CERTIFIED
ISO 20000:2018 LEAD AUDITOR

BOOK OF KNOWLEDGE

GSDC
Global Skill Development Council

ISO 20000:2018 Lead Auditor

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CERTIFIED ISO 20000:2018 LEAD AUDITOR BOOK OF KNOWLEDGE (BOK)

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1. Introduction

This BOK provides an overview of the key concepts and topics that are relevant for the Certified ISO 20000:2018 Lead Auditor course. The course aims to equip the participants with the knowledge and skills to plan, conduct, report and follow up an audit of a service management system (SMS) based on the ISO/IEC 20000 standard. The ISO/IEC 20000 standard is the international standard for IT service management (ITSM) that specifies the requirements for an organization to establish, implement, maintain and improve a SMS. The standard is based on the principles of quality management and customer satisfaction. It covers the design, transition, delivery and improvement of services that meet the needs and expectations of customers and other interested parties.

The BOK is divided into five sections:

- **ISO/IEC 20000 Standard: This** section introduces the ISO/IEC 20000 standard, its structure, scope, objectives and benefits. It also explains the key terms and definitions used in the standard.
- **Relationship with other frameworks and standards:** This section discusses how the ISO/IEC 20000 standard is aligned with other frameworks and standards that support ITSM, such as ITIL, COBIT and ISO/IEC 27001. It also describes the advantages and challenges of integrating the SMS with other management systems.
- **The Deming cycle and how it applies to ITSM:** This section describes the Deming cycle, also known as the Plan-Do-Check-Act (PDCA) cycle, which is a method for continuous improvement of processes and products. It also illustrates how the Deming cycle can be applied to ITSM to ensure the quality and effectiveness of IT services, and how the ISO/IEC 20000 standard follows the PDCA cycle in its structure and requirements.
- **Plan. Do. Check. Act:** This section explains each phase of the PDCA cycle in more detail, and provides examples of the activities, outputs and outcomes that are involved in each phase. It also highlights the role and responsibilities of the auditor in each phase.
- **Applicability and scope definition:** This section explains how to determine the applicability and scope of the SMS, which are the boundaries and characteristics of the IT services and the organization that are covered by the SMS. It also discusses the factors that should be considered when defining the

applicability and scope, and the importance of reviewing and updating them periodically.

1.1 ISO/IEC 20000 Standard

The ISO/IEC 20000 standard is the international standard for IT service management (ITSM) that specifies the requirements for an organization to establish, implement, maintain and improve a service management system (SMS). The standard is based on the principles of quality management and customer satisfaction. It covers the design, transition, delivery and improvement of services that meet the needs and expectations of customers and other interested parties.

The ISO/IEC 20000 standard consists of two parts:

- **Part 1:** Service management system requirements. This part specifies the requirements for the SMS, including the policies, objectives, processes, procedures, roles, responsibilities and resources. It also defines the scope and applicability of the SMS, and the criteria for conformity assessment.
- **Part 2:** Guidance on the application of service management systems. This part provides guidance and best practices on how to apply the requirements of Part 1 in different contexts and situations. It also explains the relationship between the SMS and other management systems, such as quality, risk, security and environmental management.

The ISO/IEC 20000 standard has the following structure:

Clause	Title	Description
0	Introduction	This clause provides the background, rationale and objectives of the standard.
1	Scope	This clause defines the scope and applicability of the standard, and the intended users and benefits of the standard.
2	Normative references	This clause lists the normative references that are indispensable for the application of the standard.
3	Terms and definitions	This clause defines the key terms and concepts used in the standard.

4	Context of the organization	This clause specifies the requirements for understanding the internal and external context of the organization, the needs and expectations of the interested parties, and the scope and boundaries of the SMS.
5	Leadership	This clause specifies the requirements for the leadership and commitment of the top management, the service management policy, and the roles and responsibilities for the SMS.
6	Planning	This clause specifies the requirements for planning the SMS, including the service management objectives, the risks and opportunities, and the actions to address them.
7	Support	This clause specifies the requirements for the resources, competence, awareness, communication and documented information that are necessary to support the SMS.
8	Operation	This clause specifies the requirements for the operation of the SMS, including the service portfolio, the service delivery and relationship processes, the resolution and control processes, and the service design, transition and improvement processes.
9	Performance evaluation	This clause specifies the requirements for the monitoring, measurement, analysis and evaluation of the SMS, the internal audit of the SMS, and the management review of the SMS.
10	Improvement	This clause specifies the requirements for the improvement of the SMS, including the identification and selection of improvement opportunities, and the implementation of improvement actions.

The ISO/IEC 20000 standard has the following objectives:

- To provide a common framework and terminology for ITSM.
- To enable the organization to deliver consistent, reliable and quality IT services that meet the customer requirements and expectations.
- To facilitate the alignment of the IT services with the business needs and objectives of the organization.
- To enhance the performance and efficiency of the IT service processes and the SMS.
- To demonstrate the compliance of the organization with the best practices and standards for ITSM.
- To support the continual improvement of the IT services and the SMS.

The ISO/IEC 20000 standard has the following benefits:

- It provides a clear and comprehensive set of requirements and guidance for ITSM.
- It helps the organization to establish, implement, maintain and improve a SMS that is fit for purpose and use.
- It improves the communication and collaboration between the IT service providers and the customers and other interested parties.
- It increases the customer satisfaction and loyalty by delivering value-added IT services.
- It reduces the costs and risks associated with the IT services and the SMS.
- It enhances the reputation and credibility of the organization as a reliable and competent IT service provider.
- It provides a competitive advantage and a differentiation factor for the organization in the market.

1.2 Relationship with other frameworks and standards

The ISO/IEC 20000 standard is aligned with other frameworks and standards that support ITSM, such as:

- **ITIL:** ITIL is a set of best practices for ITSM that provides a common language and framework for delivering value to customers and stakeholders. ITIL covers the entire service lifecycle, from strategy to operation to continual improvement. The ISO/IEC 20000 standard is compatible with ITIL and can be used to demonstrate compliance with ITIL requirements.
- **COBIT:** COBIT is a framework for the governance and management of enterprise IT that helps organizations achieve their objectives and create value. COBIT covers the domains of governance, alignment, performance, risk,

resources and value. The ISO/IEC 20000 standard supports the implementation of COBIT by providing a structured approach to ITSM.

- **ISO/IEC 27001:** ISO/IEC 27001 is the international standard for information security management that specifies the requirements for establishing, implementing, maintaining and improving an information security management system (ISMS). The ISO/IEC 20000 standard is compatible with ISO/IEC 27001 and can be integrated with the ISMS to ensure the security of IT services.

The alignment of the ISO/IEC 20000 standard with other frameworks and standards has the following advantages:

- It enables the organization to adopt a holistic and comprehensive approach to ITSM that covers all aspects of quality, governance, security and value.
- It facilitates the integration and coordination of the IT services and the SMS with other management systems and processes within the organization.
- It reduces the duplication and inconsistency of the IT service processes and the SMS across the organization.
- It simplifies the implementation and maintenance of the IT services and the SMS by leveraging the existing best practices and standards.
- It improves the interoperability and compatibility of the IT services and the SMS with the customers and suppliers that use the same or similar frameworks and standards.

The alignment of the ISO/IEC 20000 standard with other frameworks and standards also has the following challenges:

- It requires the organization to understand and comply with the different requirements and expectations of the various frameworks and standards.
- It may create confusion and conflict among the IT service providers and the customers and other interested parties that have different interpretations and preferences of the frameworks and standards.
- It may increase the complexity and cost of the IT services and the SMS by adding more layers and elements to the existing processes and systems.
- It may limit the flexibility and innovation of the IT services and the SMS by imposing rigid and prescriptive rules and guidelines.

1.3 The Deming cycle and how it applies to ITSM
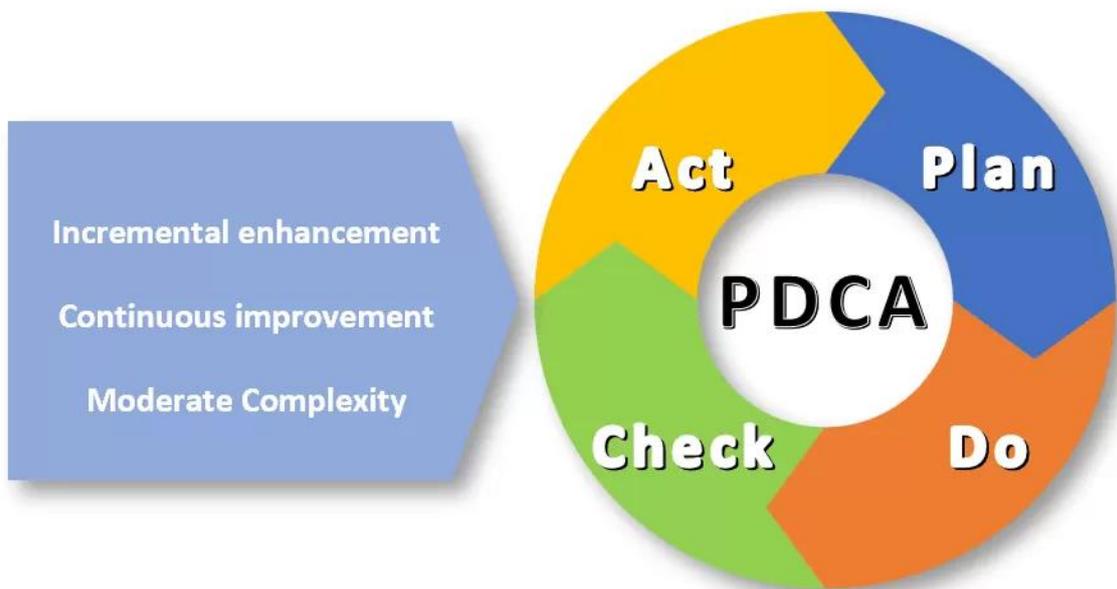
The Deming cycle, also known as the Plan-Do-Check-Act (PDCA) cycle, is a method for continuous improvement of processes and products. It consists of four phases:

- **Plan:** Define the objectives, scope, resources, methods and measures for the improvement project.
- **Do:** Implement the planned actions and collect data on the results.
- **Check:** Analyze the data and compare the results with the objectives and expectations.
- **Act:** Take corrective and preventive actions based on the analysis and feedback, and standardize the improvements.

The Deming cycle can be applied to ITSM to ensure the quality and effectiveness of IT services.

The ISO/IEC 20000 standard follows the PDCA cycle in its structure and requirements. For example:

- **Plan:** The organization establishes the SMS, defines the service management policy and objectives, and plans the service management processes.
- **Do:** The organization implements and operates the SMS, delivers and supports the services, and manages the service assets and configuration.

- **Check:** The organization monitors, measures and reviews the SMS, evaluates the performance and satisfaction of the services, and conducts internal audits and management reviews.
- **Act:** The organization improves the SMS, identifies and implements the opportunities for improvement, and takes corrective and preventive actions.

The Deming cycle has the following benefits for ITSM:

- It provides a systematic and logical approach to ITSM that ensures the alignment of the IT services with the business needs and objectives.
- It enables the organization to monitor and control the IT service processes and the SMS, and to identify and address the gaps and issues that may affect the quality and performance of the IT services.
- It encourages the organization to learn from the experience and feedback of the IT service providers and the customers and other interested parties, and to incorporate the lessons learned into the improvement of the IT services and the SMS.
- It fosters a culture of continual improvement of the IT services and the SMS that drives the organization to achieve excellence and customer satisfaction.

1.4 Plan. Do. Check. Act

Plan. Do. Check. Act (PDCA) is another name for the Deming cycle, which is a method for continuous improvement of processes and products.

It consists of four phases:

- **Plan:** Define the objectives, scope, resources, methods and measures for the improvement project.
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- **Check:** Analyze the data and compare the results with the objectives and expectations.
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- **Check:** The organization monitors, measures and reviews the SMS, evaluates the performance and satisfaction of the services, and conducts internal audits and management reviews.
- **Act:** The organization improves the SMS, identifies and implements the opportunities for improvement, and takes corrective and preventive actions.

Each phase of the PDCA cycle involves the following activities, outputs and outcomes:

Phase	Activities	Outputs	Outcomes
Plan	- Analyze the current situation and identify the problems and opportunities for improvement.- Define the scope, objectives, criteria and methods for the improvement project.- Allocate the resources, roles and responsibilities for the improvement project.- Establish the plan and schedule for the improvement project.	- Problem and opportunity statement.- Improvement project charter.- Resource plan.- Improvement project plan.	- A clear and agreed understanding of the improvement project.- A realistic and feasible plan for the improvement project.- A committed and accountable team for the improvement project.
Do	- Execute the improvement project plan and implement the planned actions.- Collect and record the data and information on the results and performance of the improvement project.- Document the changes and deviations from the improvement project plan.	- Implemented actions.- Data and information.- Change and deviation logs.	- A successful and completed implementation of the improvement project.- A reliable and accurate measurement of the results and performance of the improvement project.- A transparent and traceable record of the changes and

			deviations from the improvement project plan.
Check	- Analyze the data and information collected from the improvement project.- Compare the results and performance of the improvement project with the objectives and expectations.- Identify the strengths, weaknesses, opportunities and threats of the improvement project.- Evaluate the effectiveness and efficiency of the improvement project.- Report the findings and conclusions of the improvement project.	- Data and information analysis.- Results and performance comparison.- SWOT analysis.- Improvement project evaluation.- Improvement project report.	- A comprehensive and objective assessment of the improvement project.- A valid and meaningful comparison of the results and performance of the improvement project.- A realistic and actionable identification of the areas for improvement.- A fair and balanced evaluation of the improvement project.- A clear and concise report of the improvement project.
Act	- Review the findings and conclusions of the improvement project.- Identify and prioritize the corrective and preventive actions for the improvement project.- Implement the corrective and preventive actions and verify their effectiveness.- Standardize the successful improvements and communicate them to the relevant parties.- Recognize and reward the	- Corrective and preventive actions.- Effectiveness verification.- Standardized improvements.- Communication plan.- Recognition and reward plan.- Next improvement project plan.	- A thorough and constructive review of the improvement project.- A timely and appropriate resolution of the problems and issues of the improvement project.- A verified and confirmed improvement of the results and performance of the improvement project.- A consistent and widespread adoption of the successful

	achievements and contributions of the improvement project team.- Identify and plan the next improvement project.		improvements.- A motivated and satisfied improvement project team.- A continuous and sustainable improvement cycle.

The role and responsibilities of the auditor in each phase of the PDCA cycle are:

- **Plan:** The auditor should review and approve the improvement project plan, and ensure that it is aligned with the audit objectives, scope and criteria. The auditor should also coordinate and communicate with the improvement project team and the auditee, and prepare the audit plan and checklist.
- **Do:** The auditor should conduct the audit according to the audit plan and checklist, and collect and record the audit evidence and observations. The auditor should also document the audit findings and nonconformities, and report them to the improvement project team and the auditee.
- **Check:** The auditor should analyze the audit evidence and observations, and compare them with the audit objectives, scope and criteria. The auditor should also evaluate the effectiveness and efficiency of the improvement project, and the conformity and compliance of the SMS. The auditor should also prepare and present the audit report and conclusions.
- **Act:** The auditor should review and verify the corrective and preventive actions taken by the improvement project team and the auditee, and ensure that they are effective and sufficient. The auditor should also follow up and monitor the implementation and maintenance of the standardized improvements, and provide feedback and recommendations for the next improvement project.

1.5 Applicability and scope definition

The applicability and scope of the SMS are the boundaries and characteristics of the IT services and the organization that are covered by the SMS. The applicability and scope are determined by the organization based on its business needs, objectives, risks and opportunities. The applicability and scope should be defined, documented and communicated to all relevant parties, such as customers, suppliers, employees and auditors.

The applicability and scope of the SMS should consider the following factors:

- The type, size, complexity and diversity of the IT services and the organization.
- The needs and expectations of the customers and other interested parties.
- The legal, regulatory and contractual requirements and obligations.
- The strategic direction and goals of the organization.
- The resources and capabilities of the organization.
- The risks and opportunities associated with the IT services and the organization.

The applicability and scope of the SMS should be reviewed and updated periodically, or when there are significant changes in the IT services or the organization. The review and update should ensure that the SMS remains relevant, effective and aligned with the business needs and objectives.

The applicability and scope of the SMS have the following implications:

- They determine the extent and depth of the SMS implementation and operation, and the level of detail and documentation required.
- They influence the design, transition, delivery and improvement of the IT services and the SMS, and the allocation of the resources and responsibilities.
- They affect the performance and satisfaction of the IT services and the SMS, and the measurement and evaluation of the results and outcomes.
- They impact the conformity and compliance of the IT services and the SMS, and the audit and certification of the SMS.

2. Definitions and Terminology:

2.1 Terminology related to management system standards

- A management system standard (MSS) is a document that specifies requirements and guidelines for an organization to establish, implement, maintain and improve a management system. A management system is a set of interrelated or interacting elements that an organization uses to achieve its objectives, such as policies, processes, procedures, resources, roles and responsibilities.

- An MSS can be generic, applicable to any type of organization and any field of activity, or specific, tailored to a particular sector, industry or domain. Generic MSS are based on the principles of quality management, such as customer focus, leadership, engagement of people, process approach, improvement, evidence-based decision making, and relationship management. Specific MSS address the specific needs and challenges of a certain type of organization or activity, such as service management, environmental management, information security management, or occupational health and safety management.

- Examples of generic MSS are ISO 9001 (quality management), ISO 14001 (environmental management), ISO 27001 (information security management), and ISO 45001 (occupational health and safety management). These MSS are widely recognized and adopted by organizations around the world, and they provide a common language and framework for managing and improving their performance and satisfying their customers and other interested parties.

- Examples of specific MSS are ISO/IEC 20000-1 (service management), ISO 22301 (business continuity management), ISO 50001 (energy management), and ISO 37001 (anti-bribery management). These MSS are designed to help organizations manage their specific risks and opportunities, comply with relevant laws and regulations, and demonstrate their social responsibility and ethical conduct.

- An MSS can be used by an organization to demonstrate its ability to consistently provide products and services that meet the requirements and expectations of its customers and other interested parties, and to enhance its performance and satisfaction. An organization can use an MSS as a self-assessment tool, a benchmark for best practices, or a guide for improvement. An organization can also use an MSS to obtain external recognition or certification of its management system by an accredited third-party body,

which can provide assurance and confidence to its customers and other interested parties.

- An MSS usually follows a common structure and approach, based on the Plan-Do-Check-Act (PDCA) cycle and the process approach, which enable the integration and alignment of multiple management systems within an organization. The PDCA cycle is a model that helps an organization plan its objectives and actions, implement them, monitor and measure the results, and take corrective and preventive actions to improve them. The process approach is a method that helps an organization identify, analyze, manage, and improve its processes and their interactions, in order to deliver value to its customers and other interested parties.

- An MSS usually consists of the following sections: scope, normative references, terms and definitions, context of the organization, leadership, planning, support, operation, performance evaluation, and improvement. These sections cover the main aspects of a management system, such as its scope and boundaries, its reference standards and definitions, its internal and external issues and stakeholders, its leadership and commitment, its objectives and plans, its resources and competencies, its operational processes and controls, its monitoring and measurement methods and results, and its improvement actions and opportunities.

2.2 Terminology related to service management

- Service management is a set of specialized organizational capabilities for providing value to customers in the form of services. A service is a means of enabling value co-creation by facilitating outcomes that customers want to achieve, without the customer having to manage specific costs and risks. A service provider is an organization that provides services to internal or external customers. A customer is a person or organization that defines the requirements for the service and takes part in the service consumption. A user is a person who uses the service. A service consumer is a generic term that includes both customers and users.

- A service requirement is a need, expectation, or obligation that is stated, generally implied, or obligatory. A service requirement can be functional, specifying what the service should do or provide, or non-functional, specifying how the service should perform or behave. A service requirement can be derived from various sources, such as customer needs and preferences, market trends and opportunities, legal and regulatory requirements, or organizational policies and strategies.

- A service level agreement (SLA) is a documented agreement between a service provider and a customer that identifies the services required and the expected level of service. An SLA typically includes the following elements: the scope and description of the service, the roles and responsibilities of the parties, the service level objectives and indicators, the reporting and review mechanisms, the escalation and resolution procedures, and the terms and conditions of the service.
- A service level objective (SLO) is a measurable commitment towards one or more aspects of service quality, such as availability, reliability, performance, or security. An SLO defines the target value and the acceptable range of variation for a service level indicator. An SLO can be used to monitor and evaluate the service delivery and to trigger corrective actions if the service level falls below the agreed threshold.
- A service level indicator (SLI) is a metric that measures one or more aspects of service quality and is used to monitor and report on the achievement of SLOs. An SLI can be based on quantitative or qualitative data, such as response time, error rate, customer satisfaction, or compliance level. An SLI can be collected and calculated from various sources, such as service logs, surveys, audits, or tests.
- A service catalog is a structured and up-to-date list of all the services that a service provider offers to its customers, including information such as the service description, price, availability, and SLAs. A service catalog helps the service provider to communicate and market its service offerings, and helps the customers to understand and select the services that best suit their needs and expectations.
- A service portfolio is a complete set of services that a service provider manages across various stages of their lifecycle, such as service pipeline (services under development), service catalog (services available for use), and retired services. A service portfolio helps the service provider to manage its investments and resources, align its services with its strategies and objectives, and optimize its service mix and performance.
- A service lifecycle is a model that describes the stages that a service goes through from its initial conception to its retirement, such as service strategy, service design, service transition, service operation, and continual service improvement. A service lifecycle helps the service provider to plan, develop, deliver, and improve its services in a systematic and coordinated way, taking into account the changing needs and expectations of the customers and other interested parties.

- A service value system (SVS) is a model that describes how all the components and activities of an organization work together to facilitate value creation through services, based on the following elements: guiding principles, governance, service value chain, practices, and continual improvement. A SVS helps the organization to establish a shared vision and direction, define and enforce policies and rules, coordinate and optimize its value streams, apply and integrate its capabilities and resources, and learn and improve from its experiences and feedback.

- A service value chain (SVC) is a set of interconnected activities that an organization performs to deliver a valuable service or product to its customers and to facilitate value realization, based on the following steps: plan, improve, engage, design and transition, obtain/build, and deliver and support. An SVC helps the organization to structure its work and optimize its workflows, focusing on the value outcomes and the value co-creation with the customers and other interested parties.

- A practice is a set of organizational resources designed for performing work or accomplishing an objective, such as processes, procedures, roles, tools, and techniques. A practice helps the organization to execute its activities and tasks in an effective and efficient way, leveraging its knowledge and experience, and applying its standards and methods.

- A process is a set of interrelated or interacting activities that transform inputs into outputs and deliver value to customers or stakeholders. A process helps the organization to achieve a specific and predictable result, following a defined sequence and logic, and using a specified set of inputs and resources.

- A procedure is a specified way of carrying out an activity or a process. A procedure helps the organization to ensure consistency and quality in its work, providing detailed instructions and guidance for performing the activity or the process.

- A role is a set of responsibilities, activities and authorities assigned to a person or team. A role helps the organization to clarify and distribute its work and accountabilities, defining what each person or team is expected to do and how they are authorized to do it.

3. Organizational Context:

3.1 Comprehending the organization and its environment

- To provide effective and valuable services, a service provider needs to understand its organizational context and its environment, which include the internal and external factors that influence its purpose, goals, and strategies.
- Some examples of internal factors are the organization's vision, mission, values, culture, governance, structure, policies, processes, resources, capabilities, and competencies. These factors define the identity, direction, and capabilities of the organization and how it operates and performs internally.
- Some examples of external factors are the market conditions, customer needs and expectations, competitors, suppliers, partners, regulators, and social trends. These factors affect the opportunities, threats, and challenges that the organization faces and how it interacts and competes externally.
- A service provider can use various methods and tools to analyze its organizational context and its environment, such as SWOT analysis, PESTLE analysis, Porter's five forces analysis, stakeholder analysis, and benchmarking. These methods and tools help the service provider to assess its strengths, weaknesses, opportunities, and threats, and to compare its performance and practices with others.
- By comprehending its organizational context and its environment, a service provider can identify its value proposition, differentiate itself from its competitors, align its services with its business objectives and customer requirements, and adapt to the changing conditions and demands.

3.2 Recognizing the requirements and expectations of stakeholders

- A stakeholder is any person or organization that can affect or be affected by the service provider and its services, such as customers, users, employees, managers, owners, shareholders, suppliers, partners, regulators, and society.
- A service provider needs to recognize the requirements and expectations of its stakeholders, which are the needs, wants, preferences, obligations, or constraints that they have regarding the service provider and its services.
- A service provider can use various methods and tools to elicit, capture, analyze, and manage the requirements and expectations of its stakeholders, such as surveys, interviews, workshops, focus groups, observation,

prototyping, and requirement management software. These methods and tools help the service provider to understand the problems, goals, and values of its stakeholders, and to document and prioritize their requirements and expectations.

- By recognizing the requirements and expectations of its stakeholders, a service provider can ensure that its services meet or exceed their satisfaction and deliver value to them. It can also establish and maintain positive relationships with its stakeholders, and manage their feedback and complaints.

3.3 Defining the extent of the service management system

- A service management system (SMS) is a set of interrelated or interacting elements that establish the policies, objectives, and processes for managing and improving the quality and performance of the services provided by a service provider.
- A service provider needs to define the scope and boundaries of its SMS, which are the extent and limits of its application and operation within the organization and its environment.
- A service provider can use various methods and tools to define the scope and boundaries of its SMS, such as scoping statement, scope diagram, scope matrix, and scope verification. These methods and tools help the service provider to specify what is included and excluded from its SMS, what are the interfaces and interactions with other systems and processes, and what are the assumptions and constraints that affect its SMS.
- By defining the scope and boundaries of its SMS, a service provider can clarify the roles and responsibilities of its SMS participants, ensure the consistency and compatibility of its SMS elements, and avoid the confusion and conflicts that may arise from the ambiguity and overlap of its SMS scope.

