

1.1 INTRODUCTION

IT Service Management (ITSM) is the Implementation and Management of Quality IT Services that meet the needs of the business. It is about satisfying customer's need those who are utilizing IT services as well as for betterment of business. ITSM is performed by IT Service Providers through an appropriate mix of people, process and information technology.

1.2 WHAT IS SERVICE MANAGEMENT?

Service Management is an arrangement of particular authoritative capacities for offering some incentive to clients as service. The capabilities appear as functions and procedures for managing services over a lifecycle, with specializations in strategy, design, transition, operation and continual improvement. The capabilities represent a service organization's capacity, competency and confidence for action. The act of transforming resources into valuable services is at the core of Service Management. Without these capacities, a service association is just a bundle of assets that independent from anyone else has moderately low intrinsic value for clients.

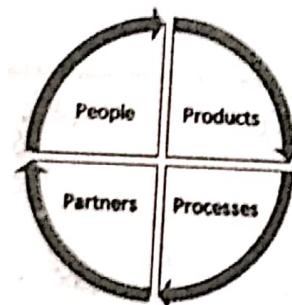
1.2.1 Four perspectives (4P's) or attributes to explain the concept of ITSM.

There are four perspectives (4P's) or attributes to explain the concept of ITSM :

1. People
2. Products
3. Partners
4. Processes

People Perspective

1. Definitions of roles and responsibilities for the people involved including staff, customers and other stakeholders involved.
2. Concerned with the "soft" side - staff, customers and other stakeholders e.g. do staff have the correct skills and knowledge to perform their roles?



Product / Technology perspective

1. The purpose primarily being to deliver and support the technology or products needed by the business to meet key organizational objectives or goals
2. Takes into account business services, hardware and software, budgets and tools

Partners / Suppliers Perspective

1. The management of external suppliers (Partners) involved in the delivery and support of the technology and products being delivered and supported by IT
2. Takes into account the importance of Partner and external supplier relationships and how they contribute to Service Delivery

Process Perspective

1. Description of the processes required to deliver and support various services for customers
2. Relates the end-to-end delivery of service based on the process flows

1.2.2 Benefits of ITSM

1. IT aligned to the business

Means achieved by enhancing the communication between IT and business, as well as improving service delivery to business

2. To implement consistent delivery

It provides consistency in the way things can be done throughout the organization.

3. Improved quality and efficiency

It provides measurement and control allows the identification of areas for improvement in terms of quality and cost.

4. Reduced cost of failure

IT incidents and downtime cost money, both in terms of unproductive time for the users of the systems, and potential loss of business if services are not available and customers can potentially go elsewhere.

5. Reduced risk to the business

IT is at the cutting edge of most organizations nowadays and any region of risk ought to be minimized and alleviated. ITSM encourages service associations to lessen the danger of losing service and furthermore accelerate recuperation time in case of significant losses.

6. Improved management and accountability

More control and a more accountable service come with greater visibility. Many successful internal IT organizations are outsourced not because they are poor, but because they cannot show how good they are (or how bad).

7. Improved communications

ITSM requires communication and cooperation across traditional lines and boundaries of management. This generally works well to improve understanding among stakeholders and increase awareness of business and operational needs.

1.2.3 Issues of ITIM

1. Fear and uncertainty/Understanding of ITSM

Sell the benefits and project. Run overview workshops / sessions to give people the opportunity to understand what can be achieved and discuss it in groups. In this situation, sending everyone to ITIL Foundation training can be overkilling.

2. Lack of clarity of objectives

This results in good project planning and governance and the need for clear and consistent communication from the project. At least everyone should know what the project is trying to achieve and be up - to - date on the progress made.

3. Poor and excessive documentation

Again this is a question of communication. The project must show quality and professionalism and be able to talk to people directly instead of complaining to them.

4. Unilateral approach

If the project focuses only on one area (e.g. service desk) is ignored by other IT staff. Clearly, this is a cross-IT project and everyone needs to be involved.

5. IT Lip Service

Very hard to be shifted and even fully identified. The most important thing to do is to try and engage people as much as possible and thus find any tacit resistance—you can work on them, at least if you have a stated doubter. The key here is to find good arguments for 'WIIFM' (what's in it for me).

6. Customer Indifference

Customers and users need to participate in service improvement plans at some level and it is useful to try to develop reporting and communication formats that speak their language and reflect their business rather than simply 'this is what IT does'.

7. Systems constraints

Your ITSM system is one area you don't want to explore—can it provide you with the reports and data you need? —This may have to be changed if not.

1.2.4 What is ITIL?

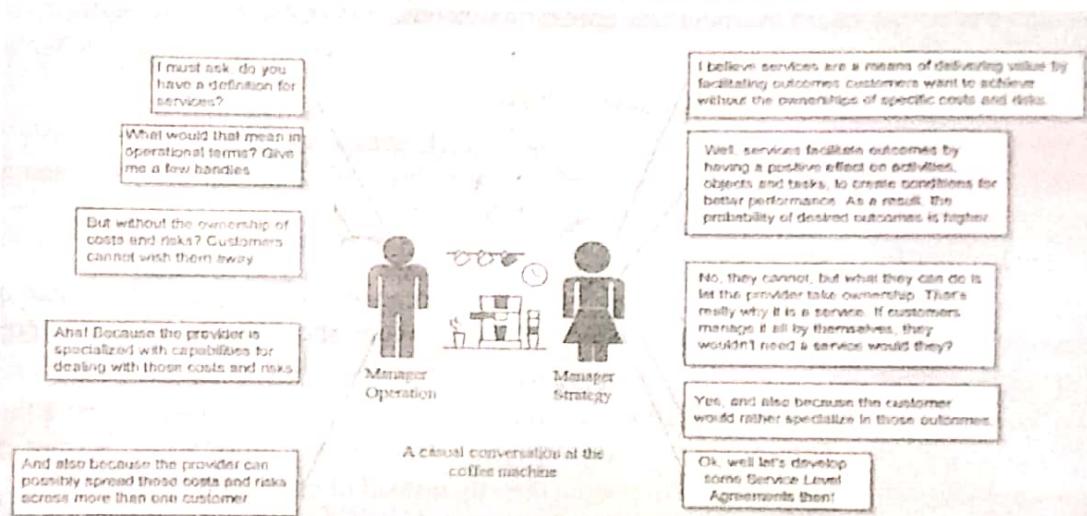
IT Infrastructure Library (ITIL) is the most widely used IT management framework in the world. ITIL guides an organization and people to use IT as a tool to encourage change, transformation and development in business. The objective is to increase efficiency and achieve predictable levels of service. The aim is to improve performance and achieve certain service levels. The key factor in ITIL success is vendor neutrality, best practices and a framework that is easy to understand. AXELOS, a joint venture between the HM Cabinet Office and Capita Plc, owned ITIL.

ITIL lifecycle consists of 5 different stages :

1. ITIL Service Strategy
2. ITIL Service Design
3. ITIL Service Transition
4. ITIL Service Operation
5. ITIL Continual Service Improvement.

1.3 WHAT ARE SERVICES?

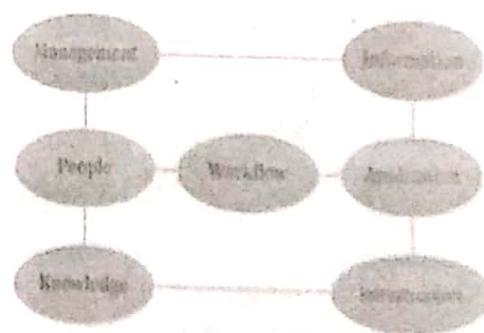
Service is defined as a way of delivering value to customers by helping customers achieve results without owning specific costs and risks. Customers want results but do not want to be responsible or to be responsible for all associated costs and risks.



1.4 BUSINESS PROCESS

The results of business are achieved through business processes governed by goals, policies and constraints. Resources, knowledge, applications and infrastructure are supported in the processes. Workflow coordinates the performance of tasks and control flows between resources and measures to ensure adequate performance and desired results. Business processes are particularly important from the perspective of service management. They apply the cumulative knowledge and experience of the organization to the achievement of a specific result shown below.

Processes are strategic assets in creating competitive advantages and differentiating the market. Consequently, business processes define many of the challenges facing organizations.



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management of services. This is best explained by the nature and dynamics of the relation between business processes and IT.

1.5 PRINCIPLES OF SERVICE MANAGEMENT

1.5.1 Specialisation and Coordination

The objective of service management is to make available to the customer capabilities and resources in the highly usable form of services at acceptable levels of quality, costs and risks. Service providers help to reduce the constraints on ownership and control of specific resources for customers. Customers can concentrate on what they regard as their core competency. Customers are specialized in business administration to achieve one set of results using a set of resources (Pool A). Similarly, service providers with a different set (Pool B) specialize in service management. Service management coordinates the dependencies between the two parties by means of insurance and use. Customers are satisfied with the use of certain resources (Pool B) unless ownership is a precondition for a strategic benefit.

For the development of organizational capabilities, specialization is a necessary condition. Management potential accumulates from specialized knowledge and experience with a variety of resources. "Specialization drives the grouping of capabilities and resources to achieve focus, expertise and excellence within the same control framework. It is easier to coordinate capabilities and resources if they are under the same control due to accountability, authority and management attention. Capabilities and resources with a high degree of dependence and interaction are combined to reduce the need for coordination. "Where coordination is easy through well-defined interfaces, protocols and agreements, they are controlled by the group that is most able to manage them."

1.5.2 The agency principle

Leaders employ or hire agents to pursue specific goals on their behalf. Staff, consultants, consultants or service providers may be agents. Officers act on behalf of leaders who provide goals, resources (or funds) and require agents to act. In the context of service management, customers are leaders who have two types of agents working for them-service providers employed by the customer and users of those services. Users do not need to be on the customer's payroll. Service agents act as intermediaries to facilitate the exchange with users between service providers and customers. Service agents are normally the service provider's employees, but they can also be systems and processes with which users interact in self-service conditions. This interlocking relationship between leaders and agents creates and delivers value for customers. The agency model is also used in client / server models widely used in the design and architecture of software and companies. Software agents interact with users for their backend functions, processes and systems.

1.5.3 Encapsulation

Customers are concerned about affordable and reliable access to the asset utility. They do not concern structural complexity, technical details or operations at low levels. They prefer simple and secure interfaces to complex resource configurations such as applications, data, infrastructure and equipment. Encapsulation hides what is not the concern of the customer and explains what is useful and useful for them as a service. Customers are only concerned with the use. Encapsulation follows three separate but closely related principles: problem separation, modularity and loose connection.

1. Separation of concerns

Complex problems or problems can be resolved or divided into separate parts or issues. Specialized capabilities and resources address every problem that leads to better results in general. This improves focus and enables systems and processes to be optimized on a manageable scale and scale. Challenges and opportunities with adequate knowledge, skills and experience are appropriate.

2. Modularity

Modularity is a structural principle for managing system complexity. Similar elements are functionally grouped to form self-contained and viable modules. The functionality is available through interfaces to other systems or modules. Modularity contributes to efficiency and economy by reducing duplication, complexity, overheads of administration and change costs. The reuse of modules has a similar impact. Encapsulation is possible from software and hardware components to business processes and organizational design at several levels of granularity.

3. Loose connection

The separation of concerns and modularity facilitates the loose coupling of resources with users. Loose coupling makes it easier to make internal changes to the resource without affecting the use. It also avoids forcing changes on the customer's side that can cost the customer unexpectedly. Loose coupling also allows different uses to dynamically allocate the same set of resources.

1.6 PRINCIPLES OF SYSTEMS

A system is a group of interacting, interrelated, or interdependent components that form a unified whole, operating together for a common purpose.

1.6.1 Open-loop And Closed-loop Control Processes

Two types of control processes are available : Open loop and closed loop. Open loop control processes in which the value of the outcome does not affect the input of the process. Control processes in which the value of the result influences the process input (with or without delay) in such a way that the desired value is maintained are closed-loop. Open-loop systems simply take controls based on inputs. Changes in inputs lead to action changes. The effectiveness of open-loop systems is excessively dependent on foresight in the design of all possible results-related conditions. Open-loop systems cannot cope with exceptions. Target driven and sensitive to disturbances or deviations is the control action in closed loop systems.

Open loop solutions try to solve the problem with a good design to ensure that it does not happen first. Once a design has been implemented, there are no mid-term corrections. Closed-loop solutions, however, are based on feedback compensation. A well-designed household air conditioner or oven leaves the house cool or too warm, unless regulated by thermostat feedback. It is a result-based attitude.

1.6.2 Feedback and Learning

Learning and growth are important aspects of the functioning of successful organisations. Learning arises from the presence of feedback as a process input in a cycle based on performance or results in the previous cycle. The feedback can be positive or self-sustaining, resulting in exponential growth or decrease. It may be negative or self-correcting that results in balance or balance. Goal-seeking behaviour is a widely observed control pattern that can be achieved by self-correcting feedback.

There are more than one feedback loop of each type for functions, processes and organizations. The interaction of the feedback loops drives the process' behaviour when it works as a dynamic system. IT organizations can be viewed as dynamic systems with functions and processes, with specialization and coordination, giving each other feedback on the goal of achieving customer goals. Interaction between processes, life-cycle phases and functions can be achieved.

1.7 THE SERVICE LIFE CYCLE

The official definition of a **Service** is "a means of delivering value to Customers by facilitating outcomes customers want to achieve without the ownership of specific costs or risks".

Lifecycle : The natural process of stages that an organism or inanimate object goes through as it matures. For example, human stages are birth, infant, toddler, child, pre-teen, teenager, young adult, adult, elderly adult and death.

ITIL® Framework provided best practices for ITSM based around the how questions. These included :

- How should we design for availability, capacity and continuity of services?
- How can we respond to and manage incidents, problems and known errors?
- As Version 3 now maintains a holistic view covering the entire lifecycle of a service, no longer does.
- ITIL® just answer the how questions, but also why?
- Why does a customer need this service?
- Why should the customer purchase services from us?
- Why should we provide (x) levels of availability, capacity and continuity?

By first asking these questions it enables a service provider to provide overall strategic objectives for the IT organization, which will then be used to direct how services are designed, transitioned, supported and improved in order to deliver optimum value to customers and stakeholders.

