



TRAINING ORGANIZATION ACCREDITED BY

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# ITIL® 2011 Foundation Certification Course

*Capgemini India*

*Process Center of Excellence (CoE)*

*Service Management Team*

**People matter, results count.**

# Introduction

Name

Professional Experience

Current Role

Expectations from this  
Course

# Course Objectives

At the end of the course, you should be able to:

- Explain the practice of service management
- Describe service lifecycle
- Identify key principles and models of ITIL® 2011
- Define generic concepts in ITIL® 2011
- Discuss the processes, roles and functions in ITIL® 2011
- Summarize the use of technology with ITIL® 2011
- Discuss the ITIL® 2011 qualification scheme
- Successfully clear your ITIL® 2011 foundation exam

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# Let's Agree

- Avoid Laptops to get full benefit of course
- Cell Phones in silent mode. Accept calls outside the class.
- Breaks to be matched with course flow
- Examples – Outside IT – Limited but Welcome
- Debates make course interesting. However time is money.

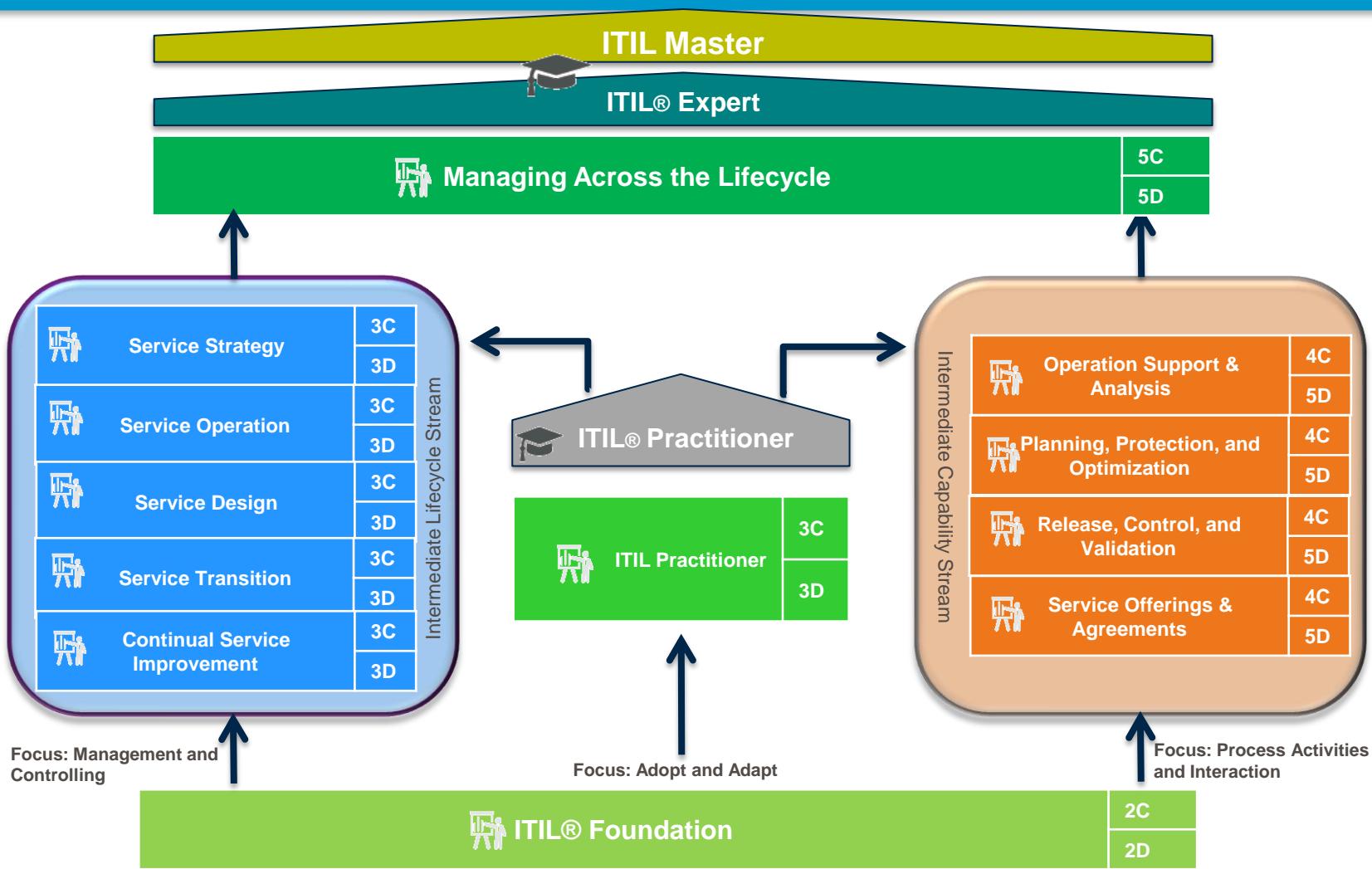
# Target Audience

The target group of the ITIL® Foundation certification in IT Service Management is drawn from:

- Individuals who require a basic understanding of the ITIL framework and how it may be used to enhance the quality of IT Service Management within an organization
- IT professionals that are working within an organization that has adopted and adapted ITIL who need to be informed about and thereafter contribute to an ongoing service improvement program.
- This may include but is not limited to, IT professionals, business managers and business process owners.

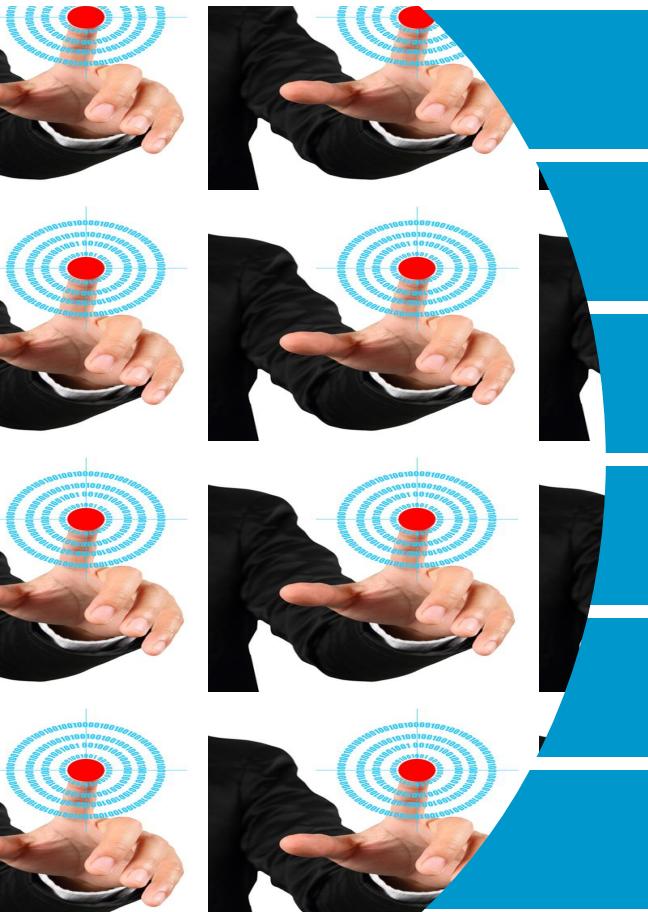
# ITIL® Qualification Scheme

 = Training  = Title D= Days C= Credits



The ITIL® qualification scheme includes a credit system. This means that for each successful completion of an ITIL® exam (every training one exam) you receive a certain number of credits. Once you have at least collected 22 credits you get the ITIL® Expert title. The title ITIL® Practitioner is awarded to you, when you successfully pass the ITIL® Practitioner exam.

# ITIL® 2011 Foundation Training - Objectives



**Module 1: Introduction To ITIL®**

**Module 2: Service & Service Management**

**Module 3: ITIL® Service Lifecycle - Overview**

**Module 4: Key Principles, Models & Concepts**

**Module 5: ITIL® Service Lifecycle –Concepts and Processes**

**Module 6: Summary and Exam Preparation**



# Module 1: Introduction To ITIL®

# What is ITIL®?

## What is ITIL®?

- A “Best Practices Framework” for IT Service Management
- A world wide de facto for IT Service Management

## Why ITIL®?

- Focuses on descriptive guidance on IT Service Management that's easily adapted
- Emphasizes quality management approach, standards

## ITIL® Goals

- Consistent, comprehensive, hygienic set of best-practice guidance
- Platform independent discussion of processes
- Common language, standardized vocabulary
- Flexible framework, adaptable to different IT environments

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# What are Best Practices?

**Best practices are generally commoditized, generally accepted, proven as effective ways of doing things which were previously considered best practices of the pioneering organizations.**

Successful innovations applied diligently become best practices

Best practice accepted and adopted by others become common best practices

Best practices are commoditized, generally accepted principles, or regulatory requirements

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# Why Choose Public Practices Over Proprietary Ones?

Public standards and frameworks	Proprietary knowledge
<ul style="list-style-type: none"><li>▪ Wide community distribution</li><li>▪ Public training and certification</li></ul>	<ul style="list-style-type: none"><li>▪ Difficult to adopt</li><li>▪ Difficult to replicate and transfer</li><li>▪ Hard to document</li></ul>
<ul style="list-style-type: none"><li>▪ Valid in different applications</li><li>▪ Peer reviewed</li><li>▪ Used by different parties</li></ul>	<ul style="list-style-type: none"><li>▪ Highly customized</li><li>▪ Specific to business needs</li><li>▪ Hard to adapt or reuse</li></ul>
<ul style="list-style-type: none"><li>▪ Free and publicly available</li><li>▪ Labour market skills easy to find</li></ul>	<ul style="list-style-type: none"><li>▪ Owners expect compensation</li></ul>

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# A brief History

Best practices effort started by the Central Computing & Telecommunications Agency (CCTA) of the UK government, now called Office of Government Computing (OGC)

itSMF-International was formed

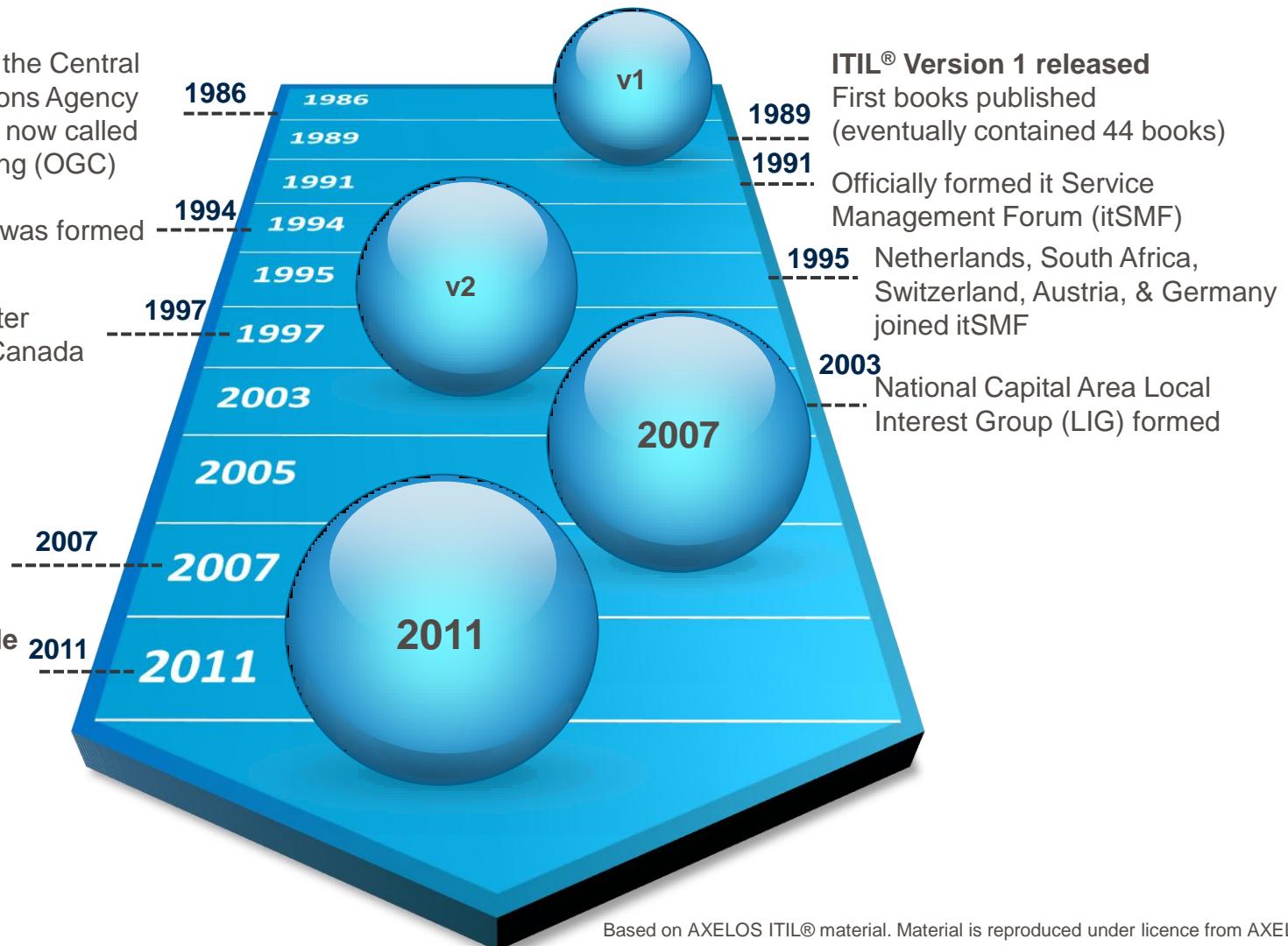
**ITIL® Version 2 released**

"itSMF America's" launched, later renamed to itSMF USA when Canada & Mexico joined independently

June 2007 – **ITIL® 2007** released

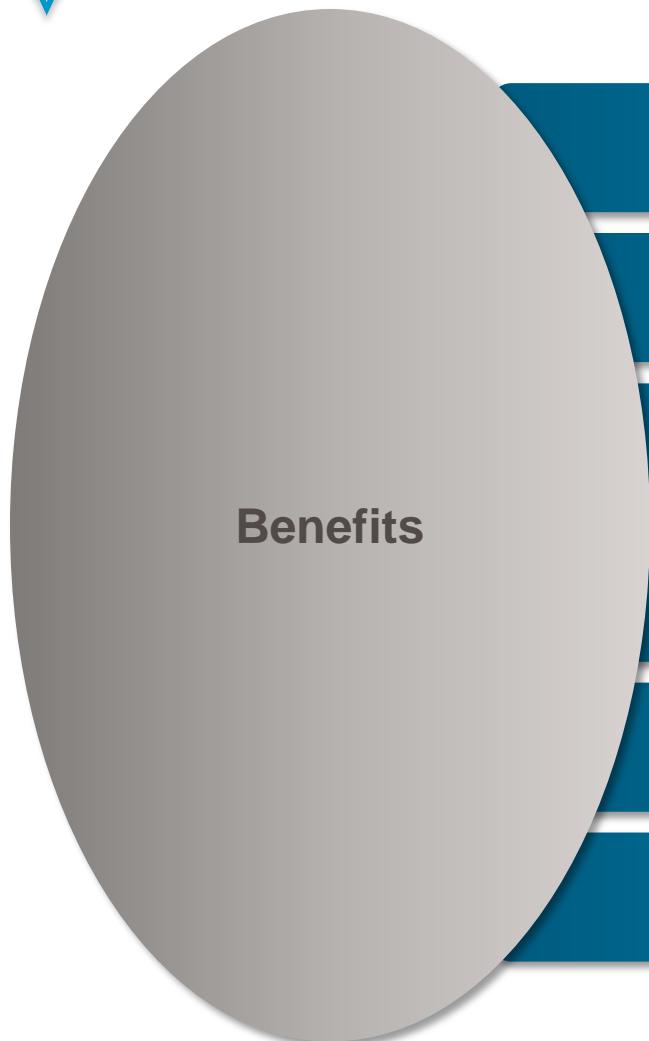
July 2011 – **ITIL® 2007 upgrade** released.

**ITIL® 2007 renamed to ITIL® 2011**



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# Benefits of ITIL®



**Improved IT services**

**Reduced costs**

**Improved customer satisfaction**

**Improved productivity**

**Improved use of skills and experience**

**Improved delivery of third party service**

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# Why ITIL® is so successful?

## Vendor-neutral

Not based on any particular technology platform or industry type

## Internal stakeholders

Should adopt ITIL® and adapt it to meet the needs of the IT organization and their customers

## Best practice

Represents the learning experiences and thought leadership of the world's best-in-class service providers

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# ITIL® 2011 Components

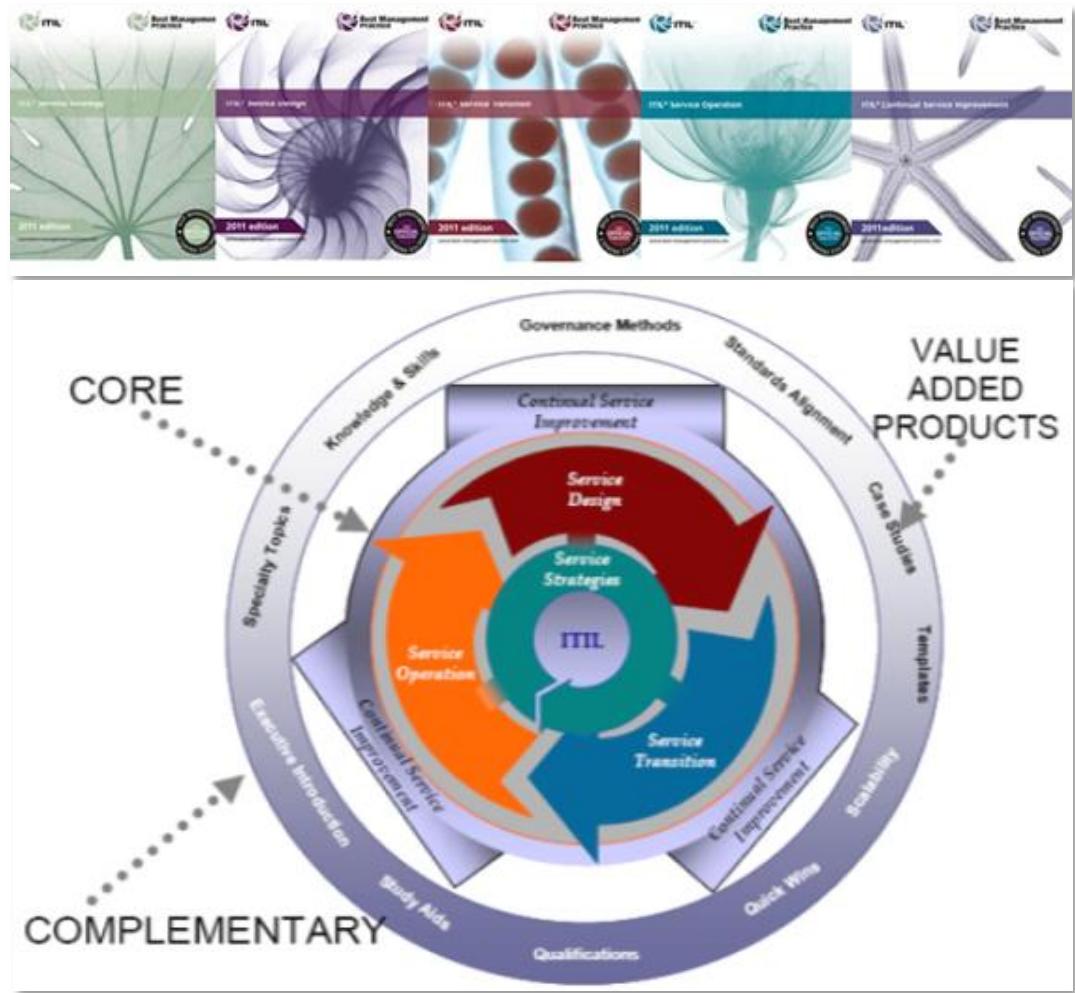
## Core Books

Each lifecycle phase of ITIL® 2011 core is represented by a Volume in the library

- Service Strategy
- Service Design
- Service Transition
- Service Operation
- Continual Service Improvement

## Complimentary Guidance

- Pocket Books
- Case Studies
- Working Templates
- Governance Methods
- White Papers
- Certification Study Aids



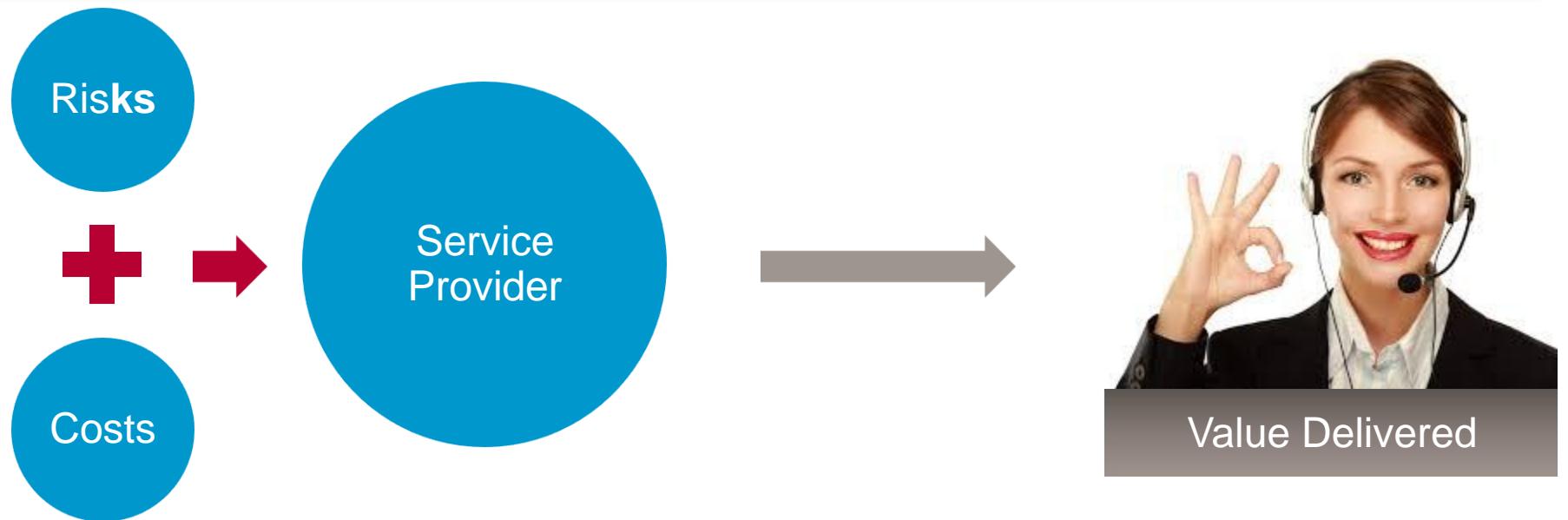
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## Module 2: Service & Service Management

# What is a Service?

A means of delivering value to customer by facilitating outcomes customers want to achieve without the ownership of specific costs and risks



Services allow customers to do business without worrying about underlying technology or IT infrastructure. Service provider owns the risk & associated costs.

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# Types of Service

## Core Service

- Deliver the basic outcomes desired by one or more customers
- They represent the value that the customer wants and for which they are willing to pay
- e.g. For a banking customer, the core services provided will be all financial services

## Enabling Service

- Needed in order for a core service to be delivered. Enabling services may or may not be visible to the customer
- e.g. A helpdesk which helps/troubleshoots any issues/queries faced by users

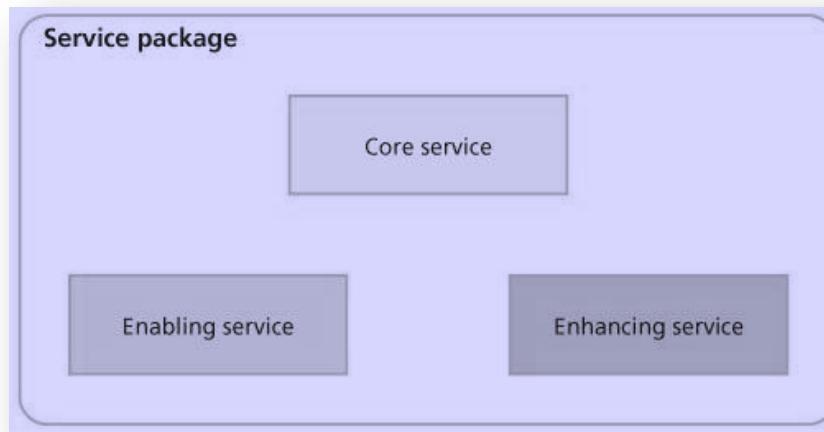
## Enhancing Service

- Added to a core service to make it more exciting or enticing to the customer

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# What is Service Package?

- A service package is a collection of two or more services that have been combined to offer a solution to a specific type of customer need or to underpin specific business outcomes
- It is important to ensure that services and service packages are grouped so that customers can relate to them better, thus making them easier to buy and use.



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# What is Service Management?

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

## Service Assets

### Resources



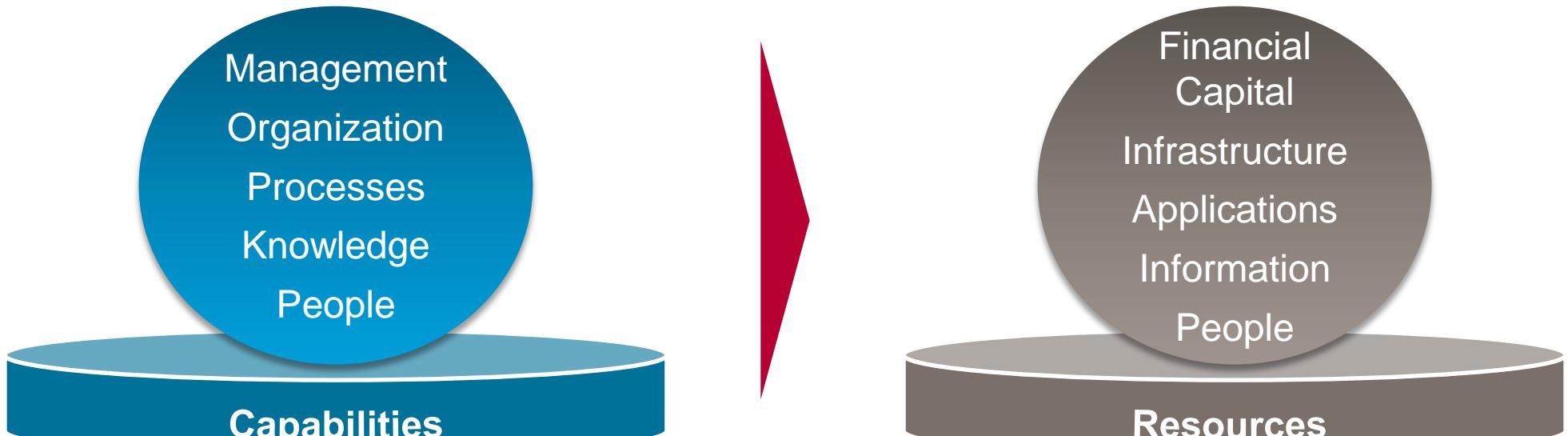
- Things you buy or pay for
- IT Infrastructure, people, money
- Tangible Assets

### Capabilities



- Things you grow
- Ability to carry out an activity (Skills)
- Intangible assets
- Transform resources into Services

# Service Assets - Resources & Capabilities



Capabilities represent ability to coordinate, control and deploy resources  
People: Experience & Skills

Resources are direct input for production  
People: Number of employees



**It is easier to acquire resources than capabilities. Capabilities need resources in order to produce value**

# What is ITSM?

**IT Service  
Management  
(ITSM)**

- The implementation and management of quality IT services that meet the needs of the business.
  - IT Service Management is performed by IT service providers through an appropriate mix of people, process and information technology.

**IT Service  
Provider**

- A service provider that provides IT services to internal or external customers.

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# Why IT Service Management?

**Improved quality of business operations as IT processes underpin the business processes**

**Reliable & agreed level of business support with process such as Incident Management, Change Management as well as the Service Desk**

**Service Level Management will help customers understand what to expect from IT and what is required of them to ensure this can be delivered**

**Increased productivity of business and Customer staff because of more reliable, more available, IT Services**

**IT Service Continuity procedures are more focused on the business needs and there will be more confidence in the ability to follow them when required**

**'Just in time' Capacity, by providing appropriate capacity just in advance of demand**

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# IT Service Management Stakeholders

## Internal Stakeholders

- **Functions, Groups and Teams** that deliver the services

## External Stakeholders

- **Customers** - Those who buy goods or services. The customer of an IT service provider is the person or group who defines and agrees the service level targets.
- **Users** - Those who use the service on a day-to-day basis. Users are distinct from customers, as some customers do not use the IT service directly.
- **Suppliers** - Third parties responsible for supplying goods or services that are required to deliver IT services.
  - Examples of suppliers include commodity hardware and software vendors, network and telecom providers, and outsourcing organizations.

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# Types of Customers

## Internal Customers

- These are customers who work for the same business as the IT service provider
  - For example, the marketing department is an internal customer of the IT organization because it uses IT services. Services delivered to Internal customers are called **Internal Services**

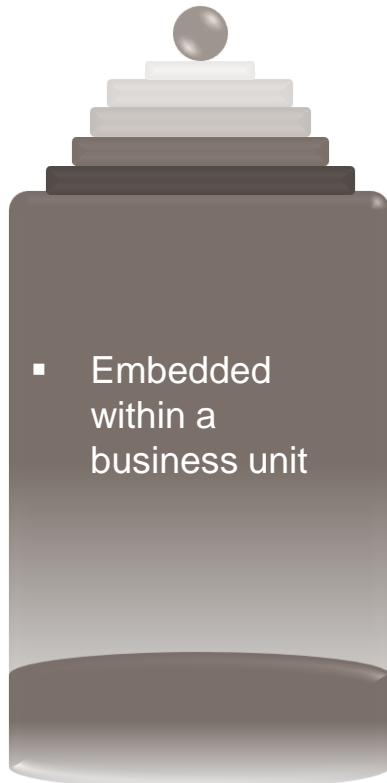
## External Customers

- These are customers who work for a different business from the IT service provider
  - External customers typically purchase services from the service provider by means of a legally binding contract or agreement.
  - Services delivered to external customers are called **External Services**

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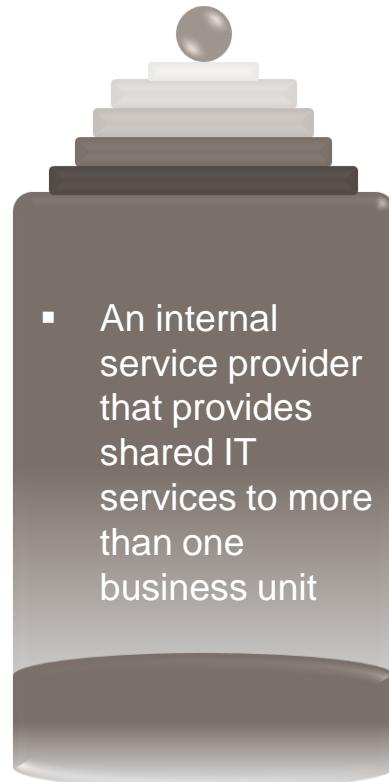
# Types of IT Service Providers

## Type I: Internal Service Provider



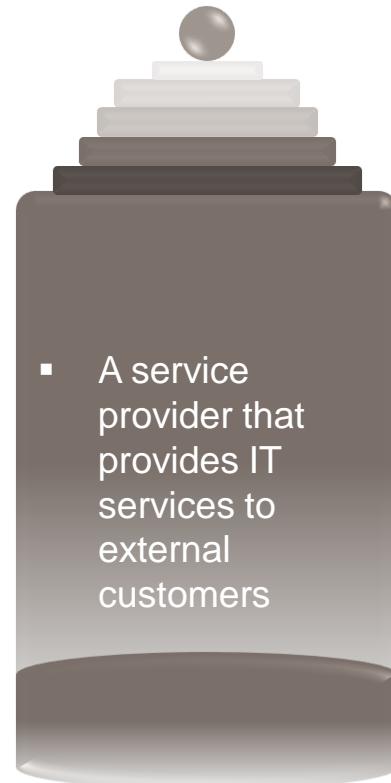
- Embedded within a business unit

## Type II: Shared Service Unit



- An internal service provider that provides shared IT services to more than one business unit

## Type III: External Service Provider



- A service provider that provides IT services to external customers

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# Service Management: Technology & Automation

Automation (tools) is extremely useful to improve utility and warranty of services:

- Real time and historical data for analysis
- Correlation of data from multiple devices
- Service impact analysis for prioritization
- Service performance optimization

Automation of service processes helps improve the quality of service, reduce costs and reduce risks by reducing complexity and uncertainty, and by efficiently resolving trade-offs.