3.4 System for managing services

A system for managing services is a framework that enables a service provider to design, develop, deliver, and improve its services in a coordinated and consistent way, based on the principles, guidance, and best practices of service management.

A system for managing services typically consists of the following components: guiding principles, governance, service value system, service value chain, practices, and continual improvement.

- Guiding principles are the core values and beliefs that guide the actions and decisions of the service provider and its stakeholders.
- Governance is the system of direction and control that ensures the alignment and accountability of the service provider and its stakeholders.
- Service value system is the model that describes how the service provider creates, delivers, and captures value for its customers and other stakeholders.
- Service value chain is the set of interconnected activities that the service provider performs to deliver value to its customers and other stakeholders.
- Practices are the sets of organizational resources and capabilities that the service provider applies and integrates to accomplish its work and achieve its objectives.
- Continual improvement is the ongoing process of learning and improving the quality and performance of the service provider and its services.

A system for managing services helps a service provider to establish a shared vision and direction, define and enforce policies and rules, coordinate and optimize its value streams, apply and integrate its capabilities and resources, and learn and improve from its experiences and feedback.

4. Leadership

- Leadership is the ability and responsibility of a service provider to direct and influence its stakeholders, especially its employees, to achieve its vision, mission, and goals.
- Leadership involves setting the direction, establishing the culture, and inspiring the engagement of the service provider and its stakeholders.
- Leadership also requires managing the services, efforts, objectives, plans, and system of the service provider, to ensure that they are aligned with its vision, mission, and goals, and that they deliver value to its customers and other stakeholders.

4.1 Managing Services

- Managing services is the process of planning, organizing, directing, and controlling the activities and resources of the service provider, to ensure that its services meet or exceed the expectations and requirements of its customers and other stakeholders.
- Managing services involves defining the service portfolio, service catalog, and service level agreements, designing and developing the service offerings, delivering and supporting the service operations, and evaluating and improving the service outcomes and performance.
- Managing services also requires coordinating and collaborating with the internal and external service providers, suppliers, and partners, to ensure the integration and interoperability of the service components and processes, and to optimize the value creation and delivery of the services.

For example, a service provider that offers cloud computing services may manage its services by:

- Defining the types, features, and prices of its cloud services in its service portfolio and service catalog, and agreeing on the service levels and responsibilities with its customers in its service level agreements.
- Designing and developing the cloud infrastructure, platform, and software that enable its customers to access and use its cloud services, and ensuring that they meet the security, reliability, and scalability standards.
- Delivering and supporting the cloud services to its customers, and resolving any issues or incidents that may affect the service availability or quality.

- Evaluating and improving the cloud services based on the feedback and satisfaction of its customers, and the performance and efficiency of its cloud resources and processes.
- Coordinating and collaborating with other cloud service providers, suppliers, and partners, to ensure that its cloud services are compatible and integrated with their services, and that they can leverage their expertise and capabilities to enhance its cloud services.

4.2 Efforts to tackle objectives and strategize for their accomplishment

- Efforts to tackle objectives and strategize for their accomplishment are the actions and initiatives that the service provider undertakes to achieve its desired results and outcomes, in alignment with its vision, mission, and goals.
- Efforts to tackle objectives and strategize for their accomplishment involve identifying and analyzing the opportunities and challenges, defining and prioritizing the objectives and targets, devising and implementing the strategies and tactics, and monitoring and measuring the progress and performance of the service provider and its services.
- Efforts to tackle objectives and strategize for their accomplishment also require engaging and empowering the stakeholders, especially the employees, to participate and contribute to the decision making, problem solving, and innovation of the service provider and its services.

For example, a service provider that wants to increase its market share and customer loyalty may tackle its objectives and strategize for their accomplishment by:

- Identifying and analyzing the opportunities and challenges in its market, such as the customer needs and preferences, the competitor strengths and weaknesses, and the technological trends and innovations.
- Defining and prioritizing the objectives and targets that it wants to achieve, such as increasing its customer base, retention, and satisfaction, and enhancing its service quality, differentiation, and value.
- Devising and implementing the strategies and tactics that it will use to achieve its objectives and targets, such as developing new or improved service features, launching marketing and promotion campaigns, and offering incentives and rewards to its customers.
- Monitoring and measuring the progress and performance of its strategies and tactics, and the results and outcomes of its objectives and targets, such as the

number of new or retained customers, the customer feedback and ratings, and the service revenue and profitability.

- Engaging and empowering its stakeholders, especially its employees, to participate and contribute to its efforts, such as by soliciting their ideas and suggestions, providing them with training and support, and rewarding them for their achievements and improvements.

4.3 Set objectives

- Setting objectives is the process of determining and communicating what the service provider wants to achieve, in terms of the results and outcomes that it delivers to its customers and other stakeholders, and the benefits and value that it creates for them.
- Setting objectives involves specifying the scope, criteria, and indicators of the objectives, aligning them with the vision, mission, and goals of the service provider, and ensuring that they are SMART: specific, measurable, achievable, relevant, and time-bound.
- Setting objectives also requires consulting and involving the stakeholders, especially the customers and employees, to understand their needs, expectations, and feedback, and to ensure their commitment and support for the objectives.

For example, a service provider that wants to improve its customer service may set its objectives by:

- Specifying the scope, criteria, and indicators of its objectives, such as the customer service quality, satisfaction, and loyalty, and the metrics and measures that it will use to assess them, such as the customer service ratings, reviews, and referrals.
- Aligning its objectives with its vision, mission, and goals, such as by stating how its objectives will help it to fulfill its vision of being the best service provider in its industry, its mission of delivering excellent service to its customers, and its goals of increasing its customer base and retention.
- Ensuring that its objectives are SMART, such as by making them specific (e.g., increase the customer service rating by 10%), measurable (e.g., use a survey or a rating system to collect the customer service feedback), achievable (e.g., provide the necessary resources and support to the customer service staff), relevant (e.g., focus on the aspects of customer service that matter most to the customers), and time-bound (e.g., achieve the objective within a year).

- Consulting and involving its stakeholders, especially its customers and employees, to understand their needs, expectations, and feedback, and to ensure their commitment and support for the objectives, such as by asking them what they like or dislike about the current customer service, what they would like to see improved, and how they can help to achieve the objectives.

4.4 Devise plans to achieve objectives

- Devising plans to achieve objectives is the process of designing and developing the courses of action and the resources that the service provider will use to accomplish its objectives, in accordance with its strategies and tactics.
- Devising plans to achieve objectives involves identifying and allocating the roles and responsibilities, tasks and activities, inputs and outputs, costs and benefits, risks and mitigations, and milestones and deadlines of the plans, and documenting and communicating them to the stakeholders, especially the employees and managers.
- Devising plans to achieve objectives also requires evaluating and validating the feasibility, suitability, and acceptability of the plans, and updating and adjusting them as needed, based on the changes and feedback from the environment and the stakeholders.

For example, a service provider that wants to launch a new service may devise its plans to achieve its objectives by:

- Identifying and allocating the roles and responsibilities, tasks and activities, inputs and outputs, costs and benefits, risks and mitigations, and milestones and deadlines of its plans, such as by assigning the project team and the project manager, defining the project scope and deliverables, estimating the project budget and resources, identifying the project risks and issues, and setting the project timeline and schedule.
- Documenting and communicating its plans to the stakeholders, especially the employees and managers, such as by creating a project charter, a project plan, and a project report, and sharing them with the project team, the project sponsor, and the other relevant stakeholders.
- Evaluating and validating the feasibility, suitability, and acceptability of its plans, such as by conducting a feasibility study, a business case analysis, and a stakeholder analysis, and ensuring that its plans are realistic, appropriate, and agreed upon by the stakeholders.

- Updating and adjusting its plans as needed, based on the changes and feedback from the environment and the stakeholders, such as by monitoring and controlling the project progress and performance, identifying and managing the project changes and issues, and incorporating the stakeholder feedback and suggestions.

4.5 Design the service management system

- Designing the service management system is the process of establishing and configuring the elements and components of the service management system, to enable and support the service provider to manage and improve its services in a coordinated and consistent way.
- Designing the service management system involves defining and applying the guiding principles, governance, service value system, service value chain, practices, and continual improvement of the service provider, and ensuring that they are aligned with its vision, mission, goals, and objectives, and that they reflect its culture and values.
- Designing the service management system also requires integrating and harmonizing the service management system with the other systems and processes of the service provider, such as the quality management system, the information security management system, and the business continuity management system, and ensuring that they are compliant with the relevant standards and regulations.

For example, a service provider that wants to adopt the ITIL framework for its service management system may design its service management system by:

- Defining and applying the guiding principles, governance, service value system, service value chain, practices, and continual improvement of the ITIL framework, such as by following the seven ITIL guiding principles (focus on value, start where you are, progress iteratively with feedback, collaborate and promote visibility, think and work holistically, keep it simple and practical, and optimize and automate), establishing the roles and responsibilities, policies and procedures, and decision making and reporting mechanisms of the ITIL governance, implementing the components and activities of the ITIL service value system (opportunity and demand, service value chain, service offering, service provision, service consumption, service relationship management, and continual improvement), applying the ITIL service value chain (plan, improve, engage, design and transition, obtain and

build, deliver and support), adopting the ITIL practices (general management, service management, and technical management practices), and applying the ITIL continual improvement model (what is the vision, where are we now, where do we want to be, how do we get there, take action, did we get there, how do we keep the momentum going).

- Ensuring that the ITIL framework is aligned with its vision, mission, goals, and objectives, and that it reflects its culture and values, such as by ensuring that the ITIL framework supports its vision of delivering high-quality and customer-centric IT services, its mission of providing reliable and innovative IT solutions, its goals of increasing its IT service efficiency and effectiveness, and its objectives of improving its IT service performance and satisfaction, and that it reflects its culture and values of excellence, innovation, collaboration, and customer focus.

- Integrating and harmonizing the ITIL framework with the other systems and processes of the service provider, such as the quality management system, the information security management system, and the business continuity management system, and ensuring that they are compliant with the relevant standards and regulations, such as by ensuring that the ITIL framework is compatible and consistent with the ISO 9001 quality management system, the ISO 27001 information security management system, and the ISO 22301 business continuity management system, and that it meets the requirements and expectations of the customers, regulators, and other stakeholders.

5. Risk and Opportunity Planning

- Risk and opportunity planning is the process of identifying, assessing, and managing the potential positive and negative effects of uncertainty on the service provider's objectives, plans, and activities.
- Risk and opportunity planning involves establishing the context, scope, criteria, and approach for risk and opportunity management, identifying and analyzing the sources, causes, and impacts of risks and opportunities, evaluating and prioritizing the risks and opportunities based on their likelihood and consequence, and developing and implementing the appropriate responses and controls for the risks and opportunities, and monitoring and reviewing their effectiveness and efficiency.
- Risk and opportunity planning also requires communicating and consulting with the stakeholders, especially the customers and employees, to ensure their awareness, involvement, and support for the risk and opportunity management, and to capture and address their feedback and concerns.

For example, a service provider that wants to expand its market share may perform its risk and opportunity planning by:

- Establishing the context, scope, criteria, and approach for risk and opportunity management, such as by defining the objectives, boundaries, assumptions, and constraints of the market expansion project, determining the risk and opportunity appetite, tolerance, and threshold of the service provider and the stakeholders, and selecting the methods and tools for risk and opportunity identification, analysis, evaluation, and treatment.
- Identifying and analyzing the sources, causes, and impacts of risks and opportunities, such as by using techniques such as brainstorming, interviews, surveys, SWOT analysis, PESTLE analysis, and scenario analysis, to identify the internal and external factors that may affect the market expansion project positively or negatively, and to analyze their root causes, potential consequences, and interrelationships.
- Evaluating and prioritizing the risks and opportunities based on their likelihood and consequence, such as by using techniques such as probability and impact matrix, risk and opportunity register, risk and opportunity heat map, and risk and opportunity profile, to assess the level and significance of the risks and opportunities, and to rank them according to their urgency and importance.

- Developing and implementing the appropriate responses and controls for the risks and opportunities, such as by using strategies such as avoid, reduce, transfer, or accept for the risks, and exploit, enhance, share, or ignore for the opportunities, and by designing and executing the actions and measures to prevent or mitigate the negative effects of the risks, and to enable or increase the positive effects of the opportunities, and by assigning the roles and responsibilities, resources, and timelines for the risk and opportunity treatment.
- Monitoring and reviewing the effectiveness and efficiency of the risk and opportunity management, such as by using techniques such as key performance indicators, risk and opportunity indicators, audits, and reviews, to measure and evaluate the performance and outcomes of the risk and opportunity management, and to identify and implement the improvements and adjustments as needed, based on the changes and feedback from the environment and the stakeholders.
- Communicating and consulting with the stakeholders, especially the customers and employees, to ensure their awareness, involvement, and support for the risk and opportunity management, and to capture and address their feedback and concerns, such as by using methods and channels such as meetings, workshops,> reports, newsletters, and surveys, to inform and engage the stakeholders about the objectives, plans, activities, and results of the risk and opportunity management, and to solicit and incorporate their input and suggestions.

5.1 Leadership and Dedication

- Leadership and dedication are the qualities and behaviors of the service provider's leaders and managers that demonstrate their commitment and support for the risk and opportunity management, and that influence and inspire the service provider's culture and values towards risk and opportunity management.
- Leadership and dedication involve setting the direction, vision, and objectives for the risk and opportunity management, establishing and promoting the policies, procedures, and standards for the risk and opportunity management, providing and allocating the resources and support for the risk and opportunity management, and recognizing and rewarding the achievements and contributions of the service provider and the stakeholders for the risk and opportunity management.

- Leadership and dedication also require leading by example, communicating and consulting effectively, empowering and motivating the employees and teams, fostering a culture of trust, collaboration, and learning, and encouraging innovation and creativity for the risk and opportunity management.

For example, a service provider's leaders and managers may demonstrate their leadership and dedication for the risk and opportunity management by:

- Setting the direction, vision, and objectives for the risk and opportunity management, such as by defining and communicating the purpose, scope, and benefits of the risk and opportunity management, and by aligning the risk and opportunity management with the service provider's vision, mission, goals, and objectives, and with the stakeholder's expectations and requirements.

- Establishing and promoting the policies, procedures, and standards for the risk and opportunity management, such as by developing and implementing the risk and opportunity management framework, policy, and plan, and by ensuring the compliance and adherence of the service provider and the stakeholders with the relevant laws, regulations, and best practices for the risk and opportunity management.

- Providing and allocating the resources and support for the risk and opportunity management, such as by assigning and empowering the roles and responsibilities, providing the necessary training and coaching, allocating the sufficient budget and time, and facilitating the access to the information and tools for the risk and opportunity management.

- Recognizing and rewarding the achievements and contributions of the service provider and the stakeholders for the risk and opportunity management, such as by acknowledging and celebrating the successes and learnings, providing positive and constructive feedback, offering incentives and recognition, and sharing the lessons and best practices for the risk and opportunity management.

- Leading by example, communicating and consulting effectively, empowering and motivating the employees and teams, fostering a culture of trust, collaboration, and learning, and encouraging innovation and creativity for the risk and opportunity management, such as by demonstrating the expected attitudes and behaviors, communicating and consulting openly and transparently, delegating and empowering the

decision making and problem solving, fostering a culture of trust, collaboration, and learning, and encouraging innovation and creativity for the risk and opportunity management.

5.2 Policy

- A policy is a set of principles and guidelines that direct and constrain the actions and decisions of the service provider and the stakeholders towards a desired outcome.
- A policy establishes the scope, objectives, requirements, roles, and responsibilities for a specific domain or activity of the service provider, such as risk and opportunity management, quality management, or service design.
- A policy also defines the criteria, standards, and measures for evaluating and improving the performance and outcomes of the service provider and the stakeholders in the specified domain or activity.
- A policy should be consistent, clear, concise, and communicated to the relevant parties, and should be reviewed and updated regularly to reflect the changes and feedback from the environment and the stakeholders.

For example, a policy for risk and opportunity management may include the following elements:

- The purpose and scope of the risk and opportunity management, such as the definition, objectives, and benefits of the risk and opportunity management, and the boundaries and assumptions of the risk and opportunity management.
- The requirements and expectations for the risk and opportunity management, such as the risk and opportunity appetite, tolerance, and threshold of the service provider and the stakeholders, and the legal, regulatory, and ethical obligations and compliance for the risk and opportunity management.
- The roles and responsibilities for the risk and opportunity management, such as the assignment and delegation of the authority, accountability, and ownership for the risk and opportunity identification, analysis, evaluation, treatment, monitoring, and review, and the escalation and reporting procedures for the risk and opportunity management.
- The criteria, standards, and measures for the risk and opportunity management, such as the methods and tools for the risk and opportunity identification, analysis, evaluation, treatment, monitoring, and review, and

the key performance indicators, risk and opportunity indicators, audits, and reviews for the risk and opportunity management.

5.3 Formulating the service management policy

- Formulating the service management policy is the process of developing and implementing the policy for the service management, which is the set of specialized organizational capabilities for enabling value co-creation with customers and other stakeholders in the form of services.
- Formulating the service management policy involves defining and communicating the purpose, scope, and objectives of the service management, establishing and promoting the principles and guidelines for the service management, providing and allocating the resources and support for the service management, and recognizing and rewarding the achievements and contributions of the service provider and the stakeholders for the service management.
- Formulating the service management policy also requires aligning and integrating the service management policy with the other policies of the service provider, such as the risk and opportunity management policy, the quality management policy, or the service design policy, and ensuring the consistency and coherence of the service management policy with the vision, mission, goals, and objectives of the service provider and the stakeholders.

For example, a service provider may formulate its service management policy by:

- Defining and communicating the purpose, scope, and objectives of the service management, such as by stating the definition, benefits, and challenges of the service management, and by setting the specific, measurable, achievable, realistic> and timely (SMART) objectives of the service management, such as improving customer satisfaction, increasing service quality, or reducing service costs.
- Establishing and promoting the principles and guidelines for the service management, such as by adopting and applying the best practices and frameworks for the service management, such as ITIL, ISO/IEC 20000, or COBIT, and by ensuring the compliance and adherence of the service provider and the stakeholders with the relevant laws, regulations, and standards for the service management.
- Providing and allocating the resources and support for the service management, such as by assigning and empowering the roles and

responsibilities, providing the necessary training and coaching, allocating the sufficient budget and time, and facilitating the access to the information and tools for the service management.

- Recognizing and rewarding the achievements and contributions of the service provider and the stakeholders for the service management, such as by acknowledging and celebrating the successes and learnings, providing positive and constructive feedback, offering incentives and recognition, and sharing the lessons and best practices for the service management.
- Aligning and integrating the service management policy with the other policies of the service provider, such as by ensuring the compatibility and complementarity of the service management policy with the risk and opportunity management policy, the quality management policy, or the service design policy, and by resolving and reconciling any conflicts or gaps between the service management policy and the other policies.
- Ensuring the consistency and coherence of the service management policy with the vision, mission, goals, and objectives of the service provider and the stakeholders, such as by aligning and integrating the service management policy with the strategic, tactical, and operational plans and activities of the service provider and the stakeholders, and by monitoring and reviewing the performance and outcomes of the service management policy and making the necessary adjustments and improvements as needed.

5.4 Conveying the service management policy

- Conveying the service management policy is the process of communicating and disseminating the policy for the service management to the relevant parties, such as the service provider, the customers, the users, the suppliers, and other stakeholders, and ensuring their understanding and acceptance of the policy.
- Conveying the service management policy involves selecting and using the appropriate methods and channels for the communication and dissemination of the policy, such as written documents, presentations, meetings, workshops, webinars, newsletters, or social media, and tailoring the content and format of the policy to suit the needs and preferences of the different audiences and contexts.
- Conveying the service management policy also requires obtaining and addressing the feedback and questions from the relevant parties, and verifying and validating their comprehension and compliance of the policy,

such as by conducting surveys, interviews, tests, audits, or reviews, and by providing clarification, explanation, or justification as needed.

For example, a service provider may convey its service management policy by:

- Selecting and using the appropriate methods and channels for the communication and dissemination of the policy, such as by creating and distributing a policy document, delivering a policy presentation, hosting a policy meeting, organizing a policy workshop, sending a policy newsletter, or posting a policy update on social media, and by choosing the most effective and efficient mode, frequency, and timing of the communication and dissemination of the policy.

- Tailoring the content and format of the policy to suit the needs and preferences of the different audiences and contexts, such as by highlighting and emphasizing the key points and benefits of the policy, using simple and clear language and terminology, providing examples and illustrations, using visual and interactive elements, and adapting the tone and style of the policy to match the expectations and culture of the audience and the context.

- Obtaining and addressing the feedback and questions from the relevant parties, and verifying and validating their comprehension and compliance of the policy, such as by inviting and encouraging the comments and suggestions, answering and resolving the queries and concerns, conducting and analyzing the surveys and interviews, administering and evaluating the tests and audits, and providing and implementing the clarification and improvement actions as needed.

5.5 Roles, responsibilities, and authorities within the organization

- Roles, responsibilities, and authorities within the organization are the definitions and descriptions of the functions, tasks, duties, and powers of the individuals and groups within the service provider who are involved in the service management, and the relationships and interactions among them.

- Roles, responsibilities, and authorities within the organization establish the expectations and obligations of the individuals and groups for the service management, and the level and scope of the decision-making and control they have over the service management processes and activities.

- Roles, responsibilities, and authorities within the organization should be clearly documented, communicated, and agreed upon by the service

provider and the stakeholders, and should be reviewed and updated regularly to reflect the changes and feedback from the environment and the stakeholders.

For example, some of the common roles, responsibilities, and authorities within the organization for the service management are:

- **Service owner:** The person who is accountable> for the end-to-end delivery and performance of a specific service, and who acts as the primary point of contact for the customers and users of the service.
- **Responsibilities:** Define and maintain the service vision, strategy, and roadmap; design and develop the service offerings and agreements; manage and coordinate the service resources and capabilities; monitor and report on the service quality and performance; ensure the customer satisfaction and value realization of the service; manage and mitigate the service risks and issues; plan and implement the service improvements and changes.
- **Authorities:** Approve and sign the service offerings and agreements; allocate and prioritize the service resources and budget; authorize and approve the service changes and releases; escalate and resolve the service risks and issues; initiate and lead the service improvements and reviews.
- **Service manager:** The person who is responsible for the day-to-day operation and management of a specific service, and who supports the service owner in the delivery and performance of the service.
- **Responsibilities:** Implement and execute the service processes and activities; supervise and support the service staff and teams; coordinate and collaborate with the service suppliers and partners; ensure and maintain the service availability and continuity; handle and respond to the service requests and incidents; collect and analyze the service data and feedback; identify and propose the service improvements and changes.
- **Authorities:** Assign and delegate the service tasks and duties; request and acquire the service resources and support; implement and communicate the service changes and releases; report and escalate the service requests and incidents; recommend and participate in the service improvements and reviews.

6. Support for the Service Management System:

6.1 Allocation of resources

Allocation of resources is the process of planning, acquiring, assigning, and optimizing the human, financial, technical, and physical resources that are required for the implementation and maintenance of the service management system.

Allocation of resources ensures that the service provider has the sufficient and appropriate resources to deliver and support the services according to the agreed service levels and customer expectations, and to achieve the service management objectives and outcomes.

Allocation of resources involves the following activities:

- Identifying and estimating the resource needs and demands for the service management system, based on the service strategy, portfolio, and catalog, and the service requirements, specifications, and agreements.
- Evaluating and selecting the resource sources and options for the service management system, such as internal or external, shared or dedicated, permanent or temporary, or purchased or leased, and considering the availability, suitability, cost, and risk of each option.
- Acquiring and procuring the resources for the service management system, according to the approved resource plans and budgets, and following the relevant policies, procedures, and standards of the service provider and the stakeholders.
- Assigning and allocating the resources to the service management processes and activities, based on the priority, urgency, and dependency of the service delivery and support, and the roles, responsibilities, and authorities of the service staff and teams.
- Optimizing and managing the resources for the service management system, by monitoring and measuring the resource utilization and performance, and by adjusting and reallocating the resources as needed to address the changes and feedback from the environment and the stakeholders.

For example, a service provider may allocate its resources for the service management system by:

- Identifying and estimating the resource needs and demands for the service management system, such as the number and skills of the service staff, the amount and type of the service equipment and materials, the size and

location of the service facilities and infrastructure, and the level and frequency of the service funding and expenditure.

- Evaluating and selecting the resource sources and options for the service management system, such as using internal staff or outsourcing to external suppliers, sharing resources with other services or departments or dedicating resources to specific services or customers, hiring permanent staff or contracting temporary staff, or purchasing equipment and materials or leasing them from vendors.

- Acquiring and procuring the resources for the service management system, such as creating and approving the resource plans and budgets, issuing and evaluating the resource requests and proposals, negotiating and signing the resource contracts and agreements, and receiving and verifying the resource deliveries and invoices.

- Assigning and allocating the resources to the service management processes and activities, such as defining and communicating the resource roles and responsibilities, scheduling and distributing the resource tasks and duties, providing and facilitating the resource training and development, and authorizing and enabling the resource access and use.

- Optimizing and managing the resources for the service management system, such as tracking and reporting the resource consumption and availability, analyzing and evaluating the resource efficiency and effectiveness, resolving and preventing the resource conflicts and shortages, and implementing and improving the resource optimization and management practices and tools.

6.2 Capability

Capability is the ability and readiness of the service provider to deliver and support the services according to the agreed service levels and customer expectations, and to achieve the service management objectives and outcomes.

Capability depends on the availability, suitability, quality, and performance of the resources that are allocated for the service management system, as well as the skills, knowledge, experience, and competence of the service staff and teams.