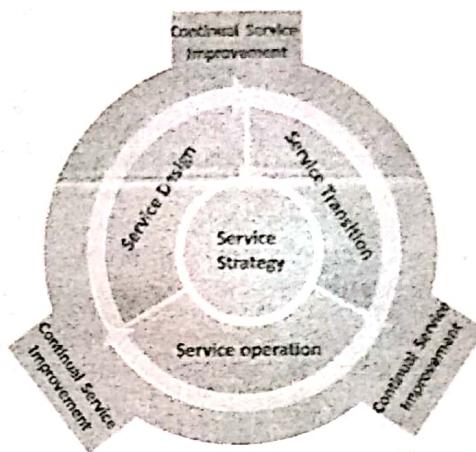
1.8 FUNCTIONS AND PROCESSES ACROSS THE LIFE CYCLE

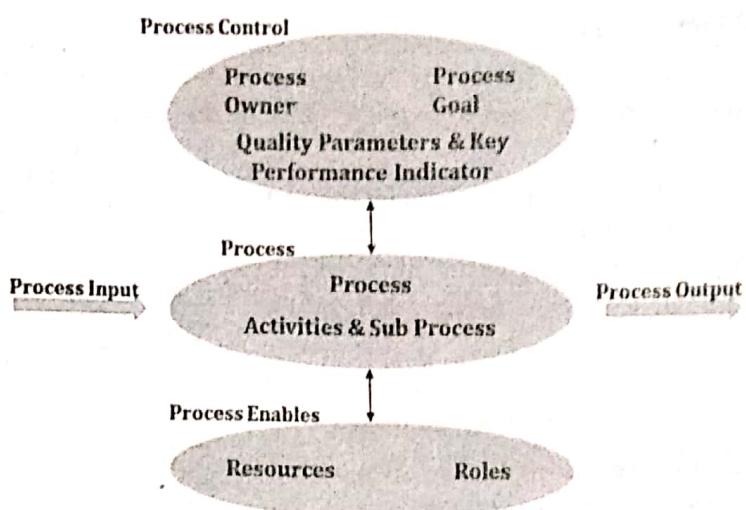
1.8.1 Processes

Processes can be defined as a structured set of coordinated activities designed to deliver results and give value to clients or stakeholders. A process takes one or more inputs and transforms them into defined outputs through the activities carried out. There are some principles :

- All processes should be measurable and performance-driven (not just time but overall cost, effort and other resources).
- Processes are strategic assets for creating competitive advantages and differentiating the market.
- Processes may define roles, responsibilities, tools, controls of management, policies, standards, guidelines, activities and work instructions if necessary.

A process owner is responsible for ensuring that the process fits the desired purpose and is responsible for the outputs. A process manager is responsible for a process's operational management. There may be several managers for one process or both the process owner and the process manager (typically in smaller organisations) may be the same person.



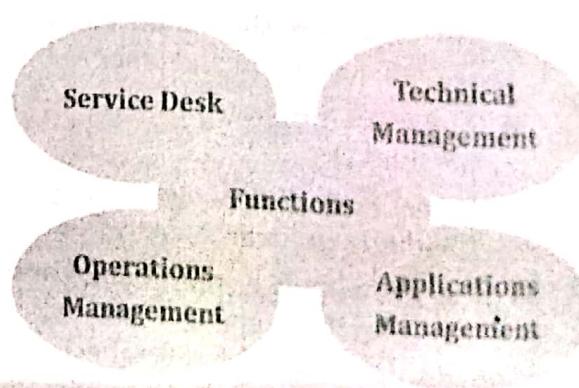


The above figure describes the physical components of processes that are tangible and therefore generally receive the greatest attention. In addition to the physical components, behavioural components are mostly intangible and are so deeply embedded and recurrently part of an underlying pattern that they are displayed by most members of the organization and include decision - making, communication and learning. Components of behaviour have no independent existence apart from the work processes in which they appear, but at the same time greatly affect and influence the form, substance and character of the activities and subsequent outputs by shaping how they are carried out. Therefore, it is important to take into account both physical and behavioural aspects when defining and designing processes. This can be achieved by ensuring that all stakeholders required (e.g. Staff, customers and users, etc.) are adequately involved in process design to ensure that :

- They may communicate their own ideas, concerns and opinions that may influence the design, implementation and improvement of processes. Of particular importance may be present behaviours not previously identified that can affect the design and implementation of the process.
- Adequate training and education is provided to stakeholder groups on how to fulfill their role in the process and the value of the process.
- Stakeholders generally feel empowered in the change that is being developed and are therefore more likely to respond positively than to resist organizational changes that occur actively or passively.

1.8.2 Functions

Functions refer to the logical grouping of roles and automated actions that perform a defined process, activity or combination. The functions in the service operation are required to manage the IT operating environment in 'steady state.' Just as in sports, where each player has a specific role to play in the overall team strategy, IT functions define the different roles and responsibilities required for overall IT service design, delivery and management.



1.8.3 Connecting Processes and Functions

Processes are often said to be perfect. Until you get people involved. This statement stems from failure to carry out processes due to misunderstandings of the people involved and a lack of clarity about the roles and responsibilities. The RACI model is a useful tool for defining roles and responsibilities when designing processes. RACI is for :

- **R** – Responsibility (actually does the work for that activity but reports to the function or position that has an "A" against it).
- **A** – Accountability (is made accountable for ensuring that the action takes place, even if they might not do it themselves). This role implies ownership.
- **C** – Consult (advice / guidance / information can be gained from this function or position prior to the action taking place).
- **I** – Inform (the function or position that is told about the event after it has happened).

	Service Desk	Desktop	Applications	Operations Manager
Logging	RACI	-	-	CI
Classification	RACI	RCI	-	CI
Investigation	RACI	RCI	RCI	CI

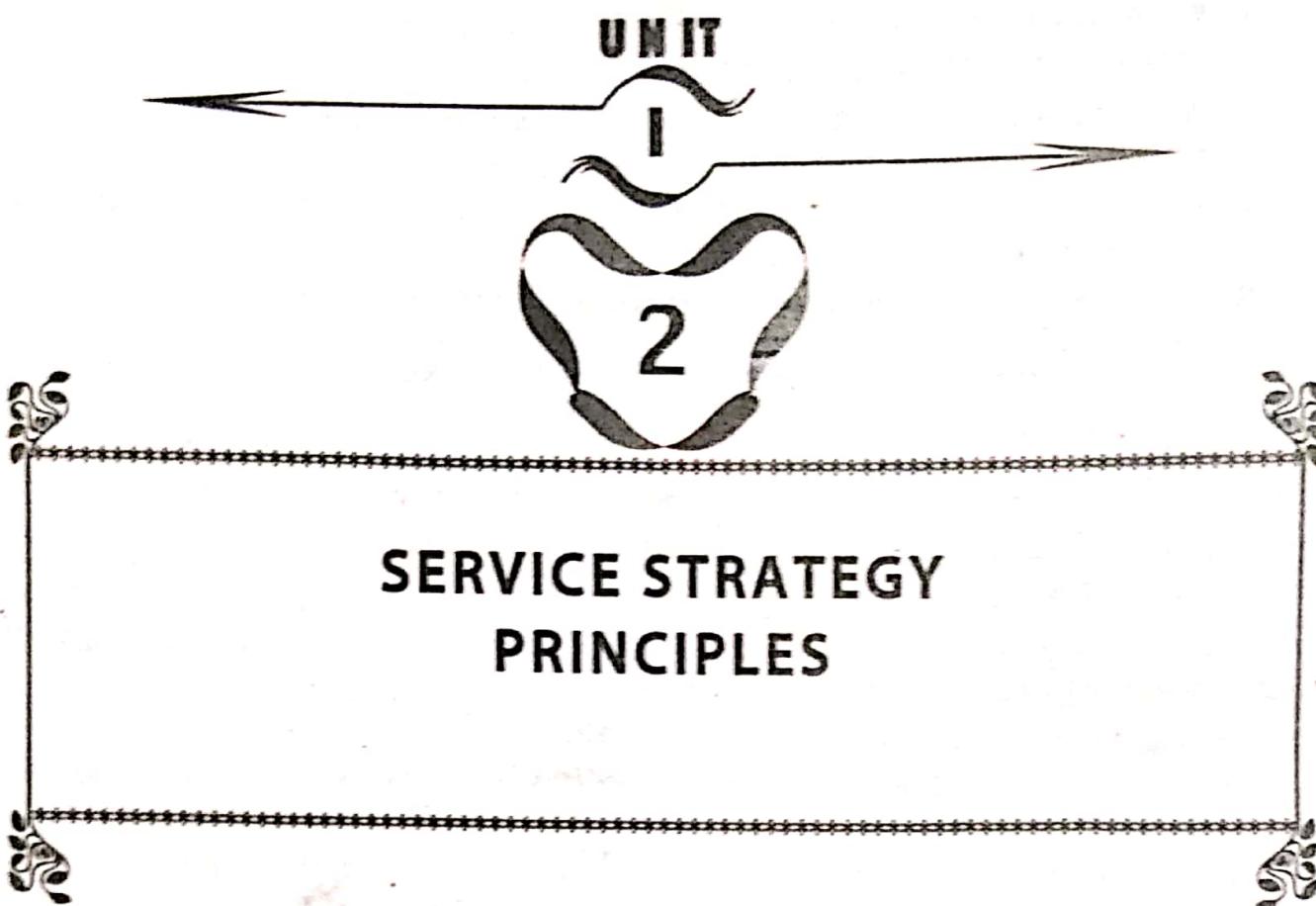
A RACI Model is used to define the roles and responsibilities of various Functions in relation to the activities of Incident Management.

General Rules that exist :

- Only 1 "A" per Row can be defined (ensures accountability, more than one "A" would confuse this).
- At least 1 "R" per Row must be (shows that actions are taking place), with more than one being appropriate where there is shared responsibility.

QUESTION

1. Define ITSM. Explain four perspective of ITSM.
2. What is ITSM? Explain benefits of ITSM.
3. What do you mean by ITSM? What are the issues related to ITSM?
4. Write short note on ITIL, Services and Business Process.
5. Explain principles of Service Management.
6. Brief about Encapsulation principle of Service Management.
7. Elaborate Service Life Cycle of ITSM.
8. What are Processes across the ITSM life cycle?
9. What are Functions across the ITSM life cycle?
10. How Functions and Processes connected in ITSM life cycle?



SERVICE STRATEGY PRINCIPLES

SYNOPSIS

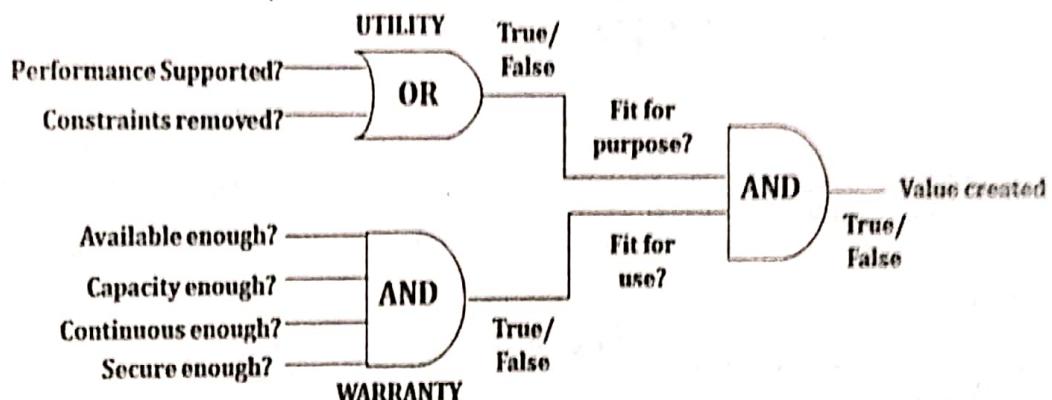
- 2.1 Value Creation
 - 2.2 Service Assets
 - 2.3 Service Provider
 - 2.4 Service Structures
 - 2.5 4p's of Strategy
 - 2.6 Service Governance
 - 2.7 Pattern of Business Activity (PBA)
- Question

Service Strategy is first phase in the ITIL lifecycle is accountable to define the service value. Below are the key principles which a strategist must keep in mind before defining a service

2.1 VALUE CREATION

The creation of value is the primary objective of any business entity. The creation of value for customers helps to sell products and services, while creating value for shareholders in the form of stock price increases, ensures the future availability of investment capital for financing activities. From a financial perspective, value is said to be created when a company earns revenue (or capital return) that exceeds expenditure (or capital cost). However, some analysts insist on a broader definition of 'value creation,' which can be separated from traditional financial measures. The stock price is increasingly reduced by earnings or asset base. In today's companies, the creation of value is increasingly represented in intangible drivers such as innovation, people, ideas and brands.

From the customer's point of view the value of a service consists of two basic elements:



1. **Utility** is the functionality offered by a service that meets a specific requirement. Utilities are also often referred to as "what does a product or service." In addition to its functionality, it can also mean the elimination of business constraints. Utility increases the company's performance.
2. The second element is the **Warranty**, commitment or guarantee that a product or service complies with the agreed requirements for availability, capacity, continuity and safety. The Service Guarantee reduces service delivery fluctuations.

2.2 SERVICE ASSETS

Resources and skills are each service provider's strategic assets to produce goods or services. Resources are a direct service delivery input parameter. Finance, infrastructure, applications and information could be provided. Management, the organization, the people and their knowledge, on the other hand, are necessary to convert these resources. Skills are expertise and help the organization develop and manage resources to generate value added. These capabilities are typically based on experience and information, are knowledge-intensive and therefore closely linked to the people, systems, processes and technologies of an organization and need to be improved over time. Capabilities are part of an organization's non - tangible assets (human capital). Combined resources and capacities are the basis of a service's value. An organization's capabilities cannot generate value without adequate and adequate resources. The productive capacity of a service provider depends on the resources available. Skills are necessary to improve, implement and coordinate the productive capacity.

2.3 SERVICE PROVIDER

A service provider is a vendor that provides IT solutions and/or services to end users and organizations. This broad term includes all IT companies that supply products and solutions through on-demand services, pay per use or a hybrid model of delivery.

There are three types of service providers :

1. Internal Service Provider
2. Shared Services Unit
3. External Service Provider

1. Internal Service Provider (TYPE I)

ISPs are dedicated and often integrated service providers in a single business unit. The business units themselves can form part of a larger company or parent company. Business functions such as finance, management, logistics, human resources and IT provide the services required by different parts of the company. They are financed by overhead and must operate strictly within the mandates of the company.

ISPs benefit from close coupling with their owners, avoiding certain costs and risks related to carrying out business with external parties. Since ISPs are dedicated to specific business units, they must have a thorough understanding of the company and its objectives, plans and operations. They are generally highly specialized in the design, customization and support of specific applications or in support of a specific business process. Internal market spaces operate by ISPs. Their growth is limited by the growth of their business unit.

Each business unit (BU) may have its own ISP. The success of ISPs is not measured in terms of revenues or profits because they tend to operate with internal financing on a cost recovery basis. All costs are borne by the company or business unit.