Some of the areas where service management can benefit from automation

- Design and modeling
- Service catalogue
- Pattern recognition and analysis
- Classification, prioritization and routing
- Detection and monitoring
- Optimization

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# Service Management: Technology & Automation (Contd.)

Service management tools functionality includes:

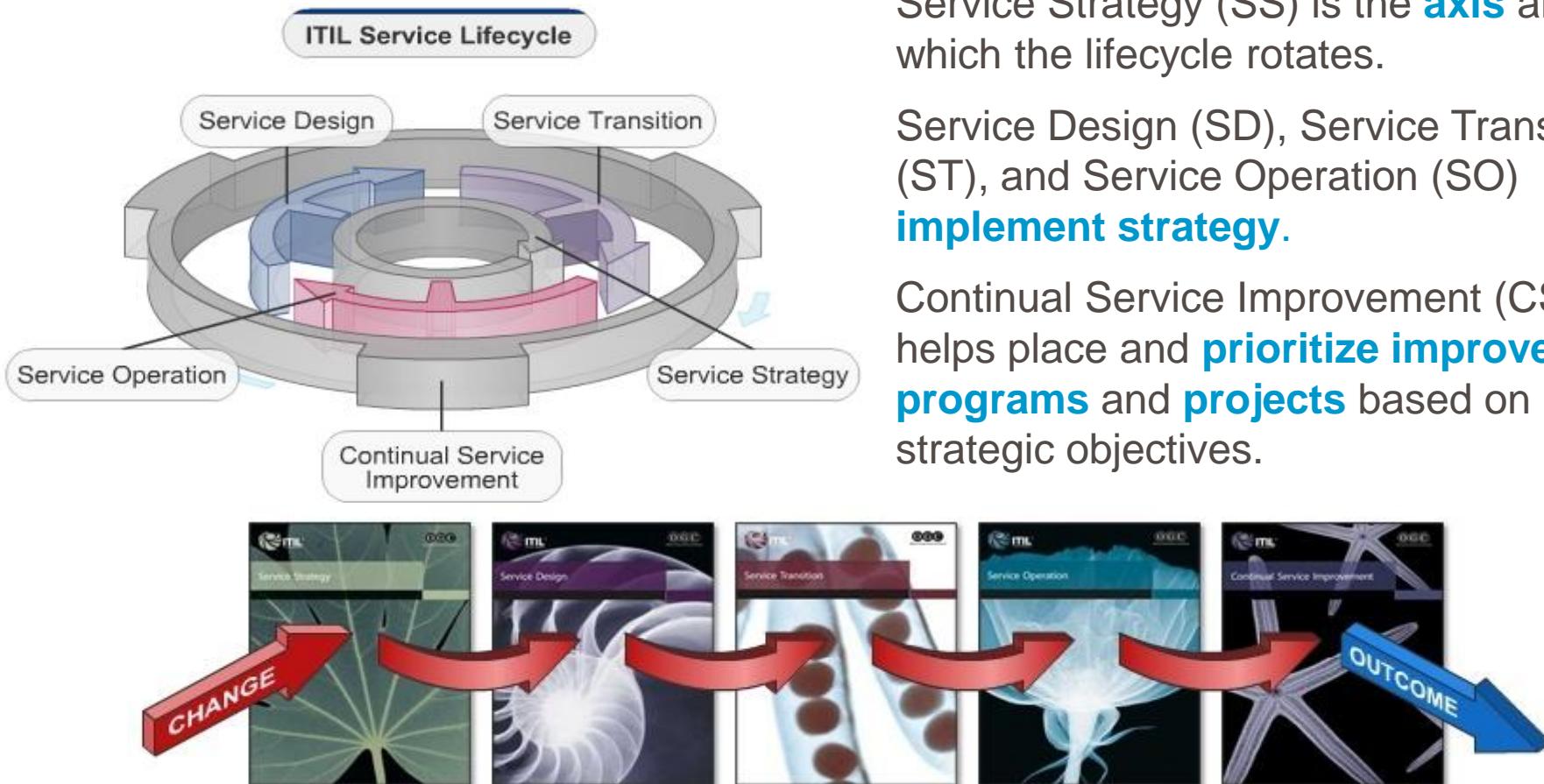
- **Self Help:** A web front-end offering a menu-driven range of self help and service requests – with a direct interface into the back-end process-handling software.
- **Workflow or Process Engine:** Should allow responsibilities, activities, timescales, escalation paths and alerting to be pre-defined and then automatically managed.
- **Integrated CMS:** Cls, relationships, records related to incidents, problems, KE & change.
- **Discovery/Deployment Technology:** Populate or verify CMS data, assist in license management, ability to deploy new software at target locations
- **Remote control:** Allow relevant support groups to take control of the user desktops
- **Diagnostic scripts & utilities**
- **Reporting & dashboards**

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## Module 3: ITIL® Service Lifecycle – Overview

# ITIL® Service Lifecycle



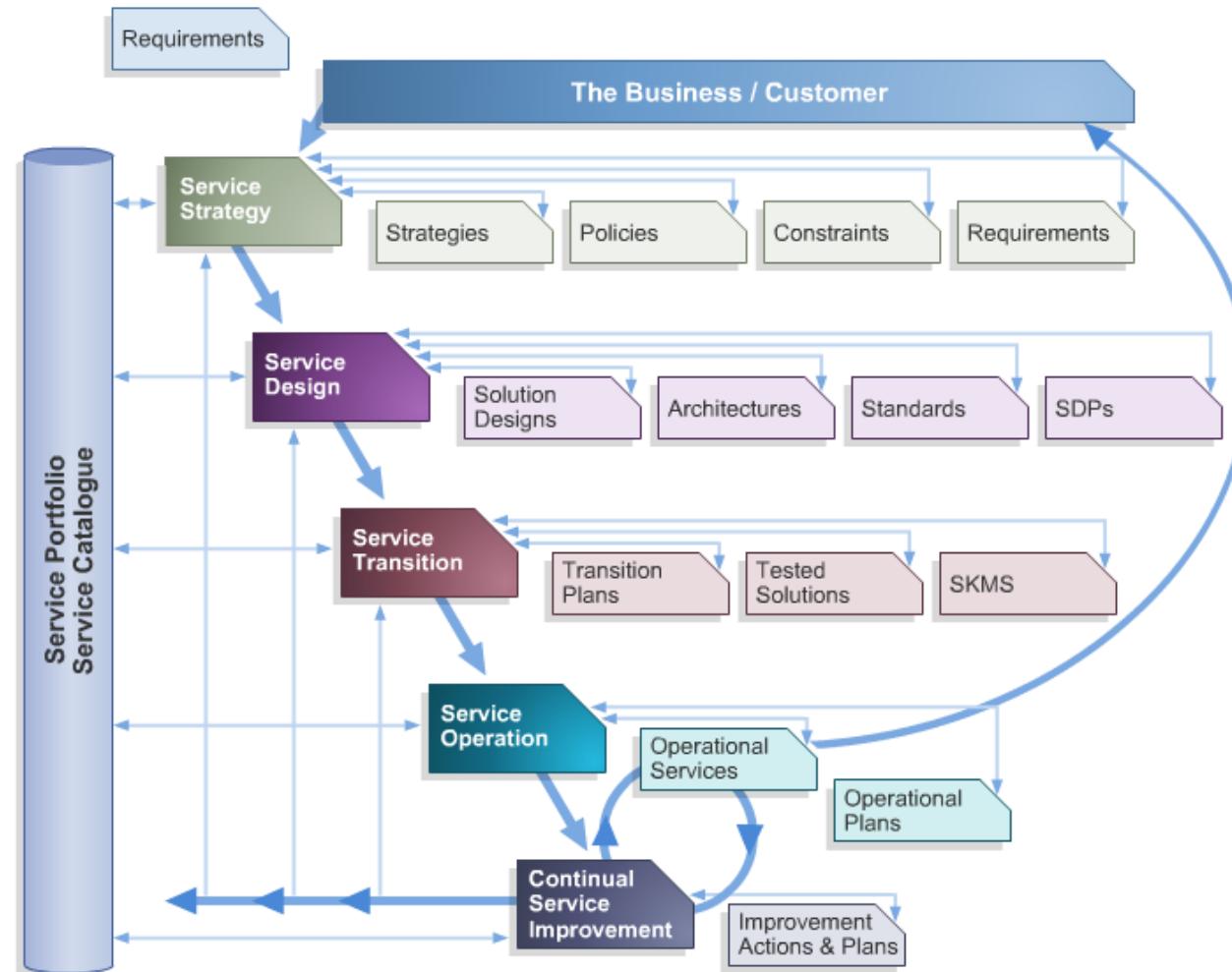
Service Strategy (SS) is the **axis** around which the lifecycle rotates.

Service Design (SD), Service Transition (ST), and Service Operation (SO) **implement strategy**.

Continual Service Improvement (CSI) helps place and **prioritize improvement programs** and **projects** based on strategic objectives.

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# ITIL® Service Lifecycle – Interactions



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# Service Lifecycle Phase 1 - Service Strategy

Design, develop and implement service management as a strategic asset and assisting growth of the organization

Define the strategic objectives of the IT organization

## Service Strategy Processes

- Strategy Management for IT Services
- Service Portfolio Management
- Financial Management for IT Services
- Demand Management
- Business Relationship Management

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# Service Lifecycle Phase 2 - Service Design

'Service Design' is concerned with designing appropriate and innovative IT services, including their architectures, processes, policies and documentation, to meet current and future agreed business requirements

## Service Design Processes

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

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# Service Lifecycle Phase 3 - Service Transition

'Service Transition' relates to the management and coordination of the processes, systems and functions to package, build, test and deploy a release into production and establish the service specified in the customer and stakeholder requirements

## Service Transition Processes

- Transition Planning & Support
- Change Management
- Service Asset & Configuration Management
- Release & Deployment Management
- Service Validation & Testing
- Change Evaluation
- Knowledge Management

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# Service Lifecycle Phase 4 - Service Operation

'Service Operation' – the key purpose is to coordinate and carry out the activities and processes required to deliver and manage services at agreed levels to business users and customer

## Service Operation Processes

- Event Management
- Request Fulfillment
- Access Management
- Incident Management
- Problem Management

## Service Operation Functions

- Service Desk
- IT Operations Management
- Technical Management
- Application Management

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# Service Lifecycle Phase 5 - Continual Service Improvement

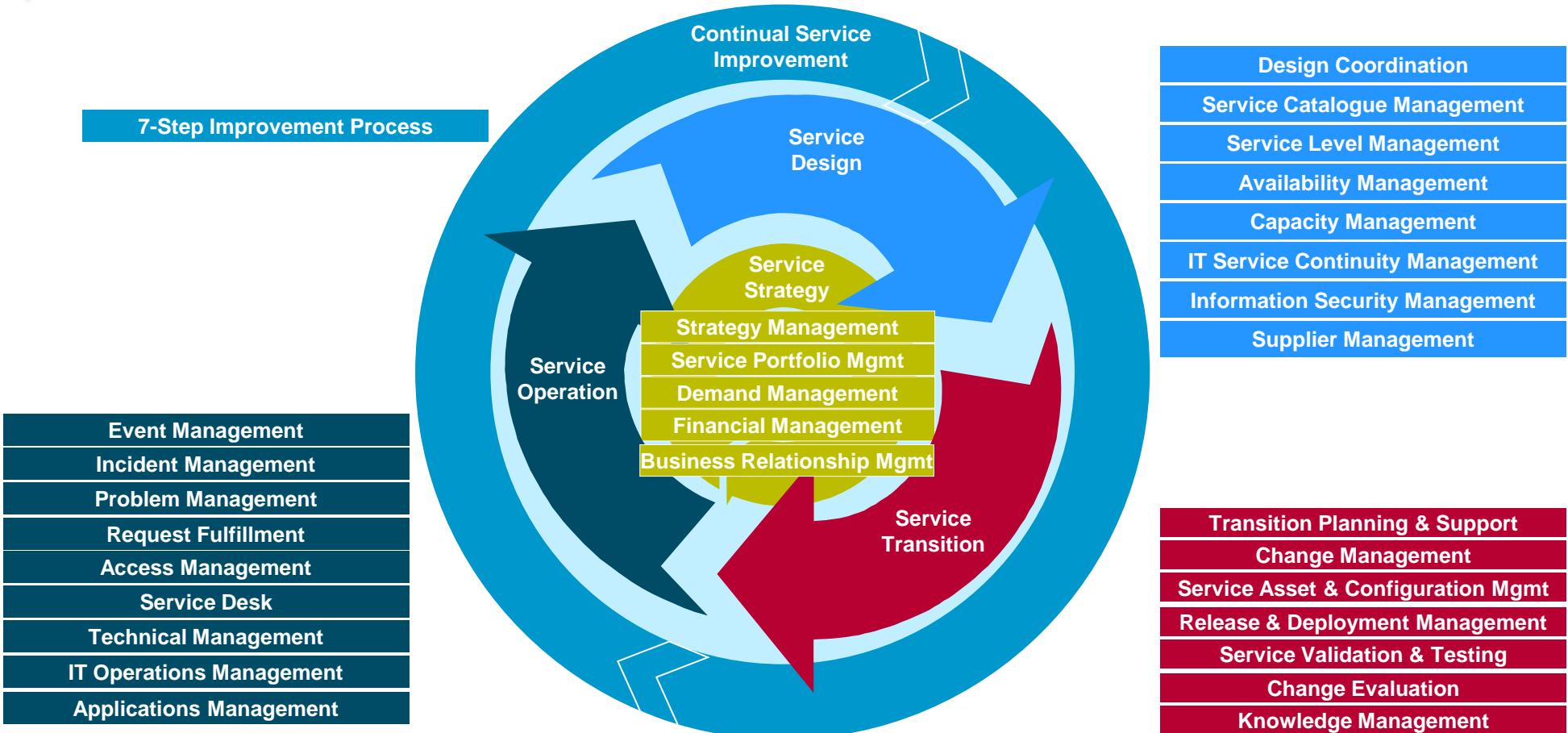
'Continual Service Improvement' aims to align and realign IT Services to changing business needs by identifying and implementing improvements to the IT services that support the Business Processes

## **Continual Service Improvement Processes**

- Seven Step Improvement Process

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# ITIL® Service Lifecycle - Phases & Processes



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# Module 4: Key Principles, Models & Concepts

# What is a Process?

## Process

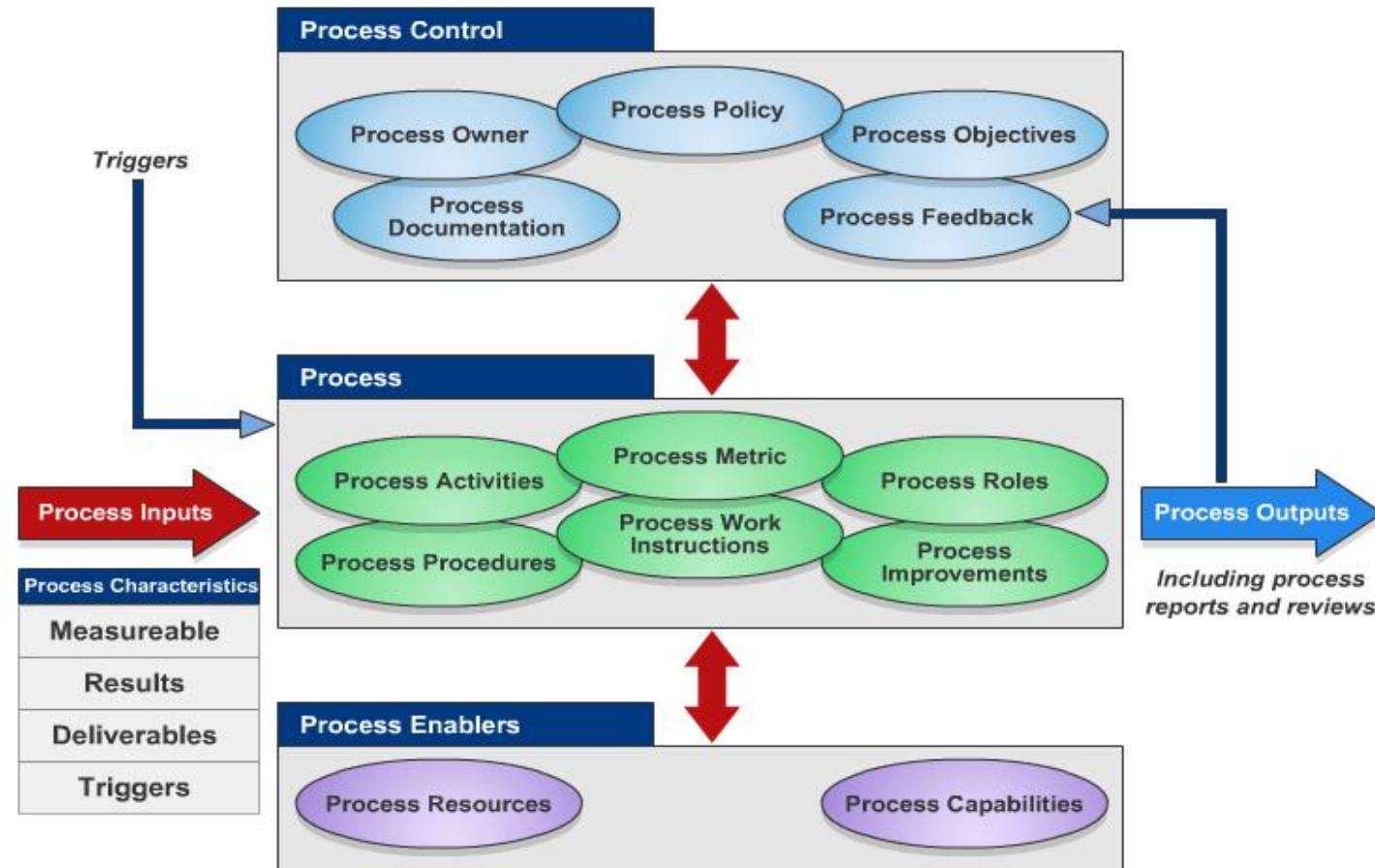
- **Structured set of activities** designed to accomplish a specific objective.
- Takes one or more defined inputs and turns them into defined outputs

## Characteristics of Process

- Is **measurable**
- Delivers specific **results**
- Delivers its primary results to a **customer or stakeholder**
- Responds to **specific events/triggers or requirements**

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# Process Model



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# Function, Group, Team, Department & Division

## Function - team and tools

- Used to carry out one or more processes or activities.

## Group

- A number of people who perform similar activities
  - For example, ensuring that all people who resolve incidents complete the incident record in the same way

## Team

- A more formal group
  - Examples of teams include project teams, application development teams, incident or problem resolution teams.

## Department

- Formal organizational structure
  - Example Finance Dept., HR Dept., IFM

## Division – Group of Departments

# What is a Role?

A role is a **set of responsibilities, activities and authorities** granted to a person or team.

A role is defined in a process or function.

One person or team may have multiple roles

- For example, the roles of configuration manager and change manager may be carried out by a single person.

**Service manager** is a generic term for any manager within the service provider.

- The term is commonly used to refer to a business relationship manager, a process manager or a senior manager with responsibility for IT services overall.
- Is often assigned several roles such as business relationship management, service level management and continual service improvement.

# What is RACI Model?

**RACI model** or ‘**authority matrix**’ is often used within organizations to **define the roles and responsibilities in relation to processes and activities**

RACI is an acronym for the four main roles of:

- **Responsible** – The person or people responsible for getting the job done (the “*Doer*”)
- **Accountable** – Only one person can be accountable for each task (the “*Manager*”)
- **Consulted** – The people who are consulted and whose opinions are sought (the “*Subject Matter Experts*”)
- **Informed** – The people who are kept up-to-date on progress (“*Keep In The Loop*”)

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# RACI - Example

	Service Desk	Human Resource	IT Security Manager	System Administrator	User
Log Service Request	RACI	-	-	I	RC
Classification of Request	RACI	C	-	I	CI
Verification of Access Levels	RI	C	AC	C	C
Provide Access Rights to Users	RI	I	A	R	I

**Example Process: Managing a service request to modify user access levels**

## General Rules

- **Only 1 “A” per Row** (ensures accountability, more than one “A” would confuse this)
- **At least 1 “R” per Row** (shows that actions are taking place)

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# ITIL® Generic Roles

For the delivery of a specific IT service

- Independent of where the underpinning technology components, processes or professional capabilities reside
- Responsible for continual improvement and the management of change affecting the service

**Service Owner – Accountable**

For ensuring that a process is fit for purpose

- Ensures that process is performed according to the agreed documented standard
- Meets the aims of the process definition

**Process Owner – Accountable**

For operational management of a process

- There may be several process managers for one process, for example regional change managers or IT service continuity managers for each data center

**Process Manager – Accountable**

For carrying out one or more process activities

**Product Practitioner – Responsible**

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# Risk Management

**Risk:** Uncertainty of outcome, whether positive opportunity or negative threat

## Objectives

- To identify, assess and control risks. This includes analyzing the value of assets to the business, identifying threats to those assets, and evaluating how vulnerable each asset is to those threats.
- Risks are addressed within several processes in ITIL. ITIL calls for "coordinated risk assessment exercises"

**Risk Management Steps**

- Identify
- Assess
- Plan
- Implement
- Communicate

**Threat Actions**

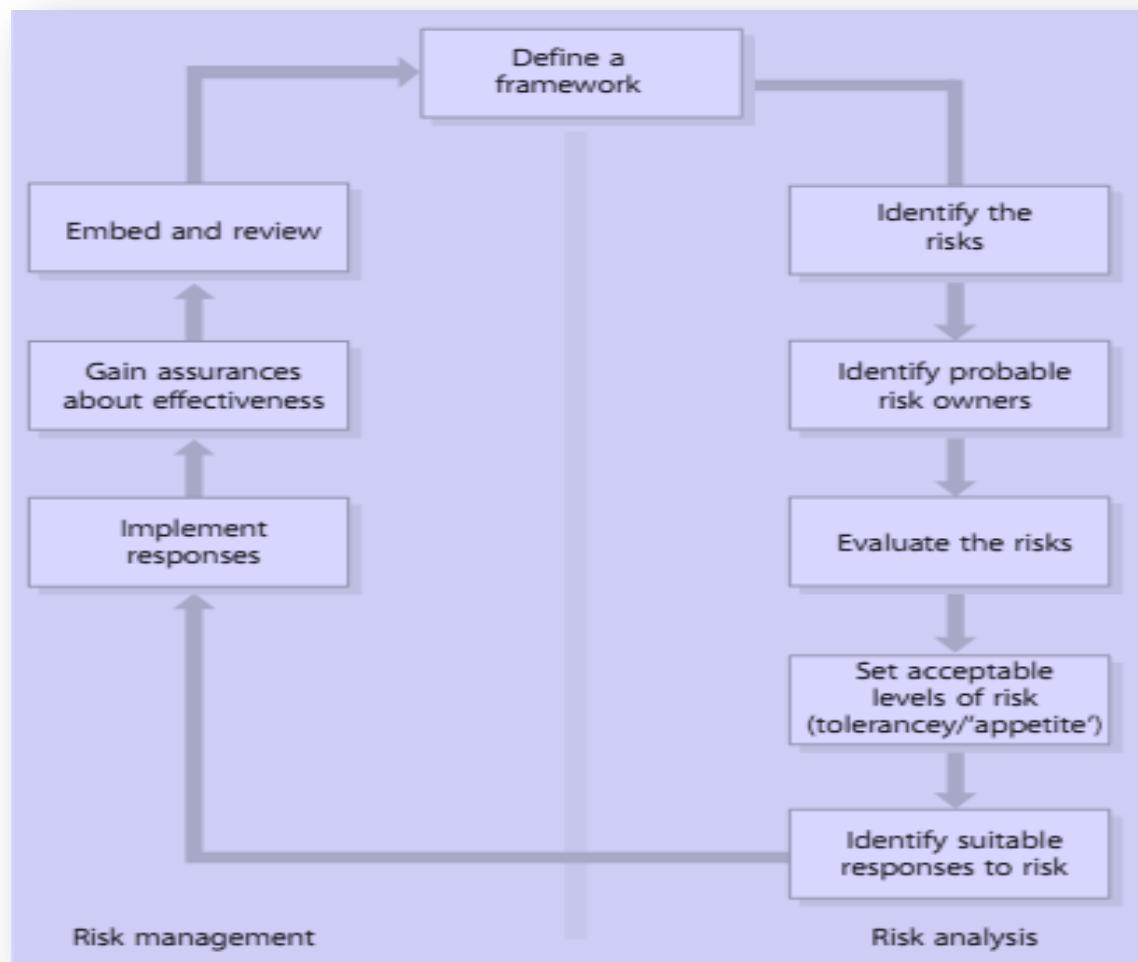
- Reduce
- Transfer
- Avoid
- Accept

**Opportunities Actions**

- Exploit
- Enhance
- Share
- Reject

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# Risk Management Framework



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# ITIL® Generic Roles

## Governance

- Ensuring that Policies and Strategy are actually implemented, and that required Processes are correctly followed. Governance includes defining Roles and responsibilities, measuring and reporting, and taking actions to resolve any issues identified.

## Enterprise Governance

- Describe a framework that covers both the corporate governance and the business management aspects of the organization. It ensures that strategic goals are aligned and good management is achieved.

## Corporate Governance

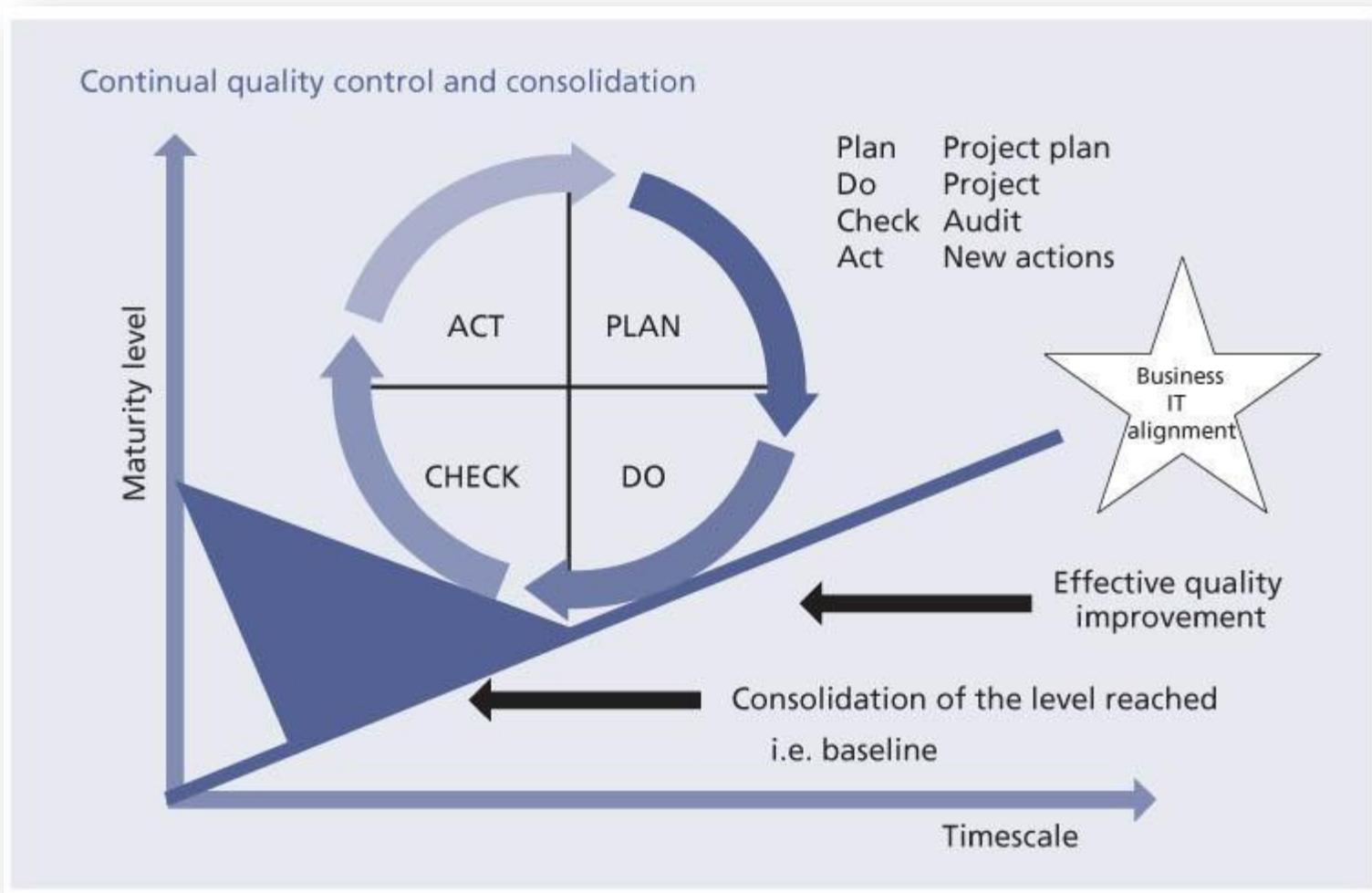
- Is about promoting corporate fairness, transparency and accountability

## IT Governance

- It is an integral part of enterprise governance and consists of the leadership, organizational structures and processes that ensure that the organization's IT sustains and extends the organization's strategies and objectives.

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# The Deming Cycle - P D C A



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# Let's Sum up

## Process Owners



## Service Provider



## RACI



## Supplier

# Quiz

**Which is NOT a source of best practice?**

- A. Standards
- B. Technology
- C. Academic research
- D. Internal experience

**Answer: B**

Technology (answer B) is an enabler of best practice, not a source of best practice.

Standards (answer A), academic research (answer C) and internal experience (answer D) are all sources of best practice.

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## Why are public frameworks, such as ITIL, attractive when compared to proprietary knowledge?

- A. Proprietary knowledge may be difficult to adopt, replicate or transfer
- B. Public frameworks are always cheaper to adopt
- C. Public frameworks are prescriptive and tell you exactly what to do
- D. Proprietary knowledge has been tested in a wide range of environments

Answer: A

Proprietary knowledge is often limited to a few individuals who execute tasks a certain way that works for them. It is often not documented so is difficult for others to follow unless observed closely.

**B** is incorrect as there is no guarantee that adoption of a public framework is any cheaper. **C** is incorrect as ITIL is a framework that is not prescriptive. **D** is incorrect as proprietary knowledge is usually only ever tested in the environment it was conceived in.

# Quiz

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## Which of the following is a source of best practice?

- A. Suppliers
- B. Technologies
- C. Standards
- D. Advisers

**Answer: C**

Standards are a source of best practice.  
Technologies (answer B), suppliers (answer A) and advisers (answer D) are all enablers of best practice.

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## Which is the CORRECT definition of a service?