Capability involves the following activities:

- Assessing and improving the current capability of the service provider, by identifying and measuring the strengths, weaknesses, opportunities, and threats of the service management system, and by implementing and evaluating the improvement actions and initiatives.

- Planning and developing the future capability of the service provider, by defining and establishing the capability goals, targets, and indicators, and by designing and implementing the capability development plans and programs.

For example, a service provider may assess and improve its capability by:

- Conducting a SWOT analysis of the service management system, such as identifying the internal strengths and weaknesses of the service resources, processes, and activities, and the external opportunities and threats from the service environment and stakeholders.
- Implementing a PDCA cycle for the service management system, such as planning the improvement objectives and actions, doing the improvement tasks and activities, checking the improvement results and feedback, and acting on the improvement issues and gaps.

A service provider may plan and develop its future capability by:

- Setting SMART goals for the service management system, such as specific, measurable, achievable, relevant, and time-bound goals that align with the service strategy, portfolio, and catalog, and the service requirements, specifications, and agreements.
- Designing and implementing a capability maturity model for the service management system, such as a framework that defines the levels and criteria of the service management capability, and the processes and activities to achieve and maintain each level of capability.

6.3 Consciousness

Consciousness is the awareness and understanding of the service provider about the service management system and its environment, stakeholders, and performance, and the ability and willingness to adapt and improve the service management system accordingly.

Consciousness enables the service provider to monitor and evaluate the service management system and its outcomes, and to identify and respond to the changes and feedback from the environment and the stakeholders, and to initiate and implement the improvements and innovations for the service management system.

Consciousness involves the following activities:

- Collecting and processing the data and information about the service management system and its environment, stakeholders, and performance,

by using various sources and methods, such as surveys, interviews, observations, audits, reports, or analytics.

- Analyzing and interpreting the data and information about the service management system and its environment, stakeholders, and performance, by using various tools and techniques, such as statistics, graphs, charts, dashboards, or models.
- Communicating and sharing the data and information about the service management system and its environment, stakeholders, and performance, by using various channels and formats, such as meetings, presentations, documents, or emails.
- Learning and improving from the data and information about the service management system and its environment, stakeholders, and performance, by using various approaches and practices, such as feedback loops, lessons learned, best practices, or benchmarks.

For example, a service provider may collect and process the data and information about the service management system and its environment, stakeholders, and performance by:

- Conducting regular surveys and interviews with the service customers, users, and suppliers, to gather their opinions, expectations, and satisfaction levels about the service delivery and support.
- Observing and auditing the service management processes and activities, to measure their compliance, efficiency, and effectiveness, and to identify any deviations, errors, or risks.
- Generating and reviewing various reports and analytics, such as service level reports, service performance reports, service incident reports, or service cost reports, to track and evaluate the service outcomes and results.

A service provider may analyze and interpret the data and information about the service management system and its environment, stakeholders, and performance by:

- Using statistical methods and tools, such as mean, median, mode, standard deviation, or correlation, to summarize and describe the service data and information, and to identify any patterns, trends, or outliers.
- Using graphical methods and tools, such as bar charts, pie charts, line graphs, or histograms, to visualize and compare the service data and information, and to highlight any differences, similarities, or changes.

- Using dashboard methods and tools, such as balanced scorecards, key performance indicators, or traffic lights, to display and monitor the service data and information, and to indicate any achievements, issues, or alerts.

A service provider may communicate and share the data and information about the service management system and its environment, stakeholders, and performance by:

- Holding regular meetings and presentations with the service owners, managers, staff, and teams, to discuss and update the service data and information, and to align and coordinate the service actions and decisions.
- Creating and distributing various documents and emails, such as service reports, service newsletters, service bulletins, or service notifications, to inform and notify the service customers, users, and suppliers about the service data and information, and to solicit and receive their feedback and suggestions.

A service provider may learn and improve from the data and information about the service management system and its environment, stakeholders, and performance by:

- Establishing and maintaining feedback loops, such as Plan-Do-Check-Act cycles, Deming cycles, or Shewhart cycles, to continuously monitor, evaluate, and improve the service management system and its outcomes, based on the service data and information, and the feedback and suggestions from the environment and the stakeholders.
- Documenting and applying lessons learned, such as the successes, failures, challenges, or opportunities of the service management system and its processes and activities, and the actions and solutions that were taken or proposed, to enhance and optimize the service management system and its performance, and to prevent or mitigate the recurrence of the same or similar issues or risks.
- Adopting and implementing best practices, such as the standards, guidelines, frameworks, or methodologies that are widely recognized and accepted in the> service management domain, such as ITIL, ISO/IEC 20000, COBIT, or CMMI-SVC, to improve and align the service management system and its processes and activities with the industry norms and expectations.
- Benchmarking and comparing the service management system and its performance with the similar or comparable systems and performances of the other service providers or organizations, such as the competitors, peers,

or leaders in the service market or sector, to identify and close the service gaps and differences, and to achieve or exceed the service excellence and quality.

6.4 Information Exchange

The process of transferring, sharing, or exchanging the data and information about the service management system and its environment, stakeholders, and performance, among the relevant parties, such as the service provider, the service customer, the service user, the service supplier, or the service regulator, by using various methods, mechanisms, or media, such as verbal, written, electronic, or physical.

The purpose of information exchange is to ensure that the service management system and its environment, stakeholders, and performance are transparent, understood, agreed, and aligned, and that the service actions and decisions are communicated, coordinated, and supported, by the relevant parties.

For example, a service provider may engage in information exchange with the service customer by:

- Negotiating and signing a service contract or agreement, which defines and documents the service requirements, expectations, and obligations of both parties, and the service level objectives and targets that will be used to measure and evaluate the service performance and outcomes.
- Conducting regular service reviews or meetings, which provide an opportunity for both parties to discuss and update the service performance and results, and to address any service issues, risks, or changes that may affect the service delivery and support.
- Sending and receiving service invoices or payments, which reflect and confirm the service value and cost that are exchanged between both parties, and the service consumption and utilization that are recorded and reported by the service provider.

A service provider may engage in information exchange with the service user by:

- Providing and receiving service requests or orders, which enable the service user to request or order the service or its components, such as products, resources, or capabilities, that are needed or desired by the service user, and the service provider to deliver or supply the service or its components, according to the service specifications and standards.

- Providing and receiving service feedback or complaints, which enable the service user to express their opinions, satisfaction, or dissatisfaction about the service delivery and support, and the service provider to acknowledge and respond to the service feedback or complaints, and to take appropriate service actions or improvements, if needed.

A service provider may engage in information exchange with the service supplier by:

- Establishing and maintaining a service partnership or relationship, which describes and governs the roles, responsibilities, and expectations of both parties, and the service outcomes and benefits that will be achieved or delivered by the service supplier, as part of the service value chain or network.
- Monitoring and evaluating the service performance and quality of the service supplier, which involve collecting and analyzing the service data and information, such as service metrics, indicators, or scores, that are used to track and assess the service delivery and support of the service supplier, and to identify and resolve any service issues, risks, or gaps that may arise.

A service provider may engage in information exchange with the service regulator by:

- Complying and reporting with the service laws or regulations, which prescribe and enforce the service rules or standards that must be followed or met by the service provider, and the service evidence or documentation that must be> submitted or disclosed by the service provider, to demonstrate and verify the service compliance and conformance.
- Consulting and collaborating with the service authorities or bodies, which represent and regulate the service domain or sector that the service provider operates in, and which provide the service guidance or support that can help the service provider to improve or align the service management system and its processes and activities.

6.5 Recorded Data

The process of capturing, storing, or maintaining the data and information about the service management system and its environment, stakeholders, and performance, in various forms or formats, such as records, documents, files, or databases, by using various tools or technologies, such as paper, digital, or cloud.

The purpose of recorded data is to ensure that the service management system and its environment, stakeholders, and performance are documented, traceable, and retrievable, and that the service data and information are available, accessible, and secure, for the relevant parties.

For example, a service provider may create and manage recorded data about the service management system and its environment, stakeholders, and performance by:

- Creating and maintaining a service portfolio or catalog, which contains and describes the service offerings or products that are provided or delivered by the service provider, and the service value or benefits that are created or realized by the service customers or users, as well as the service costs or resources that are required or consumed by the service provider, as part of the service value proposition or model.

- Creating and maintaining a service configuration or asset management system, which records and tracks the service components or assets that are used or involved in the service delivery and support, such as hardware, software, people, processes, or capabilities, and their attributes, relationships, or dependencies, as part of the service architecture or design.

- Creating and maintaining a service incident or problem management system, which registers and handles the service events or issues that may disrupt or affect the service delivery and support, such as errors, faults, failures, or incidents, and their causes, impacts, or solutions, as part of the service operation or continuity.

- Creating and maintaining a service change or release management system, which controls and implements the service modifications or improvements that are requested or proposed for the service delivery and support, such as changes, enhancements, updates, or releases, and their rationales, objectives, or outcomes, as part of the service transition or innovation.

6.6 Generation and Revision of Recorded Data

The process of creating, updating, or modifying the data and information that are captured, stored, or maintained in the recorded data, by using various methods or techniques, such as writing, editing, reviewing, or approving, to ensure that the recorded data are accurate, complete, and consistent, and that they reflect the current state and status of the service management system and its environment, stakeholders, and performance.

The purpose of generation and revision of recorded data is to enable the service management system and its environment, stakeholders, and performance to be communicated, understood, and improved, and to support the decision-making, planning, and execution of the service management processes and activities.

For example, a service provider may generate and revise recorded data about the service management system and its environment, stakeholders, and performance by:

- Writing and editing a service policy or strategy, which defines and communicates the service vision, mission, goals, and objectives of the service provider, and the service principles, values, and guidelines that guide and direct the service management system and its processes and activities. This may involve conducting a service analysis or assessment, identifying the service needs or expectations, formulating the service direction or approach, and aligning the service policy or strategy with the organizational strategy or culture.
- Reviewing and approving a service plan or project, which describes and documents the service actions, tasks, or steps that will be performed or executed by the service provider, and the service resources, schedules, or budgets that will be allocated or assigned for the service delivery and support. This may involve defining the service scope or boundaries, determining the service requirements or specifications, developing the service design or architecture, and approving the service plan or project with the relevant stakeholders or authorities.
- Updating and modifying a service report or dashboard, which displays and summarizes the service data and information, such as service metrics, indicators, or scores, that are used to measure and evaluate the service delivery and support, and to identify and report the service achievements, challenges, or opportunities. This may involve collecting and analyzing the service data or information, presenting and visualizing the service results or findings, and updating and modifying the service report or dashboard based on the feedback or changes.

6.7 Management of Recorded Data

The process of organizing, controlling, or maintaining the data and information that are captured, stored, or maintained in the recorded data, by using various functions or operations, such as sorting, filtering, searching, or archiving, to ensure

that the recorded data are relevant, useful, and reliable, and that they comply with the applicable laws, regulations, or standards.

The purpose of management of recorded data is to facilitate the access, retrieval, and use of the recorded data, and to protect the confidentiality, integrity, and availability of the recorded data, for the authorized parties.

For example, a service provider may manage recorded data about the service management system and its environment, stakeholders, and performance by:

- Sorting and filtering a service portfolio or catalog, which enables the service customers or users to browse or select the service offerings or products that are provided or delivered by the service provider, and to compare or contrast the service value or benefits, costs or resources, or specifications or standards of the service offerings or products. This may involve categorizing and classifying the service offerings or products based on their attributes or characteristics, applying and removing the sorting and filtering criteria or options, and displaying and updating the service portfolio or catalog according to the service customers' or users' preferences or needs.

- Searching and retrieving a service configuration or asset management system, which enables the service provider to locate or identify the service components or assets that are used or involved in the service delivery and support, and to view or verify their attributes, relationships, or dependencies, as part of the service architecture or design. This may involve indexing and labeling the service components or assets based on their types or functions, entering and executing the search queries or commands, and retrieving and displaying the service configuration or asset management system according to the service provider's requirements or objectives.

- Archiving and deleting a service incident or problem management system, which enables the service provider to store or preserve the service events or issues that have been resolved or closed, and to remove or discard the service events or issues that are obsolete or irrelevant, as part of the service operation or continuity. This may involve setting and applying the archiving and deleting rules or policies, selecting and confirming the service events or issues to be archived or deleted, and archiving and deleting the service incident or problem management system according to the service provider's standards or regulations.

6.8 Documented Information of the Service Management System

The data and information that are captured, stored, or maintained in the recorded data, and that are required or specified by the service management system and its processes and activities, as part of the service management system documentation or evidence.

The purpose of documented information of the service management system is to demonstrate and verify the conformity and effectiveness of the service management system and its processes and activities, and to provide the basis for the continual improvement of the service management system and its processes and activities.

For example, a service provider may create and manage documented information of the service management system and its processes and activities by:

- Documenting the service management system scope or boundaries, which defines and delimits the service domain or sector, the service customers or users, the service offerings or products, and the service processes or activities that are included or excluded in the service management system, and the rationale or justification for the inclusion or exclusion. This may involve identifying and describing the service context or environment, the service stakeholders or parties, the service scope or boundaries, and the service exclusions or limitations, and documenting them in a service management system scope statement or document.
- Documenting the service management system roles or responsibilities, which assigns and clarifies the service tasks or duties, the service authorities or powers, and the service accountabilities or obligations that are performed or fulfilled by the service personnel or teams, and the service competencies or qualifications that are required or expected from the service personnel or teams. This may involve defining and specifying the service roles or positions, the service responsibilities or functions, the service authorities or permissions, and the service accountabilities or expectations, and documenting them in a service management system roles and responsibilities matrix or chart.
- Documenting the service management system policies or procedures, which establishes and describes the service rules or standards, the service methods or techniques, and the service inputs or outputs that are followed or applied by the service personnel or teams, and the service objectives or

outcomes that are achieved or delivered by the service personnel or teams. This may involve developing and writing the service policies or guidelines, the service procedures or instructions, and the service inputs or outputs, and documenting them in a service management system policies and procedures manual or handbook.

7. Operation of the Service Management System

The process of implementing, executing, or performing the service management system and its processes and activities, by using the service resources, capabilities, or assets that are provided or delivered by the service provider, and by applying the service policies, procedures, or methods that are established or described by the service provider, to achieve or deliver the service objectives, outcomes, or value for the service customers or users.

The purpose of operation of the service management system is to enable the service provider to provide or deliver the service offerings or products that meet or exceed the service needs or expectations of the service customers or users, and to ensure the efficiency, effectiveness, and reliability of the service delivery and support.

For example, a service provider may operate the service management system and its processes and activities by:

- Implementing and executing the service plan or project, which involves carrying out or performing the service actions, tasks, or steps that are defined or documented in the service plan or project, and using or consuming the service resources, schedules, or budgets that are allocated or assigned in the service plan or project, to deliver or support the service offerings or products for the service customers or users. This may involve coordinating and communicating with the service personnel or teams, the service customers or users, and the other service stakeholders or parties, monitoring and controlling the service progress or performance, and reporting and documenting the service results or outcomes.
- Implementing and executing the service processes or activities, which involves applying or following the service methods or techniques that are established or described in the service policies or procedures, and producing or generating the service inputs or outputs that are required or specified by the service processes or activities, to deliver or support the service offerings or products for the service customers or users. This may involve adhering and complying with the service rules or standards, ensuring and maintaining the service quality or consistency, and evaluating and improving the service efficiency or effectiveness.
- Implementing and executing the service improvement or innovation, which involves identifying or discovering the service gaps or opportunities, proposing or developing the service solutions or alternatives, and

implementing or testing the service changes or enhancements, to improve or innovate the service offerings or products, the service delivery or support, or the service management system and its processes and activities. This may involve collecting and analyzing the service feedback or data, implementing and validating the service experiments or pilots, and adopting and deploying the service improvements or innovations.

7.1 Planning and Control of Operations

The process of defining, organizing, or managing the service resources, capabilities, or assets, the service actions, tasks, or steps, and the service schedules, budgets, or constraints that are used or involved in the operation of the service management system and its processes and activities, by using various tools or techniques, such as scheduling, budgeting, or resource allocation, to ensure that the operation of the service management system and its processes and activities is planned or controlled according to the service objectives, outcomes, or value.

The purpose of planning and control of operations is to enable the service provider to optimize or balance the service resources, capabilities, or assets, the service actions, tasks, or steps, and the service schedules, budgets, or constraints that are used or involved in the operation of the service management system and its processes and activities, and to ensure the alignment or integration of the operation of the service management system and its processes and activities with the service strategy or direction, the service design or architecture, and the service improvement or innovation.

For example, a service provider may plan and control the operation of the service management system and its processes and activities by:

- Scheduling the service actions, tasks, or steps, which involves defining or determining the sequence or order, the duration or time, and the dependencies or relationships of the service actions, tasks, or steps that are performed or executed in the operation of the service management system and its processes and activities, and documenting or communicating them in a service schedule or timeline. This may involve using various tools or techniques, such as Gantt charts, network diagrams, or critical path analysis, to plan or control the service actions, tasks, or steps, and to identify or manage the service milestones, deadlines, or deliverables.
- Budgeting the service resources, schedules, or budgets, which involves estimating or calculating the costs or expenses, the revenues or incomes, and the profits or losses of the service resources, schedules, or budgets that

are allocated or assigned in the operation of the service management system and its processes and activities, and documenting or communicating them in a service budget or financial statement. This may involve using various tools or techniques, such as cost-benefit analysis, return on investment, or break-even analysis, to plan or control the service resources, schedules, or budgets, and to identify or manage the service variances, risks, or opportunities.

- Allocating the service resources, capabilities, or assets, which involves assigning or distributing the service personnel or teams, the service components or assets, and the service suppliers or partners that are used or involved in the operation of the service management system and its processes and activities, and documenting or communicating them in a service resource or capacity plan. This may involve using various tools or techniques, such as resource leveling, resource optimization, or resource forecasting, to plan or control the service resources, capabilities, or assets, and to identify or manage the service requirements, constraints, or conflicts.

7.2 Service portfolio

The process of defining, managing, or updating the service offerings or products that are provided or delivered by the service provider to the service customers or users, by using various tools or techniques, such as service portfolio management, service catalogue management, or service asset and configuration management, to ensure that the service offerings or products are aligned or integrated with the service needs or expectations of the service customers or users, and the service strategy or direction, the service design or architecture, and the service improvement or innovation of the service provider.

The purpose of service portfolio is to enable the service provider to optimize or balance the service resources, capabilities, or assets, the service costs, revenues, or profits, and the service risks, opportunities, or value that are used or involved in the provision or delivery of the service offerings or products, and to ensure the efficiency, effectiveness, and reliability of the service delivery and support.

For example, a service provider may manage the service portfolio and its processes and activities by:

- Delivery of services, which involves providing or delivering the service offerings or products that are defined or documented in the service portfolio, and that meet or exceed the service needs or expectations of the service customers or users, and the service level agreements or contracts

that are established or agreed with the service customers or users. This may involve coordinating and communicating with the service customers or users, and the other service stakeholders or parties, ensuring and maintaining the service quality or consistency, and evaluating and improving the service satisfaction or loyalty.

- Planning services, which involves identifying or discovering the service needs or expectations of the service customers or users, and the service gaps or opportunities in the service market or environment, and proposing or developing the service solutions or alternatives that can satisfy or fulfill the service needs or expectations of the service customers or users, and that can create or deliver the service value or benefits for the service customers or users, and the service provider. This may involve collecting and analyzing the service feedback or data, conducting or performing the service research or analysis, and designing or creating the service prototypes or models.

- Control of involved parties in the service lifecycle, which involves defining or determining the roles or responsibilities, the authorities or permissions, and the accountabilities or expectations of the service personnel or teams, the service customers or users, the service suppliers or partners, and the other service stakeholders or parties that are used or involved in the service lifecycle, and documenting or communicating them in a service stakeholder or relationship management plan. This may involve establishing or maintaining the service relationships or collaborations, managing or resolving the service conflicts or issues, and facilitating or supporting the service interactions or communications.

- Management of service catalogue, which involves creating or updating the service catalogue, which is a subset or part of the service portfolio, and which contains or lists the service offerings or products that are currently available or active for the service customers or users, and the service attributes or characteristics, such as the service description or specification, the service price or charge, and the service level or performance, that are associated or related with the service offerings or products. This may involve using various tools or> techniques, such as service catalogue databases, service catalogue templates, or service catalogue portals, to create or update the service catalogue, and to publish or communicate the service catalogue to the service customers or users, and the other service stakeholders or parties.

- Management of assets, which involves identifying or recording the service assets, which are any tangible or intangible resources or capabilities that

are owned or controlled by the service provider, and that are used or involved in the provision or delivery of the service offerings or products, such as the service personnel or teams, the service components or assets, and the service suppliers or partners, and the service attributes or characteristics, such as the service value or worth, the service cost or expense, and the service risk or impact, that are associated or related with the service assets. This may involve using various tools or techniques, such as service asset databases, service asset registers, or service asset reports, to identify or record the service assets, and to manage or monitor the service assets throughout the service lifecycle.

- Management of configurations, which involves identifying or recording the service configurations, which are any logical or physical relationships or dependencies that exist or occur between the service assets, and that affect or influence the provision or delivery of the service offerings or products, such as the service configuration items or elements, the service configuration structures or models, and the service configuration baselines or snapshots, and the service attributes or characteristics, such as the service status or state, the service version or revision, and the service change or history, that are associated or related with the service configurations. This may involve using various tools or techniques, such as service configuration databases, service configuration management systems, or service configuration audits, to identify or record the service configurations, and to manage or control the service configurations throughout the service lifecycle.

7.3 Relationship and agreement

The process of establishing, managing, or maintaining the service relationships or collaborations, the service agreements or contracts, and the service expectations or requirements that are used or involved in the provision or delivery of the service offerings or products, by using various tools or techniques, such as relationship management, service level management, or supplier management, to ensure that the service offerings or products are aligned or integrated with the service needs or expectations of the service customers or users, and the service objectives, outcomes, or value of the service provider.

The purpose of relationship and agreement is to enable the service provider to optimize or balance the service resources, capabilities, or assets, the service costs, revenues, or profits, and the service risks, opportunities, or value that are used or involved in the provision or delivery of the service offerings or products, and to

ensure the satisfaction, loyalty, and trust of the service customers or users, and the other service stakeholders or parties.

For example, a service provider may manage the relationship and agreement and its processes and activities by:

- Management of business relationships, which involves identifying or determining the service customers or users, and the other service stakeholders or parties, that are involved or affected by the provision or delivery of the service offerings or products, and understanding or assessing their service needs or expectations, their service preferences or choices, and their service perceptions or opinions, and documenting or communicating them in a service customer or stakeholder profile. This may involve using various tools or techniques, such as customer surveys, interviews, or focus groups, stakeholder analysis, or customer segmentation, to identify or determine the service customers or users, and the other service stakeholders or parties, and to understand or assess their service needs or expectations, preferences or choices, and perceptions or opinions, and to build or maintain the service relationships or collaborations with them.
- Management of service levels, which involves defining or specifying the service levels or performance that are expected or required by the service customers or users, and the service provider, for the provision or delivery of the service offerings or products, and the service targets or measures that are used or applied to monitor or control the service levels or performance, and the service reviews or reports that are used or produced to evaluate or improve the service levels or performance, and documenting or communicating them in a service level agreement or contract. This may involve using various tools or techniques, such as service level requirements, service level objectives, or service level indicators, service level monitoring, reporting, or reviewing, or service level improvement or optimization, to define or specify the service levels or performance, and the service targets or measures, and the service reviews or reports, and to monitor, control, evaluate, or improve the service levels or performance.
- Management of suppliers, which involves identifying or selecting the service suppliers or partners, which are any external or third-party organizations or entities that provide or deliver any service components or assets that are used or involved in the provision or delivery of the service offerings or products, and negotiating or agreeing the service levels or

performance, the service costs or charges, and the service terms or conditions that are> expected or required by the service customers or users, and the service provider, for the provision or delivery of the service components or assets, and documenting or communicating them in a supplier agreement or contract. This may involve using various tools or techniques, such as supplier evaluation, selection, or qualification, supplier negotiation, agreement, or contracting, or supplier monitoring, reporting, or reviewing, to identify or select the service suppliers or partners, and to negotiate or agree the service levels or performance, the service costs or charges, and the service terms or conditions, and to monitor, control, evaluate, or improve the service suppliers or partners.

7.4 Supply and demand

Supply and demand are the process of balancing the availability and consumption of service resources, capabilities, assets, and offerings, by using various tools and techniques, such as budgeting and accounting for services, demand management, or capacity management, to ensure that the service provider can deliver and support the services that meet the needs and expectations of the service customers or users, and that create value and benefits for both parties.

The purpose of supply and demand is to enable the service provider to optimize the use and allocation of service resources, capabilities, assets, and offerings, and to manage the costs, revenues, profits, risks, and opportunities that are involved in the service provision and delivery, and to ensure the efficiency, effectiveness, and reliability of the service delivery and support.

Some of the tools and techniques that are used in supply and demand are:

- Budgeting and accounting for services, which involves estimating, forecasting, planning, controlling, and reporting the financial aspects of the service provision and delivery, such as the costs, revenues, profits, and variances, and the resources, capabilities, assets, and offerings that are used or involved in the service provision and delivery, by using various methods, such as cost-benefit analysis, return on investment, or break-even analysis, to evaluate the value and benefits of the services for the service customers or users, and the service provider, and to identify and manage the financial risks and opportunities.
- Management of demand, which involves identifying, anticipating, analyzing, forecasting, modeling, shaping, influencing, stimulating, and managing the amount and pattern of the service consumption and usage by the service

customers or users, and the factors that affect or influence the service consumption and usage, such as the seasons, cycles, peaks, triggers, drivers, or inhibitors, by using various methods, such as pricing, marketing, promotion, or demand management plans, policies, or strategies, to ensure that the service consumption and usage meets or matches the service availability and provision, and to optimize the value and benefits of the services for the service customers or users, and the service provider.