2. Shared Services Unit (TYPE II)

Functions including finance, IT, human resources and logistics are not constantly at the middle of an organization's aggressive advantage. Consequently, they need no longer be maintained at the company level where they call for the eye of the chief executive's team. As an alternative, the services of such shared capabilities are consolidated into a self-reliant unique unit referred to as a shared services unit (SSU). The model allows a more devolved governing structure underneath which SSUs can attention on serving business units as direct customers. SSUs can create, grow and sustain an internal market for their services and version themselves alongside the lines of provider carriers inside the open marketplace.

Type II can offer lower prices compared to external service providers by leveraging corporate advantage, internal the autonomy to function like a business unit, Type II providers can make decisions outside the constraints of business unit level policies. They can standardize their service offerings across business units and use market-based pricing to influence demand patterns. A successful Type II service provider can find itself in a position where it is able to provide its services externally as well as internally.

3. External Service Provider (TYPE III)

ESP is a service provider that provides IT services to external customers. The business strategies of customers sometimes require capabilities readily available from a Type III provider. The additional risks that Type III providers assume over Type I and Type II are justified by increased flexibility and freedom to pursue opportunities.

ESPs can offer competitive prices and drive down unit costs by consolidating demand. Customers may pursue sourcing strategies requiring services from external providers.

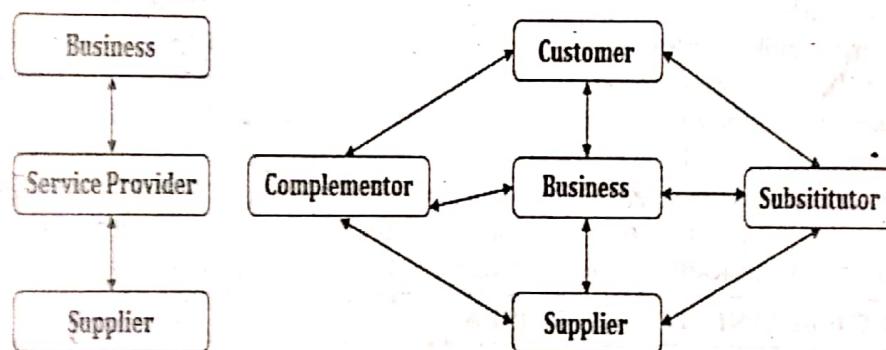
The motivation may be access to knowledge, experience, scale, scope, capabilities and resources that are either beyond the reach of the organization or outside the scope of a

carefully considered investment portfolio. Business strategies often require reductions in the asset base, fixed costs and operational risks, or the redeployment of financial assets.

The experience of ESPs is often not limited to any one enterprise or market. The breadth and depth of such experience is often the single most distinctive source of value for customers. The breadth comes from serving multiple types of customer or market. The depth comes from serving multiples of the same type. From a certain perspective, ESPs are operating under an extended large-scale shared services model.

2.4 SERVICE STRUCTURES

There is no single best way to organize, and best practices described in ITIL need to be tailored to suit individual organizations and situations. Any changes made will need to take into account resource constraints and the size, nature and needs of the business and customers. The starting point for organizational design is strategy, as it sets the direction and guides the criteria for each step of the design process. For strategy to be successful, an organization will need to clearly define the roles and responsibilities required to undertake the processes and activities.



(An organization's age, size, geographical spread and technology use affect its structure. As the organization grows and matures, changes in roles and relationships must be made or problems will arise. This is particularly important for organizations adopting a service orientation, as pressures for efficiency and discipline inevitably lead to greater formalization and complexity. In a small organization multiple roles may be combined under one person. In larger organizations there may be many different people carrying out each of these roles, split by geography, technology or other criteria.)

The differences between small and large IT organization can be seen in the table below:

Small IT Organization	Large IT Organization
Roles are combined.	Roles are separate.
Segregation of duties limited.	Segregation of duties maximized.
Generalization of skills.	Specialization of skills.
Less complexity.	More complexity.

2.5 4P'S OF STRATEGY

ITIL discusses at length the four "Ps" of strategy-**perspective, position, plan and pattern**, each of which represents a different way to approach your service strategy and not to be confused with the 4 P's of ITIL Service Design.

1. **Perspective** is your vision and direction for the services you will provide, and is attained through conversations with your stakeholders.
2. **Position** is how you will differentiate from your competitors; that is, what is your unique value proposition? A sound position guides you in both what to do and what not to do based on your ability to differentiate yourself from the competition.

3. **Plan** describes how you will achieve the established goals and objectives. It focuses on financial budgets, your portfolio of services, new service development, investments in service assets and improvement plans.
4. **Pattern** represents consistent decisions and actions over time; that is, the organization's fundamental way of doing things. It is embedded in the way you do business. Management systems, organization, policies, processes, schedules and budgets all have discernible patterns. Patterns can be a source of competitive advantage.

2.6 SERVICE GOVERNANCE

The Service Governance is about the processes and mechanisms needed to coordinate and manage the use of IT-related activities and resources to meet the operative and strategic goals of the company providing the services.

The focus of Service governance is on those resources for delivering value to the business. Service systems require IT support processes as well as organizational processes that will also involve the business leaders. Service needs a solid foundation that is based on standards and includes policies, contracts, and service level agreements. The IT community is expected to use services to quickly automate new and changing business processes. To do so, services should be produced with several design qualities, such as composability, loose-coupling, autonomy, data representation standardization. In addition, a Service governance infrastructure should be in place to support the service delivery life-cycle, which includes a registry of services to enable service discovery. Consequently, Service increases the need for good governance as it will help assign decision-making authorities, roles, and responsibilities and bring focus to the organizational capabilities needed to be successful.

2.7 PATTERN OF BUSINESS ACTIVITY (PBA)

Patterns of Business Activity (PBAs) are workload profiles describing the demand for particular services. PBAs are an important tool used by Demand Management for anticipating and influencing service demand.

In deciding whether to provide a service, IT Service Management must understand the patterns of business activity (PBAs) related to the service. While it is important to avoid having inadequate capacity, excess capacity is also a business risk, involving expense which typically cannot be recovered, since customers cannot be expected to pay for capacity they are not using.

PBAs are typically thought of in terms of transaction volumes. ITIL suggests other factors be considered as well, such as the source of the demand, special needs such as enhanced security, and tolerance for delay. The job of demand management is to identify appropriate PBAs and to associate them with user profiles (UPs). This becomes important input to the capacity management process in the Service Design lifecycle phase.

QUESTION

1. Write short note on Value Creation.
2. Write short note on Service Assets.
3. Who is Service Provider? What are its types?
4. Write short note on Service Structure.
5. Explain four P's of Service Strategy.
6. Write short note on Service Governance.
7. Write short note on Pattern of Business Activity.





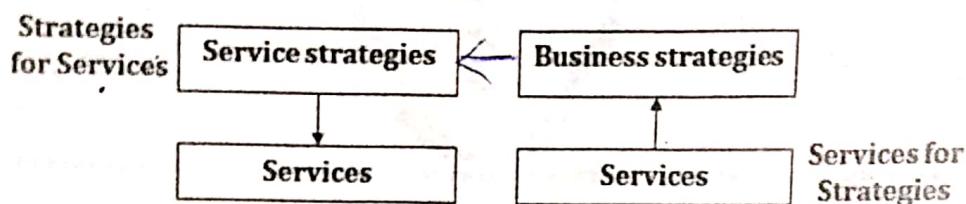
SYNOPSIS

- 3.1 Define the Market
- 3.2 Develop the Offerings
- 3.3 Develop Strategic Assets
- 3.4 Prepare for Execution
- 3.5 Challenges
- 3.6 Critical Success Factors
- 3.7 Complexity
- 3.8 Coordination and Control
- 3.9 Preserving Value
- 3.10 Effectiveness in Measurement
- 3.11 Risks

Questions

3.1 DEFINE THE MARKET

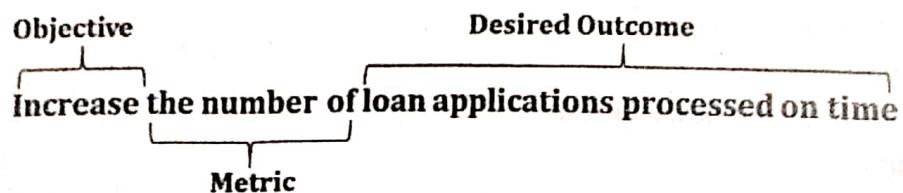
In the context of service management, organizations are interested in strategy from two separate but related perspectives. There are services strategies and strategies services. From one perspective, strategies for services are developed. Providers differentiate their services from competing alternatives available to customers.



The marketing strategy for services focuses on providing customers with processes, experiences and intangibles instead of physical goods and transactions. It involves integrating the customer's focus throughout the company and throughout all functions. All functions of the company – marketing, sales, human resources, operations and R&D–must work together to develop an effective marketing strategy for services. Instead of focusing traditional goods marketing on transaction's and exchange, the strategy of marketing services focuses on customer, usage and relationships.

Organizations aim to achieve business goals, subject to various constraints, using whatever assets they have. Limitations include costs and risks due to complexity, uncertainty and business conflicts. The company's potential for creating value depends on the performance of its business assets. Assets must perform well in their entirety. The assets may be owned by the company or used by others in different kinds of financial arrangements. Such arrangements are more often than not agreements or contracts for services. Business managers have the responsibility, authority and resources to deliver certain results by the best means possible. Services are a way for managers to enable or improve the performance of corporate assets that lead to better results.

The value of a service is best measured in terms of improving results, which can be attributed to the impact of the service on business asset performance. One important aspect of value provision is to prevent or reduce the variation in the performance of customer assets.



Customers own and manage asset settings to generate value for their own customers. Assets are the means to achieve results that enable or enhance the creation of value. For example, the result of processing a loan application on time creates a bank value for a loan. Customers receiving the loan will have access to the financial capital required and the lender will benefit from the initiation and the interest accrual. Therefore, the lending process is a business asset whose performance results in particular business results.

3.2 DEVELOP THE OFFERINGS

A market area is defined by a set of business results that a service can facilitate. The opportunity to make these results easier defines a market space. These are examples of business results which can form the basis of one or more market spaces:-

- Sales teams are productive with the wireless computer sales management system
- E-commerce website is linked to the warehouse management system

- Key business applications are monitored and secure
- Loan officers have faster access to information on loan applicants
- Online bill payment service offers more payment options for buyers
- Business continuity is guaranteed.

Each of the terms and conditions relates to one or more categories of customer assets, such as people, infrastructure, information, receivables and purchase orders, and can then be linked to the services that enable them. Each condition can be met in several ways. Customers prefer the one that means that costs and risks are lower. Service providers create these conditions by providing services and support to customers in order to achieve specific business results. A market space therefore offers service providers a number of opportunities to deliver value to a customer's business through one or more services.

Customers often express dissatisfaction with a service provider even if the terms and conditions of the SLAs are met. How services create value for customers is often unclear. Services are often defined in the terms of resources for customers to use. The definitions of service lack clarity about the context in which such resources are useful and the business results that justify the cost of a service from the client's perspective. This problem results in poor design, inefficient operation and poor service contract performance. Service improvements are difficult if it is clear where improvements are genuinely necessary. Only in the context of their own business assets, performance and results can customers understand and appreciate improvements. A proper service definition takes into account the context in which customers see value from the services.

3.3 DEVELOP STRATEGIC ASSETS

Service providers should consider service management as a strategic asset and entrust it with customer, service and support contract challenges and opportunities. Investments in trusted assets are less risky because they are constantly able to deliver.

The management of services begins with capabilities that coordinate and control resources to support a service catalogue. Challenges in achieving progressively higher levels of service are overcome. Skills and resources are adjusted until the target is achieved. Customers see benefits in an ongoing relationship and entrust the supplier with an increasingly valuable business and also add new customers and market spaces to the range of possibilities.

Stakeholders may initially rely on low-value contracts or non-critical services for the provider. Service management reacts by achieving the expected performance of a strategic asset. Successful learning and growth enable higher levels of service commitments as service management is conditioned to meet greater challenges.

Defining the value network within which service provider's work to support their customers to develop service management as a strategic asset. This network can exist entirely in a company, as is often the case with internal and joint service providers. The value network extends to external customers, suppliers and partners across organizational boundaries. By identifying the key network relationships and interactions, managers have greater visibility and control over their systems and processes. This enables managers to manage complexity of their business environments when customers pursue their own business models and strategies. It also helps to take into account all the costs and risks associated with providing a service or supporting a client.

Strategic assets are dynamic in nature. They are expected to continue to work well in their organization's changing business conditions and objectives. This requires that strategic assets have learning skills. In the near future, performance must benefit from the knowledge and experience gained from the past. This requires service management to function as a long-term system that systematically generates customer value and captures service

provider value. The control of the interaction between customer assets and service assets is an important aspect of service management.

3.4 PREPARE FOR EXECUTION

Each model of service represents a process. This model is a clear and practical approach to the development of service strategies. However, it does not guarantee success. What is needed, through reflection and examination, is to make a strategy appropriate in the context or situation of an organization. Strategy includes both thinking and doing.

When designing a service strategy, a supplier should first examine carefully what it already does. There is probably already a core of differentiation. A well-established service provider is often unaware of its own unique differentiators. The following questions can help to clarify the distinctive capabilities of a service provider:

Which of our services or service varieties are the most distinctive?

Are there services that cannot easily be replaced by a business or customer? The differentiation can take the form of entry barriers, such as the know-how of the client's business or the wide range of services offered. Or it can be in the form of increased switching costs due to lower cost structures caused by specialization or service procurement. It can be a specific attribute not easily found elsewhere, such as product knowledge, regulatory compliance, speed of delivery, technical skills or global support structures.

Which of our services or service varieties are the most profitable?

The form of value can be monetary, such as lower expenses in higher profits, or social, such as life-saving or tax collection. Are there services for non-profit organizations that enable the organization to carry out its mission better? Replace 'profit' with 'realized benefits'.

Which of our customers and stakeholders are the most satisfied?

Which customers, channels or purchase occasions are the most profitable?

Again, the value form can be monetary, social or otherwise. Which of our value chain or value network activities are most diverse and effective? The answers to these questions will probably give insight into future strategic decisions. These decisions and related goals form the basis for a strategic evaluation.

Factor	Description
Strength and Weaknesses	The attributes of the organization, e.g.: resources
Distinctive competencies	capabilities, service quality, operating leverage, experience, skills, cost structures, customer service, global reach, product knowledge, customer relationships and so on.
Business strategy	The perspective, position, plans and patterns received from a business strategy. For example, a Type I and II provider may be directed, as part of a new business model, to expose services to external partners or over the internet.
Critical success factors	How will the service provider know when it is successful?
Threats and opportunities	When must those factors be achieved? Includes competitive thinking. For example, 'Is the service provider vulnerable to substitution?'

