

# ITIL V4 FOUNDATION

## - Training & Workshop

24<sup>TH</sup> – 29<sup>TH</sup> SEPTEMBER 2024



# Lets understand each other....

- ▶ Your Name
- ▶ What is your current job/role and total years of experience?
- ▶ Your familiarity with ITIL – any version?
- ▶ Your expectation out of this training course

# COURSE OBJECTIVES

- An introduction to IT service management and its relevance to an organization
- Describe the relationship between value and its stakeholders, including the organization, service providers and service consumers
- Draw the relationship between products, service offerings and services
- Describe the key concepts of value co-creation through service relationships, including service relationship management, service provision and service consumption
- Application of lean and agile principles to service delivery, in context to ITIL V4
- Implementation of governance and guiding principles using a case study

# Course Plan – 1/2

Day	Full/Half Day	Mode	Coverage
1	Half Day	Online / Virtual	<ul style="list-style-type: none"><li>- ITIL Introduction</li><li>- Key Concepts of SM</li></ul>
2	Half Day	Online / Virtual	<ul style="list-style-type: none"><li>- 4 Dimensions of SM</li><li>- ITIL SVS</li></ul>
3	Half Day	Online / Virtual	<ul style="list-style-type: none"><li>- ITIL Practices – GM</li><li>- ITIL Practices – SM</li></ul>
4	Half Day	Online / Virtual	<ul style="list-style-type: none"><li>- ITIL Practices – SM (Contd.)</li></ul>

# Course Plan – 2/2

Day	Full/Half Day	Mode	Coverage
5	Full Day	Onsite / Hyderabad	<ul style="list-style-type: none"><li>- ITIL Practices – SM (Contd.)</li><li>- ITIL Practices – TM</li><li>- ITIL V4, AGILE, LEAN – In Practice</li><li>- ITIL Tools</li><li>- Mock Exam 1</li></ul>
6	Full Day	Onsite / Hyderabad	<ul style="list-style-type: none"><li>- Workshop</li><li>- Mock Exam 2</li></ul>

# Course Agenda

## ► **Key concepts of Service Management**

- Purpose of ITSM – Learning Goals
- Value Co-creation & Organization
- Service Relationships & Service Offerings
- Utility & Warranty

## ► **Key concepts of ITIL V4**

- The four dimensions of service management
- Service Value System
- The Guiding Principles
- Service Value Chain
- Continual Improvement

## ► **ITIL Management Practices**

- General management practices
- Service Management practices
- Technical management practices

## ► **Session Practice**

- Summarization
- Quiz
- Final Evaluation (Mock exam 1 & 2)
- Onsite Workshop

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# Purpose of ITSM

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Better working relationships between the Customers and the IT service provider

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Enhanced Customer satisfaction as service providers know and deliver what is expected of them.

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Cost-justified IT infrastructure and IT services

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Increased productivity of IT staff

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Improved metrics and management reporting

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Better information on current services and on where changes would bring most benefits

# Scenario - Traffic w/o Processes



# Scenario - Traffic with Processes & Exceptions



Process  
Breach ?

Process  
Exception ?

If Tire went flat/ Medical Emergency  
/ Brake Fail etc

# Best Practice?

**What do you understand by the term?**

“An industry accepted way of doing something, that **works**”

The most effective way of understanding a process or procedure

**Principles**

**Agreement on specific processes**

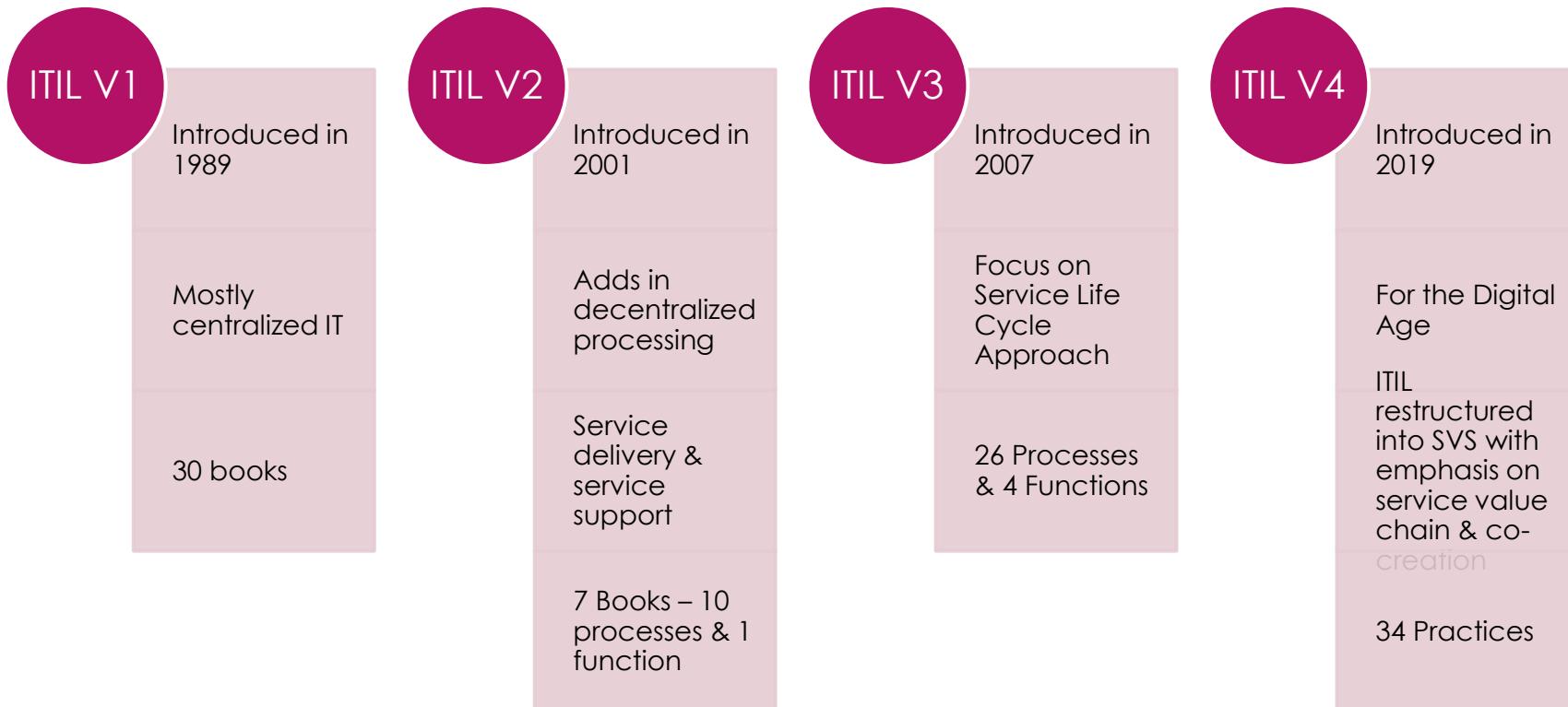
What does it consist of?

**Usually put into writing**

**Reviewed and updated**

# History of ITIL

## Platform independent



# ITIL Certification Roadmap



# Recap of ITIL V3

## ITIL V3 Overview

**Service Strategy**

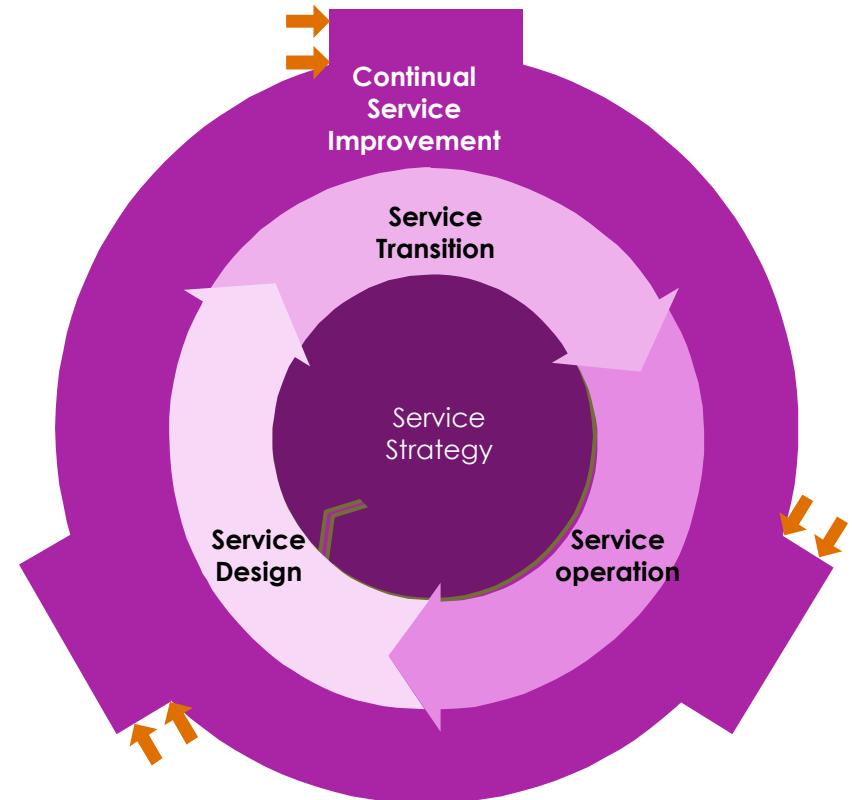
**Service Design**

**Service Transition**

**Service Operation**

**CSI**

- ✓ Process orientation
- ✓ Terminology
- ✓ Inputs and outputs
- ✓ Activities
- ✓ Process flow / diagram
- ✓ Process Roles
- ✓ Challenges
- ✓ KPIs



5 Publications, 26 Processes, 4 Functions

# ITIL v3 mapping against ITIL 4

ITIL V3	ITIL V4
<b>4 Ps of Service Design</b> <ol style="list-style-type: none"><li>1. People</li><li>2. Product</li><li>3. Partners</li><li>4. Processes</li></ol>	<b>4 Dimensions of Service Management</b> <ol style="list-style-type: none"><li>1. Organisation &amp; People</li><li>2. Information &amp; Technology</li><li>3. Partners &amp; Suppliers</li><li>4. Value Streams &amp; Processes</li></ol>
<b>26 Processes &amp; 4 Functions</b> <p>Processes organised according to ITIL V3 lifecycle phase</p>	<b>34 Practices</b> <p>Each practice may contain several processes, broadly categorised under 3 practice types</p>
<b>ITIL Service Management Lifecycle Stage</b> <ul style="list-style-type: none"><li>• Service Strategy</li><li>• Service Design</li><li>• Service Transition</li><li>• Service Operation</li><li>• Continual Service Improvement</li></ul>	<b>Service Value System</b> <ul style="list-style-type: none"><li>• Guiding Principles</li><li>• Governance</li><li>• Service Value Chain</li><li>• Practices</li><li>• Continual Improvement</li></ul>

# ITSM- (IT SERVICE MANAGEMENT)



## Service

- A means of delivering **value** to customer, by facilitating **outcomes** customers want to achieve **without** the **ownership** of specific **risks**



## Value

- The **perceived benefits**, usefulness and importance of something



## Service Management

- A set of **specialized organizational** capabilities for providing **value** to customers in the form of services

# Value Co-Creation

- ▶ Value co-creation allows and encourages a more active involvement from all the stakeholders, specifically the service provider and the customer, to create a value rich experience
- ▶ This approach ensures customers are involved in planning, designing, building, supporting and improving services through robust feedback mechanisms
- ▶ The value co-creation is considered to be transformational: the co-creation of value with the business, rather than for the business.
- ▶ ITIL 4 also keenly recognizes companies' co-creation of value with consumers through collaboration and feedback.

# Organisation

- ▶ An Organisation is a person or a group of people that has its own functions, with responsibilities, authorities and relationships to achieve its objectives.
- ▶ From an ITIL perspective, an Organisation might be:
  - ❖ A single person
  - ❖ A team within an Organisation
  - ❖ A legal entity (a company or a charity)
  - ❖ A Government department or public sector body
- ▶ **Organisations** need to collaborate with their customers and consumers, as well as the suppliers that help them to offer valuable services to **co-create value**.

# Stakeholder



**Stakeholder** – is a person or organization that has an interest or involvement in an organization, product, service, practice or other entity.

## Examples of stakeholders are :

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Service Consumer – could be customer, user or sponsor

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Service provider or its employees

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Society & Community

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Charity Organisations

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Share Holders

# Service Provision and Consumption



## Service Provider

An organization supplying Services to one or more Internal or External Customers



## Service Consumer

An Organization or an Individual to whom Services are delivered

**Service Provisioning** consists of activities performed by a service provider to provide services. It includes:

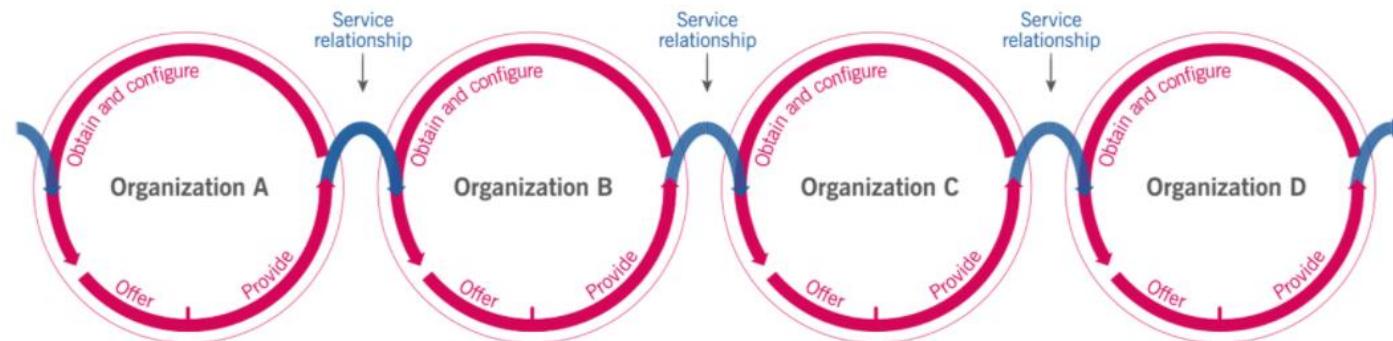
- Management of provider resources configured to deliver the service
- Provisioning of access to resources for users
- Fulfilment of the agreed service actions
- Service performance management and continual improvement

**Service Consumption** consists of activities performed by a service consumer to consume services. It includes:

- Management of the consumer resources needed to consume the service
- Utilization of the provider's resources
- Requesting of service actions to fulfill
- Receipt of or acquiring of goods

# Service Relationships and Management

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



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

# Understanding Risks

- ▶ Risks refer to possible events that could cause harm or loss or make it more difficult to achieve objectives.
  - There are risks removed or reduced for the consumer by the service
  - There are risks potentially imposed on the consumer by the service.
- ▶ The consumer contributes to the reduction of risk through :
  - Actively participating in the definition of the requirements of the service and the clarification of its required outcomes
  - Clearly communicating the critical success factors and constraints that apply to the service
  - Ensuring the provider has access to the necessary resources of the consumer throughout the service relationship

# Understanding Costs

Costs refer to the amount of money spent on a specific activity or resource.

- ▶ There are costs removed from the consumer by the service.  
Example: Uber/OLA - No need for a car, No need to pay insurance, maintenance, gas
- ▶ There are costs imposed on the consumer by the service, including charges by the service provider.  
Example: Uber/OLA - Need for a modern smartphone that's capable of running app, Need for a data plan to access the service
- ▶ Costs expressed in non-financial terms can be translated into financial costs  
Examples: Number of man-hours (or person-hours) / Number of FTEs

# Output and Outcome

An **OUTPUT** is a tangible or intangible deliverable of an activity.

An **OUTCOME** is a result for a stakeholder, enabled by one or more outputs.

If Output does not enable Outcomes:

- Costs are introduced
- Risks are introduced



If Output enables Outcomes:

- Costs are reduced/removed
  - Risks are removed
- ~ Subsequently enabling **Value**

# Service, Product and Service Offering

- 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 services an organization provides are based on one or more of its products.

**Service**



- A configuration of resources, created by the organization, that will be potentially valuable for their customers.

**Product**

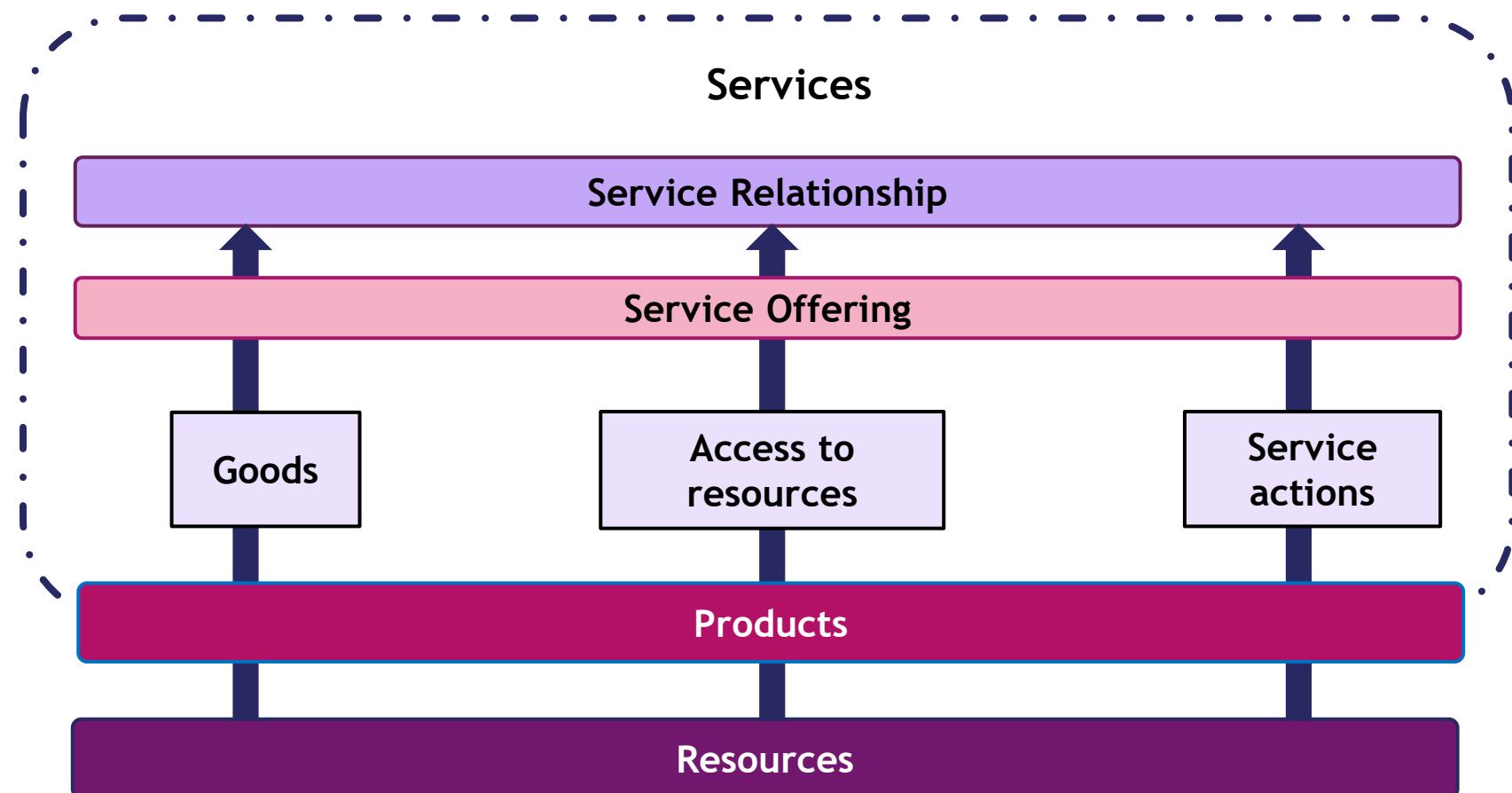


- A description of one or more services, designed to address the needs of a target consumer group.
- A service offering may include
  - ❖ Goods,
  - ❖ Access to Resources,
  - ❖ Service Actions

