
# ITIL ® 4 FOUNDATION VER 1.3

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# IT Service Management In Modern World

## Know your faculty

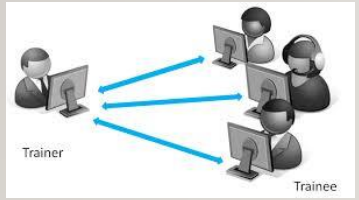
- Certified ITIL Expert in v3 – all modules.
- Over 67 ITIL credits. Takes 22 credits to become an ITIL Expert
- ITIL4 Fnd & ITIL4 Managing Professionals
- Certified Project Management Professional
- Certified Scrum Master – PSM1
- Certified DevOps Foundation, Agile Service Management

- Over 23 year of IT experience
- Domain expertise in Manufacturing Industry-Pharmaceuticals; Retail Industry & Training industry
- Over 10 years in delivering training to MNCs

# GUIDELINES

## Do's

**Ask Questions**




**Make it Interactive**

**Mute your mic always. Unmute for questions and mute immediately.**

# IPR Acknowledgement

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# ITIL4 FOUNDATION

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## DAY 1

- Introduction To IT Service Management
- Why ITIL® 4?
- Understanding The Key Concepts Of Service Management.
- ITIL® 4 Guiding Principles
- 4 Dimensions Of Service Management
- Components Of ITIL Service Value System
- ITIL Service Value Chain

# ITIL4 FOUNDATION

## CONTENTS DAY 2

- Recap day 1
- Purpose And Key Terms of 18 ITIL® Practices
- Mock Exam
- ITIL4 Certification Examination

# ITIL4 FOUNDATION

## CONTENTS DAY 3

- Recap day 1 & 2
- Case Study (Optional)
- 2 sets Axelos Mock Exam
- ITIL® 4 Certification Examination

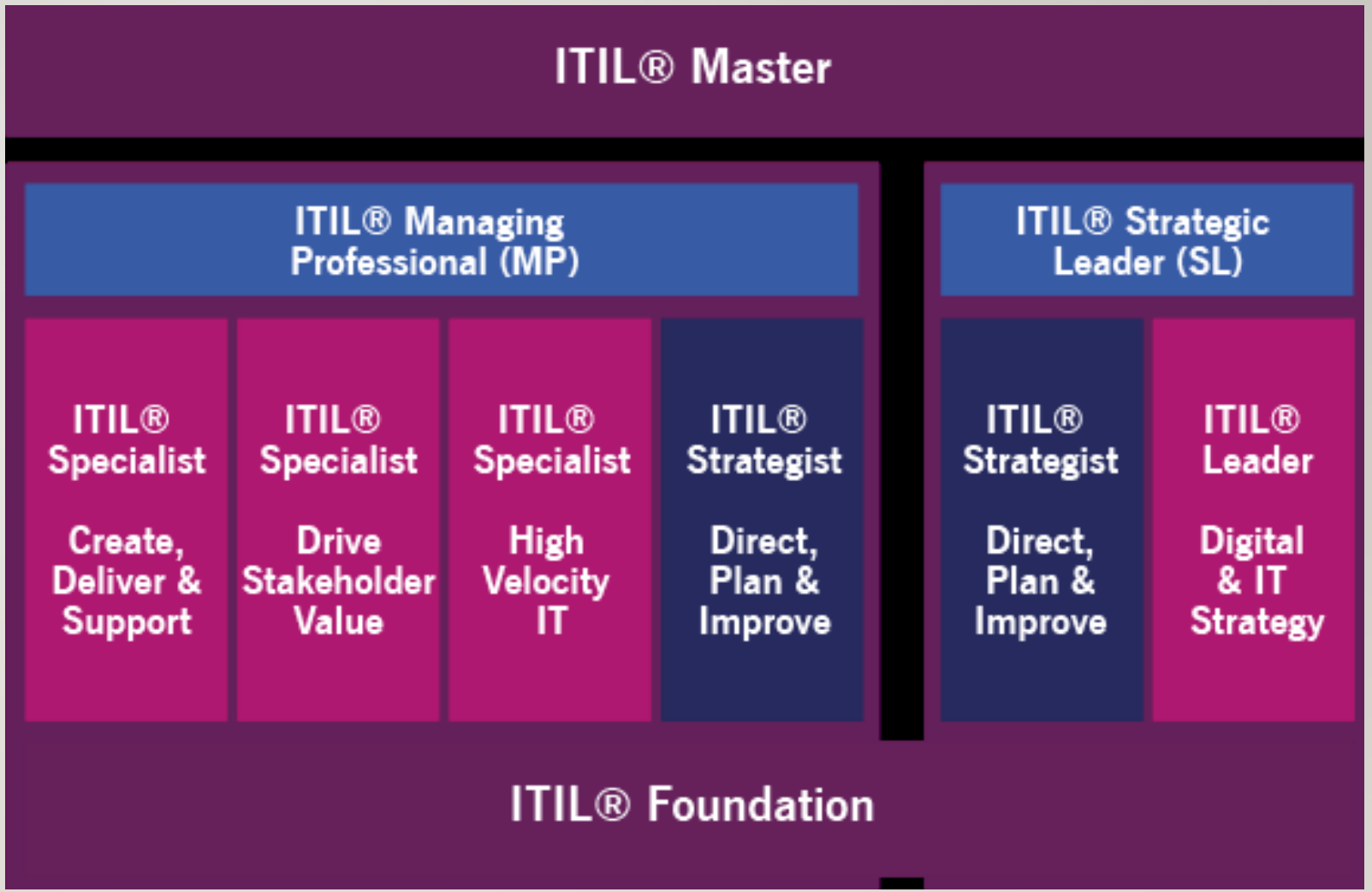
# ROAD MAP IN ITIL4 CERTIFICATION

- **ITIL(MP)** targets IT practitioners working with technology & digital team across businesses.
- Provides practical & technical knowledge about how to run successful IT projects, teams & workflows.

- **ITIL(SL)** recognizes the value of ITIL, not just for IT operations, but for all digitally enabled services.

- Clear understanding of how IT influences and directs business strategy.

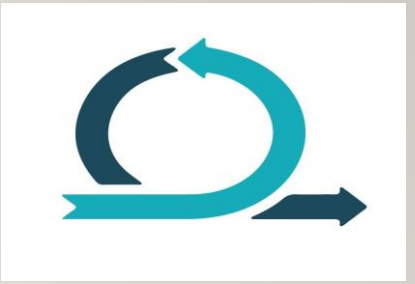
- ITIL Leader Digital & IT Strategy module mandates 3 years of managerial experience as a prerequisite along with ITIL4 Foundation.



# 1.0 INTRODUCTION TO IT SERVICE MANAGEMENT

# 1.2 ABOUT ITIL4

- ITIL® has led the IT Service Management (ITSM) industry with guidance, training and certification programmes for over 30 years. ITIL 4 brings ITIL up to date by re-shaping much of the established ITSM practices in the wider context of customer experience, value streams, and digital transformation, as well as embracing new ways of working, such as Lean, Agile, and DevOps.
- ITIL4 provides the guidance organizations need to address new service management challenges and utilize the potential of modern technology. It is designed to ensure a flexible, coordinated and integrated system for the effective governance and management of IT-enabled services.
- ITIL4 is the result of great amount of global research and development across IT Service Management industries. It has involved active practitioners,trainers,consultants,vendors, technicians and business customers. The architect team has ensured the content meets modern requirements of Continuity, Innovation,Flexibility & Value.
- ITIL4 is a holistic approach with a focus on end-to-end product and service management, from Demand to Value.

# 1.1 INTRODUCTION TO IT SERVICE MANAGEMENT

According to World Trade Organization, services comprise the largest and most dynamic component of both developed and developing economies. Services are the main way the organization create value for themselves and their customers. Almost all services today are IT-enabled, which means there's tremendous benefit for organizations in creating, expanding and improving IT Service Management Capability.

- IT has become important business driver & a source of competitive advantage, thereby being a key Strategic Capability
- To remain relevant, many organizations are embarking on major transformational programs to exploit these opportunities, often referred as 'Digital' such as cloud computing, Infrastructure as Service (IAAS), Machine Learning, Blockchain….
- However they must balance the need for

- Stability and Predictability
- Operational Agility and Increased Velocity

# 1.1 INTRODUCTION TO IT SERVICE MANAGEMENT

- IT has becoming more integrated with other organizational capabilities.
- Silos are breaking down
- Cross functional teams are being used more widely.
- Service Management is evolving, and so is ITIL ®, the most adapted guidance on IT Service Management (ITSM) in the world

# 2.0 KEY ASPECTS OF SERVICE MANAGEMENT

# 2.0 KEY ASPECTS OF SERVICE MANAGEMENT

*Understand The Key Concepts Of Service Management*

# KEY CONCEPTS OF SERVICE MANAGEMENT

**A shared understanding of the key concepts and terminology of ITIL ® is critical to the effective use of this guidance by organizations and individuals to address real world service management challenges. To that end, this chapter explains some of the most important concepts of service management, including:*

- *The nature of value and value co-creation*
- *Organizations, service providers, service consumers and other stakeholders*
- *Products and services*
- *Service relationships*
- *Value: outcomes, costs and risks*

*These concepts apply to all services and service relationships, regardless of their nature and underpinning technology.*

* *Italics font denotes source from ITIL®4 publications*

# KEY CONCEPTS OF SERVICE MANAGEMENT

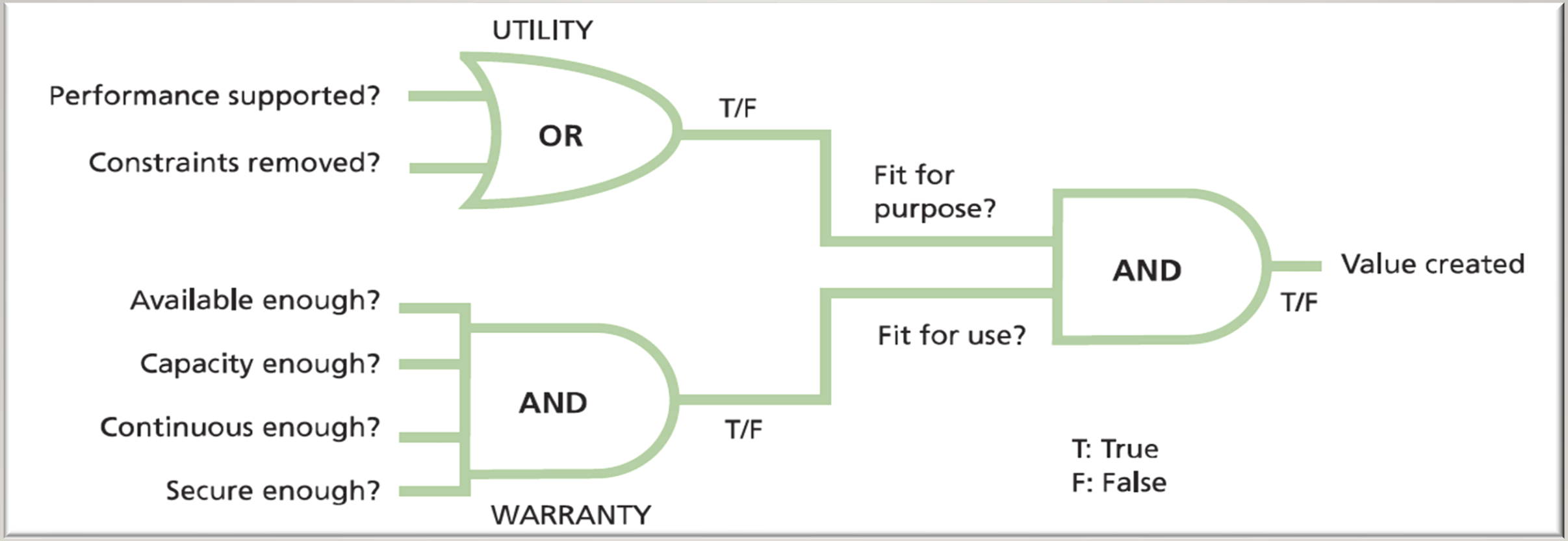
***Service:*** *A means of enabling value co-creation by facilitating outcomes that customers want to achieve, without the customer having to manage specific costs and risks.*

The service that an organization provides are based on one or more of it's products. Organizations owns or access to a variety of resources including

- People
- Information & Technology
- Value Stream & Processes and
- Supplier & Partners

* *Italics font denotes source from ITIL®4 publications*

# KEY CONCEPTS OF SERVICE MANAGEMENT



# 2.5.4 UTILITY AND WARRANTY

Utility & Warranty helps evaluate whether or not a service or service offering will facilitate the outcomes desired by the consumers and therefore create value for them

**** Utility :*** *The functionality offered by a product or service to meet a particular need. Utility can be summarized as 'what the service does' and can be used to determine whether a service is 'fit for purpose'. To have utility, a service must either support the performance of the consumer or remove constraints from the consumer. Many services do both. .*

**** Warranty :*** *Assurance that a product or service will meet agreed requirements. Warranty can be summarized as 'how the service performs' and can be used to determine whether a service is 'fit for use'. Warranty often relates to service levels aligned with the needs of service consumers. This may be based on a formal agreement, or it may be a marketing message or brand image. Warranty typically addresses such areas as the availability of the service, its capacity, levels of security and continuity. A service may be said to provide acceptable assurance, or 'warranty', if all defined and agreed conditions are met.*

** Italics font denotes source from ITIL®4 publications*

# 2.3.2 SERVICE OFFERINGS

***Service Offering:** A description of one or more services, designed to address the needs of a target consumer group. A service offering may include goods, access to resources, and service actions.*

Service offerings may include:

- Goods to be supplied to the customer
- Access to resources granted or licensed to a consumer under agreed terms & conditions
- Service actions performed to address a consumer need (support)

** Italics font denotes source from ITIL®4 publications*

# 2.4 SERVICE RELATIONSHIPS

***Service Relationship:** A co-operation between a service provider and service consumer. Service relationships include service provision, service consumption and service relationship management.*

***Service Provision:** Activities performed by an organization to provide services. Service provision includes:*

- Management of the providers resources
- Access to these resources for users
- Fulfilment of the agreed actions
- Service Level Management & Continual Improvement

Service Provision may also include the supplying of goods

* *Italics font denotes source from ITIL®4 publications*

# 2.4 SERVICE RELATIONSHIPS

***Service Consumption:** Activities performed by an organization to consume services. Service consumption includes:*

- Management of the consumer's resources needed to use the service
- Service use actions performed by users including:
  - ✓ Utilizing the provider's resources
  - ✓ Requesting service actions to fulfil.

