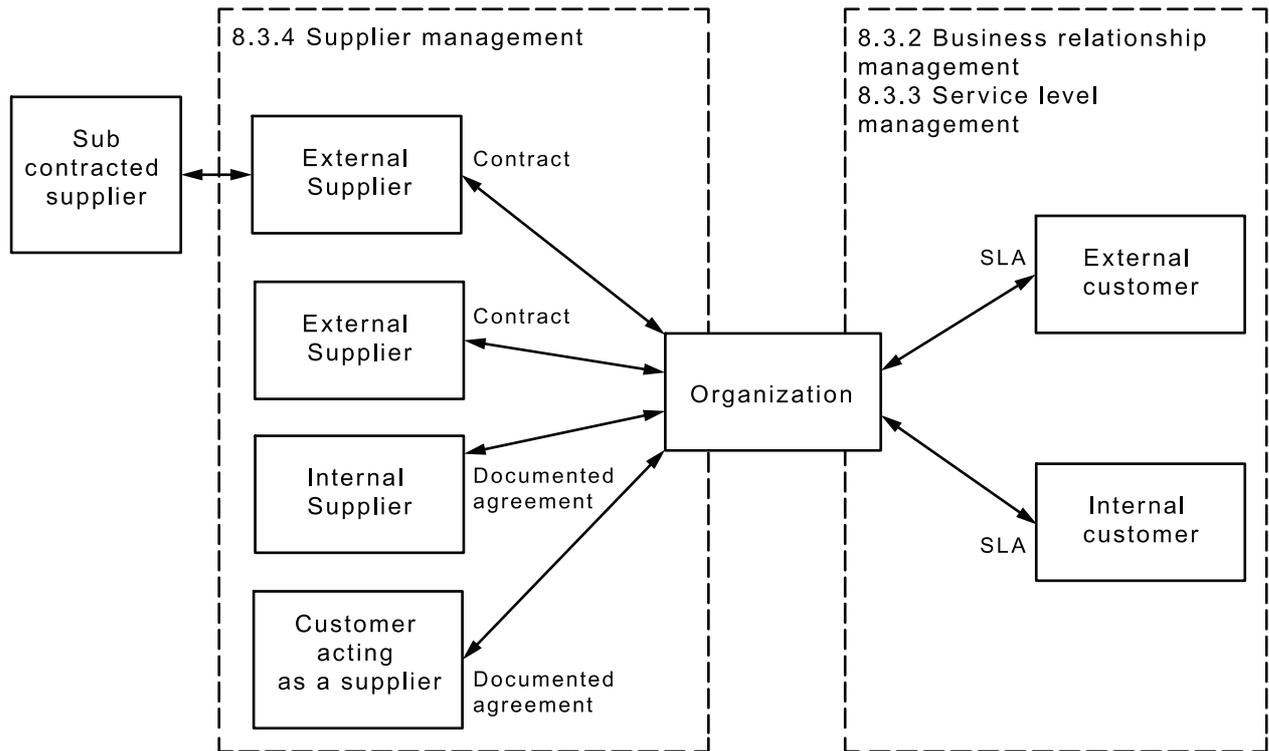
Figure 2 — Relationships and agreements between parties involved in the service lifecycle

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

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

8.3.2   Business relationship management

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

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

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

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

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

8.3.3   Service level management

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

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

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

a) performance against service level targets;

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

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

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

8.3.4   Supplier management

8.3.4.1   Management of external suppliers

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

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

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

b) requirements to be met by the external supplier;

c) service level targets or other contractual obligations;

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

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

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

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

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

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

8.3.4.2   Management of internal suppliers and customers acting as a supplier

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

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

8.4 Supply and demand

8.4.1 Budgeting and accounting for services

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

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

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

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

8.4.2 Demand management

At planned intervals, the organization shall:

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

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

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

8.4.3 Capacity management

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

The organization shall plan capacity to include:

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

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

c)   timescales and thresholds for changes to service capacity.