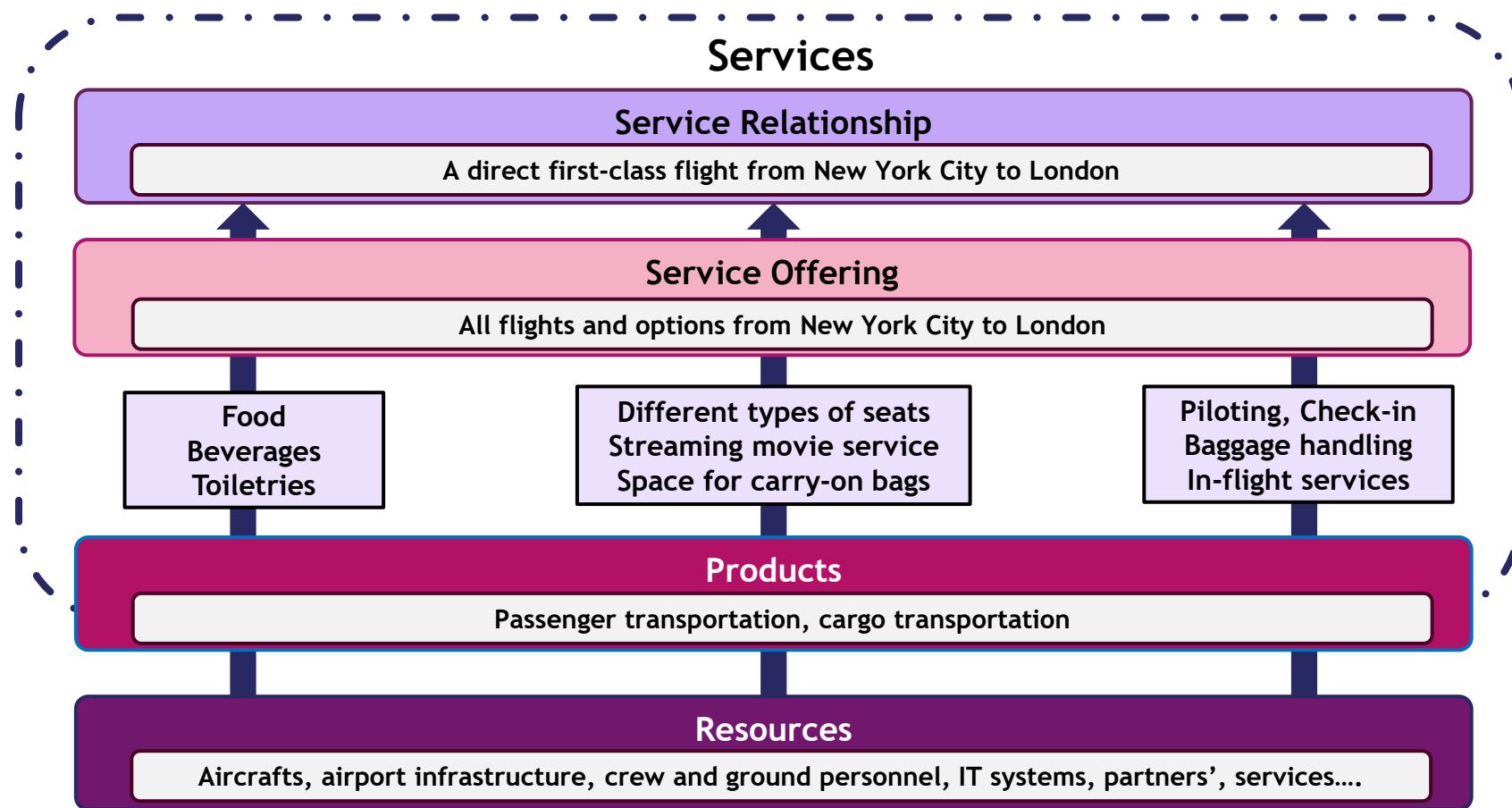
**Service  
Offering**



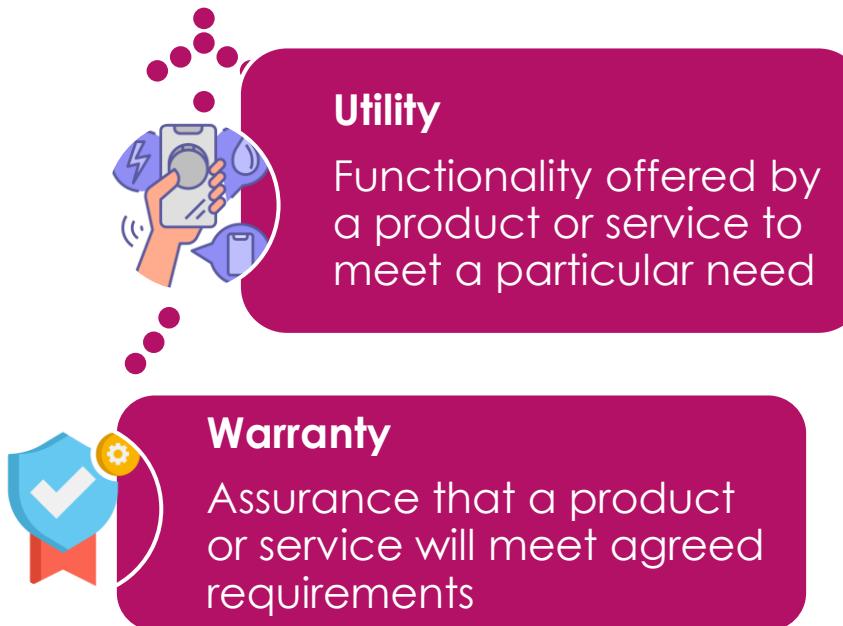
# Service Architecture Model



# Service Architecture Model - Example

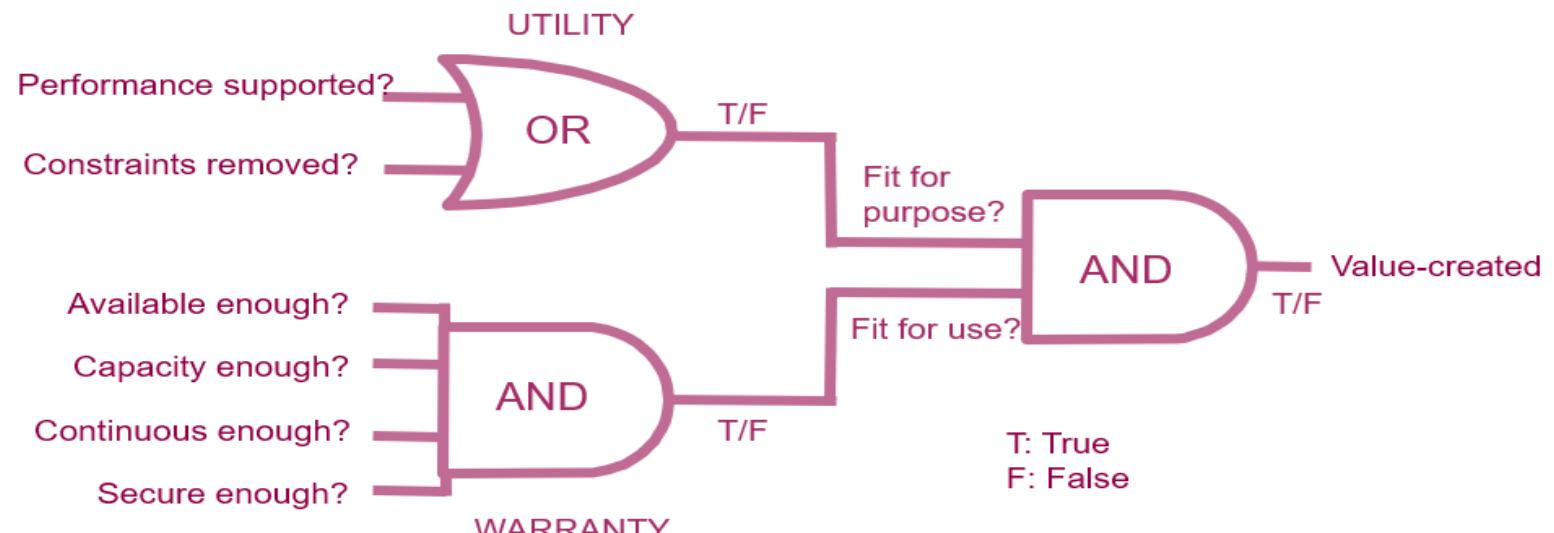


# Utility & Warranty – 1/2



- What the service does
- Can be used to determine whether a service is '**fit for purpose**'
- Requires that a service support the performance of the consumer or remove constraints from the consumer
  
- How the service performs
- Can be used to determine whether a service is '**fit for use**'
- Typically addresses areas such as availability, capacity, security levels and continuity
- Requires that a service has defined and agreed conditions that are met

# Utility & Warranty – 2/2



**Utility:**  
**'What the Customer gets'**

Utility is measured on the basis of the number of key 'outcomes supported' and 'constraints removed'



**Warranty:**  
**'How is it delivered'**

Warranty is measured in terms of the levels of Availability, Capacity, Continuity and Security



**Value Creation**

The basis of differentiation in the Market Space

# Understanding Service Provider

- ▶ Type I – Internal service provider
- ▶ Type II – Shared services Provider/Unit
- ▶ Type III – External service provider

# Different Sourcing Approaches

- ▶ **Insourcing** – The Organization's existing resources are leveraged to create, deliver and support service components. For example:
  - The in-house data center is used to provide computing and storage resources.
  - The HR team in the organization is used to source candidates for open roles
- ▶ **Outsourcing** – Organizations transfers the responsibility for the delivery of specific outputs, outcomes, function or an entire product or services to a vendor. For example:
  - A local data center vendor is used to provide computing and storage resources.
  - A recruitment agency is used to source candidates for open roles or find contractors.

***Outsourcing can be onshoring, nearshoring or offshoring***

# Quiz

## Key Concepts of Service Management

**What is a set of specialized organizational capabilities for enabling value for customers in the form of services?**

- i. Service Offering
- ii. Service Provision
- iii. Service Management
- iv. Service Consumption

# Quiz

## Key Concepts of Service Management

**What can be used to determine if a service is 'fit for purpose'?**

- i. Availability
- ii. Warranty
- iii. Outcome
- iv. Utility

# Quiz

## Key Concepts of Service Management

**In service relationships, what is a benefit of identifying consumer roles?**

- i. It enables effective stakeholder management
- ii. It provides shared service expectations
- iii. It removes constraints from the customer
- iv. It enables a common definition of value

# Quiz

## Key Concepts of Service Management

**What term is used to describe whether a service will meet availability, capacity and security requirements?**

- i. Outcomes
- ii. Value
- iii. Utility
- iv. Warranty

# Quiz

## Key Concepts of Service Management

**Which statement about outputs is CORRECT?**

- i. They consist of several outcomes
- ii. They capture customer demand for services
- iii. They contribute to the achievement of outcomes
- iv. They describe how the service performs

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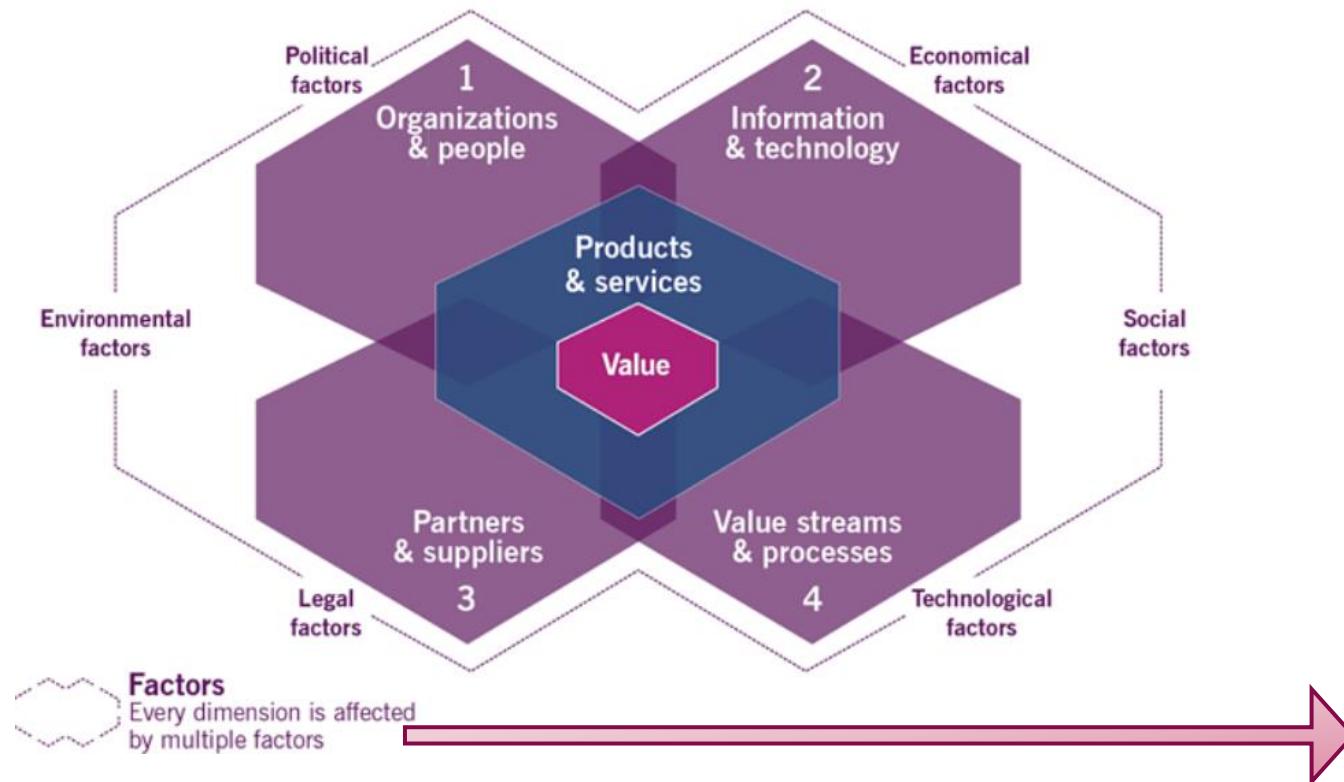
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# Four Dimensions of Service Management



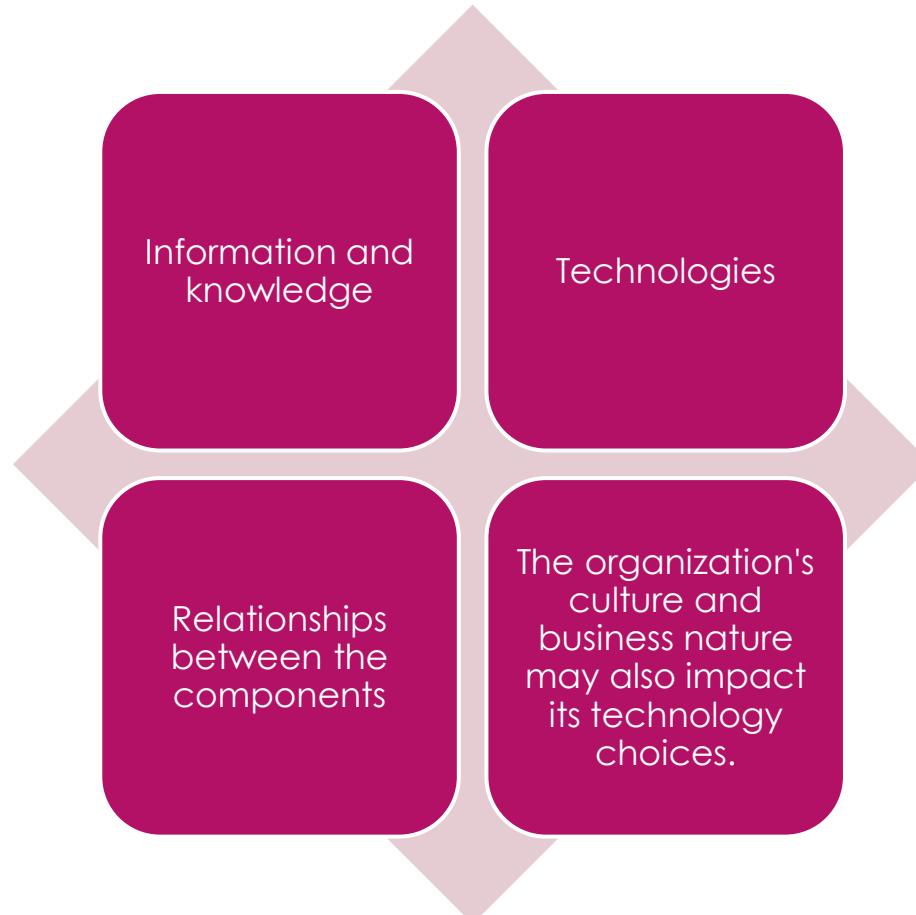
The **PESTLE** model describes factors that constrain or influence how a service provider operates.

- **Political, Economic, Social, Technological, Legal, Environmental**

# Dimension 1 - Organizations & People



# Dimension 2: Information & Technology



# Dimension 3: Partners & Suppliers



Service provider/service consumer relationships



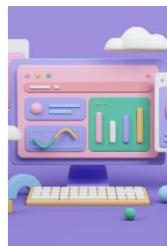
Organization's partner and supplier strategy



Factors that influence supplier strategies



Service partnerships



Goods and service supply



Service integration and management

# Dimension 4: Value Streams & Processes

- ▶ Value streams and processes define activities, workflows, controls and procedures to achieve agreed objectives.
- ▶ A value stream is a series of steps an organization undertakes to create and deliver products and services to service consumers.



- ▶ A process is a set of interrelated or interacting activities that transforms inputs into outputs. Processes are designed to accomplish a specific objective.



# Service Value System

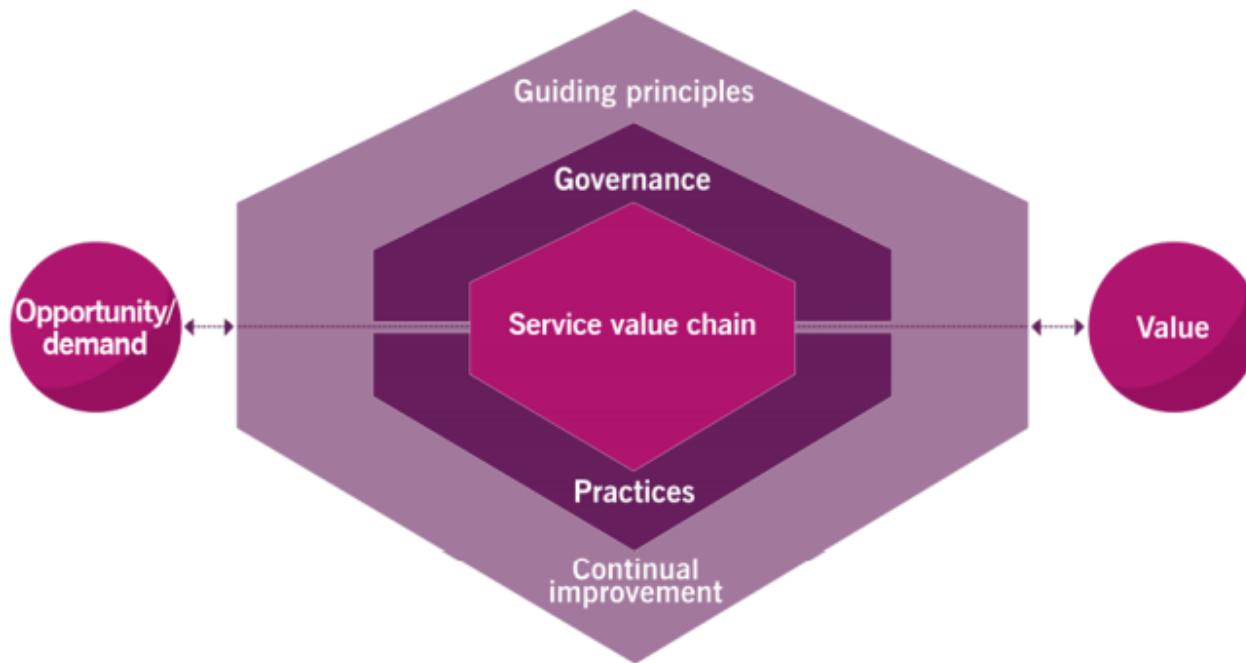
## What is Service Value System (SVS)

The **ITIL Service Value System** describes how all the **components** and **activities** of the **organization work together** as a system to **enable value creation**.



The purpose of the **SVS** is to ensure that the organization continually co-creates value with all stakeholders through the use and management of products and services.

# Service Value System (SVS) – 1/2



## ► Inputs of the SVS

- **Opportunities** - options or possibilities to add value for stakeholders or to improve the organization.
- **Demand** - the need or desire for products and services among internal and external consumers.

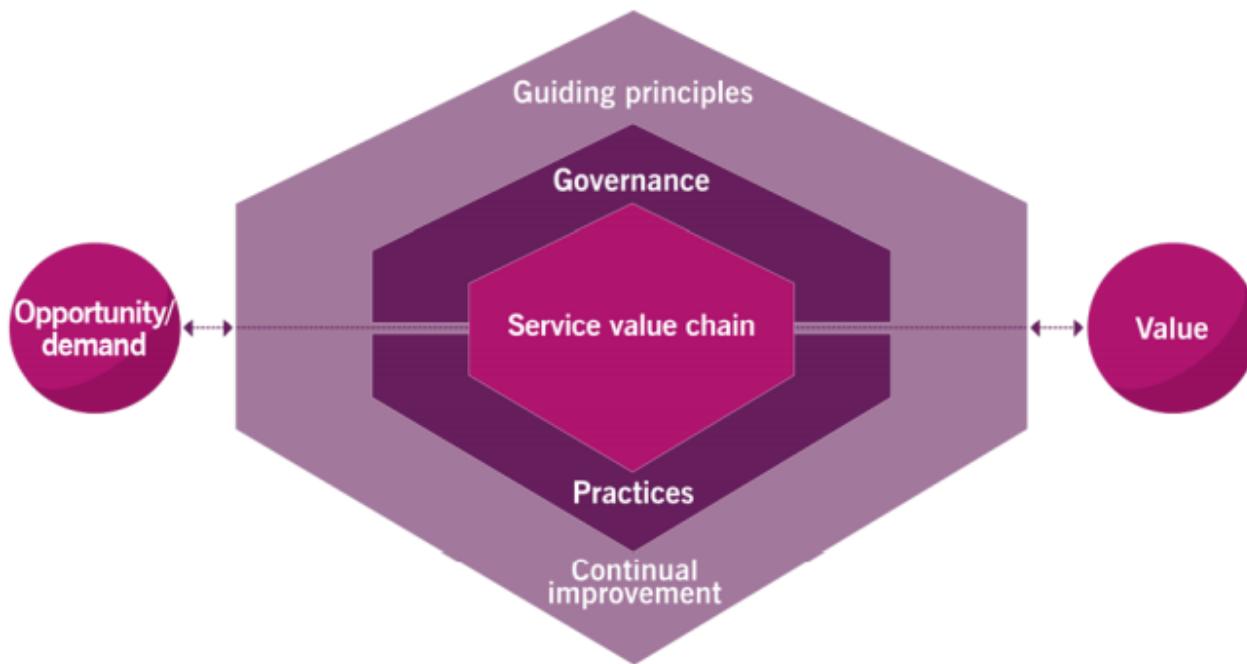
## ► Output of the SVS

- **Value**. The SVS can enable the creation of many different types of value for a wide group of stakeholders.

## ► Components of the SVS

- **The guiding principles** - recommendations to guide an organization in all circumstances, regardless of changes in its goals, strategies, type of work, or management structure.
- **Governance** - means by which an organization is directed and controlled.

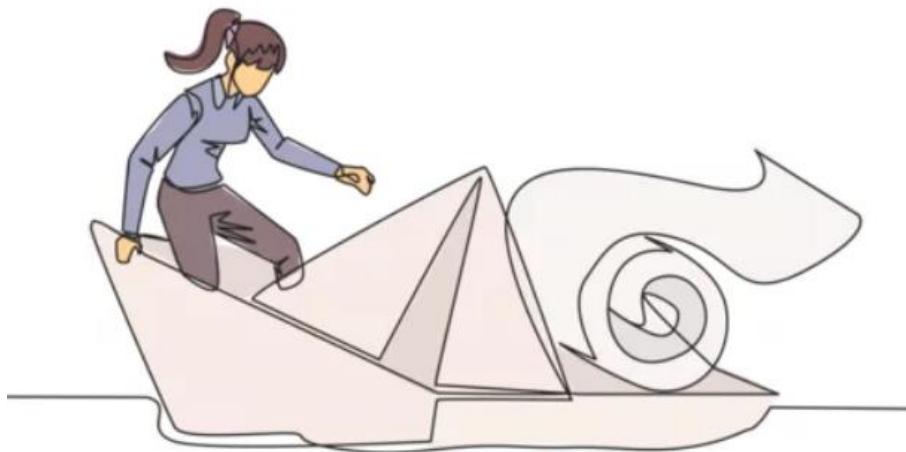
# Service Value System (SVS) – 2/2



- ▶ **Components of the SVS - contd...**
  - **The service value chain** -a set of interconnected activities performed by an organization to deliver a product or service to its consumers & to facilitate value realization.
  - **The ITIL practices** - sets of organizational resources (people, processes, documentation, information assets, technologies, supplier contracts, etc ) designed for performing work or accomplishing an objective.
  - **Continual improvement** - a recurring organizational activity performed at all levels to ensure organization's performance continually meets stakeholders' expectations.