- Management of capacity, which involves identifying, estimating, analyzing, planning, modeling, optimizing, enhancing, adjusting, and managing the amount and pattern of the service availability and provision by the service provider, and the factors that affect or influence the service availability and provision, such as the utilization, consumption, performance, constraints, bottlenecks, or issues, by using various methods, such as scaling, allocation, prioritization, or capacity management plans, policies, or strategies, to ensure that the service availability and provision meets or matches the service consumption and usage, and to optimize the value and benefits of the services for the service customers or users, and the service provider.

For example, a service provider may use the following tools and techniques to manage the supply and demand of its services:

Budgeting and accounting for services:

- The service provider may use cost-benefit analysis to compare the costs and benefits of different service options or alternatives, such as outsourcing, insourcing, or co-sourcing, and to select the best option or alternative that maximizes the value and benefits of the services for the service customers or users, and the service provider.
- The service provider may use return on investment to measure the financial performance and return of the service provision and delivery, and to evaluate the effectiveness and efficiency of the service resources, capabilities, assets, and offerings that are used or involved in the service provision and delivery.
- The service provider may use break-even analysis to determine the point at which the service revenues or incomes equal the service costs or expenses, and to identify the minimum amount of service consumption and usage that is required to cover the service costs or expenses, and to generate the desired service profits or margins.

Management of demand:

- The service provider may use pricing to manage the service consumption and usage by the service customers or users, by setting the appropriate price or charge for the service offerings or products, based on the value and benefits of the services, the costs and profits of the service provision and delivery, and the market and competitive conditions, and by adjusting the price or charge according to the service availability and provision, and the service objectives, outcomes, or value of the service provider.

- The service provider may use marketing to manage the service consumption and usage by the service customers or users, by promoting the value and benefits of the services, the features and advantages of the service offerings or products, and the brand and reputation of the service provider, and by communicating the service offerings or products to the target or potential service customers or users, and the market and competitive segments, and by attracting and retaining the service customers or users, and increasing their loyalty and satisfaction.

- The service provider may use promotion to manage the service consumption and usage by the service customers or users, by offering incentives or rewards for the service consumption and usage, such as discounts, coupons, vouchers, or loyalty programs, and by stimulating the service consumption and usage, especially during the off-peak or low-demand periods, and by creating or increasing the demand for the services, and the service offerings or products.

Management of capacity:

- The service provider may use scaling to manage the service availability and provision, by increasing or decreasing the service resources, capabilities, assets, and offerings, according to the service consumption and usage, and the service objectives, outcomes, or value of the service provider, and by using various types of scaling, such as horizontal scaling, which involves adding or removing the service components or units, vertical scaling, which involves increasing or decreasing the size or capacity of the service components or units, or diagonal scaling, which involves a combination of horizontal and vertical scaling.

- The service provider may use allocation to manage the service availability and provision, by assigning or distributing the service resources, capabilities, assets, and offerings, to the service customers or users, or the service offerings or products, based on the service needs and expectations of the service customers or users, and the service priorities or requirements of the

service provider, and by using various types of allocation, such as static allocation, which involves pre-determining or fixing the amount or proportion of the service resources, capabilities, assets, and offerings, that are allocated, dynamic allocation, which involves adjusting or changing the amount or proportion of the service resources, capabilities, assets, and offerings, that are allocated, according to the service consumption and usage, or the service availability and provision, or hybrid allocation, which involves a combination of static and dynamic allocation.

- The service provider may use prioritization to manage the service availability and provision, by ranking or ordering the service customers or users, or the service offerings or products, according to the service value and benefits of the services, the service costs and profits of the service provision and delivery, and the service risks and opportunities of the service provider, and by using various types of prioritization, such as first come, first served, which involves serving the service customers or users, or the service offerings or products, in the order of their arrival or request, first in, first out, which involves serving the service customers or users, or the service offerings or products, in the order of their entry or acceptance, or last in, first out, which involves serving the service customers or users, or the service offerings or products, in the reverse order of their entry or acceptance.

7.5 Service Design, Build, and Transition

Service design, build, and transition is the process of creating, developing, and implementing service solutions that meet the needs and expectations of the service customers or users, and that create value and benefits for both parties, by using various tools and techniques, such as service design principles, practices, methods, or models, service prototypes, blueprints, or specifications, or service testing, validation, or verification, to ensure that the service solutions are feasible, viable, desirable, and sustainable.

The purpose of service design, build, and transition is to enable the service provider to deliver and support the services that are fit for purpose, fit for use, and fit for experience, and that align with the service vision, mission, strategy, objectives, outcomes, or value of the service provider, and that comply with the service policies, standards, or regulations of the service provider, and the service customers or users.

Some of the tools and techniques that are used in service design, build, and transition are:

Management of Change

Management of change is the process of identifying, assessing, planning, implementing, monitoring, controlling, and reviewing the changes that affect or impact the service provision and delivery, such as the changes in the service needs and expectations of the service customers or users, the changes in the service resources, capabilities, assets, and offerings of the service provider, or the changes in the service environment, context, or conditions, by using various methods, such as change management plans, policies, or strategies, change requests, proposals, or approvals, change impact analysis, risk assessment, or mitigation, change implementation, communication, or coordination, or change evaluation, review, or feedback, to ensure that the changes are managed effectively and efficiently, and that the changes support the service improvement and innovation of the service provider.

Some of the benefits of management of change are:

- It helps to align the service provision and delivery with the service needs and expectations of the service customers or users, and to respond to the changing service demands, preferences, or requirements.
- It helps to optimize the service resources, capabilities, assets, and offerings of the service provider, and to enhance the service quality, performance, or efficiency.
- It helps to mitigate the service risks, issues, or challenges, and to prevent or resolve the service problems, incidents, or errors.
- It helps to foster the service innovation, learning, or growth, and to create the service opportunities, advantages, or differentiation.

Some of the challenges of management of change are:

- It may encounter the resistance, reluctance, or opposition from the service customers or users, or the service providers, or the service partners or suppliers, who may prefer the status quo, or who may have different views, interests, or expectations about the changes.
- It may involve the uncertainty, complexity, or ambiguity of the changes, and the difficulty, cost, or time of implementing the changes, which may affect the service stability, reliability, or continuity.
- It may require the coordination, collaboration, or integration of the changes across the service processes, functions, or systems, and the alignment, agreement, or consensus of the changes among the service stakeholders,

which may pose the challenges of communication, compatibility, or consistency.

- It may need the evaluation, measurement, or monitoring of the changes, and the feedback, review, or improvement of the changes, which may demand the data, information, or knowledge of the changes, and the tools, methods, or techniques of the changes, which may be lacking, insufficient, or outdated.

Some of the examples of management of change are:

- A service provider may use change management plans, policies, or strategies to define the scope, objectives, outcomes, or value of the changes that affect or impact the service provision and delivery, and to establish the roles, responsibilities, authorities, or accountabilities of the change agents, managers, or owners, and the change stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, and to outline the change processes, procedures, or steps, and the change tools, techniques, or methods, that are used or involved in the change management.

- A service provider may use change requests, proposals, or approvals to initiate, request, propose, or approve the changes that affect or impact the service provision and delivery, and to document the change details, such as the change description, rationale, or justification, the change benefits, costs, risks, or opportunities, the change dependencies, assumptions, or constraints, or the change timeline, milestones, or deliverables, and to communicate the change information to the change stakeholders, and to obtain the change authorization or permission from the change agents, managers, or owners, or the change governance or oversight bodies, such as the change advisory board, or the change steering committee.

- A service provider may use change impact analysis, risk assessment, or mitigation to identify, analyze, or evaluate the potential or actual effects or consequences of the changes that affect or impact the service provision and delivery, and to identify, prioritize, or address the possible or existing threats or uncertainties of the changes, and to plan, implement, or monitor the actions or measures that are taken to reduce, avoid, or transfer the negative impacts or risks of the changes, and to enhance, exploit, or share the positive impacts or risks of the changes.

- A service provider may use change implementation, communication, or coordination to execute, deliver, or perform the changes that affect or impact the service provision and delivery, and to inform, update, or consult the

change stakeholders about the change progress, status, or results, and to manage, coordinate, or integrate the change activities, tasks, or resources, across the service processes, functions, or systems, and among the service stakeholders, to ensure the change quality, consistency, or compatibility.

- A service provider may use change evaluation, review, or feedback to measure, monitor, or check the outcomes, results, or impacts of the changes that affect or impact the service provision and delivery, and to collect, analyze, or report the feedback, reviews, or comments of the change stakeholders, such as the change customers or users, the change providers, or the change partners or suppliers, and to identify, document, or share the change lessons, learnings, or best practices, and to identify, plan, or implement the change improvements, enhancements, or adjustments.

Design and Transition of Services

Design and transition of services is the process of designing, developing, and implementing the service solutions that meet the service needs and expectations of the service customers or users, and that create value and benefits for both parties, by using various methods, such as service design principles, practices, methods, or models, service prototypes, blueprints, or specifications, or service testing, validation, or verification, to ensure that the service solutions are feasible, viable, desirable, and sustainable.

Some of the benefits of design and transition of services are:

- It helps to create the service solutions that are fit for purpose, fit for use, and fit for experience, and that satisfy the service requirements, criteria, or standards of the service customers or users, and the service providers.
- It helps to co-create, co-produce, or co-deliver the service value and benefits with the service customers or users, and the service stakeholders, and to enhance the service quality, performance, or efficiency.
- It helps to foster the service innovation, learning, or growth, and to create the service opportunities, advantages, or differentiation.
- It helps to facilitate the service transition and operation, and to support the service improvement and optimization.

Some of the challenges of design and transition of services are:

- It may encounter the complexity, uncertainty, or ambiguity of the service needs and expectations of the service customers or users, and the difficulty, cost, or time of designing, developing, or implementing the service solutions that meet them.

- It may involve the coordination, collaboration, or integration of the service solutions across the service processes, functions, or systems, and the alignment, agreement, or consensus of the service solutions among the service stakeholders, which may pose the challenges of communication, compatibility, or consistency.
- It may require the testing, validation, or verification of the service solutions, and the feedback, review, or improvement of the service solutions, which may demand the data, information, or knowledge of the service solutions, and the tools, methods, or techniques of the service solutions, which may be lacking, insufficient, or outdated.
- It may need the adaptation, adjustment, or modification of the service solutions, to respond to the changing service needs and expectations of the service customers or users, or the changing service environment, context, or conditions, which may affect the service stability, reliability, or continuity.

Some of the examples of design and transition of services are:

- A service provider may use service design principles, practices, methods, or models, such as user-centered design, human-centered design, service-dominant logic, or service science, to design the service solutions that meet the service needs and expectations of the service customers or users, and that create value and benefits for both parties, by following the service design stages or phases, such as discovery, definition, ideation, prototyping, or testing, and by applying the service design techniques or tools, such as empathy mapping, persona creation, customer journey mapping, service blueprinting, or prototyping, to understand the service users, their needs, expectations, behaviors, preferences, or emotions, and to generate, develop, or refine the service concepts, ideas, or features, and to co-create, co-produce, or co-deliver the service value with the service users, and the service stakeholders.
- A service provider may use service prototypes, blueprints, or specifications to represent the service solutions that meet the service needs and expectations of the service customers or users, and that create value and benefits for both parties, by using various formats, such as sketches, drawings, diagrams, models, or mockups, and by illustrating the service elements, components, or aspects, such as the service processes, interactions, or touchpoints, and the service resources, capabilities, assets, or offerings, that are involved or used in the service provision and delivery, and by showing the service relationships, connections, or flows, such as the service

user actions, behaviors, or responses, the service provider actions, behaviors, or responses, the service frontstage, backstage, or support activities, or the service physical, digital, or human evidences, that occur or happen in the service provision and delivery.

- A service provider may use service testing, validation, or verification to evaluate, measure, or check the service solutions against the service requirements, criteria, or standards, and the service feedback, reviews, or comments, from the service customers or users, and the service stakeholders, to ensure that the service solutions are feasible, viable, desirable, and sustainable, and to identify, document, or report the service errors, defects, or issues, and to plan, implement, or monitor the service corrections, fixes, or solutions.

- A service provider may use service transition and operation to implement, deliver, or perform the service solutions to the service customers or users, or the service environment, context, or conditions, and to manage, support, or maintain the service solutions, and to ensure the service quality, performance, or efficiency, and to co-create, co-produce, or co-deliver the service value and benefits with the service customers or users, and the service stakeholders.

Management of Release and Deployment

Management of release and deployment is the process of managing, coordinating, and executing the release and deployment of the service solutions to the service customers or users, or the service environment, context, or conditions, by using various methods, such as release and deployment management plans, policies, or strategies, release and deployment packages, units, or components, release and deployment schedules, calendars, or dates, or release and deployment testing, validation, or verification, to ensure that the release and deployment are done effectively and efficiently, and that the release and deployment support the service transition and operation of the service provider.

Some of the benefits of management of release and deployment are:

- It helps to deliver the service solutions that are fit for purpose, fit for use, and fit for experience, and that satisfy the service requirements, criteria, or standards of the service customers or users, and the service providers.

- It helps to optimize the service resources, capabilities, assets, and offerings of the service provider, and to enhance the service quality, performance, or efficiency.

- It helps to facilitate the service transition and operation, and to support the service improvement and optimization.
- It helps to mitigate the service risks, issues, or challenges, and to prevent or resolve the service problems, incidents, or errors.

Some of the challenges of management of release and deployment are:

- It may encounter the resistance, reluctance, or opposition from the service customers or users, or the service providers, or the service partners or suppliers, who may prefer the status quo, or who may have different views, interests, or expectations about the release and deployment.
- It may involve the uncertainty, complexity, or ambiguity of the release and deployment, and the difficulty, cost, or time of executing the release and deployment, which may affect the service stability, reliability, or continuity.
- It may require the coordination, collaboration, or integration of the release and deployment across the service processes, functions, or systems, and the alignment, agreement, or consensus of the release and deployment among the service stakeholders, which may pose the challenges of communication, compatibility, or consistency.
- It may need the testing, validation, or verification of the release and deployment, and the feedback, review, or improvement of the release and deployment, which may demand the data, information, or knowledge of the release and deployment, and the tools, methods, or techniques of the release and deployment, which may be lacking, insufficient, or outdated.

Some of the examples of management of release and deployment are:

- A service provider may use release and deployment management plans, policies, or strategies to define the scope, objectives, outcomes, or value of the release and deployment of the service solutions to the service customers or users, or the service environment, context, or conditions, and to establish the roles, responsibilities, authorities, or accountabilities of the release and deployment agents, managers, or owners, and the release and deployment stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, and to outline the release and deployment processes, procedures, or steps, and the release and deployment tools, techniques, or methods, that are used or involved in the release and deployment management.
- A service provider may use release and deployment packages, units, or components to contain the service solutions that are ready to be released and

deployed to the service customers or users, or the service environment, context, or conditions, and to document the service solution details, such as the service solution description, features, or functions, the service solution requirements, criteria, or standards, the service solution dependencies, assumptions, or constraints, or the service solution configuration, installation, or activation, and to communicate the service solution information to the release and deployment stakeholders, and to ensure the service solution quality, consistency, or compatibility.

- A service provider may use release and deployment schedules, calendars, or dates to specify the timing and frequency of the release and deployment activities, tasks, or resources, and to coordinate, synchronize, or align the release and deployment with the service processes, functions, or systems, and the service stakeholders, and to manage, monitor, or control the release and deployment progress, status, or results.

- A service provider may use release and deployment testing, validation, or verification to evaluate, measure, or check the release and deployment outcomes, results, or impacts, and the release and deployment feedback, reviews, or comments, from the service customers or users, and the service stakeholders, to ensure that the release and deployment are done effectively and efficiently, and that the release and deployment support the service transition and operation of the service provider, and to identify, document, or report the release and deployment errors, defects, or issues, and to plan, implement, or monitor the release and deployment corrections, fixes, or solutions.

7.6 Resolution and Fulfillment

Resolution and fulfillment is the process of resolving, fulfilling, or completing the service requests, incidents, or problems that are raised by the service customers or users, or that are detected by the service provider, or that are reported by the service partners or suppliers, by using various methods, such as resolution and fulfillment plans, policies, or strategies, resolution and fulfillment tools, techniques, or methods, resolution and fulfillment standards, guidelines, or best practices, or resolution and fulfillment testing, validation, or verification, to ensure that the service solutions are delivered, performed, or executed effectively and efficiently, and that the service quality, performance, or efficiency are maintained or improved, and that the service value and benefits are co-created, co-produced, or co-delivered with the service customers or users, and the service stakeholders.

Some of the benefits of resolution and fulfillment are:

- It helps to satisfy the service needs, expectations, or preferences of the service customers or users, and to enhance the service experience, satisfaction, or loyalty.
- It helps to restore the service stability, reliability, or continuity, and to prevent or reduce the service downtime, disruption, or interruption.
- It helps to optimize the service resources, capabilities, assets, or offerings of the service provider, and to avoid or minimize the service waste, cost, or risk.
- It helps to facilitate the service improvement and optimization, and to support the service innovation and transformation.

Some of the challenges of resolution and fulfillment are:

- It may encounter the complexity, ambiguity, or uncertainty of the service requests, incidents, or problems, and the difficulty, cost, or time of resolving, fulfilling, or completing them, which may affect the service quality, performance, or efficiency.
- It may involve the coordination, collaboration, or integration of the resolution and fulfillment across the service processes, functions, or systems, and the alignment, agreement, or consensus of the resolution and fulfillment among the service stakeholders, which may pose the challenges of communication, compatibility, or consistency.
- It may require the data, information, or knowledge of the service requests, incidents, or problems, and the tools, techniques, or methods of the resolution and fulfillment, which may be lacking, insufficient, or outdated, and which may demand the learning, training, or development of the resolution and fulfillment agents, managers, or owners, and the resolution and fulfillment stakeholders.
- It may need the testing, validation, or verification of the resolution and fulfillment outcomes, results, or impacts, and the feedback, review, or improvement of the resolution and fulfillment, which may consume the resources, time, or effort of the resolution and fulfillment agents, managers, or owners, and the resolution and fulfillment stakeholders.

Some of the examples of resolution and fulfillment are:

- A service provider may use resolution and fulfillment plans, policies, or strategies to define the scope, objectives, outcomes, or value of the resolution and fulfillment of the service requests, incidents, or problems, and to establish the roles, responsibilities, authorities, or accountabilities of

the resolution and fulfillment agents, managers, or owners>, and the resolution and fulfillment stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, and to outline the resolution and fulfillment processes, procedures, or steps, and the resolution and fulfillment tools, techniques, or methods, that are used or involved in the resolution and fulfillment management.

- A service provider may use resolution and fulfillment tools, techniques, or methods to perform, execute, or deliver the resolution and fulfillment activities, tasks, or resources, and to manage, monitor, or control the resolution and fulfillment progress, status, or results, and to communicate, coordinate, or collaborate with the resolution and fulfillment stakeholders, such as the service desk, the service support, or the service delivery teams, or the service customers or users, the service providers, or the service partners or suppliers, and to ensure the resolution and fulfillment quality, consistency, or compatibility. Some examples of resolution and fulfillment tools, techniques, or methods are ticketing systems, workflow systems, knowledge bases, chatbots, self-service portals, or automation tools.

- A service provider may use resolution and fulfillment standards, guidelines, or best practices to specify the quality, performance, or efficiency criteria, measures, or indicators of the resolution and fulfillment of the service requests, incidents, or problems, and to evaluate, measure, or check the resolution and fulfillment outcomes, results, or impacts, and to compare, benchmark, or improve the resolution and fulfillment against the internal or external resolution and fulfillment standards, guidelines, or best practices, and to ensure the resolution and fulfillment compliance, conformance, or alignment. Some examples of resolution and fulfillment standards, guidelines, or best practices are ITIL, ISO, or COBIT.

- A service provider may use resolution and fulfillment testing, validation, or verification to ensure that the resolution and fulfillment of the service requests, incidents, or problems are done effectively and efficiently, and that the resolution and fulfillment support the service transition and operation of the service provider, and to identify, document, or report the resolution and fulfillment errors, defects, or issues, and to plan, implement, or monitor the resolution and fulfillment corrections, fixes, or solutions.

Management of Incidents

Management of incidents is the process of managing, resolving, or completing the incidents that are raised by the service customers or users, or that are detected by

the service provider, or that are reported by the service partners or suppliers, by using various methods, such as incident management plans, policies, or strategies, incident management tools, techniques, or methods, incident classification, prioritization, or escalation, or incident analysis, diagnosis, or resolution, to ensure that the incidents are resolved or completed within the agreed time, quality, or cost, and that the service stability, reliability, or continuity are restored or maintained, and that the service value and benefits are co-created, co-produced, or co-delivered with the service customers or users, and the service stakeholders.

Some of the benefits of management of incidents are:

- It helps to restore the service stability, reliability, or continuity, and to prevent or reduce the service downtime, disruption, or interruption, which may cause the service dissatisfaction, frustration, or complaints of the service customers or users, or the service providers, or the service partners or suppliers, or which may affect the service performance, efficiency, or effectiveness, or the service outcomes, results, or impacts.

- It helps to satisfy the service needs, expectations, or preferences of the service customers or users, and to enhance the service experience, satisfaction, or loyalty, by resolving or completing the incidents quickly, accurately, or reliably, and by providing the service support, assistance, or guidance, or the service feedback, updates, or notifications, to the service customers or users, or the service stakeholders, during the incident management process.

- It helps to optimize the service resources, capabilities, assets, or offerings of the service provider, and to avoid or minimize the service waste, cost, or risk, by resolving or completing the incidents efficiently, effectively, or economically, and by using the appropriate service tools, techniques, or methods, or the service standards, guidelines, or best practices, for the incident management process.

- It helps to facilitate the service improvement and optimization, and to support the service innovation and transformation, by analyzing, diagnosing, or resolving the root causes, sources, or factors of the incidents, and by identifying, documenting, or reporting the incident errors, defects, or issues, and by planning, implementing, or monitoring the incident corrections, fixes, or solutions, or the incident preventive, corrective, or improvement actions, or the service changes, enhancements, or innovations.

Some of the challenges of management of incidents are:

- It may encounter the uncertainty, complexity, or ambiguity of the incidents, and the difficulty, cost, or time of resolving or completing them, which may affect the service quality, performance, or efficiency, and which may require the service expertise, knowledge, or skills, or the service tools, techniques, or methods, that are lacking, insufficient, or outdated, for the incident management process.
- It may involve the coordination, collaboration, or integration of the incident management across the service processes, functions, or systems, and the alignment, agreement, or consensus of the incident management among the service stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, which may pose the challenges of communication, compatibility, or consistency, for the incident management process.
- It may require the classification, prioritization, or escalation of the incidents, based on the incident severity, impact, or urgency, and the assignment, allocation, or distribution of the incident management activities, tasks, or resources, to the appropriate service agents, managers, or owners, or the service teams, groups, or units, which may demand the service policies, rules, or criteria, or the service standards, guidelines, or best practices, that are unclear, inconsistent, or conflicting, for the incident management process.
- It may need the testing, validation, or verification of the incident resolution or completion, and the feedback, review, or improvement of the incident management, which may consume the resources, time, or effort of the service agents, managers, or owners, or the service teams, groups> or units, and which may depend on the data, information, or knowledge of the incidents, and the tools, techniques, or methods of the incident management, which may be inaccurate, incomplete, or unreliable, for the incident management process.

Some of the examples of management of incidents are:

- A service provider may use incident management plans, policies, or strategies to define the scope, objectives, outcomes, or value of the incident management, and to establish the roles, responsibilities, authorities, or accountabilities of the incident management agents, managers, or owners, and the incident management stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, and to outline the incident management processes, procedures, or steps, and the

incident management tools, techniques, or methods, that are used or involved in the incident management.

- A service provider may use incident management tools, techniques, or methods to perform, execute, or deliver the incident management activities, tasks, or resources, and to manage, monitor, or control the incident management progress, status, or results, and to communicate, coordinate, or collaborate with the incident management stakeholders, such as the service desk, the service support, or the service delivery teams, or the service customers or users, the service providers, or the service partners or suppliers, and to ensure the incident management quality, consistency, or compatibility. Some examples of incident management tools, techniques, or methods are ticketing systems, workflow systems, knowledge bases, chatbots, self-service portals, or automation tools.

- A service provider may use incident classification, prioritization, or escalation to categorize, rank, or elevate the incidents based on the incident severity, impact, or urgency, and to assign, allocate, or distribute the incident management activities, tasks, or resources, to the appropriate service agents, managers, or owners, or the service teams, groups, or units, and to ensure the incident management efficiency, effectiveness, or economy. Some examples of incident classification, prioritization, or escalation are incident labels, tags, or codes, incident ratings, scores, or levels, or incident workflows, routes, or paths.

- A service provider may use incident analysis, diagnosis, or resolution to understand, explain, or solve the incidents, and to identify, document, or report the incident errors, defects, or issues, and to plan, implement, or monitor the incident corrections, fixes, or solutions, or the incident preventive, corrective, or improvement actions, or the service changes, enhancements, or innovations, and to ensure the incident management effectiveness, efficiency, or economy. Some examples of incident analysis, diagnosis, or resolution are incident root cause analysis, incident impact analysis, or incident trend analysis, incident troubleshooting, debugging, or testing, or incident resolution methods, techniques, or procedures.