- A. A means of delivering value to customers to facilitate outcomes customers want to achieve without the ownership of specific cost and risks
- B. A means of delivering outcomes to customers to facilitate the value that customers pay for without owning the service assets
- C. A means of delivering resources to customers to facilitate capabilities that customers want to acquire without the ownership of specific risks
- D. A means of delivering results to customers to facilitate achievement of contractual obligations without incurring financial penalties

**Answer: A**

This is the ITIL book definition where value is delivered to facilitate outcomes without ownership of costs and risks.  
The incorrect answers are themed around this but incorrect in terms of their order and/ or goals.

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## What is the term for customers of an IT service provider who purchase services as agreed in a legal contract?

- A. Strategic customers
- B. External customers
- C. Valued customers
- D. Internal customers

**Answer: B**

If there is a contract, the customer must be external as contracts are not needed when the customer is internal.  
For this reason, internal customers (answer D) is incorrect. Strategic customers (answer A) and valued customers (answer C) may be internal or external and so may, or may not, require a contract.



## Module 5: ITIL® Service Lifecycle - Concepts and Processes

# Module 5: ITIL® Service Lifecycle - Concepts and Processes

**Module 5.1: Service Strategy**

**Module 5.2: Service Design**

**Module 5.3: Service Transition**

**Module 5.4: Service Operations**

**Module 5.5: Continuous Service Improvement**

# Module 5.1: Lifecycle Phase 1 - Service Strategy



## Processes

- Strategy Management for IT Services
- Service Portfolio Management
- Demand Management
- Financial Management
- Business Relationship Management

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# Service Strategy: Purpose and Objectives

**Purpose:** To define the perspective, position, plans and patterns that a service provider needs to be able to execute to meet an organization's business outcomes.

## **Objectives:**

- A clear identification of the definition of services and the customers who use them
- The ability to define how value is created and delivered
- A means to identify opportunities to provide services and how to exploit them
- A clear service provision model, that articulates how services will be delivered and funded, and to whom they will be delivered and for what purpose
- The means to understand the organizational capabilities required to deliver the strategy
- Documentation and coordination of how service assets are used to deliver services, and how to optimize their performance

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# Service Strategy: Purpose and Objectives (cont'd.)

The other objectives of service strategy include:

- Provide business stakeholder value
- Differentiate the organization
- Make solid cases for investment
- Resolve conflicting demands for services
- Improve service quality by strategic planning

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# Service Strategy: Value to Business

- Provides guidance on how to design, and put in place service management as a strategic asset
- Sets the principles for developing service management policies, guidelines and processes across the service lifecycle
- Sets objectives and expectations of performance towards serving customers and market spaces
- Identifies and prioritizes opportunities
- Ensures that organizations can manage the costs and risks associated with their service portfolios
- Asks questions and plans a strategy for how to do something before progressing

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# Service Strategy: Scope

The objectives of service strategy are to answer questions such as:

- What services should we offer and to whom?
- How do we differentiate ourselves from competing alternatives?
- How do we truly create value for our customers?
- How do we capture value for our stakeholders?

## **Scope:**

- Defining a strategy whereby a service provider will deliver services to meet a customer's business outcome.
- Defining a strategy for how to manage those services

# Service Strategy: Business Value

**Service Strategy offers value to Service Providers and customers by:**

Ensuring that the services they offer align with business objectives.

Ensuring that the services they offer are likely to offer value.

Ensuring that customers can be charged for the services or that some mechanism exists by which the services allow the value offered by the Service Provider to be recognized

Ensuring that the Service Provider is in a position to handle the costs and risks associated with the services it offers.

# Service Strategy: Major Activities



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# Key Concept - The Four P's of Service Strategy



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# Key Concept - Value of Service

## Service Value = Utility + Warranty

**Utility** - what the customer gets in terms of outcomes supported and/or constraints removed. Functionality offered by a service to meet a particular customer need

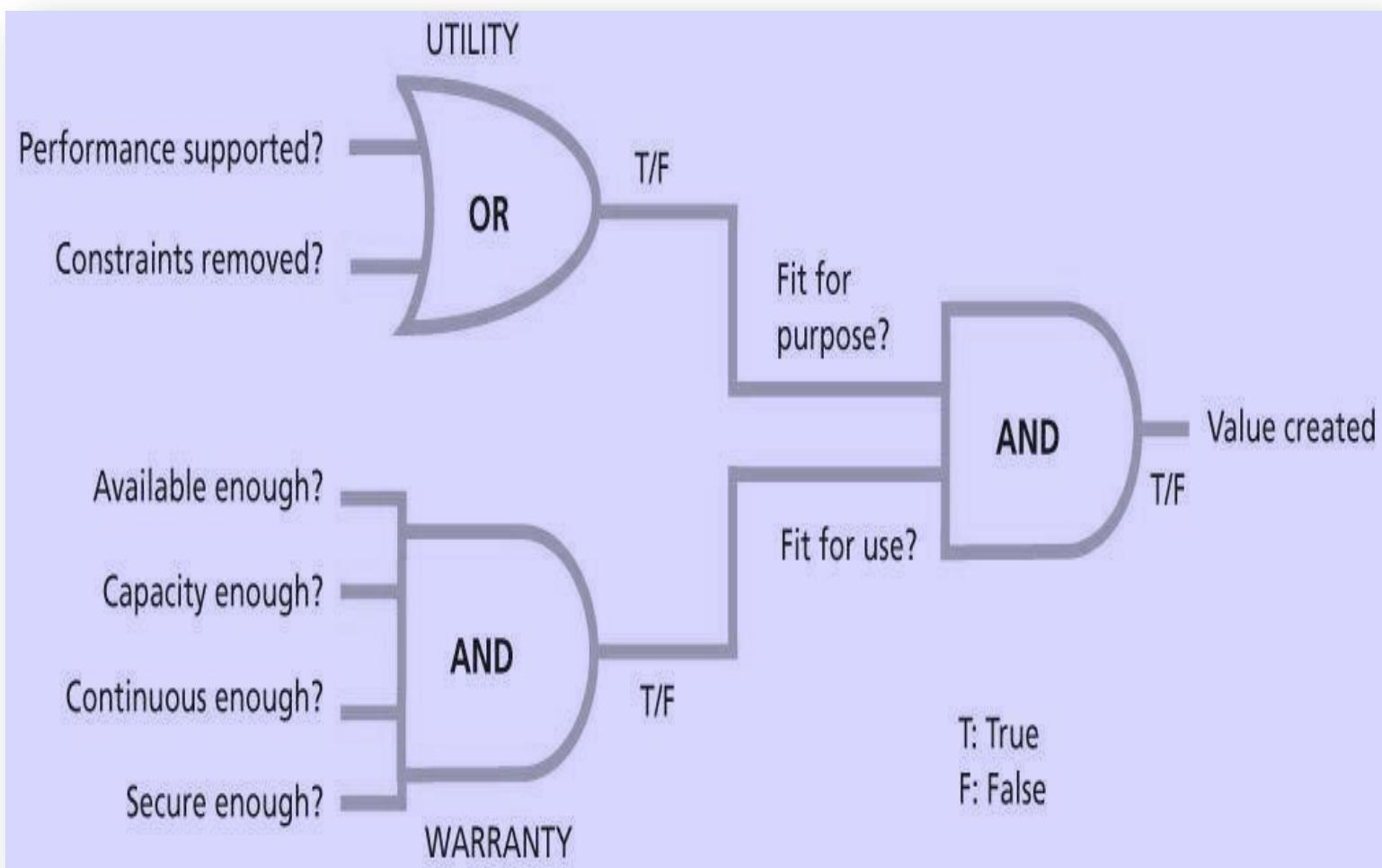
- What does the service do?
- **Functional** requirements
- Features, inputs, outputs
- **Fit for purpose**

**Warranty** - how the service is delivered and its fitness for use, in terms of **Availability, Capacity, Continuity and Security**

- How well the service performs
- **Performance** related
- **Fit for use**

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# Key Concept - Utility & Warranty



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# Key Concepts - Assets, Resources and Capabilities

## Asset – Any resource or capability

- **Customer Assets**
  - Any resource or capability used by a customer to achieve a business outcome.
- **Service Assets**
  - Any resource or capability used by a service provider to deliver services to a customer.

- **Resources** are direct inputs for production.
- **Capabilities** represent an organization's ability to coordinate, control and deploy resources to produce value.



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# Key Concepts - Service Delivery Model Options

## In-sourcing

All parts internal(Type 1 OR Type 2 service provider)

## Out-sourcing

External resources for specific and defined areas  
(Type 3 service provider)

## Co-sourcing

Mix of internal and external resources

## Knowledge Process Outsourcing (domain-based business expertise)

Outsourcing of particular processes, with additional specific expertise from provider

## Application Outsourcing

External hosting on shared systems/infrastructure – applications on demand (e.g. SalesForce.Com)

## Business Process Outsourcing

Outsourcing of specific processes e.g. HR, Library Circulation, Payroll

## Partnership/Multi-sourcing

Sharing service provision over the lifecycle with two or more organisations

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# Service Strategy Processes

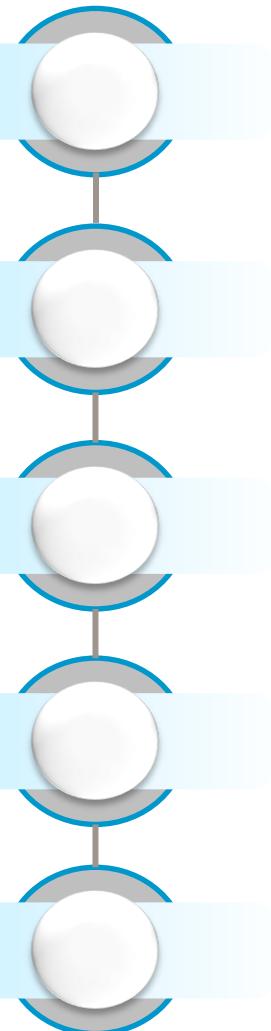
Strategy Management for IT Services

Service Portfolio Management

Demand Management

Financial Management

Business Relationship Management



# Service Management for IT Services - Objective

Assess the service provider's offerings, capabilities, competitors as well as current and potential market spaces in order to develop a strategy to serve customers. Once the strategy has been defined, ITIL Strategy Management is also responsible for ensuring the implementation of the strategy.

- Analysing capabilities and needs for services that span multiple customers and agreements.
- Establishing and maintaining standard services, service levels and descriptions that reflect these capabilities and needs.

The purpose of Strategic Management is to establish and maintain standard services in concert with strategic needs and plans.

# Service Management for IT Services - Key Terms

## **Business Planning Information**

Includes important input from clients and external service providers, especially for devising the Service Strategy and looking for ways to improve services.

This information helps the service organization understand the businesses it serves and their plans for the future, allowing it to offer and develop the right set of services.

## **Service Strategy Plan**

The Service Strategy Plan (at times referred to as the Service Strategy) is about translating a big idea regarding customer needs into a distinctive and cost-effective set of connected capabilities and resources to satisfy those needs.

## **Strategic Action Plan**

The Strategic Action Plan sets out the steps required to implement the previously defined Service Strategy, defining specific tasks and responsibilities.

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# Service Management for IT Services - Key Terms

## **Strategic Service Assessment**

The Strategic Service Assessment is used to gain insight into a service provider's weaknesses, strengths and opportunities prior to developing a Service Strategy.

## **IT Steering Group (ISG)**

The IT Steering Group (ISG) sets the direction and strategy for IT Services. It includes members of senior management from business and IT. The IT Steering Group reviews the business and IT strategies in order to make sure that they are aligned. It also sets priorities of service development programs/ projects.

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# Service Portfolio Management - Purpose

- To ensure the service provider has the right mix of services to balance the investment in IT with the ability to meet the business outcomes.
- To track the investment in services throughout their lifecycle and work with other service management processes to ensure that the appropriate returns are being achieved.
- To ensure that services are clearly defined and linked to the achievement of business outcomes, thus ensuring that all design, transition and operation activities are aligned to the value of services.

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# Service Portfolio Management - Objectives

- Provides a process and mechanisms to enable an organization to investigate and decide on which services to provide.
- Maintains the definitive portfolio of services provided.
- Provides a mechanism for the organization to evaluate how services are enabled to achieve its strategy.
- Controls which services are offered, under what conditions and at what level of investment.
- Analyze which services are no longer viable and when they should be retired.

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# Service Portfolio Management - Scope

- The scope of service portfolio management is about all the services that a service provider plans to deliver, that are currently delivered and that have been withdrawn from service.
- Primary concern is whether the service provider is able to generate value from the services.
- It evaluates the value of services throughout their lifecycles, and must be able to compare what newer services have offered over the retired services they have replaced.

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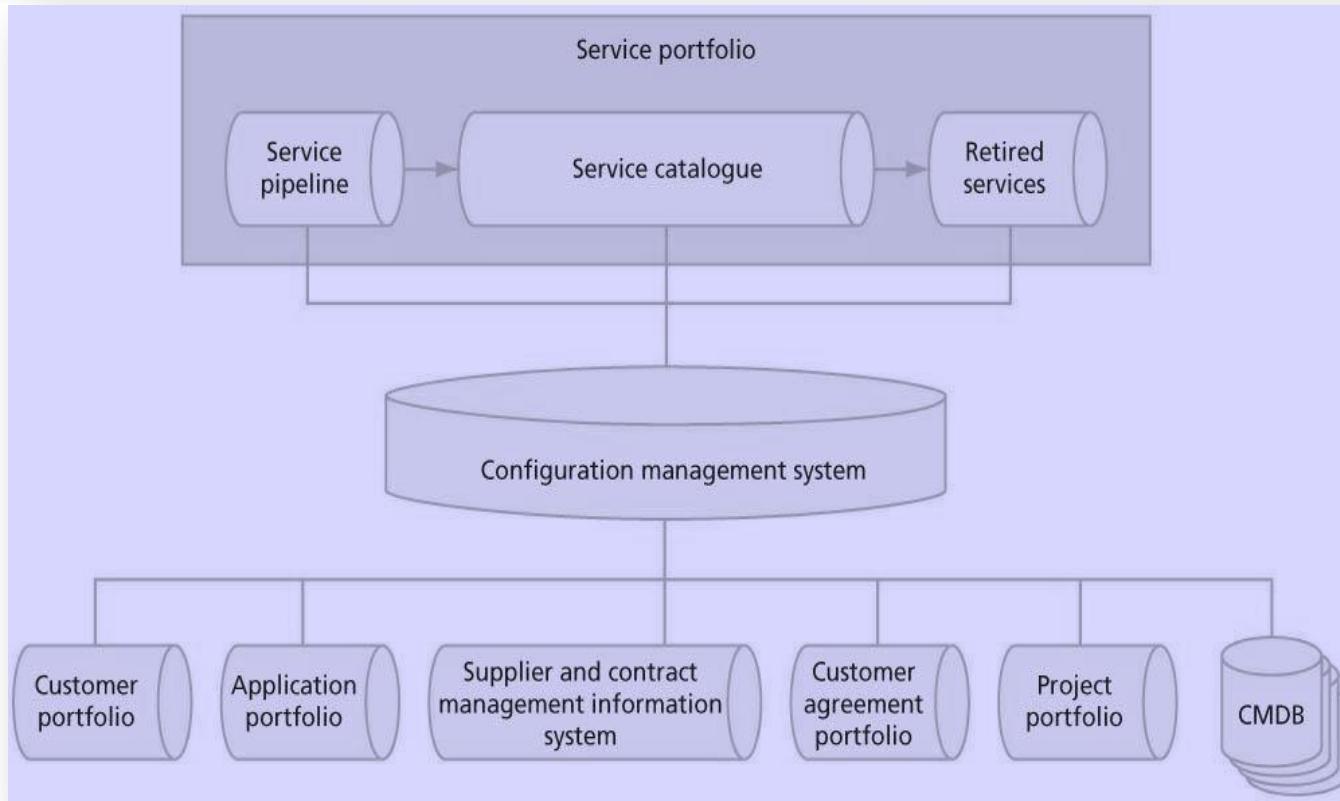
# Key Concepts - Service Portfolio & Service Portfolio Management

- A **Service Portfolio** describes a provider's services in terms of business value. It articulates business needs and the provider's response to those needs.
- **Service Portfolio Management** is a dynamic method for governing investments in service management across the enterprise and managing them for value.

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# Key Concepts - Service Portfolio Structure

**Service Portfolio is the complete set of services that is managed by a service provider**



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# Key Concepts - Components of Service Portfolio

## Service Pipeline

Database or structured document listing all services that are under consideration or development, but are not yet available to customers

## Service Catalogue

Database or structured document with information about all live IT services, including those available for deployment

## Retired Services

Kept in the portfolio but removed from the Catalogue

- The replacement service might not meet all requirements, and it is important to be able to fall back to the previous service.
- When defining a new service, service portfolio management might discover that some functionality is available from a retired service. This might result in the service being reinstated as part of a new service.
- There might be regulatory requirements to maintain archived data that can only be accessed using the previous service, in which case information is exported to a read-only database for future use

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# Key Concepts - Types of Service Portfolio

## Application Portfolio

Used to manage applications throughout their lifecycle

- Implemented as part of the service portfolio or as part of the service knowledge management system.

## Customer Portfolio

Used to record all customers of the IT service provider

- Defined and maintained by business relationship manager

## Customer Agreement Portfolio

Used to manage service contracts or agreements between an IT service provider and its customers

- Intersection of the service and customer portfolios
- Usually managed as part of service portfolio management
- Used by business relationship management process

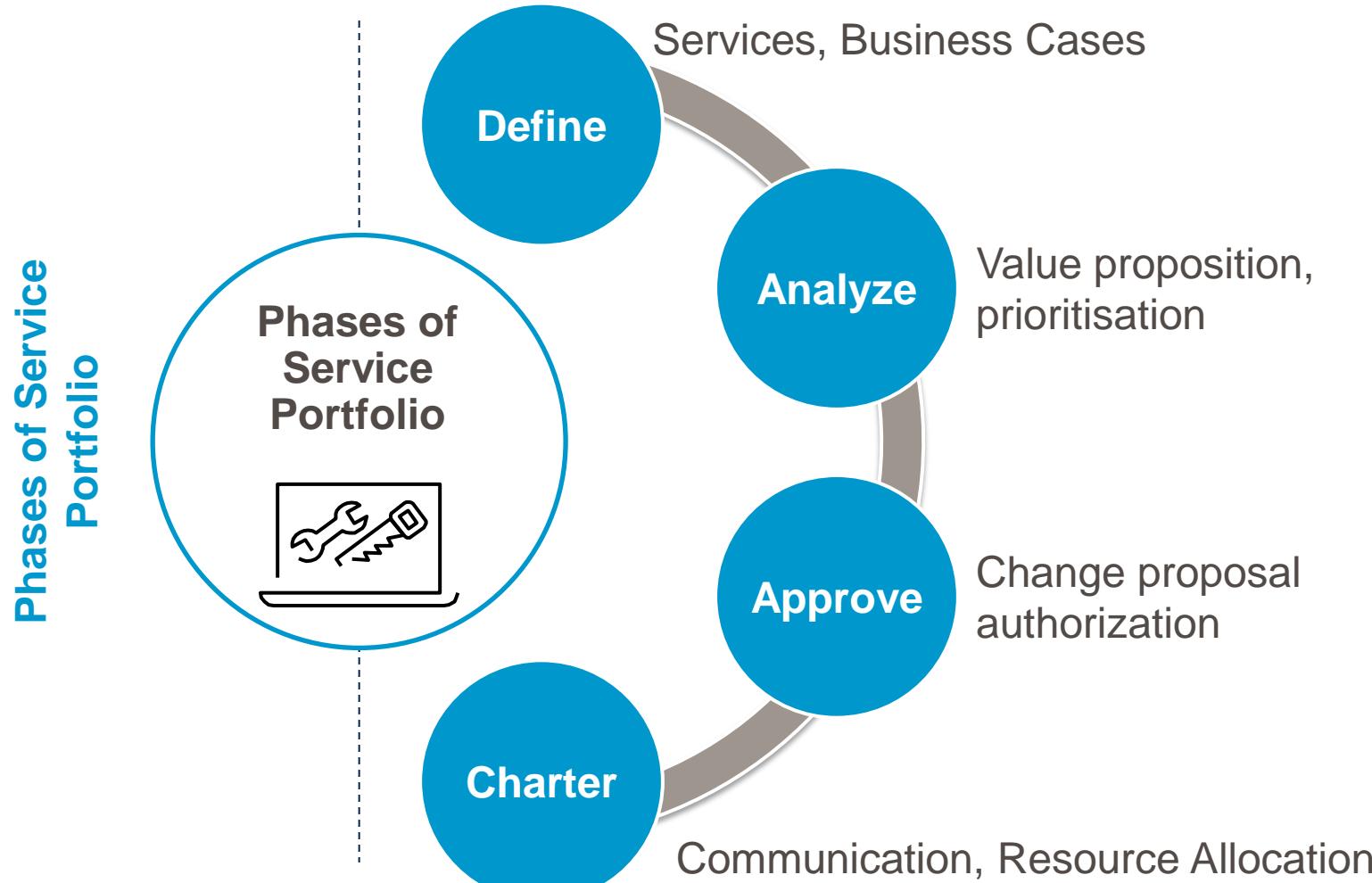
## Project Portfolio

Used to manage projects that have been chartered

- Defined and maintained by a PMO

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# Key Concepts - Service Portfolio Management - Activities



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# Key Concepts - Business Service vs IT Service

## Business Service

- A Service that is **delivered to Business Customers by Business Units**
- For example delivery of financial services to Successful delivery of Business Services often depends on one or more IT Services
- Customers of a bank, or goods to the Customers of a retail store

## IT Service

- A Service **provided to one or more Customers by an IT Service Provider**
- An IT Service is based on the use of Information Technology and supports the Customer's Business Processes
- An IT Service is made up from a **combination of people, processes and technology** and should be defined in a Service Level Agreement

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# Demand Management - Purpose, Scope & Objectives

## Purpose:

- To understand, anticipate and influence customer demands for services.
- To work with the capacity management to ensure the service provider has capacity to meet its demand.

## Objectives:

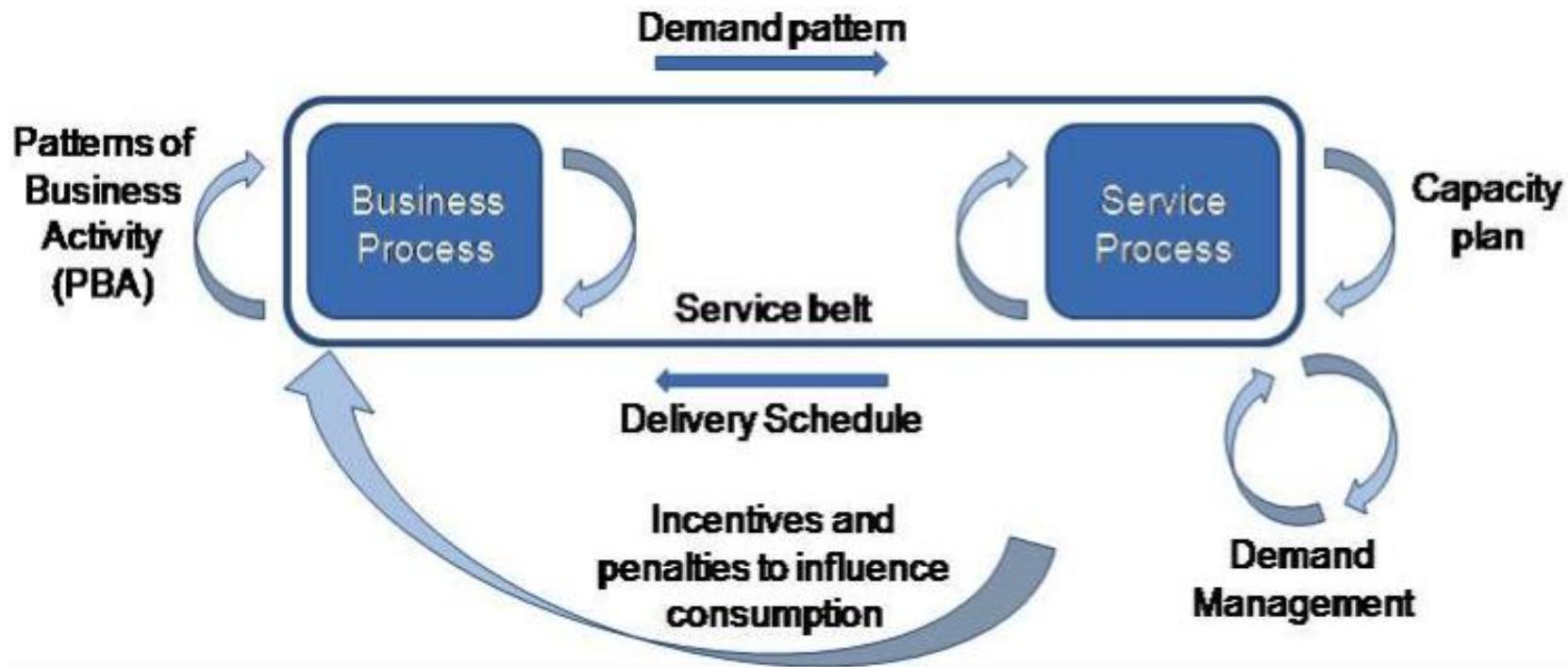
- Identification and analysis of patterns of business activity (PBA) and user profiles (UP) that generate demand.
- Anticipate and prevent or manage situations where demand for a service exceeds the capacity to deliver it.
- Gear the utilization of resources that deliver services to meet the fluctuating levels of demand for those services.

## Scope:

- The scope of demand management process is to identify and analyze the patterns of business activity that initiate demand for services.
- To identify and analyze how different types of users influence the demand for services.

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# Managing Demand for Services



**Business Processes** are the primary source of demand for services. Pattern of Business activity (PBA) influence the demand patterns seen by service providers. It is very important to study the customers business to identify, analyze and classify such patterns to provide sufficient basis for capacity management.

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# Challenges in Managing Demand for Services

- Excess capacity generates cost without creating value
- Insufficient capacity has impact on the quality of services delivered and limits the growth of the service
- Demand cannot exist simply because capacity exists.
- Unlike goods, services cannot be manufactured in advance and stocked in inventory in anticipation of demand

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# Key Concept - Service Package Vs. Service Level Package

## Service Package (SP)

**Service Package (SP)** is a bundle of core services and/or supporting services which are offered to customers

- Provides complete description of the services
- SP Includes **Service Level Package (SLP)**

## Service Level Package (SLP)

**Service Level Package (SLP)** has a defined level of Utility & Warranty for a given SP

- Each SLP is designed to meet the needs of a particular pattern of business activity
- E.g. Infrastructure Management of 100 servers is a SP deal but some of them could be under Gold/Silver SLP

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# Key Concepts - Activity Based Demand Management

**Business processes** are the primary source of demand for services. Patterns of Business Activity and User Profiles have an impact on demand patterns.

## Patterns of Business Activity (PBA)

- Represents change in pattern of customers' demands based on business cycles
- Important to track as it helps organization identify improvements in existing services or identify future opportunities
- Also important to study customer's business & changing business needs

## User Profile (UP)

- Users include people, processes, functions, etc.
- Helps in determining the expected use of services by each type of user – Demand Patterns
- Is usually associated with (or) is subset of PBA

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# Financial Management - Purpose

To secure appropriate level of funding to design, develop and deliver services that meet the strategy of the organization

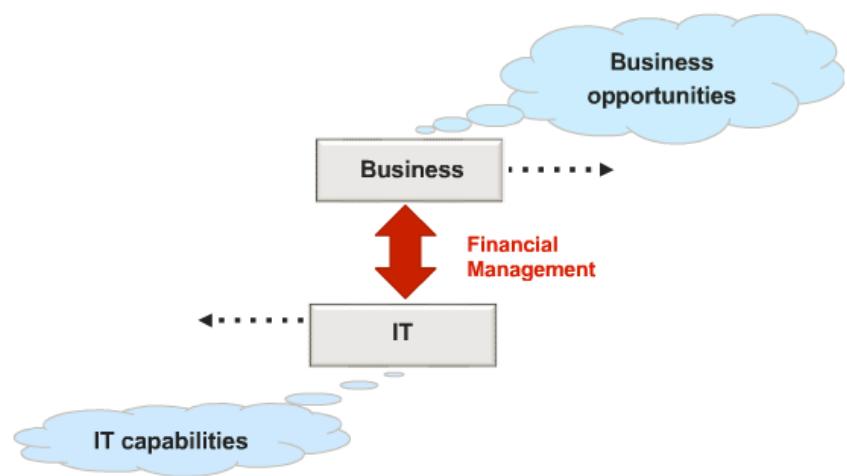
It is a gatekeeper that ensures the service provider does not commit to services which they are not able to provide

Identifies the balance between cost and quality of service and maintains the balance of supply and demand between the service providers and their customers

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# Financial Management - Objectives

- Defining and maintaining a framework to identify, manage and communicate the cost of providing services.
- Evaluating the financial impact of new or changed strategies on the service provider.
- Facilitating good stewardship to service Management customer asset and to ensure that the organization meet its objectives.
- Executing the financial policies and practices in the provision of the services.
- Accounting for money spent on the creation, delivery and support of services.



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# Financial Management - Scope

Managed by professional accountants which set financial policies, budgeting procedures, financial reporting standards, accounting practices and revenue generation or cost recovery rules.

Often a separate function either reporting to the CIO or CFO, but with some form of functional reporting between the two areas.

Consists of three main processes: **Budgeting, IT Accounting, Charging**

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# Financial Management - Activities

## Budgeting

Predicting the expected future requirements for funds to deliver the agreed upon services and monitoring adherence to the defined budgets

## Accounting

Enables the IT Organization to account fully for the way it spends money

## Chargeback

Charging customer for their use of IT Services

## Demand Modelling

Working with the process of Demand Management to anticipate usage of services by the business and the associated financial implications of future service demand

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# Key Concept - Business Case

A **decision support and planning tool** that projects the likely consequences of a business action. It is normally **used to justify investments**.

Usually it is in the form of report & may contain

- Background/History
- Facts & Figures, Validity period of the document
- Risks & Mitigation plans
- Recommendations
- E.g. Study Report for “Why should we buy 34 Mbps Link?”

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# Key Concept - Business Impact Analysis (BIA)

- Seeks to **identify a company's most critical business services** through analysis of outage severity translated into a financial value, coupled with operational risk
- Helps to **prioritize the critical services**
- Analyzes various facets of service such as impact of outages, financial penalties, customer relationship etc.

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# Business Relationship Management - Purpose

- To establish and maintain relationship between the service provider and customer based on understanding the customer and their business needs.
- To identify customer needs and ensure that the service provider is able to meet these needs as business needs change over time and between circumstances.