Service consumption may also include the receiving (acquiring) of goods.

***Service Relationship Management:** Joint activities performed by a service provider and a service consumer to ensure continual value co-creation based on agreed and available service offerings.*

# KEY CONCEPTS OF SERVICE MANAGEMENT

## Service Consumers

When receiving services, an organization takes on the role of the service consumer. There are more specific roles involved in service consumption, such as customers, users & sponsors

***Customer:** Is a person who defines the requirements for a service and takes responsibility for the outcomes of service consumption.*

***Users:** A person uses services*

***Sponsor:** A person who authorizes budget for service consumption*

** Italics font denotes source from ITIL®4 publications*

# 2.1 KEY CONCEPTS OF SERVICE MANAGEMENT

***Service Management***
*A set of specialized organizational capabilities for enabling value for customers in the form of services*

Developing the specialized organizational capabilities mentioned in the above definition requires an understanding of:

- The nature of value
- The nature and scope of the stakeholders involved
- How value creation is enabled through services

** Italics font denotes source from ITIL®4 publications*

# 2.5.2 COSTS

*** Cost:** *The amount of money spent on a specific activity or resource.*

*From the service consumer's perspective, there are two types of costs involved in service relationships:*

1. *Costs removed from the consumer by the service (a part of the value proposition). This may include costs of staff, technology and other resources, which the consumer does not need to provide.*

2. *Costs imposed on the consumer by the service (the costs of service consumption). The total cost of consuming a service includes the price charged by the service provider (if applicable), plus other costs such as staff training, costs of network utilization, procurement, etc. Some consumers describe this as what they have to 'invest' to consume the service.*

*Both types of cost are considered when the consumer assesses the value which they expect the service will create.*

** Italics font denotes source from ITIL®4 publications*

# KEY CONCEPTS OF SERVICE MANAGEMENT

***Value***

*Value is the perceived benefits, usefulness and importance of something*


- **The purpose of an organization is to create value for stakeholders.*
- *The term 'value' Is used regularly in service management, and it is a key focus of ITIL 4;*
- *Inherent in this definition is the understanding that value is subject to the perception of the stakeholders, whether they be the customer or consumer of a service, or part of the service provider organization(s).*
- *Value can be subjective.*

** Italics font denotes source from ITIL®4 publications*

# 2.2 ORGANIZATIONS, SERVICE PROVIDERS, SERVICE CONSUMERS & OTHER STAKEHOLDERS

***Organization***

*A person or a group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives.*

* *Italics font denotes source from ITIL®4 publications*

# 2.5.1 OUTCOMES

***Output:** A tangible or intangible deliverable of an activity*

***Outcome:** A result for a stakeholder enabled by one or more outputs.*

*Acting as a service provider, an organization produces outputs that help its consumers to achieve certain outcomes.*

** Italics font denotes source from ITIL®4 publications*

# 2.5.3 RISKS

**** Risk:*** *A possible event that could cause harm or loss, or make it more difficult to achieve objectives. Risk can also be defined as uncertainty of outcome, and can be used in the context of measuring the probability of positive outcomes as well as negative outcomes.*

*As with costs, there are two types of risks that are of concern to service consumers:*

1. *Risks removed from a consumer by the service (part of the value proposition). These may include failure of the consumer's server hardware or lack of staff availability. In some cases, a service may only reduce a consumer's risks, but the consumer may determine that this reduction is sufficient to support the value proposition.*

2. *Risks imposed on a consumer by the service (risks of service consumption). An example of this would be a service provider ceasing trading, or experiencing a security breach.*

** Italics font denotes source from ITIL®4 publications*

# 2.1.1 VALUE CO-CREATION

Providers should no longer attempt to work in a vacuum to define what will be of value to their customers and users, but actively seek to establish mutually beneficial, interactive relationships with their consumers, empowering them to be creative collaborators in the service value chain.

Organizations recognize that value is co-created through:

- An active collaboration between providers and consumers, as well as
- Other organizations that are part of the relevant service relationships.

# 2.2.1 SERVICE PROVIDERS

***Service Provider***

*When provisioning services, an organization takes on the role of the service provider. They can be*

- *External to the organization or*
- *Can be part of the same organization*

** Italics font denotes source from ITIL®4 publications*

# 2.2.3 OTHER STAKEHOLDERS

A key focus of service management, and of ITIL, is the way that organizations co-create value with their consumers through service relationships. Other stakeholders that are important to value creation include

- Individual employees of the provider organization.
- Partners and suppliers.
- Investors and shareholders.
- Government organizations such as regulators, social groups, etc.

# 2.3 PRODUCTS AND SERVICES

**Table 2.1 provides examples of value for several different types of stakeholder.*

| Stakeholder | Example Stakeholder Value |
|---|---|
| *Service Consumers* | *Benefits achieved, costs and risks optimized* |
| *Service Provider* | *Funding from the consumer; business development; image improvement* |
| *Service Provider Employees* | *Financial and non-financial incentives, career and professional development, sense of purpose* |
| *Society and Community* | *Employment, taxes, organizations' contribution to the social and community development* |
| *Charity Organizations* | *Financial and non-financial contributions from other organizations* |
| *Shareholders* | *Financial benefits, such as dividends; sense of assurance and stability* |

** Italics font denotes source from ITIL®4 publications*

# 2.3.1 CONFIGURING RESOURCES FOR VALUE CREATION

***Product:** *A configuration of an organization's resources designed to offer value for a consumer.*

Products……

- Are created with a number of target consumer in mind-either internal or external to the organization.
- They are tailored to meet the needs of different group.

** Italics font denotes source from ITIL®4 publications*

# 2.4 SERVICE RELATIONSHIPS

***Service Relationship:** A co-operation between a service provider and service consumer. Service relationships include service provision, service consumption and service relationship management.*

***Service Provision:** Activities performed by an organization to provide services. Service provision includes:*

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- Access to these resources for users
- Fulfilment of the agreed actions
- Service Level Management & Continual Improvement

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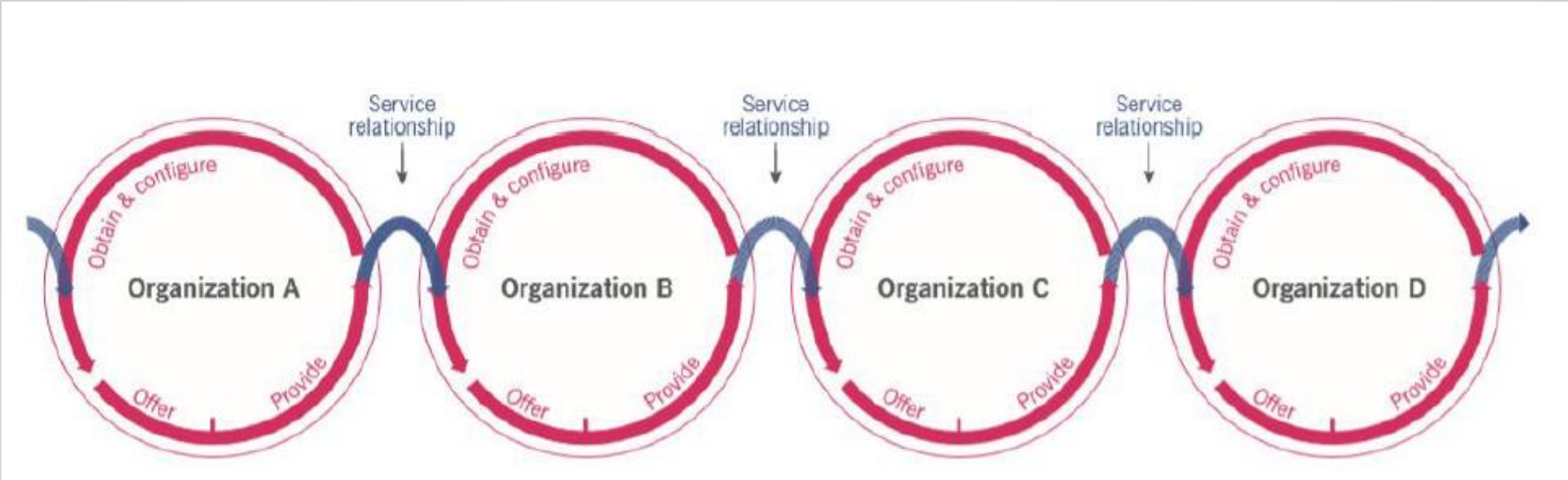
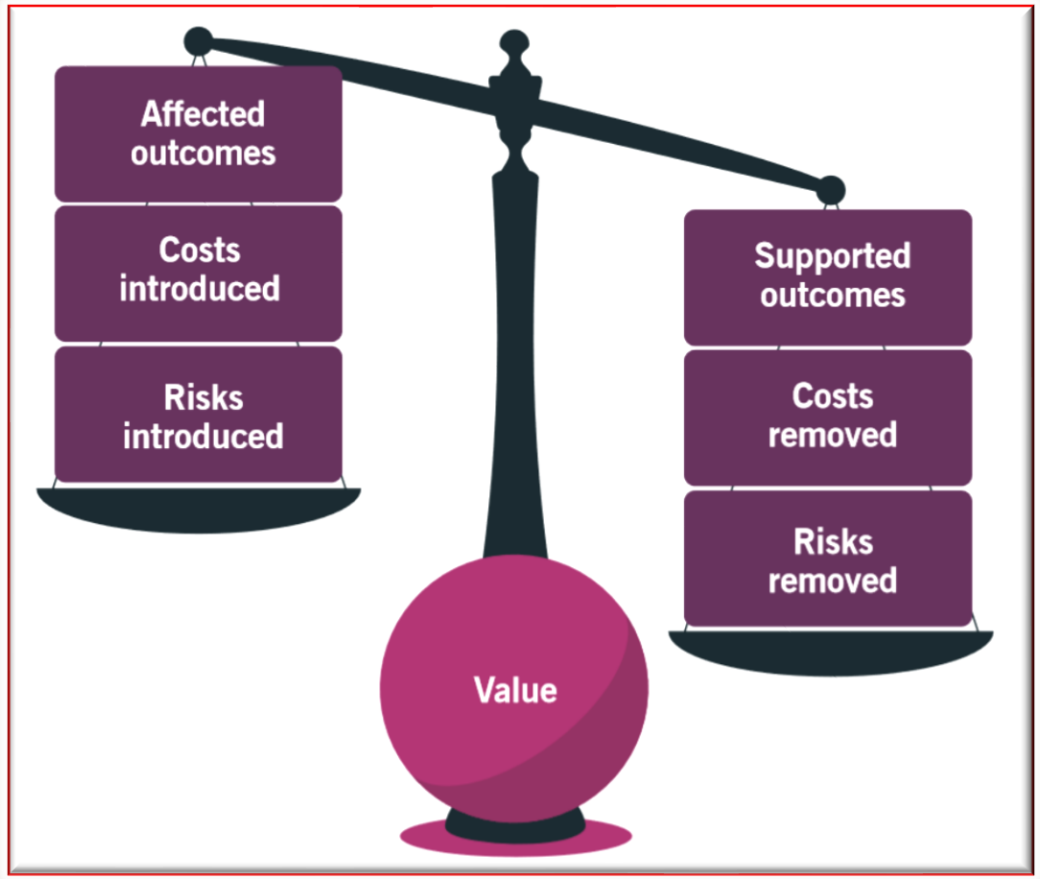
# 2.4.1 THE SERVICE RELATIONSHIP MODEL



# 2.5 VALUE:OUTCOMES, COSTS AND RISKS




Achieving value: outcomes, costs and risks

*Service providers help their consumers to achieve outcomes, and in doing so, take on some of the associated risks and costs.