# Addressing The Challenge Of Silos

The ITIL **SVS** has been specifically architected to **enable flexibility** and **discourage siloed working**.



Working in Silos



Flexible & Collaborative Working

# SVS – The Guiding Principles

A GUIDING PRINCIPLE is a recommendation that guides an organization in all circumstances, regardless of changes in its goals, strategies, type of work, or management structure.

Focus on value

Start where you are

Progress iteratively with feedback

Collaborate and promote visibility

Think and work holistically

Keep it simple and practical

Optimize and automate

# ITIL Guiding Principles – Adopt & Adapt

Should the ITIL guiding principles be followed word-for-word?



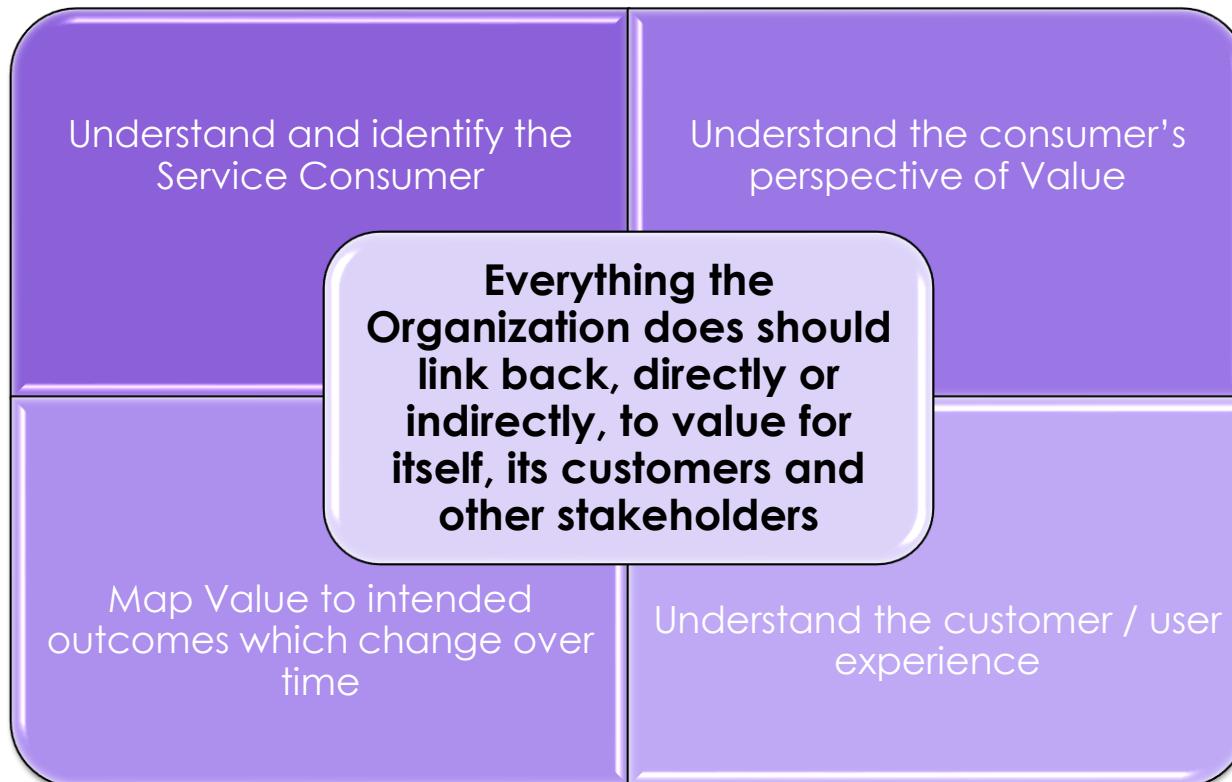
NO

***It is a guidance that should be read, understood, and then followed to create value***

Organizations are highly recommended to: -

- Use ITIL guiding principles to **adopt** a service management approach, and then
- **Adapt** ITIL guidance to their own specific circumstances, goals & requirements

# Focus on Value



## Applying the Principle

- ❖ Know how consumers use each service
- ❖ Encourage a focus on value among all staff
- ❖ Focus on value during operational activity as well as during improvement initiatives
- ❖ Include a focus on value in every step of any improvement initiative

# Start Where You Are

Don't start over without first considering what is already available to be leveraged

Decisions on how to proceed should be based on accurate info

Measurement should be used to support the analysis.

Do not over-rely on data analytics and reporting

The current state should be investigated and observed directly to make sure it is fully understood.

## Applying the Principle

- ❖ Look at what exists as objectively as possible
- ❖ Determine if successful practices or services can be replicated or expanded
- ❖ Apply your risk management skills in the decision-making process
- ❖ Recognize that sometimes nothing from the current state can be reused

# Progress Iteratively with Feedback

Organize work into smaller or more manageable sections

Feedback loops – occurs when part of the output of an activity is used as a new input

Must be continually reevaluated to accurately reflect changes in circumstances

Utilize feedback before, throughout, and after each iteration

Working in a time-boxed and iterative manner with embedded feedback loops allows for

- Greater flexibility
- Faster response to needs,
- The ability to respond to failure earlier
- An overall improvement in quality

## Applying the Principle

- ❖ Comprehend the whole but do something
- ❖ The ecosystem is constantly changing, so feedback is essential
- ❖ Fast does not mean incomplete

# Collaborate & Promote Visibility

Puts the right people in the correct roles, achieve better buy in, have more reliance and gain an increased likelihood of long-term success.

Collaboration is about working together

Collaboration increases visibility

A lack of visibility leads to poor decision making

## Applying the Principle

- ❖ Collaboration does not mean consensus
- ❖ Communicate in a way the audience can hear
- ❖ Decisions can only be made on visible data

Creative solutions, enthusiastic contributions and important perspectives can be obtained from unexpected sources, so inclusion is generally a better policy than exclusion.

# Think & Work Holistically



## Applying the Principle

- ❖ Recognize the complexity of systems
- ❖ Collaboration is key to thinking & working holistically
- ❖ Look for patterns of interaction between elements
- ❖ Automation can help you to work more holistically

# Keep it Simple & Practical

Outcome based thinking should be used to produce practical solutions which deliver valuable outcomes using the minimum number of steps

Establish a holistic view of organization work

Start with an uncomplicated approach

Do not try to produce a solution for every exception

Be mindful of how we can complete the objectives

If a process, service, action or metric provides no value or produces no useful outcome, then eliminate it.

## Applying the Principle

- ❖ Ensure value
- ❖ Simplicity is the unlimited sophistication
- ❖ Recognize the complexity of systems
- ❖ Respect the time of the people involved
- ❖ Easier to understand, more likely to adopt
- ❖ Simplicity is the best route to achieving quick wins

# Optimize and Automate

## Optimize

- Make something as effective and useful as it makes sense to do

## Automation

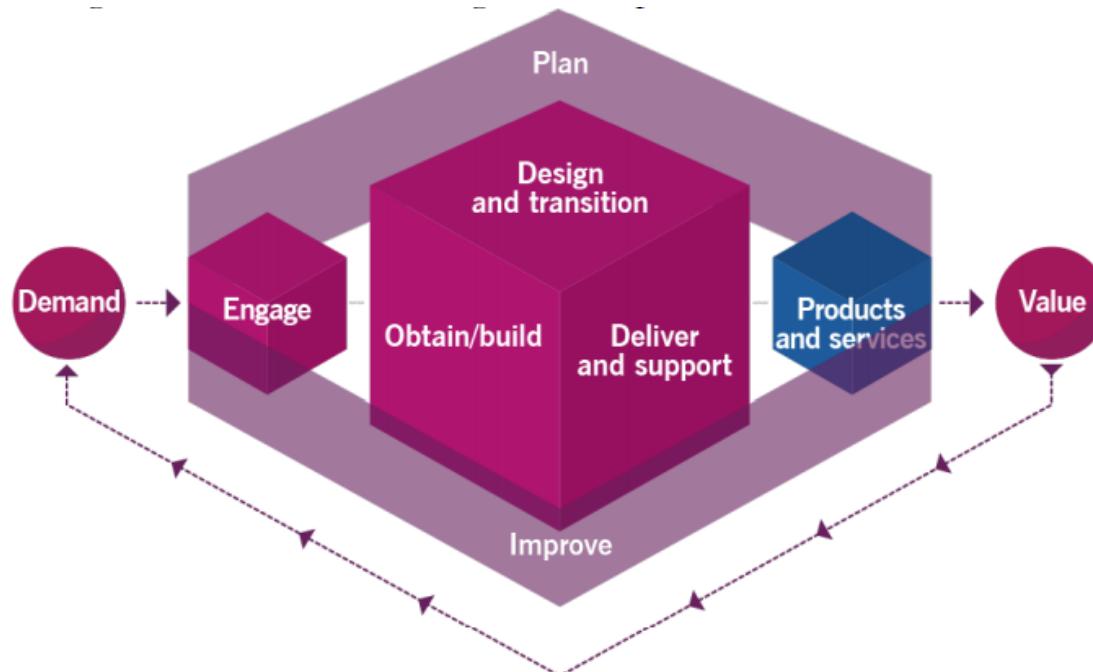
- Using technology to perform a step or series of steps correctly and consistently with limited or no human intervention

## Applying the Principle

- ❖ Automate Frequent & repetitive steps
- ❖ Simplest form of automation involves standardizing and streamlining manual tasks
- ❖ Simply and/or optimize before automation
- ❖ Define your metrics
- ❖ Use other guiding principles when applying this one

# 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.

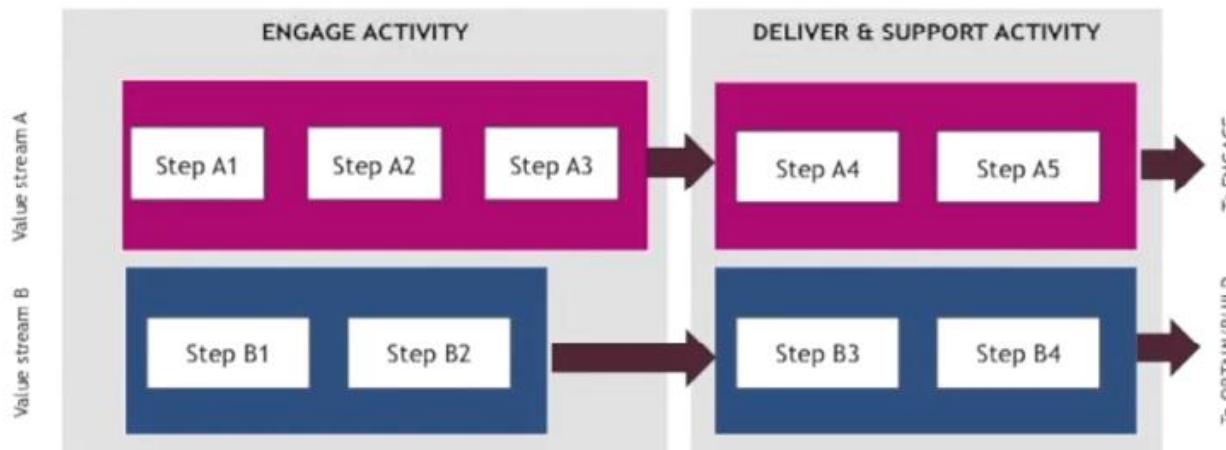


# Value Chain Activity

- ▶ **Plan** - To ensure a shared understanding of the vision, current status & improvement direction for all four dimensions and all products and services across the organization
- ▶ **Improve** - To ensure continual improvement of products, services and practices across all value chain activities and the four dimensions of service management.
- ▶ **Engage** - To provide a good understanding of stakeholder needs, continual engagement with all stakeholders, transparency and good relationships with all stakeholders.
- ▶ **Design & Transition** - To ensure that products and services continually meet stakeholder expectations for quality, costs and time to market.
- ▶ **Obtain/Build** -To ensure that service components are available when and where they are needed, and meet agreed specifications.
- ▶ **Deliver & Support** - To ensure that services are delivered and supported according to agreed specifications and stakeholders' expectations

# Value Streams and the Service Value Chain

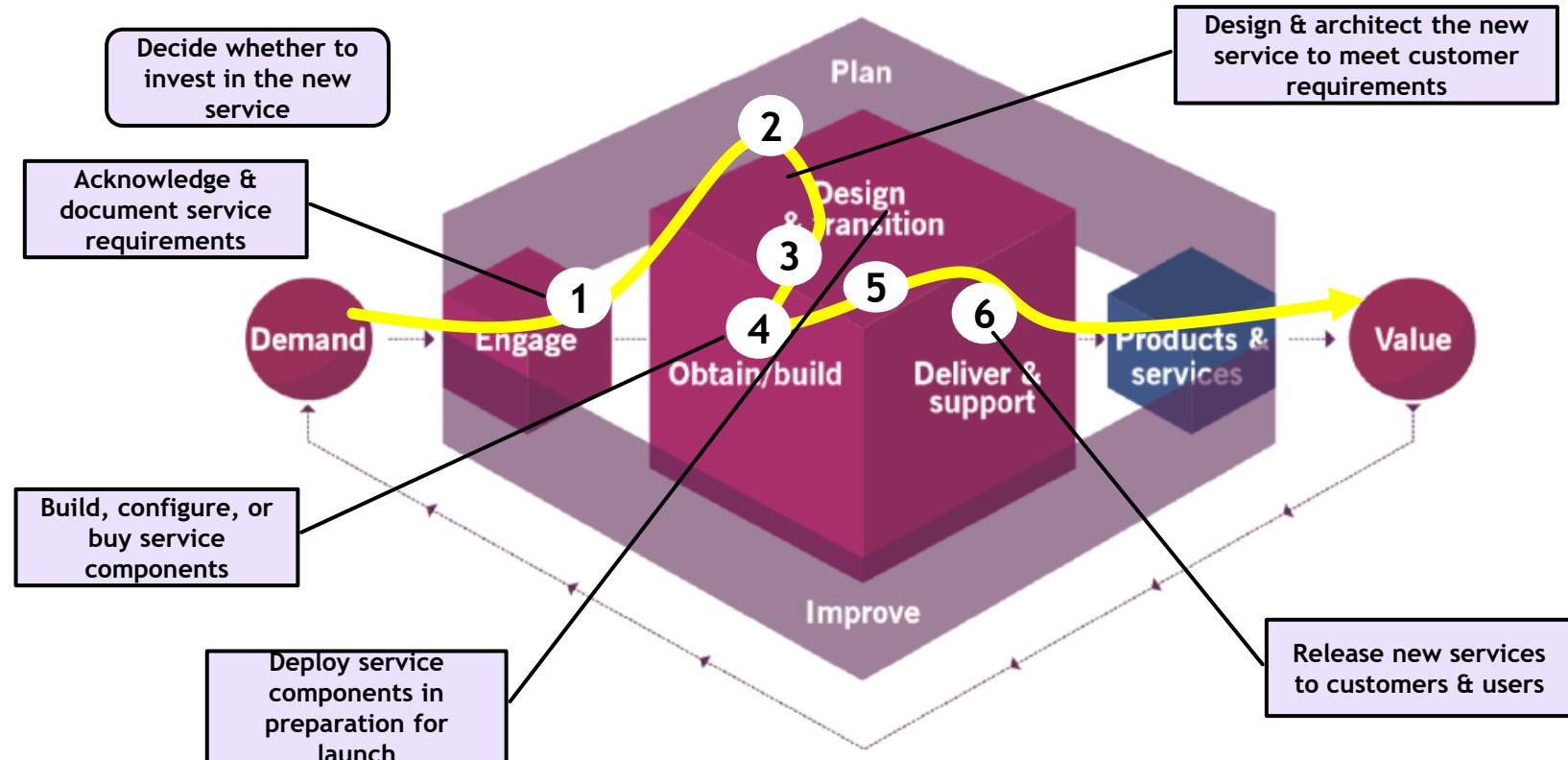
- ▶ Service value streams are specific combinations of activities and practices, and each one is designed for a particular scenario.



- ▶ As each value stream is made up of a different combination of value chain activities and practices, inputs and outputs must be understood as specific to particular value streams.

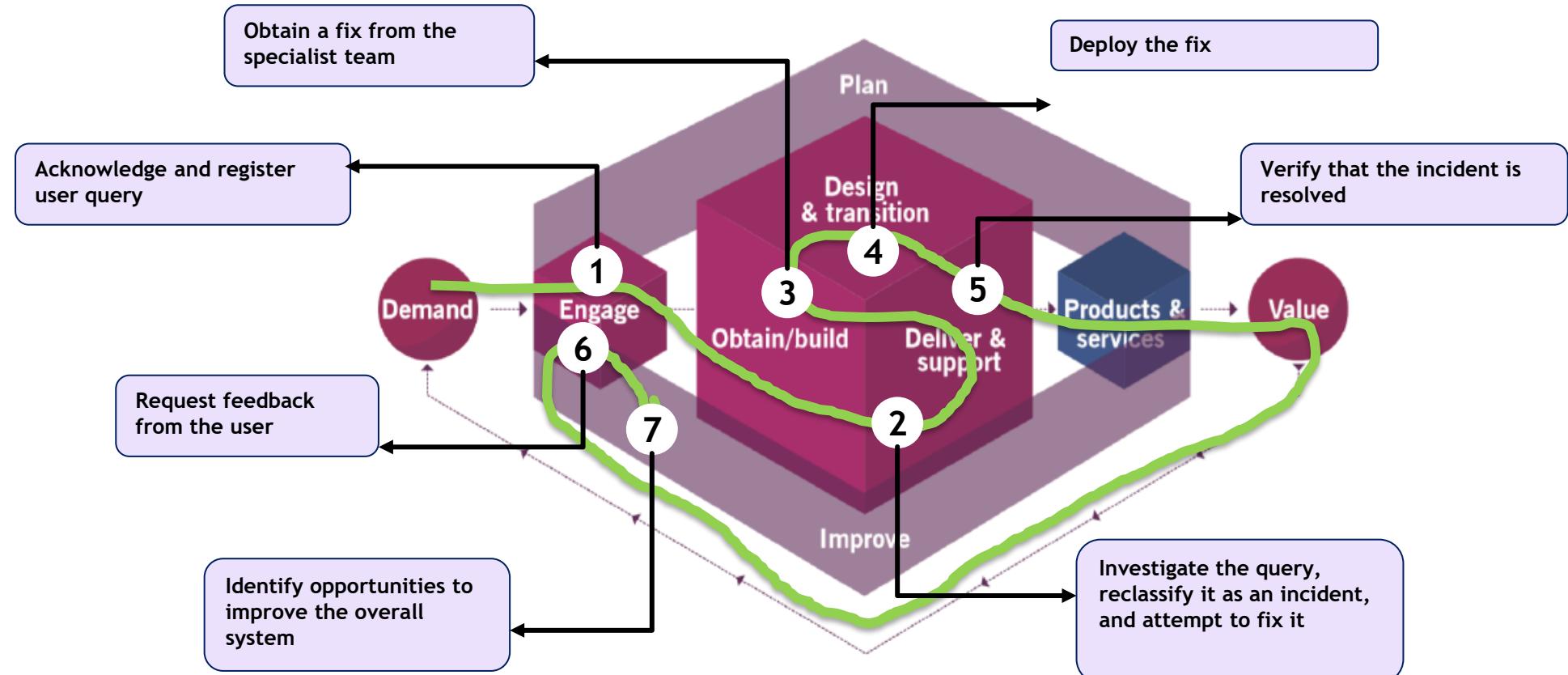
# VALUE STREAMS FOR SPECIFIC SCENARIOS

## NEW SERVICE COMPONENT



# VALUE STREAMS FOR SPECIFIC SCENARIOS

## RESTORATION OF LIVE SERVICE



Example of Value Flow in the resolution of an incident. Copyright © AXELOS Limited 2019

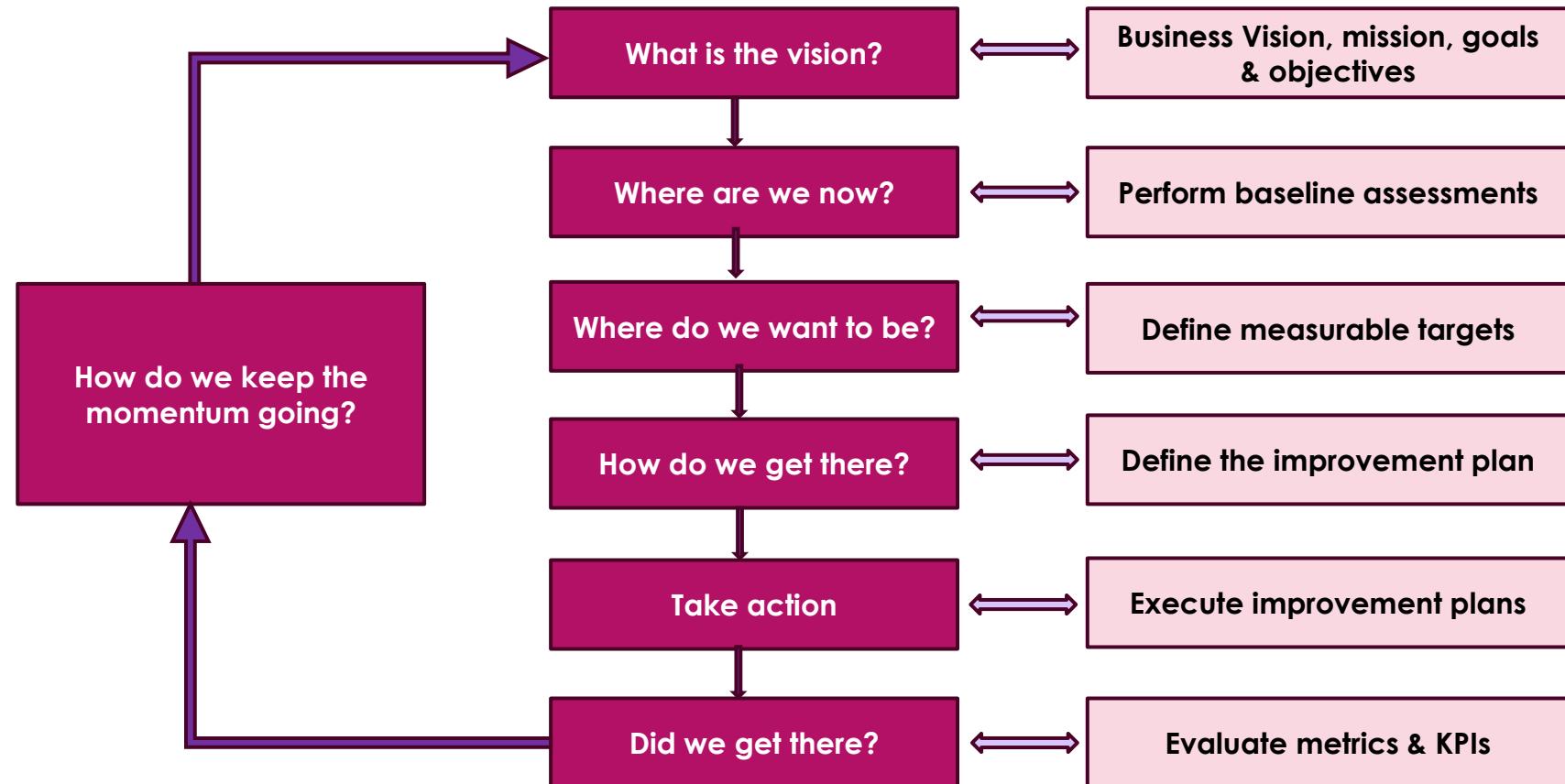
# Continual Improvement

- ▶ Continual improvement takes place in all areas of the organization and at all levels
- ▶ The continual improvement model applies to the SVS in its entirety, as well as to all of the organization's products, services, service components, and relationships.
- ▶ To support continual improvement at all levels, the ITIL SVS includes:
  - ❑ The **ITIL continual improvement model**, which provides organizations with a structured approach to implementing improvements
  - ❑ The **improve** service value chain activity, which embeds continual improvement into the value chain
  - ❑ The **continual improvement practice**, supporting organizations in their day-to-day improvement efforts.