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

8.5 Service design, build and transition

8.5.1 Change management

8.5.1.1 Change management policy

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

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

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

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

8.5.1.2   Change management initiation

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

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

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

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

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

d)   removal of a service;

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

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

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

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

8.5.1.3   Change management activities

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

a)   existing services;

b)   customers, users and other interested parties;

c)   policies and plans required by this document;

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

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

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

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

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

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

8.5.2 Service design and transition

8.5.2.1 Plan new or changed services

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

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

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

c) human, technical, information and financial resources;

d) dependencies on other services;

e) testing needed for the new or changed services;

f) service acceptance criteria;

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

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

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

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

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

8.5.2.2 Design

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

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

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

c) requirements for appropriate education, training and experience;

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

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

f) impact on other services;

g) updates to the service catalogue(s).

8.5.2.3 Build and transition

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

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

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

8.5.3   Release and deployment management

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

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

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

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

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

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

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

8.6   Resolution and fulfilment

8.6.1   Incident management

Incidents shall be:

a)   recorded and classified;

b)   prioritized taking into consideration impact and urgency;

c)   escalated if needed;

d)   resolved;

e)   closed.

Records of incidents shall be updated with actions taken.

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

8.6.2   Service request management

Service requests shall be:

a)   recorded and classified;

b)   prioritized;

c)   fulfilled;

d)   closed.

Records of service requests shall be updated with actions taken.

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

8.6.3   Problem management

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

Problems shall be:

a)   recorded and classified;

b)   prioritized;

c)   escalated if needed;

d)   resolved if possible;

e)   closed.

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

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

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

8.7   Service assurance

8.7.1   Service availability management

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

Service availability requirements and targets shall be documented and maintained.

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

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

8.7.2   Service continuity management

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

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

a) criteria and responsibilities for invoking service continuity;

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

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

d) service recovery requirements;

e) procedures for returning to normal working conditions.

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

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

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

8.7.3 Information security management

8.7.3.1 Information security policy

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

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

a) the organization;

b) customers and users;

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

8.7.3.2 Information security controls

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

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

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

8.7.3.3 Information security incidents

Information security incidents shall be:

a) recorded and classified;

b) prioritized taking into consideration the information security risk;

c) escalated if needed;

d) resolved;

e) closed.

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

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

9   Performance evaluation

9.1   Monitoring, measurement, analysis and evaluation

The organization shall determine:

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

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

c) when the monitoring and measuring shall be performed;

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

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

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

9.2   Internal audit

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

a) conforms to:

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

    2)   the requirements of this document;

b) is effectively implemented and maintained.

9.2.2   The organization shall:

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

    1)   the importance of the processes concerned;

    2)   changes affecting the organization;

3) the results of previous audits;

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

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

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

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

NOTE   ISO 19011 provides guidelines on auditing management systems.

9.3   Management review

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

The management review shall include consideration of:

a) the status of actions from previous management reviews;

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

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

1) nonconformities and corrective actions;

2) monitoring and measurement results;

3) audit results;

d) opportunities for continual improvement;

e) feedback from customers and other interested parties;

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

g) achievement of service management objectives;

h) performance of the services;

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

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

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

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

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

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

9.4   Service reporting

The organization shall determine reporting requirements and their purpose.

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

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

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

10 Improvement

10.1 Nonconformity and corrective action

10.1.1 When a nonconformity occurs, the organization shall:

a)   react to the nonconformity, and as applicable:

    1)   take action to control and correct it;

    2)   deal with the consequences;

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

    1)   reviewing the nonconformity;

    2)   determining the causes of the nonconformity;

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

c)   implement any action needed;

d)   review the effectiveness of any corrective action taken;

e)   make changes to the SMS, if necessary.

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

10.1.2 The organization shall retain documented information as evidence of:

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

b)   the results of any corrective action.

10.2 Continual improvement

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

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

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

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

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

c)   making changes to the SMS, if necessary;

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

e) reporting on implemented improvements.

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

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