*Achieving desired outcomes requires resources (and therefore costs) and is often associated with risks*

*Service relationships can introduce new risks and costs, and in some cases, can negatively affect some of the intended outcomes, while supporting others. Service relationships are perceived as valuable only when they have more positive effects than negative, as depicted in figure*

# 2.6 SUMMARY

**This chapter has covered the key concepts in*

- *Service management, in particular the nature of value and value co-creation, organizations, products and services.*
- *It has explored the often complex relationships between service providers and consumers, and the various stakeholders involved.*
- *The chapter has also covered the key components of consumer value: benefits, costs and risks, and how important it is to understand the needs of the customer when designing and delivering services.*
- *These concepts will be built upon over the next few chapters, and guidance provided on applying them in practical and flexible ways.*

** Italics font denotes source from ITIL®4 publications*

# 3.0 THE FOUR DIMENSIONS OF SERVICE MANAGEMENT

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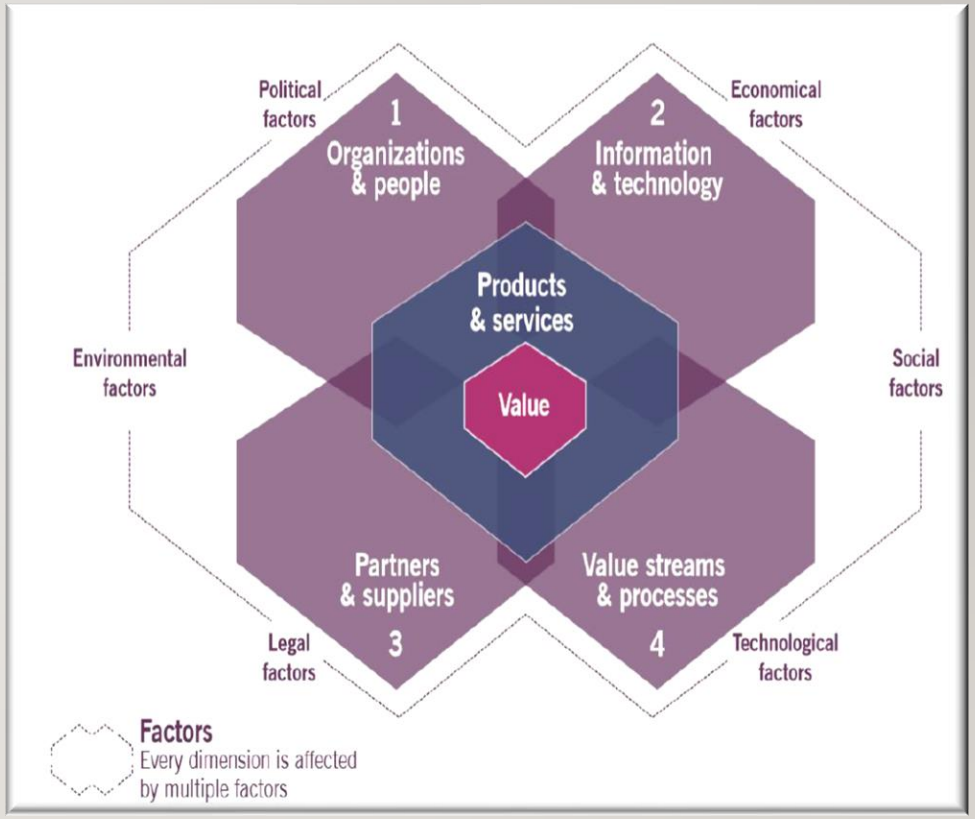
*Understand The Four Dimensions Of Service Management*

# 3.0 THE FOUR DIMENSIONS OF SERVICE MANAGEMENT

**To support a holistic approach to service management, ITIL defines four dimensions of service management that collectively are critical to the effective and efficient facilitation of value for customers and other stakeholders in the form of products and services. These are:*

1. *Organizations and People*
2. *Information and Technology*
3. *Partners and Suppliers*
4. *Value Streams and Processes.*

*These four dimensions represent perspectives which are relevant to the whole SVS, including the entirety of the service value chain and all practices.*
*The four dimensions are constrained, or influenced, by several external factors that are often beyond the control of the SVS.*




The Four Dimensions Of Service Management



*Failing to address all four dimensions properly may result in services becoming undeliverable, or not meeting expectations of quality or efficiency.*

** Italics font denotes source from ITIL®4 publications*

# 3.0 THE FOUR DIMENSIONS OF SERVICE MANAGEMENT

## 3.1 Organization & People

**The complexity of the organization is growing. It's important that the organization supports its overall strategy and operating model. It should therefore be….*

- *Structured and managed*
- *Defined roles and responsibilities*
- *Systems of authority*
- *Culture supporting its objectives*
- *Right level capacity and competencies among its workforce and*
- *Communication.*

*It's vital that the leaders of the organization champion and advocate values that motivate people to work in desirable ways.*

*Adopting the ITIL guiding principles can be a good starting point for establishing a healthy organizational culture*

** Italics font denotes source from ITIL®4 publications*

# 3.0 THE FOUR DIMENSIONS OF SERVICE MANAGEMENT

## 3.1 Organization & People

**People* *(whether customers, employees of suppliers, employees of the service provider, or any other stakeholder in the service relationship) are a key element in this dimension.*
Attention should be paid to

- Skill & competencies of team or individual members.
- Management & leadership skills
- Communication & collaboration skills

- *It is important that every person in the organization has a clear understanding of their contribution towards creating value for the organization, its customers and other stakeholders.*

- *It is becoming increasingly important that people understand the interfaces between their specialization and roles and those of others in the organization, to ensure proper levels of collaboration and coordination.*

** Italics font denotes source from ITIL®4 publications*

## 3.2 Information & Technology

*The second dimension of service management is information and technology. As with the other three dimensions, information and technology applies both to service management and to the services being managed. It also incorporates the relationships between different components of the SVS, such as the inputs and outputs of activities and practices.

The technologies that support service management include, but are not limited to

- Workflow management systems,
- Knowledge bases,
- Inventory systems,
- Communication systems and analytical tools.
- Artificial intelligence, machine learning and other cognitive computing solutions, are used at all levels, from strategic planning and portfolio optimization, to system monitoring and user support.
- Mobile platforms, cloud solutions, remote collaboration tools, automated testing and deployment solutions, has become a common practice among service providers.

Service management increasingly benefits from technology development.

* Italics font denotes source from ITIL®4 publications

# 3.2 Information & Technology

*In relation to the information component of this dimension, organizations should consider:*

- *What information is managed by the services?*
- *What supporting information and knowledge is needed to deliver and manage the services?*
- *How will the information and knowledge assets be protected, managed, archived and disposed of?*

*Another key consideration in this dimension is how information is exchanged between different services and service components. The information architecture of the various services should be well-understood and continually optimized, considering such criteria as the…*

- *Availability*
- *Reliability*
- *Accessibility*
- *Timeliness*
- *Accuracy and*
- *Relevance of the information provided to users and exchanged between services.*

** Italics font denotes source from ITIL®4 publications*

## 3.2 Information & Technology

### Considerations on I&T while planning, design, transition, or operation of a product or service:

- **Is this technology compatible with the current architecture of the organization and its customer(s)?*
- *How are emerging technologies (such as machine learning, artificial intelligence and Internet of Things) likely to disrupt the service or the organization?*
- *Does this technology raise any regulatory or other compliance issues with the organization's policies and information security controls, or tho*
- 
- *Is this a technology that will continue to be viable in the foreseeable future?*
- *Does this technology align with the strategy of the service provider, or its service consumers?*
- *Does the organization have the right skills across its staff and suppliers to support and maintain the technology?*
- *Does this technology have sufficient automation capabilities to ensure it can be efficiently developed, deployed and operated?*
- *Does this technology offer additional capabilities that might be leveraged for other products or services?*
- *Does this technology introduce new risks or constraints to the organization (for example, locking it into a specific vendor)?*

** Italics font denotes source from ITIL®4 publications*

## 3.3 Partners & Suppliers

*The third dimension of service management is partners and suppliers. Every organization and every service depends to some extent on services provided by other organizations.

When it comes to using partners and suppliers, an organization's strategy should be based on its goals, culture and business environment.

Relationships between organizations

| Form of cooperation | Outputs | Responsibility for the outputs | Responsibility for achievement of the outcomes | Level of formality | Examples |
|---|---|---|---|---|---|
| Goods Supply | Goods supplied | Supplier | Customer | Formal Supply Contract/Invoices | Procurement of Computers & Phones |
| Service Delivery | Services Delivered | Supplier | Customer | Formal agreements and flexible cases | Cloud computing (infrastructure of platform as a service) |
| Service Partnership | Value co-created | Shared between provider & customer | Shared between provider & customer | Shared goals, generic agreements, flexible case-based arrangement | Employee onboarding (shared between HR, facilities and IT) |



* Italics font denotes source from ITIL®4 publications

# 3.3 Partners & Suppliers

**Factors that may influence an organization strategy when using supplier include…..*

| | |
|---|---|
| *Strategic Focus* | *Some organizations may prefer to focus on their core competence and to outsource non-core supporting functions to third parties; others may prefer to stay as self-sufficient as possible, retaining full control over all important functions.* |
| *Corporate Culture* | *Some organizations have a historical preference for one approach over another. Long-standing cultural bias is difficult to change without compelling reasons.* |
| *Resource Scarcity* | *If a required resource or skillset is in short supply, it may be difficult for the service provider to acquire what is needed without engaging a supplier.* |
| *Cost Concerns* | *A decision may be influenced by whether the service provider believes that it is more economical to source a particular requirement from a supplier.* |
| *Subject Matter Expertise* | *The service provider may believe that it is less risky to use a supplier that already has expertise in a required area, rather than trying to develop and maintain the subject matter expertise in house.* |
| *External Constraints* | *Government regulation or policy, industry codes-of-conduct and social, political or legal constraints might impact an organization's supplier strategy.* |
| *Demand Patterns* | *Customer activity or demand for services might be seasonal or demonstrate high degrees of variability.These patterns may impact the extent to which organizations use external service providers to cope with variable demand* |

** Italics font denotes source from ITIL®4 publications*

## 3.4 Value Stream & Processes

**The fourth dimension of service management is value streams and processes. Like the other dimensions, the value streams and processes dimension is applicable to both the SVS in general, and to specific products and services. In both contexts it defines the activities, workflows, controls and procedures needed to achieve agreed objectives.*

*This dimension focuses on*

- What activities the organization undertakes, and
- How they are organized, as well as
- How the organization ensures that it is enabling value creation for all stakeholders efficiently and effectively.

*ITIL gives organizations acting as service providers an operating model that covers all the key activities required to effectively manage products and services. This is referred to as the ITIL service value chain.*

** Italics font denotes source from ITIL®4 publications*

# 3.4.1 VALUE STREAM FOR SERVICE MDANAGEMENT

*Value Stream : *A series of steps an organization undertakes to create and deliver products and services to consumers .*

A Value Stream helps….

- Provide a clear picture of what it delivers and how
- Enable the organization to analyse their current state and identify any barriers to workflow and non-value-add activities
- Non-value activities refers to wasteful activities, that should be eliminated to increase productivity.
- Enables process automation or adoption of emerging technologies, improve efficiencies and enhance user experience.
- Ensure that the organization achieves its objectives in an optimal way through Continual Improvement.