Management of Service Requests

Management of service requests is the process of managing, fulfilling, or completing the service requests that are raised by the service customers or users, or that are detected by the service provider, or that are reported by the service partners or suppliers, by using various methods, such as service request>

management plans, policies, or strategies, service request management tools, techniques, or methods, service request catalogues, menus, or options, or service request fulfillment, completion, or delivery, to ensure that the service requests are fulfilled or completed within the agreed time, quality, or cost, and that the service value and benefits are co-created, co-produced, or co-delivered with the service customers or users, and the service stakeholders. A service request is a formal or informal request from a service customer or user for a service action, such as accessing, using, changing, or returning a service resource, capability, asset, or offering, or for a service information, such as getting, updating, or confirming a service data, information, or knowledge, or for a service support, such as receiving, providing, or requesting a service assistance, guidance, or feedback.

Some of the benefits of management of service requests are:

- It helps to satisfy the service needs, expectations, or preferences of the service customers or users, and to enhance the service experience, satisfaction, or loyalty, by fulfilling or completing the service requests quickly, accurately, or reliably, and by providing the service support, assistance, or guidance, or the service feedback, updates, or notifications, to the service customers or users, or the service stakeholders, during the service request management process.

- It helps to optimize the service resources, capabilities, assets, or offerings of the service provider, and to avoid or minimize the service waste, cost, or risk, by fulfilling or completing the service requests efficiently, effectively, or economically, and by using the appropriate service tools, techniques, or methods, or the service standards, guidelines, or best practices, for the service request management process.

- It helps to facilitate the service improvement and optimization, and to support the service innovation and transformation, by identifying, documenting, or reporting the service request errors, defects, or issues, and by planning, implementing, or monitoring the service request corrections, fixes, or solutions, or the service request preventive, corrective, or improvement actions, or the service changes, enhancements, or innovations.

- It helps to increase the service availability, accessibility, or usability, and to improve the service performance, efficiency, or effectiveness, by enabling the service customers or users to access, use, change, or return the service resources, capabilities, assets, or offerings, or to get, update, or confirm the service data, information, or knowledge, or to receive, provide, or request the service assistance, guidance, or feedback, according to their service

needs, expectations, or preferences, or the service requirements, criteria, or standards.

Some of the challenges of management of service requests are:

- It may encounter the variety, diversity, or complexity of the service requests, and the difficulty, cost, or time of fulfilling or completing them, which may affect the service quality, performance, or efficiency, and which may require the service expertise, knowledge, or skills, or the service tools, techniques, or methods, that are lacking, insufficient, or outdated, for the service request management process.
- It may involve the coordination, collaboration, or> integration of the service request management across the service processes, functions, or systems, and the alignment, agreement, or consensus of the service request management among the service stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, which may pose the challenges of communication, compatibility, or consistency, for the service request management process.
- It may require the classification, prioritization, or escalation of the service requests, based on the service request type, category, or nature, and the assignment, allocation, or distribution of the service request management activities, tasks, or resources, to the appropriate service agents, managers, or owners, or the service teams, groups, or units, which may demand the service policies, rules, or criteria, or the service standards, guidelines, or best practices, that are unclear, inconsistent, or conflicting, for the service request management process.
- It may need the testing, validation, or verification of the service request fulfillment or completion, and the feedback, review, or improvement of the service request management, which may consume the resources, time, or effort of the service agents, managers, or owners, or the service teams, groups, or units, and which may depend on the data, information, or knowledge of the service requests, and the tools, techniques, or methods of the service request management, which may be inaccurate, incomplete, or unreliable, for the service request management process.

Some of the examples of management of service requests are:

- A service provider may use service request management plans, policies, or strategies to define the scope, objectives, outcomes, or value of the service request management, and to establish the roles, responsibilities, authorities,

or accountabilities of the service request management agents, managers, or owners, and the service request management stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, and to outline the service request management processes, procedures, or steps, and the service request management tools, techniques, or methods, that are used or involved in the service request management.

- A service provider may use service request management tools, techniques, or methods to perform, execute, or deliver the service request management activities, tasks, or resources, and to manage, monitor, or control the service request management progress, status, or results, and to communicate, coordinate, or collaborate with the service request management stakeholders, such as the service desk, the service support, or the service delivery teams, or the service customers or users, the service providers, or the service partners or suppliers, and to ensure the service request management quality, consistency, or compatibility. Some examples of service request management tools, techniques, or methods are ticketing systems, workflow systems, knowledge bases, chatbots, self-service portals, or automation tools.

- A service provider may use service request catalogues, menus, or options to list, display, or present the service requests that are available, accessible, or usable for the service customers or users, and to describe, explain, or illustrate the service request details, such as the service request description, features, or functions, the> service request requirements, criteria, or standards, the service request dependencies, assumptions, or constraints, or the service request costs, benefits, or value, and to enable the service customers or users to select, order, or request the service requests according to their service needs, expectations, or preferences, or the service requirements, criteria, or standards, and to ensure the service request management efficiency, effectiveness, or economy.

- A service provider may use service request fulfillment, completion, or delivery to provide, perform, or execute the service requests that are selected, ordered, or requested by the service customers or users, and to document, record, or report the service request outcomes, results, or impacts, and to communicate, confirm, or verify the service request fulfillment, completion, or delivery with the service customers or users, or the service stakeholders, and to ensure the service request management quality, performance, or efficiency.

Management of Problems

Management of problems is the process of managing, resolving, or completing the problems that are raised by the service customers or users, or that are detected by the service provider, or that are reported by the service partners or suppliers, by using various methods, such as problem management plans, policies, or strategies, problem management tools, techniques, or methods, problem identification, analysis, or diagnosis, or problem resolution, prevention, or improvement, to ensure that the problems are resolved or completed within the agreed time, quality, or cost, and that the service risks, issues, or challenges are mitigated or eliminated, and that the service value and benefits are co-created, co-produced, or co-delivered with the service customers or users, and the service stakeholders. A problem is a cause, source, or factor of one or more incidents, which has an adverse effect on the service stability, reliability, or continuity, and which requires investigation, analysis, or diagnosis, and resolution, prevention, or improvement.

Some of the benefits of management of problems are:

- It helps to restore the service stability, reliability, or continuity, and to prevent or reduce the service downtime, disruption, or interruption, which may cause the service dissatisfaction, frustration, or complaints of the service customers or users, or the service providers, or the service partners or suppliers, or which may affect the service performance, efficiency, or effectiveness, or the service outcomes, results, or impacts.
- It helps to mitigate or eliminate the service risks, issues, or challenges, and to prevent or avoid the recurrence or escalation of the incidents, by resolving or completing the problems effectively and efficiently, and by identifying, documenting, or reporting the problem errors, defects, or issues, and by planning, implementing, or monitoring the problem corrections, fixes, or solutions, or the problem preventive, corrective, or improvement actions, or the service changes, enhancements, or innovations.
- It helps to optimize the service resources, capabilities, assets, or offerings of the service provider, and to avoid or minimize the service waste, cost, or risk, by resolving or completing the problems efficiently, effectively, or economically, and by using the appropriate service tools, techniques, or methods,> or the service standards, guidelines, or best practices, for the problem management process.
- It helps to facilitate the service improvement and optimization, and to support the service innovation and transformation, by identifying, analyzing, or diagnosing the root causes, sources, or factors of the problems,

and by identifying, documenting, or reporting the problem errors, defects, or issues, and by planning, implementing, or monitoring the problem corrections, fixes, or solutions, or the problem preventive, corrective, or improvement actions, or the service changes, enhancements, or innovations.

Some of the challenges of management of problems are:

- It may encounter the uncertainty, complexity, or ambiguity of the problems, and the difficulty, cost, or time of resolving or completing them, which may affect the service quality, performance, or efficiency, and which may require the service expertise, knowledge, or skills, or the service tools, techniques, or methods, that are lacking, insufficient, or outdated, for the problem management process.
- It may involve the coordination, collaboration, or integration of the problem management across the service processes, functions, or systems, and the alignment, agreement, or consensus of the problem management among the service stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, which may pose the challenges of communication, compatibility, or consistency, for the problem management process.
- It may require the classification, prioritization, or escalation of the problems, based on the problem severity, impact, or urgency, and the assignment, allocation, or distribution of the problem management activities, tasks, or resources, to the appropriate service agents, managers, or owners, or the service teams, groups, or units, which may demand the service policies, rules, or criteria, or the service standards, guidelines, or best practices, that are unclear, inconsistent, or conflicting, for the problem management process.
- It may need the testing, validation, or verification of the problem resolution or completion, and the feedback, review, or improvement of the problem management, which may consume the resources, time, or effort of the service agents, managers, or owners, or the service teams, groups, or units, and which may depend on the data, information, or knowledge of the problems, and the tools, techniques, or methods of the problem management, which may be inaccurate, incomplete, or unreliable, for the problem management process.

Some of the examples of management of problems are:

- A service provider may use problem management plans, policies, or strategies to define the scope, objectives, outcomes, or value of the problem management, and to establish the roles, responsibilities, authorities, or accountabilities of the problem management agents, managers, or owners, and the problem management stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, and to outline the problem management processes, procedures, or steps, and the problem management tools, techniques, or methods, that are used or involved in the problem management.

- A service provider may use problem management tools, techniques, or methods to perform, execute, or deliver the problem management activities, tasks, or resources, and to manage, monitor, or control the problem management progress, status, or results, and to communicate, coordinate, or collaborate with the problem management stakeholders, such as the service desk, the service support, or the service delivery teams, or the service customers or users, the service providers, or the service partners or suppliers, and to ensure the problem management quality, consistency, or compatibility. Some examples of problem management tools, techniques, or methods are incident management systems, root cause analysis, problem-solving techniques, or knowledge management systems.

- A service provider may use problem identification, analysis, or diagnosis to detect, discover, or recognize the problems that are raised by the service customers or users, or that are reported by the service partners or suppliers, or that are identified by the service monitoring, measurement, or evaluation, and to analyze, examine, or investigate the problems to determine, understand, or explain their causes, sources, or factors, and their effects, impacts, or consequences, and to diagnose, assess, or evaluate the problems to identify, document, or report their errors, defects, or issues, and to plan, propose, or recommend their corrections, fixes, or solutions, or their preventive, corrective, or improvement actions, or the service changes, enhancements, or innovations.

- A service provider may use problem resolution, prevention, or improvement to implement, execute, or apply the problem corrections, fixes, or solutions, or the problem preventive, corrective, or improvement actions, or the service changes, enhancements, or innovations, that are planned, proposed, or recommended by the problem identification, analysis, or diagnosis, and to test, validate, or verify the problem resolution or completion, and to communicate, confirm, or verify the problem resolution or completion with

the service customers or users, or the service stakeholders, and to prevent or avoid the recurrence or escalation of the incidents, by implementing, executing, or applying the problem preventive, corrective, or improvement actions, or the service changes, enhancements, or innovations, and to improve or optimize the service quality, performance, or efficiency, by implementing, executing, or applying the service changes, enhancements, or innovations.

7.7 Service assurance

Service assurance is the process of ensuring that the service delivery meets or exceeds the service expectations, requirements, or standards of the service customers or users, and the service stakeholders, by using various methods, such as service availability management, service continuity management, or information security management, to monitor,> measure, or evaluate the service quality, performance, or efficiency, and to manage, mitigate, or eliminate the service risks, issues, or challenges, and to ensure that the service value and benefits are co-created, co-produced, or co-delivered with the service customers or users, and the service stakeholders. Service assurance is also known as service quality management or service performance management.

Some of the benefits of service assurance are:

- It helps to enhance the service satisfaction, loyalty, or trust of the service customers or users, and the service stakeholders, by ensuring that the service delivery meets or exceeds their service expectations, requirements, or standards, and by providing them with the service feedback, review, or improvement, and the service reporting, communication, or consultation.
- It helps to optimize the service resources, capabilities, assets, or offerings of the service provider, and to avoid or minimize the service waste, cost, or risk, by ensuring that the service delivery is efficient, effective, or economical, and by using the appropriate service tools, techniques, or methods, or the service standards, guidelines, or best practices, for the service assurance process.
- It helps to facilitate the service improvement and optimization, and to support the service innovation and transformation, by ensuring that the service delivery is consistent, compatible, or adaptable, and by identifying, documenting, or reporting the service gaps, opportunities, or potentials, and by planning, implementing, or monitoring the service changes, enhancements, or innovations.

Some of the challenges of service assurance are:

- It may encounter the uncertainty, complexity, or ambiguity of the service expectations, requirements, or standards, and the difficulty, cost, or time of meeting or exceeding them, which may affect the service quality, performance, or efficiency, and which may require the service expertise, knowledge, or skills, or the service tools, techniques, or methods, that are lacking, insufficient, or outdated, for the service assurance process.

- It may involve the coordination, collaboration, or integration of the service assurance across the service processes, functions, or systems, and the alignment, agreement, or consensus of the service assurance among the service stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, which may pose the challenges of communication, compatibility, or consistency, for the service assurance process.

- It may require the classification, prioritization, or escalation of the service assurance activities, tasks, or resources, based on the service importance, impact, or urgency, and the assignment, allocation, or distribution of the service assurance activities, tasks, or resources, to the appropriate service agents, managers, or owners, or the service teams, groups, or units, which may demand the service policies, rules, or criteria, or the service standards, guidelines, or best practices, that are unclear, inconsistent, or conflicting, for the service assurance process.

- It may need the testing, validation, or verification of the service assurance outcomes, results, or impacts, and the feedback, review, or> improvement of the service assurance, which may consume the resources, time, or effort of the service agents, managers, or owners, or the service teams, groups, or units, and which may depend on the data, information, or knowledge of the service assurance, and the tools, techniques, or methods of the service assurance, which may be inaccurate, incomplete, or unreliable, for the service assurance process.

Some of the examples of service assurance are:

- A service provider may use service assurance plans, policies, or strategies to define the scope, objectives, outcomes, or value of the service assurance, and to establish the roles, responsibilities, authorities, or accountabilities of the service assurance agents, managers, or owners, and the service assurance stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, and to outline the service assurance

processes, procedures, or steps, and the service assurance tools, techniques, or methods, that are used or involved in the service assurance.

- A service provider may use service assurance tools, techniques, or methods to perform, execute, or deliver the service assurance activities, tasks, or resources, and to manage, monitor, or control the service assurance progress, status, or results, and to communicate, coordinate, or collaborate with the service assurance stakeholders, such as the service desk, the service support, or the service delivery teams, or the service customers or users, the service providers, or the service partners or suppliers, and to ensure the service assurance quality, consistency, or compatibility. Some examples of service assurance tools, techniques, or methods are service level agreements, service level management, service monitoring, measurement, or evaluation, service reporting, communication, or consultation, or service feedback, review, or improvement.

- A service provider may use service availability management to ensure that the service is available, accessible, or usable for the service customers or users, and the service stakeholders, according to the agreed service levels, by using various methods, such as service availability planning, design, or implementation, service availability monitoring, measurement, or evaluation, service availability reporting, communication, or consultation, or service availability improvement or optimization, to monitor, measure, or evaluate the service availability, and to manage, mitigate, or eliminate the service availability risks, issues, or challenges, and to ensure that the service availability meets or exceeds the service expectations, requirements, or standards. Service availability is the ability of the service to perform its intended function at a given time, without interruption, within acceptable limits, or under stated conditions.

- A service provider may use service continuity management to ensure that the service can be restored or resumed within the agreed time, quality, or cost, in the event of a service disruption, interruption, or failure, by using various methods, such as service continuity planning, design, or implementation, service continuity testing, validation, or verification, service continuity activation, execution, or recovery, or service continuity reporting, communication, or consultation, to plan, design, or implement the service continuity arrangements, such as the service backup, restore, or recovery> procedures, or the service alternative, contingency, or emergency plans, and to test, validate, or verify the service continuity arrangements, and to activate, execute, or recover the service continuity arrangements, in the event of a

service disruption, interruption, or failure, and to report, communicate, or consult the service continuity outcomes, results, or impacts. Service continuity is the ability of the service to continue to operate or function, despite a service disruption, interruption, or failure.

- A service provider may use information security management to ensure that the service information is protected, secured, or safeguarded from unauthorized access, use, disclosure, modification, or destruction, by using various methods, such as information security planning, design, or implementation, information security monitoring, measurement, or evaluation, information security reporting, communication, or consultation, or information security improvement or optimization, to monitor, measure, or evaluate the information security, and to manage, mitigate, or eliminate the information security risks, issues, or challenges, and to ensure that the information security meets or exceeds the information security expectations, requirements, or standards. Information security is the preservation of the confidentiality, integrity, or availability of the service information.

8. Performance evaluation

Performance evaluation is the process of assessing, judging, or appraising the service quality, performance, or efficiency, and the service value and benefits, that are co-created, co-produced, or co-delivered with the service customers or users, and the service stakeholders, by using various methods, such as monitoring, measurement, analysis, or evaluation, internal audit, management review, or service reporting, to collect, process, or analyze the service data, information, or knowledge, and to provide the service feedback, review, or improvement, and the service reporting, communication, or consultation, and to ensure the service compliance, conformance, or alignment with the service expectations, requirements, or standards, and the service policies, rules, or regulations, and the service objectives, outcomes, or value. Performance evaluation is also known as service evaluation or service assessment.

Some of the benefits of performance evaluation are:

- It helps to enhance the service satisfaction, loyalty, or trust of the service customers or users, and the service stakeholders, by providing them with the service feedback, review, or improvement, and the service reporting, communication, or consultation, that are based on the objective, reliable, or valid service data, information, or knowledge, and that are relevant, timely, or accurate, and that are transparent, clear, or concise, and that are consistent, compatible, or adaptable.

- It helps to optimize the service resources, capabilities, assets, or offerings of the service provider, and to avoid or minimize the service waste, cost, or risk, by using the appropriate service tools, techniques, or methods, or the service standards, guidelines, or best practices, for the performance evaluation process, and by identifying, documenting, or reporting the service gaps, opportunities, or potentials, and by planning, implementing, or monitoring the service changes, enhancements, or innovations, that are based on the performance evaluation results, outcomes, or impacts.

- It helps to facilitate the service improvement and optimization, and to support the service innovation and transformation, by ensuring that the service delivery is consistent, compatible, or adaptable, and by providing the service feedback, review, or improvement, and the service reporting, communication, or consultation, that are based on the performance evaluation results, outcomes, or impacts, and that are aligned, agreed, or consensus with the service stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers.

Some of the challenges of performance evaluation are:

- It may encounter the uncertainty, complexity, or ambiguity of the service data, information, or knowledge, and the difficulty, cost, or time of collecting, processing, or analyzing them, which may affect the validity, reliability, or accuracy of the performance evaluation, and which may require the service expertise, knowledge, or skills, or the service tools, techniques, or methods, that are lacking, insufficient, or outdated, for the performance evaluation process.

- It may involve the coordination, collaboration, or integration of the performance evaluation across the service processes, functions, or systems, and the alignment, agreement, or consensus of the performance evaluation among the service stakeholders, such as the service customers or users, the service providers, or the service partners or suppliers, which may pose the challenges of communication, compatibility, or consistency, for the performance evaluation process.

- It may require the classification, prioritization, or escalation of the performance evaluation activities, tasks, or resources, based on the service importance, impact, or urgency, and the assignment, allocation, or distribution of the performance evaluation activities, tasks, or resources, to the appropriate service agents, managers, or owners, or the service teams, groups, or units, which may demand the service policies, rules, or criteria, or

the service standards, guidelines, or best practices, that are unclear, inconsistent, or conflicting, for the performance evaluation process.

- It may need the testing, validation, or verification of the performance evaluation outcomes, results, or impacts, and the feedback, review, or improvement of the performance evaluation, which may consume the resources, time, or effort of the service agents, managers, or owners, or the service teams, groups, or units, and which may depend on the data, information, or knowledge of the performance evaluation, and the tools, techniques, or methods of the performance evaluation, which may be inaccurate, incomplete, or unreliable, for the performance evaluation process.

Some of the examples of performance evaluation are:

8.1 Monitoring, measurement, analysis and evaluation

A service provider may use monitoring, measurement, analysis and evaluation to collect, process, or analyze the service data, information, or knowledge, that are related to the service quality, performance, or efficiency, and the service value and benefits, that are co-created, co-produced, or co-delivered with the service customers or users, and the service stakeholders, by using various service indicators, metrics, or measures, such as service availability, reliability, or usability, service capacity, throughput, or utilization, service response, resolution, or completion time, service cost, revenue, or profit, service satisfaction, loyalty, or trust, service value, outcomes, or impacts, and to evaluate, assess, or appraise the service quality, performance, or efficiency, and the service value and benefits, against the service expectations, requirements, or standards, and the service objectives, outcomes, or value, and to identify, document, or report the service gaps, opportunities, or potentials, and to plan, propose, or recommend the service changes, enhancements, or innovations, or the service feedback, review, or improvement, or the service reporting, communication, or consultation, based on the monitoring, measurement, analysis and evaluation results, outcomes, or impacts.

Some examples of monitoring, measurement, analysis and evaluation tools, techniques, or methods are:

- **Service dashboards:** These are graphical displays of the service indicators, metrics, or measures, that show the current status, trend, or performance of the service delivery, and that can be customized, filtered, or updated,

according to the service needs, preferences, or requirements, of the service customers or users, and the service stakeholders.

- **Service scorecards:** These are strategic tools that link the service indicators, metrics, or measures, to the service objectives, outcomes, or value, and that show the degree of achievement, progress, or performance, of the service delivery, and that can be aligned, balanced, or integrated, across the service processes, functions, or systems.

- **Service reports:** These are formal documents that present, summarize, or analyze the service data, information, or knowledge, that are related to the service quality, performance, or efficiency, and the service value and benefits, and that provide the service feedback, review, or improvement, or the service reporting, communication, or consultation, based on the service results, outcomes, or impacts, of the service delivery.

- **Service surveys:** These are methods of collecting the service data, information, or knowledge, that are related to the service satisfaction, loyalty, or trust, of the service customers or users, and the service stakeholders, and that reflect their perceptions, opinions, or experiences, of the service quality, performance, or efficiency, and the service value and benefits, and that can be conducted, analyzed, or reported, using various service tools, techniques, or methods, such as service questionnaires, service interviews, service focus groups, service feedback forms, service rating scales, service statistics, service charts, service graphs, service tables, service diagrams, service figures, service images, service slides, service presentations.

- **Service audits:** These are methods of examining, inspecting, or verifying the service processes, functions, or systems, and the service resources, capabilities, assets, or offerings, that are involved or used in the service delivery, and to check, test, or confirm the service compliance, conformance, or alignment with the service expectations, requirements, or standards, and the service policies, rules, or regulations, and the service objectives, outcomes, or value, by using various service criteria, methods, or procedures, such as service quality, performance, or efficiency, service value and benefits, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations, and to identify, document, or report the service audit findings, results, or impacts, and to plan, propose, or recommend the service audit actions, corrections, or improvements, or the service feedback, review, or improvement, or the service reporting, communication, or consultation, based on the service audit findings, results, or impacts.

- **Service reviews:** These are methods of reviewing, evaluating, or appraising the service quality, performance, or efficiency, and the service value and benefits, that are co-created, co-produced, or co-delivered with the service customers or users, and the service stakeholders, and to compare, contrast, or benchmark the service quality, performance, or efficiency, and the service value and benefits, with the service expectations, requirements, or standards, and the service objectives, outcomes, or value, by using various service inputs, outputs, or outcomes, such as service data, information, or knowledge, service indicators, metrics, or measures, service monitoring, measurement, analysis and evaluation results, outcomes, or impacts, service audit findings, results, or impacts, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations, and to identify, document, or report the service review findings, results, or impacts, and to plan, propose, or recommend the service review actions, corrections, or improvements, or the service feedback, review, or improvement, or the service reporting, communication, or consultation, based on the service review findings, results, or impacts.
- **Service benchmarks:** These are methods of comparing, contrasting, or benchmarking the service quality, performance, or efficiency, and the service value and benefits, that are co-created, co-produced, or co-delivered with the service customers or users, and the service stakeholders, with the service quality, performance, or efficiency, and the service value and benefits, of the best practices, standards, or competitors, in the service industry, market, or domain, and to identify, document, or report the service benchmark findings, results, or impacts, and to plan, propose, or recommend the service benchmark actions, corrections, or improvements, or the service feedback, review, or improvement, or the service reporting, communication, or consultation, based on the service benchmark findings, results, or impacts.
- **Service baselines:** These are methods of establishing, defining, or documenting the service quality, performance, or efficiency, and the service value and benefits, that are co-created, co-produced, or co-delivered with the service customers or users, and the service stakeholders, at a specific point in time, or under a specific condition, or for a specific purpose, and to use them as the reference, standard, or basis, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service

gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service targets:** These are methods of setting, specifying, or communicating the service quality, performance, or efficiency, and the service value and benefits, that are expected, required, or desired, by the service customers or users, and the service stakeholders, and that are aligned, agreed, or consensus, with the service objectives, outcomes, or value, and to use them as the goal, aim, or direction, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service thresholds:** These are methods of defining, determining, or applying the service quality, performance, or efficiency, and the service value and benefits, that are acceptable, tolerable, or permissible, by the service customers or users, and the service stakeholders, and that are consistent, compatible, or adaptable, with the service expectations, requirements, or standards, and the service objectives, outcomes, or value, and to use them as the limit, boundary, or range, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service trends:** These are methods of identifying, analyzing, or predicting the service quality, performance, or efficiency, and the service value and benefits, that are changing, varying, or fluctuating, over time, or across the service processes, functions, or systems, or among the service customers or users, and the service stakeholders, and to use them as the pattern, direction, or tendency, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service patterns:** These are methods of identifying, analyzing, or predicting the service quality, performance, or efficiency, and the service value and benefits, that are recurring, repeating, or replicating, over time, or across the service processes, functions, or systems, or among the service customers or users, and the service stakeholders, and to use them as the regularity,

consistency, or similarity, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service correlations:** These are methods of identifying, analyzing, or predicting the service quality, performance, or efficiency, and the service value and benefits, that are related, associated, or connected, with each other, or with other service indicators, metrics, or measures, or with other service factors, variables, or parameters, and to use them as the relationship, link, or connection, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service causations:** These are methods of identifying, analyzing, or predicting the service quality, performance, or efficiency, and the service value and benefits, that are caused, influenced, or affected, by each other, or by other service indicators, metrics, or measures, or by other service factors, variables, or parameters, and to use them as the cause, influence, or effect, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service predictions:** These are methods of estimating, forecasting, or projecting the service quality, performance, or efficiency, and the service value and benefits, that are likely, probable, or possible, to occur, happen, or emerge, in the future, or under a specific scenario, or for a specific purpose, and to use them as the expectation, probability, or possibility, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service simulations:** These are methods of creating, modeling, or testing the service quality, performance, or efficiency, and the service value and benefits, that are simulated, imitated, or replicated, from the real, actual, or existing,

service delivery, or from the hypothetical, theoretical, or ideal, service delivery, and to use them as the representation, imitation, or replication, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service optimizations:** These are methods of finding, selecting, or applying the service quality, performance, or efficiency, and the service value and benefits, that are optimal, best, or most, for the service delivery, or for the service customers or users, and the service stakeholders, and to use them as the optimum, maximum, or minimum, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service validations:** These are methods of confirming, verifying, or validating the service quality, performance, or efficiency, and the service value and benefits, that are correct, accurate, or valid, for the service delivery, or for the service customers or users, and the service stakeholders, and to use them as the confirmation, verification, or validation, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service verifications:** These are methods of checking, testing, or verifying the service quality, performance, or efficiency, and the service value and benefits, that are true, factual, or verified, for the service delivery, or for the service customers or users, and the service stakeholders, and to use them as the check, test, or verification, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service evaluations:** These are methods of evaluating, assessing, or appraising the service quality, performance, or efficiency, and the service

value and benefits, that are evaluated, assessed, or appraised, by the service customers or users, and the service stakeholders, or by the service providers, or by the service experts, or by the service standards, or by the service criteria, and to use them as the evaluation, assessment, or appraisal, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service assessments:** These are methods of measuring, testing, or assessing the service quality, performance, or efficiency, and the service value and benefits, that are measured, tested, or assessed, by the service indicators, metrics, or measures, or by the service tools, techniques, or methods, and to use them as the measurement, test, or assessment, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

- **Service appraisals:** These are methods of rating, scoring, or appraising the service quality, performance, or efficiency, and the service value and benefits, that are rated, scored, or appraised, by the service scales, grades, or levels, or by the service feedback, review, or improvement, and to use them as the rating, score, or appraisal, for the service monitoring, measurement, analysis and evaluation, service audit, service review, service benchmark, service feedback, review, or improvement, service reporting, communication, or consultation, service risks, issues, or challenges, service gaps, opportunities, or potentials, service changes, enhancements, or innovations.