# Continual Improvement

## - 7 Step Improvement Plan



# Quiz

## Key Concepts of ITIL V4

**What should be considered as part of the 'partners and suppliers' dimension?**

- i. The level of integration and formality involved in the relationships between organizations
- ii. The activities, workflows, controls and procedures needed to achieve the agreed objectives
- iii. The information created, managed and used in the course of service provision and consumption
- iv. The required skills and competencies of teams and individual members of the organization

# Quiz

## Key Concepts of ITIL V4

**Which activity contributes to the 'where are we now?' step of the 'continual improvement' model?**

- i. Executing improvement actions
- ii. Performing baseline assessments
- iii. Defining the improvement plan
- iv. Understanding the business mission

# Quiz

## Key Concepts of ITIL V4

**Which is a result of applying the guiding principle 'progress iteratively with feedback'?**

- i. The ability to discover and respond to failure earlier
- ii. Standardization of practices and services
- iii. Understanding the customer's perception of value
- iv. Understanding the current state and identifying what can be reused

# Quiz

## Key Concepts of ITIL V4

**Which is an external input to the service value chain?**

- i. The 'improve' value chain activity
- ii. An overall plan
- iii. Customer requirements
- iv. Feedback loops

# Quiz

## Key Concepts of ITIL V4

**What can help to reduce resistance to a planned improvement when applying the guiding principle 'collaborate and promote visibility'?**

- i. Restricting information about the improvement to essential stakeholders only
- ii. Increasing collaboration and visibility for the improvement
- iii. Involving customers after all planning has been completed
- iv. Engaging every stakeholder group in the same way, with the same communication

# Quiz

## Key Concepts of ITIL V4

**Which can act as an operating model for an organization?**

- i. The four dimensions of service management
- ii. The service value chain
- iii. The ITIL guiding principles
- iv. Continual improvement

# Practices

# Categories of Practices

## What is Practice?

- ▶ A practice is a set of organizational resources designed for performing work or accomplishing an objective.
- ▶ Each practice:
  - Supports multiple service value chain activities
  - Includes resources based on the 4 dimensions of service management

## ITIL Practices – 3 Categories

- ▶ General management practices
- ▶ Service management practices
- ▶ Technical management practices

# General Management Practices

General Management Practices are adopted/adapted for service management from general business management domains.

General Management Practices:		
Continual Improvement **	Information Security Management *	Relationship Management *
Supplier Management *	Architecture Management	Knowledge Management
Measure and Reporting	Portfolio Management	Organizational Change Management
Project Management	Risk Management	Service Financial Management
Strategy Management	Workforce and Talent Management	

# Service Management Practices

Service Management Practices are adopted/adapted for service management practices have been developed in service management and IT service management (ITSM) industries.

<b>Service Management Practices:</b>		
Change Enablement **	Service Request Management **	Service Continuity Management
Incident Management **	IT Asset Management *	Availability Management
Problem Management **	Monitoring and Event Management *	Business Analysis
Service Desk **	Release Management *	Capacity and Performance Management
Service Level Management **	Service Configuration Management *	Service Catalogue Management
Service Design	Service Validation and Testing	

# Technical Management Practices

Technical management practices have been adapted from technology management domains for service management purposes by expanding or shifting their focus from technology solutions to IT services

<b>Technical Management Practices</b>		
Deployment Management *	Infrastructure and Platform Management	Software Development and Management

# General Management Practices

# Architecture Management

**Purpose** – Helps Organization manage its **components** and their interrelationships, enabling it to achieve its present and future goals effectively. It provides the principles, standards, and tools that enable an organization to manage complex change in a structured and Agile way.



- A complete architecture management practice should address all architecture domains: **business, service, information, technology, and environment.**
- For a smaller and less complex organization, the architect can develop a single integrated architecture.

# Continual Improvement

# Continual Improvement \*\*

**Purpose** - 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.



- Its scope is the development of improvement-related methods and techniques and the propagation of a continual improvement culture across the organization, in alignment with the organization's overall strategy.
- If it is not, there is a real risk that daily operational concerns and major project work will eclipse continual improvement efforts.

# Continual Improvement

Key activities that are part of continual improvement practices include:

- Encouraging continual improvement across the organization
- Securing time and budget for continual improvement
- 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

To track and manage improvement ideas from identification through to final action, organizations use a database or structured document called a continual improvement register (CIR).

Various methods or techniques can be deployed by this practice, like:

- ✓ DevOps
- ✓ Lean
- ✓ SWAT
- ✓ Balanced Scorecard
- ✓ Maturity Assessments
- ✓ Agile Improvements

# Information Security Management \*

**Purpose** - To protect the information needed by the organization to conduct its business. This includes ways to prevent breaches of the **confidentiality, integrity, and availability** of information, as well as other aspects of information security.



- 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.

# Knowledge Management

# Knowledge Management

**Purpose** - To maintain and improve the effective, efficient, and convenient use of information and knowledge across the organization.

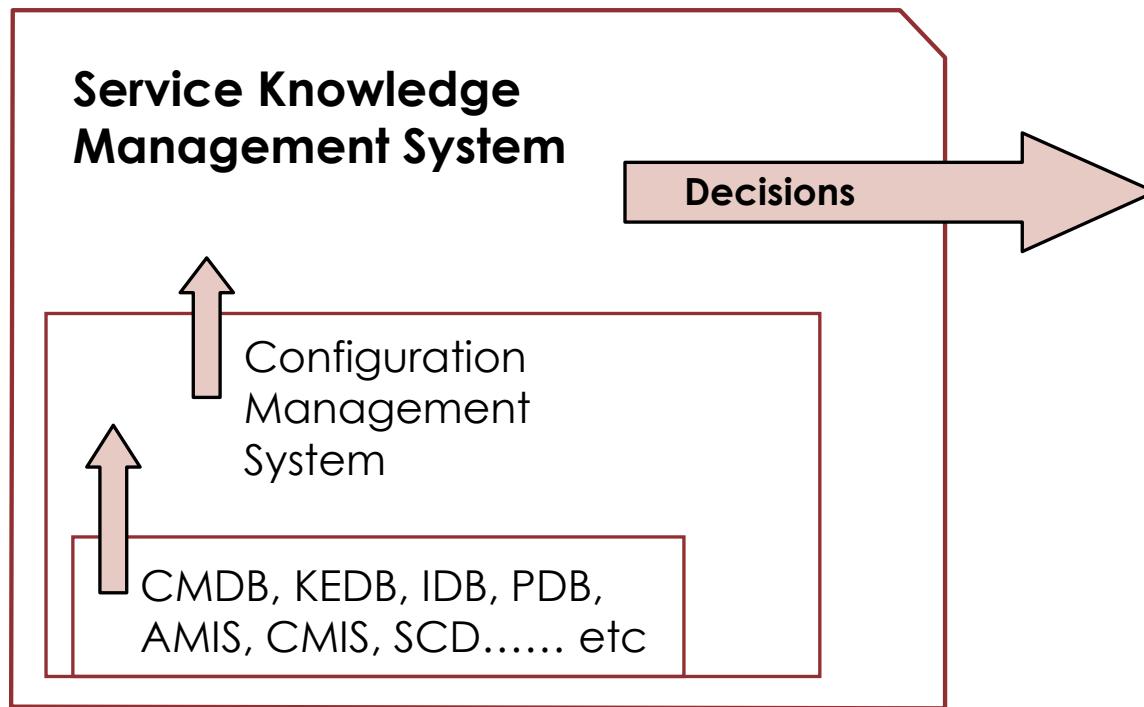


Knowledge management is typically displayed within the Data–Information–Knowledge–Wisdom structure :

- ▶ **Data** is a set of discrete facts about events
- ▶ **Information** comes from providing context to data or by asking questions on the data
- ▶ **Knowledge** is composed of the concepts, tacit experiences, ideas, insights, values and judgments of individuals
- ▶ **Wisdom** gives the ultimate discernment of the material and guides a person in the application of knowledge

Wisdom CANNOT be managed by tools

# Knowledge Management - SKMS



*Relationship of the CMDB, the CMS and the SKMS*

- A set of tools and databases that are used to manage knowledge and information
- The SKMS includes the Configuration Management System, as well as other tools and databases
- The SKMS stores, manages, updates, and presents all information that an IT Service Provider needs to manage the full lifecycle of IT Services

# Measurement and Reporting

**Purpose** - To support good decision-making and continual improvement by **decreasing** the **levels of uncertainty**.



- Achieved by collecting relevant data on various managed objects.
- Managed objects include, but are not limited to:
  - Products and services
  - Practices and value chain activities
  - Teams and individuals
  - Suppliers and partners
  - The organization as a whole

# Organizational Change Management

**Purpose** – To ensure that **changes** in an **organization** are smoothly and successfully implemented, and that lasting benefits are achieved by **managing** the **human aspects** of the changes.



- It helps organizations implement the changes recommended during the continual improvement process.
- It aims to ensure that everyone affected by the change, accepts and supports it.
- This is achieved by removing or reducing resistance to the change, eliminating or addressing adverse impacts, and providing training, awareness, and other means of ensuring a successful transition to the changed state.

# Portfolio Management

**Purpose** - To ensure that the organization has the **right mix of programmes, projects, products, and services** to execute the organization's **strategy** within its **funding** and **resource constraints**.



**Strategic Alignment:** Ensures services and initiatives align with business goals, prioritizing those that deliver maximum value.

**Lifecycle Management:** Covers the entire service lifecycle, from development to retirement, optimizing resource allocation.

**Supply and Demand Balance:** Manages resources, capacity, and funding to balance the supply of services with business demand.

**Value Optimization:** Focuses on evaluating and selecting services that provide the highest value for both the organization and its customers.

# Project Management

**Purpose** – To ensure that all projects in the organization are successfully delivered. This is achieved by **planning**, **delegating**, monitoring, and **maintaining control** of all aspects of a project, and keeping the **motivation** of the people involved.

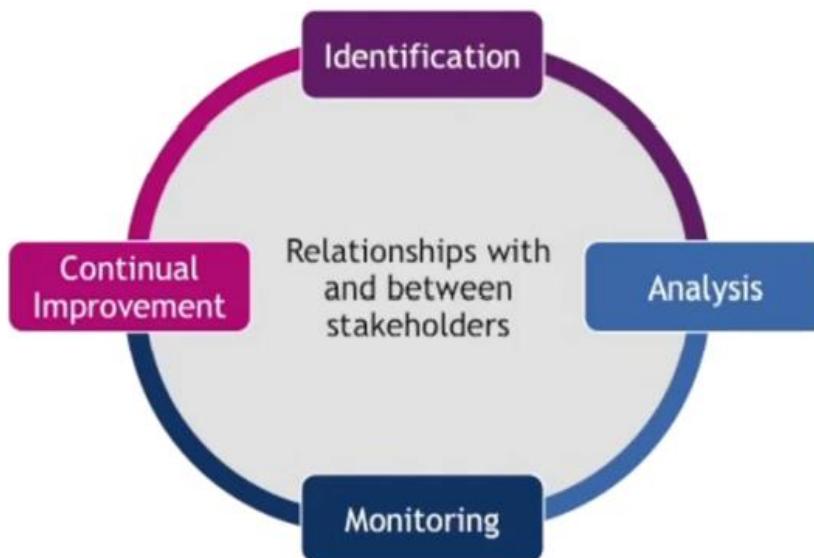


Successful project management is important as the organization must balance its need to:

- Maintain current business operations effectively and efficiently
- Transform those business operations to change, survive, and compete in the marketplace
- Continually improve its products and services.

# Relationship Management \*

**Purpose** – To establish and nurture the links between the organization and its stakeholders at strategic and tactical levels. It includes the identification, analysis, monitoring, and continual improvement of relationships with and between stakeholders.



A few tasks ensured by this practice are:

- Stakeholders' needs and drivers are understood, and products and services are prioritized appropriately
- Customers' priorities for new or changed products and services, in alignment with desired business outcomes, are effectively established and articulated.
- Any stakeholders' complaints and escalations are handled well through a sympathetic (yet formal) process

# Relationship Management

- ▶ For any service, relationship and trust are essential factors for a successful value realization.
- ▶ Stakeholders are successful when they foster and sustain an environment for collaboration & trust as, with a high level of trust, a customer tends to increase demand, effectively contributing to value co-creation.



# Risk Management

**Purpose** - To ensure that the organization understands and effectively handles risks.

**Managing risk** is essential to ensuring the **ongoing sustainability** of an organization and creating value for its customers.



- Risk management is an integral part of all organizational activities and therefore central to the organization's SVS
- Decisions about risk need to be balanced so that the potential benefits are worth more to the organization than the cost to address the risk.

# Service Financial Management

**Purpose** - To support the organization's strategies and plans for service management, by ensuring that the organization's **financial resources** and **investments** are being used effectively.



It is responsible for managing the **budgeting**, **costing**, **accounting**, and **charging** for the activities of an organization, acting as both service provider and service consumer.

# Strategy Management

**Purpose** – to formulate the **goals of the Organization** and adopt the **courses of action** and allocation of resources necessary for achieving those goals.



It ensures that the strategy is defined, agreed, maintained, and achieved.

# Supplier Management

# Supplier Management \*

**Purpose** – To ensure the **organization's suppliers** and their **performance** are managed appropriately to support the provision of seamless, quality products, services and components. This can include creating closer, more collaborative relationships with key suppliers to uncover and realize new value and reduce risk of failure



A few tasks ensured by this practice are:

- Stakeholders' needs and drivers are understood, and products and services are prioritized appropriately
- Customers' priorities for new or changed products and services, in alignment with desired business outcomes, are effectively established and articulated.

# Supplier Management

Activities that are central to the practice include:

- ▶ **Creating a single point of visibility and control to ensure consistency** across all products, services, service components, and procedures provided or
- ▶ **Maintaining a supplier strategy, policy, and contract management information**
- ▶ **Negotiating and agreeing contracts and arrangements** that need to be aligned with business needs and service targets.
- ▶ **Managing supplier performance** to ensure that they meet the terms, conditions, and targets of their contracts and agreements, while aiming to increase the value for money obtained from supplies and the products/services they provide.

**Service integrator** is responsible for coordinating or orchestrating all the suppliers involved in the development and delivery of products and services.

# Workforce and Talent Management

**Purpose** - To ensure that the organization has the **right people** with the appropriate **skills** and **knowledge** and in the **correct roles** to support its business objectives.



It focuses on activities to successfully engaging with the organization's employees and people resources, including **planning, recruitment, onboarding, learning & development, performance measurement, and succession planning**.

# Service Management Practices

# Service Level Management

# Service Level Management \*\*

**Purpose** - To set clear business-based targets for service levels, and to ensure that delivery of services is properly assessed, monitored, and managed against these targets.



## Service level

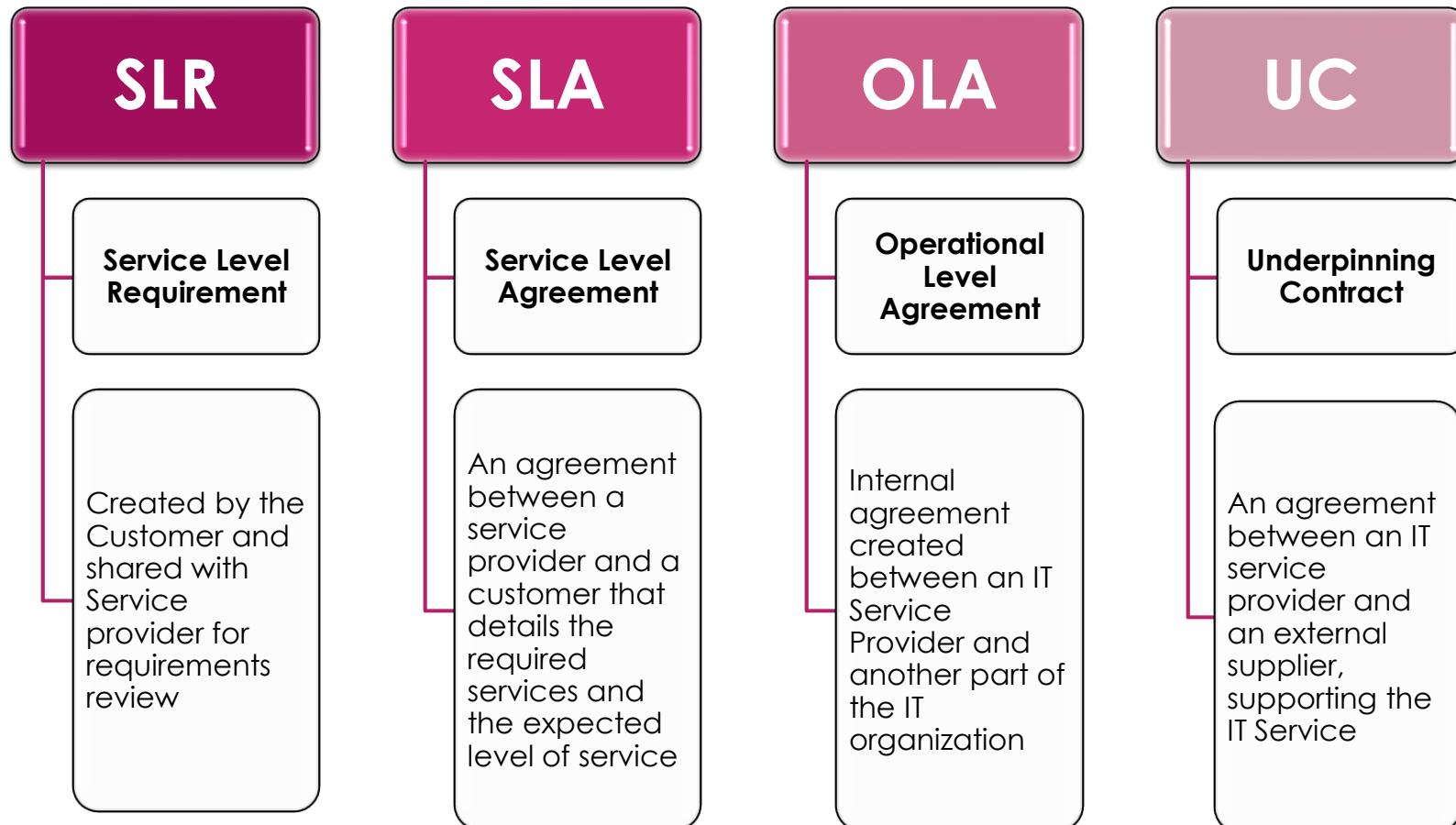
One or more metrics that define expected or achieved service quality.

# Service Level Management-Objective

The objective of Service Level Management is to ensure that :

- Expectation setting of IT services provided
- Relationship maintenance
- Ensure that specific and measurable targets are developed for all IT services
- Monitor and improve customer satisfaction with the quality of service delivered
- Transparent expectation of the level of service to be delivered
- Proactive measures for improvement

# Service Level Management - Basics



# Service Level Management - Generic SLA Elements

- ▶ General Introduction
  - Parties
  - Signatories
  - Signatures
  - Service description
  - Period
- ▶ Reporting and reviewing
  - Content
  - Frequency
- ▶ Incentives and penalties
- ▶ Roles and responsibilities of involved parties
- ▶ Support:
  - Service hours
  - Support
  - Change procedures
  - Escalation
- ▶ Delivery
  - Availability
  - Reliability
  - Transaction response
  - Times
  - Throughput
  - Batch turnaround times
  - Contingency and security
  - Charging

# Incident Management

# Incident Management – Purpose & Objective \*\*

## Purpose

The purpose of incident management is to restore normal service operation as quickly as possible and minimize the adverse impact on business operations.



## Objectives

- Ensure that standardized methods and procedures are used
- Increase visibility and communication of incidents
- Align incident management activities and priorities with those of the business

# Incident Management –Value to the business

## The value of Incident Management includes:

- Reduced downtime by giving higher availability to the business
- Allocation of resource to business priorities
- Identify potential improvements
- Identify additional requirements

Incidents should be logged.

Incidents should be managed to meet agreed target resolution times.