*Value streams should be defined by organizations for each of their products and services. Depending on the organization's strategy, value streams can be redefined to react to changing demand and other circumstances, or remain stable for a significant amount of time.*

** Italics font denotes source from ITIL®4 publications*

# 3.4.2 PROCESSES

***Process :** A set of interrelated or interacting activities that transform inputs into outputs. A process takes one or more defined inputs and turns them into defined outputs. Processes define the sequence of actions and their dependencies*

*The same structure of the value chain, value streams, processes, procedures and work instructions applies to specific services: to successfully create, deliver and improve a service, the following questions need to be answered:*

- *What is the generic delivery model for the service, and how does the service work?*
- *What are the value streams involved in delivering the agreed outputs of the service?*
- *Who, or what, performs the required service actions?*

*Specific answers to these questions will vary depending on the nature and architecture of the service.*

# 3.6 SUMMARY

**The four dimensions represent a holistic approach to service management, and organizations should ensure that there is a balance of focus between each dimension.*

*The impact of external factors on the four dimensions should also be considered. All four dimensions and the external factors that affect them should be addressed as they evolve, considering emerging trends and opportunities.*

*It is essential that an organization's SVS is considered from all four dimensions, as the failure to adequately address or account for one dimension, or an external factor, can lead to sub-optimal products and services.*

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# 4.0 DESCRIBE THE ITIL® SERVICE VALUE SYSTEM

# 4.0 DESCRIBE THE ITIL SERVICE VALUE SYSTEM

***Understand The Purpose And Components Of The ITIL Service Value System***

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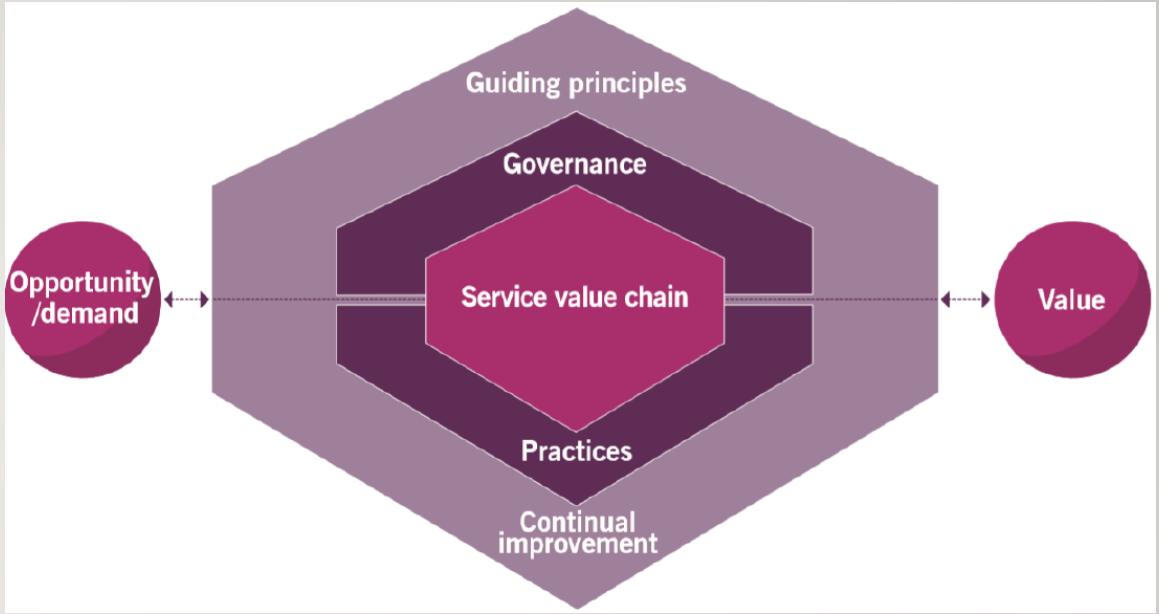
# 4.1 SERVICE VALUE SYSTEM

## *Overview

*For service management to function properly, it needs to work as a system. The ITIL SVS describes the inputs to this system (opportunity and demand), the elements of this system (organizational governance, service management, continual improvement and the organization's capabilities and resources) and the outputs (achievement of organizational objectives and value for the organization, its customers and other stakeholders).*

*The outcome of the SVS is value, that is, the perceived benefits, usefulness and importance of something. The ITIL SVS can enable the creation of many different types of value for a wide group of stakeholders.*






*The ITIL SVS includes the following components:*

- *Guiding principles Recommendations that can guide an organization in all circumstances, regardless of changes in its goals, strategies, type of work, or management structure.*
- *Governance The means by which an organization is directed and controlled.*
- *Service value chain A set of interconnected activities that an organization performs to deliver a valuable product or service to its consumers and to facilitate value realization.*
- *Practices Sets of organizational resources designed for performing work or accomplishing an objective.*
- *Continual improvement A recurring organizational activity performed at all levels to ensure that an organization's performance continually meets stakeholders'*

** Italics font denotes source from ITIL®4 publications*

# 4.1 SERVICE VALUE SYSTEM

- *The ITIL SVS has been specifically architected to enable flexibility and discourage siloed working.
- The service value chain activities and the practices in the SVS do not form a fixed, rigid structure.
- Rather, they can be combined in multiple value streams to address the needs of the organization in a variety of scenarios.
- None of them are definite or prescriptive.
- Organizations should be able to define and redefine their value streams in a flexible, yet safe and efficient manner.
- This ITIL continual improvement activity, enabled by ITIL guiding principles to be carried out at all levels of the organization;

The guiding principles create a

✓ Foundation for a shared culture across the organization,
✓ Supporting collaboration and co-operation within and between the teams, and
✓ Removing the need for constraints and controls previously provided by silos.

With these components the ITIL SVS supports many work approaches, such as Agile, DevOps and Lean, as well as traditional process and project management, with a flexible value-oriented operating model.

* Italics font denotes source from ITIL®4 publications

# 4.3 ITIL Guiding Principles

A guiding principle is universal and enduring. Is a recommendation that guides an organization in all circumstances regardless of changes in its

- Goals
- Strategies,
- Type of work, or
- Management structure.

It supports organizations in continual improvement at all levels

These principles are also reflected in many other frameworks, methods, standards, philosophies and/or bodies of knowledge, such as

- Lean
- Agile
- DevOps and
- COBIT.

This allows organizations to effectively integrate the use of multiple methods into an overall approach to service management.

# 4.3 ITIL Guiding Principles

| *Guiding Principle | Description |
|---|---|
| Focus on Value | Everything that the organization does needs to map, directly or indirectly, to value for the stakeholders.<br>The focus on value principle encompasses many perspectives, including the experience of customers and users. |
| Start where you are | Do not start from scratch and build something new without considering what is already available to be leveraged. There is likely to be a great deal in the current services, processes, programs, projects and people that can be used to create the desired outcome.<br>The current state should be investigated & observed directly to make sure it is fully understood |
| Progress iteratively with feedback | Do not attempt to do everything at once. Even huge initiatives must be accomplished iteratively. By organizing work into smaller, manageable sections that can be executed and completed in a timely manner, it is easier to maintain a sharper focus on each effort.<br>Using feedback before, throughout and after each iteration will ensure that actions are focused and appropriate, even if circumstances should change. |
| Collaborate and promote visibility | Working together across boundaries produces results that have greater buy-in, more relevance to objectives and better likelihood of long-term success.<br>Achieving objectives requires information, understanding and trust. Work and consequences should be made visible, hidden agendas should be avoided and information should be shared to the greatest degree possible. |

* Italics font denotes source from ITIL®4 publications

# 4.3 ITIL Guiding Principles

| *Guiding Principle | Description |
|---|---|
| Think and work holistically | No service, or element used to provide a service, stands alone. The outcomes achieved by the service provider and service consumer will suffer unless the organization works on the service as a whole, not just on its parts.<br>Results are delivered to internal and external customers through the effective and efficient management and dynamic integration of information, technology, organization, people, practices, partners and agreements, which should all be coordinated to provide a defined value. |
| Keep it simple and practical | If a process, service, action or metric provides no value, or produces no useful outcome, eliminate it. In a process or procedure, use the minimum number of steps necessary to accomplish the objective(s). Always use outcome-based thinking to produce practical solutions that deliver results. |
| Optimize and automate | Resources of all types, particularly human resources (HR), should be used to their best effect. Eliminate anything that is truly wasteful and use technology to achieve whatever it is capable of. Human intervention should only happen where it really contributes value. |

* Italics font denotes source from ITIL®4 publications

# 4.3 ITIL Guiding Principles

## 4.3.1 Focus on Value

Everything the organization does, should link back, directly or indirectly, to value for

- Service consumers (an organization takes the role of service consumer while receiving services)
- Organization (role of service provider)
- Customer and
- Other stakeholders

**The consumer's perspectives of value*

*The service provider must understand what is truly of value to the service consumer(s).*

- *Why the consumer uses the services?*
- *What the services help them to do?*
- *How the services help them meet their goals?*
- *The role of cost/financial consequences for the service consumer?*
- *The role of risks for the service consumer?*

*Value can come in many forms, such as increased productivity, reduced negative impact, reduced costs, the ability to pursue new markets or a better competitive position.*

** Italics font denotes source from ITIL®4 publications*

# 4.3 ITIL Guiding Principles

## 4.3.1 Focus on Value…*Contd*

**The Customer Experience (CX)*

*An important element of value is the experience that service consumers have when they interact with the service and the service provider. This is frequently called customer experience (CX) or user experience (UX) depending on the adopted definitions, and it must be actively managed.*

*To apply the principles successfully, consider this advice:*

| | |
|---|---|
| *Know how service consumers use each service* | *Understand expected outcomes. Collect feedback on value on an ongoing basis-not just beginning of the service relationship.* |
| *Encourage a focus on value among all staff* | *Bring in awareness to staff of who the customers are and understand the CX.* |
| *Focus on value during normal operational activity as well as improvement initiatives* | *The creation of value should not be limited to a limited section of people but to the whole organization that the customer perceives* |
| *Include focus on value in every step of any improvement initiative* | *Everybody involved in an improvement initiative needs to understand what outcomes the initiative is trying to facilitate, how its value will be measured, and how they should be contributing to the co-creation of that value.* |

** Italics font denotes source from ITIL®4 publications*

# 4.3 ITIL Guiding Principles

## 4.3.2 Start Where You Are

**In the process of eliminating old, unsuccessful methods or services and creating something better, there can be great temptation to remove what has been done in the past and build something completely new.*

*Do not start over without first considering what is already available to be leveraged.*

*Assess where you are*

- Understand the current state
- Base decision on reliable information, as far as possible.
- Gathering data at source helps avoiding assumptions
- Encourage those involved in activities to ask questions

** Italics font denotes source from ITIL®4 publications*

# 4.3 ITIL Guiding Principles

## 4.3.2 Start Where You Are (4.3.2)…contd

**The role of measurement*

*"When a measure becomes a target, it ceases to be a good measure" Goodhart's law*

- Measurement is and important principle. Should be used to support the analysis (observed) rather than to replace it.
- Organizations should consider a variety of techniques to develop knowledge.
- Direct observation should always be the preferred option.
- Too often existing data is used with no consideration of direct personal investigation.
- Metrics such as CSF & KPI need to be meaningful and directly relate to the desired outcome.

** Italics font denotes source from ITIL®4 publications*

# 4.3 ITIL Guiding Principles

## 4.3.2 Start Where You Are….*Contd*

***Applying the principle**

*To apply this principle successfully, consider this advice:*

| | |
|---|---|
| *Look at what exists as objectively as possible, using the customer, or the desired outcome, as the starting point* | *Are the elements of the current state fit for purpose and fit for use?* |
| *When examples of successful practices or services are found in the current state, determine if and how these can be replicated or expanded upon to achieve the desired state* | *Focus on learning and improvement, not just replication and expansion.* |
| *Apply your risk management skills* | *These should be considered as part of the decision-making process, and the risks of making or not making a change evaluated to decide on the best course of action.* |
| *Recognize that sometimes nothing from the current state can be reused* | *Regardless of how desirable it may be to reuse, repurpose and recycle, or even upcycle, there will be times when the only way to achieve the desired result is to start over entirely. It should be noted however that these situations are very rare.* |

** Italics font denotes source from ITIL®4 publications*

# 4.3 ITIL Guiding Principles

## 4.3.3 Progress Iteratively With Feedback

By organizing work into

- Smaller manageable sections that can be executed and completed in a timely manner
- The focus on each effort be sharper and easier to maintain.
- Even huge initiatives must be accomplished iteratively.
- Resist the temptation to do everything at once.