8.2 Internal audit

A service provider may use internal audit to examine, inspect, or verify the service processes, functions, or systems, and the service resources, capabilities, assets, or offerings, that are involved or used in the service delivery, and to check, test, or confirm the service compliance, conformance, or alignment with the service expectations, requirements, or standards, and the service policies, rules, or regulations, and the service objectives, outcomes, or value, by using various audit criteria, methods, or procedures, such as service quality, performance, or efficiency, service value and benefits, service risks, issues, or challenges, service

gaps, opportunities, or potentials, service changes, enhancements, or innovations, and to identify, document, or report the audit findings, results, or impacts, and to plan, propose, or recommend the audit actions, corrections, or improvements, or the service feedback, review, or improvement, or the service reporting, communication, or consultation, based on the internal audit findings, results, or impacts.

Some examples of internal audit tools, techniques, or methods are:

- **Audit plans:** These are documents that define, describe, or specify the audit objectives, outcomes, or value, and the audit scope, criteria, or methods, and the audit resources, time, or budget, and the audit roles, responsibilities, or accountabilities, and the audit activities, tasks, or steps, and the audit risks, issues, or challenges, and the audit documents, records, or evidences, and the audit reporting, communication, or consultation.

- **Audit policies:** These are documents that state, communicate, or enforce the audit principles, values, or ethics, and the audit standards, guidelines, or best practices, and the audit policies, rules, or regulations, that are applicable, relevant, or mandatory, for the audit process, and that are aligned, agreed, or consensus, with the service expectations, requirements, or standards, and the service policies, rules, or regulations, and the service objectives, outcomes, or value.

- **Audit strategies:** These are documents that outline, explain, or justify the audit approach, direction, or vision, and the audit goals, aims, or targets, and the audit priorities, preferences, or choices, and the audit methods, techniques, or tools, and the audit resources, capabilities, or assets, and the audit partners, suppliers, or stakeholders, that are selected, adopted, or applied, for the audit process, and that are consistent, compatible, or adaptable, with the service strategy, direction, or vision, and the service goals, aims, or targets, and the service priorities, preferences, or choices, and the service methods, techniques, or tools, and the service resources, capabilities, or assets, and the service partners, suppliers, or stakeholders.

- **Audit scopes:** These are documents that specify, limit, or bound the audit coverage, extent, or range, and the audit areas, domains, or topics, and the audit processes, functions, or systems, and the audit resources, capabilities, or assets, and the audit customers, users, or stakeholders, that are included, excluded, or considered, for the audit process, and that are relevant, significant, or important, for the service delivery, and the service quality, performance, or efficiency, and the service value and benefits.

- **Audit objectives:** These are statements that express, articulate, or communicate the audit purpose, intention, or rationale, and the audit expected, required, or desired, outcomes, results, or impacts, and the audit value, benefits, or improvements, that are to be achieved, accomplished, or delivered, by the audit process, and that are aligned, balanced, or integrated, with the service objectives, outcomes, or value.

- **Audit outcomes:** These are statements that describe, summarize, or report the audit actual, realized, or delivered, outcomes, results, or impacts, and the audit value, benefits, or improvements, that are achieved, accomplished, or delivered, by the audit process, and that are compared, contrasted, or benchmarked, with the audit objectives, outcomes, or value.

- **Audit criteria:** These are documents that establish, define, or document the audit standards, norms, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, that are used, applied, or followed, for the audit process, and that are consistent, compatible, or adaptable, with the service standards, norms, or benchmarks, and the service requirements, specifications, or expectations, and the service rules, regulations, or policies.

- **Audit methods:** These are documents that describe, explain, or illustrate the audit procedures, steps, or activities, and the audit techniques, tools, or methods, and the audit inputs, outputs, or outcomes, and the audit roles, responsibilities, or accountabilities, and the audit documents, records, or evidences, and the audit reporting, communication, or consultation, that are used, applied, or followed, for the audit process, and that are appropriate, suitable, or effective, for the audit objectives, outcomes, or value.

- **Audit procedures:** These are documents that detail, specify, or prescribe the audit steps, actions, or tasks, and the audit sequences, orders, or flows, and the audit conditions, criteria, or rules, and the audit inputs, outputs, or outcomes, and the audit roles, responsibilities, or accountabilities, and the audit documents, records, or evidences, and the audit reporting, communication, or consultation, that are used, applied, or followed, for the audit process, and that are logical, rational, or systematic, for the audit objectives, outcomes, or value.

- **Audit steps:** These are statements that indicate, instruct, or guide the audit actions, tasks, or activities, and the audit inputs, outputs, or outcomes, and the audit roles, responsibilities, or accountabilities, and the audit documents, records, or evidences, and the audit reporting, communication, or consultation, that are performed, executed, or completed, for the audit

process, and that are sequential, ordered, or flowed, for the audit objectives, outcomes, or value.

- **Audit checklists:** These are documents that list, enumerate, or record the audit items, elements, or components, and the audit questions, queries, or inquiries, and the audit checks, tests, or validations, and the audit responses, answers, or results, and the audit evidences, proofs, or supports, that are used, applied, or followed, for the audit process, and that are comprehensive, complete, or exhaustive, for the audit objectives, outcomes, or value.
- **Audit questionnaires:** These are documents that contain, present, or provide the audit questions, queries, or inquiries, and the audit choices, options, or alternatives, and the audit scales, grades, or levels, and the audit responses, answers, or results, and the audit evidences, proofs, or supports, that are used, applied, or followed, for the audit process, and that are clear, concise, or precise, for the audit objectives, outcomes, or value.
- **Audit interviews:** These are methods of conducting, performing, or carrying out the audit conversations, dialogues, or discussions, and the audit questions, queries, or inquiries, and the audit responses, answers, or results, and the audit evidences, proofs, or supports, that are used, applied, or followed, for the audit process, and that are interactive, engaging, or participative, for the audit objectives, outcomes, or value.
- **Audit observations:** These are methods of observing, watching, or monitoring the audit behaviors, actions, or activities, and the audit processes, functions, or systems, and the audit resources, capabilities, or assets, and the audit customers, users, or stakeholders, that are used, applied, or followed, for the audit process, and that are visible, noticeable, or evident, for the audit objectives, outcomes, or value.
- **Audit documents:** These are documents that show, display, or demonstrate the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit evidences, proofs, or supports, that are used, applied, or followed, for the audit process, and that are relevant, reliable, or valid, for the audit objectives, outcomes, or value.
- **Audit records:** These are documents that record, store, or keep the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit evidences, proofs, or supports, that are used, applied, or followed, for the audit process, and that are traceable, retrievable, or accessible, for the audit objectives, outcomes, or value.
- **Audit evidences:** These are documents that prove, substantiate, or corroborate the audit data, information, or knowledge, and the audit

indicators, metrics, or measures, and the audit findings, results, or impacts, that are used, applied, or followed, for the audit process, and that are objective, factual, or verifiable, for the audit objectives, outcomes, or value.

- **Audit samples:** These are methods of selecting, choosing, or applying the audit items, elements, or components, and the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit evidences, proofs, or supports, that are used, applied, or followed, for the audit process, and that are representative, typical, or illustrative, of the audit population, group, or set, and that are sufficient, adequate, or appropriate, for the audit objectives, outcomes, or value.

- **Audit tests:** These are methods of applying, performing, or executing the audit checks, validations, or verifications, and the audit experiments, trials, or simulations, and the audit analyses, evaluations, or assessments, and the audit evidences, proofs, or supports, that are used, applied, or followed, for the audit process, and that are rigorous, robust, or reliable, for the audit objectives, outcomes, or value.

- **Audit validations:** These are methods of confirming, verifying, or validating the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit findings, results, or impacts, that are correct, accurate, or valid, for the audit process, and that are consistent, compatible, or adaptable, with the service data, information, or knowledge, and the service indicators, metrics, or measures, and the service findings, results, or impacts.

- **Audit verifications:** These are methods of checking, testing, or verifying the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit findings, results, or impacts, that are true, factual, or verified, for the audit process, and that are objective, factual, or verifiable, by the audit evidences, proofs, or supports.

- **Audit evaluations:** These are methods of evaluating, assessing, or appraising the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit findings, results, or impacts, that are evaluated, assessed, or appraised, by the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, and the audit feedback, review, or improvement, and the audit reporting, communication, or consultation, and that are aligned, balanced, or integrated, with the service data, information, or knowledge, and the service indicators, metrics, or measures, and the service findings, results, or impacts, and the service criteria, standards, or benchmarks, and the

service requirements, specifications, or expectations, and the service rules, regulations, or policies, and the service feedback, review, or improvement, and the service reporting, communication, or consultation.

- **Audit assessments:** These are methods of measuring, testing, or assessing the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit findings, results, or impacts, that are measured, tested, or assessed, by the audit tools, techniques, or methods, and the audit evidences, proofs, or supports, and the audit feedback, review, or improvement, and the audit reporting, communication, or consultation, and that are compared, contrasted, or benchmarked, with the service data, information, or knowledge, and the service indicators, metrics, or measures, and the service findings, results, or impacts, and the service tools, techniques, or methods, and the service evidences, proofs, or supports, and the service feedback, review, or improvement, and the service reporting, communication, or consultation.

- **Audit appraisals**: These are methods of rating, scoring, or appraising the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit findings, results, or impacts, that are rated, scored, or appraised, by the audit scales, grades, or levels, and the audit feedback, review, or improvement, and the audit reporting, communication, or consultation, and that are consistent, compatible, or adaptable, with the service data, information, or knowledge, and the service indicators, metrics, or measures, and the service findings, results, or impacts, and the service scales, grades, or levels, and the service feedback, review, or improvement, and the service reporting, communication, or consultation.

- **Audit findings:** These are statements that describe, summarize, or report the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and the audit gaps, opportunities, or potentials, and the audit risks, issues, or challenges, and the audit actions, corrections, or improvements, that are identified, documented, or reported, by the audit process, and that are based, derived, or inferred, from the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit evidences, proofs, or supports.

8.3 Management review

This is a method of reviewing, evaluating, or assessing the audit process, and the audit findings, results, or impacts, and the audit value, benefits, or improvements, and the audit gaps, opportunities, or potentials, and the audit risks, issues, or challenges, and the audit actions, corrections, or improvements, by the management team, leaders, or executives, and the audit team, staff, or personnel, and the audit customers, users, or stakeholders, that are involved, affected, or impacted, by the audit process, and that are accountable, responsible, or liable, for the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.

The purpose of the management review is to:

- Ensure that the audit process is effective, efficient, or economical, and that it meets, satisfies, or exceeds, the audit objectives, outcomes, or value, and the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies.
- Identify, document, or report the audit strengths, weaknesses, or areas, and the audit best practices, lessons learned, or experiences, and the audit feedback, comments, or suggestions, and the audit recommendations, suggestions, or proposals, and the audit actions, corrections, or improvements, that are needed, required, or desired, to improve, enhance, or optimize, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.
- Communicate, share, or disseminate the audit findings, results, or impacts, and the audit value, benefits, or improvements, and the audit gaps, opportunities, or potentials, and the audit risks, issues, or challenges, and the audit actions, corrections, or improvements, to the management team, leaders, or executives, and the audit team, staff, or personnel, and the audit customers, users, or stakeholders, and to other relevant, interested, or concerned, parties, groups, or organizations, that are involved, affected, or impacted, by the audit process, and that are accountable, responsible, or liable, for the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.
- The management review should be conducted, performed, or carried out, at regular, periodic, or scheduled, intervals, times, or dates, and at critical, important, or significant, milestones, stages, or phases, of the audit process,

and at the end, completion, or closure, of the audit process, and whenever there are changes, modifications, or revisions, to the audit process, or to the audit objectives, outcomes, or value, or to the audit criteria, standards, or benchmarks, or to the audit requirements, specifications, or expectations, or to the audit rules, regulations, or policies, that affect, influence>, or impact, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.

The management review should follow, apply, or use, a structured, standardized, or formalized, format, template, or agenda, that covers, includes, or addresses, the following topics, items, or elements:

- The audit objectives, outcomes, or value, and the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, that are used, applied, or followed, for the audit process, and that are consistent, compatible, or adaptable, with the service objectives, outcomes, or value, and the service criteria, standards, or benchmarks, and the service requirements, specifications, or expectations, and the service rules, regulations, or policies.

- The audit methods, procedures, or steps, and the audit techniques, tools, or methods, and the audit inputs, outputs, or outcomes, and the audit roles, responsibilities, or accountabilities, and the audit documents, records, or evidences, and the audit reporting, communication, or consultation, that are used, applied, or followed, for the audit process, and that are appropriate, suitable, or effective, for the audit objectives, outcomes, or value.

- The audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit evidences, proofs, or supports, that are used, applied, or followed, for the audit process, and that are relevant, reliable, or valid, for the audit objectives, outcomes, or value.

- The audit findings, results, or impacts, and the audit value, benefits, or improvements, and the audit gaps, opportunities, or potentials, and the audit risks, issues, or challenges, and the audit actions, corrections, or improvements, that are identified, documented, or reported, by the audit process, and that are based, derived, or inferred, from the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit evidences, proofs, or supports.

- The audit strengths, weaknesses, or areas, and the audit best practices, lessons learned, or experiences, and the audit feedback, comments, or suggestions, and the audit recommendations, suggestions, or proposals, and

the audit actions, corrections, or improvements, that are needed, required, or desired, to improve, enhance, or optimize, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.

- The audit plan, schedule, or timeline, and the audit budget, resources, or costs, and the audit scope, coverage, or extent, and the audit quality, performance, or excellence, and the audit risks, issues, or challenges, and the audit actions, corrections, or improvements, that are used, applied, or followed, for the audit process, and that are realistic, achievable, or attainable, for the audit objectives, outcomes, or value.

8.4 Service reporting

This is a method of producing, creating, or generating the audit reports, documents, or records, and the audit summaries, overviews, or highlights, and the audit findings, results, or impacts, and the audit value, benefits, or improvements, and the audit gaps, opportunities, or potentials, and the audit risks, issues, or challenges, and the audit actions, corrections, or improvements, that are used, applied, or followed, for the audit process, and that are communicated, shared, or disseminated, to the management team, leaders, or executives, and the audit team, staff, or personnel, and the audit customers, users, or stakeholders, and to other relevant, interested, or concerned, parties, groups, or organizations, that are involved, affected, or impacted, by the audit process, and that are accountable, responsible, or liable, for the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.

The purpose of the service reporting is to:

- Inform, update, or notify the management team, leaders, or executives, and the audit team, staff, or personnel, and the audit customers, users, or stakeholders, and to other relevant, interested, or concerned, parties, groups, or organizations, about the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and the audit gaps, opportunities, or potentials, and the audit risks, issues, or challenges, and the audit actions, corrections, or improvements, that are identified, documented, or reported, by the audit process, and that are based, derived, or inferred, from the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit evidences, proofs, or supports.

- Provide, present, or deliver the audit evidences, proofs, or supports, and the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit findings, results, or impacts, and the audit value, benefits, or improvements, and the audit gaps, opportunities, or potentials, and the audit risks, issues, or challenges, and the audit actions, corrections, or improvements, that are used, applied, or followed, for the audit process, and that are relevant, reliable, or valid, for the audit objectives, outcomes, or value, and the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies.

- Explain, justify, or rationalize the audit methods, procedures, or steps, and the audit techniques, tools, or methods, and the audit inputs, outputs, or outcomes, and the audit roles, responsibilities, or accountabilities, and the audit documents, records, or evidences, and the audit reporting, communication, or consultation, that are used, applied, or followed, for the audit process, and that are appropriate, suitable, or effective, for the audit objectives, outcomes, or value, and the> audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies.

- Recommend, suggest, or propose the audit actions, corrections, or improvements, and the audit feedback, review, or improvement, and the audit reporting, communication, or consultation, that are needed, required, or desired, to improve, enhance, or optimize, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and to address, resolve, or mitigate, the audit gaps, opportunities, or potentials, and the audit risks, issues, or challenges, that are identified, documented, or reported, by the audit process, and that are based, derived, or inferred, from the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit evidences, proofs, or supports.

- The service reporting should be produced, created, or generated, at regular, periodic, or scheduled, intervals, times, or dates, and at critical, important, or significant, milestones, stages, or phases, of the audit process, and at the end, completion, or closure, of the audit process, and whenever there are changes, modifications, or revisions, to the audit process, or to the audit objectives, outcomes, or value, or to the audit criteria, standards, or benchmarks, or to the audit requirements, specifications, or expectations, or to the audit rules, regulations, or policies, that affect, influence, or impact,

the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.

The service reporting should follow, apply, or use, a structured, standardized, or formalized, format, template, or structure, that covers, includes, or addresses, the following topics, items, or elements:

- The audit title, name, or identifier, and the audit date, time, or period, and the audit scope, coverage, or extent, and the audit objectives, outcomes, or value, and the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, that are used, applied, or followed, for the audit process, and that are consistent, compatible, or adaptable, with the service title, name, or identifier, and the service date, time, or period, and the service scope, coverage, or extent, and the service objectives, outcomes, or value, and the service criteria, standards, or benchmarks, and the service requirements, specifications, or expectations, and the service rules, regulations, or policies.

- The audit summary, overview, or highlight, and the audit findings, results, or impacts, and the audit value, benefits, or improvements, and the audit gaps, opportunities, or potentials, and the audit risks, issues, or challenges, and the audit actions, corrections, or improvements, that are identified, documented, or reported, by the audit process, and that are based, derived, or inferred, from the audit data, information, or knowledge, and the audit indicators, metrics, or measures, and the audit evidences, proofs, or supports.

- The audit methods, procedures, or steps, and the audit techniques, tools, or methods, and the audit inputs, outputs, or outcomes, and the audit roles, responsibilities, or accountabilities, and the audit documents, records, or evidences, and the audit reporting, communication, or consultation, that are used, applied, or followed, for the audit process, and that are appropriate, suitable, or effective, for the audit objectives, outcomes, or value, and the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulation.

9. Relationship processes

These are the processes that establish, maintain, or improve the relationship between the audit service provider and the audit customers, users, or stakeholders, and other relevant, interested, or concerned, parties, groups, or organizations, that are involved, affected, or impacted, by the audit process, and that are accountable, responsible, or liable, for the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.

The purpose of the relationship processes is to:

- Ensure, confirm, or verify, that the audit service provider and the audit customers, users, or stakeholders, and other relevant, interested, or concerned, parties, groups, or organizations, have a clear, mutual, or shared, understanding, agreement, or commitment, on the audit objectives, outcomes, or value, and the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, that are used, applied, or followed, for the audit process, and that are consistent, compatible, or adaptable, with the service objectives, outcomes, or value, and the service criteria, standards, or benchmarks, and the service requirements, specifications, or expectations, and the service rules, regulations, or policies.

- Establish, build, or develop, a trustful, respectful, or collaborative, relationship, interaction, or communication, between the audit service provider and the audit customers, users, or stakeholders, and other relevant, interested, or concerned, parties, groups, or organizations, that facilitates, enables, or supports, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and that addresses, resolves, or mitigates, any conflicts, disputes, or disagreements, that may arise, occur, or happen, during or after the audit process.

- Identify, document, or report, the feedback, comments, or suggestions, and the expectations, needs, or wants, and the satisfaction, dissatisfaction, or complaints, of the audit customers, users, or stakeholders, and other relevant, interested, or concerned, parties, groups, or organizations, regarding the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and to use, apply, or follow, this information, data, or knowledge, to improve, enhance, or optimize, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.

9.1 Nonconformity and corrective action

This is a method of identifying, documenting, or reporting, the deviations, discrepancies, or nonconformities, from the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, that are used, applied, or followed, for the audit process, and that are consistent, compatible, or adaptable, with the service criteria, standards, or benchmarks, and the> service requirements, specifications, or expectations, and the service rules, regulations, or policies, and of taking, implementing, or performing, the appropriate, suitable, or effective, actions, corrections, or improvements, to eliminate, remove, or prevent, the causes, sources, or origins, of the deviations, discrepancies, or nonconformities, and to prevent, avoid, or reduce, their recurrence, repetition, or reoccurrence, and to restore, recover, or regain, the conformity, compliance, or alignment, with the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies.

The purpose of the nonconformity and corrective action is to:

- Ensure, confirm, or verify, that the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, are in conformity, compliance, or alignment, with the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, that are used, applied, or followed, for the audit process, and that are consistent, compatible, or adaptable, with the service criteria, standards, or benchmarks, and the service requirements, specifications, or expectations, and the service rules, regulations, or policies.
- Identify, document, or report, the root causes, factors, or reasons, of the deviations, discrepancies, or nonconformities, from the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, and to analyze, evaluate, or assess, their impact, effect, or consequence, on the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and on the service process, and the service outcomes, results, or impacts, and the service value, benefits, or improvements.
- Determine, decide, or select, the best, optimal, or most suitable, actions, corrections, or improvements, to address, resolve, or mitigate, the deviations, discrepancies, or nonconformities, from the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or

expectations, and the audit rules, regulations, or policies, and to prevent, avoid, or reduce, their recurrence, repetition, or reoccurrence, and to restore, recover, or regain, the conformity, compliance, or alignment, with the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, and to improve, enhance, or optimize, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and the service process, and the service outcomes, results, or impacts, and the service value, benefits, or improvements.

- Implement, perform, or execute, the actions, corrections, or improvements, that are determined, decided, or selected, to address, resolve, or mitigate, the deviations, discrepancies, or nonconformities, from the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, and to monitor, track, or measure, their effectiveness, efficiency, or quality, and to verify, validate, or confirm, their results, outcomes, or impacts, and their value, benefits, or improvements, for the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and for the service process, and the service outcomes, results, or impacts, and the service value, benefits, or improvements.

- Communicate, share, or disseminate, the information, data, or knowledge, and the evidences, proofs, or supports, regarding the deviations, discrepancies, or nonconformities, from the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, and the actions, corrections, or improvements, that are taken, implemented, or performed, to address, resolve, or mitigate, them, and their results, outcomes, or impacts, and their value, benefits, or improvements, to the management team, leaders, or executives, and the audit team, staff, or personnel, and the audit customers, users, or stakeholders, and to other relevant, interested, or concerned, parties, groups, or organizations, that are involved, affected, or impacted, by the audit process, and that are accountable, responsible, or liable, for the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.

9.2 Continual improvement

This is a method of evaluating, assessing, or measuring, the performance, quality, or effectiveness, of the audit process, and the audit outcomes, results, or impacts,

and the audit value, benefits, or improvements, and of identifying, documenting, or reporting, the opportunities, potentials, or possibilities, for improving, enhancing, or optimizing, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and of planning, designing, or developing, and implementing, performing, or executing, and monitoring, tracking, or measuring, and reviewing, verifying, or validating, the actions, corrections, or improvements, that are needed, required, or desired, to realize, achieve, or accomplish, the improvement, enhancement, or optimization, of the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.