Target resolution times should be agreed, documented and communicated

**Incident** - An unplanned interruption to or quality reduction of an IT service

# INCIDENT MANAGEMENT

## Design the incident management practice

- Incidents based on different impact
  - Lower impact incidents should not consume too many resources
- Separate procedure for
  - Major incidents
  - Information security incidents

## Prioritize incidents

- Based on agreed classification
- Ensure incidents with highest business impact are resolved first

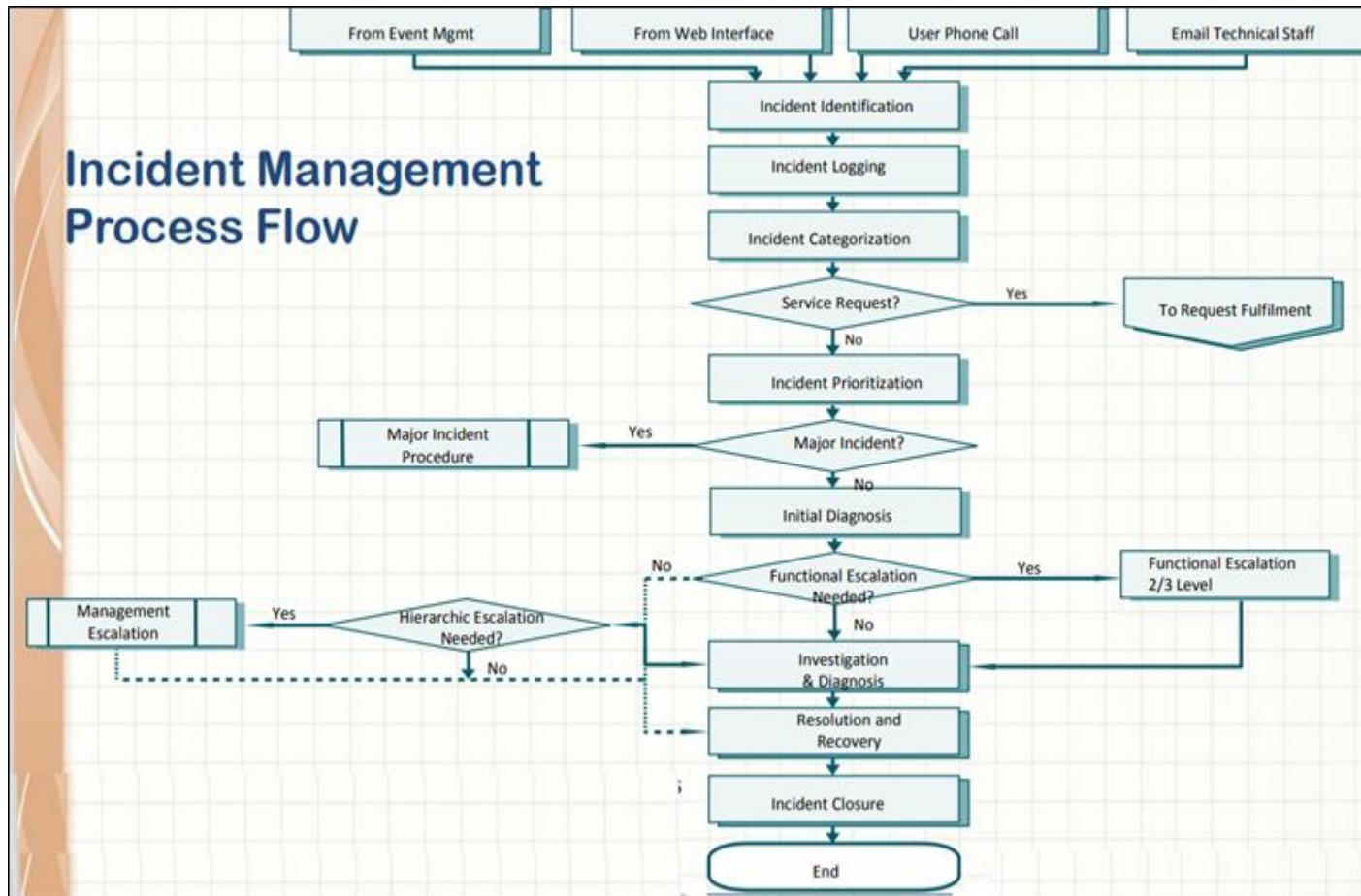
## Use a robust tool to log and manage incidents

- Link to configuration items, changes, problems, known errors and other knowledge
- Provide incident matching to other incidents, problems or known errors

# Incident Management – Key Concepts

- ▶ **Incident Models**
  - A set of predefined steps taken to handle an Incident in an agreed manner
- ▶ **Incident Models for Major Incident**
  - Separate procedure with shorter timescales and greater urgency must be used for Major incidents
  - A definition of what constitutes a major incident must be agreed and ideally mapped onto the overall incident prioritization scheme
- ▶ **Status Tracking**
  - Incidents should be tracked throughout their lifecycle to support proper handling and reporting on the status of incidents.

# Incident Management - Process Flow



# Incident Management Activities

- ▶ **Identification**
  - Ideally, incidents should be resolved before they have an impact on users!
- ▶ **Logging**
  - All incidents must be fully logged and date/time stamped
- ▶ **Categorisation**
  - Suitable incident categorization coding must be located so that the exact type of incident is recorded.

# Incident Management Activities - Prioritization

**Prioritization = Impact \* Urgency**

		Impact		
		High	Medium	Low
Urgency	High	1	2	3
	Medium	2	3	4
	Low	3	4	5

Priority	Description	Target Resolution Time
1	Critical	2 Hrs
2	High	4 Hrs
3	Medium	24 Hrs
4	Low	48 Hrs

## Regular Incident

A user reports their printer is not working

## Critical Priority Incident

A company-wide network outage prevents all employees from accessing critical business systems

## Major Incident

The organization's e-commerce site is down during a peak sales event, affecting all customers and revenue

## High Impact but Not Urgent Incident:

A security vulnerability is discovered that could lead to a breach, but there's no immediate threat detected.

## Low Impact but Highly Urgent Incident:

The CEO is unable to log into a presentation tool minutes before a crucial meeting

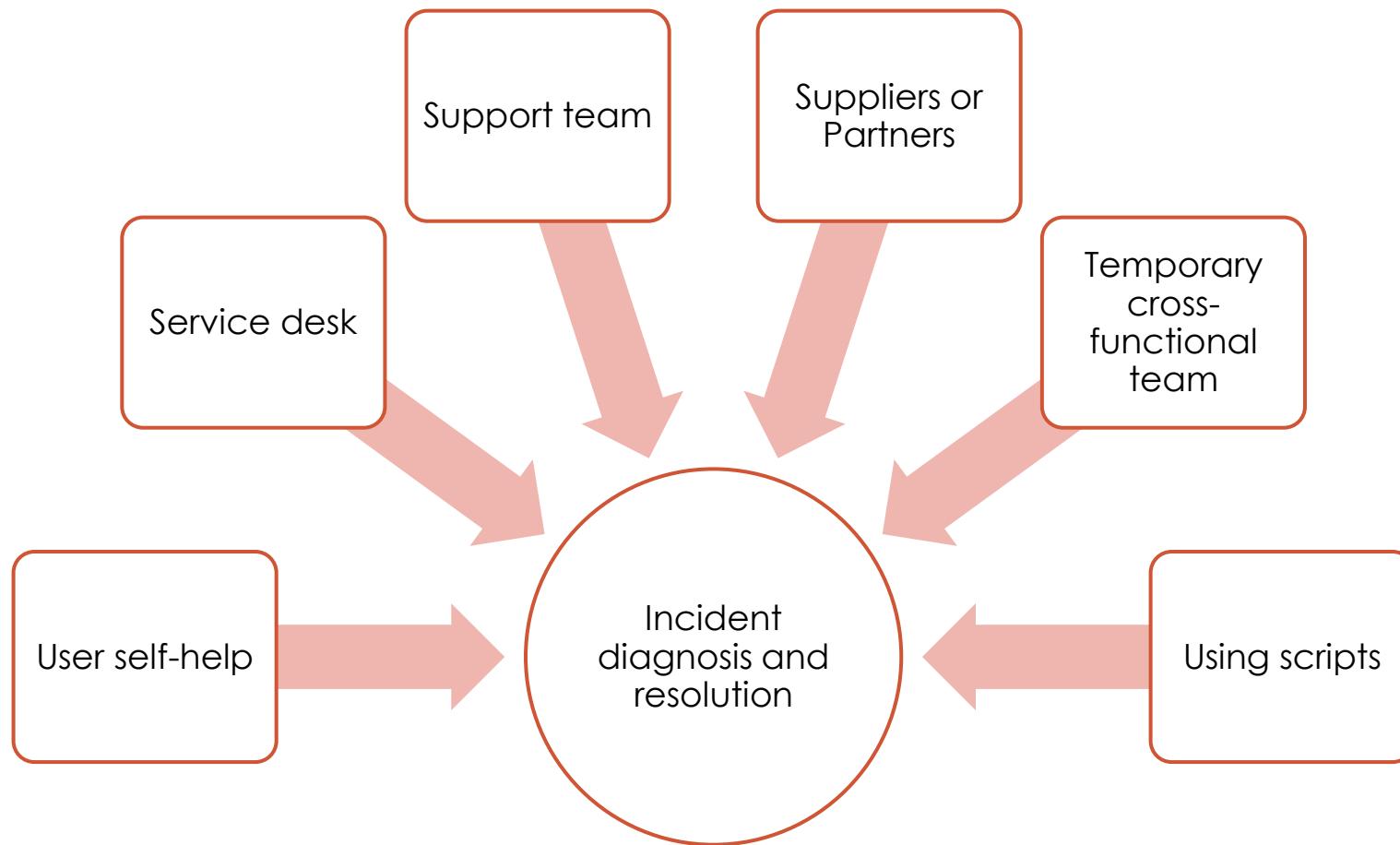
# Incident Management – Escalation

- ▶ **Functional Escalation**
  - When incident needs deeper technical/functional know-how
- ▶ **Hierarchical Escalation**
  - Depending on the nature of the incident (e.g. high priority)and when the SLA may likely breach due to limited resources or timeframe, hierarchical escalation should be done
- ▶ **Levels for escalation should be agreed**
- ▶ **Ownership of incident remains with the service desk no matter what**

# Incident Management – Investigation & Diagnosis

- Establish what has gone wrong
- Understand chronological order of events
- Confirm full impact
- Identify any events that could have triggered Incident
- Knowledge search for previous occurrences

# Incident Management – Diagnosis & Resolution



# Incident Management – Closure

- ▶ Categorization – Check and confirm initial Incident categorization
- ▶ User satisfaction – Gain user feedback
- ▶ Incident documentation – Service Desk chase outstanding information and data
- ▶ Problem – Determine if a Problem Record should be raised
- ▶ Formal Closure – Incident Record closed

# Incident Management - Swarming

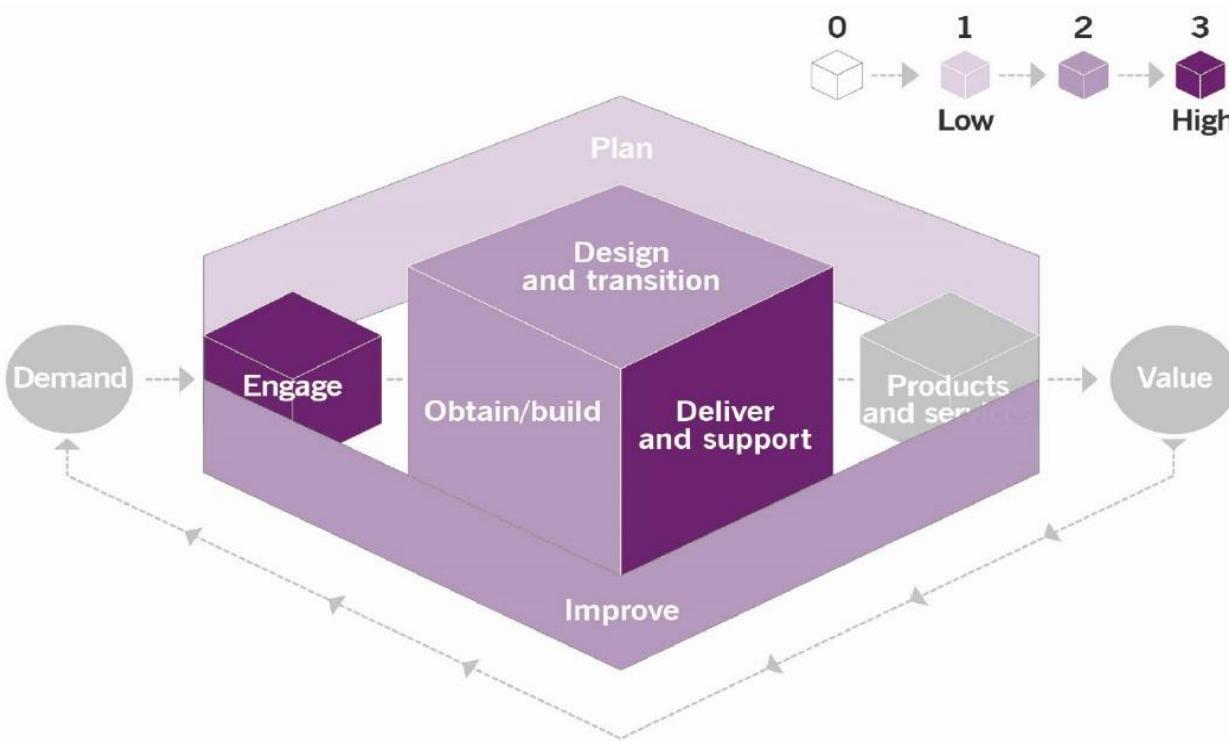


Effective incident management often requires a high level of collaboration within and between teams.

## SWARMING

Involves many different stakeholders working together initially, until it becomes clear which of them is best placed to continue and which can move on to other tasks.

# Incident Management – Value Chain Mapping



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# Service Request Management

# Service Request Management – Purpose & Objective \*\*

## Purpose

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



## Objectives

- To provide a channel for customers to **request** and receive standard services for which a pre-defined approval and qualification **process** exists.
- To provide information to users and customers about the availability of services and the **procedure** for obtaining them

Service requests are a normal part of service delivery, not a failure or degradation of service, which are handled as incidents.

# Service Request – Service Actions

A service request is 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.

## Request for a service delivery action

Provision of a new email account for a newly onboarded employee.

## Request for information

Request for details about the available VPN options for remote access.

## Request for provision of a resource or service

Access to a cloud storage service for a new project.

## Request access to a resource or service

Access to the company's financial reporting system

## Feedback, compliments and complaints

- Compliments the IT team's prompt response to a recent outage
- Submits a complaint about slow response times for resolving support tickets

# Service Request Management – Key Concepts

- ▶ Service Requests will usually be satisfied by implementing a Standard Change, with clear, standard procedure., and do not require an RFC to be submitted
- ▶ The ownership of Service Requests resides with the Service Desk, which monitors, escalates, dispatches and often fulfils the user request
- ▶ Pre-defined Request Models which typically include some form of pre-approval / authorized by Change Management



# Service Request Management

Service request management is dependent upon well-designed processes and procedures, which are operationalized through tracking and automation tools, to maximize the efficiency of the practice.

Service requests may have simple workflows or quite complex workflows

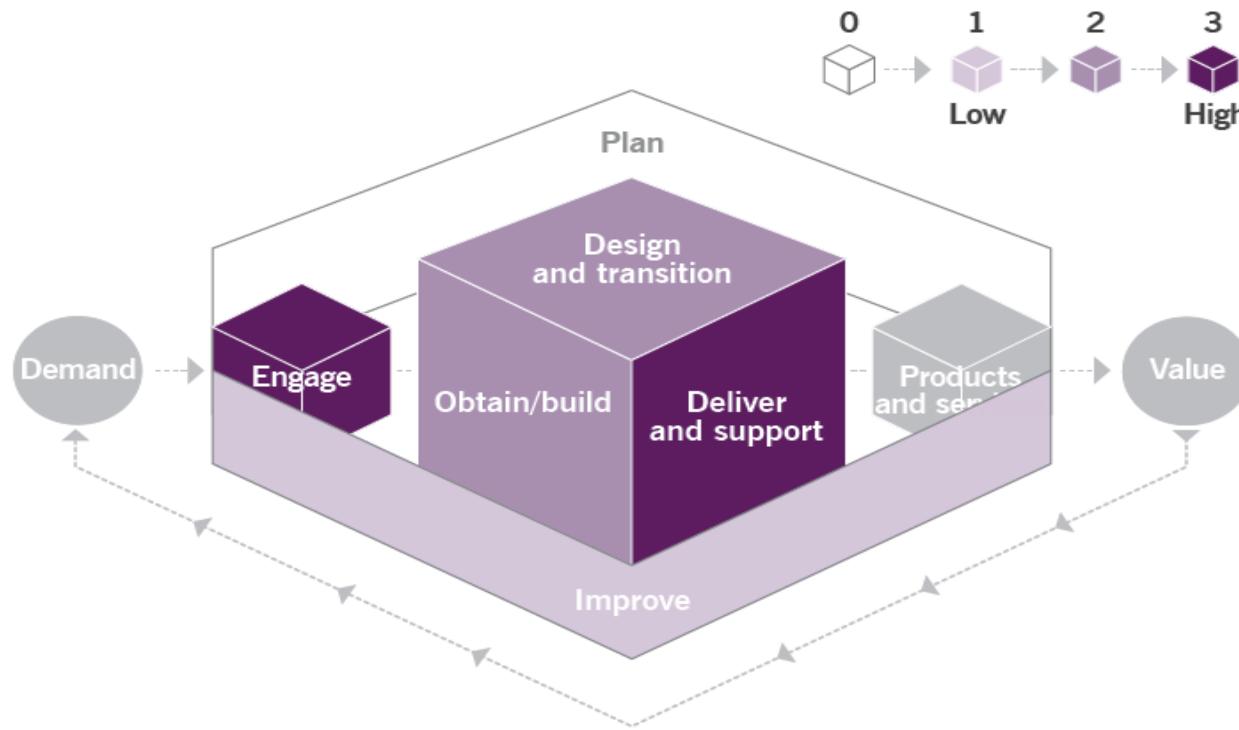
Steps to fulfil requests should be well-known and proven

The service provider can agree to fulfilment times and provide clear status communication to users

Some service requests can provide a self-service experience - completely fulfilled with automation

Leverage existing workflow models whenever possible to improve efficiency and maintainability.

# Service Request Management – Value Chain Mapping



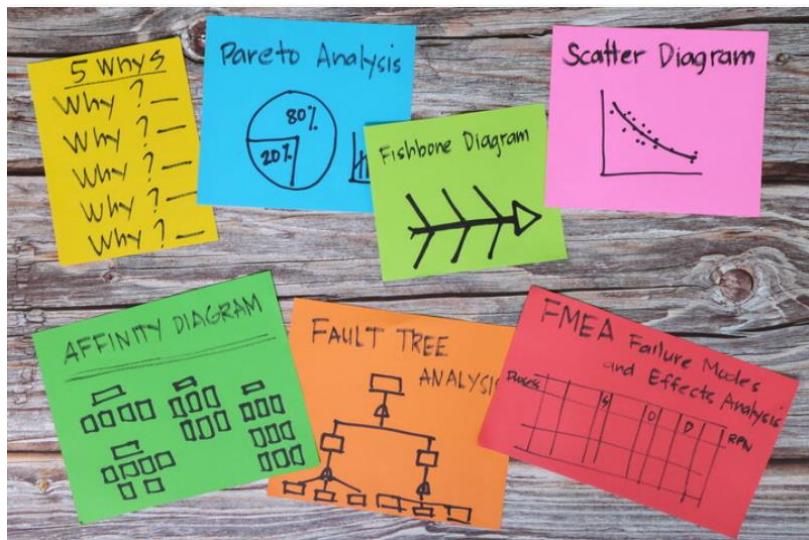
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# Problem Management

# Problem Management – Purpose & Objective \*\*

## Purpose

To minimize the adverse impact of incidents and problems on the business. The aim is to reduce the likelihood and impact of incidents by identifying actual and potential causes of incidents and managing workarounds and known errors.



## Objectives

- Prevent Problems and Incidents
- Eliminate recurring Incidents
- Minimize the impact of Incidents that cannot be prevented using workarounds

# Problem Management –Value to the business

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- ▶ **The value of Problem Management includes:**
  - Higher availability of IT services
  - Higher productivity of business and IT staff
  - Reduced expenditure on workarounds or fixes that do not work
  - Reduction in cost of effort in fire-fighting or resolving repeat Incidents.

# Problem Management – Key Concepts

- ▶ **Problem**
  - A cause, or potential cause, of one or more Incidents. It is a cause or potential cause of prior, current, or future incidents.
- ▶ **Work-around**
  - A set of predefined steps taken to handle an Incident in an agreed manner
- ▶ **Known Error**
  - Problem that has a documented root cause and a workaround
- ▶ **Known Error Database (KEDB)**
  - Database containing all Known Error records
- ▶ **Problem Models**
  - Having predefined procedures for handling known errors

# Problem Management - Workaround

A **workaround** is a 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.

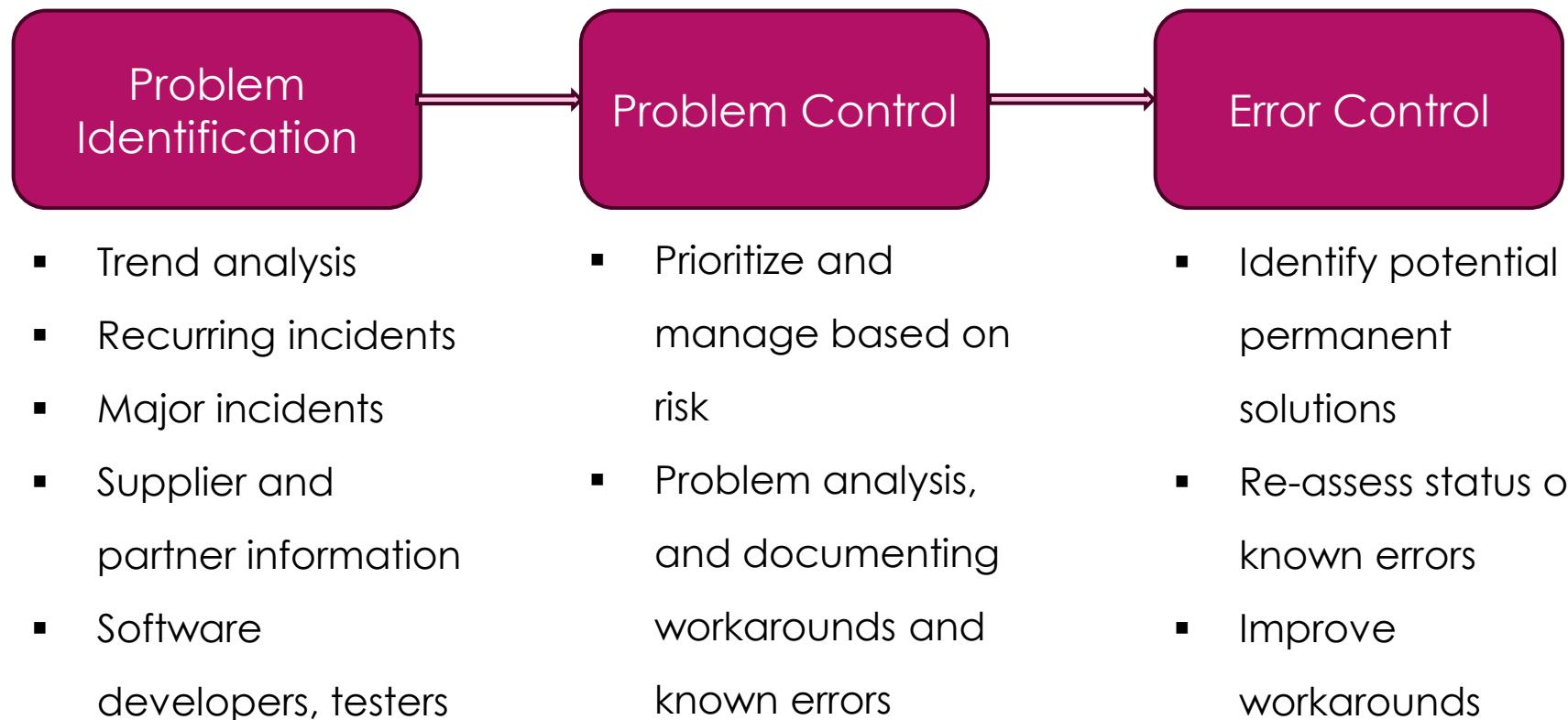
- When a problem cannot be resolved quickly, it is often useful to find and to document a workaround for future incidents, based on understanding of the problem.
- Workarounds are documented in problem records.
- This can be done at any stage, it doesn't need to wait for analysis to be complete.
- If a workaround has been documented early in problem control then this should be reviewed and improved after problem analysis is complete.