**A feedback loop is a term commonly used to refer to a situation where part of the output of an activity is used for new input. Well-constructed feedback mechanisms facilitate understanding of:*

- *End user and customer perception of the value created*
- *The efficiency and effectiveness of value chain activities*
- *The effectiveness of service governance as well as management controls*
- *The interfaces between the organization and its partner and supplier network*
- *The demand for products and services*

** Italics font denotes source from ITIL®4 publications*

# 4.3 ITIL Guiding Principles

## 4.3.3 Progress Iteratively With Feedback

### *Applying the principle*

*To apply this principle successfully, consider this advice:*

| | |
|---|---|
| **Comprehend the whole, but do something* | *The desire to understand and account for everything sometimes are greatest enemy to progressive iteratively. This can lead to 'analysis paralysis'* |
| *The eco-system is constantly changing, so feedback is essential* | *Important to seek and use feedback all times as change is happening constantly* |
| *Fast does not mean incomplete* | *Iteration is small. Does not mean it should not include all the elements necessary for success. Any iteration should be produced in line with the concept of the minimum viable product(MVP).* |

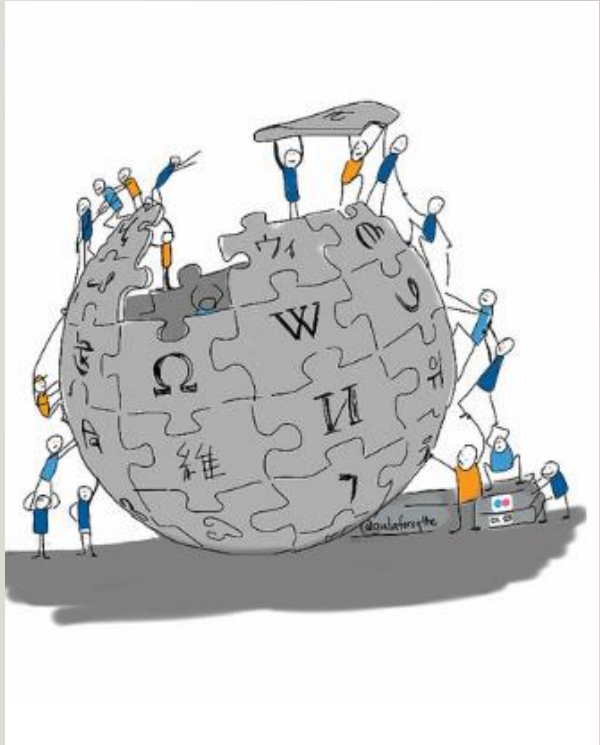
** Italics font denotes source from ITIL®4 publications*

# 4.3 ITIL Guiding Principles

## 4.3.4.Collaborate and promote visibility

**When initiatives involve the right people in the correct roles, efforts benefit from better buy-in, more relevance (because better information is available for decision-making) and increased likelihood of long-term success.*

- Collaboration & co-operation are better than 'Silo' activity.
- Applying the principle of 'think and work holistically' can help organization overcome the barriers between Silos of work.
- Without effective collaboration none of the ITSM framework such as Lean, Agile, DevOps would work.
- Working together helps build information, understanding, trust resulting in accomplishment of activities.
- Hidden agendas should be avoided,



### Whom to collaborate with?

The right level of collaboration with customers will lead to better outcomes for the organization, its customers and other stakeholders. Other example of stakeholder collaboration include:

- Developers
- Suppliers
- Relationship Managers
- Customers collaborating with each other for better understanding of their business issues.
- Internal & external suppliers collaborating with each other

** Italics font denotes source from ITIL®4 publications*

# 4.3 ITIL Guiding Principles

## 4.3.4 Collaborate And Promote Visibility

### *Applying the principle*

**To apply this principle successfully, consider this advice:*

| | |
|---|---|
| *Collaboration does not mean consensus* | *It is not necessary, or even always wise, to get consensus from everyone involved in an initiative before proceeding* |
| *Communicate in a way the audience can hear* | *Selecting the right method and message for each audience is critical for success.* |
| *Decisions can only be made on visible data* | *Decisions should be made about what data is needed, and therefore what work needs to be made visible. Organization must balance that cost against the benefit and intended usage of the data* |

** Italics font denotes source from ITIL®4 publications*

# 4.3 ITIL Guiding Principles

## 4.3.5 Think And Work Holistically

**Taking a holistic approach to service management includes establishing an understanding of how all the parts of an organization work together in an integrated way. It requires end-to-end visibility of how demand is captured and translated into outcomes.*

*Services are delivered to internal and external service consumers through the coordination and integration of the four dimensions of service management.*

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** Italics font denotes source from ITIL®4 publications*

# 4.3 ITIL Guiding Principles

## 4.3.5 Think And Work Holistically

### *Applying the principle*

*To apply this principle successfully, consider this advice:*

| | |
|---|---|
| **Recognize the complexity of the systems* | *Different levels of complexity require different heuristics for decision-making. Applying methods and rules designed for a simple system can be ineffective or even harmful in a complex system, where relationships between components are complicated and change more frequently.* |
| *Collaboration is key to thinking and working holistically* | *If right mechanisms are put in place for all relevant stakeholders to collaborate in a timely manner, it will be possible to address any issue holistically without being unduly delayed.* |
| *Where possible, look for patterns in the needs of and interactions between system elements* | *Draw on knowledge in each area to identify what is essential for success, and which relationships between elements influence the outcomes. With this information, needs can be anticipated, standards can be set and a holistic view point can be achieved.* |
| *Automation can facilitate working holistically* | *Where the opportunity and sufficient resources are available, automation can support end-to-end visibility for the organization and provide an efficient means of integrated management* |

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# 4.3 ITIL Guiding Principles

## 4.3.6 Keep It Simple And Practical

*Always use the minimum number of steps needed to accomplish an objective. Outcome-based thinking should be used to produce practical solutions that deliver valuable outcomes. If a process, service, action or metric provides no value or produces no useful outcome, then eliminate it.

### *Applying the principle*

*To apply this principle successfully, consider this advice*

| | |
|---|---|
| *Ensure Value* | *Every activity should contribute to the creation of value* |
| *Simplicity is the ultimate sophistication* | *It may seem harder to simplify, but it is often more effective.* |
| *Do fewer things, but do them better* | *Minimizing activities to only include those with value for one or more stakeholders will allow more focus on the quality of those actions.* |
| *Respect the time of the people involved* | *A process that is too complicated and bureaucratic is a poor use of the time of the people involved.* |
| *Easier to understand, more likely to adopt* | *To embed a practice, make sure it is easy to follow.* |
| *Simplicity is the best route to achieving quick wins* | *Whether in a project, or when improving daily operations activities, quick wins allow organizations to demonstrate progress and manage stakeholder expectations. Working in an iterative way with feedback will quickly deliver incremental value at regular intervals.* |

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# 4.3 ITIL Guiding Principles

## 4.3.7 Optimize & Automate

- *Optimization* means to make something as effective and useful as it needs to be.
- Before an activity can be effectively automated, it should be optimized to whatever degree is possible and reasonable.
  It is essential that limits are set on the optimization of services and practices, as they exist within a set of constraints such as :

✓ Cost,
✓ Time
✓ Resource and
✓ Compliance

*Automation* typically refers to the use of technology to perform a step or series of steps correctly and consistently with limited or no human intervention.

For example, in organizations adopting continuous deployment, it refers to the automatic and continuous release of code from development through to live, and often automatic testing occurring in each environment

* Italics font denotes source from ITIL4® publications

# 4.3 ITIL Guiding Principles

## 4.3.7.1 Optimize & Automate- Road to optimization

*There are many ways in which practices and services can be optimized. This includes several ITIL practices, especially Continual Improvement practice.*

*The road for an organization to improve & automate can be drawn from the following guidance ITIL. Lean, DevOps, Kanban….*

***Path of optimization follows the high level steps:***

- *Agree to overall vision and objectives of the organization*
- *Assess the current state to bring in improvement opportunities likely to product biggest positive impact.*
- *Agree on future state and priorities of the organization to automate or optimize further at a later point.*
- *Ensure optimization has highest level of stakeholders engagement and commitment.*
- *Execute improvements in an iterative way.*
- *Continually monitor the impact on optimization.*

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# 4.3 ITIL Guiding Principles

## 4.3.7.2 Optimize & Automate- Using automation

*Automation typically refers to the use of technology to perform a set or series of steps correctly and consistently with limited or no human intervention.*
*Continuous deployment refers automatic and continuous release of code from development to live, and often testing occurring in each environment.*
*Automation in simplest terms can also mean standardization and streamlining of manual tasks to allow decisions to be made 'automatically'.*

***Automating repetitive tasks helps:***

- *Improve efficiency*
- *Helps reduce organization costs*
- *Reduce human error and*
- *Improve employee experience*

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# 4.3 ITIL Guiding Principles

## 4.3.7.3 Optimize & Automate- Applying the principle

**To apply this principle successfully, consider this advice*

| | |
|---|---|
| *Simplify and/or optimize before automating* | *Take time to map out the standard and repeating processes as best as possible, and streamline where possible (optimize). From there you can start to automate* |
| *Define your metrics* | *The intended and actual result of the optimization should be evaluated using an appropriate set of metrics. Use the same metrics to define the baseline and to measure the achievements. Make sure that the metrics are outcome based and focused on value.* |
| *Use other guiding principles while applying this one* | • Progress iteratively with feedback<br>• Keep it simple and practical<br>• Focusing on value<br>• Start where you are |

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# 4.4 GOVERNANCE

## 4.4 & 4.4.1 GOVERNANCE

** Every organization is directed by a governing body – a person or group of people who are accountable at the highest level for the performance and compliance of the organization. All sizes and types of organizations perform governance activities – the governing body may be a board of directors, or executive managers who take on a separate governance role when they are performing governance activities. The governing body is accountable for the organization's compliance to policies and any external regulations.*

*Organizational governance is a system by which an organization is directed and controlled. Governance is realized though the following activities:*

| | |
|---|---|
| *Evaluate* | *The evaluation of the organization, its strategy, portfolios and relationships with other parties.The governing body evaluates the organization on a regular basis as stakeholders needs and external circumstances evolve.* |
| *Direct* | *The governing body assigns responsibility for, and directs the preparation and implementation of, organizational strategy and policies. Strategies set the direction and prioritization for organizational activity, future investment, etc. Policies establish the requirements for behaviour across the organization and, where relevant, suppliers, partners and other stakeholders.* |
| *Monitor* | *The governing body monitors the performance of the organization and its practices, products and services. The purpose of this is to ensure that performance is in accordance with policies and direction.* |

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# 4.4 GOVERNANCE

## 4.4.2 GOVERNANCE IN SVS

- **The role and position of governance in the ITIL SVS depends on how the SVS is applied in an organization. The SVS is a universal model that can be applied to an organization as a whole, or to one or more of its units or products.*
- *In ITIL 4, the guiding principles and continual improvement apply to all components of the SVS, including governance.*
- *The governing body should also have visibility of the outcomes of continual improvement activities and measurement of value for the organization and its stakeholders.*
- *Both the governing body and management at all levels maintain alignment through a clear set of shared principles and objectives.*
- *The governance and management at all levels are continually improved to meet expectations of the stakeholders.*

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# 5.0 SERVICE VALUE CHAIN

# 5.0 SERVICE VALUE CHAIN

***Understand The Activities Of The Service Value Chain, And How They Interconnect***

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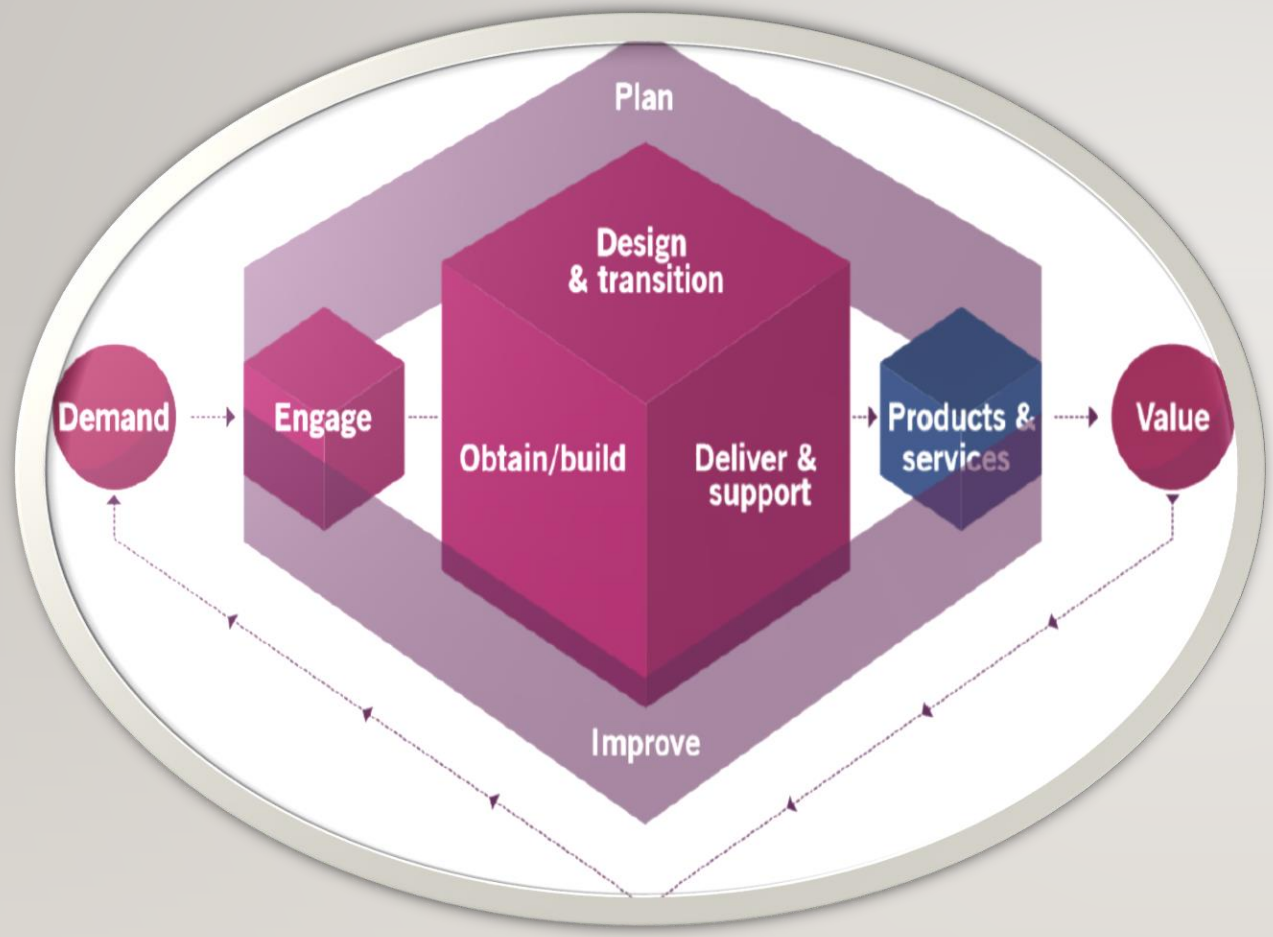
# 4.5 SERVICE VALUE CHAIN