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# Business Relationship Management - Objectives

- Ensure that the service provider understands the customer perspective of service, and is therefore able to prioritize its services and service assets appropriately.
- Ensure high levels of customer satisfaction, indicating that the service provider is meeting customer's requirements.
- Establish and maintain a constructive relationship between the service provider and the customer based on understanding the customer and their business drivers.
- Identify changes to the customer environment that could potentially impact the type, level or utilization of services provided.
- Work with customers to ensure that services and service levels are able to deliver value.
- Identify technology trends that could potentially impact the type, level or utilization of the services provided

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# Business Relationship Management - Scope

- Business outcomes that the customer wants to achieve
- Services that are currently offered to the customer, and the way in which they are used by the customer
- Understanding who is responsible for the service, what levels of service have been agreed, the quality of service delivered and any changes that are anticipated
- Understanding technology trends that could impact current services and the customer
- How to optimize services for the future
- How the service provider is represented to the customer

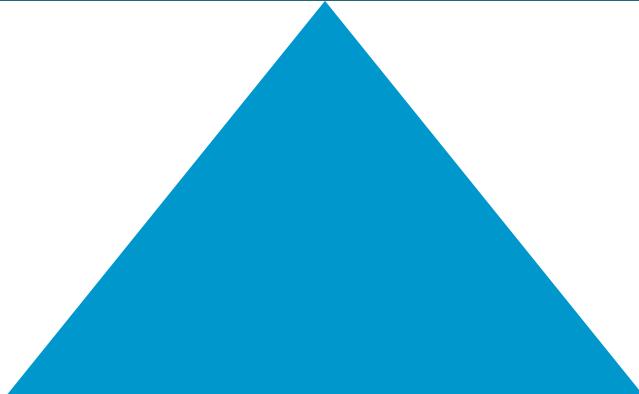
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# Business Relationship Management - Activities

Being the voice of the service provider to the customer

Being the voice of the customer to the service provider

The two key activities are:



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# BRM/Service Level Management (SLM) Differences

BRM	SLM
<ul style="list-style-type: none"><li>• Establish and maintain business relationship</li><li>• Identify customer needs (utility and warranty)</li><li>• Ensure service provider can meet needs</li></ul>	<ul style="list-style-type: none"><li>• Negotiate service level agreements (warranty terms) with customers</li><li>• Ensure all SM processes, operational level agreements and contracts are appropriate for the agreed service level targets</li></ul>
<p>Focus</p> <ul style="list-style-type: none"><li>• Strategic and tactical</li></ul>	<p>Focus</p> <ul style="list-style-type: none"><li>• Tactical and operational</li></ul>
<p>Primary measure</p> <ul style="list-style-type: none"><li>• Customer satisfaction (including willingness to recommend service to others)</li></ul>	<p>Primary measure</p> <ul style="list-style-type: none"><li>• Achieving agreed levels of service (which leads to customer satisfaction)</li></ul>

**BRM is the primary process for strategic communication with customers for all service provider departments, including application development.**

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# Business Relationship Management - Role

## Business Relationship Manager

Responsible for the interaction and the communication with customers

Could easily combine with the service level manager to create seamless conduit from customer to service provider capabilities used to ensure value

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# Service Strategy - Summary

## Purpose

How to design, develop, and implement service management not only as an organizational capability but also as a *strategic asset*

## Key Concepts

- Service assets for value creation:
  - Resources – tangible assets
  - Capabilities – intangible assets
- Value to the business is defined by:
  - Utility – Fit for Purpose
  - Warranty – Fit for Use
- Service portfolio
- Patterns of Business Activity and User Profiles

## 4 Main Activities

- Define the market
- Develop the offerings
- Develop strategic assets
- Prepare for execution

## Processes

- Strategy Management for IT Services
- Service Portfolio Management
- Demand Management
- Financial Management
- Business Relationship Management

# Quiz

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## Which of the following are the components of Service Portfolio?

- A. Service Pipeline, Service Catalogue, Retired Services
- B. Database, Technology, Retired Services
- C. Standard Services, Decommissioning Services, Catalogue Services
- D. Service Pipeline, Service Catalogue, Service Standards

Answer: A

Service Pipeline, Service Catalogue, Retired Services

Option B, C and D are distractors.

Topic: Service Portfolio Management

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## Which among the following are the activities of Financial Management?

- A. Budgeting, Taxing, Account, Charging
- B. Accounting, Budgeting, Charging
- C. Pattern of Business, Accounting, Charging
- D. Accounting, Budgeting, Counting

**Answer: B**

The main activities of Financial Management are Accounting, Budgeting and Charging (ABC of Financial Management)

# Quiz

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## Which of the following statement about Business Relationship Management (BRM) is INCORRECT?

- A. BRM establishes and maintains business relationship
- B. BRM negotiates service level agreements with customers
- C. BRM identifies customer needs
- D. BRM ensures service provider can meet customers' needs

**Answer: B**

Negotiating service level agreement with customers is done by Service Level Management.

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# Quiz

**Which part of Financial Management for IT services deals with predicting and controlling income and expenditure within the organization?**

- A. Accounting
- B. Budgeting
- C. Cost models
- D. Charging

**Answer: B**

Budgeting involves looking into future to predict expenditure and income. Accounting (answer A) is the process of recording and accounting for spending. Cost models (answer C) are used to calculate the cost of providing services. Charging (answer D) is the process through which costs can be recovered from customers.

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# Module 5.2: Lifecycle Phase 2 - Service Design



## Processes

- Service Catalog Management
- Service Level Management
- Availability Management
- Capacity Management

## Processes

- Design Coordination
- Supplier Management
- Information Security Management
- IT Service Continuity Management

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# Service Design: Purpose and Objectives

## Purpose

- The purpose of the service design stage of the lifecycle is to design IT services, together with the governing IT practices, processes & policies.
- To realize the service provider's strategy and to facilitate the introduction of these services into supported environments ensuring quality service delivery, customer satisfaction and cost-effective service provision.

## Objectives

- To design IT services so effectively that minimal improvement during their lifecycle will be required.
- Inclusion of continual service improvement in all service design activities to ensure that the solutions and designs become even more effective over time.
- To identify changing trends in the business that may offer improvement opportunities.

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# Service Design: Scope & Value to Business

## Scope

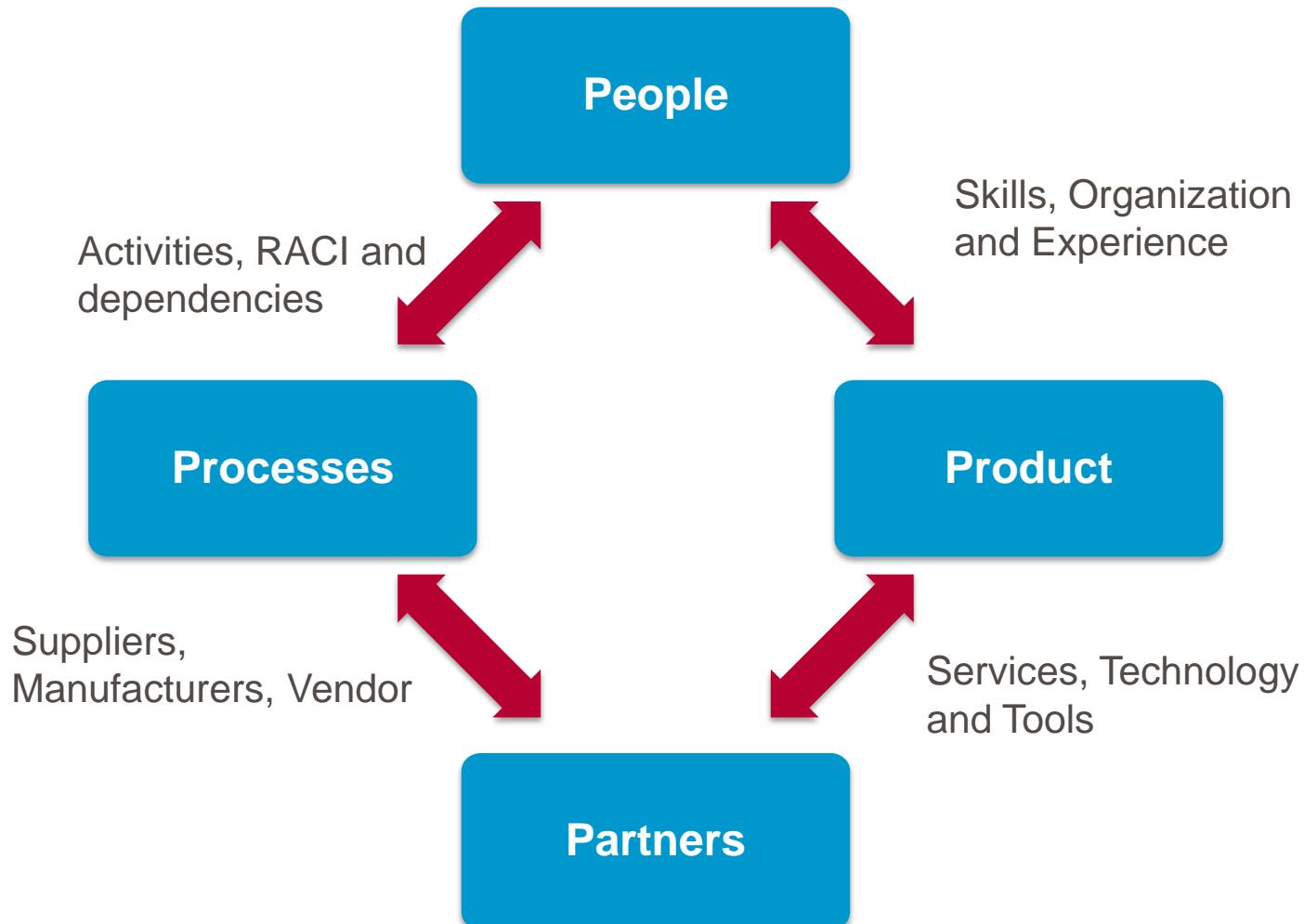
- Current, new or changed agreed business requirements
- Management information systems & tools
- Technology, architecture & management systems
- Measurement methods and metrics
- All processes that are essential for successful service design management and it processes

## Value to Business

- Reduced total cost of ownership (TCO)
- Improved quality & consistency of service
- Easier implementation of new or changed services
- Improved service alignment
- Increased effective service, performance, service
- Improved IT governance

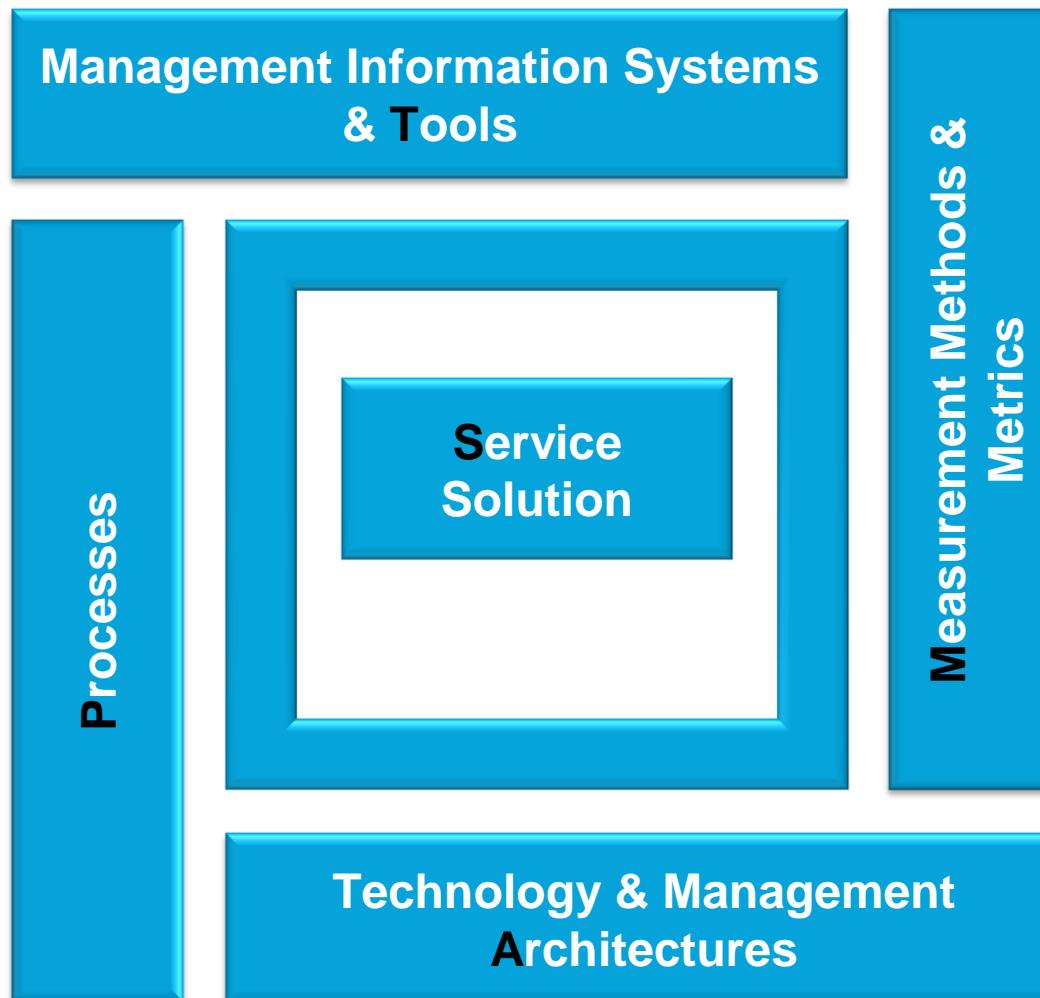
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# Key Concept - 4P's in Service Management



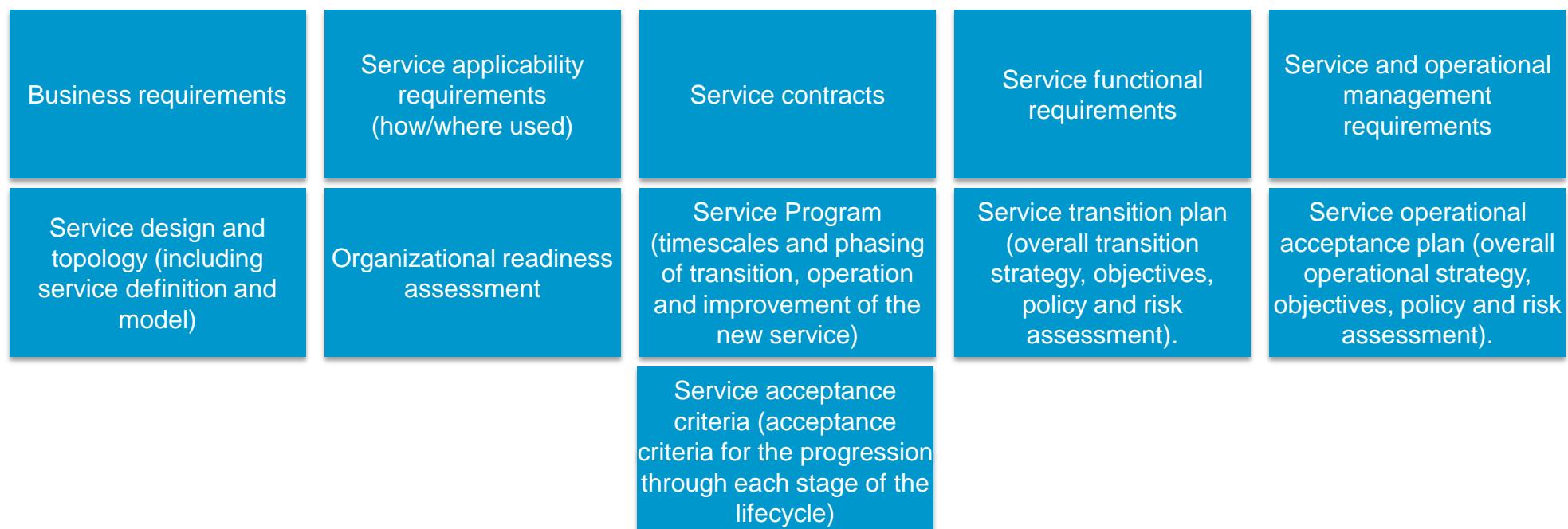
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# Key Concepts - 5 Major Aspects of Service Design



# Key Concept - Service Design Package

- A document defining all aspects of an IT Service and its requirements through each stage of its lifecycle.
- A Service Design Package is produced for each new IT service, major change, or IT service retirement.
- The SDP is passed from Service Design to Service Transition.



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# Service Design - Processes

Design Coordination

Service Catalogue Management

Service Level Management

Capacity Management

Availability Management

IT Service Continuity Management

Information Security Management

Supplier Management

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# Design Coordination - Purpose, Objectives and Scope

## Purpose:

- To ensure that the objectives of the service design stages are met by providing and maintaining a single point of coordination and control for all activities and processes within this stage of the service lifecycle

## Objectives:

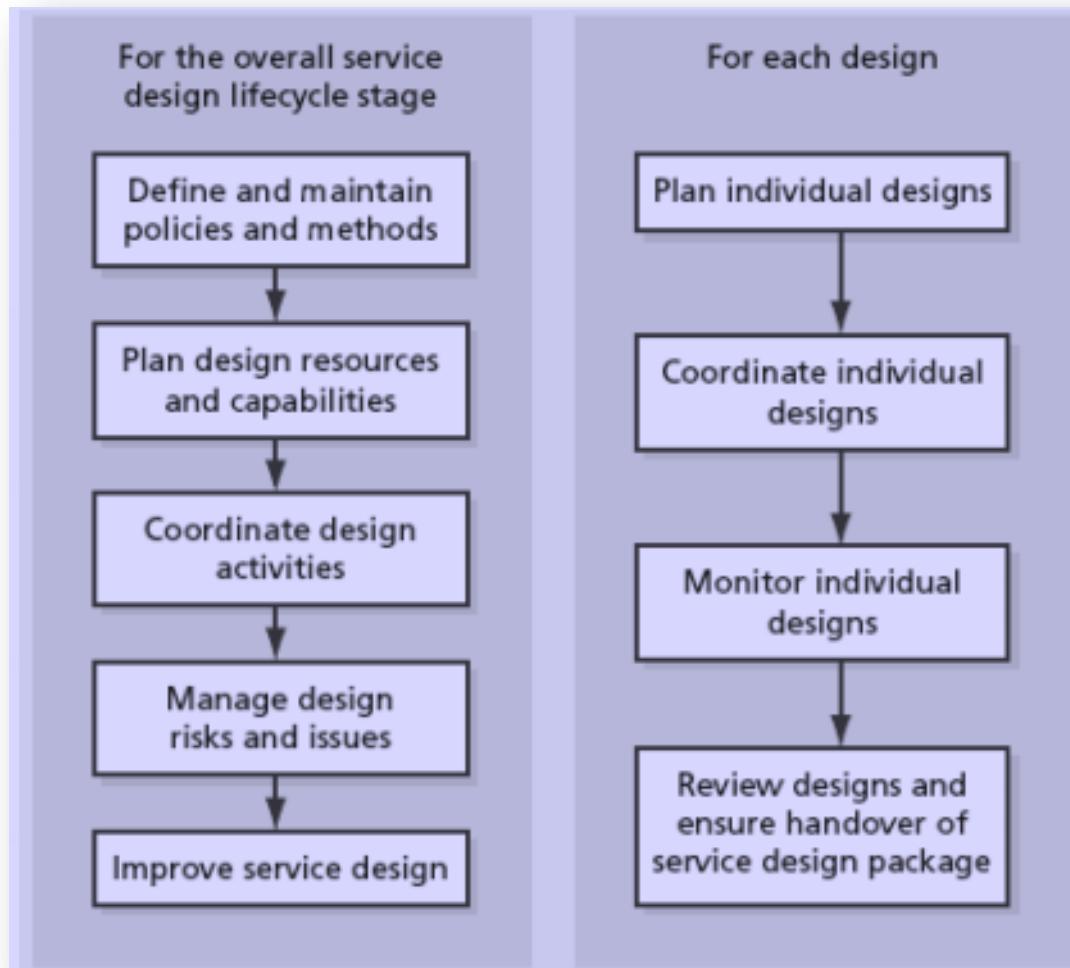
- Ensuring consistent design of services to meet current and evolving business needs
- Coordination of all design activities across projects, changes, suppliers and support teams
- Maintaining governance

## Scope:

- All design activities
- All new or changed service solutions that are being designed for transition into the live environment or retirement

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# Design Coordination - Activities



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# Service Catalogue Management - Purpose, Objectives & Scope

## Purpose

- To provide and maintain a single source of consistent information on all operational services, and those being prepared to run operationally, and to ensure that it is widely available to those who are approved to access it.

## Objectives

- Manage the information contained within the service catalogue.
- Maintain accuracy with current details, status, interfaces and dependencies of all services.
- Enable access to service catalogue to those approved.

## Scope

- Contribution to the definition of services and service packages.
- Development and maintenance of service and service packages.
- Production and maintenance of an accurate service catalogue.
- Interfaces, dependencies and consistency between the service catalogue and the overall service portfolio.

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# What is a Service Catalogue?

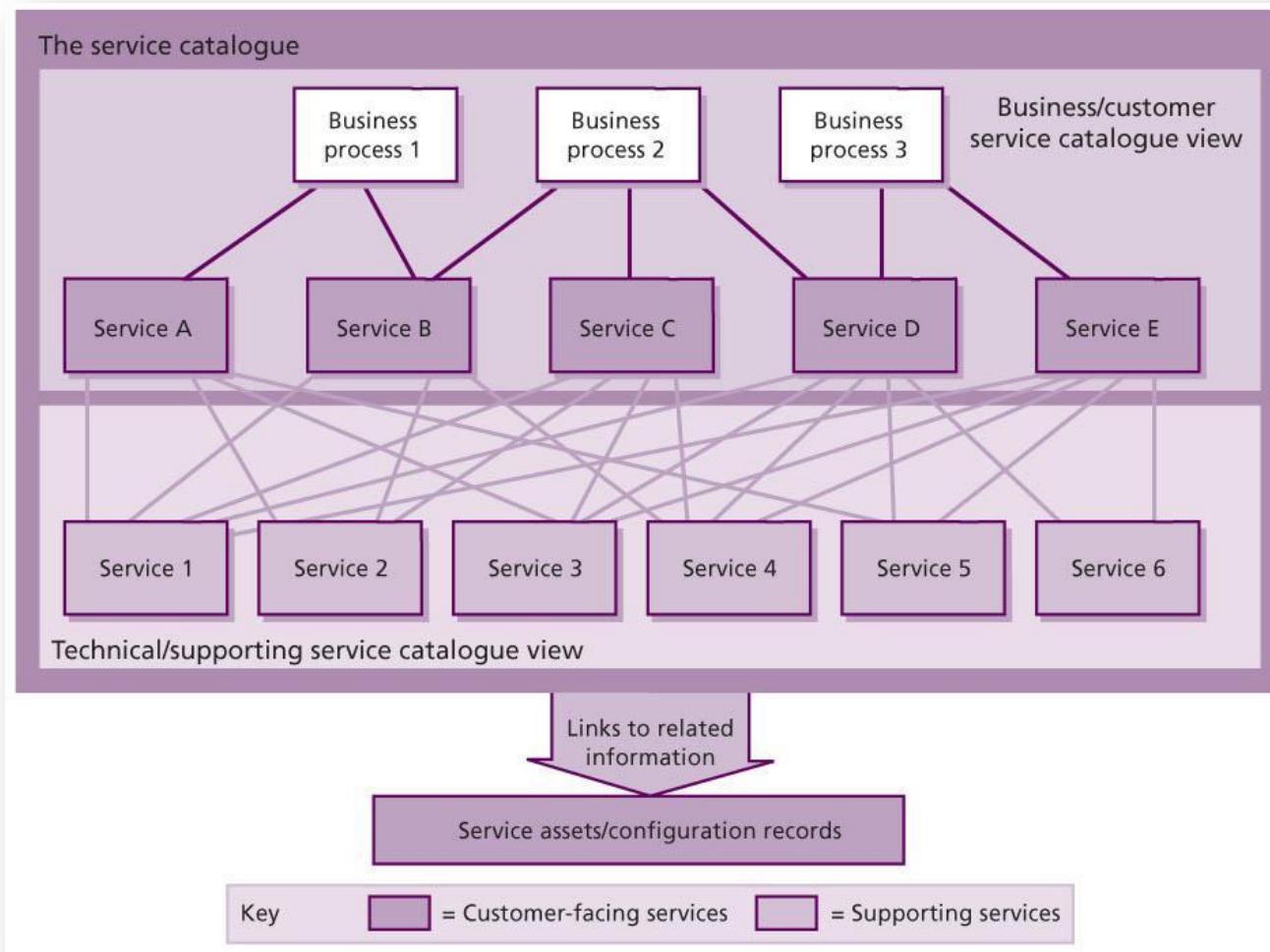
- A single source of **information for all the service offerings** - deliverables, prices, contact points, ordering and request processes
- Includes **Operational & Chartered (in Transition) Services**
- The only part of the Service Portfolio **published to Customers**

## Types of Catalogues :

- Customer/Business Service Catalogue
  - Details of all the IT services delivered to customers
  - **Visible to the customers**
- Supporting/Technical Service Catalogue
  - Details of all **supporting services**
  - **Not usually visible to customers**

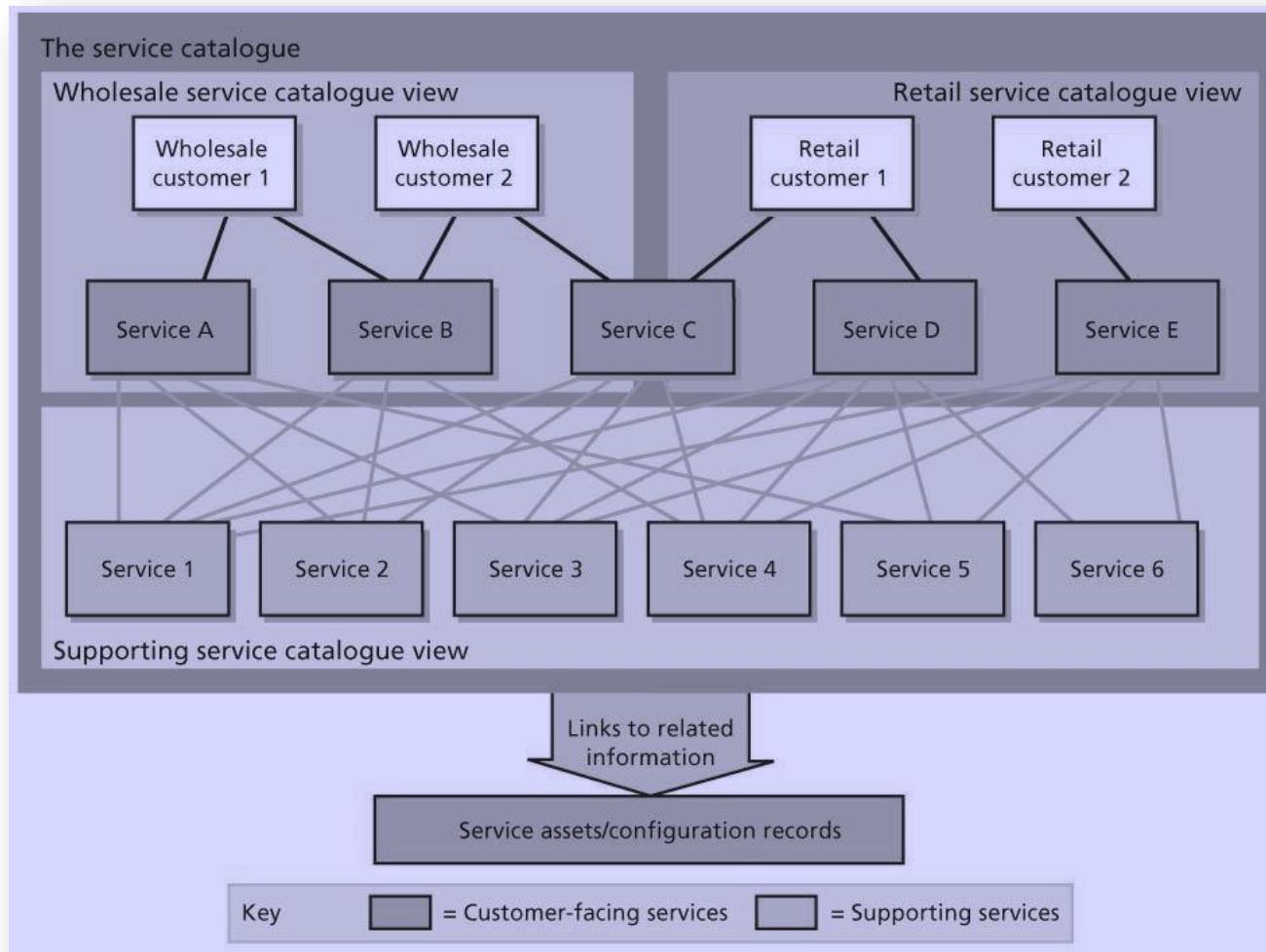
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# Two-View Service Catalogue



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# Three-View Service Catalogue



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# Service Catalogue Management - Roles

## Service Catalogue Manager

- Produce and maintain the Service Catalogue
- Ensure all operational services and those being prepared for operational running are recorded
- Ensure all information in the Service Catalogue is accurate and up-to-date
- Ensure all information is consistent with the information in the Service Portfolio
- Ensure all information is adequately protected and backed-up

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# Service Level Management - Purpose, Objectives & Scope

## Purpose

- To ensure that all current and planned IT services are delivered to agreed achievable targets.
- To correct or improve the level of service delivered

## Objectives

- To define, document, agree on, monitor measure, report and review the level of IT services provided.
- To provide and improve the relationship and communication with the business and customers.
- Proactive measures to improve the levels of service delivered are implemented in a cost-justified manner

## Scope

- To provide a point of regular contact and communication to the customers and business managers of an organization in relation to service levels.
- Needs to manage the exception and perception of the business, customers and users and ensure that the quality of service delivered by the service provider is matched to those expectations and needs.