# Problem Management Activities

Can be Reactive or Proactive

- ▶ Detection
- ▶ Logging
- ▶ Categorization
- ▶ Prioritization
- ▶ Investigating & Diagnosis
- ▶ Workarounds & Known Error Records
- ▶ Resolution
- ▶ Closure

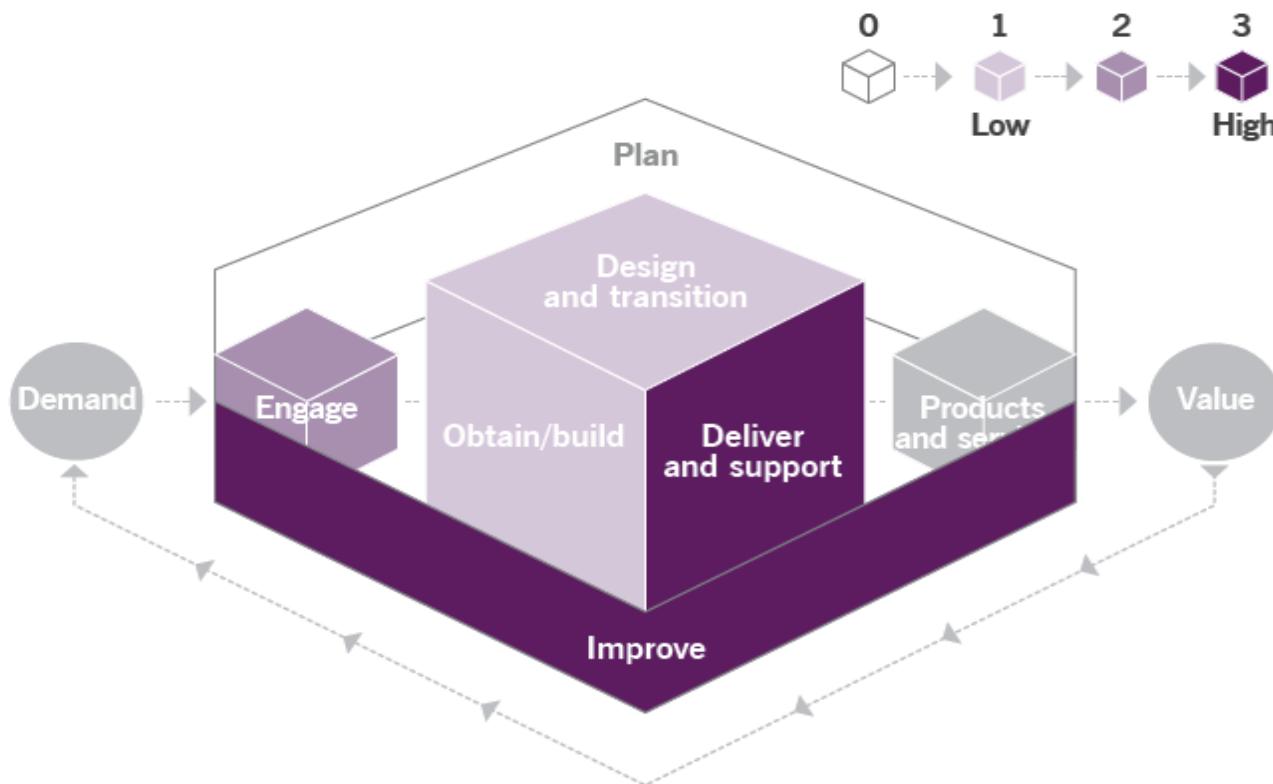
# Problem Management Phases



# Problem Management – Challenges

- Making sure that business impact is well understood by all staff working on problem resolution
- Establishment of an effective incident management process and tools
- The skills and capabilities for problem resolution staff
- The ability to relate incidents to problems
- Good working relationship between the second- and third- line staff working on problem support activities and first line staff

# Problem Management – Value Chain Mapping



# Change Enablement

(Renamed from Change Control)

# Change Enablement – Purpose & Objective \*\*

## Purpose

To maximize the number of successful IT changes by ensuring that risks have been properly assessed, authorizing changes to proceed, and managing the change schedule.



A **change** is the addition, modification, or removal of anything that could have a direct or indirect effect on IT services

## Objectives

- Respond to the customer's changing business requirements while maximizing value and reducing incidents, disruption and re-work
- Respond to the business and IT requests for change that will align the services with the business needs

# Change Enablement – Types of Changes

## ▶ **Standard**

- Low-risk, Pre-authorized, Well-understood, Fully-documented
- Implement without additional authorization

## ▶ **Normal**

- Changes needs to be scheduled, assessed and authorized
- Authorization based on change type
- Low-risk, someone who can make rapid decisions
- Very major, could be as high as management board

## ▶ **Emergency**

- Expedited assessment and authority
- May be separate change authority

# Change Enablement – Key Concepts

- ▶ **Request for Change (RFC)** – An RFC is a formal proposal for change that is requested.  
Formal means that it's in written form and recorded.
- ▶ **Change Advisory Board (CAB)** – A change advisory board (CAB) is a person or body that exists to support the authorization of changes and to assist change management in the assessment, prioritization and scheduling of changes
- ▶ **Emergency Advisory Board** – A group of the change advisory board (CAB) that makes decisions about emergency changes

# Change Enablement – Key Concepts

- ▶ **Remediation Planning** – Back out planning must be in place before undertaking the change
- ▶ **Change Schedule**– The **change schedule** is used to help plan changes, assist in communication, avoid conflicts and assign resources
- ▶ **Change Model** - It is a repeatable approach to the management of a particular type of change.

# Change Enablement – Change Manager

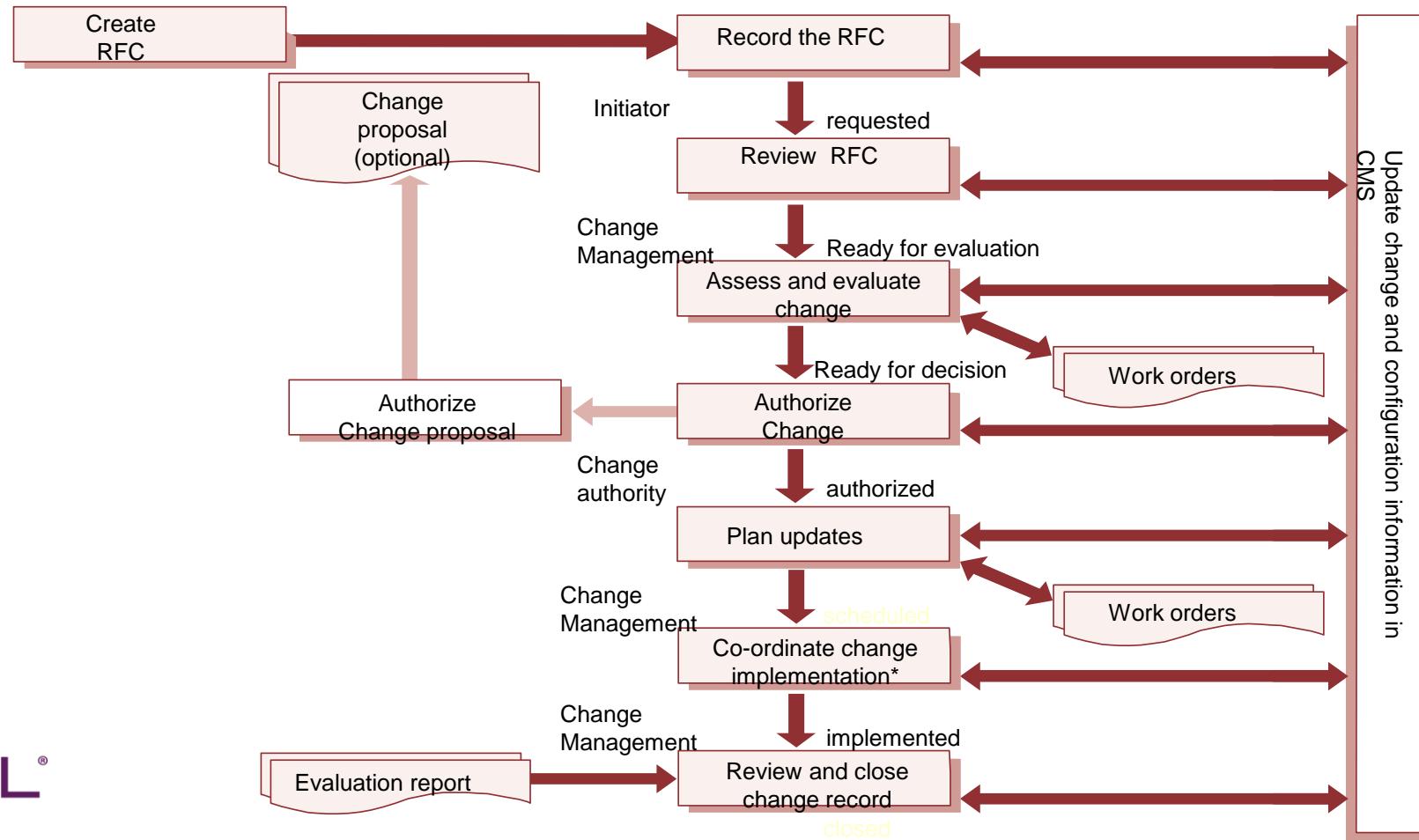
The **Change Manager** acts as a facilitator, responsible for the overall change management process. The primary responsibilities include –

- ▶ Authorize and approve minor/low change
- ▶ Coordinate and conduct meetings with **Change advisory board (CAB)** to discuss higher risk changes
- ▶ Authority to implement or reject a change
- ▶ Ensures that all the activities designed to implement the change are as per the standards. The policies and procedures should be well defined, recognized and reviewed
- ▶ Prepare Change Summary Sheet that summarizes all RFC's. This sheet helps the CAB team to understand and evaluate the proposed change

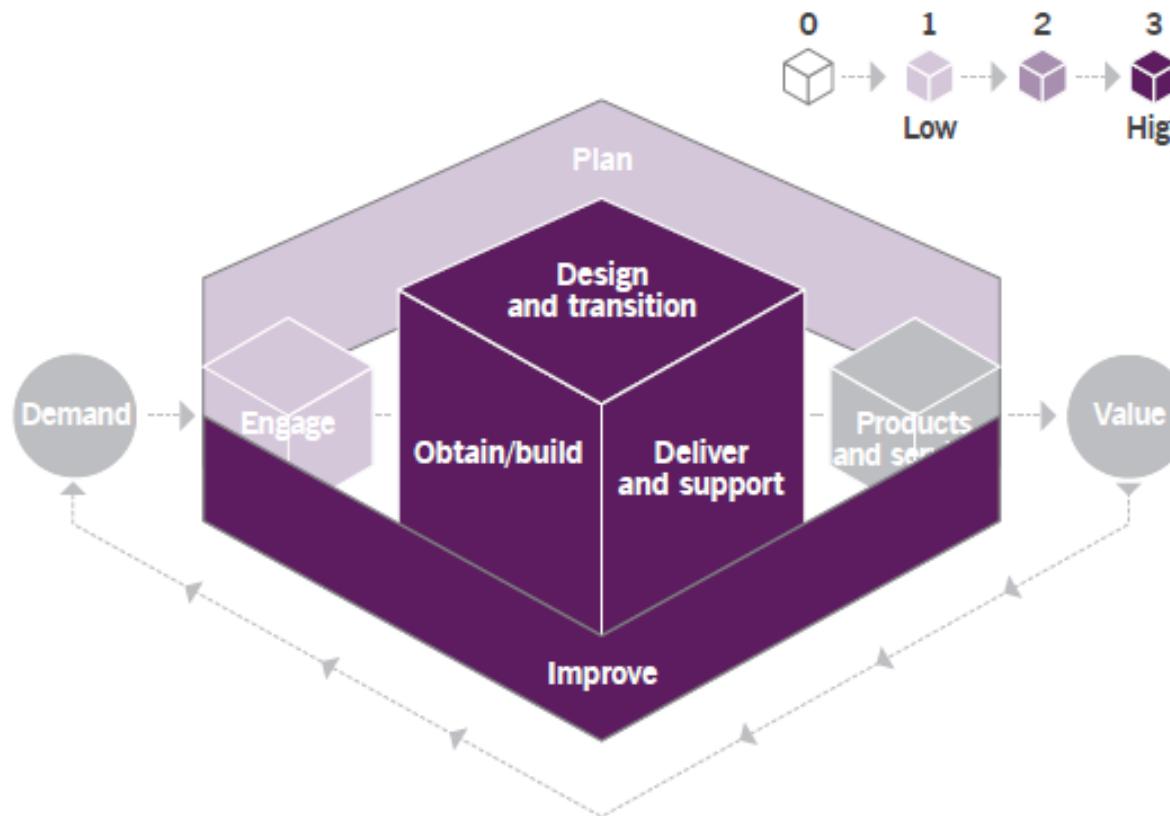
# Change Enablement – 7Rs

- ▶ Who **RAISED** the change?
- ▶ What is the **REASON** for the change?
- ▶ What is the **RETURN** required from the change?
- ▶ What are the **RISKS** involved in the change?
- ▶ What **RESOURCES** are required to deliver the change?
- ▶ Who is **RESPONSIBLE** for the build, test and implementation of the change?
- ▶ What is the **RELATIONSHIP** between this change and other changes?

# Process of Change Enablement



# Change Enablement – Value Chain Mapping



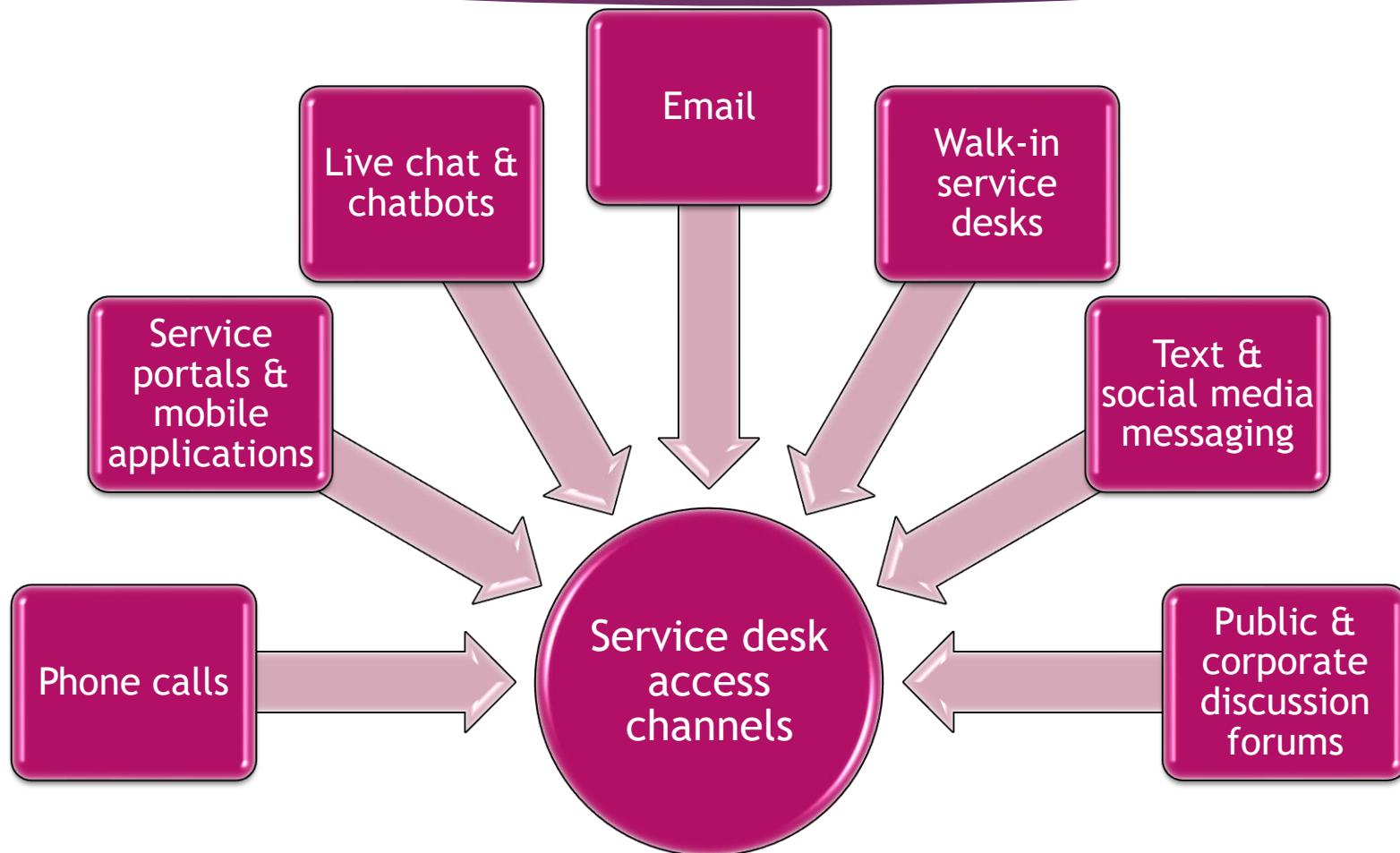
# Service Desk

# Service Desk – Objectives \*\*

- ▶ Primary aim - restore the ‘normal service’ to the users as quickly as possible
- ▶ It is SPOC – Single point of contact for users to capture demand for incident resolution and service requests.
- ▶ While this could involve fixing a technical fault, it could equally involve fulfilling a service request or answering a query or anything that is needed to allow the users to return to working satisfactorily

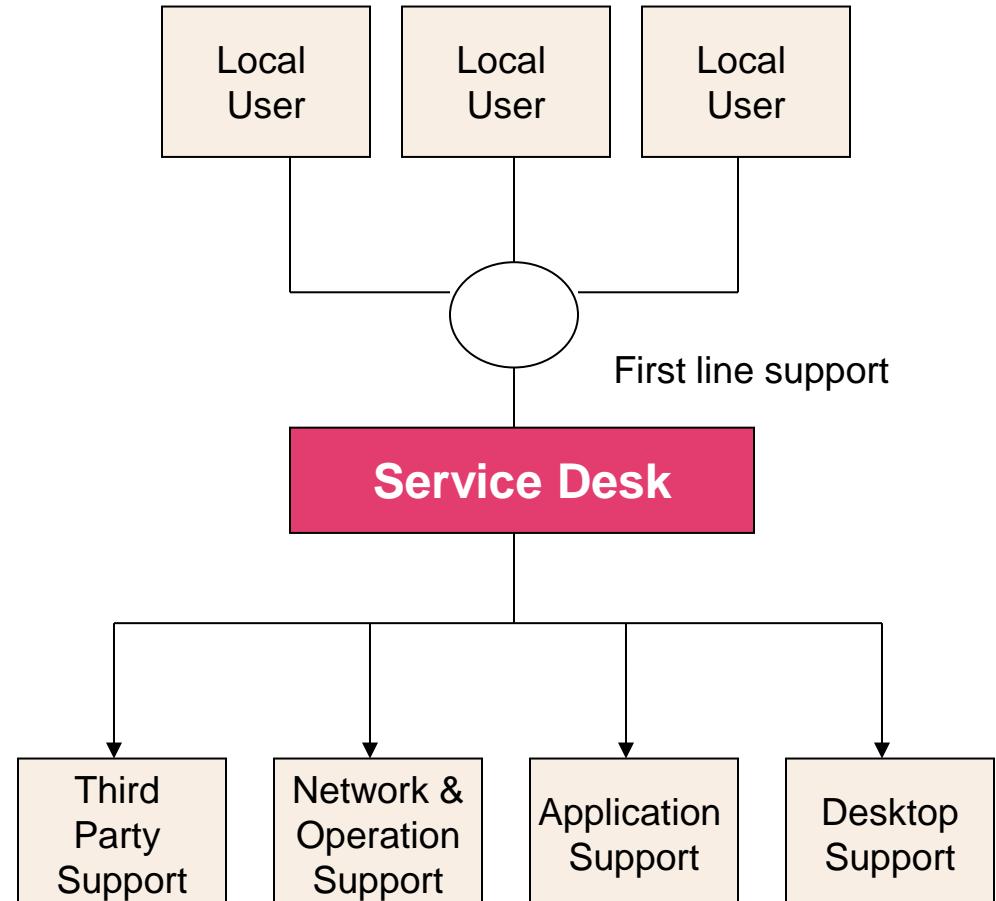


# Service Desk – Access Channels



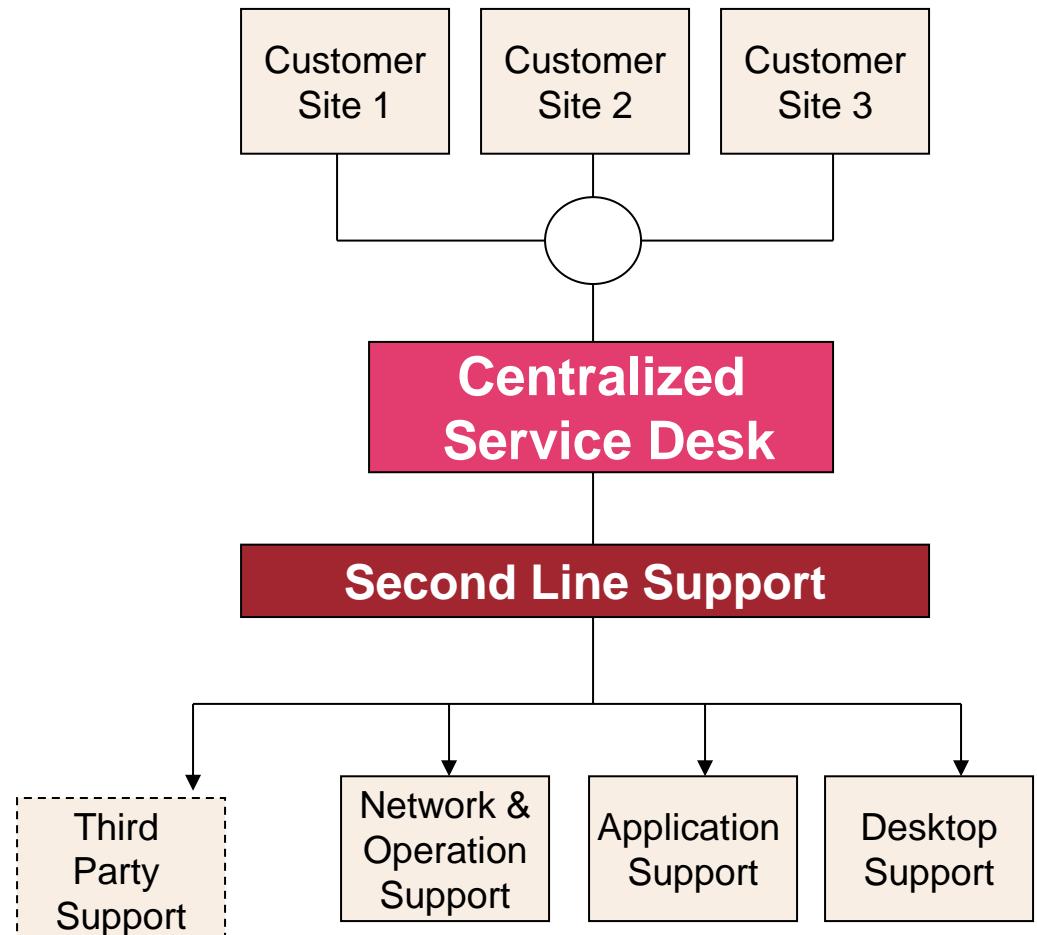
# Local Service Desk

- ▶ For Local business needs and onsite support
- ▶ Desktop support
- ▶ Network support
- ▶ Application support
- ▶ Systems and operations support
- ▶ Third party support