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# 4.5 SERVICE VALUE CHAIN

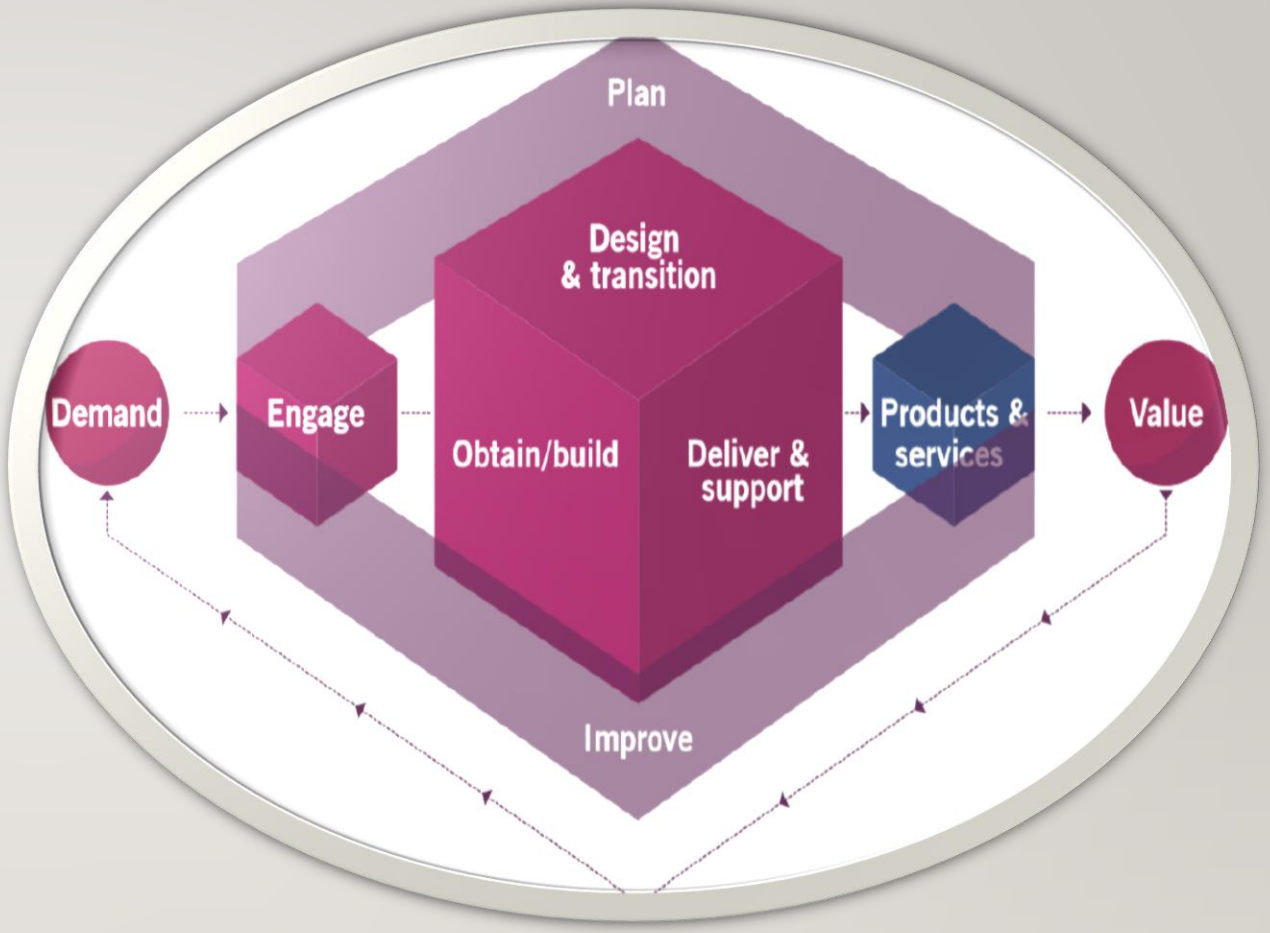
**The central element of the SVS is the service value chain, an operating model which outlines the key activities required to respond to demand and facilitate value creation through the creation and management of products and services.*

*Figure 4.2:The ITIL service value chain*

*As shown in figure 4.2, the ITIL service value chain includes six value chain activities which lead to the creation of products and services and, in turn, value.*

*The six value chain activities are:*

- *Plan*
- *Improve*
- *Engage*
- *Design and transition*
- *Obtain/build*
- *Deliver and support.*






*These activities represent the steps an organization takes in the creation of value. Each activity contributes to the value chain by transforming specific inputs into outputs. These inputs could be demand from outside the value chain, or they could be outputs of other activities.*

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# 4.5 SERVICE VALUE CHAIN

## 4.5.1 PLAN

**The purpose of this value chain activity is to ensure a shared understanding of the vision, current status and improvement direction for all four dimensions and all products and services across the organization.*

## 4.5.2 IMPROVE

*The purpose of this value chain activity is to ensure continual improvement of products, services and practices across all value chain activities and the four dimensions of service management.*

## 4.5.3 ENGAGE

*The purpose of this value chain activity is to provide a good understanding of stakeholder needs, continual engagement with all stakeholders, transparency and good relationships with all stakeholders.*

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# 4.5 SERVICE VALUE CHAIN

## 4.5.4 DESIGN & TRANSITION

** The purpose of this value chain activity is to ensure that products and services continually meet stakeholder expectations for quality, costs and time-to-market. The key inputs to this activity are:*

## 4.5.5 OBTAIN & BUILD

*The purpose of this value chain activity is to ensure that service components are available when and where they are needed, and meet agreed specifications*

## 4.5.3 DELIVER AND SUPPORT

*The purpose of this value chain activity is to ensure that services are delivered and supported according to agreed specifications and stakeholders' expectations.*

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# 6.0 ITIL® PRACTICES

# 6.0 ITIL® PRACTICES

***Know The Purpose And Key Terms Of 15 ITIL Practices***

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# 6.1 ITIL PRACTICES

## 5.1.3 Information Security Management

**The purpose of the information security management practice is to protect the information needed by the organization to conduct its business. This includes understanding and managing risks to the*

- *Confidentiality,*
- *Integrity and*
- *Availability of information,*

*as well as other aspects of information security such as authentication (ensuring someone is who they claim to be), and non-repudiation (ensuring that someone can't deny that they took an action).*


*The required security is established by means of policies, processes, behaviours, risk management and controls, which must maintain a balance between:*

- ***Prevention*** *Ensuring that security incidents don't occur.*
- ***Detection*** *Rapidly and reliably detecting incidents that can't be prevented.*
- ***Correction*** *Recovering from incidents after they are detected.*

*It is also important to achieve a balance between protecting the organization from harm and allowing it to innovate. Information security controls that are too restrictive may do more harm than good, or may be circumvented by people trying to do work more easily. Information security controls should consider all aspects of the organization and should align with its risk appetite.*

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# 6.1 ITIL PRACTICES

## 5.1.9 Relationship Management

**The purpose of the relationship management practice is to establish and nurture the links between the organization and its stakeholders at strategic and tactical levels. It includes…*

- *Identification*
- *Analysis,*
- *Monitoring and*
- *Continual improvement of relationships with and between stakeholders.*

The relationship management practice ensures that:

- Stakeholders' needs and drivers are understood, prioritized appropriately, desired outcome established
- Stakeholders' satisfaction is high and a constructive relationship is established & sustained
- Stakeholders' complaints and escalations are handled well through a sympathetic (yet formal) process
- Facilitate value creation for the service consumers as well as for the organization
- Conflicting stakeholder requirements are mediated appropriately.

Service providers quite naturally focus most of their efforts on their relationships with service consumers (sponsors, customers and users

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# 6.1 ITIL PRACTICES

## 5.1.13 Supplier Management

**The purpose of the supplier management practice is to ensure that the organization's suppliers and their performance are managed appropriately to support the provision of seamless, quality products and services. This can include creating closer, more collaborative relationships with key suppliers to uncover and realize new value and reduce risk of failure.*

Activities that are central to the supplier management practice include:

- Creating a single point of visibility and control to ensure consistency
- Negotiating and agreeing contracts and arrangements
- Managing relationships and contracts with internal and external suppliers
- Managing supplier performance

Different types of Sourcing strategy

- Insourcing
- Outsourcing
- Single source or partnership
- Multi-sourcing

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# 6.1 ITIL PRACTICES

## 5.1.13 Supplier Management

Activities of the supplier management practice include:

- Supplier planning: works in conjunction with the business analysis, requirements management and service design practices.
- Evaluation of suppliers and contracts: The purpose of this activity is to identify, evaluate, and select suppliers
- Supplier and contract negotiation: Develop, negotiate, review, update, finalize and award supplier contracts.
- Supplier categorization: Commonly used categories include strategic, tactical and commodity suppliers.
- Supplier and contract management: Obtains value for money and the delivery of the agreed performance.
- Warranty management: Manage warranty requirements/clauses. Works in conjunction with performance management.
- Performance management This activity includes the setup and continuous tracking of operational measures that have been mutually agreed with internal and external suppliers. It focuses on the key measures, which can then be consolidated onto a supplier scorecard. Monitoring will allow for the identification of systemic problems and improvement opportunities and provide a basis for reporting.
- Contract renewal and/or termination This procedure aims to manage contract renewals and terminations, which are triggered from either specific or periodic reviews of supplier performance.

## Service Integration

**The service integrator is responsible for the coordination of suppliers as well as assurance. This includes performance management and reporting, defining roles and responsibilities and maintaining relationships across all parties and heading regular forums and steering committees to address issues, agree priorities and make decisions.*

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# 6.1 ITIL PRACTICES

## 5.2.6 IT Asset Management

*The purpose of the IT asset management practice is to plan and manage the full lifecycle of all IT assets, to help the organization:

- Maximize value
- Control costs
- Manage risks
- Support decision-making about purchase, reuse and retirement of assets
- Meet regulatory and contractual requirements.

> IT Asset : Any valuable component that can contribute to delivery of an IT product or service.

IT asset management typically includes the following activities:

- Define, populate and maintain the asset register in terms of structure and content, and the storage facilities for assets and related media
- Control the asset lifecycle in collaboration with other practices (for example upgrading obsolete software or onboarding new staff members with a laptop and mobile phone) and record all changes to assets (status, location, characteristics, assignment, etc.)
- Provide current and historical data, reports and support to other practices about IT assets
- Audit assets, related media and conformity (particularly with regulations, and license terms and conditions), and drive corrective and preventive improvements to deal with detected issues.

* Italics font denotes source from ITIL®4 publications

# 6.1 ITIL PRACTICES

## 5.2.7 Monitoring & Event Management

- *The purpose of the monitoring and event management practice is to systematically observe services and service components, and record and report selected changes of state identified as events. This practice identifies and prioritises infrastructure, services, business processes and information security events, and establishes the appropriate response to those events, including responding to conditions that could lead to potential faults or incidents.

- The monitoring and event management practice manages events throughout their lifecycle to prevent, minimize or eliminate their negative impact on the business.

Event : An event can be defined as any change of state that has significance for the management of a configuration item (CI) or IT service. Events are typically recognized through notifications created by an IT service, CI or monitoring tool.

Events are often classified as

- Informational - Informational events do not require action at the time they are identified.
- Warning - Allow action to be taken before any negative impact is actually experienced by the business.
- Exceptions - Require action, even though business impact may not yet have been experienced.