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# Service Level Management - Value to Business

- Consistent interface to the business for all IT service related issues
- Provides the business with the agreed service targets and the required management information
- Feedback on service failures or breaches & actions taken to prevent recurrence
- Reliable communications channel and trusted relationship

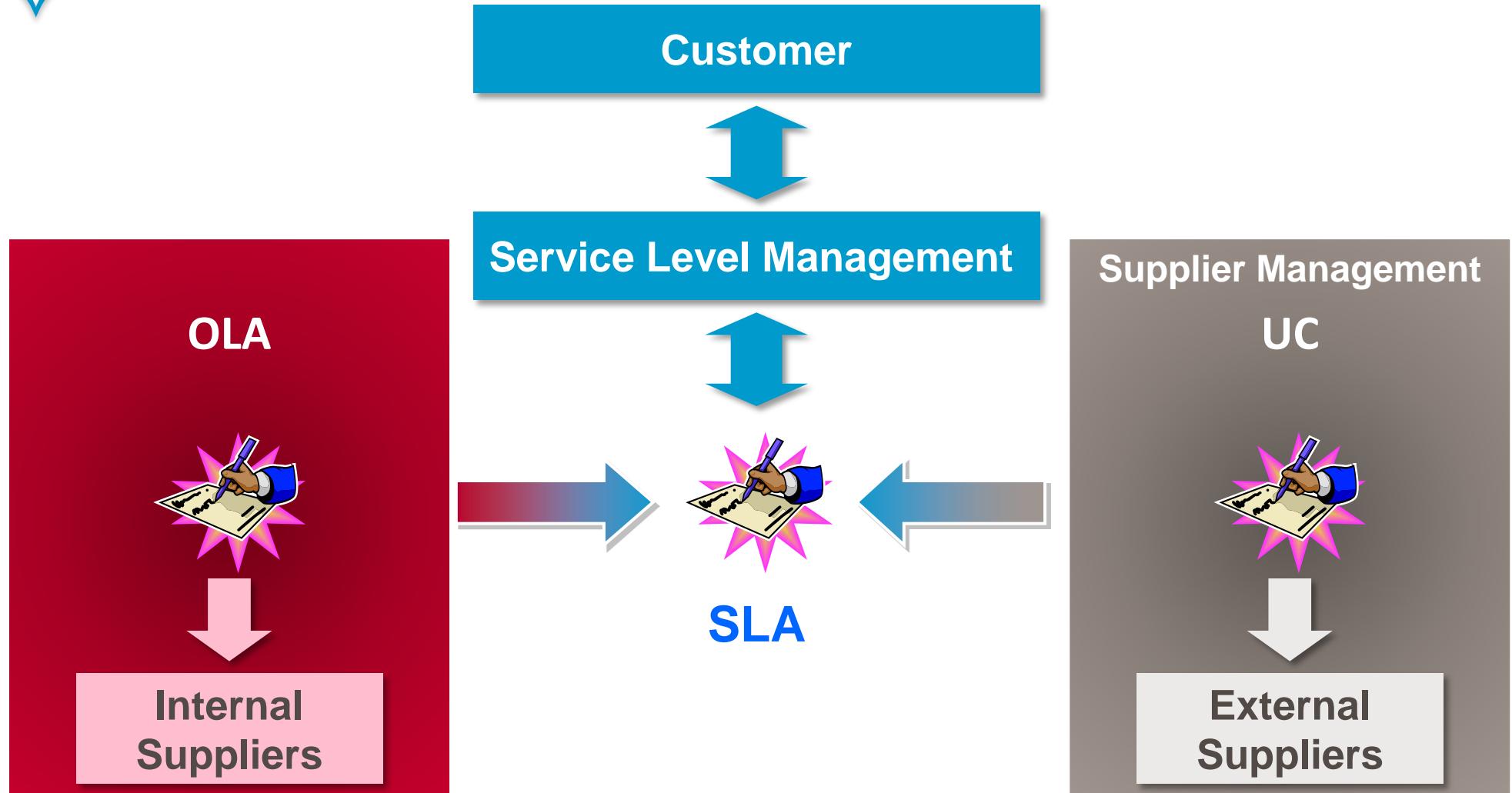
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# Service Level Management - Terminology

Term	Definition
<b>Service Level Requirement (SLR)</b>	Customer requirements for an aspect of an IT service - based on business objectives and are used to negotiate service level targets
<b>Service Lever Agreement (SLA)</b>	An agreement between an IT service provider and a customer
<b>Operational Level Agreement (OLA)</b>	An agreement defining the responsibilities of an internal provider
<b>Underpinning contract (UC)</b>	A contract between the organization and an external third party for the services that contribute to meeting the SLA

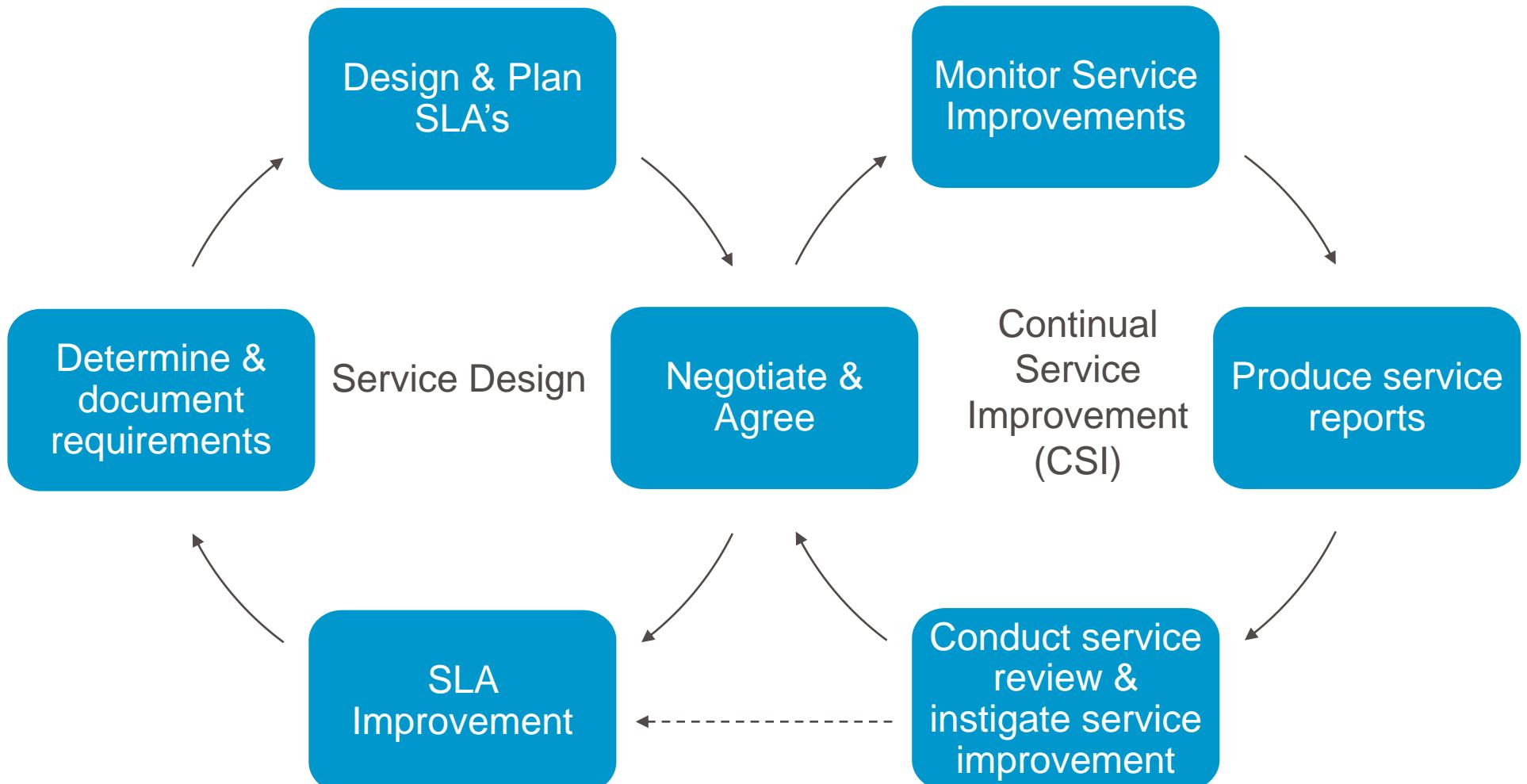
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# Service Level Management - Key Terms Illustrated



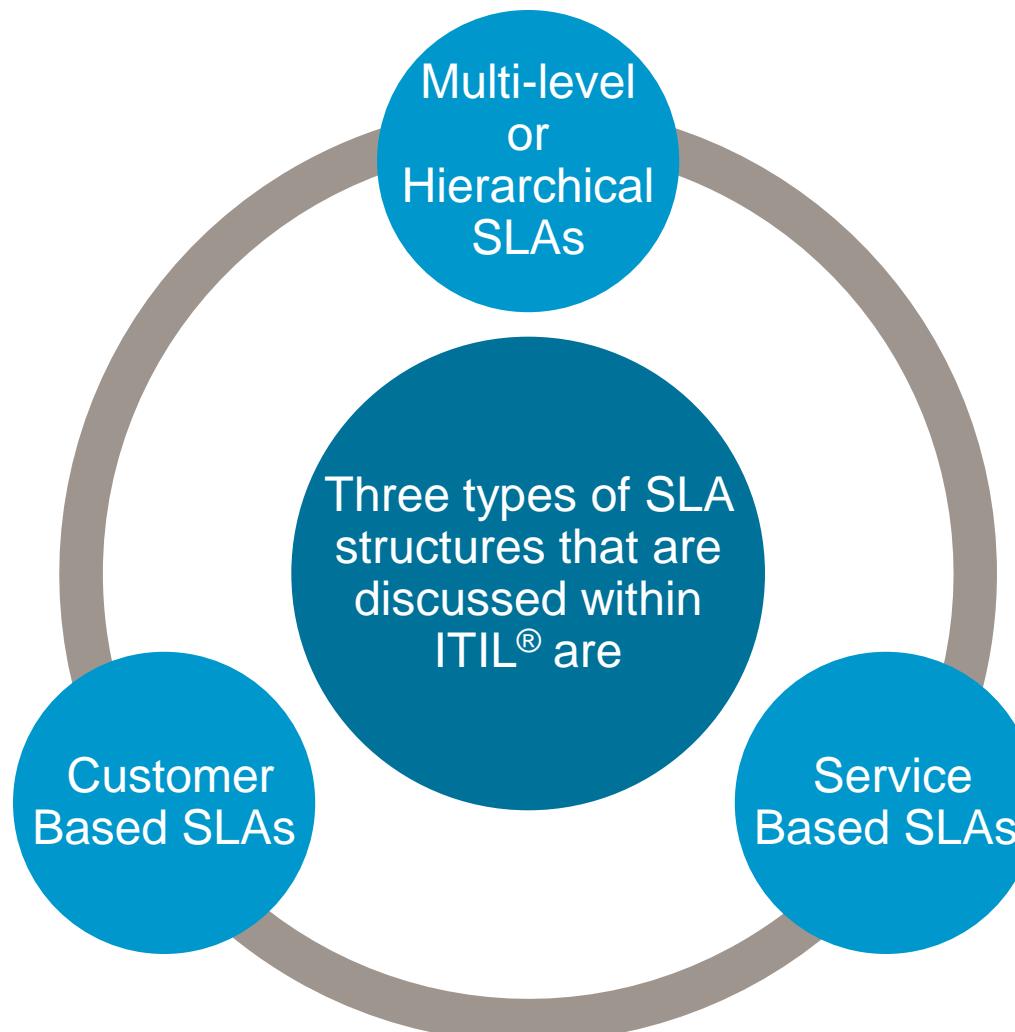
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# Service Level Management - Process Activities



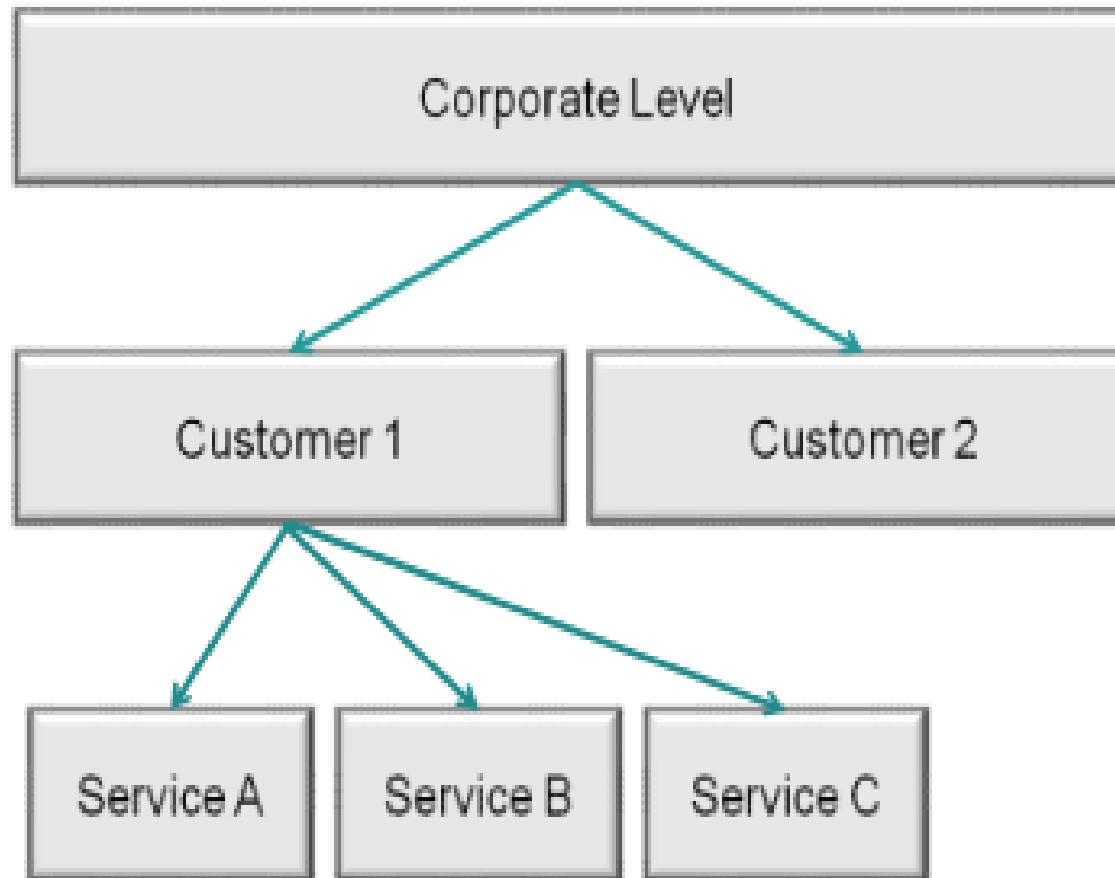
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# Service Level Management - SLA Structures



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# Multi-level SLAs



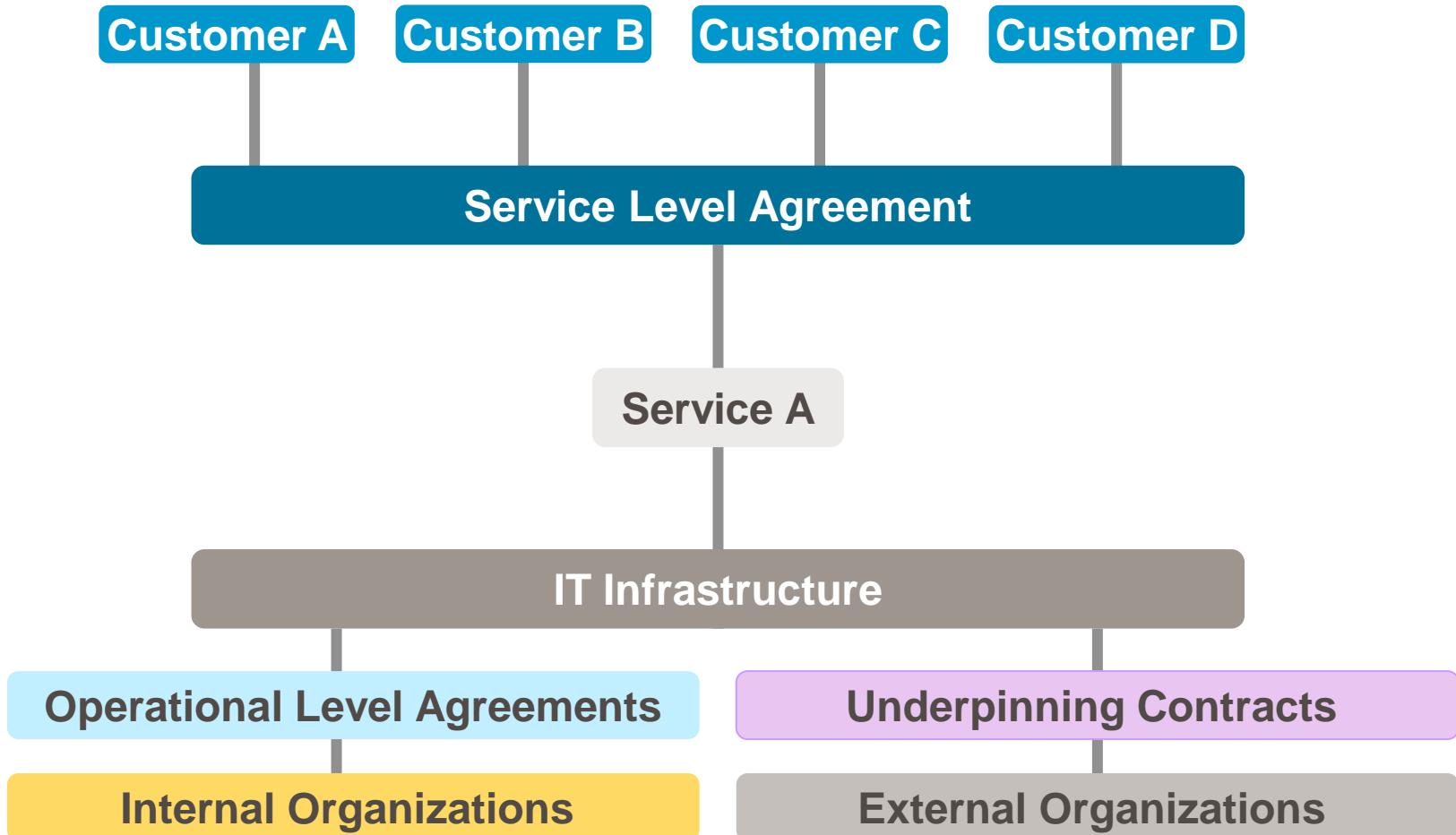
**Corporate Level**

**Customer Level**

**Service Level**

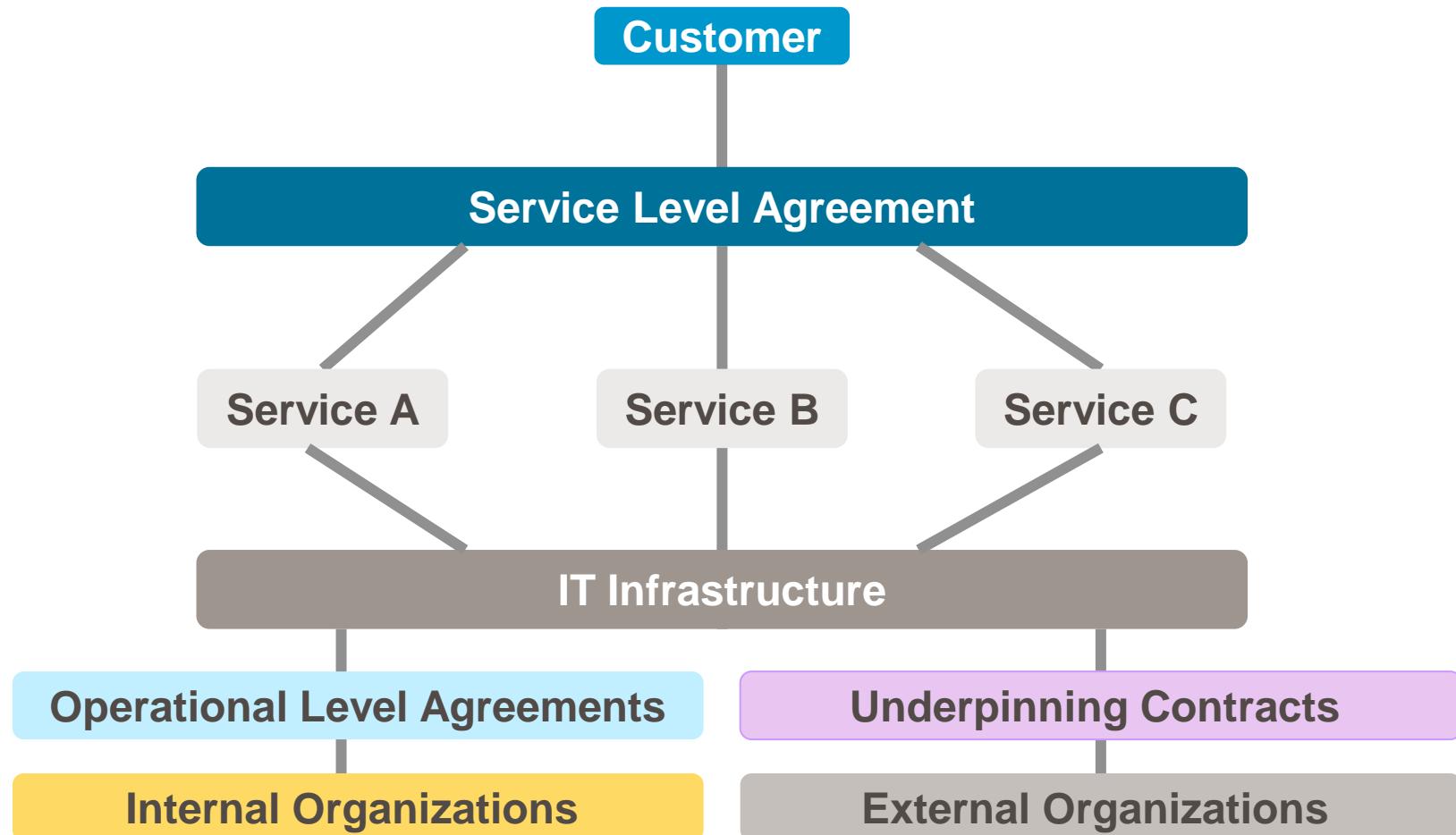
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# Service Based SLA Structures



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# Customer Based SLA Structures



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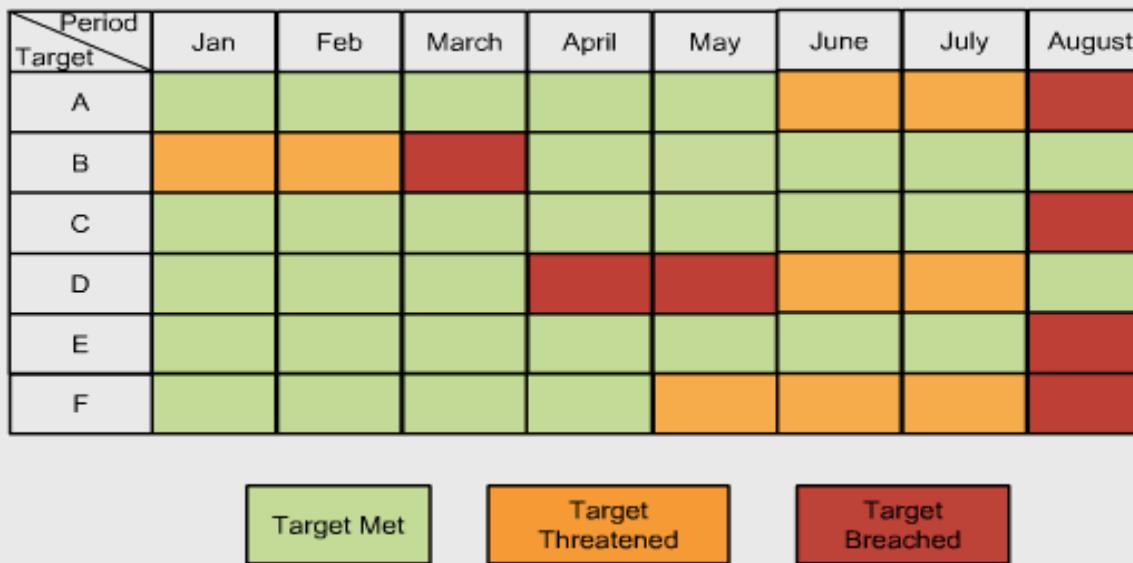
# Service Level Management - SLA Components

Service Description	Hours of operation	User Response times
Incident Response times	Resolution times	Availability & Continuity targets
Customer Responsibilities	Critical operational periods	Change Response Times

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# Service Level Management - SLAM Chart

- **SLAM Chart:** A Service Level Agreement Monitoring Chart used to help **monitor and report** achievements against Service Level Targets.
- A SLAM Chart is typically **colour coded** to show whether each agreed Service Level Target has been met or missed



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# Service Level Management - Key Concepts

## Service Reviews

- Periodic review meetings with customers to review the service achievements in the last period and to preview any issues for the coming period
- Focus on each breach of service level to determine what caused the loss of service and to prevent any recurrence
- If necessary review, renegotiate, and agree different service targets

## Service Improvements

- Analyze impact of service breaches to justify SIP activities and actions
- Report on the progress and success of SIPs

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# Service Level Management - Key Concepts

## Service Improvement Plan (SIP)

- All processes and all areas of the service provider organization should be involved in the SIP.
- Identify and implement whatever actions are necessary to overcome the difficulties and restore service quality
- Service level management must work in conjunction with problem management and availability management to instigate an SIP
- Relevant people need to be involved and adequate feedback needs to be given to make improvements
- Establish an up-front annual budget held by SLM from which the SIP initiatives can be funded
- Third party contract should contain an SIP clause

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# Capacity Management - Purpose, Objectives & Scope

## Purpose:

- To ensure that cost-justifiable IT capacity in all areas of IT always exists and is matched to the current and future agreed needs of the business, in a timely manner

## Objectives:

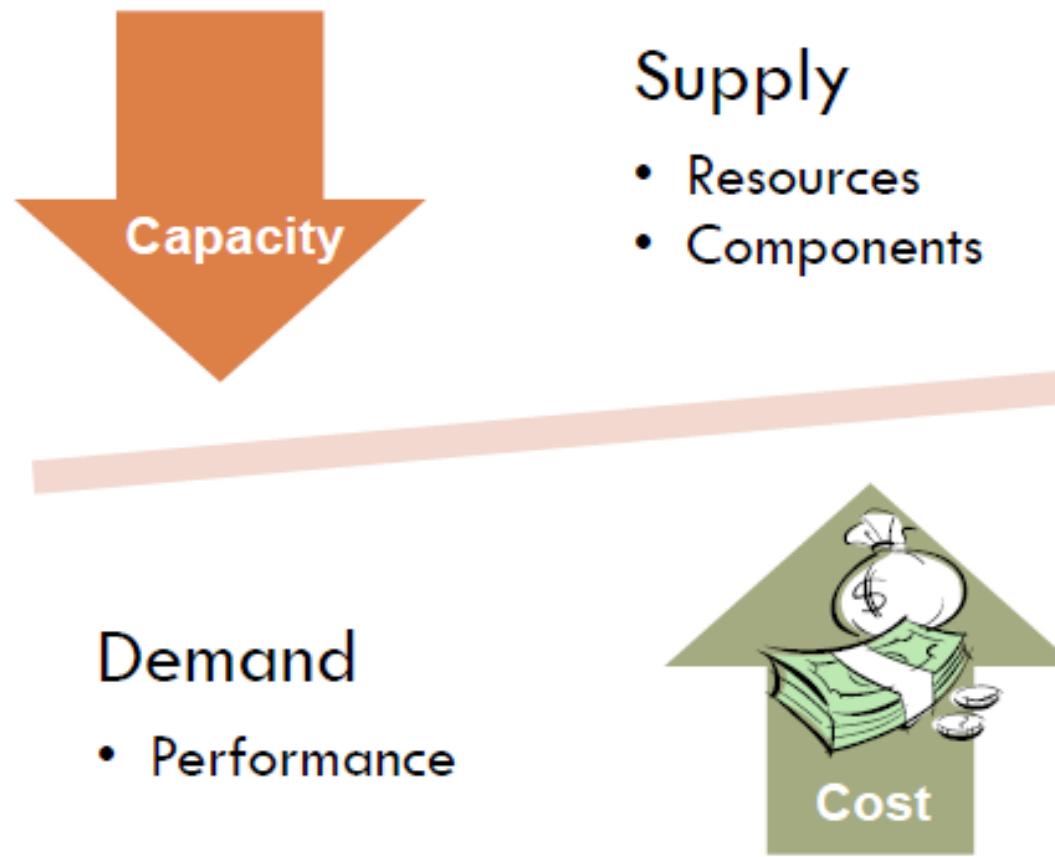
- Produce and maintain an appropriate and up-to-date capacity plan.
- Provide advice and guidance to the business and IT on all capacity and performance-related issues.
- Ensure that service performance achievements meet or exceed all of their agreed performance targets

## Scope:

- Considers all resources required to deliver the IT service, and plans for short-, medium- and long-term business requirements.
- Scheduling of human resources, staffing levels, skill levels and capability levels are included within the scope of capacity management.

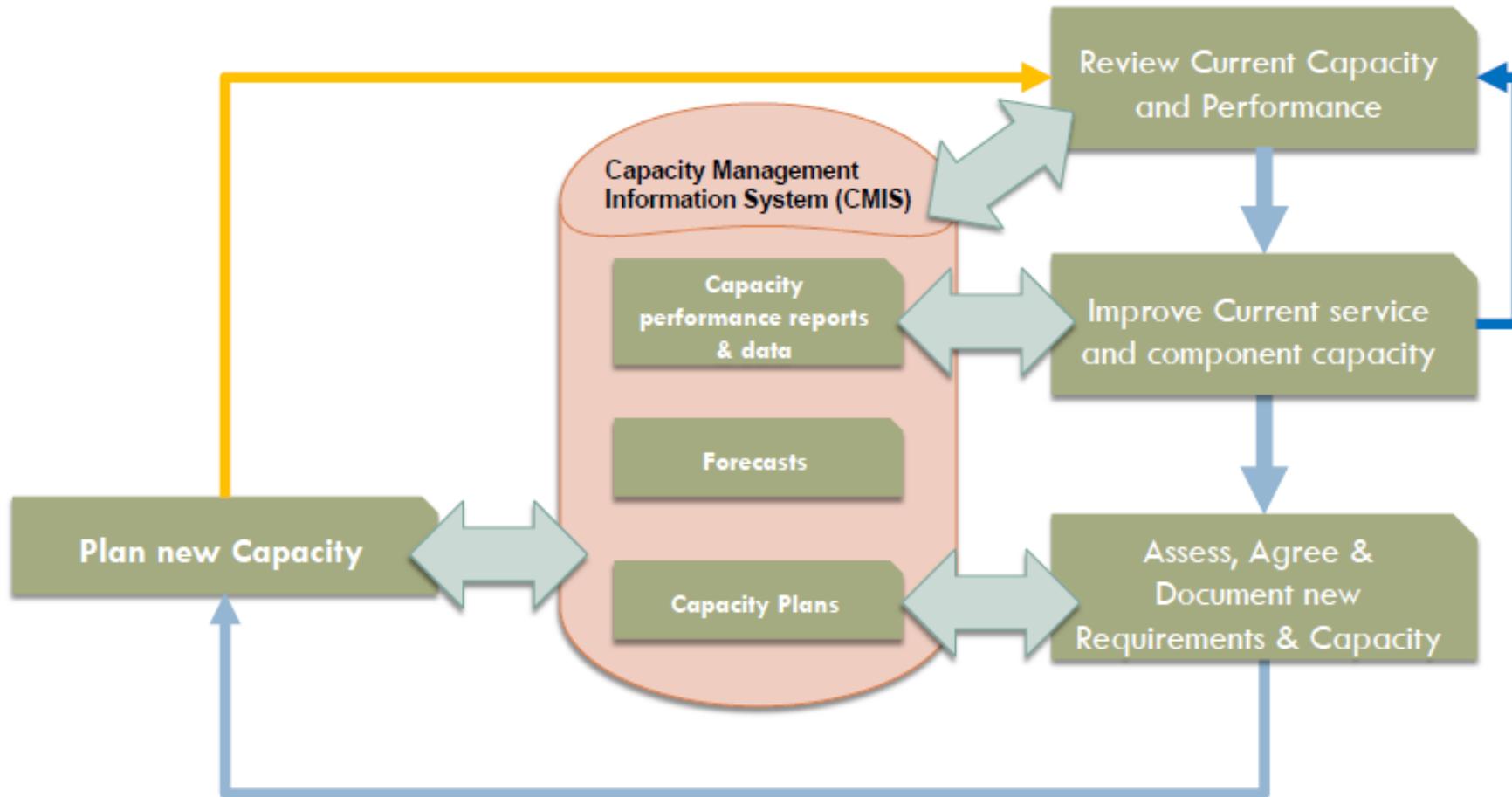
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# Capacity Management - A Balancing Act



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# Capacity Management - Process Activities



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# Capacity Management - Sub-processes

## Business Capacity Management

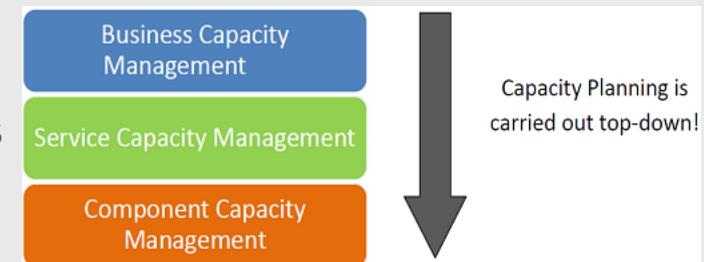
- Translates business needs and plans into requirements for service and IT infrastructure, ensuring that the future business requirements for IT services are quantified, designed, planned and implemented in a timely fashion

## Service Capacity Management

- Focuses on managing, controlling & predicting the performance and capacity of operational IT services

## Component Capacity Management

- Focuses on managing, controlling & predicting the performance , utilization and capacity of individual IT components like
  - Processors
  - Network
  - Bandwidth



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# Capacity Management - Capacity Plan & CMIS

## Capacity Plan

- Contains information on the current usage of service and components, and plans for the development of IT capacity to meet the needs in the growth of both existing services and any agreed new services

## Capacity Management Information System (CMIS)

- A System which holds the data/information needed by all the sub-processes/activities

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# Availability Management - Purpose, Objectives and Scope

## Purpose:

- To ensure that the level of service availability delivered in all services is matched to or exceeds the current and future business requirements, in a cost-effective and timely manner.
- To ensure both the current and future availability need of the business are met.