The purpose of the continual improvement is to:

- Ensure, confirm, or verify, that the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, are aligned, consistent, or compatible, with the current and future needs, wants, or expectations, of the audit customers, users, or stakeholders, and other relevant, interested, or concerned, parties, groups, or organizations, that are involved, affected, or impacted, by the audit process, and that are accountable, responsible, or liable, for the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.
- Identify, document, or report, the strengths, weaknesses, or areas, and the opportunities, threats, or risks, of the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and to analyze, evaluate, or assess, their impact, effect, or consequence, on the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and on the service process, and the service outcomes, results, or impacts, and the service value, benefits, or improvements.
- Determine, decide, or select, the best, optimal, or most suitable, actions, corrections, or improvements, to address, resolve, or mitigate, the weaknesses, gaps, or deficiencies, and the threats, issues, or challenges, of the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and to exploit, leverage, or utilize, the strengths, capabilities, or competencies, and the opportunities, potentials, or possibilities, of the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and to improve, enhance, or optimize, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and the service

process, and the service outcomes, results, or impacts, and the service value, benefits, or improvements.

- Implement, perform, or execute, the actions, corrections, or improvements, that are determined, decided, or selected, to address, resolve, or mitigate, the weaknesses, gaps, or deficiencies, and the threats, issues, or challenges, and to exploit, leverage, or utilize, the strengths, capabilities, or competencies, and the opportunities, potentials, or possibilities, of the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and to monitor, track, or measure, their effectiveness, efficiency, or quality, and to verify, validate, or confirm, their results, outcomes, or impacts, and their value, benefits, or improvements, for the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and for the service process, and the service outcomes, results, or impacts, and the service value, benefits, or improvements.

- Communicate, share, or disseminate, the information, data, or knowledge, and the evidences, proofs, or supports, regarding the performance, quality, or effectiveness, of the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and the opportunities, potentials, or possibilities, for improving, enhancing, or optimizing, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and the actions, corrections, or improvements, that are taken, implemented, or performed, to realize, achieve, or accomplish, the improvement, enhancement, or optimization, of the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and their results, outcomes, or impacts, and their value, benefits, or improvements, to the management team, leaders, or executives, and the audit team, staff, or personnel, and the audit customers, users, or stakeholders, and to other relevant, interested, or concerned, parties, groups, or organizations, that are involved, affected, or impacted, by the audit process, and that are accountable, responsible, or liable, for the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.

Some examples of continual improvement methods, tools, or techniques, that can be used, applied, or followed, for the audit process, are:

- **The Plan-Do-Check-Act (PDCA)** cycle, which is a four-step method for carrying out change, by planning, implementing, checking, and acting on the results of the change.
- **The root cause analysis (RCA),** which is a systematic process for identifying, analyzing, and resolving the underlying causes of problems, issues, or failures, by using various tools, such as the fishbone diagram, the 5 whys, or the Pareto chart.
- **The SWOT analysis**, which is a strategic planning tool for identifying, evaluating, and prioritizing the strengths, weaknesses, opportunities, and threats, of a situation, project, or process, by using a matrix>
- **The benchmarking,** which is a process of comparing, measuring, or evaluating, the performance, quality, or effectiveness, of a process, product, or service, against the best practices, standards, or criteria, of the industry, sector, or domain, or of the competitors, peers, or leaders, in order to identify, learn, or adopt, the best practices, methods, or techniques, for improving, enhancing, or optimizing, the performance, quality, or effectiveness, of the process, product, or service.
- **The balanced scorecard (BSC),** which is a strategic management tool for aligning, monitoring, and managing, the objectives, strategies, and actions, of an organization, team, or individual, across four perspectives: financial, customer, internal process, and learning and growth, by using a set of indicators, metrics, or measures, and targets, goals, or benchmarks, for each perspective.

Appendices

Glossary of Terms

This section provides the definitions, explanations, or descriptions, of the key terms, concepts, or acronyms, that are used, applied, or followed, in the audit process, and that are related, relevant, or important, to the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, and to the service criteria, standards, or benchmarks, and the service requirements, specifications, or expectations, and the service rules, regulations, or policies.

Some examples of the terms, concepts, or acronyms, that are included, are:

- **Audit:** A systematic, independent, and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled.
- **Audit criteria:** The set of policies, procedures, standards, regulations, or requirements, against which the audit evidence is compared.
- **Audit evidence:** The records, documents, statements, facts, or other information, that are relevant to the audit criteria and audit objectives, and that are verifiable.
- **Audit finding:** The result of the evaluation of the collected audit evidence against audit criteria.
- **Audit objective:** The purpose or aim of the audit, which may include assessing conformity, evaluating performance, identifying improvement opportunities, or providing feedback.
- **Audit report:** A formal record or document that communicates the audit objectives, scope, criteria, findings, conclusions, recommendations, and any other relevant information, to the audit customers, users, or stakeholders, and to other interested or concerned parties.
- **Audit team:** The group of auditors who conduct the audit, under the direction of an audit leader or manager, and who are responsible for performing the audit activities and producing the audit results.
- **Nonconformity:** The non-fulfillment of a requirement, specification, or expectation, that is related to the audit criteria or the audit objectives.
- **Corrective action:** The action taken to eliminate the cause of a detected nonconformity or other undesirable situation, and to prevent its recurrence or reoccurrence.

- **Continual improvement:** The ongoing process of enhancing the performance, quality, or effectiveness, of a process, product, or service, by identifying, analyzing, and resolving the problems, issues, or failures, and by exploiting, leveraging, or utilizing, the strengths, capabilities, or competencies, and the opportunities, potentials, or possibilities, that are related to the process, product, or service.

Additional Resources

This section provides the links, references, or sources, of the additional resources, materials, or information, that can be used, accessed, or consulted, by the audit team, staff, or personnel, and the audit customers, users, or stakeholders, and by other relevant, interested, or concerned, parties, groups, or organizations, that are involved, affected, or impacted, by the audit process, and that are accountable, responsible, or liable, for the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and that can help, support, or assist, them, in understanding, learning, or applying, the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, and the service criteria, standards, or benchmarks, and the service requirements, specifications, or expectations, and the service rules, regulations, or policies, and in performing, executing, or implementing, the audit activities, tasks, or steps, and the service activities, tasks, or steps, and in achieving, accomplishing, or realizing, the audit objectives, goals, or targets, and the service objectives, goals, or targets, and in improving, enhancing, or optimizing, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and the service process, and the service outcomes, results, or impacts, and the service value, benefits, or improvements.

Some examples of the additional resources, materials, or information, that are provided, are:

- The websites, portals, or platforms, of the relevant, recognized, or authoritative, organizations, associations, or institutions, that are involved, engaged, or specialized, in the audit domain, field, or area, and that provide, offer, or share, the best practices, standards, or guidelines, for the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and for the service process, and the service outcomes, results, or impacts, and the service value, benefits, or improvements, such as:
- The Institute of Internal Auditors (IIA)

- The International Organization for Standardization (ISO)
- The Information Systems Audit and Control Association (ISACA)

The books, publications, or articles, that are written, published, or endorsed, by the experts, professionals, or practitioners, who have the knowledge, skills, or experience, in the audit domain, field, or area, and that cover, discuss, or explain, the concepts, principles, or methods, for the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and for the service process, and the service outcomes, results, or impacts, and the service value, benefits, or improvements, such as:

Sawyer's Internal Auditing: The Practice of Modern Internal Auditing, by Lawrence B. Sawyer, Mortimer A. Dittenhofer, and James H. Scheiner

ISO 19011: Guidelines for auditing management systems, by ISO

COBIT 2019: Framework for the Governance and Management of Enterprise Information and Technology, by ISACA

The courses, trainings, or workshops, that are designed, developed, or delivered, by the educators, trainers, or instructors, who have the qualifications, credentials, or certifications, in the audit domain, field, or area, and that teach, instruct, or guide, the learners, students, or participants, on how to apply, follow, or use, the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, and the service criteria, standards, or benchmarks, and the service requirements, specifications, or expectations, and the service rules, regulations, or policies, and on how to perform, execute, or implement, the audit activities, tasks, or steps, and the service activities, tasks, or steps, and on how to achieve, accomplish, or realize, the audit objectives, goals, or targets, and the service objectives, goals, or targets, and on how to improve, enhance, or optimize, the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and the service process, and the service outcomes, results, or impacts, and the service value, benefits, or improvements, such as:

Certified Internal Auditor (CIA) Program, by IIA

ISO 19011 Lead Auditor Training Course, by ISO

COBIT 2019 Foundation Course, by ISACA

Sample Templates and Tools

This section provides the sample templates and tools that can be used, applied, or followed, by the audit team, staff, or personnel, and the audit customers, users, or stakeholders, and by other relevant, interested, or concerned, parties, groups, or organizations, that are involved, affected, or impacted, by the audit process, and that are accountable, responsible, or liable, for the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and that can help, support, or assist, them, in planning, designing, or developing, and implementing, performing, or executing, and monitoring, tracking, or measuring, and reviewing, verifying, or validating, and reporting, communicating, or disseminating, the audit activities, tasks, or steps, and the audit results, outcomes, or impacts, and the audit value, benefits, or improvements.

Some examples of the sample templates and tools that are provided, are:

- The audit plan template, which is a document that outlines, describes, or specifies, the scope, objectives, criteria, methods, resources, schedule, roles, and responsibilities, of the audit, and that guides, directs, or controls, the execution, performance, or implementation, of the audit activities, tasks, or steps, and the production, delivery, or presentation, of the audit results, outcomes, or impacts, and the audit value, benefits, or improvements. The audit plan template can be customized, modified, or adapted, according to the needs, preferences, or expectations, of the audit team, and the audit customers, users, or stakeholders, and the audit context, situation, or environment. The audit plan template can include the following sections or elements:
- Audit title, date, and reference number
- Audit scope, objectives, and criteria
- Audit methods, techniques, and tools
- Audit resources, budget, and timeline
- Audit roles, responsibilities, and authorities
- Audit risks, assumptions, and limitations
- Audit deliverables, outputs, and outcomes
- Audit quality assurance and control measures
- Audit communication and reporting plan
- Audit approval and sign-off

The audit checklist tool, which is a list of questions, items, or actions, that are related, relevant, or important, to the audit criteria, standards, or benchmarks, and

the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, and the audit objectives, goals, or targets, and that are used, applied, or followed, to collect, gather, or obtain, the audit evidence, and to evaluate, assess, or measure, the audit performance, quality, or effectiveness, and to identify, document, or report, the audit findings, conclusions, or recommendations. The audit checklist tool can be developed, created, or generated, based on the audit plan, and the audit scope, objectives, and criteria, and the audit methods, techniques, and tools, and the audit resources, budget, and timeline, and the audit roles, responsibilities, and authorities, and the audit risks, assumptions, and limitations, and the audit deliverables, outputs, and outcomes, and the audit quality assurance and control measures, and the audit communication and reporting plan, and the audit approval and sign-off.

The audit checklist tool can include the following sections or elements:

- Audit title, date, and reference number
- Audit scope, objectives, and criteria
- Audit methods, techniques, and tools
- Audit questions, items, or actions
- Audit evidence, sources, or locations
- Audit responses, answers, or results
- Audit findings, conclusions, or recommendations
- Audit comments, notes, or observations
- Audit verification, validation, or confirmation
- Audit completion and sign-off

The audit report template, which is a document that communicates, shares, or disseminates, the audit objectives, scope, criteria, methods, results, outcomes, or impacts, and the audit value, benefits, or improvements, and the audit findings, conclusions, or recommendations, and any other relevant, important, or useful, information, data, or knowledge, and the evidences, proofs, or supports, regarding the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, to the audit customers, users, or stakeholders, and to other interested or concerned parties. The audit report template can be prepared, drafted, or written, based on the audit plan, and the audit scope, objectives, and criteria, and the audit methods, techniques, and tools, and the audit resources, budget, and timeline, and the audit roles, responsibilities, and authorities, and the audit risks, assumptions, and limitations, and the audit deliverables, outputs, and outcomes, and the audit quality assurance and control measures, and the audit

communication and reporting plan, and the audit approval and sign-off, and the audit checklist tool, and the audit evidence, and the audit findings, conclusions, or recommendations.

The audit report template can include the following sections or elements:

- Audit title, date, and reference number
- Audit executive summary
- Audit introduction and background
- Audit scope, objectives, and criteria
- Audit methods, techniques, and tools
- Audit results, outcomes, or impacts
- Audit value, benefits, or improvements
- Audit findings, conclusions, or recommendations
- Audit appendices and attachments
- Audit acknowledgements and references

References and Further Reading

This section provides the links, references, or sources, of the references and further reading, materials, or information, that are used, cited, or referenced, in the audit process, and that are related, relevant, or important, to the audit criteria, standards, or benchmarks, and the audit requirements, specifications, or expectations, and the audit rules, regulations, or policies, and to the service criteria, standards, or benchmarks, and the service requirements, specifications, or expectations, and the service rules, regulations, or policies, and that can provide, offer, or share, more details, insights, or perspectives, on the audit process, and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements, and on the service process, and the service outcomes, results, or impacts, and the service value, benefits, or improvements.

Some examples of the references and further reading, materials, or information, that are provided, are:

ISO 9000: Quality management systems — Fundamentals and vocabulary, by ISO

- This standard defines the basic terms and concepts related to quality management systems, such as customer satisfaction, process approach, continual improvement, risk-based thinking, and evidence-based decision making.

- It can help auditors understand the principles and practices of quality management and how they apply to the audit process and the service process.
- It can also help auditors communicate effectively with the auditees and other stakeholders who use the same terminology and framework for quality management.

ISO 9001: Quality management systems — Requirements, by ISO

- This standard specifies the requirements for a quality management system that an organization can use to demonstrate its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, and to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.
- It can help auditors assess the conformity and effectiveness of the quality management system of the auditee and identify the areas for improvement and enhancement of customer satisfaction.
- It can also help auditors evaluate the performance and value of the service process and the service outcomes, results, or impacts, and the service value, benefits, or improvements, against the quality management system requirements and the customer and applicable statutory and regulatory requirements.

International Standards for the Professional Practice of Internal Auditing, by IIA

- These standards are the mandatory components of the International Professional Practices Framework (IPPF), which is the authoritative guidance for the internal audit profession. The standards provide principles-based guidance for the conduct of internal audits, such as the definition of internal auditing, the code of ethics, the attribute standards, and the performance standards.
- They can help auditors follow the best practices and ethical principles of the internal audit profession and ensure the quality and professionalism of the audit process and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.
- They can also help auditors demonstrate the credibility and reliability of the> audit process and the audit outcomes, results, or impacts, and the audit value,

benefits, or improvements, to the audit customers, users, or stakeholders, and to other interested or concerned parties.

COBIT 2019: Design Guide, by ISACA

- This guide is part of the COBIT 2019 framework, which is a comprehensive and holistic set of guidance for the governance and management of enterprise information and technology (I&T). The guide provides a structured approach for designing and implementing a tailored and fit-for-purpose governance system for enterprise I&T, based on the COBIT principles, governance components, and performance management system.
- It can help auditors understand the different aspects and dimensions of the governance and management of enterprise I&T and how they relate to the audit process and the service process.
- It can also help auditors evaluate the alignment and integration of the audit process and the service process with the governance and management of enterprise I&T and the achievement of the enterprise goals and objectives.

The Essential Guide to Internal Auditing, by K. H. Spencer Pickett

- This book is a practical and comprehensive introduction to the theory and practice of internal auditing. It covers the key topics and issues of internal auditing, such as the internal audit role and function, the internal audit process, the internal audit standards and techniques, the internal audit reporting and communication, the internal audit quality assurance and improvement, and the internal audit challenges and opportunities.
- It can help auditors learn the essential skills and knowledge of internal auditing and apply them to the audit process and the service process.
- It can also help auditors develop their professional competence and confidence in conducting internal audits and delivering audit value, benefits, or improvements, to the audit customers, users, or stakeholders, and to the service customers, users, or stakeholders.

Auditing For Dummies, by Maire Loughran

- This book is a friendly and easy-to-understand guide to the basics of auditing. It explains the concepts and terms of auditing, such as audit evidence, audit risk, audit opinion, and audit report, and the steps and procedures of auditing, such as audit planning, audit execution, audit documentation, and audit completion. It also provides tips and advice for auditors on how to deal with common audit situations and challenges, such as audit sampling, audit testing, audit fraud, and audit ethics.

- It can help auditors grasp the fundamentals of auditing and apply them to the audit process and the service process.
- It can also help auditors avoid common audit pitfalls and errors and ensure the accuracy and validity of the audit process and the audit outcomes, results, or impacts, and the audit value, benefits, or improvements.

MCQ's:

Question 1

Scenario: You are auditing an organization's Service Management System (SMS). During the audit, you find that the organization has not clearly defined the scope of its SMS, leading to confusion about which services and processes are covered by the SMS.

Question: Which clause of the ISO/IEC 20000 standard specifies the requirements for defining the scope and applicability of the SMS?

- A) Clause 1: Scope
- B) Clause 4: Context of the Organization
- C) Clause 6: Planning
- D) Clause 8: Operation

Answer: B) Clause 4: Context of the Organization

Explanation:

- **Correct Answer:** Clause 4 of the ISO/IEC 20000 standard specifies the requirements for understanding the internal and external context of the organization. This includes the needs and expectations of interested parties, and most importantly, the scope and boundaries of the SMS. This ensures that the organization has a clear understanding of what the SMS covers, which services are included, and which parts of the organization are involved.
- **Incorrect Answers:**
    - **Clause 1:** Defines the scope and applicability of the ISO/IEC 20000 standard itself, not the SMS of an organization.
    - **Clause 6:** Pertains to the planning aspects of the SMS, including setting objectives and determining the actions needed to achieve them.
    - **Clause 8:** Covers the operational aspects of the SMS, including the management and delivery of services.

Question 2

Scenario: An organization wants to ensure that its Service Management System (SMS) includes strong practices for information security to protect sensitive customer data and comply with regulatory requirements.

Question: Which standard should the organization integrate with its SMS to ensure information security management?

- A) ITIL
- B) COBIT
- C) ISO/IEC 27001
- D) ISO 9001

Answer: C) ISO/IEC 27001

Explanation:

- **Correct Answer:** ISO/IEC 27001 is the international standard for information security management systems (ISMS). It specifies the requirements for establishing, implementing, maintaining, and continually improving an ISMS. Integrating ISO/IEC 27001 with the SMS ensures that information security is systematically managed and aligned with the IT service management processes.
- **Incorrect Answers:**
    - **ITIL:** A set of best practices for IT service management (ITSM) that focuses on aligning IT services with the needs of the business. While it includes elements of security, it is not specific to information security management.
    - **COBIT:** A framework for the governance and management of enterprise IT. It covers various aspects of IT governance but is not specifically focused on information security.
    - **ISO 9001:** An international standard for quality management systems (QMS). It focuses on ensuring that organizations meet customer and regulatory requirements related to product and service quality, but it does not specifically address information security.

Question 3

Scenario: During an internal audit of an organization's SMS, you observe that the improvement activities are inconsistent and there are no systematic follow-ups on corrective actions.

Question: Which phase of the PDCA cycle is most likely not being effectively implemented?

- A) Plan
- B) Do
- C) Check
- D) Act

Answer: D) Act

Explanation:

- **Correct Answer:** The Act phase of the PDCA (Plan-Do-Check-Act) cycle involves taking corrective and preventive actions based on the analysis and feedback obtained during the Check phase. It ensures that improvements are made and standardized to prevent recurrence of issues.
- **Incorrect Answers:**
    - **Plan:** This phase involves setting objectives and planning the processes required to deliver results according to the organization's policies.
    - **Do:** This phase involves implementing the planned activities and collecting data on the performance of these activities.
    - **Check:** This phase involves monitoring and measuring processes and products against policies, objectives, and requirements, and reporting the results.

Question 4

Scenario: An organization is working to clearly define roles and responsibilities within its SMS to ensure accountability and efficient management of IT services.

Question: Under which clause of the ISO/IEC 20000 standard would this activity fall?

- A) Clause 5: Leadership
- B) Clause 7: Support
- C) Clause 9: Performance Evaluation
- D) Clause 10: Improvement

Answer: A) Clause 5: Leadership

Explanation:

- **Correct Answer:** Clause 5 of the ISO/IEC 20000 standard specifies the requirements for leadership and commitment. This includes defining roles, responsibilities, and authorities within the SMS to ensure effective governance and accountability.
- **Incorrect Answers:**
    - **Clause 7:** Deals with the resources, competence, awareness, communication, and documented information necessary to support the SMS.

- o **Clause 9:** Focuses on performance evaluation, including monitoring, measurement, analysis, and evaluation of the SMS.
- o **Clause 10:** Pertains to improvement actions, including continual improvement and addressing nonconformities.

Question 5

Scenario: An organization receives negative feedback from customers regarding its IT services and decides to improve its Service Management System (SMS) based on this feedback.

Question: Which phase of the PDCA cycle does this action represent?

- A) Plan
- B) Do
- C) Check
- D) Act

Answer: D) Act

Explanation:

- **Correct Answer:** The Act phase involves taking actions to improve the SMS based on the results of the Check phase. This includes implementing corrective and preventive measures to enhance service quality and customer satisfaction.
- **Incorrect Answers:**
    - o **Plan:** Involves defining objectives and planning the processes necessary to deliver results.
    - o **Do:** Involves executing the planned processes and collecting data on their performance.
    - o **Check:** Involves reviewing and analyzing data to determine whether the processes are achieving the desired results.

Question 6

Scenario: An organization is conducting a thorough review of its internal and external contexts to ensure that its SMS remains relevant and effective.

Question: Which clause of the ISO/IEC 20000 standard is this activity related to?

- A) Clause 2: Normative References
- B) Clause 3: Terms and Definitions
- C) Clause 4: Context of the Organization

- D) Clause 6: Planning

Answer: C) Clause 4: Context of the Organization

Explanation:

- **Correct Answer:** Clause 4 specifies the requirements for understanding the context of the organization. This includes analyzing both internal and external factors that can impact the SMS and ensuring that the SMS aligns with the organization's objectives and the needs of interested parties.
- **Incorrect Answers:**
  - **Clause 2:** Lists normative references that are indispensable for the application of the standard.
  - **Clause 3:** Defines key terms and concepts used in the standard.
  - **Clause 6:** Deals with planning the SMS, including setting objectives and determining actions to achieve them.

Question 7

Scenario: During an audit, you find that the documentation supporting the organization's SMS is outdated and not regularly reviewed.

Question: Under which clause should the organization address this issue to ensure proper support for its SMS?

- A) Clause 5: Leadership
- B) Clause 7: Support
- C) Clause 8: Operation
- D) Clause 10: Improvement

Answer: B) Clause 7: Support

Explanation:

- **Correct Answer:** Clause 7 specifies the requirements for the necessary resources, including competence, awareness, communication, and documented information to support the SMS. Ensuring that documentation is up-to-date is critical for the effective support of the SMS.
- **Incorrect Answers:**
  - **Clause 5:** Focuses on leadership and commitment.
  - **Clause 8:** Deals with the operational aspects of the SMS.
  - **Clause 10:** Covers the processes for continual improvement of the SMS.

Question 8

Scenario: The organization is conducting internal audits to evaluate the performance and effectiveness of its SMS.

Question: Which clause of the ISO/IEC 20000 standard addresses this activity?

- A) Clause 5: Leadership
- B) Clause 7: Support
- C) Clause 9: Performance Evaluation
- D) Clause 10: Improvement

Answer: C) Clause 9: Performance Evaluation

Explanation:

- **Correct Answer:** Clause 9 includes requirements for monitoring, measurement, analysis, evaluation, and internal audits. It ensures that the SMS is regularly evaluated for performance and effectiveness, leading to informed decisions for improvement.
- **Incorrect Answers:**
    - **Clause 5:** Focuses on leadership and commitment.
    - **Clause 7:** Involves resources and support.
    - **Clause 10:** Pertains to the improvement actions based on performance evaluations.

Question 9

Scenario: An organization aims to integrate its Service Management System (SMS) with its existing quality and environmental management systems to create a unified management system.

Question: Which clause of the ISO/IEC 20000 standard is relevant for this integration activity?

- A) Clause 4: Context of the Organization
- B) Clause 6: Planning
- C) Clause 8: Operation
- D) Clause 10: Improvement

Answer: A) Clause 4: Context of the Organization

Explanation:

- **Correct Answer:** Clause 4 involves understanding the context of the organization, including how the SMS interacts with other management systems. It ensures that the SMS aligns with the overall strategic direction and

integrates well with other management systems like quality and environmental management.

- **Incorrect Answers:**
    - o **Clause 6:** Focuses on planning activities within the SMS.
    - o **Clause 8:** Covers operational processes of the SMS.
    - o **Clause 10:** Addresses improvement processes.

Question 10

Scenario: An organization is defining specific actions to address identified risks and opportunities related to its SMS to enhance service delivery and compliance.

Question: Which clause of the ISO/IEC 20000 standard covers the planning of these actions?

- A) Clause 4: Context of the Organization
- B) Clause 6: Planning
- C) Clause 8: Operation
- D) Clause 9: Performance Evaluation

Answer: B) Clause 6: Planning

Explanation:

- **Correct Answer:** Clause 6 specifies the requirements for planning, including the determination of risks and opportunities and planning actions to address them. This ensures that the organization can achieve its service management objectives while managing potential risks effectively.
- **Incorrect Answers:**
    - o **Clause 4:** Deals with the context of the organization.
    - o **Clause 8:** Involves the operation of the SMS.
    - o **Clause 9:** Focuses on performance evaluation.

Question 11

Scenario: During an audit, you observe that the organization has not effectively communicated its Service Management Policy to all relevant stakeholders, leading to inconsistencies in service delivery.

Question: Which clause of the ISO/IEC 20000 standard addresses the need for effective communication of the service management policy?