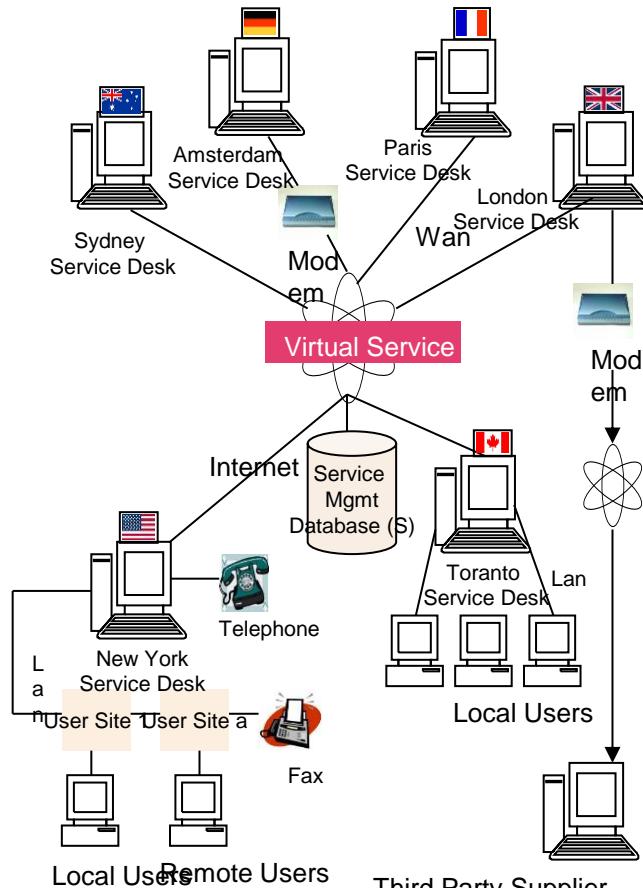
# Centralized Service Desk

- ▶ In multi location environment local SD becomes expensive
- ▶ Central SD is established serving all locations
- ▶ All service request are logged at a central physical location
- ▶ Key benefits
  - Reduced operational costs
  - Consolidated Mgmt reports
  - Better resource allocation



# Virtual Service Desk

- ▶ Virtual service desk can be accessed from anywhere in the world
- ▶ Maintains central database accessible from all locations
- ▶ The only difficulty is the person required at Virtual SD needs to be specialist
- ▶ Follow The Sun Model



# Service Desk – Supporting Technologies

## Supporting technologies for a service desk

Intelligent telephony systems

Workflow systems

Workforce management/resource planning systems

Knowledge base

Call recording and quality control

Remote access tools

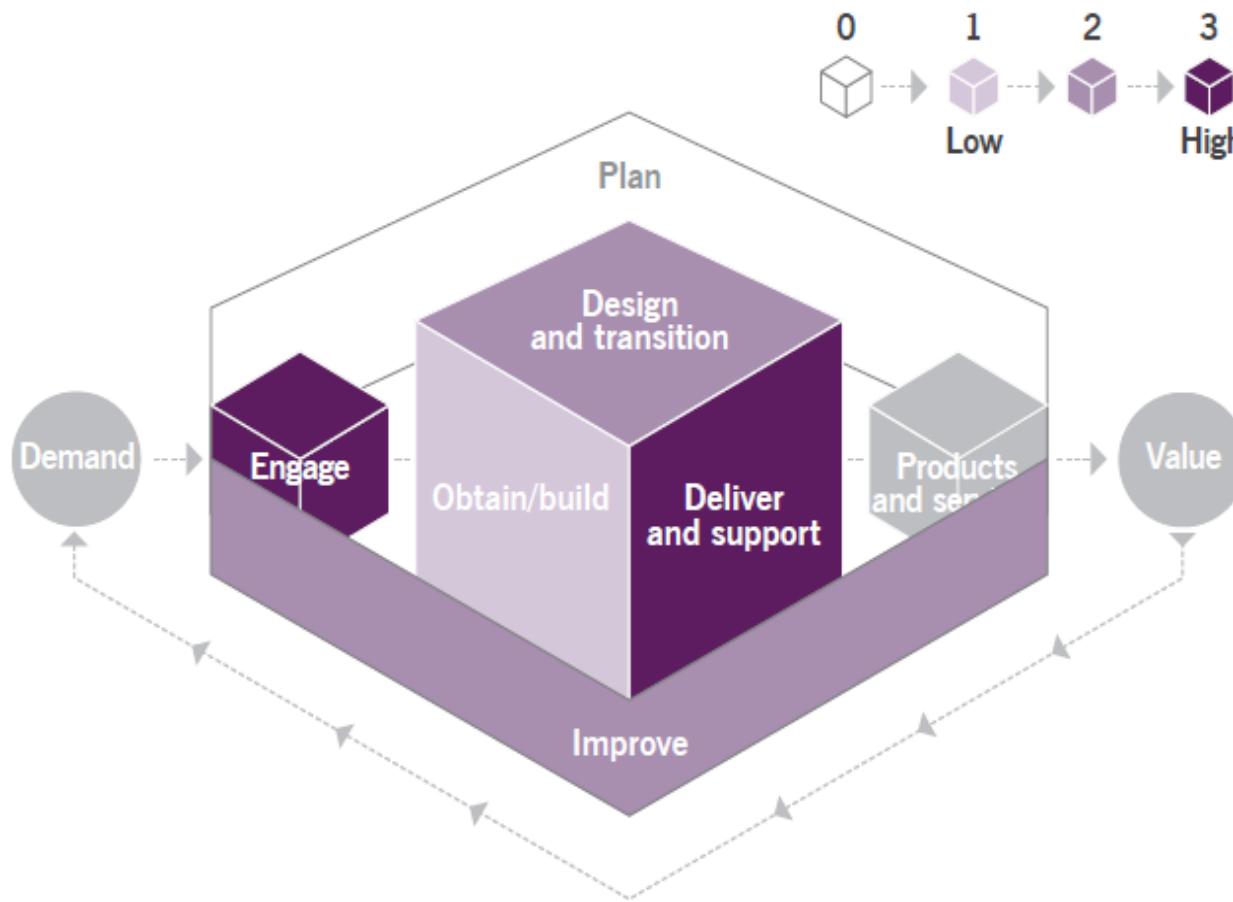
Dashboard and monitoring tools

Configuration management systems

# Service Desk – Required Skillset



# Service Desk – Value Chain Mapping

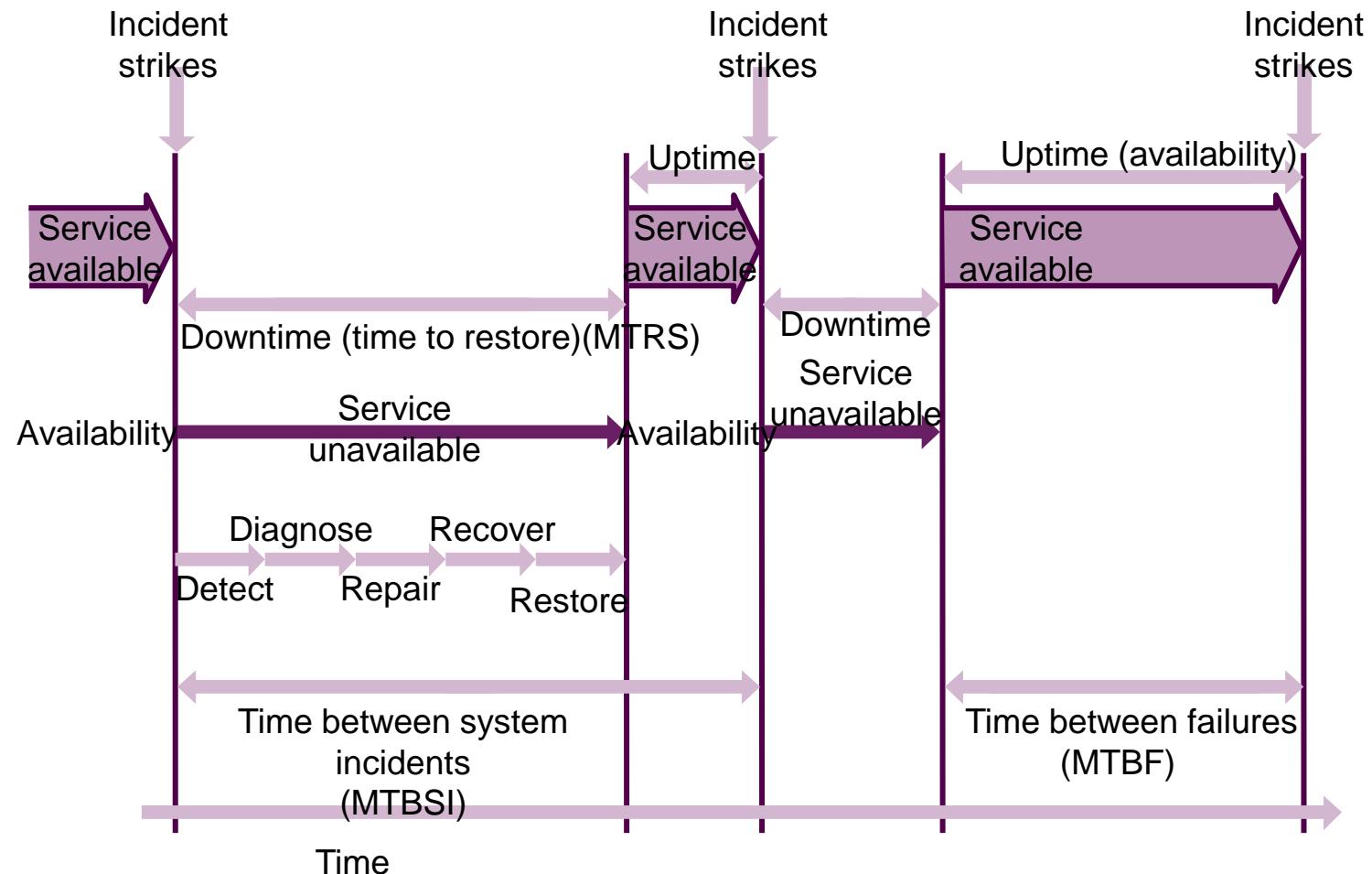


# Availability Management

# Availability Management

- ▶ The goal is to ensure level of service availability delivered in all services is matched to or exceeds
  - the current and future agreed needs of the business
  - in a cost-effective manner
- ▶ What is availability
  - Ability of a Configuration Item or IT Service to perform its agreed Function when required
  - Determined by Reliability, Resilience ,Maintainability, Serviceability, Performance, and Security
  - Usually calculated as a percentage. This calculation is often based on Agreed Service Time and Downtime

# Availability Metrics



# IT Capacity Management

# Capacity and Performance Management

## Purpose

- ▶ To ensure that services achieve agreed and expected performance, satisfying current and future demand in a cost-effective way.
  
- ▶ Objective is to provide a point of focus and management for all capacity and performance related issues, relating to both services and resources.



Service performance depends on service capacity, which is defined as the maximum throughput that a CI or service can deliver.

# Capacity and Performance Management

➤ **Scope**

- IT Services, IT Components, Resources

➤ **Capacity Management Types**

- Business Capacity Management
- Service Capacity Management
- Component Capacity Management

➤ **Capacity Management involves:**

- Balancing costs against resources needed
- Balancing supply against demand
- Demand Management
- Application Sizing
- Capacity & Performance Modelling

# IT Asset Management \*

**Purpose** - 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 requirement



An IT asset is any valuable component that can contribute to delivery of an IT product or service

# Monitoring & Event Management \*

## Purpose

- To systematically observe a service or service component, and record and report selected changes of state identified as events.
- It identifies and prioritizes infrastructure, services, business processes and information security events, and establishes the appropriate response to those events and conditions that indicate potential faults or incidents.



An event is any change of state that has significance for the management of a configuration item (CI) or IT service.

# Service Continuity Management

## Purpose

- ▶ To ensure that the availability and performance of a service are maintained at sufficient levels in case of a **disaster**.
- ▶ To ensure that required IT technical and service facilities can be resumed within required, and agreed, business timescales following a major disruption



# Service Catalogue Management \*

## Purpose

- ▶ To provide a single source of consistent information on all services and service offerings, and to ensure that it is available to the relevant audience.
  
- ▶ The goal is to ensure that a Service Catalogue is produced and maintained, and it contains accurate information on all operational & planned services



- ❖ Business Service Catalogue
- ❖ Technical Service Catalogue

# Service Design

## Purpose

- ▶ To design products and services that are fit for purpose, fit for use, and that can be delivered by the organization and its ecosystem.
- ▶ This includes planning and organizing people, partners and suppliers, information, communication, technology, and practices for new or changed products and services, and the interaction between the organization and its customers.



One of the key focuses of Service Design Practice is customer experience (CX) and user experience (UX).

# Business Analysis

## Purpose

- ▶ To analyze a business or some element of it, define its associated needs, and recommend solutions to address these needs and/or solve a business problem, which must facilitate value creation for stakeholders.
- ▶ It enables an organization to communicate its needs in a meaningful way, express the rationale for change, and design and describe solutions that enable value creation



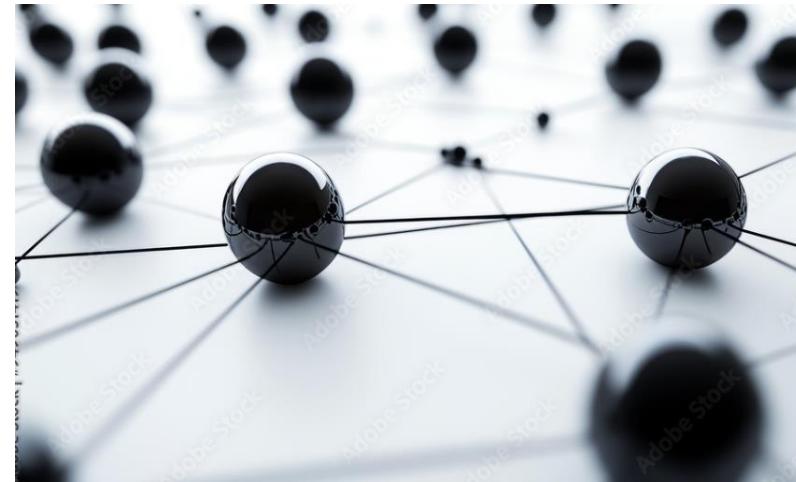
Business Analysis Practice analyzes business systems, business processes, services, or architectures in the changing internal and external context

# Service Configuration Management

# Service Configuration Management – Purpose \*

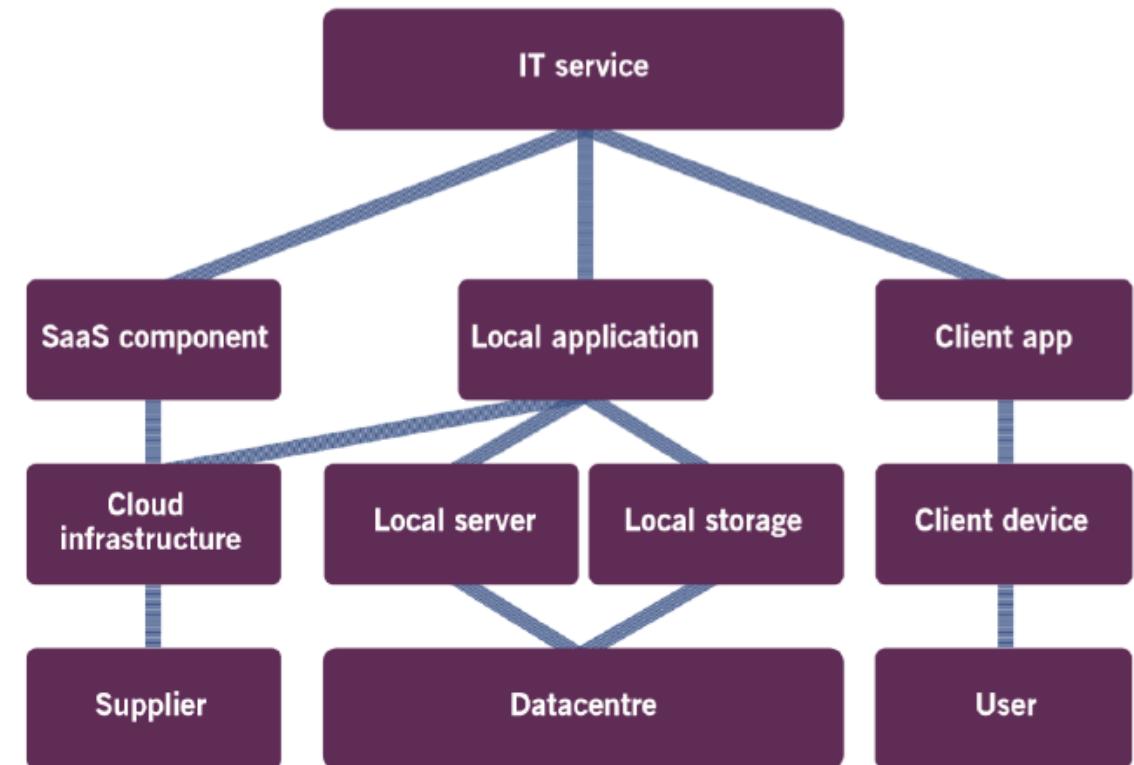
## ► Purpose

- 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.



# Service Configuration Management – Purpose

A CONFIGURATION ITEM (CI) is any component that needs to be managed in order to deliver an IT service



# Service Validation & Testing

# Service Validation & Testing – Purpose

## Purpose

- Service validation and testing practice ensures that new or changed products and services meet defined requirements.
  
- The service validation and testing practice reduces the risks and uncertainties introduced by new or changed products and services.



The testing phases include:

- Unit Testing
- Integration Testing
- System Testing
- Acceptance Testing

# Service Validation & Testing – Purpose

## Purpose

- Service validation and testing practice ensures that new or changed products and services meet defined requirements.
  
- The service validation and testing practice reduces the risks and uncertainties introduced by new or changed products and services.



# Release Management

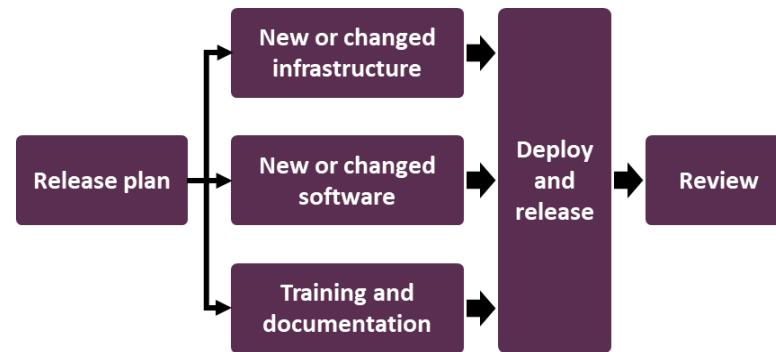
# Release Management – Purpose \*

## ► **Purpose**

- To make new and changed services and features available for use
- A release may comprise many different infrastructure and application components that work together to deliver new or changed functionality.