3.5 CHALLENGES

Challenges represent the expected results of the pursuit of strategies, while strategies represent the actions to be taken to achieve the goals. Clear goals set consistent decision

making to minimize later conflicts. They identify and serve as standards. Organizations should avoid the following "goal management" means.

- **Crisis management** : The belief that an organization's measurement is its ability to solve problems. It is the approach to allow events to dictate decision making.
- **Extrapolation management** : Carry on the same activity in the same way because things are going well.
- **Managing by hope** : Ultimately making decisions about the belief they'll work out.
- **Subjective management** : Doing the best you can to accomplish what should be done. No overall plan exists.

There are four common information categories that are often collected and presented as goals. Senior managers should understand the risk, if not completely avoided, of each category :

1. Solutions

Customers present their requirements in the form of a problem solution. Customers may lack the technical expertise to come up with the best solution possible. Ultimately, customers may be disappointed by the very solution they present. Instead of looking for customer ideas about the service itself, look for the criteria used to measure the value of a service to mitigate this risk.

2. Specifications

Customers submit their specification requirements – vendor, product, architectural style, computer platform, etc. A provider unnecessarily prevents its own organization from providing optimal services by accepting specifications.

3. Needs

Customers present their needs as high - level descriptions of overall service quality. High - level descriptions in their nature do not include a specific benefit for the customer. For instance, ... service is available 99.9% of the time.' These contributions are often ambiguous and imprecise. They leave the supplier asking what customers really mean: 99.9% of business hours? A calendar year's 99.9 percent? Does this include windows for maintenance? Can 0.1% be used simultaneously?' The provider leaves too much to chance by leaving room for interpretation. Be sure all input is measurable and actionable.

4. Benefits

In the form of benefit statements, customers present their requirements. The risk lies again in the ambiguity or inaccuracy of the statements. "Highly reliable", "faster response" and "better security" have many meanings and different consequences for the organization.

3.6 CRITICAL SUCCESS FACTORS

There are critical success factors for every market space that determine the success or failure of a service strategy. These factors are influenced by customer needs, business trends, competition, regulations, suppliers, standards, best practices and technologies in the industry. Critical success factors are also referred to as strategic industry factors (SIF) in business literature and have the following general characteristics :

- They are defined in terms of capabilities and resources.
- They prove to be key determinants of industry leaders' success.
- They are defined by market space levels, not specific to any company.
- They are the basis for competition between rivals.
- They change over time, so they are dynamic and not static and usually require significant investment and time to develop,
- Their value is extracted in combination with other factors.

Critical success factors by themselves are altered or influenced by one or more of the following factors :

- Customers
- Competitors
- Suppliers
- Regulators.

An important aspect of strategic planning and development is the identification of critical success factors for a market space. A core asset is required in each market space service provider to support a customer portfolio through a service portfolio. For example, in the real - time high - volume data processing market, such as those required by the financial services industry, service providers must have large - scale computer systems, highly reliable network infrastructure, secure facilities, industry regulatory knowledge and a very high level of contingency. Without these assets, these service units would not be able to provide the utility and guarantee requested by customers in this market space.

3.7 COMPLEXITY

IT organizations are Complex systems. In contrast to disorganized complexity (random systems) or organized simplicity (simple systems), a complex system is characterized by organized complexity. For example, in an organizational environment, the operating group is a system composed of people, processes and technology. However, the operations group components must interact with each other to perform. They are interdependent, therefore. The operating group must in turn interact with other IT organization components. This is why some service organizations resist change.

Complex systems differ from simple systems and present unusual challenges. They are tightly linked. They are self-organizing and adaptive. They are thus self-stabilizing and resistant to politics. Their complexity prevails over our ability to understand them. The result is that the more you try to change, the more they resist.

3.8 COORDINATION AND CONTROL

In general, decision makers have limited time, attention and personal ability. Roles and responsibilities are delegated to teams and individuals who specialize in specific systems, processes, performance and results. Specialization enables profound knowledge, expertise and experience to be developed. It also enables innovation, improvements and changes to take place in a controlled environment. Service management is a coherent set of specialized skills defined in terms of processes and life cycles. An increase in the level of specialization means that the need for coordination is correspondingly increased. This is a major challenge in service management due to the level of specialization required for various phases, processes and functions of the service life cycle. Coordination and control between teams and individuals can be improved.

Problems of cooperation involve finding a way to align groups with divergent and possibly conflicting interests and objectives in order to cooperate in mutual interest. This applies not only to internal groups, but also to customers and service providers. How do you agree on the definition of service levels in terms of the satisfaction of the user? How much should a customer pay for a given level of service? What is a reasonable timeframe for the approval of a change request? What level of service can you impose on an internal function or group of services? How can more than one service provider work together to serve a common customer?

Control perspectives are based on the goals of one or more service management processes or life cycles. They help managers focus on what is important and relevant to the processes under their control and ensure that they have effective and efficient control information of good quality. Control perspectives can also be useful in determining

information requirements for effective learning and improvement in the organization. Financial management offers such a perspective for control. Customers show the prices they are prepared to pay for a certain level of quality of service.

3.9 PRESERVING VALUE

Mature customers are not just concerned with the utility and guarantee they receive at the price they are charged. They also take care of the total utilization cost (TCU). The TCU concept is based on the transaction cost principle discussed above. Customers are aware not only of the direct costs of actual consumption, but also of all other related costs indirectly incurred in the process of receiving the committed utility and guarantee.

The creation of value for customers is a highly visible objective for service providers. It is also important to capture value for their own stakeholders. These two set of goals can be closely aligned for internal providers. They can easily diverge or conflict, in particular with external suppliers.

Customer value is easily lost due to the hidden costs incurred by the customer by using a service. Poor service management over the life cycle can lead to customers paying far more than the price of the service if the effect of the hidden costs is set. The lasting value for customers is much lower than the created value. It is a challenge, a key success factor and a risk to eliminate hidden costs. The total losses in the system must be reduced.

3.10 EFFECTIVENESS IN MEASUREMENT

The Deming principle has long been understood by organizations: if you cannot measure it, you cannot manage it. Despite significant investment in products and processes, however, many IT organizations lack the ability to create a holistic analytical service. In combination with a disjointed translation of IT components into business processes, operational models lack proactive or predictive capabilities.

In service organizations, performance measurements are often out of step with the business environment they serve. Traditional measurements focus more on internal objectives than on customer satisfaction external realities. Even measurements carried out by seasoned companies emphasize control at the expense of customer response. Although each organization differs, some common rules are useful for the design of effective measurements.

Measures focus on strategic objectives, track progress and provide feedback. As strategy evolves, make sure to change measurements. Older measurements will achieve new objectives when they conflict, because measurements, not strategic objectives, determine rewards and promotions. Developing new strategic objectives without changing the related measurements is completely unchanged.

Current monitoring solutions lead to a small percentage of failures being detected. Practice demonstrates that it is not enough to monitor discrete components. An approach that integrates and promotes cross - domain coordination with service management is more likely to be successful. The common techniques are not entirely satisfactory, unfortunately.

3.11 RISKS

Risk is normally perceived as something to be avoided because of its association with threats. While this is generally true, risk is also to be associated with opportunity. Failure to take opportunities can be a risk in itself. The opportunity costs of underserved market spaces and unfulfilled demand is a risk to be avoided. When service management is effective, services in the Catalogue and Pipeline represent opportunities to create value for customers and capture value for stakeholders. Implementing strategies often requires changes to the Service Portfolio, which means managing associated risks.

Risk is defined as uncertainty of outcome, whether positive opportunity or negative threat. Managing risks requires the identification and control of the exposure to risk, which may have an impact on the achievement of an organization's business objectives.

Every organization manages its risk, but not always in a way that is visible, repeatable and consistently applied to support decision making. The task of management of risk is to ensure that the organization makes cost-effective use of a risk framework that has a series of well-defined steps. The aim is to support better decision making through a good understanding of risks and their likely impact. There are two distinct phases: risk analysis and risk management.

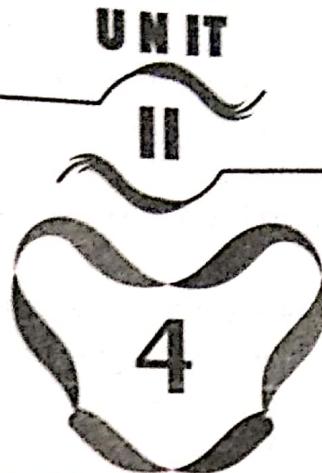
Risk analysis is concerned with gathering information about exposure to risk so that the organization can make appropriate decisions and manage risk appropriately.

Management of risk involves having processes in place to monitor risks, access to reliable and up-to-date information about risks, the right balance of control in place to deal with those risks, and decision-making processes supported by a framework of risk analysis and evaluation.

QUESTIONS

1. What is defining markets in Service Strategy?
2. How to develop offerings in Service Strategy?
3. How to develop Strategic Assets in Service Strategy?
4. How to prepare Service Strategy for execution?
5. What are the challenges of Service Strategy?
6. What are Critical Success factors associated with Service Strategy?
7. What kind of complexity involved in Service Strategy?
8. What is Coordination and Control in Service Strategy?
9. How to preserve value in Service Strategy?
10. Write a short note on Effectiveness in measurement at Service Strategy.
11. What are the Risks associated with Service Strategy?





SERVICE DESIGN

SYNOPSIS

- 4.1 Fundamentals
- 4.2 Service Design Principles
- Questions

4.1 FUNDAMENTALS

The service design is all about taking a service and meeting the needs of the user and the customer. It can be used to improve existing services or from scratch to create a new service. Service design can be seen as collecting service needs and mapping them to integrated service requirements and creating the design specifications for the services to be provided.

The main objective of Service Design is to design IT services in conjunction with IT practices, processes and policies to implement the strategy and facilitate the introduction of these services in the live environment, ensuring quality service delivery, customer satisfaction and cost - effective service delivery. Service Design should also efficiently design the IT services so that they do not need much improvement during their life cycle.

4.1.1 Objective and aspects of Design

The main goal of the service design stage can be defined as: to design suitable and innovative IT services, including their architectures, processes, policies and documentation, to meet current and future business requirements. There are five separate aspects of service design :

1. New or changed services
2. Service management systems and tools, in particular the portfolio of services, including the service catalogue.
3. Architecture and management technology.
4. Processes required.
5. Methods and metrics of measurement.

The lifecycle service design phase begins with a set of new or changed business requirements and ends with the development of a service solution designed to meet the documented business needs. This developed solution is then transferred to the service transition for evaluation, construction, testing and deployment of the new or changed service.

4.1.2 Service Design purpose:

ITIL Service Design is relevant for organizations involved in developing, delivering or supporting services, including internal and external service providers. Organizations aiming to improve services by effectively implementing the principles of service management and a service life - cycle approach. Organizations that require a consistent management approach in a supply chain or value network for all service providers. Organizations that apply for their services. The publication is also relevant to every professional involved in service management.

- IT architects
- IT managers
- IT practitioners
- IT service owners

4.1.3 Usage ↗

There are a number of ways to provide an IT service, including in-house, outsourced and partnership. This publication is generally relevant to all service delivery methods. Those involved in the provision of IT services—in their own organization, in the provision of outsourced services or in partnerships—will therefore find that this publication applies. Business managers can find this publication helpful in understanding and establishing IT services and support for best practices. Supplier organization managers will also find this publication relevant when establishing service delivery and support agreements.

4.1.4 Four P's of Service Design

The service design stage translates the customers' needs and demands into the services they want. Service design helps you determine your target market and how your business offers can be differentiated from your competitors. A service designer must consider the four P's when planning a service.

1. People

People are in charge of providing IT services. These professionals should have the skills and competencies required for providing services.

2. Products:

The products are the tools, services, and technology used in the delivery of, and support of, the services.

3. Processes

Processes support and manage the services being offered so that the services meet customer expectations and agreed service levels. All processes must be measurable.

4. Partners

When designing services, vendors, manufacturers, and suppliers should be considered as they will be utilized to support the service once it is live.

4.2 SERVICE DESIGN PRINCIPLES

IT Service Design is part of the business process as a whole. The correct interfaces and links to the design activities are important. It is vital that the entire service life cycle and ITSM processes are involved from the outset when designing new or changed services. Often operational difficulties arise when a newly designed service is delivered for live operation at the last minute.

4.2.1 Goals

1. Design services to meet business objectives based on quality, compliance, risk and security requirements, delivering more efficient and efficient IT and organizational solutions and services tailored to organizational needs.
2. Design services that can be easily and efficiently developed and enhanced within appropriate timescales and costs and reduced, minimized or constrained where possible
3. Designing efficient and effective processes for the design, transition, operation and enhancement of high - quality IT services, along with supporting tools, systems and information, in particular the service portfolio, to manage services through their lifecycles.
4. Designing secure and resilient IT infrastructures, environments, applications and data / information resources and capabilities.
5. Designing methods and metrics for evaluating the effectiveness and efficiency of design processes and their deliverables.
6. Developing and maintaining IT plans, processes, policies, architectures, frameworks and documents for the design of quality IT solutions to meet current and future organizational needs.
7. Assist in the development of policies and standards in all design areas.
8. Develop IT skills and capabilities by moving strategies and design activities into operational tasks, making efficient and efficient use of all IT service resources.
9. Contribute to improving the overall quality of IT services within the design constraints imposed, in particular by reducing the need for retrofitting.

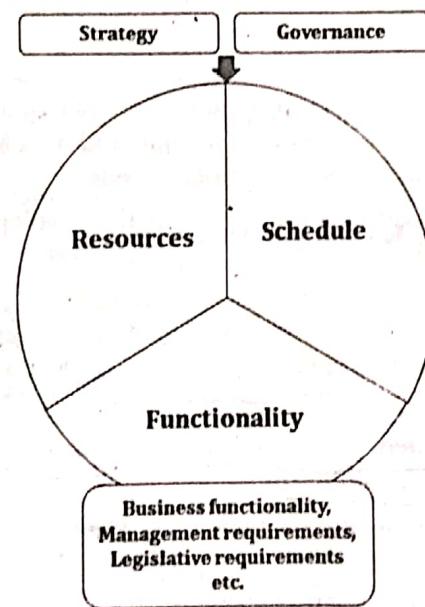
4.2.2 Balanced Design

The design of services is a delicate balancing act for any new business requirements, ensuring that not only functional requirements but also performance objectives are met. All this needs to be balanced in terms of the resources available within the timeframe required and the costs for the new services.

- **Functionality** : The service or product and its facilities, functionality and quality, including all of the management and operational functionality required.
- **Resources** : The people, technology and money available.
- **Schedule** : The timescales.