- A) Clause 5: Leadership

- B) Clause 7: Support
- C) Clause 8: Operation
- D) Clause 9: Performance Evaluation

Answer: B) Clause 7: Support

Explanation:

- **Correct Answer:** Clause 7 specifies the requirements for support, including the necessity of communicating relevant information within the organization. This ensures that everyone is aware of and understands the service management policy, leading to consistent and aligned service delivery.
- **Incorrect Answers:**
  - **Clause 5:** Focuses on leadership and commitment, which involves defining roles and responsibilities but not specifically the communication of policies.
  - **Clause 8:** Covers the operational aspects of the SMS, including processes and service delivery, but not the communication of policies.
  - **Clause 9:** Involves performance evaluation, including monitoring and measurement, but does not focus on policy communication.

Question 12

Scenario: An organization needs to document and maintain information about its service management processes to ensure consistency and traceability across all service management activities.

Question: Which clause would guide the organization in documenting information and maintaining records for the SMS?

- A) Clause 5: Leadership
- B) Clause 6: Planning
- C) Clause 7: Support
- D) Clause 10: Improvement

Answer: C) Clause 7: Support

Explanation:

- **Correct Answer:** Clause 7 includes requirements for documented information necessary to support the SMS. This ensures that processes are

documented, records are maintained, and information is consistently available for effective service management.

- **Incorrect Answers:**
    - o **Clause 5:** Deals with leadership and commitment, focusing on roles and responsibilities.
    - o **Clause 6:** Focuses on planning activities, including risk management and setting objectives.
    - o **Clause 10:** Covers continual improvement, which involves identifying and implementing improvement opportunities but not specifically maintaining documentation.

Question 13

Scenario: An organization wants to establish a systematic approach to managing incidents and service requests to improve service delivery and customer satisfaction.

Question: Which clause of the ISO/IEC 20000 standard is most relevant for managing incidents and service requests?

- A) Clause 5: Leadership
- B) Clause 7: Support
- C) Clause 8: Operation
- D) Clause 9: Performance Evaluation

Answer: C) Clause 8: Operation

Explanation:

- **Correct Answer:** Clause 8 specifies the requirements for the operation of the SMS, including managing service delivery processes such as incident and service request management. This ensures systematic handling of incidents and requests to improve service delivery.
- **Incorrect Answers:**
    - o **Clause 5:** Focuses on leadership and commitment.
    - o **Clause 7:** Involves support resources, including competence and documented information.
    - o **Clause 9:** Deals with performance evaluation, including monitoring and measurement.

Question 14

Scenario: During an audit, you find that the organization does not have a process in place for reviewing the performance of its SMS, leading to potential gaps in service quality.

Question: Which clause addresses the need for performance review and evaluation of the SMS?

- A) Clause 5: Leadership
- B) Clause 7: Support
- C) Clause 9: Performance Evaluation
- D) Clause 10: Improvement

Answer: C) Clause 9: Performance Evaluation

Explanation:

- **Correct Answer:** Clause 9 specifies the requirements for performance evaluation, including monitoring, measurement, analysis, and evaluation of the SMS. This ensures that the SMS is regularly reviewed for effectiveness and efficiency, addressing potential gaps in service quality.
- **Incorrect Answers:**
    - o **Clause 5:** Deals with leadership and commitment, focusing on roles and responsibilities.
    - o **Clause 7:** Involves support resources, including competence and documented information.
    - o **Clause 10:** Covers improvement actions, which involve identifying and implementing improvements based on performance evaluations.

Question 15

Scenario: An organization aims to continually improve its SMS by identifying and implementing improvement opportunities based on performance data and customer feedback.

Question: Which clause of the ISO/IEC 20000 standard focuses on continual improvement?

- A) Clause 4: Context of the Organization
- B) Clause 6: Planning
- C) Clause 8: Operation
- D) Clause 10: Improvement

Answer: D) Clause 10: Improvement

Explanation:

- **Correct Answer:** Clause 10 specifies the requirements for continual improvement of the SMS, including the identification and implementation of improvement opportunities. This ensures that the organization continuously enhances its SMS based on performance data and customer feedback.
- **Incorrect Answers:**
    - o **Clause 4:** Deals with understanding the context of the organization.
    - o **Clause 6:** Focuses on planning activities, including risk management and setting objectives.
    - o **Clause 8:** Involves the operation of the SMS, including managing service delivery processes.

Question 16

Scenario: An organization is assessing the risks and opportunities associated with its SMS to ensure it meets business objectives and customer requirements while mitigating potential risks.

Question: Which clause of the ISO/IEC 20000 standard should the organization refer to for guidance on this activity?

- A) Clause 4: Context of the Organization
- B) Clause 5: Leadership
- C) Clause 6: Planning
- D) Clause 9: Performance Evaluation

Answer: C) Clause 6: Planning

Explanation:

- **Correct Answer:** Clause 6 specifies the requirements for planning the SMS, including the identification of risks and opportunities and the planning of actions to address them. This ensures that the organization proactively manages risks and seizes opportunities to meet business objectives and customer requirements.
- **Incorrect Answers:**
    - o **Clause 4:** Deals with understanding the context of the organization.
    - o **Clause 5:** Involves leadership and commitment, focusing on roles and responsibilities.

o **Clause 9:** Focuses on performance evaluation, including monitoring and measurement.

Question 17

Scenario: An organization is conducting a thorough review to understand the internal and external factors that could affect its SMS, aiming to align its strategy with the organizational environment.

Question: Which clause addresses the requirements for understanding these factors?

- A) Clause 4: Context of the Organization
- B) Clause 5: Leadership
- C) Clause 7: Support
- D) Clause 8: Operation

Answer: A) Clause 4: Context of the Organization

Explanation:

- **Correct Answer:** Clause 4 focuses on understanding the context of the organization, including internal and external factors that can affect the SMS. This ensures that the SMS aligns with the organization's strategic objectives and adapts to the organizational environment.
- **Incorrect Answers:**
    o **Clause 5:** Deals with leadership and commitment, focusing on roles and responsibilities.
    o **Clause 7:** Involves support resources, including competence and documented information.
    o **Clause 8:** Covers operational processes, including service delivery and management.

Question 18

Scenario: An organization has identified a need to enhance the competence of its staff to support its SMS effectively and ensure high-quality service delivery.

Question: Which clause of the ISO/IEC 20000 standard outlines the requirements for competence and support?

- A) Clause 4: Context of the Organization
- B) Clause 5: Leadership
- C) Clause 7: Support

- D) Clause 10: Improvement

Answer: C) Clause 7: Support

Explanation:

- **Correct Answer:** Clause 7 specifies the requirements for the necessary resources to support the SMS, including competence, awareness, communication, and documented information. This ensures that staff are adequately trained and competent to deliver high-quality services.
- **Incorrect Answers:**
  - o **Clause 4:** Deals with understanding the context of the organization.
  - o **Clause 5:** Involves leadership and commitment, focusing on roles and responsibilities.
  - o **Clause 10:** Focuses on improvement, including identifying and implementing opportunities for enhancing the SMS.

Question 19

Scenario: During an audit, you find that the organization has not established a service management policy, leading to a lack of direction and alignment in service management activities.

Question: Which clause requires the establishment of a service management policy?

- A) Clause 4: Context of the Organization
- B) Clause 5: Leadership
- C) Clause 7: Support
- D) Clause 8: Operation

Answer: B) Clause 5: Leadership

Explanation:

- **Correct Answer:** Clause 5 requires top management to establish a service management policy, ensuring leadership and commitment to the SMS. This policy provides direction and alignment for all service management activities.
- **Incorrect Answers:**
  - o **Clause 4:** Deals with understanding the context of the organization.
  - o **Clause 7:** Involves support resources, including competence and documented information.

o **Clause 8:** Covers operational processes, including service delivery and management.

Question 20

Scenario: An organization wants to ensure that its SMS is aligned with its strategic objectives and customer needs, adapting to changes in the business environment.

Question: Which clause addresses the alignment of the SMS with the organization's strategic objectives and customer needs?

- A) Clause 4: Context of the Organization
- B) Clause 6: Planning
- C) Clause 8: Operation
- D) Clause 10: Improvement

Answer: A) Clause 4: Context of the Organization

Explanation:

- **Correct Answer:** Clause 4 specifies the requirements for understanding the internal and external context, ensuring that the SMS aligns with the organization's strategic objectives and customer needs. This includes analyzing both internal and external factors that can impact the SMS.
- **Incorrect Answers:**
    o **Clause 6:** Focuses on planning activities, including risk management and setting objectives.
    o **Clause 8:** Covers operational processes, including service delivery and management.
    o **Clause 10:** Involves improvement actions, including identifying and implementing opportunities for enhancing the SMS.

Question 21

Scenario: An organization wants to ensure that its suppliers and partners are aligned with its SMS requirements to enhance service delivery. They need to establish processes to manage these relationships effectively.

Question: Which clause of the ISO/IEC 20000 standard addresses the management of suppliers and partners?

- A) Clause 5: Leadership

- B) Clause 7: Support
- C) Clause 8: Operation
- D) Clause 9: Performance Evaluation

Answer: C) Clause 8: Operation

Explanation:

- **Correct Answer:** Clause 8 of the ISO/IEC 20000 standard specifies the requirements for the operation of the SMS, which includes managing service delivery processes and the management of suppliers and partners. Effective supplier and partner management ensures that they meet the necessary requirements and contribute to the overall quality of service delivery.
- **Incorrect Answers:**
  - o **Clause 5:** Focuses on leadership and commitment, including roles and responsibilities, but not specifically supplier and partner management.
  - o **Clause 7:** Involves support resources such as competence, awareness, and documented information, not directly addressing supplier management.
  - o **Clause 9:** Focuses on performance evaluation, including monitoring and measuring the performance of the SMS, but not specifically managing suppliers and partners.

Question 22

Scenario: During a review, it is found that the organization does not have a clear process for evaluating and selecting new suppliers, which leads to inconsistent service quality from these suppliers.

Question: Which clause should the organization refer to for guidelines on evaluating and selecting suppliers?

- A) Clause 4: Context of the Organization
- B) Clause 6: Planning
- C) Clause 7: Support
- D) Clause 8: Operation

Answer: D) Clause 8: Operation

Explanation:

- **Correct Answer:** Clause 8 includes the requirements for managing operational processes, which encompass the evaluation and selection of

suppliers. This ensures that the suppliers are capable of meeting the service requirements and contributing positively to the SMS.

- **Incorrect Answers:**
    - o **Clause 4:** Deals with understanding the context of the organization, not specifically supplier evaluation and selection.
    - o **Clause 6:** Focuses on planning the SMS, including risk management and setting objectives, but does not specifically address supplier evaluation.
    - o **Clause 7:** Involves support resources like competence and documented information, but not directly the process for evaluating suppliers.

Question 23

Scenario: An organization is planning to conduct an internal audit of its SMS to ensure compliance with the ISO/IEC 20000 standard and identify areas for improvement.

Question: Which clause specifies the requirements for conducting internal audits?

- A) Clause 5: Leadership
- B) Clause 7: Support
- C) Clause 9: Performance Evaluation
- D) Clause 10: Improvement

Answer: C) Clause 9: Performance Evaluation

Explanation:

- **Correct Answer:** Clause 9 specifies the requirements for performance evaluation, including the need for internal audits. Internal audits are crucial for assessing the effectiveness and compliance of the SMS and identifying areas for improvement.
- **Incorrect Answers:**
    - o **Clause 5:** Deals with leadership and commitment, focusing on roles and responsibilities rather than audits.
    - o **Clause 7:** Involves support resources, such as documented information and competence, but does not specify auditing.
    - o **Clause 10:** Covers continual improvement, which involves taking actions based on audit findings, but does not cover the audit process itself.

Question 24

Scenario: An organization is defining the roles and responsibilities for its service management team to ensure clear accountability and effective service management.

Question: Which clause addresses the definition of roles and responsibilities within the SMS?

- A) Clause 4: Context of the Organization
- B) Clause 5: Leadership
- C) Clause 7: Support
- D) Clause 8: Operation

Answer: B) Clause 5: Leadership

Explanation:

- **Correct Answer:** Clause 5 specifies the requirements for leadership and commitment, including the definition of roles, responsibilities, and authorities. Clear roles and responsibilities are essential for effective governance and accountability within the SMS.
- **Incorrect Answers:**
    - o **Clause 4:** Deals with understanding the context of the organization, including internal and external factors.
    - o **Clause 7:** Involves support resources, including competence and communication.
    - o **Clause 8:** Covers operational processes but not specifically the definition of roles and responsibilities.

Question 25

Scenario: During an audit, you find that the organization has not established metrics to measure the performance of its SMS, leading to a lack of data for informed decision-making.

Question: Which clause would guide the organization in establishing performance metrics?

- A) Clause 5: Leadership
- B) Clause 6: Planning
- C) Clause 9: Performance Evaluation
- D) Clause 10: Improvement

Answer: C) Clause 9: Performance Evaluation

Explanation:

- **Correct Answer:** Clause 9 focuses on performance evaluation, including the establishment of performance metrics to monitor, measure, and analyze the effectiveness of the SMS. This ensures that the organization can make data-driven decisions to improve service quality.
- **Incorrect Answers:**
    - o **Clause 5:** Deals with leadership and commitment.
    - o **Clause 6:** Focuses on planning activities, including risk management and setting objectives.
    - o **Clause 10:** Covers continual improvement, which involves implementing changes based on performance evaluations but does not specify how to establish metrics.

Question 26

Scenario: An organization has identified the need to update its service catalog to reflect new services offered to customers and ensure accurate information is available.

Question: Which clause provides guidance on managing the service catalog?

- A) Clause 5: Leadership
- B) Clause 7: Support
- C) Clause 8: Operation
- D) Clause 10: Improvement

Answer: C) Clause 8: Operation

Explanation:

- **Correct Answer:** Clause 8 includes the requirements for operational processes, which cover the management and maintenance of the service catalog. Keeping the service catalog updated ensures that accurate and current information about services is available to customers.
- **Incorrect Answers:**
    - o **Clause 5:** Deals with leadership and commitment.
    - o **Clause 7:** Involves support resources, including documented information and competence.

- **Clause 10:** Focuses on continual improvement actions, which involve making changes based on performance reviews but not specifically managing the service catalog.

Question 27

Scenario: An organization wants to ensure that changes to its SMS are controlled and implemented effectively to avoid disruptions and maintain service quality.

Question: Which clause of the ISO/IEC 20000 standard addresses change management?

- A) Clause 5: Leadership
- B) Clause 7: Support
- C) Clause 8: Operation
- D) Clause 9: Performance Evaluation

Answer: C) Clause 8: Operation

Explanation:

- **Correct Answer:** Clause 8 specifies the requirements for operational processes, including change management. Effective change management ensures that changes are controlled and implemented in a way that minimizes disruptions and maintains service quality.
- **Incorrect Answers:**
  - **Clause 5:** Deals with leadership and commitment, focusing on roles and responsibilities.
  - **Clause 7:** Involves support resources, including competence and documented information.
  - **Clause 9:** Focuses on performance evaluation, including monitoring and measuring the SMS's performance.

Question 28

Scenario: An organization is developing a plan to address potential risks and opportunities identified during a risk assessment to ensure continuous improvement and resilience.

Question: Which clause should guide the organization in developing this plan?

- A) Clause 4: Context of the Organization
- B) Clause 5: Leadership
- C) Clause 6: Planning

- D) Clause 10: Improvement

Answer: C) Clause 6: Planning

Explanation:

- **Correct Answer:** Clause 6 specifies the requirements for planning the SMS, including the identification of risks and opportunities and developing plans to address them. This ensures that the organization proactively manages risks and seizes opportunities to enhance the SMS.
- **Incorrect Answers:**
  - o **Clause 4:** Deals with understanding the context of the organization.
  - o **Clause 5:** Focuses on leadership and commitment, including defining roles and responsibilities.
  - o **Clause 10:** Covers continual improvement, which involves implementing changes based on performance evaluations but not specifically developing plans for risks and opportunities.

Question 29

Scenario: An organization needs to ensure that its SMS is continually aligned with changing business objectives and customer requirements to remain competitive.

Question: Which clause focuses on the continual alignment of the SMS with business objectives and customer needs?

- A) Clause 4: Context of the Organization
- B) Clause 5: Leadership
- C) Clause 6: Planning
- D) Clause 10: Improvement

Answer: D) Clause 10: Improvement

Explanation:

- **Correct Answer:** Clause 10 focuses on continual improvement of the SMS, ensuring it remains aligned with business objectives and customer requirements by identifying and implementing improvements based on performance data and feedback.
- **Incorrect Answers:**
  - o **Clause 4:** Deals with understanding the context of the organization, including internal and external factors.

Question 30

Scenario: An organization is preparing to conduct a management review of its SMS to evaluate its performance and identify areas for improvement based on current performance data.

Question: Which clause outlines the requirements for conducting a management review?

- A) Clause 4: Context of the Organization
- B) Clause 6: Planning
- C) Clause 9: Performance Evaluation
- D) Clause 10: Improvement

Answer: C) Clause 9: Performance Evaluation

Explanation:

- **Correct Answer:** Clause 9 specifies the requirements for performance evaluation, including conducting management reviews. Management reviews assess the performance of the SMS and identify areas for improvement, ensuring the SMS remains effective and aligned with organizational goals.
- **Incorrect Answers:**
  - o **Clause 4:** Deals with understanding the context of the organization.
  - o **Clause 6:** Focuses on planning activities, including setting objectives and managing risks.
  - o **Clause 10:** Covers continual improvement, which involves taking actions based on performance evaluations but not specifically conducting the management review.

Question 31

Scenario: An organization has experienced multiple incidents of service disruption due to poorly managed change implementations. To prevent future occurrences, they need to establish a robust change management process.

Question: Which clause of the ISO/IEC 20000 standard should the organization focus on to develop a comprehensive change management process?

- A) Clause 5: Leadership
- B) Clause 7: Support
- C) Clause 8: Operation
- D) Clause 9: Performance Evaluation

Answer: C) Clause 8: Operation

Explanation:

- **Correct Answer:** Clause 8 specifies the requirements for operational processes, including change management. Establishing a robust change management process under this clause ensures that all changes are properly evaluated, approved, and implemented to minimize service disruptions.
- **Incorrect Answers:**
    - o **Clause 5:** Deals with leadership and commitment, focusing on roles and responsibilities, not specifically change management.
    - o **Clause 7:** Involves support resources, such as competence and documented information.
    - o **Clause 9:** Focuses on performance evaluation, including monitoring and measuring the SMS's performance, not change management.

Question 32

Scenario: During an audit, you discover that the organization has no formal procedure for capturing and responding to customer feedback, leading to missed opportunities for improvement.

Question: Which clause addresses the need to manage customer feedback?

- A) Clause 5: Leadership
- B) Clause 6: Planning
- C) Clause 8: Operation
- D) Clause 9: Performance Evaluation

Answer: D) Clause 9: Performance Evaluation

Explanation:

- **Correct Answer:** Clause 9 specifies the requirements for performance evaluation, which includes collecting and analyzing customer feedback to

identify opportunities for improvement. This ensures that the organization actively seeks and responds to customer input.

- **Incorrect Answers:**
    - o **Clause 5:** Deals with leadership and commitment.
    - o **Clause 6:** Focuses on planning the SMS, including risk management.
    - o **Clause 8:** Covers operational processes, but not specifically customer feedback management.

Question 33

Scenario: An organization needs to ensure that its service level agreements (SLAs) with customers are realistic and achievable to maintain customer satisfaction.

Question: Which clause of the ISO/IEC 20000 standard provides guidance on establishing and managing SLAs?

- A) Clause 5: Leadership
- B) Clause 7: Support
- C) Clause 8: Operation
- D) Clause 10: Improvement

Answer: C) Clause 8: Operation

Explanation:

- **Correct Answer:** Clause 8 includes the requirements for managing service delivery processes, which encompass establishing and managing SLAs. This ensures that SLAs are realistic, clearly defined, and aligned with customer expectations and service capabilities.
- **Incorrect Answers:**
    - o **Clause 5:** Deals with leadership and commitment.
    - o **Clause 7:** Involves support resources, including documented information and competence.
    - o **Clause 10:** Focuses on continual improvement actions, not specifically on SLAs.

Question 34

Scenario: The organization wants to ensure that all its IT services are continually evaluated for effectiveness and efficiency as part of its ongoing management activities.

Question: Which clause would guide the organization in setting up regular evaluations of its IT services?

- A) Clause 4: Context of the Organization
- B) Clause 5: Leadership
- C) Clause 9: Performance Evaluation
- D) Clause 10: Improvement

Answer: C) Clause 9: Performance Evaluation

Explanation:

- **Correct Answer:** Clause 9 focuses on performance evaluation, which includes regular monitoring, measurement, and analysis of IT services to ensure they are effective and efficient. This helps the organization identify areas for improvement and maintain high service standards.
- **Incorrect Answers:**
  - o **Clause 4:** Deals with understanding the context of the organization.
  - o **Clause 5:** Focuses on leadership and commitment.
  - o **Clause 10:** Involves taking improvement actions based on performance evaluations, not the evaluation itself.

Question 35

Scenario: An organization needs to maintain up-to-date documentation for its SMS to ensure all processes are clearly defined and accessible to relevant stakeholders.

Question: Which clause of the ISO/IEC 20000 standard addresses the management of documented information?

- A) Clause 4: Context of the Organization
- B) Clause 6: Planning
- C) Clause 7: Support
- D) Clause 10: Improvement

Answer: C) Clause 7: Support

Explanation:

- **Correct Answer:** Clause 7 specifies the requirements for managing documented information, ensuring that all SMS processes are clearly defined, controlled, and accessible to those who need them. Proper documentation supports consistency and clarity in service management.

- **Incorrect Answers:**
  - o **Clause 4:** Deals with understanding the context of the organization.
  - o **Clause 6:** Focuses on planning the SMS, including setting objectives and managing risks.
  - o **Clause 10:** Covers continual improvement actions, which involve implementing changes based on evaluations.

Question 36

Scenario: An organization is reviewing its resources to ensure they are adequate and appropriately assigned to support its SMS.

Question: Which clause outlines the requirements for resource management in the SMS?

- A) Clause 4: Context of the Organization
- B) Clause 5: Leadership
- C) Clause 7: Support
- D) Clause 8: Operation

Answer: C) Clause 7: Support

Explanation:

- **Correct Answer:** Clause 7 specifies the requirements for managing resources, ensuring that the organization has adequate resources (such as personnel, infrastructure, and information) to support its SMS. Proper resource management is essential for effective service delivery.
- **Incorrect Answers:**
  - o **Clause 4:** Deals with understanding the context of the organization.
  - o **Clause 5:** Focuses on leadership and commitment.
  - o **Clause 8:** Involves operational processes, including service delivery and management.

Question 37

Scenario: An organization is implementing a process to ensure that incidents are managed and resolved promptly to minimize service disruption.

Question: Which clause of the ISO/IEC 20000 standard focuses on incident management?

- A) Clause 5: Leadership

- B) Clause 6: Planning
- C) Clause 8: Operation
- D) Clause 9: Performance Evaluation

Answer: C) Clause 8: Operation

Explanation:

- **Correct Answer:** Clause 8 specifies the requirements for operational processes, including incident management. Effective incident management ensures that incidents are promptly addressed and resolved to minimize service disruptions and maintain service quality.
- **Incorrect Answers:**
    - **Clause 5:** Deals with leadership and commitment.
    - **Clause 6:** Focuses on planning the SMS, including setting objectives and managing risks.
    - **Clause 9:** Covers performance evaluation, including monitoring and measuring the SMS's performance.

Question 38

Scenario: An organization is developing a plan to address potential nonconformities identified in its SMS.

Question: Which clause guides the organization in developing and implementing corrective actions for nonconformities?

- A) Clause 4: Context of the Organization
- B) Clause 5: Leadership
- C) Clause 7: Support
- D) Clause 10: Improvement

Answer: D) Clause 10: Improvement

Explanation:

- **Correct Answer:** Clause 10 focuses on continual improvement, including the development and implementation of corrective actions for nonconformities. This ensures that the organization addresses and rectifies issues to prevent recurrence and improve the SMS.
- **Incorrect Answers:**
    - **Clause 4:** Deals with understanding the context of the organization.
    - **Clause 5:** Focuses on leadership and commitment.

Question 39

Scenario: An organization wants to ensure that its SMS remains relevant and effective in the face of changing business needs and customer expectations.

Question: Which clause addresses the continual alignment and relevance of the SMS to business needs and customer expectations?

- A) Clause 4: Context of the Organization
- B) Clause 5: Leadership
- C) Clause 6: Planning
- D) Clause 10: Improvement

Answer: D) Clause 10: Improvement

Explanation:

- **Correct Answer:** Clause 10 focuses on continual improvement, ensuring that the SMS remains relevant and effective by continuously aligning with changing business needs and customer expectations. This involves regularly reviewing and updating the SMS based on performance data and feedback.
- **Incorrect Answers:**
    - o **Clause 4:** Deals with understanding the context of the organization, including internal and external factors.
    - o **Clause 5:** Focuses on leadership and commitment.
    - o **Clause 6:** Involves planning activities, including setting objectives and managing risks.

Question 40

Scenario: An organization is preparing for a management review to evaluate the performance of its SMS and ensure it meets the organization's objectives.

Question: Which clause outlines the requirements for conducting a management review?

- A) Clause 4: Context of the Organization
- B) Clause 6: Planning
- C) Clause 9: Performance Evaluation
- D) Clause 10: Improvement

Answer: C) Clause 9: Performance Evaluation

Explanation:

- **Correct Answer:** Clause 9 specifies the requirements for performance evaluation, including conducting management reviews. These reviews assess the performance of the SMS, ensuring it meets organizational objectives and identifying areas for improvement.
- **Incorrect Answers:**
    - **Clause 4:** Deals with understanding the context of the organization.
    - **Clause 6:** Focuses on planning the SMS, including setting objectives and managing risks.
    - **Clause 10:** Involves continual improvement actions, which are often based on findings from performance evaluations but do not specifically cover the management review process.

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