* Italics font denotes source from ITIL®4 publications

# 6.1 ITIL PRACTICES

## 5.2.7 Monitoring & Event Management

**Monitoring and event management practice need to address these key activities and more:*

- *Identifying what services, systems, CIs or other service components should be monitored*
- *Establishing and maintaining thresholds*
- *Establishing and maintaining policies for how each type of detected event should be handled*
- *Implementing processes and automations required to operationalize the defined thresholds, criteria and policies.*

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# 6.1 ITIL PRACTICES

## 5.2.9 Release Management

**The purpose of the release management practice is to make new and changed services and features available for use.*
*A release may comprise many different infrastructure & application components that work together to deliver new or changed functionality.*
*It may also include documentation, training (for users or IT staff), updated processes or tools, or any other components that are required.*
*Each component of a release may be developed by the service provider, or procured from a third party and integrated by the service provider.*

Release : *A version of a service or other configuration item, or a collection of configuration items, that is made available for use.*

*Releases can range in size from the very small, involving just one minor changed feature, to the very large, involving many components that deliver a completely new service.*
*In either case, a release plan will specify the exact combination of new and changed components to be made available, and the timing for their release.*

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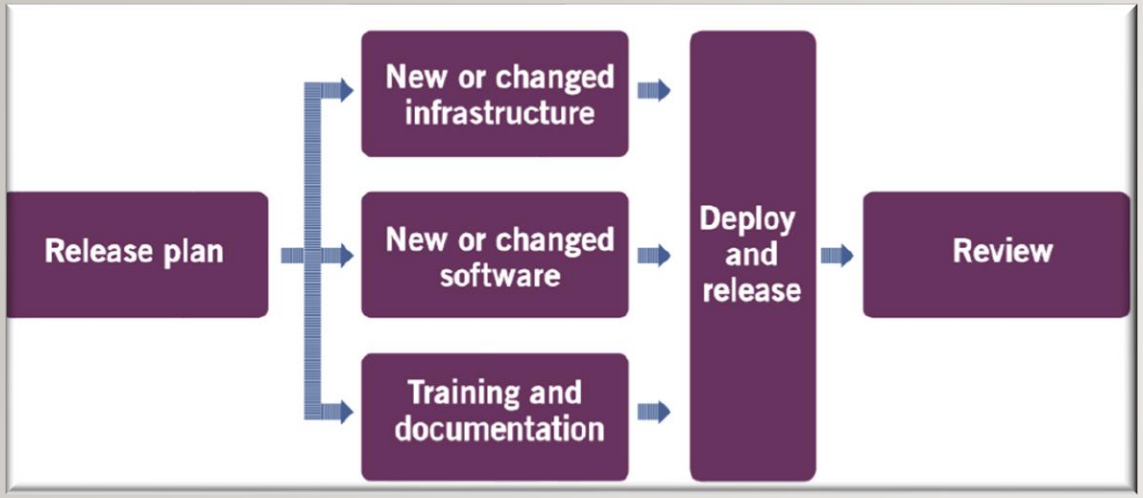
# 6.1 ITIL PRACTICES

## 5.2.9 Release Management



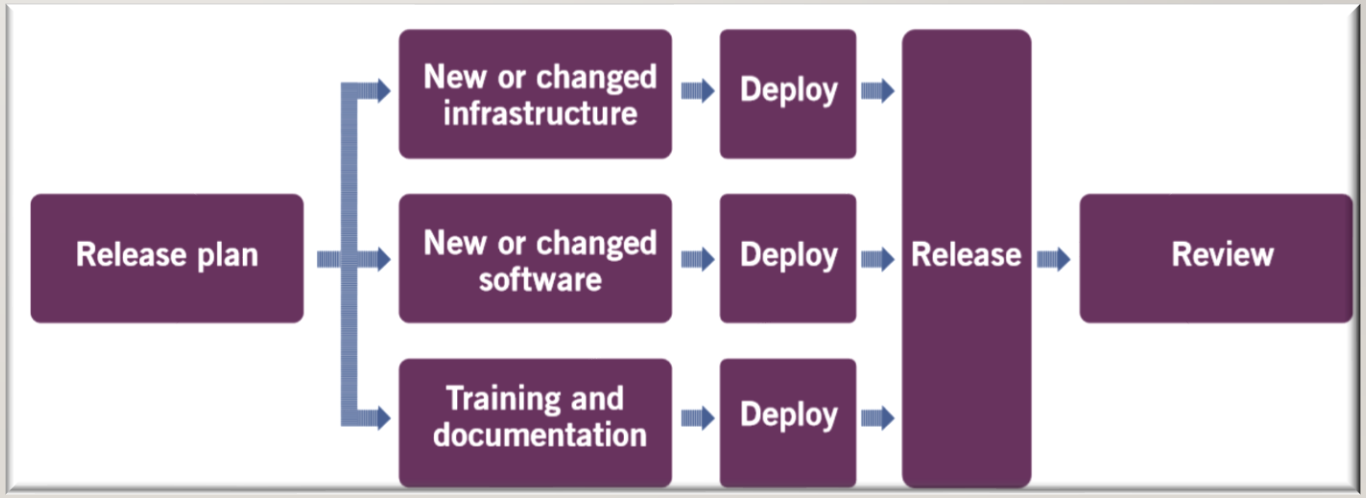

*In these environments release management and deployment may be combined and executed as a single process.*

Release management in a traditional/waterfall environment



Release management in an Agile/DevOps environment

*In these case software and infrastructure are typically deployed in many small increments, and release management activity enables the new functionality at a later point. This may be done as a very small change.*



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# 6.1 ITIL PRACTICES

## 5.2.11 Service Configuration Management

**The purpose of the service configuration management practice is to ensure that accurate and reliable information about the configuration of services, and the CIs that support them, is available when and where it is needed. This includes information on how CIs are configured and the relationships between them. .*

*Configuration Item : Any component that needs to be managed in order to deliver an IT service.*

*Configuration management provides information on the CIs that contribute to each service and their relationships - how they interact, relate and depend on each other to create value for customers and users. This includes information about dependencies between services. This high-level view is often called a service map, or service model, and forms part of the service architecture.*

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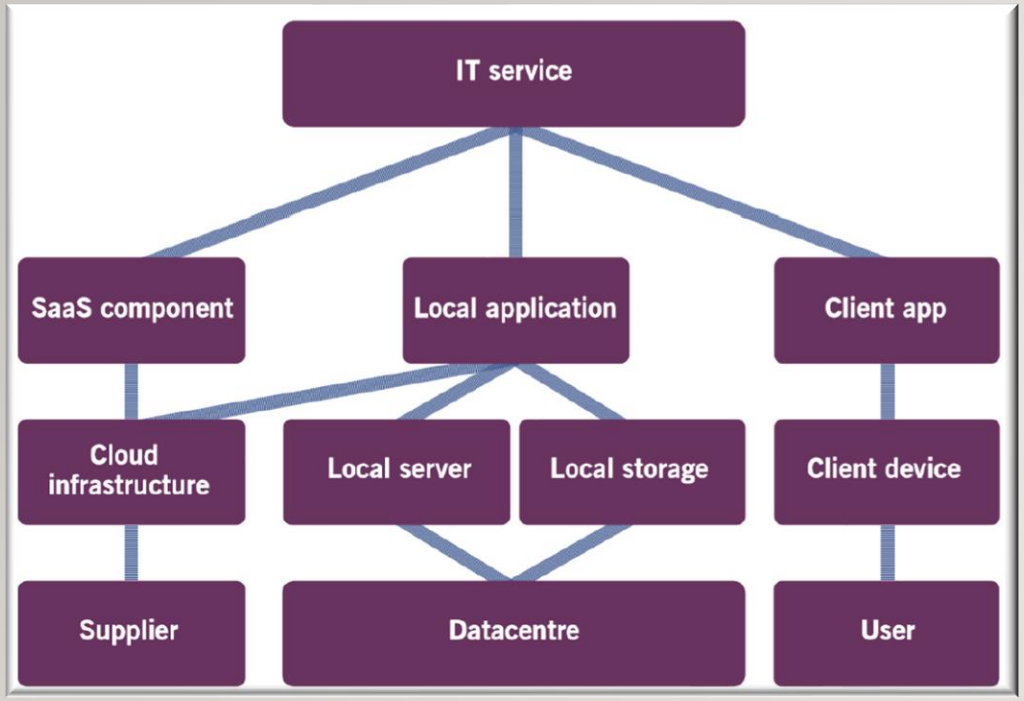
# 6.1 ITIL PRACTICES

## 5.2.11 Service Configuration Management




Simplified service model for a typical IT service



**Configuration Management System : A set of tools, data and information that is used to support service configuration management.*

*Configuration management typically needs processes to:*

- *Identify new configuration items, and add them to the CMS*
- *Update configuration data when changes are deployed*
- *Verify that configuration records are correct*
- *Audit applications and infrastructure to identify any that are not documented.*

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# 6.1 ITIL PRACTICES

## 5.3.1 Deployment Management

**The purpose of the deployment management practice is to move new or changed hardware, software, documentation, processes, or any other component to live environments. It may also be involved in deploying components to other environments for testing or staging.*

*Deployment management works closely with release management and Change enablement, but is a separate practice.*

*There are a number of distinct approaches that can be used for deployment. Many organizations use a combination of these approaches, depending on their specific services and requirements as well as the release sizes, types and impact.*

| | |
|---|---|
| *Phased deployment* | *The new or changed components are deployed to just part of the production environment at a time, for example to users in one office, or one country.* |
| *Continuous delivery* | *Components are integrated, tested and deployed when they are needed, providing frequent opportunities for customer feedback loops.* |
| *Big bang deployment* | *New or changed components are deployed to all targets at the same time.* |
| *Pull deployment* | *New or changed software is made available in a controlled repository, and users download the software to client devices when they choose.* |

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# 6.1 ITIL PRACTICES

## 5.3.1 Deployment Management

**Components that are available for deployment should be maintained in one or more secure locations to ensure that they are not modified before deployment. These locations are collectively referred to as a definitive media library for software and documentation, and a definitive hardware store for hardware components.*

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# 6.1 ITIL PRACTICES

## 5.1.2 Continual Improvement

**The purpose of the continual improvement practice is to align the organization's practices and services with changing business needs through the ongoing identification and improvement of services, service components, practices or any element involved in the efficient and effective management of products and services.*

*Key activities that are part of continual improvement practices include:*

- *Time and budget for continual improvement*
- *Encouraging continual improvement across the organization*
- *Identifying and logging improvement opportunities*
- *Assessing and prioritizing improvement opportunities*
- *Making business cases for improvement action*
- *Planning and implementing improvements*
- *Measuring and evaluating improvement results*
- *Coordinating improvement activities across the organization.*

*Approaches to continual improvement can be found in many places. Lean methods provide perspectives on the elimination of waste. Agile methods focus on making improvement incrementally at a cadence. DevOps methods look at working holistically and ensuring improvements are not only designed well, but applied effectively.*

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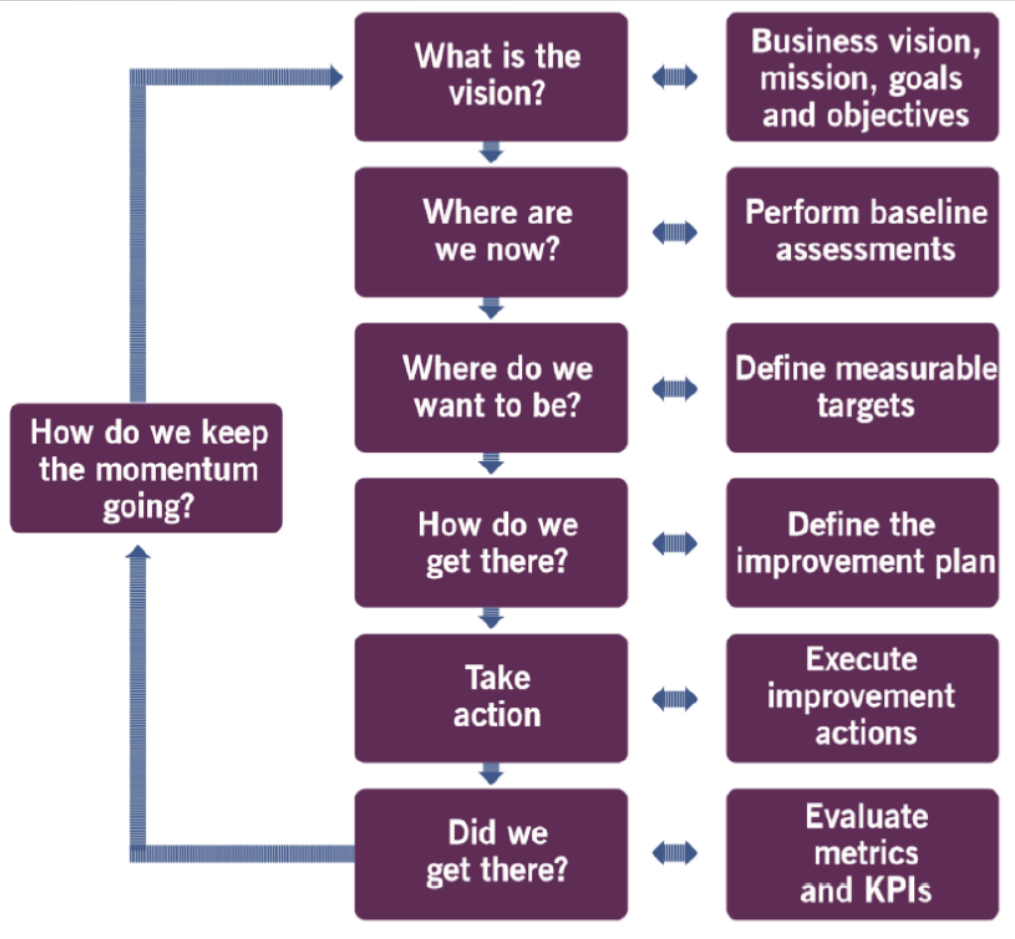
# 6.1 ITIL PRACTICES