In order to achieve this, the overall management of design activities needs to ensure :

- Good communication between the various design activities and all other parties, including the business and IT planners and strategists.
- The latest versions of all appropriate business and IT plans and strategies are available to all designers.
- All of the architectural documents and design documents are consistent with all business and IT policies and plans
- The architectures and designs :
 - Are flexible and enable IT to respond quickly to new business needs.
 - Integrate with all strategies and policies.
 - Support the needs of other stages of the Service Lifecycle.
 - Facilitate new or changed quality services and solutions, aligned to the needs and timescales of the business.



4.2.3 Identifying Service requirements

The service design must take into account all service elements by adopting a holistic approach to the design of a new service. This approach should take into account the service and its components and their interrelationships to ensure that the services provided meet the functionality and quality of service expected by the company in all sectors :

- The scalability of the service to meet future requirements, in support of the long-term business objectives.
- The business processes and business units supported by the service.
- The IT service and the agreed business functionality and requirements.

- The service itself and its Service Level Requirement (SLR) or Service Level Agreement (SLA).
- The technology components used to deploy and deliver the service, including the infrastructure, the environment, the data and the applications.
- The internally supported services and components and their associated Operational Level Agreements (OLAs).
- The externally supported services and components and their associated underpinning contracts, which will often have their own related agreements and / or schedules.
- The performance measurements and metrics required.
- The legislated or required security levels.

4.2.4 Identifying and documenting business requirements and drivers

IT must retain accurate information on business requirements and drivers if it is to provide the most appropriate catalogue of services with an acceptable level of service quality that is aligned to business needs. Business drivers are the people, information and tasks that support the fulfilment of business objectives. This requires that IT develops and maintains close, regular and appropriate relationships and exchange of information in order to understand the operational, tactical and strategic requirements of the business. This information needs to be obtained and agreed in two main areas to maintain service alignment :

Information on the requirements of existing services : what changes will be required to existing services with regard to :

- New facilities and functionality requirements.
- Changes in business processes, dependencies, priorities, criticality and impact.
- Changes in volumes of service transactions.
- Increased service levels and service level targets due to new business driver, or reduced for old services, lowering priority for those due for replacement.
- Additional needs for Service Management information.

Information on the requirements of new services :

- Facilities and functionality required.
- Management information required and management needs.
- Business processes supported, dependencies, priorities, criticality and impact.
- Business cycles and seasonal variations.
- Service level requirements and service level targets.
- Business transaction levels, service transaction levels, numbers and types of users and anticipated future growth.
- Business justification, including the financial and strategic aspects.
- Predicted level of change, e.g. known future business requirements or enhancement
- Level of business capability or support to be provided, e.g. local business-based support.

4.2.5 Design activities

All design activities are motivated by changes in business needs or improvements in services. A structured and holistic approach to the design activities should be adopted so that all information available is taken into account to ensure consistency and integration throughout the IT service provider organization in all design activities.

- Requirements collection, analysis and engineering to ensure that business requirements are clearly documented and agreed.

- Design of appropriate services, technology, processes, information and process measurements to meet business requirements.
- Review and revision of all processes and documents involved in Service Design, including designs, plans, architectures and policies.
- Liaison with all other design and planning activities and roles, e.g. solution design.
- Production and maintenance of IT policies and design documents, including designs, plans, architectures and policies.
- Revision of all design documents, and planning for the deployment and implementation of IT strategies using 'roadmaps', programmes and project plans.
- Risk assessment and management of all design processes and deliverables.
- Ensuring alignment with all corporate and IT strategies and policies.

4.2.6 Design aspects

An overall, integrated approach should be adopted for the design activities documented in the previous section and should cover the design of :

- Service solutions, including all of the functional requirements, resources and capabilities needed and agreed.
- Service Management systems and tools, especially the Service Portfolio for the management and control of services through their lifecycle.
- Technology architectures and management architectures and tools required to provide the services.
- Processes needed to design, transition, operate and improve the services.
- Measurement systems, methods and metrics for the services, the architectures and their constituent components and the processes.

The key aspect is that new or modified service solutions are designed to meet changing business needs. Whenever a new service solution is produced, it must be checked against each other to ensure that it integrates and interfaces with all existing services. These five aspects of service design are discussed in the following sections in greater detail. The design, transition and subsequent operation of these five different aspects should be included in the plans produced by the service design :

- The approach taken and the associated timescales.
- The organizational impact of the new or changed solution on both the business and IT.
- The commercial impact of the solution on the organization, including the funding, costs and budgets required.
- The technical impact of the solution and the staff and their roles, responsibilities, skills, knowledge, training and competencies required to deploy, operate, maintain and optimize the new solution to the business.
- The assessment and mitigation of risks to services, processes and Service Management activities.
- Communication planning and all aspects of communication with all interested parties.
- The impact of the solution on new or existing contracts or agreements.

4.2.7 Subsequent Design Activities

After designing the desired service solution, the following activities must also be completed with the service design stage before the solution enters the service transition stage.

A. Evaluation of Alternative Solutions

An additional evaluation stage may be necessary if external supplier services and solutions are involved. This consists of the following :

- Selecting a set of suppliers and completing a tendering process. This will require the production and completion of :
 - Documentation of the scope of the service and production of a Statement of Requirement (SoR) and/or a Terms of Reference (ToR) document.
 - Request For Information (RFI), Request For Proposal (RFP), Request For Quotation (RFQ) and Invitation To Tender (ITT) documents.
 - Producing and agreeing a set of solution and supplier evaluation criteria and a scoring process.
- Assessing and reviewing the responses of the supplier and selecting the preferred supplier(s) and their proposed solutions.) This may also involve testing or even prototyping or proof of conceptual activity if important new concepts or technology are involved in the new service to ensure that new components meet their needs.
- Assessment and costing of alternative designs, including possibly identifying potential suppliers and assessing their alternative proposals, technologies, solutions and contracts.) Costing must cover one - off costs and ongoing operating and ownership costs, including support and maintenance.

B. Procurement of the Preferred Solution

It is possible that for the solution, no external elements are required. This is unusual, however, as software suppliers are at least highly likely to be involved. If external suppliers participate in the preferred solution, the steps are :

- Completing all necessary checks on the preferred supplier.
- Finalizing the terms and conditions of any new contracts..
- Ensuring that all corporate policies are enforced.
- The procurement of the selected solution,

C. Develop the Service Solution

The development phase involves translating the service design into a plan for the development, reuse or redevelopment of the components required to provide the service and the subsequent implementation of the service developed. If this is a major service change, it may need to be developed into a program of plans. Each plan or project in the program is responsible for delivering one or more service components and includes :

- The needs of the business.
- The strategy to be adopted for the development and or purchase of the solution.
- The timescales involved.
- The resources required, taking into consideration facilities, IT infrastructure and the right personnel skills in order to ensure the delivery service meets the customer's needs.
- The development of the service and its constituent components, including the management and other operational mechanisms, such as measurement, monitoring and reporting.
- Service and component test plans.

4.2.8 Design Constraints

All design works within many constraints. These constraints stem from the company and service strategy and cover many different sectors. This means that designers are not always free to design the best solution for the company, as it does not fall within the constraints

imposed. The financial constraint is most obvious. There may be insufficient budget for the most suitable solution, therefore a cheaper alternative service should be identified and agreed with the company.

The designer can only provide the solution that meets all the currently known constraints, or else try to lift or renegotiate some of the constraints by obtaining a larger budget, for example. In order to implement the desired solution, not only will more budget be needed, but it would also be incompatible with some of the relevant standards and regulations. In this case, an alternative, cheaper solution would probably have to be found. The service design processes must therefore recognize that they can design solutions, but they operate in an environment in which many external factors can influence the design.

Many of these external influences are due to the need for good corporate and IT governance and others to comply with regulations, laws and international standards. It is therefore essential that all designers recognize them and ensure that the designs and solutions produced by them have all the necessary controls and capabilities.

4.2.9 Service Oriented Architecture

Service - oriented architecture (SOA) approach should be used to design and develop business processes and solutions. The SOA approach is regarded as best practice and is used by many organizations to improve their efficiency and effectiveness in providing IT services.

SOA is defined by OASIS as :

'A paradigm for organizing and utilizing distributed capabilities that may be under the control of different ownership domains. It provides a uniform means to offer, discover, interact with and use capabilities to produce desired effects consistent with measurable preconditions and expectations.'

OASIS (Organization for the Advancement of Structured Information Standards) is a not-for-profit, international consortium that drives the development, convergence and adoption of e-business standards. SOA brings value and agility to an organization by promoting the development of reusable "self - contained " services. In turn, this encourages a flexible and modular approach to the development of ' shared services,' which can be used in many different areas of the company. More and more organizations transform business processes into common ' packaged services,' which can be used and shared by many business sectors.

IT service providers should use the SOA and the principles wherever possible to develop flexible, reusable IT services that are common and can be shared and used in many different areas of the business. When using this approach, it is important that IT :

- Defines and determines what a service is,
- Understands and clearly identifies interfaces and dependencies between services,
- Utilizes standards for the development and definition of services,
- Uses common technology and tool-sets,
- Investigates and understands the impact of changes to 'shared services',
- Ensures that SOA-related training has been planned and achieved for the IT people in order to establish a common language and improve the implementation and support of the new or changed services.

4.2.10 Business Service Management

Business Service Management (BSM) is a strategy and approach for connecting IT components with business goals. This can predict the impact of technology on business and how business change can affect technology. The creation of a fully integrated service catalogue—including business units, processes and services, and their relationships and dependencies on IT services, technology and components—is essential to enhancing the ability of the IT service provider to deliver BSM.

All aspects of service design are essential elements to support and enhance the IT service provider's business management capabilities, in particular the design of the service portfolio, the service catalogue and the individual IT services. All these activities will also improve the harmonization of the provision of IT services with businesses and their evolving needs. BSM enables an organization of an IT service provider to :

- Align IT service provision with business goals and objectives.
- Prioritize all IT activities on business impact and urgency, ensuring critical business processes and services receive the most attention.
- Increase business productivity and profitability through the increased efficiency and effectiveness of IT processes.
- Support the requirements for corporate governance with appropriate IT governance and controls.
- Create competitive advantage through the exploitation and innovation of IT infrastructure as a whole.
- Improve service quality, customer satisfaction and user perception.
- Ensure regulatory and legislative compliance.
- Ensure appropriate levels of protection on all IT and information assets.
- Ensure that IT services are aligned and continue to be aligned with changing business needs.

4.2.11 Service Design Models

The model chosen for the design of IT services depends primarily on the model chosen to provide IT services. Before adopting a design model for a major new service, a review of current capabilities and provisions should be carried out on all aspects of the provision of IT services. This review should consider all aspects of the new service, including the :

- Business drivers and requirements.
- Scope and capability of the existing service provider unit.
- Demands, targets and requirements of the new service.
- Scope and capability of external suppliers.
- Maturity of the organizations currently involved and their processes.
- Culture of the organizations involved.
- IT infrastructure, applications, data, services and other components involved.
- Degree of corporate and IT governance and the level of ownership and control required.
- Budgets and resources available.
- Staff levels and skills.

QUESTIONS

1. What is Service Design? State its Objectives and Aspects.
2. Define Service Design and brief about its purpose and uses.
3. What are four P's of Service Design?
4. Write note on Service Design principles.
5. Define Service Design. List and explain its goals.
6. What is Balanced Design?
7. What are Service Requirements? How to identify them?
8. How to Identifying and document business requirements and drivers?

9. Write short note on Design activities.
10. Write short note on Design aspects.
11. Explain in detail about Subsequent design activities.
12. Write short note on Design constraints.
13. Explain in brief about Service oriented architecture.
14. Explain in details about Business Service Management.
15. Write short note on Service Design Models.



UNIT

II

5

SERVICE DESIGN PROCESSES

SYNOPSIS

- 5.1 Introduction
- 5.2 Challenges
- 5.3 Risks
- Questions

5.1 INTRODUCTION

These processes are primarily responsible for providing key information for the development of new or modified services. There are five design aspects that need to be considered :

- The design of services, including all the necessary and agreed functional requirements, resources and capabilities.
- The design of service management systems and tools, in particular the service portfolio, for managing and controlling services through their lifecycle.
- The design of technology architectures and management systems.
- Designing the processes necessary for the design, transition, operation and improvement of services, architectures and processes.
- Designing the measurement methods and metrics of services, architectures and their components and processes

In each of the five aspects, the structured approach should be adopted to deliver quality, repeatable consistency and continuous improvement throughout the organisation. In the provision of IT services to internal or external service providers, there are no situations where there are no processes in the service design area. All IT service provider organisations, regardless of how basic, already have some elements of their approach to these five aspects. Before starting the implementation of improving activities and processes, a review of what elements are in place and work successfully should be carried out.

Key Processes of Service Design are :

- Service Catalogue Management
- Service Level Management
- Capacity Management
- Availability Management
- IT Service Continuity Management
- Information Security Management
- Supplier Management

5.1.1 Service Catalogue Management

A service catalogue is an organized collection or database of all services related to business and information technology that can be performed live, for or within a company. It is one of the main well-defined processes under the ITIL Service Design module. It is a controlled process that ensures that the service catalogue is produced, maintained and contains accurate information for all operational and operational services.

The ITIL Service Catalogue contains information on supplies, prices, points of contact, ordering and request processes. While the entire service portfolio is managed in the ITIL service strategy, the service catalogue is managed in ITIL's service design specifically. Service catalogues act as knowledge management tools for an organization's employees and consultants. It allows them to forward their service - related requests to the Subject Matter Experts (SMEs) who own the service.

Process Objective

To ensure that a service catalogue is produced and maintained with accurate information on all operational services and those ready to operate. Service Catalogue Management provides vital information for all other processes of service management : service details, current status and interdependencies.