## Objectives:

- Provide a point of focus and management for all availability-related issues.
- Produce and maintain an appropriate and up-to-date availability plan.
- Ensure that proactive measures to improve the availability of services are implemented wherever it is cost-justifiable to do so.

## Scope:

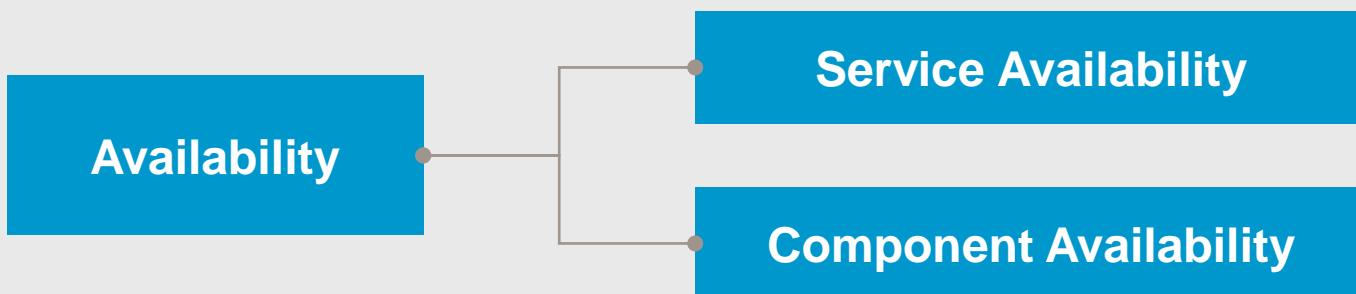
- Current business processes, their operation and requirements.
- Future business plans and requirements.
- Service targets and the current IT service operation and delivery.

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# Availability Management - Key Terms Explained

## Availability

- Involves all aspects of **service availability and unavailability** and the impact of component availability, or the potential impact of component availability
- Most important measurements are those that reflect availability from the business and user perspective



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# Availability Management - Key Terms Explained

## Reliability (MTBSI / MTBF)

- Measure of how long a service, component or CI can perform its agreed function without interruption

## Maintainability (MTRS)

- Measure of how quickly and effectively a service, component or CI can be restored to normal working after a failure

## Serviceability

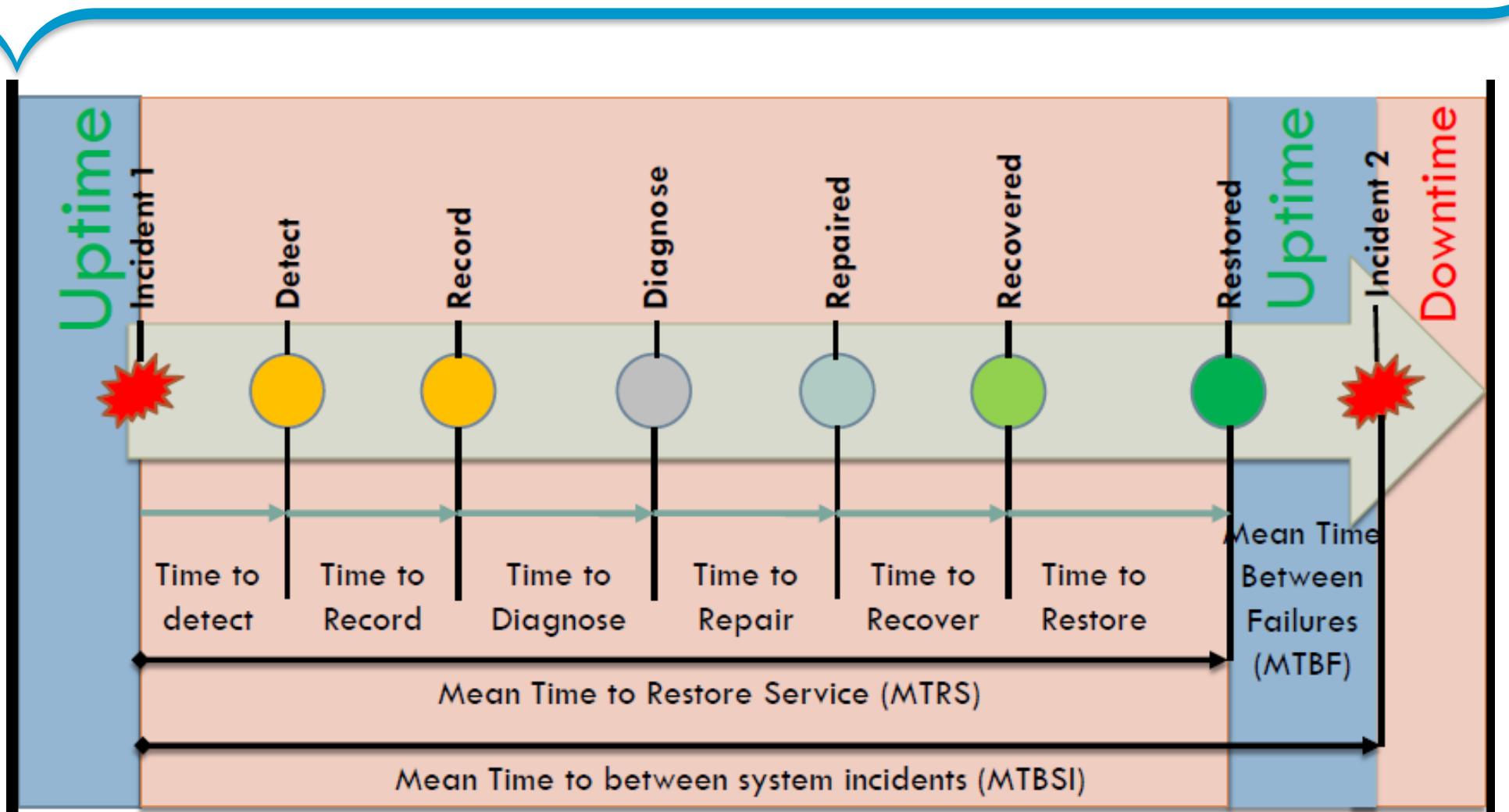
- Ability of a third party supplier to meet the terms of the contract

## Vital Business Function (VBF)

- A function of a Business Process which is critical to the success of the Business

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# Availability Management - Expanded Incident Lifecycle



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# IT Service Continuity Management - Purpose and Objectives

## Purpose:

- To support the overall business continuity management (BCM) process by ensuring that the required IT technical and service facilities (including computer systems, networks, applications, data repositories, telecommunications, environment, technical support and service desk) can be resumed within required, and agreed business timescales.

## Objectives:

- Maintain a set of IT service continuity plans and IT recovery plans that support the overall business continuity plans (BCPs) of the organization.
- To conduct regular risk assessment and management exercises.
- To complete regular business impact analysis (BIA).

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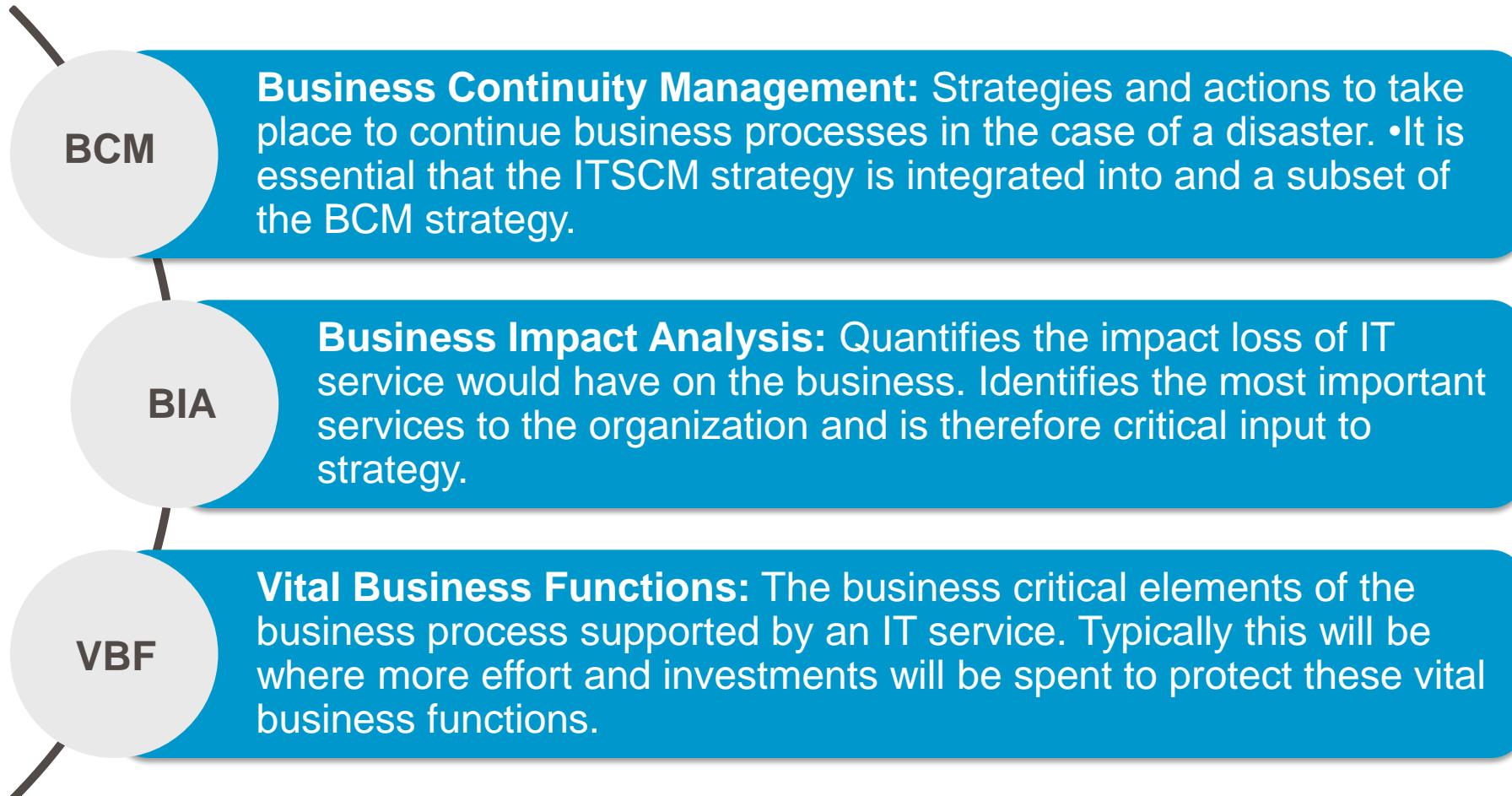
# IT Service Continuity Management - Scope

## Scope:

- Focus on business disaster events.
- Set critical requirements for survival.
- Maintaining agreements on scope and policies.
- ITSCM supports IT service requirements

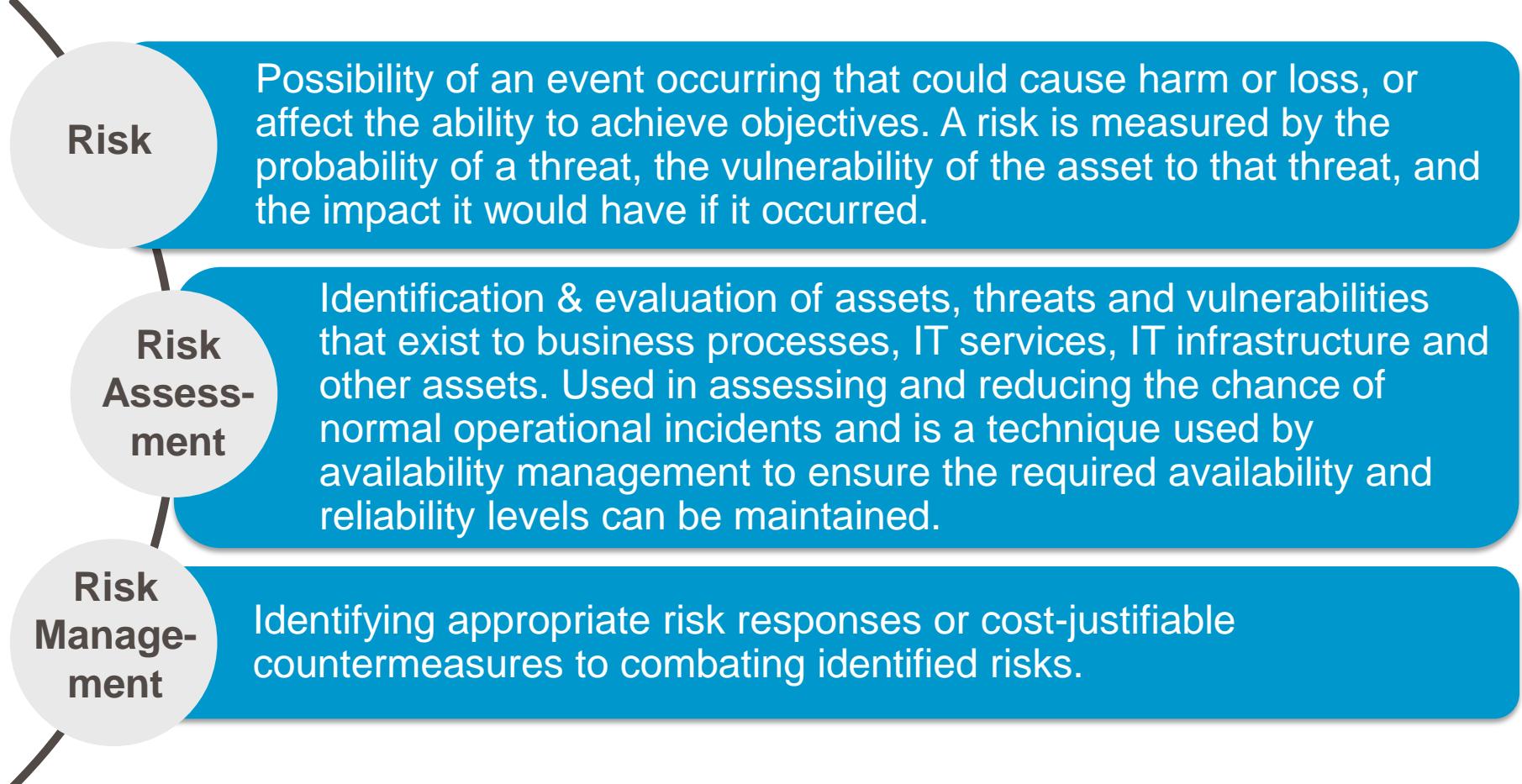
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# IT Service Continuity Management - Key Terms Explained



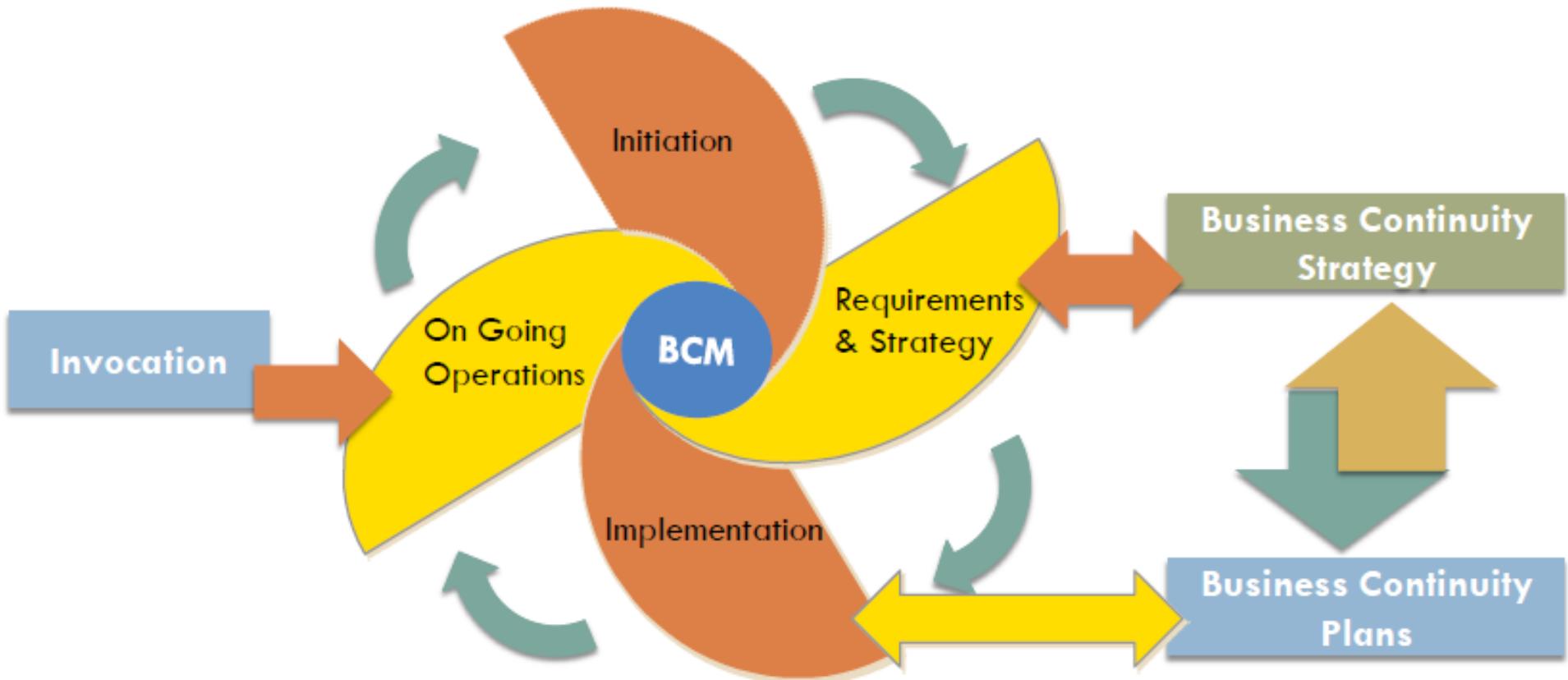
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# IT Service Continuity Management - Key Terms Explained



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# IT Service Continuity Management - Lifecycle Activities



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# Information Security Management - Purpose and Objectives

## Purpose:

- To align IT security with business security and ensure that information security is effectively
- Managed in all service and IT Service Management activities.

## Objectives:

- To protect the interests of those relying on information, and the systems and communications that deliver the information, from harm resulting from failures of availability, confidentiality and Integrity.

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# Information Security Management - Scope

## Scope:

- Input from business security policy and plans
- Current business operation and its security requirements
- Future business plans and requirements
- Legislative and regulatory requirements
- Obligations with regard to security contained within SLAs
- The business and IT risks and their management

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# Information Security Management - Key Terminology

## Confidentiality

- Protecting information against unauthorized access and use.
  - Examples: Passwords, swipe cards, firewalls

## Integrity

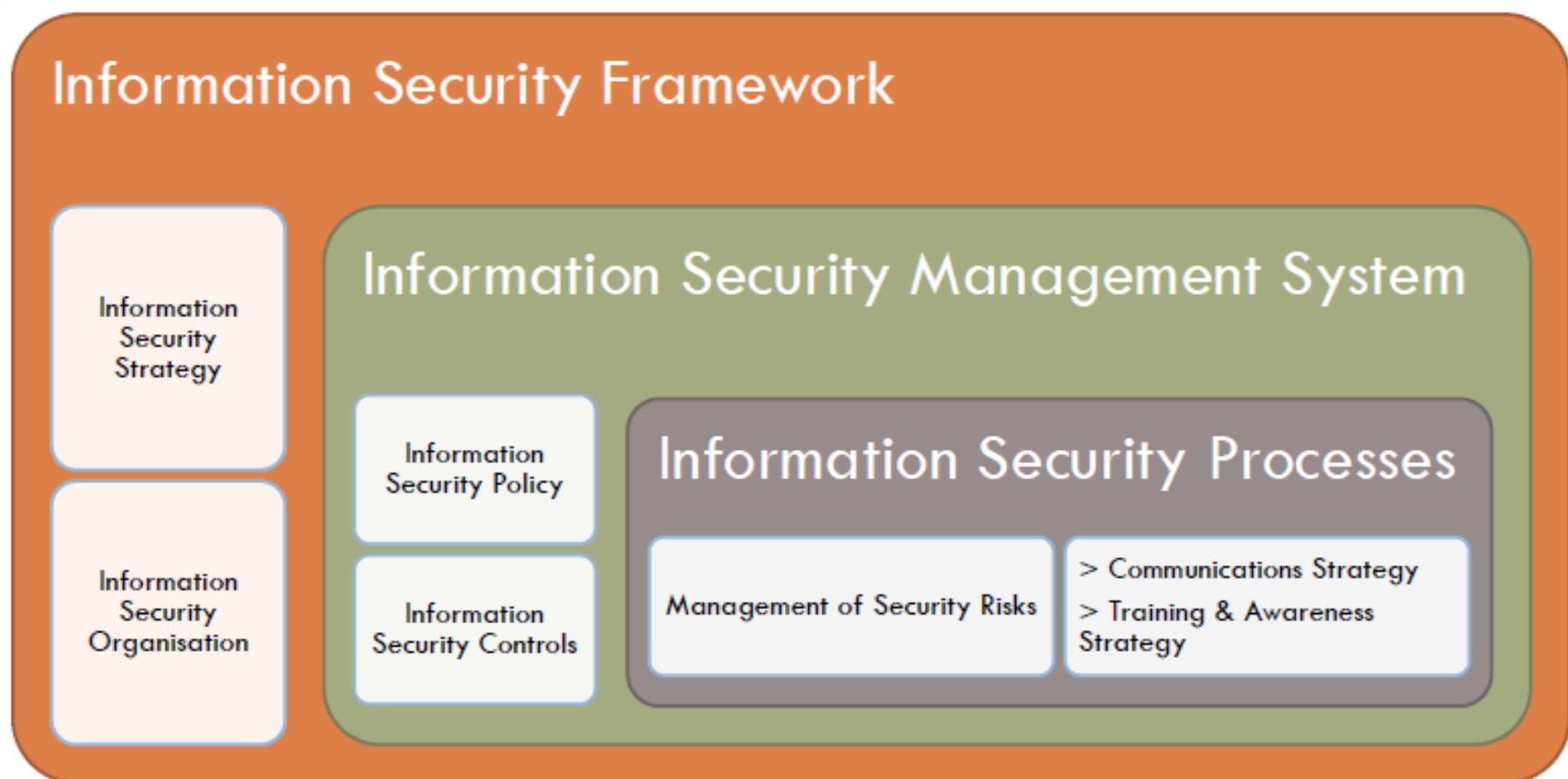
- Accuracy, completeness and timeliness of services, data information, systems and physical locations.
  - Examples: Rollback mechanisms, test procedures, audits.

## Availability

- The information should be accessible at any agreed time. This depends on the continuity provided by the information processing systems.
  - Examples: UPS, resilient systems, service desk hours

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# Information Security Management - Framework



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# Information Security Management - Security Policy

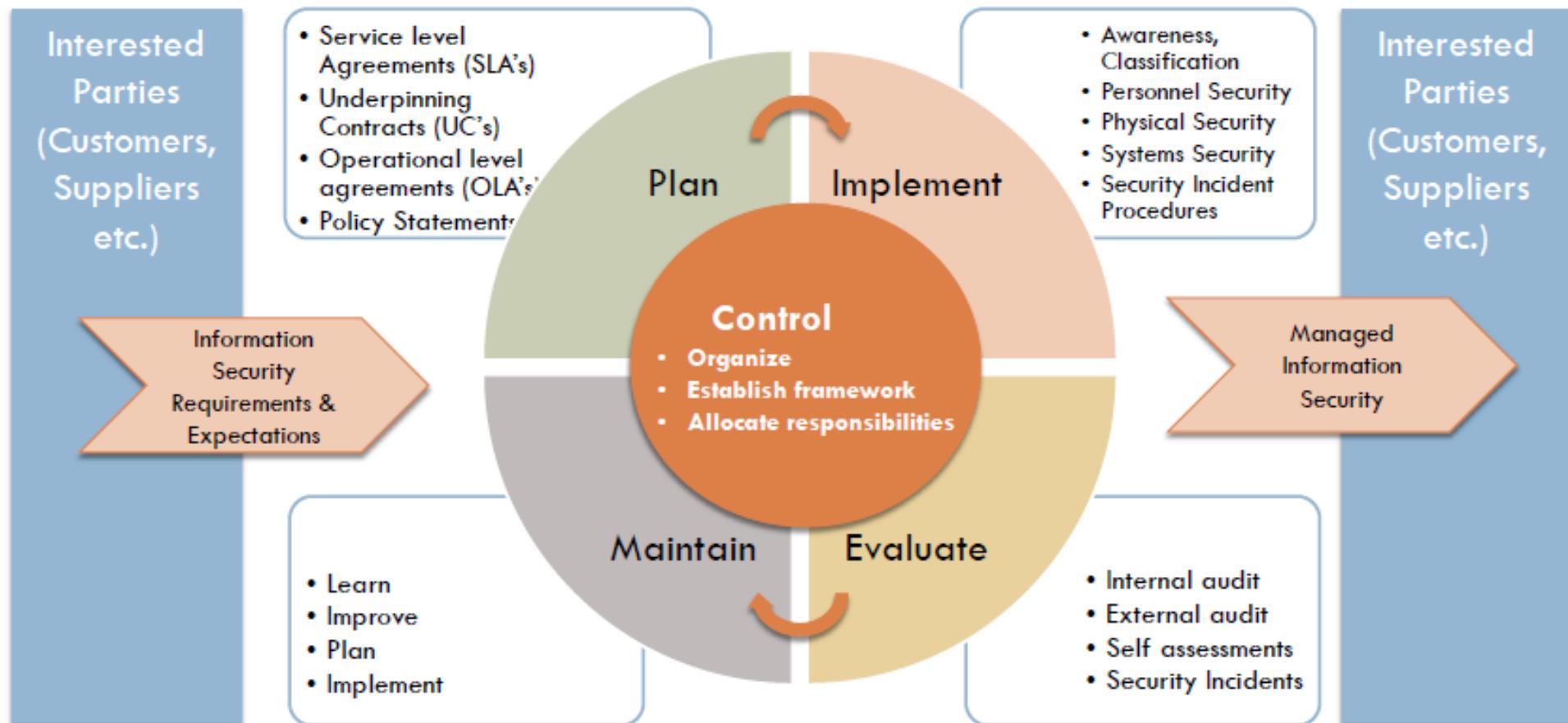
## Audience for Security Policy

- These policies should be widely available to all customers and users, and their classification policy compliance should be referred to in all SLRs, SLAs, contracts service, information and agreements.

## Security Policy Contains

- ✓ An overall information security policy
- ✓ Use and misuse of IT assets policy
- ✓ Access control policy Security Policy
- ✓ Password control policy
- ✓ E-mail policy
- ✓ Internet policy
- ✓ Anti-virus policy
- ✓ Information classification policy
- ✓ Document classification policy
- ✓ Remote access policy
- ✓ Policy for supplier access of IT service, information and components
- ✓ Asset disposal policy

# Information Security Management - Information Security Management System (ISMS)



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# Supplier Management - Purpose and Objectives

## Purpose:

- To manage suppliers and to obtain value for money from suppliers, to provide seamless quality of IT service to the business.
- Ensure that underpinning contracts and agreements with suppliers are aligned to business needs and they meet their contractual commitments.

## Objectives:

- Manage relationships with suppliers.
- Negotiate and agree contracts with suppliers.
- Manage supplier performance.
- Maintain a supplier policy and a supporting supplier and contract database (SCMIS).

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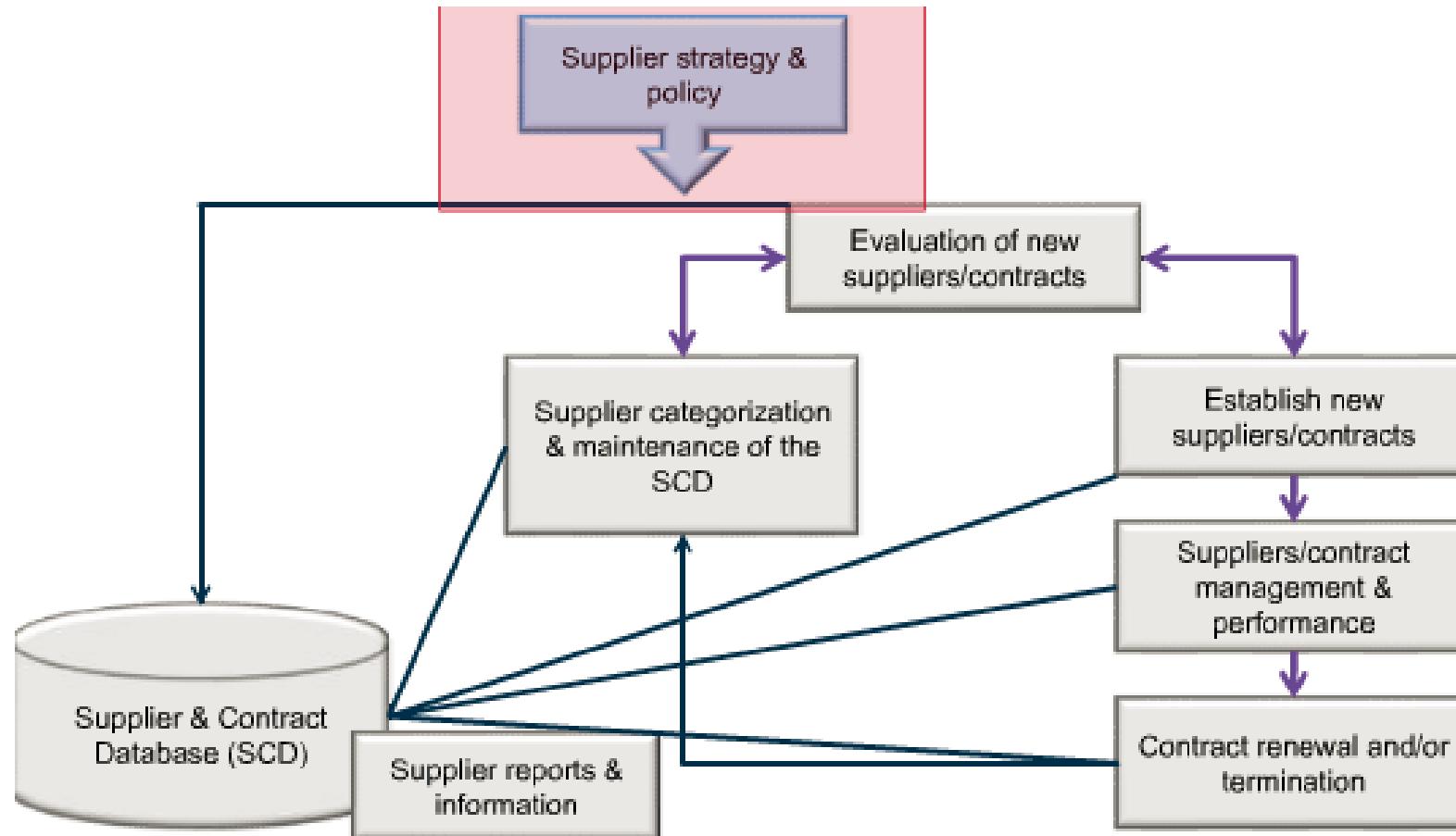
# Supplier Management - Scope

## Scope:

- Management of all suppliers and contracts needed to support the provision of IT services to the business
- To ensure that suppliers provide value for money and meet their service target.
- To ensure that relationships are developed in a consistent manner and that suppliers' performance is appropriately reviewed and managed.