## 5.1.2 Continual Improvement



# 6.1 ITIL PRACTICES

## 5.2.4 Change enablement

**The purpose of the change enablement practice is to maximize the number of successful IT changes by ensuring that risks have been properly assessed, authorizing changes to proceed, and managing a change schedule.*

*The scope of change enablement is defined by each organization. It will typically include all IT infrastructure, applications, documentation, processes, supplier relationships and anything else that might directly or indirectly impact a product or service.*

***Change :*** *The addition, modification, or removal of anything that could have a direct or indirect effect on services.*

*It is important to distinguish change enablement from organizational change management.*

*Organizational change management manages the people aspects of changes to ensure that improvements and organizational transformation initiatives are implemented successfully.*

*Change enablement is usually focussed on changes in products and services.*

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# 6.1 ITIL PRACTICES

## 5.2.4 Change enablement

**The person or group who authorizes a change is known as a change authority. It is essential that the correct change authority is assigned to each type of change to ensure. There are three types of change that are each managed in different ways:*

| | |
|---|---|
| *Standard Changes* | *These are low-risk, pre-authorized changes that are well-understood and fully-documented, and can be implemented without needing additional authorization.*<br>*They are often initiated as service requests, but may also be operational changes.* |
| *Normal Changes* | *These are changes that need to be scheduled, assessed and authorized following a standard process.*<br>*Change models, based on the type of change, determine the roles for assessment and authorization.* |
| *Emergency Changes* | *These are changes that must be implemented as soon as possible, for example, to resolve an incident or implement a security patch.*<br>*Emergency changes are not typically included in a change schedule, and the process for assessment and authorization is expedited to ensure they can be implemented quickly.* |



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# 6.1 ITIL PRACTICES

## 5.2.5 Incident Management

* The purpose of incident management is to minimize the negative impact of incidents by restoring normal service operation as quickly as possible.

***Incident :*** *An unplanned interruption to a service, or reduction in the quality of a service.*

- *Every incident should be logged and managed to ensure that it is resolved in a time that meets the expectations of the customer and user.*
- *Target resolution times are agreed, documented and communicated to ensure that expectations are realistic.*
- *Incidents are prioritised, based on agreed classification, to ensure that incidents with the highest business impact are resolved first.*
- *Modern IT service management tools can provide automated matching of incidents to other incidents, problems or known errors, and can even provide intelligent analysis of incident data to generate recommendations for helping with future incidents.*

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# 6.1 ITIL PRACTICES

## 5.2.5 Incident Management

- **Effective incident management often requires a high level of collaboration within, and between, teams.*
- *These teams may include the service desk, technical support, application support and vendors.*
- *Collaboration can facilitate information sharing and learning, as well as helping to solve the incident more efficiently and effectively.*

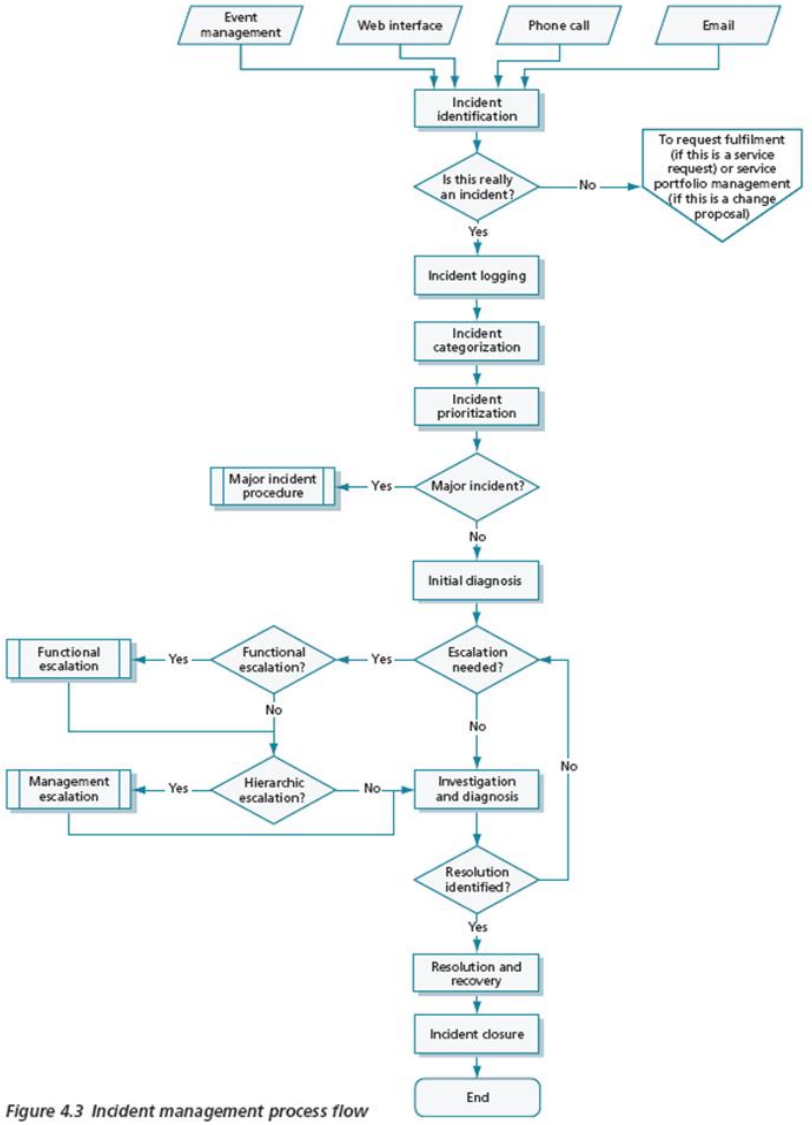


*Figure 4.3 Incident management process flow*

- ✓ *There should be a formal process for logging and managing incidents.*
- ✓ *This process does not usually include detailed procedures for how to diagnose, investigate and resolve incidents, but can provide techniques for making investigation and diagnosis more efficient.*
- ✓ *There may be scripts for collecting information from users during initial contact, and this may lead directly to diagnosis and resolution of simple incidents.*
- ✓ *Investigation of more complicated incidents often requires knowledge and expertise, rather than procedural steps.*



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# 6.1 ITIL PRACTICES

## 5.2.8 Problem Management

** The purpose of problem management is to reduce the likelihood and impact of incidents by identifying actual and potential causes of incidents, and managing workarounds and known errors.*

| | |
|---|---|
| ***Problem*** | ***: A cause, or potential cause, of one or more incidents.*** |
| ***Known Error*** | ***: A problem that has been analysed and has not been resolved.*** |

- *Every service has errors, flaws or vulnerabilities that may cause incidents.*
- *They may include errors in any of the four dimensions of service management.*
- *Many errors are identified and resolved before a service goes live.*
- *However, some remain unidentified, or unresolved, and may be a risk to live services.*
- *In ITIL, these errors are called problems and they are addressed by the problem management practice.*

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# 6.1 ITIL PRACTICES

## 5.2.8 Problem Management

**Problems are related to incidents, but should be distinguished as they are managed in different ways.*

- ***Incidents** have an impact on users or business processes, and must be resolved so that normal business activity can take place*
- ***Problems** are the causes of incidents. They require investigation and analysis to identify the causes, develop workarounds, and recommend longer term resolution. This reduces the number and impact of future incidents.*


The phases of problem management



***Problem identification** activities identify and log problems. This includes:*

- *Performing trend analysis of incident records*
- *Detection of duplicate and recurring issues by users, service desk and technical support staff*
- *Major incident management identifying a risk that an incident could recur*
- *Analysing information received from suppliers and partners*
- *Analysing information received from internal software developers, test teams, and project teams.*

***Problem control** activities include*

- *Problem analysis*
- *Documenting workarounds &*
- *Known errors*

*Problems are prioritized analyses based on risk they pose, managed based on potential impact and probability*

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# 6.1 ITIL PRACTICES

## 5.2.8 Problem Management

***Work Around :*** *Solution that reduces or eliminates the impact of an incident or problem for which a full resolution is not yet available. Some workarounds reduce the likelihood of incidents.*

**Error control**

- *A known error is a problem where initial analysis is complete; it usually means that faulty components have been identified.*
- *Error control includes identification of potential permanent solutions. This may result in a change request for implementation of a solution, but only if this can be justified in terms of cost, risks and benefits.*
- *Error control regularly re-assesses the status of known errors that have not been resolved, including overall impact on customers, availability and cost of permanent resolutions, and effectiveness of workarounds. The effectiveness of workarounds should also be evaluated each time a workaround is used. Workarounds may be improved based on the assessment. .*

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# 6.1 ITIL PRACTICES

## 5.2.14 Service Request Management

** The purpose of the service request management practice is to support the agreed quality of a service by handling all pre-defined, user-initiated service requests in an effective and user-friendly manner.*

***Service Request :*** *A request from a user or user's authorized representative that initiates a service action that has been agreed as a normal part of service delivery.*

*Each service request may include one or more of:*

- *a request for a service delivery action (for example, providing a report or replacing a toner cartridge)*
- *a request for information (for example, how to create a document or what the hours of the office are)*
- *a request for provision of a resource or service (for example, providing a phone or laptop to a user, or providing a virtual server for a development team)*
- *a request for access to a resource or service (for example, providing access to a file or folder)*
- *feedback, compliments and complaints (for example, complaints about a new interface or compliments to a support team).*

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# 6.1 ITIL PRACTICES

## 5.2.16 Service Desk

**The purpose of the Service Desk practice is to capture demand for incident resolution and service requests. It should also be the point of communication for the service provider with all of its users. In other words, it should act as the entry point/single point of contact for the IT or service organization.*

*Service desks provide a variety of channels for access. These include:*

- *Phone calls, which can include specialized technology, such as IVR, conference calls, voice recognition and others*
- *Service portals and mobile applications, supported by service and request catalogues, and knowledge bases*
- *Chat, through live chat and chatbots*
- *Email can be used for logging and updating, and for follow up surveys and confirmations. Unstructured email can be difficult to process, but emerging technologies based on AI and machine learning are starting to address this*
- *Walk-in service desks are becoming more prevalent in some sectors, e.g. higher education, where there are high peaks of activity that demand physical presence*
- *Text and social media messaging, which are useful for notifications in case of major incidents and for contacting specific stakeholder groups, but can also be used to allow users to request support.*
- *Public and corporate social media and discussion forums for contacting the service provider and for peer-to-peer support*

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# 6.1 ITIL PRACTICES

## 5.2.15 Service Level Management

*The purpose of the service level management practice is to set clear business-based targets for service performance, so that the delivery of a service can be properly assessed, monitored and managed against these targets.*
*This practice involves the definition, documentation, and active management of service levels. As services may involve a 'bundle' of varied and disparate activities, this means that a number of these activities need to be combined and aggregated together, to reflect a realistic view.*

*Service level management provides the end to end visibility of the organization's services.*
*To achieve this, service level management:*

- *Establishes a shared view of the services and target service levels with customers*
- *Ensures the organization meets the defined service levels through the collection, analysis, storage and reporting of the relevant metrics for the identified services*
- *Performs service reviews to ensure the current set of services continues to meet the needs of the organization and its customers*
- *Captures and reports on service issues including performance against defined service levels.*

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# 6.1 ITIL PRACTICES

## 5.2.15 Service Level Management

*Service Level Agreement*

**Service level agreements (SLAs) have long been used as a tool to measure the performance of services from the customer's point of view.*

*Some of the key requirements for successful SLAs include:*

- *They must be related to a defined 'service' in the service catalogue. Otherwise they are simply individual metrics without a purpose, that do not provide adequate visibility or reflect the service perspective*
- *They should relate to defined outcomes and not simply operational metrics. This can be achieved with balanced 'bundles' of metrics, such as customer satisfaction and key business outcomes.*
- *They should reflect an 'agreement', that is, engagement and discussion between the service provider and the service consumer. It is important to involve all stakeholders including partners, sponsors, users and customers.*
- *They must be simply written and easy to understand and use for all parties.*

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# AXELOS BASED MOCK EXAMS