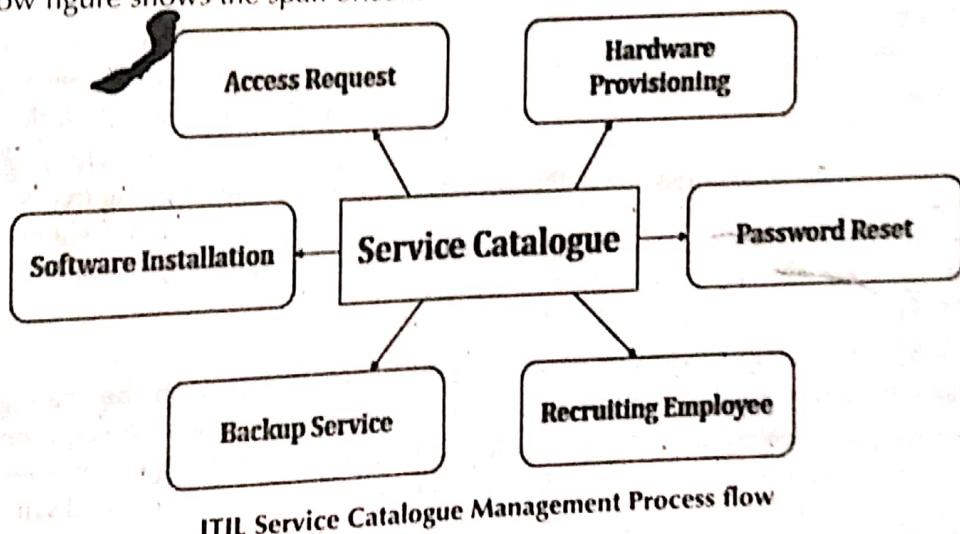
Activities : Below lists some key activities performed under the Service Catalogue Management Process :

- Documentation and agreement with all relevant parties on a service definition.
- Create a Service Portfolio Management interface to sync the Service Portfolio and Service Catalogue contents.
- Produce and maintain the content of a service catalogue.
- Coordinates with Business Relationship Management (BRM) and Service Level Management (SLM) to ensure that service catalogue information is aligned with business objectives.

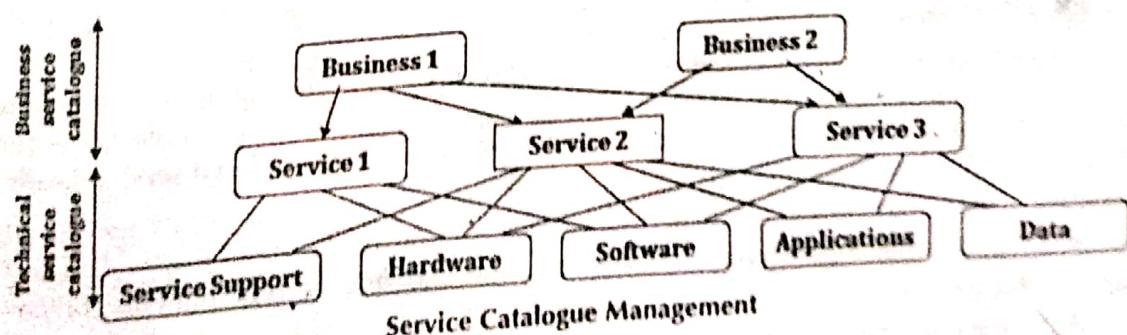
Types : Broadly, there are two types of service catalogues :

- **Business Service Catalogue (BSC)** : It contains details of all the IT services from customer's view of the Service Catalogue. It can further be divided into two sub-categories, namely (Retail Catalogue & Wholesale Catalogue)
- **Technical Service Catalogue (TSC)** : It contains details of all the IT services from IT perspective. It also describes the relationships between the supporting services, shared services, components, and CIs necessary to support the provision of the service to the business.

Below figure shows the span of control that is maintained by Service Catalogue.



ITIL Service Catalogue Management Process flow



Terminologies & Definitions

Some important terminologies & definition specific to this topic are listed below :

Required Modifications to Service Catalogue :

- It is a request from a Service Management process to change the Service Catalogue.

- This request is generally sent to Service Catalogue Management in case of any new service or service attribute must be recorded in the Service Catalogue.

Service Catalogue :

- A Service Catalogue, is an organized collection or database of all business and information technology related services that are live and can be implemented, for, or within an enterprise.
- As per ITIL V3, Service Catalogue is the part of an Organization's Service Portfolio, which is visible to customers and is used to support the sale and delivery of IT Services.
- The ITIL Service Catalogue includes information about deliverables, prices, contact points, ordering and request processes.

Roles :

Service Catalogue Manager :

- Service Catalogue Manager is the Process Owner of ITIL Service Catalogue Management Process.
- This role is responsible for maintaining the Service Catalogue, and also ensures that all information within the Service Catalogue is accurate and up-to-date.

5.1.2 Service Level Management

Service Level Management (SLM) is one of the main well-defined processes within the ITIL best practice framework Service Design Process Group. It is the process responsible for the continuous identification, monitoring and review of the IT service benchmarks specified in the SLAs.

ITIL SLM process helps to achieve the target level of service by ensuring that appropriate agreements are concluded with internal IT support providers and external suppliers in the form of operational level agreements (OLAs) and Underpinning Contracts (UCs) / subcontracts.

Scope :

The Service Level Management Process (SLM) works closely with the management of the availability and capacity in order to estimate and plan the resource requirement. The SLM is also directly related to incident management and problem management to ensure that the required quality and service levels are achieved using the resources agreed with financial management. This process also ensures the implementation of the appropriate service continuity plan and the agreed level of service can be provided to customers under all circumstances.

Process Objective

Negotiating service level agreements with customers and designing services in line with agreed service level objectives. Service level management is also responsible for ensuring that all operational level agreements and contracts are appropriate and that service levels are monitored and reported.

Activities

- Determining, negotiating, documenting, and agreeing on requirements for new or changed services.
- Managing and reviewing all services to match SLAs for operational services.
- Monitoring and measuring service performance of all operational services against the SLA targets.
- Review, Report & Identify improvement opportunities for improvement planning & inclusion in the CSI register.

- Collating, measuring and improving customer satisfaction, in cooperation with business relationship management.
- Reviewing, revising, and documenting: Scope of Service, SLAs, OLAs, and underpinning contracts.

Sub-Process

1. Maintenance of the SLM Framework

Maintaining the sub-process of the SLM Framework is responsible for maintaining the basic service level management framework. In particular, it is responsible for designing and maintaining the underlying structure of the customer agreement portfolio and for providing templates for the different SLM documents.

2. Identification of Service Requirement

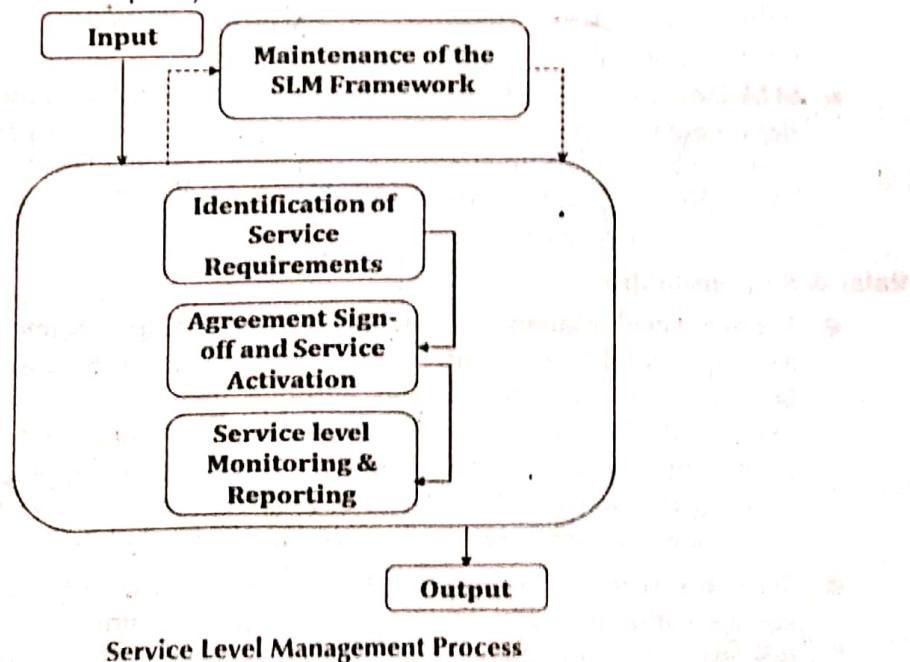
Used to document the desired results or demands from the customer's point of view for new services or major service changes. This sub-process identifies the much-needed service requirements to be documented and submitted for initial assessment, to check whether the requirements are technically and/or economically feasible and to find alternatives where possible.

3. Agreements Sign-Off and Service Activation

Ensure that all relevant contracts are signed after the completion of the service transition and check whether the criteria for service acceptance are met. This includes but not limited to the signing of SLAs, OLAs and contracts between service owners and clients.

4. Service Level Monitoring and Reporting

Used to monitor the service levels achieved and compare them with the agreed service level targets for reporting. These reports are then distributed to customers and other stakeholders to emphasize the quality of the service.



Terminologies & Definitions

- **Customer Agreement Portfolio :** It is the database which contains information about all Service Agreements done with customers to provide the framework for delivering services.
- **Outline of Service Requirements :** This is the desired outcome of a service, stated in terms of required service functionality (utility) and service levels (warranty).

- **Service Acceptance Criteria (SAC)** : A set of criteria or benchmark used for service acceptance testing to ensure that an IT service meets its functionality and quality requirements as per the customer requirement.
- **Service Level Agreement (SLA)** : It is an agreement or contract between an IT service provider and a customer. In ITIL, SLA specifically describes the IT service, the responsibilities of the IT service provider and the customer, and documents the service level targets.
- **Service Level Report** : The Service Level Report is the document of assessment of service provider's ability to deliver the agreed service quality. It compares the agreed SLA with the actually achieved service levels and also includes other information, such as usage statistics of services, ongoing measures for service improvement, and any exceptional events.
- **Service Level Requirements (SLR)** : The Service Level Requirements (SLR) are documents containing the requirements for a service from the client viewpoint. In ITIL, SLR defines detailed service level targets, mutual responsibilities, and other requirements specific to a group of similar customers. Service Level Agreement (SLA) is a derived form of SLR.
- **Operational Level Agreement (OLA)** : OLA is an internal agreement between an IT Service Provider and other units of the same organization. An OLA supports the IT service provider in the delivery of services to customers. The OLA defines the goods or services to be provided and the responsibilities of both parties within the same organization. OLA is not visible or communicated to customers.
- **Underpinning Contracts (UC)** : UC is an agreement or contract between a Service Provider and a Third Party Provider for receiving some specialized services. The third party provides supporting services, which enables the service provider to deliver a service to a customer. An Underpinning Contract must be aligned with the customer-facing Service Level Agreements.
- **SLM Document Templates** : It broadly points to all the templates used for various documentation purposes under service level management process. A few examples are Service Level Requirements template, Service Level Agreement document, Operational Level Agreement document, Underpinning Contracts, Service Acceptance Criteria etc.

Roles & Responsibilities

- **Service Level Manager** : This role is the Process Owner for ITIL Service Level Management Process. The Service Level Manager is responsible for negotiating Service Level Agreements and ensuring that these are met. This role is also responsible for ensuring that all ITIL Service Management processes, Operational Level Agreements and Underpinning Contracts are appropriate, and aligned for meeting the agreed service level targets. The Service Level Manager also monitors and reports the achieved service levels to all stakeholders.
- **Service Owner** : The Service Owner has the responsibility to deliver a particular service within the agreed service levels. Typically, this role acts as the counterpart of the Service Level Manager at time of negotiating Operational Level Agreements (OLAs). Often, the Service Owners are observed as the leader of a team of technical specialists or an internal support unit.

5.1.3 Capacity Management

Capacity management is a process used to ensure that the service provider has sufficient IT resources to respond cost-effectively to current and future business requirements. It helps determine the current demand for services and how their demands can change over time.

Scope

The Capacity Management Process provides the necessary information about the current and planned use of individual components in order to allow organizations to decide which components to upgrade, when to upgrade and how much the cost would be. For example, as the use of IT services changes and functionality develops, an organization may need more central processing units (CPUs), memory and storage devices.

ITIL Capacity Management works closely with other ITIL processes, such as Service Level Management, IT Service Continuity Management and Availability Management, to access the current IT infrastructure and to plan the resource capacity required to maintain the desired level of service. Coordinates the financial management process to obtain information on budget allocation for all types of resources and to inform the financial department of the organization if any further budget allocation is required.

Process Objective : To ensure that the capacities of IT services and IT infrastructure are able to deliver the agreed service level objectives in a cost - effective and timely manner. Capacity management takes into account all resources required to deliver the IT service and plans for short, medium and long term business needs.

Activities

- Designing a service so that it meets Service Level agreement (SLA) targets after its implementation.
- Managing resource performance so that services meet their SLA targets.
- Periodically reviewing current service capacity and service performance.
- Assisting with the diagnosis of performance-related issues.
- Creating and maintaining a capacity plan that aligns with the organization's strategic plans.
- Gathering and evaluating data regarding service usage, and document new requirement if any.
- Guiding the implementation of changes related to service capacity.

Process Steps

Step 1 – Gather the Data : This step includes few activities like working with the business to determine what the expected service-level are & quality requirements. Then work with Demand Management to predict the demand based on user roles, and take inputs from Finance Management team to determine the costs.

Step 2 – Design a Service and Create Agreement : Once all of the above information is taken, then it works with Service Level Management to build an SLA that everyone can agree to.

Step 3 – Build the Service : In this step, the actual service is built. This involves purchasing the components and building the necessary IT infrastructure, processes, and documentation to support the new service. The financial management team would be involved at this stage to facilitate purchasing of components and other resources, and the development team will be engaged to develop the service.

Step 4 – Operation : Once the service is built and everyone agrees that the service meets the Acceptance Criteria (SAC), then the go-live time for that service is finalized.

Sub-Process

1. Business Capacity Management

Used to translate the business needs into IT requirements. It also ensures that future capacity and performance needs can be fulfilled.

It predict changing requirements for capacity demand and manage such demand on a tactical level.

Hence, company infrastructure facilitated
to boost production by 1000 units
in a day.

For example, offices are not reducing the usage of papers & replacing the paper with softcopy documents, which sequentially requires purchasing of more Desktops and Laptops.

2. Service Capacity Management

Used to manage, control and predict the performance and capacity of operational services. This includes initiating proactive and reactive action to ensure that the performances and capacities of services meet their agreed targets.

This target meeting is achieved by measuring performance and comparing it to requirements that are set in Service Level Agreements (SLAs) or Service Level Requirements (SLRs). Such as if the company is increasing the number of Desktops and Laptops, then they must also consider hiring more IT support Engineers.