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# Supplier Management - Supplier and Contract Management Information system



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# Supplier Management - Supplier & Contract

## Supplier

- A third party responsible for supplying goods or services
- These are required by the service provider to enable them to deliver IT services

## Contract

- A legally binding agreement between the service provider & the external supplier for the supply of goods or services

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# Supplier Management - Supplier Categorization

## Strategic

- Partnering relationships
- Senior Management
- Network service provider supplying worldwide networks service and their support

## Tactical

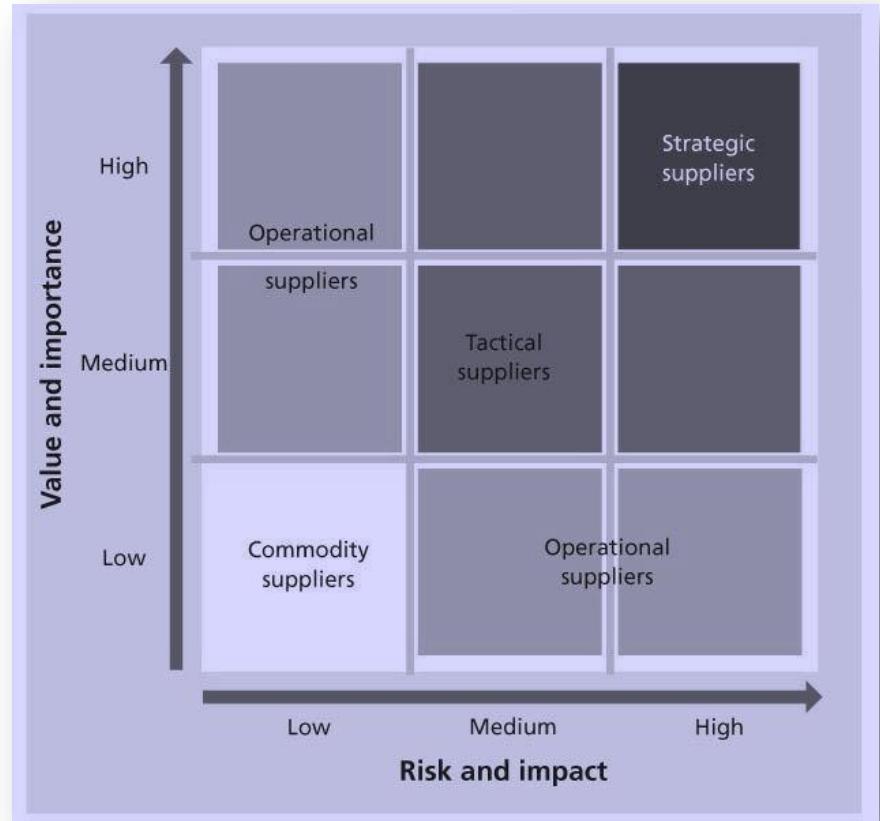
- Commercial Activities
- Middle Management
- Hardware maintenance organization providing resolution of server hardware failures

## Operational

- Junior Level
- Internet hosting service provider, supplying hosting space for a low-usage, low-impact website or internally used IT service

## Commodity

- Paper, Printer consumables



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# Supplier Management - Role

## Supplier Manager

- Process owner
- Create, establish & maintain SCMIS
- Manage the contracts in conjunction with SLM
- Perform contract or SLA reviews
- Monitoring, reporting and regularly reviewing supplier performance against targets
- Ensure changes are assessed for their impact on suppliers
- Ensure that all IT supplier processes are consistent and interface to all corporate supplier strategies/ processes

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# Service Design - Summary

## Purpose

A holistic approach to all aspects of the design of new or changed service for introduction into the live environment

Key Concepts	5 Major Aspects
<ul style="list-style-type: none"><li>▪ 4 P's - People, Process, Products &amp; Partners</li><li>▪ Service Catalogue<ul style="list-style-type: none"><li>▪ Business Service Catalogue</li><li>▪ Technical Service Catalogue</li></ul></li><li>▪ Types of SLA<ul style="list-style-type: none"><li>▪ Customer Based, Service Based, Multi-level</li></ul></li><li>▪ Capacity Mgmt. - BCM, SCM, CCM</li><li>▪ Extended Lifecycle of Incident</li><li>▪ ITSCM - Recovery Options</li><li>▪ ISM - CIAA</li><li>▪ SCDB , UC</li></ul>	<ul style="list-style-type: none"><li>▪ Service Solution</li><li>▪ Systems &amp; Tools</li><li>▪ Architecture</li><li>▪ Processes</li><li>▪ Measurement Systems and metrics</li></ul>
	<p><b>Processes</b></p> <ul style="list-style-type: none"><li>▪ Design Coordination</li><li>▪ Service Catalogue Management</li><li>▪ Service Level Management</li><li>▪ Availability Management</li><li>▪ Capacity Management</li><li>▪ Information Security Management</li><li>▪ IT Service Continuity Management</li><li>▪ Supplier Management</li></ul>

## Which is the BEST description of a service-based service level agreement (SLA)?

- A. An agreement with an individual customer group, covering all the services that they use
- B. An agreement that covers one service for a single customer
- C. An agreement that covers service specific issues in a multi-level SLA structure
- D. An agreement that covers one service for all customers of that service

**Answer: D**

A service-based SLA describes the agreed level of service for a particular service, which may be provided to a number of customers. Answer A describes a customer-based SLA where a single customer has an SLA for multiple services. Answer B is half right in that it covers a single service but still incorrect as it fails to identify multiple customers. Answer C describes one of the levels (the service level) of a multi-level SLA.

## Where would a customer's initial service targets be recorded before the service level agreement (SLA) is produced?

- A. In an operational level agreement (OLA)
- B. In a list of service level requirements (SLR)
- C. In the service catalogue
- D. In the configuration management database (CMDB)

**Answer: B**

Service level requirements (SLR) describe the customer's actual needs for the service, which can be verified by the service provider and perhaps amended by negotiation before arriving at a signed SLA.

An OLA (answer A) details the internal supporting targets for the SLA. The service catalogue (answer C) would be used as the basis to start the discussion of service level requirements. The CMDB (answer D) is not used as part of this process.

## Which is the **BEST** description of a service catalogue?

- A. A document used by IT staff to identify activities that must be performed
- B. A list of all service level agreements (SLAs)
- C. A list of all business requirements that have not yet become services
- D. The part of the service portfolio that is visible to customers

**Answer: D**

The service portfolio comprises the service catalogue (visible to customers) and the service pipeline and retired services (not visible to customers). Answer A is incorrect as the service catalogue sets out the description of a service not the activities that need to be carried out. Answer B is incorrect as the service catalogue is used as a basis for creating SLAs, however they are not listed within the catalogue. Answer C is incorrect as the service catalogue contains the services provided, and not the services required.

## Which of these recommendations is/are best practice for service level management?

- A. Include legal terminology in service level agreements (SLAs)
- B. Ensure all the targets in an SLA are measurable.
  - a) 1 only
  - b) 2 only
  - c) Both of the above
  - d) Neither of the above

**Answer: B**

Only option 2 is correct. Every target in an SLA must be measurable to allow it to be managed.

Option 1 is incorrect. SLAs are not contracts and are usually used internally, therefore legal language is not needed and would serve only to confuse. SLAs should be clear and unambiguous.

# Quiz

**Which process includes business, service and component sub-processes?**

- A. Capacity management
- B. Incident management
- C. Service level management
- D. Financial management

**Answer: A**

These are the three sub-processes of capacity management.

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# Quiz

**Which process will perform risk analysis and review of all suppliers and contracts on a regular basis?**

- A. Service level management
- B. IT service continuity management
- C. Service catalogue management
- D. Supplier management

**Answer: D**

Supplier management must review all contracts on a regular basis to ensure elements like risk of non-supply have not increased.  
The incorrect answers A, B and C may all be consulted by supplier management as part of the review but do not actually undertake it.

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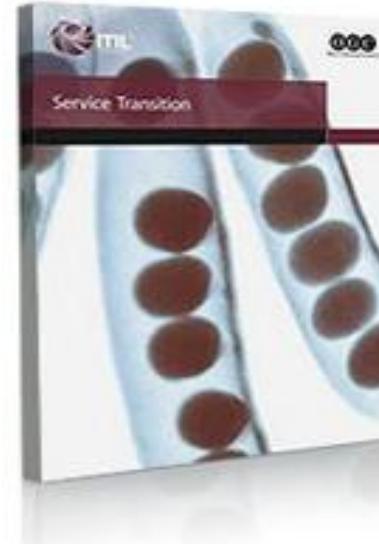
**Which process has the objective: “Produce service design packages (SDPs) based on service charters and change requests.”?**

- A. Service transition planning and support
- B. Design coordination
- C. Service level management
- D. Change management

**Answer: B**

The service design package (SDP) is a major output from service design and producing it is part of design coordination. This immediately makes service transition planning and support (answer A) and change management (answer C) incorrect as they are in the service transition stage of the lifecycle. Service level management's (answer D) major role is in agreeing and managing SLAs.

# Module 5.3: Lifecycle Phase 3 - Service Transition



## Processes

- Change Management
- Service Asset & Configuration Management
- Release & Deployment Management

## Processes

- Knowledge Management
- Transition Planning & Support
- Service Validation & Testing
- Change Evaluation

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# Service Transition: Purpose and Objectives

## Purpose:

- The purpose of service transition is to ensure that new, modified or retired services meet the expectations of the business as documented in the service strategy and service design stages of the lifecycle.
- **KEY ROLE:** To move services from design to operations, without impacting the on-going services

## Objectives:

- Plan and manage service changes efficiently and effectively.
- Manage risks relating to new, changed or retired services.
- Successfully deploy service releases into supported environments.
- Set correct expectations on the performance and use of new or changed services.
- Provide good quality knowledge and information about services and service assets.

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# Service Transition: Scope

## Scope:

Service transition provides guidance for:

- The development and improvement of capabilities for transitioning new and changed services into supported environments, including release planning, building, testing, evaluation and deployment.
- It also considers service retirement and transfer of services between service providers.

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# Service Transition: Value to Business

## **Value to Business:**

- The capacity of the business to respond quickly and adequately to changes in the market improves.
- Changes in the business as a result of takeovers, contracting, etc. are well managed.
- More successful changes and releases for the business.
- Better compliance of business and governing rules.
- Less deviation between planned budgets and the actual costs.
- Better insight into the possible risks during and after the input of a service into production.
- Higher productivity of customer staff

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# Service Transition - Processes

Transition Planning and Support

Change Management

Change Evaluation

Service Validation and Testing

Service Asset and Configuration Management

Release and Deployment Management

Knowledge Management

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# Transition Planning & Support - Purpose and Objectives

## Purpose:

- The purpose of the transition, planning and support process is to provide overall planning for service transitions and to coordinate the resources that they require.

## Objectives:

- To plan and coordinate the resources to ensure that the requirements of service strategy encoded in service design are effectively realized in service operation.
- Coordinate activities across projects, suppliers and service teams where required.
- Provide clear and comprehensive plans that enable customer and business change projects to align their activities with the service transition plans.
- Establish new or modified information systems and tools, technology and management architectures, service management processes and measurement methods and metrics to meet requirements established during the service design lifecycle stage.
- Monitor and improve the performance of the service transition lifecycle stage.

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# Transition Planning & Support - Scope

## Scope:

- Maintaining policies, standards and models for service transition activities and processes.
- Coordinating the efforts needed to enable multiple transitions to be managed at the same time.
- Prioritizing conflicting requirements for service transition resources.
- Reviewing and improving the performance of transition planning and support activities.

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# Change Management - Purpose and Objectives

## Purpose:

- The purpose of the change management process is to control the lifecycle of all changes, enabling beneficial changes to be made with minimum disruption to IT services.

## Objectives:

- Respond to business and IT requests to align services with business needs
- Ensuring changes are introduced in a controlled manner
- Optimize business risk
- Implement changes successfully
- Implement changes in times that meet business needs
- Use standard processes
- Record all changes

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# Change Management - Purpose, Objectives & Scope

## Scope:

- Any changes to all architecture, processes, tools, metrics and documentation.
- Addition, modification or removal of any service or configuration item or associated documentation.
- Changes to any of the five aspects of service design.

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# Change Management - Types of Changes

## Normal changes

- Types are specific to the organization
- Type determines what assessment is required

## Standard changes

- Pre –authorized with an established procedure
  - E.g. updating the Anti-Virus software

## Emergency changes

- Business criticality means there is insufficient time for normal handling
- Changes intended to repair an error in an IT service that is negatively impacting the business to a high degree
- Should be kept to minimum

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# Key Concepts - Change Models & Remediation Plan

## Change Models

- Predefined way or procedure for handling known type or complexity
- Automated as far as possible
- Allow for scalability to create a new model

## Back Out Plan (Remediation Planning)

- It is executed if the Change implementation fails
- Usually but not necessarily a typical back out plan is required to bring the systems back to its original state (before the change implementation)

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# Key Concepts - FSC & PSA

## Forward Schedule of Changes (FSC)

- Contains details of all approved changes and their implementation dates for an agreed period
- Detailed short term schedules and less detailed for longer term planning

## Projected Service Availability (PSA)

- To determine the best time for a change implementation
- Identifies the effect of planned changes, maintenance activities and test plans on agreed Service Levels

**Both the FSC and PSA are agreed with the customers**

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# Change Management - Concepts

## Service change

It is done by “the addition, modification or removal of an authorized, planned or supported service component and its associated documentation”.

## Request for change (RFC)

It is a formal request for a “Service Change” and it can be raised or issued by anyone involved in the service.

## Change proposal

It is raised for major changes with significant organizational or financial effects.

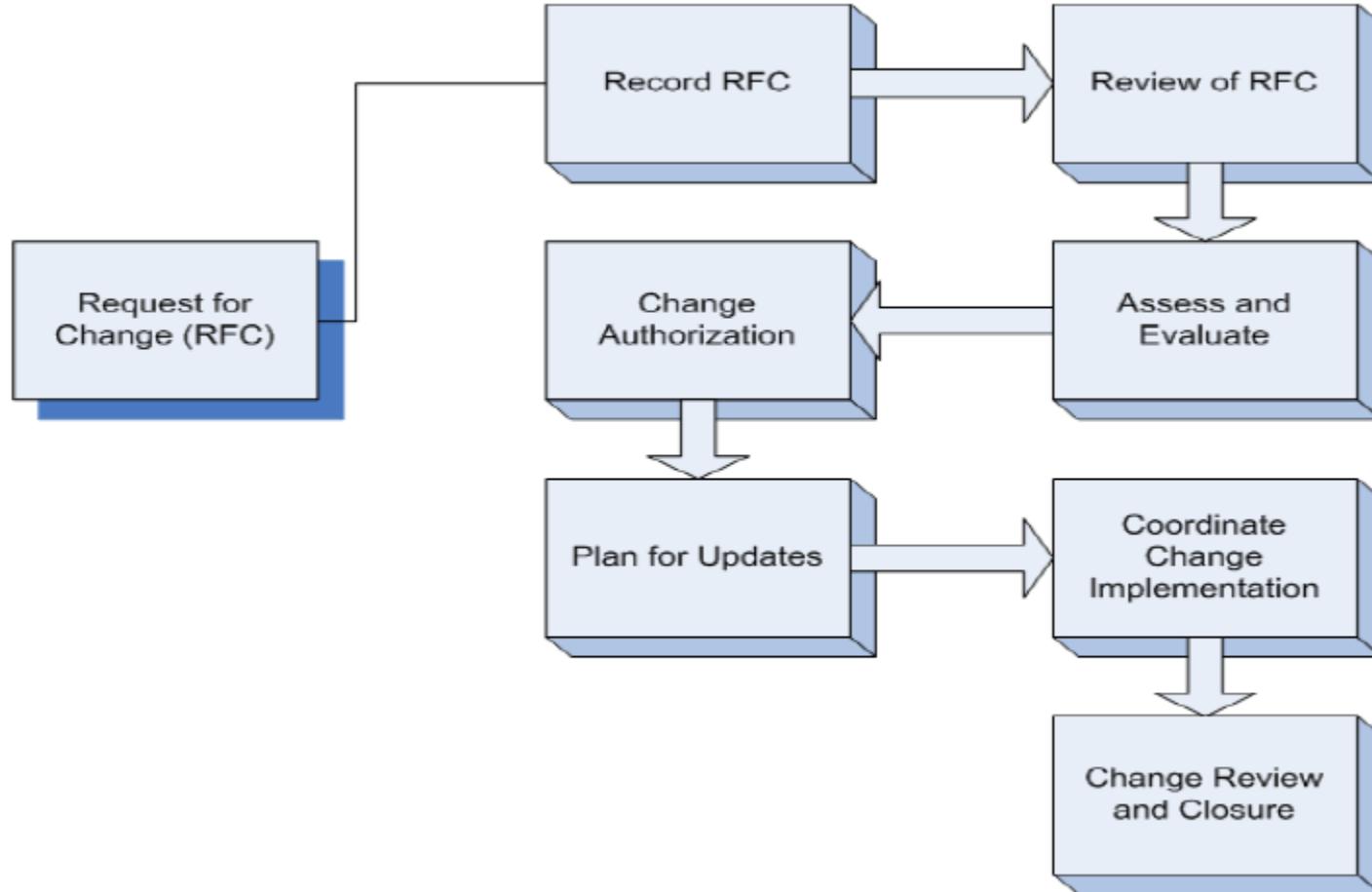
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# Change Management - Change Proposal

- A change proposal is used to communicate a high-level description of the change.
- The change proposal is normally created by the service portfolio management process and is passed to change management for authorization.
- In some organizations change proposals may be created by a program management office or by individual project.
- A change proposal should include a high-level description of the new, changed or retired service, a business case including risks, issues and alternatives, financial requirements and an outline schedule for design and implementation of the change.

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# Change Management - Change Flow



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# Seven R's of Change Management



- 1 Who **RAISED** the change? 
- 2 What is the **REASON** for the change? 
- 3 What is the **RETURN** from the change? 
- 4 What are the **RISKS** associated with the change? 
- 5 What **RESOURCES** are required to deliver the change? 
- 6 Who is **RESPONSIBLE** for the build, test & implementation of the change? 
- 7 What is the **RELATIONSHIP** between this change & other changes? 

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# Change Management - Roles

## Change Manager

- Ensures that process is followed
- Usually authorizes minor changes
- Coordinates and runs CAB meetings
- Produces change schedule
- Coordinates change/built/test/implementation
- Reviews/closes changes

## Change advisory board (CAB)

- Supports the change manager
- Consulted on significant changes
- Business, users, application/technical support, operations, service desk, capacity, service continuity, third parties
- People who have clear understanding of business needs
- Technical specialists/consultants

## Emergency CAB (ECAB)

- Subset of the standard CAB
- Membership depends on the specific change

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# Change Management - Metrics

## Compliance

- Reduction in unauthorized changes
- Reduction in emergency changes

## Effectiveness

- Percentage of changes which met requirements
- Reduction in disruptions, defects and re-work
- Reduction in changes failed/backed out
- Number of incidents attributable to changes

## Efficiency

- Benefits (value compared to cost)
- Average time to implement (by urgency/priority/type)
- Percentage accuracy in change estimates

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# Change Management - Key Challenges

- Business pressure to “just do it”
- Inaccurate and incomplete configuration management system
- Soiled technical function areas
- Misunderstanding of “Emergency” changes
- Scalability across large organizations
- Vendor/contract compliance
- Ad hoc nature of people

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# Change Evaluation

## Objectives:

- Change Evaluation aims to assess major changes, like the introduction of a new service or a substantial change to an existing service, before those changes are allowed to proceed to the next phase in their lifecycle.

## Scope:

- Change Evaluation is called upon by the Change Management process at various points in a change's lifecycle to perform a change assessment.
- The results of a formal Change Evaluation are documented in a Change Evaluation Report, which is thus the main output of the new Change Evaluation process.

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# Change Evaluation - Process

## Change Evaluation Process:

- **Change Evaluation prior to Planning:** To assess a proposed major Change before authorizing the Change planning phase.
- **Change Evaluation prior to Build:** To assess a proposed major Change before authorizing the Change build phase.
- **Change Evaluation prior to Deployment:** To assess a proposed major Change before authorizing the Change deployment phase.
- **Change Evaluation after Deployment:** To assess a major Change after it has been implemented, to verify if the Change has met its objectives and to identify any lessons to be learned.

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# Change Evaluation Report

## Change Evaluation Report:

- Certain types of major Changes, like the introduction of a new service or a substantial change to an existing service, require formal Change evaluations before being authorized.
- The results of a formal Change evaluation are documented in a Change Evaluation Report.
- Change evaluations may be used at different points in a Change's lifecycle, for example before authorizing the Change/Release build or during the Post Implementation Review.

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# Service Asset & Configuration Management - Purpose, Objectives & Scope

## Purpose:

- To ensure that the assets required to deliver services are properly controlled, and that accurate and reliable information about those assets is available when and where it is needed.

## Objectives:

- Define and control the components of services and infrastructure and maintain accurate configuration records. This enables an organization to comply with corporate governance requirements, protect & control its asset base, optimize its costs, manage change and release effectively, and resolve incidents and problems faster

## Scope:

- To make sure that all assets that are used during the service lifecycle are within the scope of asset management. Management of the complete lifecycle of every configuration item.
- The process offers a complete overview of all assets, and shows who is responsible for the control and maintenance of these assets.

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# Service Asset & Configuration Management - Key Concepts

## What is Configuration Item (CI)?

- Anything that needs to be managed in order to deliver an IT Service
- CI information is recorded in the configuration management system
- CI information is maintained throughout its lifecycle by configuration management
- All CIs are subject to change management control

## CI Types:

- CIs typically include : IT services, hardware, software, buildings, people and formal documentation such as process documentation and SLAs

## Configuration Baseline

- Configuration details captured at a specific point in time. This captures both the structure and details of a configuration item.
- It is used as a reference point for future builds, releases and changes. (E.g. after major changes, disaster recovery, etc.).
- It is typically managed through the change management process

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# Service Asset & Configuration Management - Key Concepts (cont'd.)

## What is a Configuration Management System (CMS)?

- Information about all configuration items
  - CI may be an entire service, or any component
  - Stored in 1 or more databases (CMDBs)
- CMS stores attributes
  - Any information about the CI that might be needed
- CMS stores relationships
  - Between CIs
  - With incident, problem, change records, etc.
- CMS has multiple layers
  - Data sources and tools, information integration, knowledge processing (scorecards, dashboards, etc.), presentation

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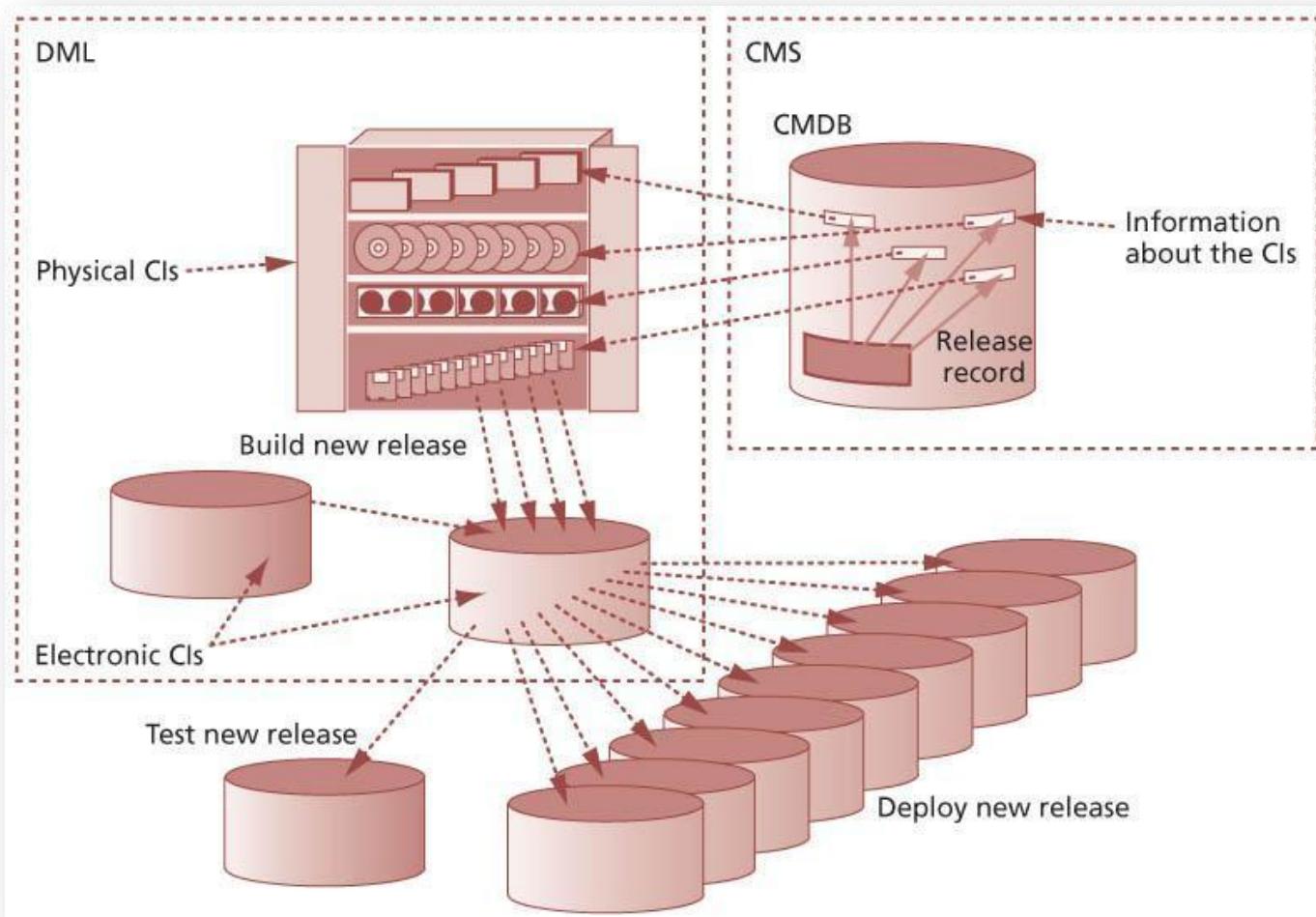
# Service Asset & Configuration Management - Key Concepts (cont'd.)

## What is a **definitive media library (DML)**?

- The only source for build and distribution
- Master copies of all software assets
  - In house, external software houses
  - Scripts as well as code
  - Management tools as well as applications
  - Including licenses
- Quality checked
  - Complete, correct, virus scanned...

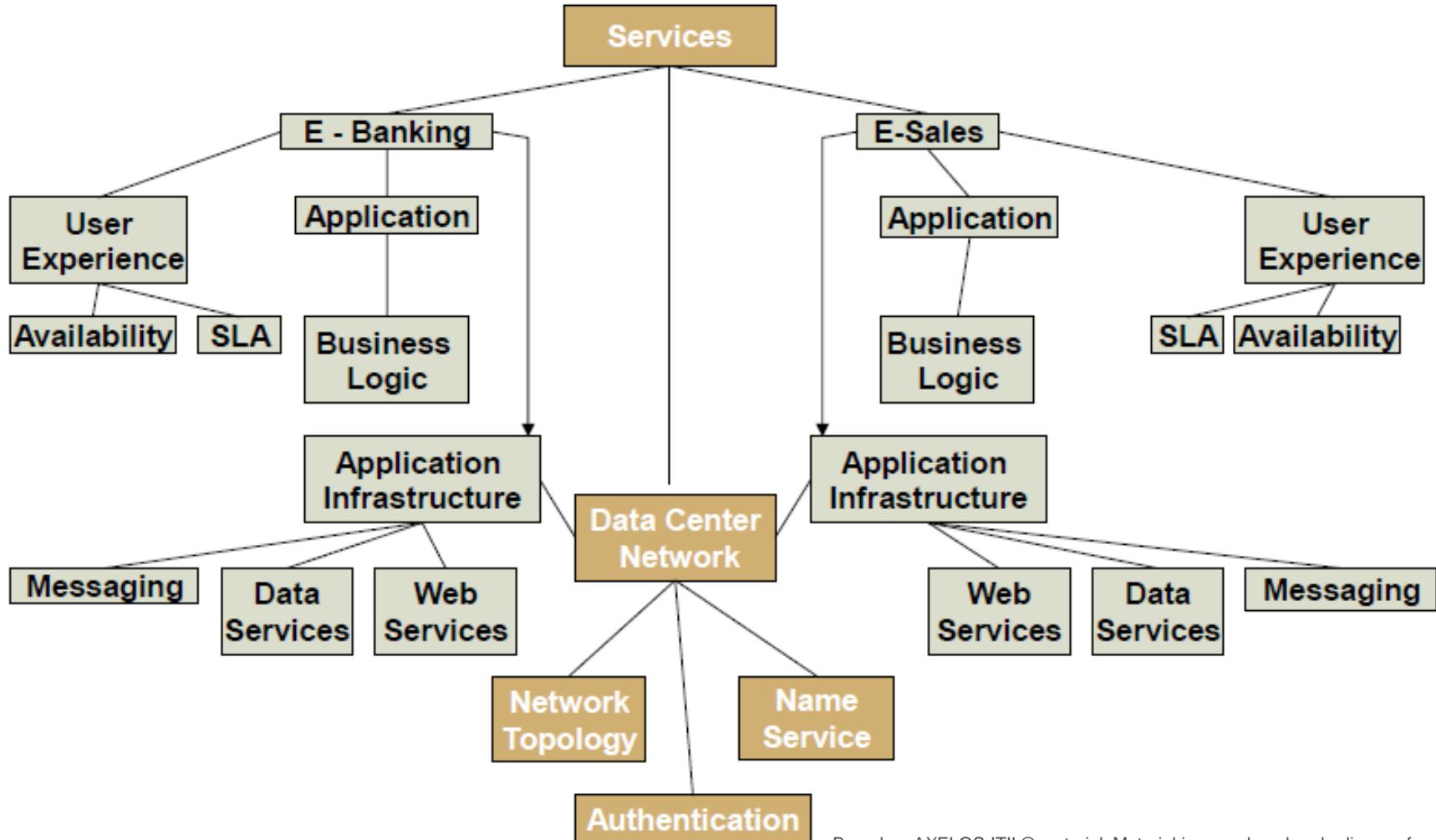
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# Service Asset & Configuration Management - CMDB and DML



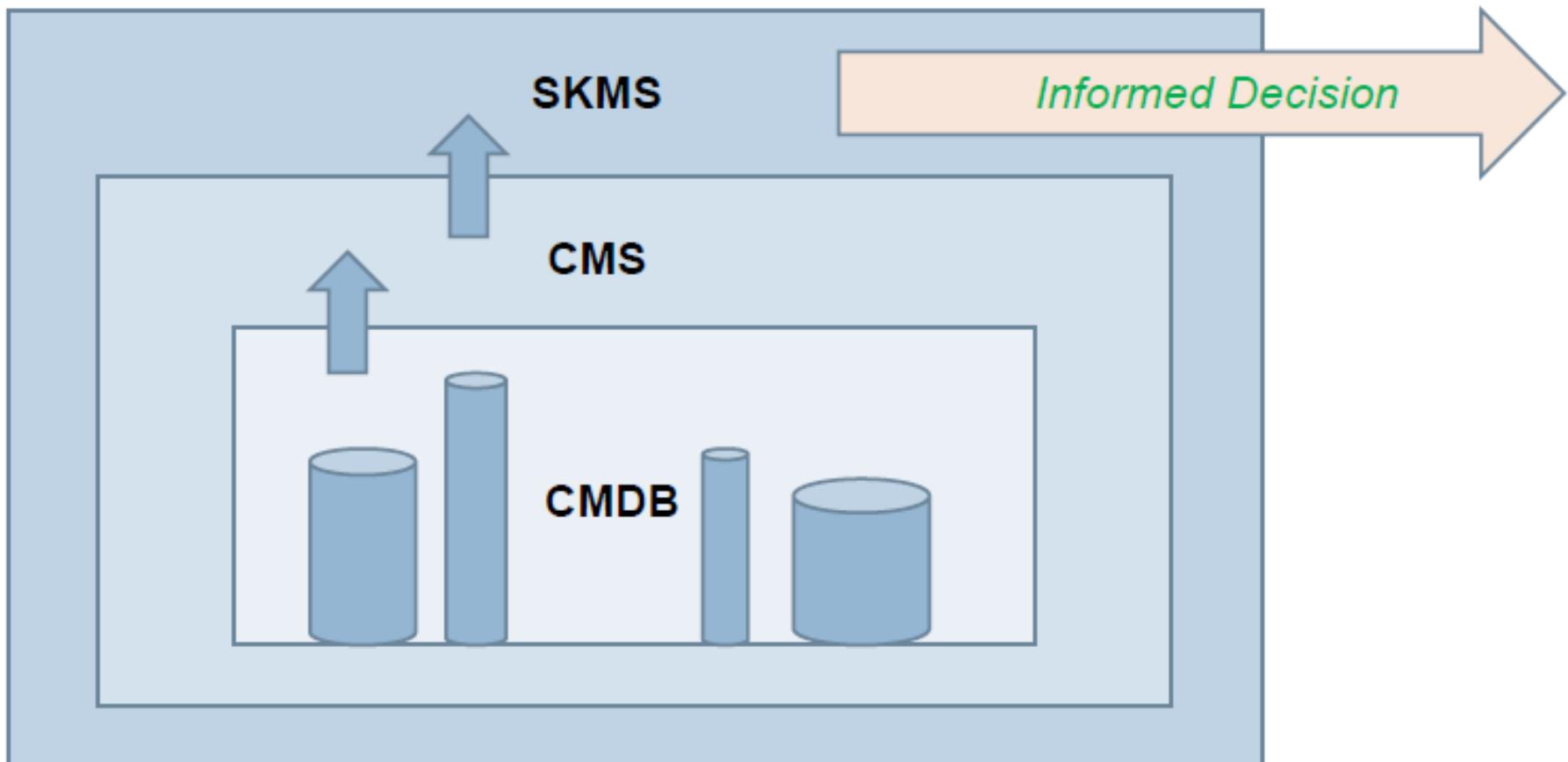
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# Service Asset & Configuration Management - Logical Model



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# Service Asset & Configuration Management - CMDB, CMS and SKMS



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# Release & Deployment Management - Purpose, Objectives & Scope

## Purpose:

- To plan, schedule and control the build, test and deployment of releases.
- To deliver new functionality required by the business while protecting the integrity of existing services.