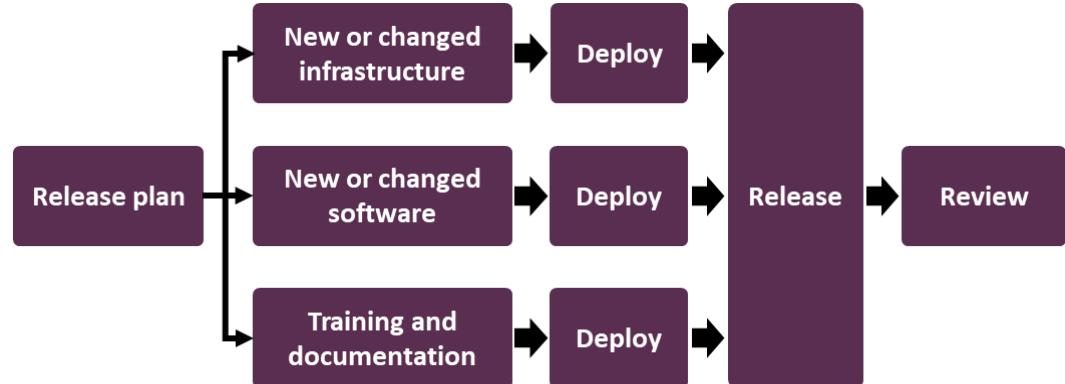
# Release Management

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



**Release management in a traditional/waterfall environment**

**Release management in an Agile/DevOps environment**



# Release Management – Key Concepts

Release Unit - Components of an IT Service that are normally Released together

- For example one Release Unit could be a Desktop PC, including Hardware, Software, Licenses, Documentation etc.
- A different Release Unit may be the complete Payroll Application, including IT Operations Procedures and User training

A single Release can deliver:

Release Type	Typical Impact of the Release	Implemented Deliverable
Major	Provide new functions	Full or Package
Minor	Correct known problems	Delta or Package
Emergency	Fix urgent unexpected problems	Delta

# Technical Management Practices

# Deployment Management

# Deployment Management – Purpose

## ▶ **Purpose**

- 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 control, but is a separate practice.

# Deployment Management – Success Factors

Establish and maintain effective approaches to deploy services and service components.

- The deployment management practice includes defining and agreeing on models.
- These models are used to deploy products, services, and components.
- There can be one approach or a combination of approaches to deployment.
- This depends on specific services and requirements.
- It may also be based on sizes, types, and impacts of the service components.

# Deployment Management – Success Factors

Models can be defined for deploying services or service components of similar types. Such deployment models could be defined based on several factors, including:

Automation considerations

Rate of customer requirement changes

Source of the components

Cost/resource limitations

Rate of technology change

User adoption behaviors and preferences

Expected frequency of deployments

Risks of component flaws

Visibility of the technology change

# Software Development and Management

# Software Development and Management

**Purpose** - Software development and management practice ensures that applications meet internal and external stakeholder needs, in terms of

- Functionality
- Reliability
- Maintainability
- Compliance
- Auditability

# Software Development and Management

Important components of practice success factor in software development and management:

Understanding the source code

Understanding the requirements

Ensuring nonfunctional requirements are included

Creating tests before coding

Effective version control

Coding considering difficulties and limitations

Adhering to coding conventions

Peer review

Fast feedback from testing

# Infrastructure & Platform Management

# Infrastructure and Platform Management

## Purpose :

- To oversee the infrastructure (hardware, software, networks) and platforms (cloud, virtualization, middleware) used by an organization.
- When carried out properly, this practice enables the monitoring of technology solutions available to the organization, including the technology and external service providers.

**Infrastructure and Platform management practices** have been adapted from technology management domains for service management purposes by expanding or shifting their focus from technology solutions to IT services.

# Infrastructure and Platform Management

## Focus Areas:

- Capacity Management
- Availability
- Security
- Performance

Integration with Cloud	Plays a critical role in hybrid and multi-cloud environments, managing both on-premise and cloud infrastructure
Collaboration	Works closely with <b>Service Management</b> , <b>Incident Management</b> , and <b>Change Control</b> to ensure infrastructure issues do not disrupt service delivery.
Automation and Monitoring	Employs tools for proactive monitoring, infrastructure automation, and self-healing mechanisms to improve efficiency and reduce downtime.
Scalability	Ensures that the infrastructure is scalable to accommodate growth in user demand and business expansion.
Lifecycle Management	Oversees the full lifecycle of platforms and infrastructure components, from procurement and deployment to decommissioning and disposal.

# QUIZ

## ITIL Management Practices

**Which practice has a strong influence on the user experience and perception of the service provider?**

- i. Service desk
- ii. Change enablement
- iii. Service level management
- iv. Supplier management

# QUIZ

## ITIL Management Practices

**Which practice is responsible for moving new or changed components to live or other environments?**

- i. Release management
- ii. Deployment management
- iii. Change enablement
- iv. Supplier management

# QUIZ

## ITIL Management Practices

**Which ITIL practice has the purpose to establish and nurture the links between the organization and its stakeholders at strategic and tactical levels?**

- i. Supplier management
- ii. Change control
- iii. Relationship management
- iv. Service desk

# Course Agenda

## ► Key concepts of Service Management

- Purpose of ITSM – Learning Goals
- Value Co-creation & Organization
- Service Relationships & Service Offerings
- Utility & Warranty

## ► ITIL Management Practices

- General management practices
- Service Management practices
- Technical management practices

## ► Key concepts of ITIL V4

- The four dimensions of service management
- Service Value System
- The Guiding Principles
- Service Value Chain
- Continual Improvement

## ► Session Practice

- Summarization
- Quiz
- Final Evaluation (Mock exam 1 & 2)
- Onsite Workshop

# QUIZ

(All Topics)

# Quiz

**Which process is involved with monitoring and producing reports on delivery against the agreed level of service?**

- i. Continual Service Improvement
- ii. Incident Management
- iii. Service Level Management
- iv. Technical Management Function

# Quiz

**What does a service always deliver to customers?**

- i. Applications
- ii. Infrastructure
- iii. Value
- iv. Resources

# Quiz

**Which ITIL concept describes guiding principles?**

- i) Service value system
- ii) Four dimensions of service management
- iii) Service value chain
- iv) Practices

# Quiz

**Which of the following is NOT a valid objective of Problem Management?**

- i. To prevent Problems and their resultant Incidents
- ii. To manage Problems throughout their lifecycle
- iii. To restore service to a user
- iv. To eliminate recurring Incidents

# Quiz

## 1. Consider the following two statements

- a. Responds to business needs and incidents only after they are reported.
  - b. Anticipates business requirements before they are reported and problems before they occur.
- i. a) and b) are both reactive
  - ii. a) and b) are both proactive
  - iii. a) describes a reactive approach and b) describes a proactive approach
  - iv. a) describes a proactive approach and b) describes a reactive approach

# Quiz

**The BEST definition of an Incident is:**

- i. An unplanned disruption of service unless there is a backup to that service
- ii. An unplanned interruption or reduction in the quality of an IT Service
- iii. Any disruption to service whether planned or unplanned
- iv. Any disruption to service

# Quiz

**Which of the following is not a satisfactory resolution to an incident?**

- i. A user complains of poor response; a reboot speeds up the response.
- ii. A user complains of poor response; second-line support runs diagnostics to be able to monitor it the next time it occurs.
- iii. The service desk uses the KEDB to provide a workaround to restore the service.
- iv. The service desk takes control of the user's machine remotely and shows the user how to run the report they were having difficulty with.

# Quiz

**Which guiding principle considers the importance of customer loyalty?**

- i. Progress iteratively with feedback
- ii. Focus on value
- iii. Optimize and automate
- iv. Start where you are

# Quiz

**Identify the missing word(s) in the following sentence. A known error is a(n) [?] that has been analyzed but has not been resolved.**

- i. Change
- ii. Incident
- iii. Event
- iv. Problem

# Quiz

**Which guiding principle is focused on using the minimum number of steps to accomplish an objective?**

- i) Keep it simple and practical
- ii) Progress iteratively with feedback
- iii) Optimize and automate
- iv) Collaborate and promote visibility

# Quiz

**What impact does automation have on a service desk?**

- i. Less low-level work and a greater ability to focus on user experience
- ii. Increased phone contact and a reduced ability to focus on user experience
- iii. Ability to work from multiple locations, geographically dispersed
- iv. Ability to work from a single centralized location

# Quiz

**Which is a use of a continual improvement register?**

- i) Planning changes, assisting in communication, avoiding conflicts, and assigning resources
- ii) Selecting the right method, model or technique for identifying improvements
- iii) Tracking and managing improvement ideas from identification through to final action
- iv) Describing the services designed to meet the needs of a consumer group

# Quiz

**How are target resolution times used in the 'incident management' practice?**

- i) They are agreed, documented, and communicated to help set user expectations
- ii) They are established, reviewed, and reported to ensure that customers are happy with the service
- iii) They are initiated, approved, and managed to ensure that predictable responses are achieved
- iv) They are scheduled, assessed and authorized to reduce the risk of service failures

.

# Quiz

**Which ITIL guiding principle recommends using existing services, processes and tools when improving services?**

- i) Progress iteratively with feedback
- ii) Keep it simple and practical
- iii) Start where you are
- iv) Focus on value

.

# Quiz

**Which practice has a purpose that includes ensuring that risks have been properly assessed?**

- i. Service configuration management
- ii. Problem management
- iii. Service level management
- iv. Change control

# Quiz

**Where are the details of the required performance outcomes of a service defined?**

- i. Service level agreements
- ii. Service requests
- iii. Service components
- iv. Service offerings

# Quiz

**Which practice coordinates the classification, ownership and communication of service requests and incidents?**

- i. Supplier management
- ii. Service desk
- iii. Problem management
- iv. Relationship management

# Quiz

## What is warranty?

- i. The functionality offered by a product or service to meet a particular need
- ii. The perceived benefits, usefulness and importance of something
- iii. Assurance that a product or service will meet agreed requirements
- iv. The amount of money spent on a specific activity or resource

# Quiz

**Fill in the blank. Service requests and their fulfillment should be [?] and automated to the greatest degree possible.**

- i. Uniquely handled
- ii. Creatively solved
- iii. Ignored
- iv. Standardized

# Quiz

**Which is an example of a business related measurement?**

- i. The number of passengers checked in
- ii. The average time to respond to change requests
- iii. The average resolution time for incidents
- iv. The number of problems resolved

# Quiz

**Which value chain activity ensures a shared understanding of the current status and required direction for all products and services?**

- i. Plan
- ii. Improve
- iii. Design and transition
- iv. Deliver and support

# Quiz

**Which two practices interact the MOST with the service desk practice?**

- i. Incident management and service request management
- ii. Service request management and deployment management
- iii. Deployment management and change enablement
- iv. Change enablement and incident management

# Quiz

**Which is an external input to the service value chain?**

- i. The 'improve' value chain activity
- ii. An overall plan
- iii. Customer requirements
- iv. Feedback loops

# Additional Topics

# Lean Concepts

# Basic Lean Principles in ITIL Context

**Lean thinking**, emphasizing flow efficiency, is integral to this process. It involves a steady, predictable progression of work units through the system, aiming for an efficient and continuous flow in product and service design.

**Value stream mapping, a Lean technique, helps in visualizing and analyzing this flow.**



Lean is a targeted approach to eliminating waste and elevating your team's capacity to innovate. The objective is to reduce DOWNTIME:

- Defects
- Overproduction
- Waiting
- Non-utilized Talent
- Transportation
- Inventory
- Motion
- Extra Processing

# Lean Approach

Purpose : To improving throughput to get the work done quickly and efficiently

Lean Approaches:

- Minimized Work-in-progress
- Shorter Lead Time / Small Batch Size

## Lean Thinking

Process Improvement Philosophy that prioritizes flow efficiency over resource efficiency

## Flow

Manner in which work progresses through a system

## Work Unit

Piece of work flowing through the value stream

## Good Flow

Work Units move steadily and predictably

## Bad Flow

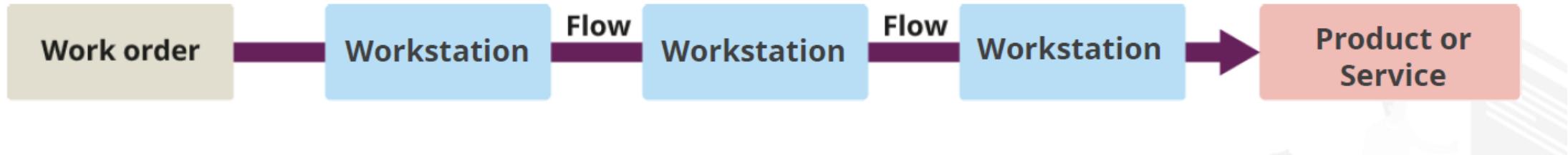
System with a lot of queues with many work items in them, where the work unit has to stop & wait

# Lean Thinking – Five Basic Principles

Identify customer value	What the customer needs. What creates value for the customer? What is the desired outcome & why is it needed? When and where is it needed? How much? How frequently?
Map the value Stream	Understand & map the value stream Define the work unit (request, product, service) Map how it flows through the value chain Each flow represents a value stream.
Create flow	Bottleneck or waste elimination  Flow improvement
Establish pull	Optimize the value stream 'Pull' principle ensures that work is not pushed downstream  Batch size and work in progress to be limited to ensure on-time completion
Seek perfection	Reflects continual improvement

# Lean – Reduce WIP

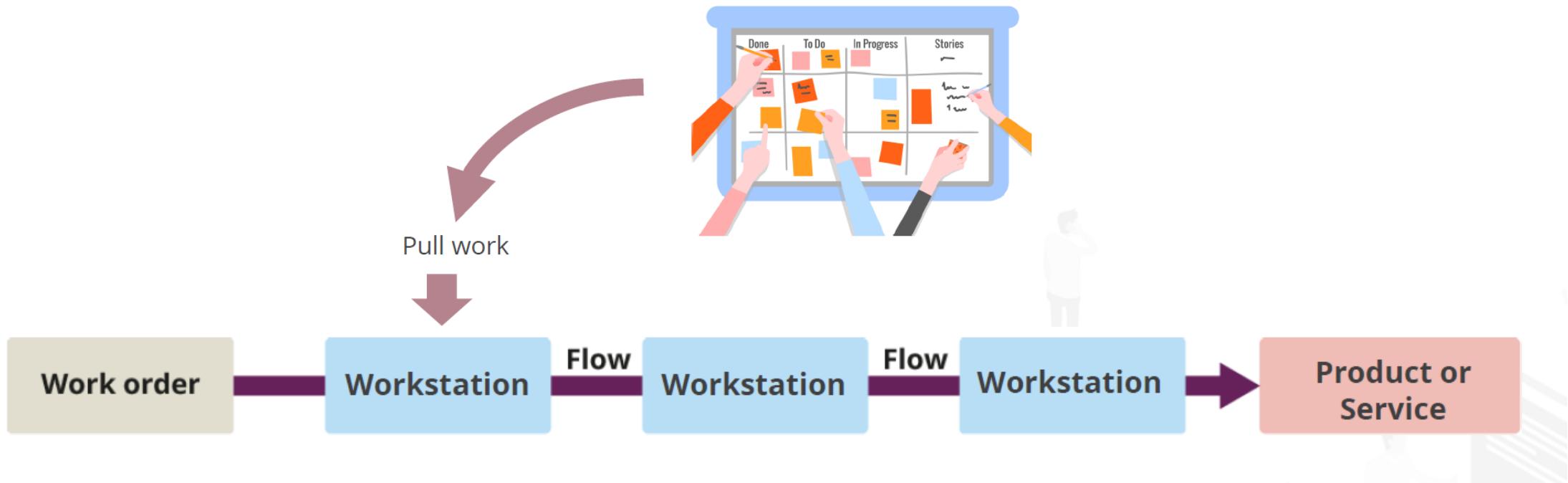
A lean technique to improve throughput is to reduce work in progress.



A value stream with three workstations

# Lean – Reduce WIP

Reduction in work is beneficial for the flow of work through the value stream.



A value stream with three workstations

# Lean – Reduce WIP

Theory of constraints is another concept that is different from directing each workstation in the value stream, which may result in a backlog for the next workstation.

To improve throughput:

- Identify the weakest workstation in the value stream.
- Lighten the load as much as possible.
- Organize work around the weakest link.

Theory of constraints



Weakest link

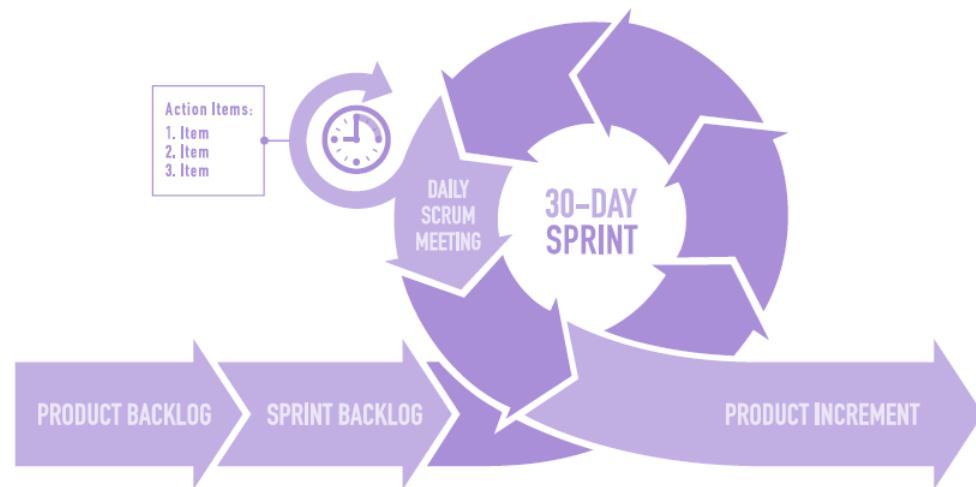


A value stream with three workstations

# Agile Concepts

# Agile Development

Agile is an ongoing conversation and interaction between software developers, business people, and other stakeholders who improve the customer experience.



- ✓ Products are delivered in frequent increments
- ✓ Information is gathered quickly
- ✓ Decisions are delayed

# AGILE MANIFESTO v/s GUIDING PRINCIPLES

## AGILE MANIFESTO

**Individuals and interactions** over processes and tools

**Working software** over comprehensive documentation

**Customer collaboration** over contract negotiation

**Responding to change** over following a plan

## ITIL GUIDING PRINCIPLES

- Keep it simple and practical
- Start where you are

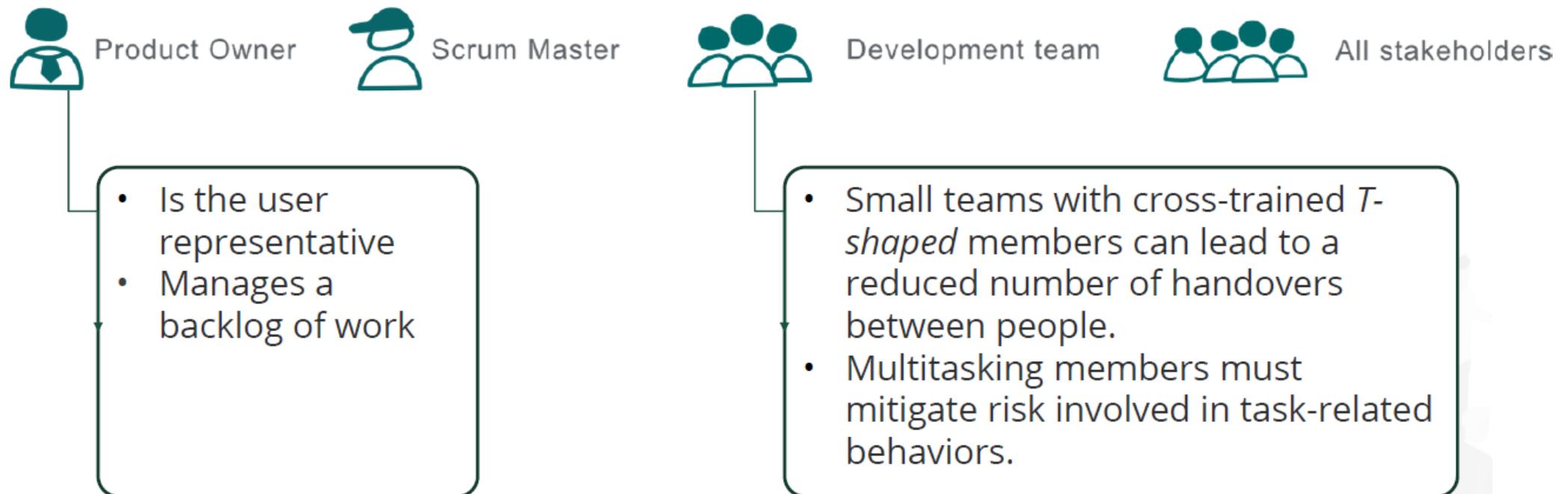
- Focus on value
- Think and work holistically

- Focus on value
- Collaborate and promote visibility

- Progress iteratively with feedback
- Keep it simple and practical

# Aspects of Agile

A software is developed by small, relatively independent, and self-organized teams.



# Agile – Scrum Methodology

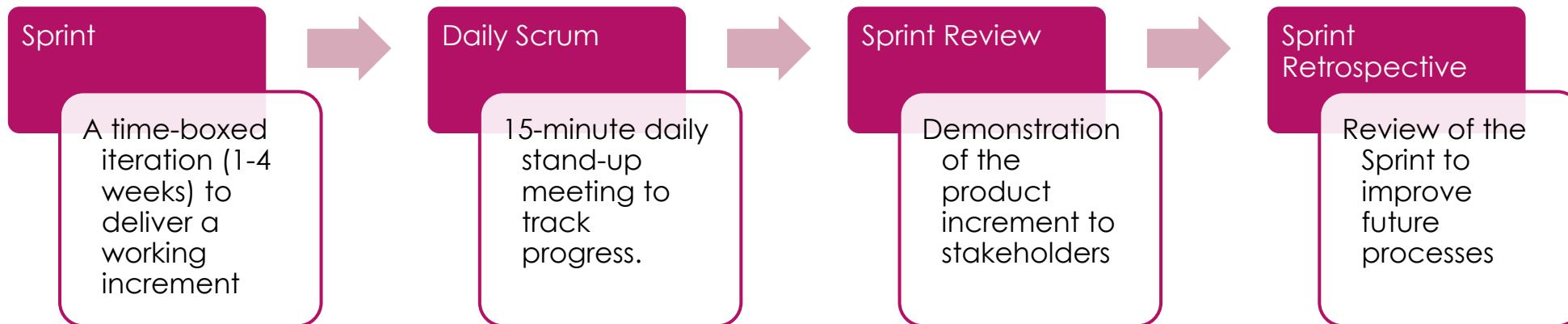
## What is Scrum?

Scrum is an **Agile framework** for managing complex projects, focused on **iterative, incremental** progress. It is commonly used in **software development**, adaptable across industries.

### Key Roles in Scrum:

- **Product Owner:** Manages the **Product Backlog** and maximizes product value.
- **Scrum Master:** Facilitates Scrum processes and ensures the team follows Scrum practices.
- **Development Team:** Cross-functional team that delivers the working product increment.

# Agile – Scrum Process and Artifacts



## Key Artifacts:

**1. Product Backlog:** Prioritized list of product requirements

**2. Sprint Backlog:** Selected tasks for the current Sprint

**3. Increment:** The completed work at the end of the Sprint



# Thank You