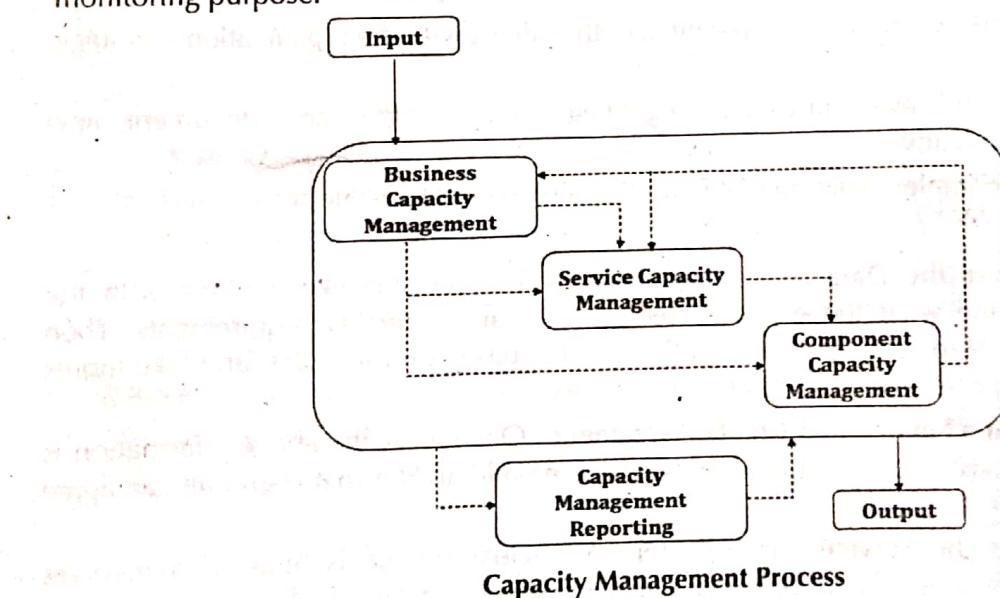
3. Component Capacity Management - Planning the services, disk space

Used to manage, control and predict the performance, utilization, and capacity of IT resources and individual IT components.

The goal is to reduce the total amount of service downtime by monitoring current performance and predicting future performance. For example, if the softcopy and software usage is increasing then the organization should consider upgrading the individual PC components such as Hard Disk, RAM, and CPU etc.

4. Capacity Management Reporting

This sub-process is responsible for generating reports on the service information, resource capacity, utilization and performance, which is called Capacity Report. This report is then circulated to other Management processes and IT Management for planning & monitoring purpose.



Terminologies & Definitions

- **Capacity Management Information System :** This is a virtual repository of all Capacity Management data, usually stored in multiple physical locations.
- **Capacity Plan :** A Capacity Plan is used for planning & managing the resources required for delivering IT services. The Capacity plan contains the prediction of required resources and their costs for different business scenarios to achieve the agreed service level targets.
- **Capacity Report :** The Capacity Report provides information about the services their resource utilization, and current performance.
- **Event Filtering and Correlation Rules :** Rules and Criteria are used to determine if an Event is significant and to decide upon an appropriate response.

Roles and Responsibilities

- **Capacity Manager :** Capacity Manager Role is responsible for ensuring that services and infrastructure are having adequate capacity and can deliver the agreed performance targets in a cost-effective and timely manner. All resources required to deliver the service and is also responsible for planning according to short, medium and long-term business requirements.

5.1.4 Availability Management

ITIL Availability Management is used to ensure that the services are available where necessary. This means usually that every service is available under the terms of service level agreements (SLAs). To do this, the availability management team regularly reviews the requirements for the availability of business processes. And then they ensure that there are the most cost - effective contingency plans. These plans are regularly tested to ensure that they meet the business needs.

Scope

Availability Management process plays a leading role in **component failure impact analysis (CFIA)** and **service outage analysis (SOA)** initiatives.

Typically, the Availability Management team determines the cause of the problem, analyses any related trends, and then takes the steps to ensure service availability according to SLAs.

The ITIL Availability Management process works jointly with Capacity Management, Service Level Management, and IT Service Continuity Management to plan for the infrastructure requirement needed to meet the targeted service level and quality.

It also works closely with Incident Management and Event Management process to help them meet the operation level service targets and quality standards.

Process Objective

Defining, analysing, planning, measuring and improving all aspects of IT service availability. It is responsible for ensuring all IT infrastructures, processes, tools, roles, etc. are appropriate for the agreed objectives of availability.

Components

Availability Management has six components which determine the accuracy service availability. Those are as follows :

- **Availability :** Determines the ability of the service or component to provide the agreed-upon functionality when required.
- **Reliability :** Determines ability of a service or component to perform at an agreed level at described conditions.
- **Maintainability :** Describes the ability of a service or component to remain operational, or be restored to an operational state.
- **Serviceability :** Describes the ability for an external supplier to maintain the availability of service or component under a third-party contract.
- **Resilience :** It's a method of keeping services reliable in an event of major failure and it also measures the chances of such failure. This broadly describes the need to service redundancy.
- **Security :** Security refers to the confidentiality, integrity, and availability of all service related data.

Activities

Availability Management process includes two types of activities, (i) Reactive and (ii) Proactive.

i) **Reactive Activities** : Reactive Availability Management includes activities such as monitoring, measuring, analysis and management of all events, incidents, and problems causing service unavailability. These activities are generally performed by operational roles.

ii) **Proactive Activities** : Proactive Availability Management includes proactive planning, design, and monitoring of services to improve the availability.

These activities are typically performed by design and planning roles.

Proactive activities can be further divided into two categories : **Service Availability & Component Availability**. Activities performed under this proactive category are :

- Participate in IT infrastructure design.
- Monitor actual IT availability achieved.
- Create, maintain & review Availability Plan.
- Schedule Availability Testing.
- Attend CAB meetings.
- Assessment & Testing after a major business change.
- Assess & Manage Risk in an economically viable way.

Sub-Process

1. Design Services for Availability

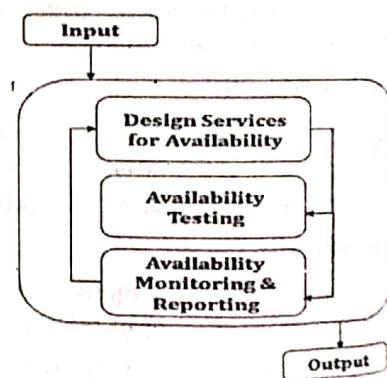
As the name suggests, this sub-process is responsible for designing the procedures and technical features required to fulfill the agreed availability levels.

2. Availability Testing

This sub-process is responsible for scheduling and arranging for regular testing of all availability, resilience and recovery mechanisms.

3. Availability Monitoring and Reporting

Used to monitor the current availability achievements of services and components, compare that result with the agreed availability benchmarks, identify the improvement areas, and preparing a detailed report. It also circulates the report to other Service Management processes and IT Management for decision-making purpose.



Availability Management Process

Terminologies and Definitions

- **Availability Design Guidelines** : It draws the guidelines from a technical point of view, that how the required availability levels can be achieved, including specific instructions for application development and for externally sourced infrastructure components.
- **Availability Guidelines for the Service Desk** : Guidelines for Service Desk on how to manage Incidents causing unavailability to prevent minor incidents from becoming major Incidents.
- **Availability Management Information System** : It is a virtual repository of all Availability Management data, typically stored in multiple physical locations.
- **Availability Plan** : The Availability Plan contains detailed information about initiatives taken for improving the availability of service or component.
- **Availability/ ITSCM/ Security Testing Schedule** : A schedule for the periodic testing of all availability, continuity and security mechanisms, jointly regulated by

Availability Management, IT Service Continuity Management (ITSCM), and Information Security Management.

- **Availability Report** : A Report containing information related to service and infrastructure component availability. This Report is then circulated to other Service Management processes and IT Management for decision making purpose.
- **Event Filtering and Correlation Rules** : Rules and Criteria are used to determine if an Event is significant and to decide upon an appropriate response.
- **Maintenance Plan/ SOP** : Define the frequency and scope of preventative maintenance.
- **Recovery Plan** : It is jointly created by Availability Management and IT Service Continuity Management. This recovery plan contains specific instructions for restoring specific services or components to a working state from a major failure.
- **Technical/ Administration Manual** : A document detailing the required procedures to run and maintain application or infrastructure component.
- **Test Report** : A Test Report provides a summary of testing and assessment activities performed by any ITSM process.
- **Vital Business Function (VBF)** : VBF refers to business-critical elements that are supported by an IT service.
- **Service Failure Analysis (SFA)** : It is a structured approach to identifying causes of service interruption.

Roles and Responsibilities

- **Availability Manager** : This role is responsible for defining, analysing, planning, measuring and improving all aspects of the availability of IT services & components. Availability Manager also has to coordinate with Capacity Manager to ensure that all IT infrastructure, processes, tools, roles etc. are appropriate for achieving the agreed service level targets for availability.

5.1.5 IT Service Continuity Management (ITSCM)

ITSCM prepares the organization to recover from disasters and major emergencies to maintain the business continuity.

It helps the organization in two ways : (i) through preventive disaster and emergency planning and (ii) through periodic disaster and emergency management exercises. The implementation of ITSCM must be aligned with the Business Continuity Management of the organization.

Scope

For a Service Provider, if service continuity cannot be maintained and/or restored within SLA, then the business may not be able to get the full advantage from the Service.

ITSCM focuses only on those events that the business identifies as significant enough to be treated as a Disaster. Any less significant events are taken care of by the incident management process.

ITIL ITSCM process is tightly bound with other ITIL processes, such as Availability Management, Capacity Management, Service Level Management to access and plan for the resources required to maintain the desired service level.

ITIL Continuity Management also works closely with Risk Management and Information Security Management to access the potential threats to the service continuity and take preventive actions.

Process Objective

Manage risks that could have serious implications for IT services. ITSCM ensures that the IT service provider can always provide the minimum agreed level of service by reducing

the risk of disaster events to an acceptable level and by planning for IT services recovery. ITSCM should be designed to support Business Continuity Management.

Activities

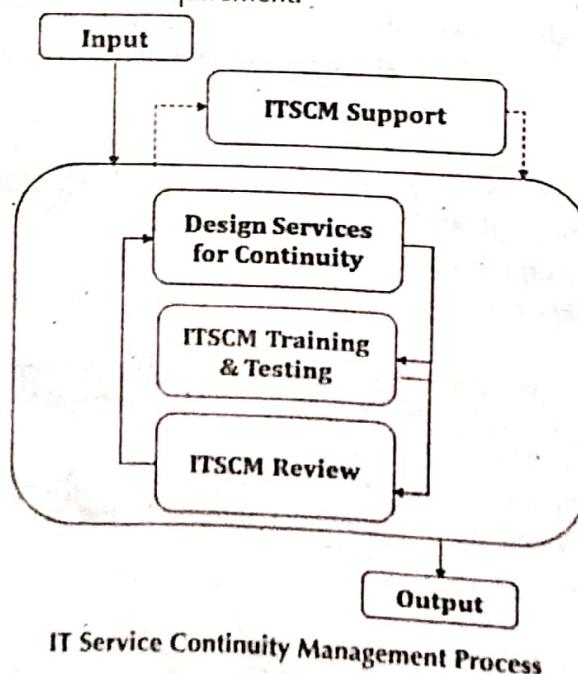
Broadly IT Service Continuity Management process has four stages or activities :

1. **Initiation** : Initiation includes defining policy, scope, terms of reference, project planning and resource allocation for ITSCM strategy and plans.
2. **Requirements and Strategy** : In this step, business impact analysis and risk assessment are performed for each of the IT services to identify the assets and their threats & vulnerabilities. And also priorities are assigned to the Services that are to be recovered.
3. **Implementation** : This stage includes evaluation of recovery options, planning the risk reduction, executing risk reduction measures, and testing the implementation of contingency plan.
4. **Ongoing Operation** : This Operation stage takes care of testing, reviewing, and revising the ITSCM plans on a regular interval, change control of ITSCM plans, and also responsible for user education and awareness.

Sub-Process

IT Service Continuity Management (ITSCM) Process has four sub-processes.

1. **ITSCM Support** : This sub-process makes sure that all IT personnel with responsibilities for fighting disasters are aware of their exact duties and they have instant access to all relevant information when a disaster occurs.
2. **Design Services for Continuity** : This sub-process is used to design appropriate and financially viable continuity mechanisms and procedures to meet the agreed business continuity targets. This includes the design of risk reduction procedures and recovery plans.
3. **ITSCM Training and Testing** : This ensures periodic testing of all preventive measures and recovery mechanisms designed for disaster recovery. It also ensures that appropriate training on disaster recovery is given to every IT Staff.
4. **ITSCM Review** : This sub-process is used to verify that the ITSCM testing is being done as per schedule. And also to ensure that the present disaster prevention measures are still in line with the business requirement.



Terminologies & Definitions

- **Availability / ITSCM / Security Testing Schedule :** A schedule for the periodic testing of all availability, continuity and security mechanisms, jointly regulated by Availability Management, IT Service Continuity Management (ITSCM), and Information Security Management.
- **Business Continuity Plan (BPC) :** It describes the Plan or approach to ensure the continuity of Vital Business Functions (VBF) in the case of disaster events. The BPC is prepared by the business continuity management team and serves as a reference point for producing the IT Service Continuity Strategy.
- **Disaster Recovery Invocation Guideline :** A document produced by ITIL IT Service Continuity Management with detailed instructions and steps to be followed in case any disaster occurs.
- **Vital Business Function (VBF) :** VBF refers to business-critical elements that are supported by an IT service.
- **Service Failure Analysis (SFA) :** It is a structured approach to identifying causes of service interruption.
- **IT Service Continuity Report :** The IT Service Continuity Report is created at regular intervals and provides other Service Management processes and IT Management with information related to disaster prevention & recovery.
- **IT Service Continuity Strategy :** The IT Service Continuity Strategy contains an outline of the strategic approaches to be done to maintain the continuity of vital services in the case of disaster events.
- **IT Service Continuity Plan :** IT Service Continuity Plan is the detailed step-by-step disaster recovery procedure created on the basis of ITSCM Strategy. ITSCM Plan describes specific instructions on, how the continuity of service would be maintained at the time of specific disaster events and services.
- **Recovery Plan :** Recovery Plans are created jointly by Availability Management and IT Service Continuity Management. The plans contain detailed instructions for returning specific services and/or components to a working state from a Major failure.
- **Test Report :** A Test Report provides a summary of testing and assessment activities performed by any ITSM process.

Roles and Responsibilities

- **IT Service Continuity Manager :** The IT Service Continuity Manager is responsible for managing risks that could seriously impact IT services. This Role also guarantees to provide minimum agreed service level at the time of disaster, by reducing the risk to an acceptable level and planning for the recovery of IT services. To achieve the above objective, IT Service Continuity Manager works hand-in-hand with Risk Manager & Availability Manager.

5.1.6 Information Security Management

ITIL Information Security Management Process describes the approach and controls the measure of IT security inside an organization.

Scope

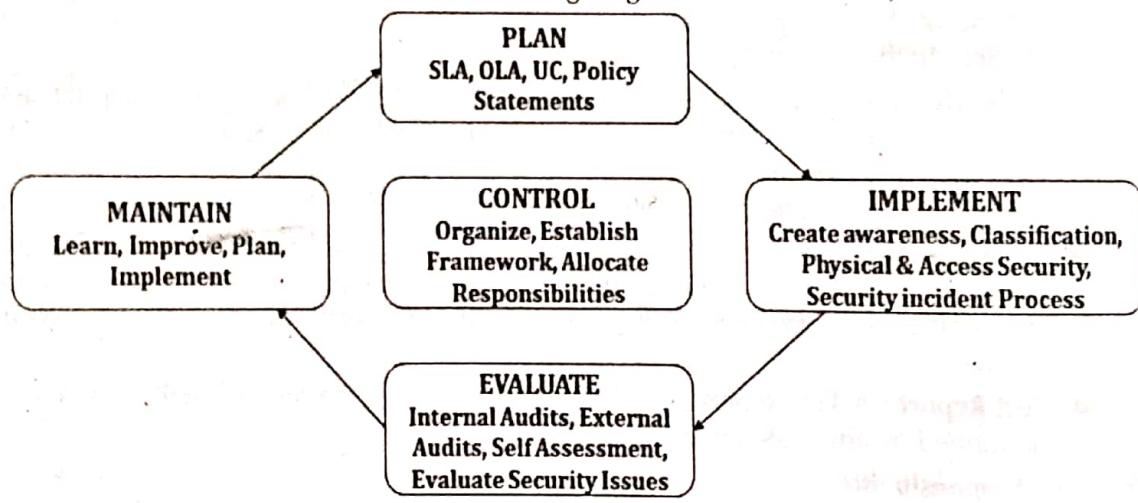
Information security management (ISM) is used to align IT security with business security and to ensure the effective management of information security in all services and service management activities. The ITIL ISM process is the basis of the ITIL Security Process. The main objective of information security management, is to control access to organizational information efficiently. ISM has a strong relationship with other ITIL processes, such as availability management and IT service continuity management.

Process Objective : To ensure the confidentiality, integrity and availability of information, data and IT services of an organization. Information security management is usually part of a more comprehensive organizational approach to security management than the IT service provider.

Activities

- i) **Plan** : The objective of this activity is to devise and recommend the appropriate security measures, based on an understanding of the organization's requirement. Here ISM coordinates with service level management to understand the security requirements defined under SLA.
- ii) **Implement** : This key element ensures that appropriate procedures, tools, and controls are in place to support the ITIL Information Security Management Policy and Plan.
- iii) **Evaluation** : This phase is responsible for measuring the success of the security implementation. For doing this it carries out regular technical security audits of IT systems.
- iv) **Maintain** : This phase takes the security evaluation results and suggests improvements on security implementation, and on security agreements as specified in, for example, SLAs and OLAs.

Remember that, these above phases are NOT one-time activity. These are continuous and cyclic activities, as shown in the following diagram.



Sub-Process : ISM has four sub-process :

1. Design of Security Controls

Responsible for designing appropriate technical and organizational measures in order to ensure the confidentiality, integrity, security, and availability of an organization's assets, information, data, and services. It can further be categorized as Administrative, Logical & Physical Control.

2. Security Validation & Testing

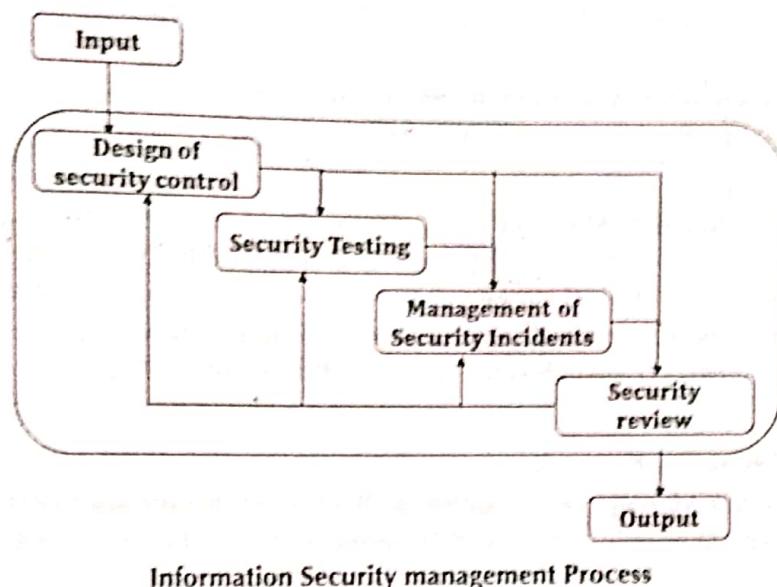
Responsible for regular testing & validation of the effectiveness of the IT Security activities and implementation.

3. Management of Security Incidents

To detect and fight attacks and intrusions, and to minimize the damage incurred by security breaches.

4. Security Review

To review if security measures and procedures are still in line with risk perceptions from the business side, and to verify if those measures and procedures are regularly maintained and tested.



Information Security management Process

Terminologies & Definitions

- **Confidentiality :** Means protecting information against unauthorized access and use. It also means Information can only be accessed by those authorized. Examples: passwords, access cards etc.
- **Integrity :** A measure of Accuracy, completeness, and timeliness of services, data information, systems and physical locations. It ensures Information is complete, accurate and protected against unauthorized modification. Examples: Rollback mechanisms, test procedures, audits etc.
- **Availability :** Defines that, information should always be accessible by authorized personnel whenever required.
- **Authenticity and Non-repudiation :** It means Information exchanges between parties should be done securely & can be trusted.
- **Information Security Policy :** The policy on information security describes and records the approach of the organization to manage the security of information. It includes references to specific policies for the security of information.
- **Underpinning Information Security Policy :** Information security policies are specific policies that complement the primary ITIL security management policy of the organization by laying down binding rules for the use of systems and information. It also lays down rules for the use and performance of services. The main objective is to improve the security of information.
- **Information Security Report :** The Information Security Report provides a detailed information security analysis report and shares this information with other service management and IT management processes.
- **Security Advisories :** A list of known security vulnerabilities compiled by third party product providers from inputs. The list includes instructions for preventative measures and for dealing with security breaches once they occur.
- **Security Alert :** A warning about the future or current outbreak of security threats from the ITIL information security management process. The main aim is to increase

the awareness of users and IT staff so that they can identify any attacks and take the necessary precautions.

- **Security Management Information System (SMIS)** : A virtual repository of all Information Security Management data, usually stored in multiple physical locations.
- **Security Incident** : Any incident related to information security that may obstruct with achieving the SLA security requirements.

Roles

- **Information Security Manager** : The Information Security Manager is responsible for ensuring the confidentiality, integrity, and availability of an organization's assets, information, data and IT services. This role has a wider scope of work than the IT service provider, generally includes monitoring & handling of paper (hard copy), building access, phone calls etc., for the entire organization.

3.1.7 Supplier Management

The **ITIL Supplier Management process** is all about managing suppliers and the services they supply, to provide seamless quality of IT Services in an economical manner.

Scope

The ultimate objective of Supplier Management is to obtain value for money from suppliers and contracts. Supplier Management should cover the management of all suppliers and ensure that all supplier contracts meet business requirements, SLA and SLR. ITIL Supplier Management Process works closely with Service Level Management and Availability Management to ensure that suppliers deliver the level of service required to meet service levels and quality objectives.

Process Objective

To ensure that all contracts with suppliers support the needs of the business, and that all suppliers meet their contractual commitments.

Activities

- Implement and enforce the supplier policy.
- Management of sub-contracted suppliers.
- Contracts categorization, selection, and risk assessment.
- Maintain a supplier policy and a supporting **Supplier and Contract Management Information System (SCMIS)**.
- Management of SCMIS Suppliers.
- Maintenance of standard contracts, terms and conditions.
- Development, negotiation, and agreement of contracts with suppliers and manage them through their lifecycle.
- Contract review, renewal, and termination.
- Management of suppliers and Supplier performance.
- Management of contractual dispute resolution.

Refer to the below diagram for a conceptual view of these above activities :



What is a Contract?

A contract is a documented and legal binding agreement between a service provider and the customer to supply or receive certain services. In the case of a contract with the supplier, it generally specifies all the necessary information, such as service nature, SLA targets, service cost, etc. The official term of such a service delegation to a third - party supplier is called "outsourcing".

ITIL Contract Management and Types of Supplier Contracts

There are many types of supplier-contract or outsourcing types present which are mentioned below :

1. Co-sourcing

An informal combination of outsourcing, using several outsourcing organizations working together to co-source key elements within the lifecycle.

2. Partnership or multi-sourcing

A formal arrangement between two or more organizations to work jointly to design, develop, transition, maintain, operate, and support IT services.

3. Business Process Outsourcing (BPO)

Formal arrangements, where an organization delegates the management of one or more of its business process or function to the external organizations. *Moving other companies*

4. Knowledge Process Outsourcing (KPO)

This is a new enhancement of Business Process Outsourcing, where external organizations provide business expertise which requires advanced analytical and specialized domain skills. *Survey, market research, data mining etc.*

5. Application Service Provision

Where external organizations provide shared computer-based services to customer organizations over a network.

6. Underpinning Contract

It is an agreement or contract between a Service Provider and a Third Party Provider for receiving some specialized services. The third party provides support to core services, which enables the service provider to deliver a service to a customer. For Example, A Service Provider may make an agreement to a third party supplier for servicing computer hardware in time of critical hardware failure.

Sub-Process

Supplier Management has six sub-processes operating under it :

1. Providing the Supplier Management Framework

Defines the guidelines and standards for procurement of services and products. This also includes the terms of the Supplier Strategy and the preparation of standard Terms and Conditions.

2. Assessment or Evaluation of new Suppliers and Contracts

Responsible for evaluating prospective suppliers in accordance with the Supplier Strategy, and also to select the most suitable supplier.

3. Establishing new Suppliers and Contracts

This process is used to negotiate and sign a binding agreement or contract with the suppliers. This process is typically used for significant investments, either in externally provided services or in technology.

4. Processing of Standard Orders

Responsible for processing pre-defined orders and/or items for commodity products and services within the boundaries of existing contract frameworks.

5. Supplier and Contract Review

Responsible for verifying if the contractually agreed performance is actually being delivered by suppliers, and to define improvement measures if required.

6. Contract Renewal or Termination

It is used to carry out the regular assessment of existing contracts to check if they are still relevant with current requirements. And also to do the renewals or termination of contracts based on the assessment results.

Terminologies & Definitions

Supplier and Contract Management Information System (SCMIS) : Formerly referred to as Supplier and Contract Management Database (SCMDB). The Supplier and Contract Management Information System (SCMIS) is a database or structured document used to manage suppliers and contracts throughout their lifecycle. Supplier and Contract Management Information System (SCMIS) contains key attributes of all supplier contracts and acts as an input to Service Knowledge Management System.

Supplier Service Improvement Plans (SSIP) : Used to record all improvement plans & actions agreed between suppliers and service providers.

Supplier Survey Reports : Summary of feedback gathered from all individuals that deal directly with suppliers. These feedbacks are reviewed to ensure that suppliers are maintaining reliable service quality.

Supplier & Contract Performance Reports : This report is used as an input for the Supplier & Contract review meetings to manage the quality of the service provided by suppliers and partners.

Purchase Order : An order for purchasing items (services or components) from a supplier. In case of purchase of services it also describes the Underpinning Contract mentioning the service level targets.

Purchase Request : A request to purchase a service or a product from an external supplier, issued from other ITSM processes.

Roles and Responsibilities

- **Supplier Manager :** The Supplier Manager role is responsible for ensuring that value for money is obtained from all suppliers. Supplier Manager also makes sure that

contracts with suppliers fulfil the business needs, and that all suppliers are meeting their contractual commitments.

5.2 CHALLENGES

Challenges or difficulties will be faced and overcome with every undertaking. This applies in particular to the design of new services and processes that meet the requirements of all stakeholders in the company. Experience has demonstrated that the following helps solve the challenges :

- Understanding and ensuring that business requirements and business priorities are taken into account in the design of processes and services.
- Communications will be vital both in explaining what is happening and how individuals are affected and in listening to the individual's needs and requirements. It is vital to communicate with people about issues related to their daily work.
- Involve in the design as many people as possible. The establishment of focus groups or steering groups can be very efficient in obtaining the right solution and obtaining broader support.
- Engagement from senior management as well as from all staff levels.

Examples of challenges that may be faced include :

- The infrastructure procured has poor monitoring and control characteristics.
- Use of various technologies and applications.
- Unclear or changing business requirements.
- Lack of awareness and knowledge about service goals and business needs.
- Certain facilities are not included in the design.
- Planning resistance or lack of planning that results in unplanned initiatives and unplanned purchases.

5.3 RISKS

There are a number of risks that are directly related to the service life cycle design phase. To ensure that these risks are not realized, these must be identified. These include: if any of the Service Design PFSs are not met, the Service Design or Service Management process will not work.

- If the level of maturity of one process is low, full maturity in other processes will be impossible to achieve.
- Business requirements for IT staff are not clear.
- Business timescales are such that adequate service design time is not given.
- Insufficient tests, leading to poor design and consequently poor implementation.
- An incorrect balance is struck between innovation, risk and cost while at the same time seeking a competitive edge, as the company wishes.
- Infrastructure, customers and partners are not adequate to meet the overall business needs.
- The policies and strategies are not available or their content is not clearly understood.
- Service design activities are provided with insufficient resources and budget.
- Insufficient time for the design phase or insufficient training for the design staff.
- Insufficient engagement or commitment to the functional development of the application leading to insufficient attention to the requirements of service design.



QUESTIONS

1. What is Service Design Process? List the Key Processes of Service Design.
2. Explain in details Service Catalogue Management process of Service design.
3. Explain in details Service Level Management process of Service design.
4. Explain in details Capacity Management process of Service design.
5. Explain in details Availability Management process of Service design.
6. Explain in details IT Service Continuity Management process of Service design.
7. Explain in details Information Security Management process of Service design.
8. Explain in details Supplier Management process of Service design.
9. Explain the sub processes in Service Level Management.
10. List and explain the Terminologies & Definitions in Service Level Management.
11. Explain the sub processes in Capacity Management.
12. List and explain the Terminologies, Roles in Capacity Management process.
13. Explain the components of Availability Management process.
14. Write short note on activities of Availability Management process.
15. List and explain the Terminologies & Definitions in Availability Management.
16. List and explain the Terminologies & Definitions in IT Service Continuity Management process.
17. List and Explain activities and sub processes of IT Service Continuity Management process.
18. List and Explain activities of Information Security Management process.
19. List and explain the Terminologies & Definitions in Information Security Management process.
20. What are the activities of Information Security Management process?
21. What is a Contract? Explain Contract Management and Types of Supplier Contracts.
22. List and Explain sub processes of Information Security Management process.
23. List and explain the Terminologies & Definitions in Information Security Management process.
24. Explain in detail Challenges in Service Design Process.
25. Explain in detail Risks associated with Service Design Process.