## Objectives:

- Define and agree release and deployment management plans with customers and stakeholders.
- Create and test release packages that consist of related configuration items that are compatible with each other.
- Ensure that all release packages can be tracked, installed, tested, verified and/or uninstalled or backed out if appropriate

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# Release & Deployment Management - Purpose, Objectives & Scope (cont'd.)

## Objectives:

- Record and manage deviations, risks and issues related to the new or changed service and take necessary corrective action.
- Ensure that there is knowledge transfer to enable the customers and users to optimize their use of the service to support their business activities.

## Scope:

- Includes processes, systems and functions to package, build, test and deploy a release into production and establish the service specified in the service design package before final handover to service operations.
- It also includes all configuration items required to implement a release.

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# Release & Deployment Management - Value

## Value:

Effective release and deployment management enables the service provider to add value to the organization by:

- Delivering change, faster and at optimum cost and minimized risk
- Assuring that customers and users can use the new or changed service in a way that supports the organization goals
- Improving consistency in implementation approach across the organization change, service teams, suppliers and customers

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# Release & Deployment Management - Key Concepts

## Release

- A collection of hardware, software, documentation, processes or other components required to implement one or more approved changes
- A Release could consist of a number of Problem fixes and/or enhancements to a service

## Release Policy

- A set of rules for deploying releases into the live operational environment, defining different approaches for releases depending on their urgency and impact

## Release Unit

- Cls that are normally released together
- Typically includes sufficient components to perform a useful function.
  - Example : E-mail application, Fully configured desktop, Network connectivity

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# Release & Deployment Management - Key Concepts (cont'd)

## Release Package

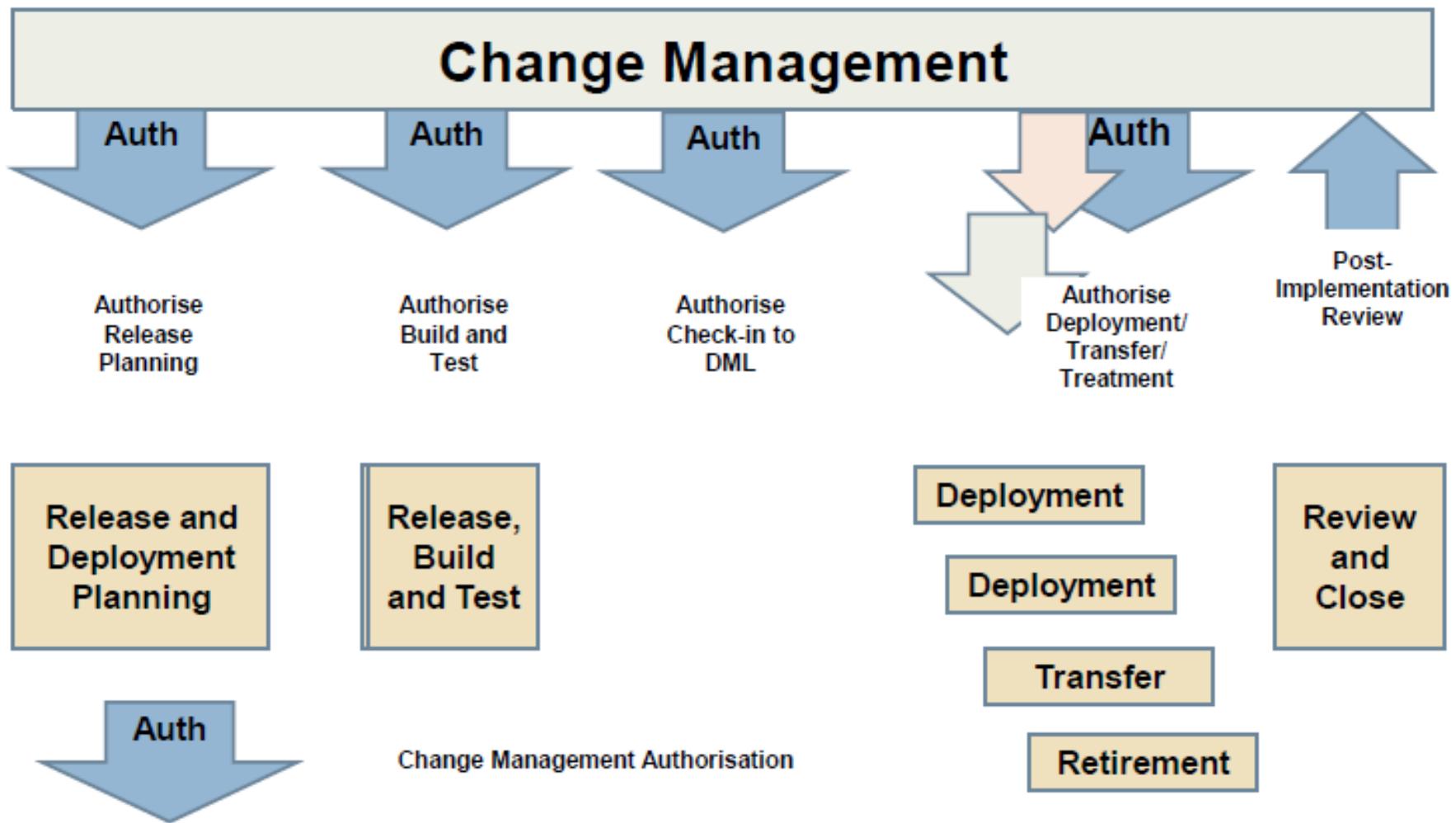
- Single release or many related releases
- Can include hardware, software, utility, warranty, documentation, training.

## Release Options

1. Big-bang versus Phased Approach
  - Phased approach can be users, locations, functionality
2. Push versus Pull Deployment
3. Automation versus Manual Deployment

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# Four Phases of Release & Deployment Management



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# Release & Deployment Management - Roles & Responsibilities

## Release & Deployment Process Manager

- Planning and coordinating all resources needed to build, test and deploy each release, including resources from other functions such as technical management or application management
- Planning and managing support for release and deployment management tools and processes
- Ensuring that change authorization is provided before any activity that requires this, for example before a release is checked in to the definitive media library (DML) and before it is deployed to a live environment
- Coordinating interfaces between release and deployment management and other processes, especially change management, SACM, and service validation and testing

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# Service Validation and Testing - Purpose, Objectives & Scope

## Purpose:

- Plan and implement a structured validation and test process that will generate evidence that the service will support the customer's business within agreed service levels.
- Provide quality assurance for a release and its components and service capability.
- Identify risks, issues, and errors and eliminate them throughout Service Transition.

## Objectives:

- To ensure that deployed Releases and the resulting services meet customer expectations, and to verify that IT operations is able to support the new service.

## Scope:

- To ensure that new or changed services are fit for purpose (utility) and fit for use (warranty).
- To make sure the delivery of activities adds value that is agreed and expected.

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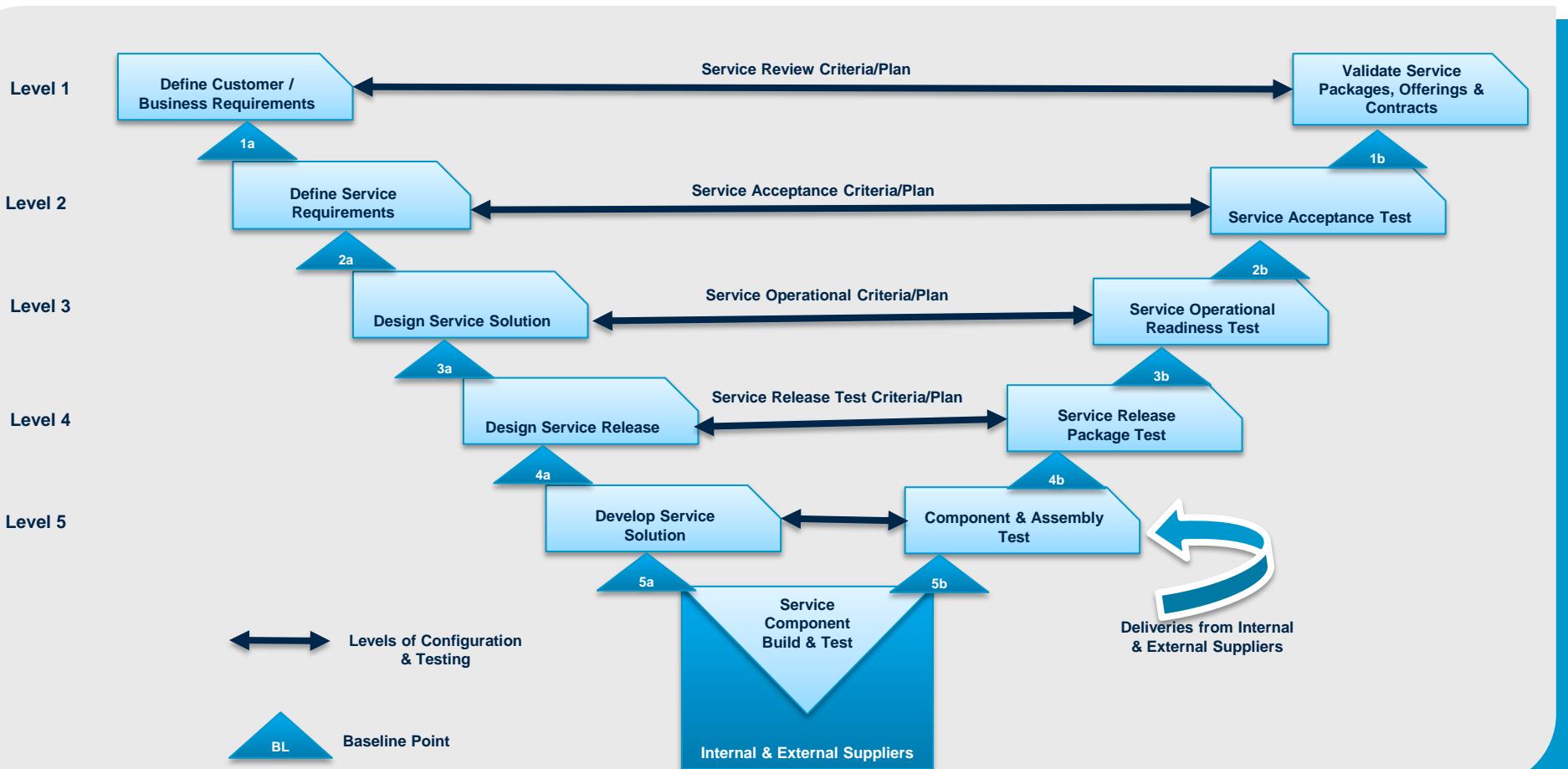
# Service Validation and Testing - Activities

## Activities for Service Validating and Testing

- **Validation and Test management** - This consists of planning and managing/controlling and then reporting on the activities that have taken place during all phases to ensure they are fit for purpose/use.
- **Planning and Design** - Test planning and design activities take place in the early stages of the Service Lifecycle. These correlate to resources, supporting services, scheduling milestones for delivery and acceptance.
- **Verification of Test Plan and Design** - Test plans and designs are validated to ensure all activities are complete (this also includes test scripts). Test models are also verified to minimise the risks to the service.
- **Preparation of the Test environment** - Prepare and make a baseline of the test environment.
- **Testing** - Tests are carried out using manual or automated testing techniques and procedures. All results are registered.
- **Evaluate Exit Criteria and Report** - Actual results are compared with projected results.
- **Clean up and Closure** - Ensure the test environment is cleaned. Learn from previous experiences and identify areas for improvement.

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# Service Validation and Testing - The V Model



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# Service Validation and Testing - The V Model

- Provides a path to follow with regard to defining the requirements for a service package, designing the package, building and then testing the package.
- Provides baseline points along the path that are used as checkpoints to ensure that what is being designed, built and delivered is actually what was required.
- Each step on the path also has specifically named outputs that should be visible.
- Demonstrates the relationships between each phase of the development life cycle and its associated phase of testing.
- Testing happens at different levels, first component testing, then package testing, system testing etc. again leading to early detection of errors.

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# Service Validation and Testing - Other Testing Activities

- Usability testing
- Accessibility testing
- Process and procedure testing
- Knowledge transfer and capability testing
- Performance, capacity, and resilience testing
- Volume, stress, load, and scalability testing
- Availability, backup and recovery testing
- Security testing
- Logistics, deployment, and migration testing
- Build, packaging, and distribution testing
- Operability and maintainability testing

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# Knowledge Management - Purpose and Objectives

## Purpose:

- To share perspectives, ideas, experience and information.
- To ensure that these are available in the right place, right time to enable informed decisions and to improve efficiency by reducing the need to rediscover knowledge.

## Objectives:

- Improve quality of management decision making by ensuring that reliable and secure information and data is available throughout the service lifecycle.
- Ensure that the right information is delivered to the appropriate place or person at the right time to enable informed decisions.
- Maintain a service knowledge management system (SKMS) that provides controlled access to knowledge, information and data that is appropriate for each audience.

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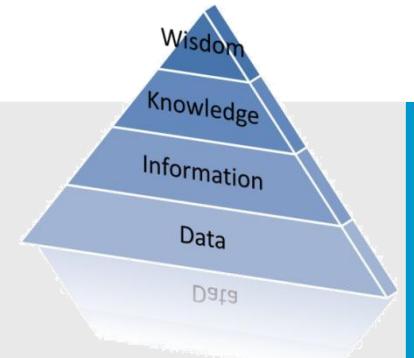
# Knowledge Management - Scope

## Scope:

- Provide knowledge through out the service life-cycle
- Management of knowledge and the information & data from which the knowledge derives
- Within the service transition domain might include:
  - Identity of stakeholders
  - Acceptable risk levels and performance expectations
  - Available resource and timescales

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# Knowledge Management - DIKW Pyramid



## Data

- is a set of discrete facts about events
- Metrics supply quantitative data

## Information

- Comes from providing context to data or by asking questions on the data
- CSI transforms data into information

## Knowledge

- is composed of the concepts, tacit experiences, ideas, insights, values and judgments of individuals
- Application of information with experience, context, interpretation & reflection

## Wisdom

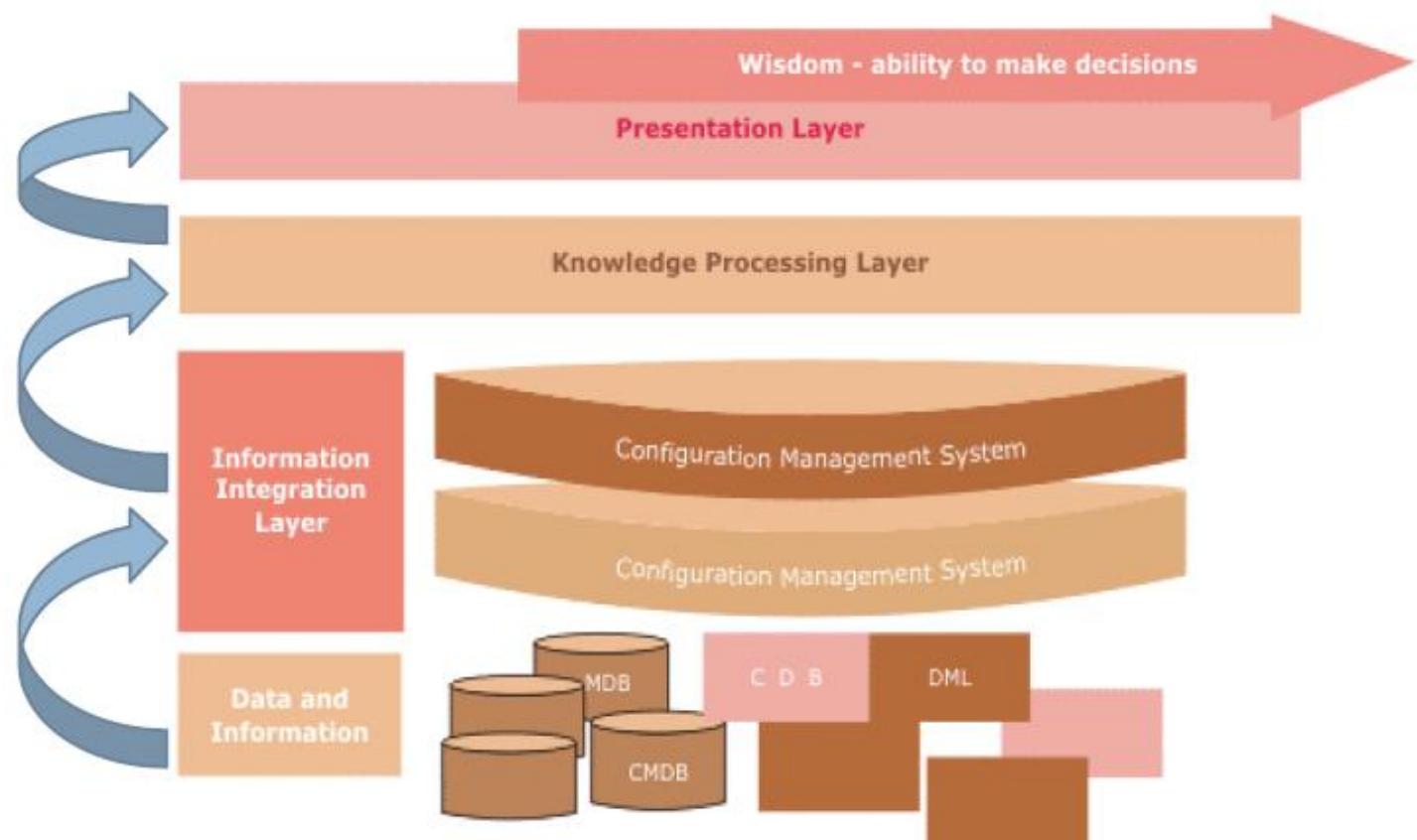
- Gives the ultimate discernment of the material and guides a person in the application of knowledge
- Being able to make correct assessments & informed decisions based on knowledge

**CSI takes the organization on the path of wisdom**

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# Knowledge Management - Service Knowledge Management System

- A set of tools for managing knowledge and information.
- SKMS includes CMS.
- SKMS contains all the information needed to manage the lifecycle of IT Services.



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# Service Transition - Summary

Purpose	Assist organizations seeking to plan and manage service changes and deploy service releases into the production environment successfully
Key Concepts	Processes
<ul style="list-style-type: none"><li>▪ 7 R's of change</li><li>▪ The V Model</li><li>▪ Types of changes</li><li>▪ Change Proposal</li><li>▪ Release options</li><li>▪ DIKW</li><li>▪ CMS, CMDB, DML, SKMS</li></ul>	<ul style="list-style-type: none"><li>▪ Transition Planning &amp; Support</li><li>▪ Change Management</li><li>▪ Change Evaluation</li><li>▪ Service Asset &amp; Configuration Management</li><li>▪ Release &amp; Deployment Management</li><li>▪ Service Validation &amp; Testing</li><li>▪ Knowledge Management</li></ul>

# Quiz

**Effective Release and Deployment Management enables the service provider to add value to the business by?**

- A. Delivering change, faster and at optimum cost and minimized risk
- B. Ensuring that all assets are accounted for
- C. Verifying the accuracy of all items in the configuration management database
- D. Ensures that the fastest servers are purchased

**Answer : A**

One of the value to the organization by having effective release and deployment management is to deliver change faster and at optimum cost and minimized risk

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## Which of the following is NOT a purpose of Service Transition?

- A. Ensure that a service can be managed, operated and supported
- B. Provide training and certification in project management
- C. Provide quality knowledge of change, release and deployment management
- D. Plan and manage the capacity and resource requirements to manage a release

Answer : B

Service Transition gives an overview of Project Management (Transition Planning and Support), but does not provide training and certification in project management.

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**Which of the following would be used to communicate a high level description of a major change that involved significant cost and risk to the organization?**

- A. Change proposal
- B. Change policy
- C. Service request
- D. Risk register

**Answer : A**

A change proposal would be used where a major cost and / or risk is involved, often requiring approval from senior customer and service provider representatives.

A change policy (answer B) defines when change proposals or requests should be raised. A service request (answer C) is raised for more minor levels of change, with known risks and costs. A risk register (answer D) records the nature and level of risk of events that may affect the service. (that, if they occur, may necessitate changes).

# Quiz

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## Who is responsible for chairing a change advisory board (CAB)?

- A. Change manager
- B. Service owner
- C. Change initiator
- D. Business relationship manager

**Answer : A**

The change manager chairs the CAB.  
It is likely that the other three may attend the CAB to either contribute or take away information.

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## The definitive media library is the responsibility of:

- A. Facilities management
- B. Access management
- C. Request fulfillment
- D. Service asset and configuration management

**Answer : D**

The Definitive Media Library (DML) is the secure logical library in which the definitive authorized versions of all media CIs are stored and protected. It is the responsibility of service asset and configuration management.

The other three answers may involve the DML but are not responsible for it: Facilities management (answer A) may be responsible for a fire safe allowing the physical store of the actual media; Access management (answer B) may be involved in granting rights to use the DML; Request fulfillment (answer C) might be the route to accessing the components in the DML for users and customers.

# Module 5.4: Lifecycle Phase 4 - Service Operations



## Processes

- Event Management
- Incident Management
- Problem Management
- Request Fulfillment
- Access Management

## Functions

- Service Desk
- Technical Management
- Application Management
- IT Operations Management

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# Service Operations: Purpose and Objectives

## Purpose:

- The purpose of service operations is to coordinate and carry out the activities and processes required to deliver and manage services at agreed levels to business users and customers.
- Service operation is also responsible for the on-going management of the technology that is used to deliver and support services.

## Objectives:

- The objective of service operations is to maintain business satisfaction by delivering effective and efficient IT services, minimize the impact of service outage and to ensure access to IT services for only authorized users

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# Service Operations: Scope

## Scope:

The scope of service operations is to provide guidance on:

- **The services themselves:** Activities that form part of a service is included in service operation, whether it is performed by the service provider, an external supplier or the user or customer of that service.
- **Service management processes:** The on-going management and execution of the many service management processes that are performed in service operation.
- **Technology:** All services require some form of technology to deliver them. Managing this technology is not a separate issue, but an integral part of the management of services themselves.
- **People:** All processes and technology are managed, they are all about people. It is people who drive the demand for the organization's services and products and it is people who decide how this will be done.

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# Service Operations: Value to Business

## Value to Business:

- All stages in the service lifecycle provide value to the business, but from a customer viewpoint, Service Operation is where the actual value is seen.
- For example, service value is modeled in Service Strategy; the cost of the service is designed, predicted and validated in Service Design and Service Transition; and measures for optimization identified in Continual Service Improvement.
- If day-to-day operation of the processes is not properly conducted, controlled and managed; well-designed and well-implemented processes will be of little value.
- The operation of service is where these plans, designs and optimizations are executed and measured.

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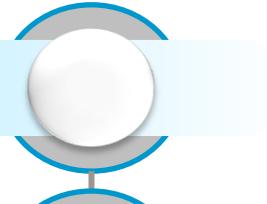
# Service Operations: Role of Communication

- Good communication is important across all phases of the service lifecycle but particularly so in service operation
- Good communication is needed between all IT Service Management staff and with users/customers/partners
- Issues can often be mitigated or avoided through good communication
- All communication should have:
  - Intended purpose and/or resultant action
  - Clear audience, who should be involved in deciding the need/format
- Examples of communications in service operations
  - Routine operational communication
  - Communication between shifts
  - Performance reporting
  - Communication related to emergencies
  - Training on new or customized processes and service designs

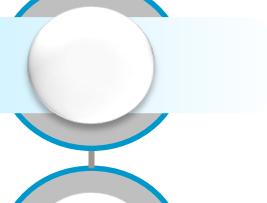
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# Service Operations - Processes

Event Management



Incident Management



Problem Management



Request Fulfillment



Access Management



# Event Management - Purpose and Objectives

## Purpose:

- The purpose of event management is to manage events throughout their lifecycle. The activities are to detect events, make sense of them and determine that the appropriate control action is coordinated by the event management process

## Objectives:

- Detect all changes of state that have significance for the management of a CI or IT service.
- Determine the appropriate control action or events and ensure these are communicated to the appropriate functions.
- Provide the means to compare actual operating performance and behavior against design standards and SLAs.
- Provide a basis for service assurance and reporting; and service improvement.

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# Event Management - Scope

## Scope:

The scope of event management applies to all aspects of service management that require control. It includes:

- Configuration items – E.g. updating of a file server
- Environmental conditions - E.g. fire and smoke detection
- Software license monitoring for usage to ensure optimum/legal license utilization and allocation
- Security – E.g. intrusion detection
- Normal activity - E.g. mainframe utilization, batch jobs, etc.

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# Event Management - Key Concepts

- **Events :** An expected or unexpected change of state of an IT component that could negatively impact delivery of IT services.
- Events are typically notifications created by an IT service, configuration item (CI) or a monitoring tool.

Event Type	Description
Informational	An event that does not require any action, regular operation <ul style="list-style-type: none"><li>▪ Example: Notification that a scheduled workload has completed</li></ul>
Warning	An event that is unusual but not an exception, requires closer monitoring. <ul style="list-style-type: none"><li>▪ Example: A server's CPU utilization is approaching maximum performance threshold.</li></ul>
Exception	An event signifying a service or a device is operating abnormally <ul style="list-style-type: none"><li>▪ Example: A PC scan reveals the installation of unauthorized software.</li></ul>

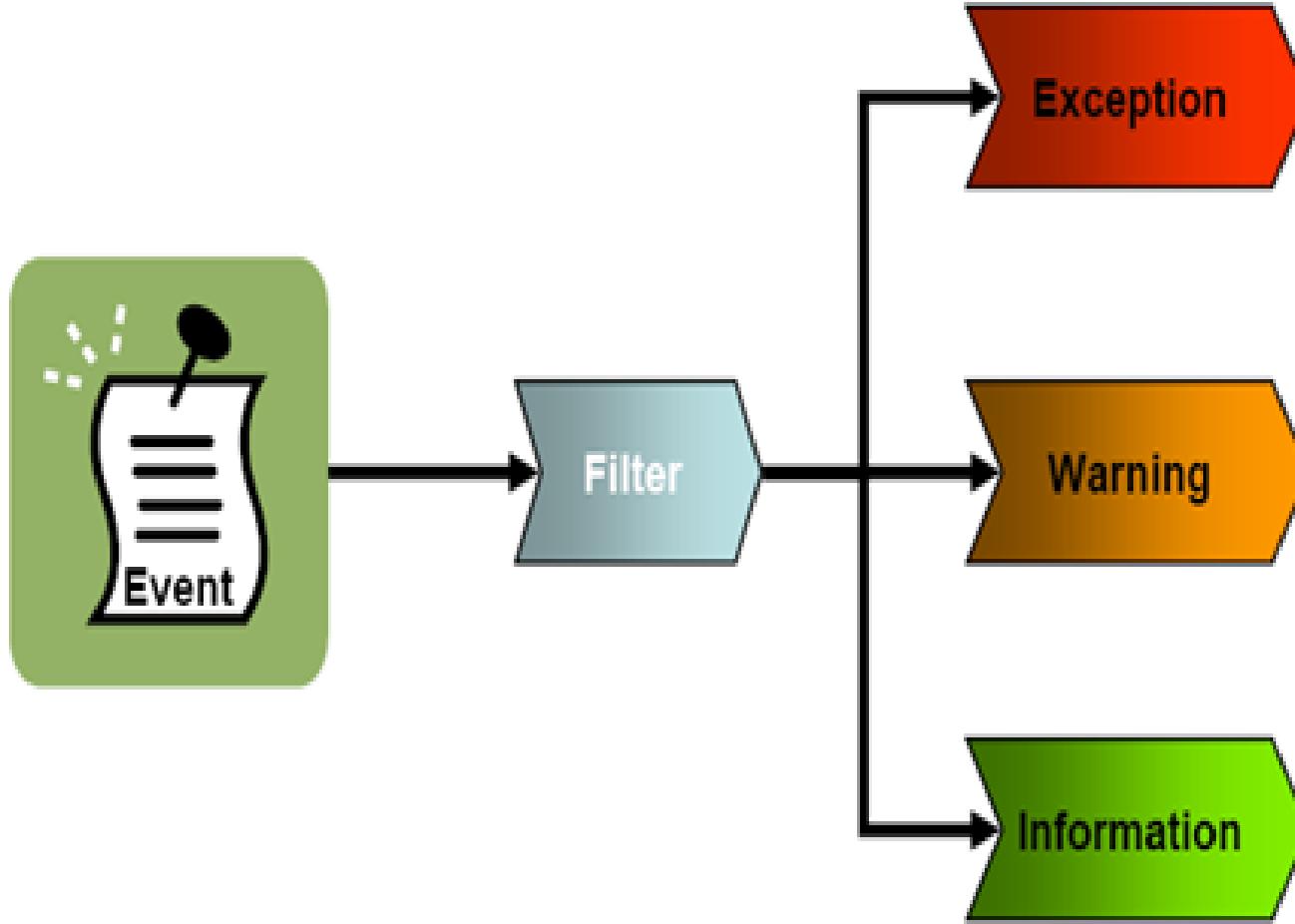
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# Event Management - Process Activities

1. Event occurs
2. Event detection, filtering & notification
3. Event significance (Type of event) (Information, warning or exception)
4. Event correlation
5. Event response
6. Event review & closure

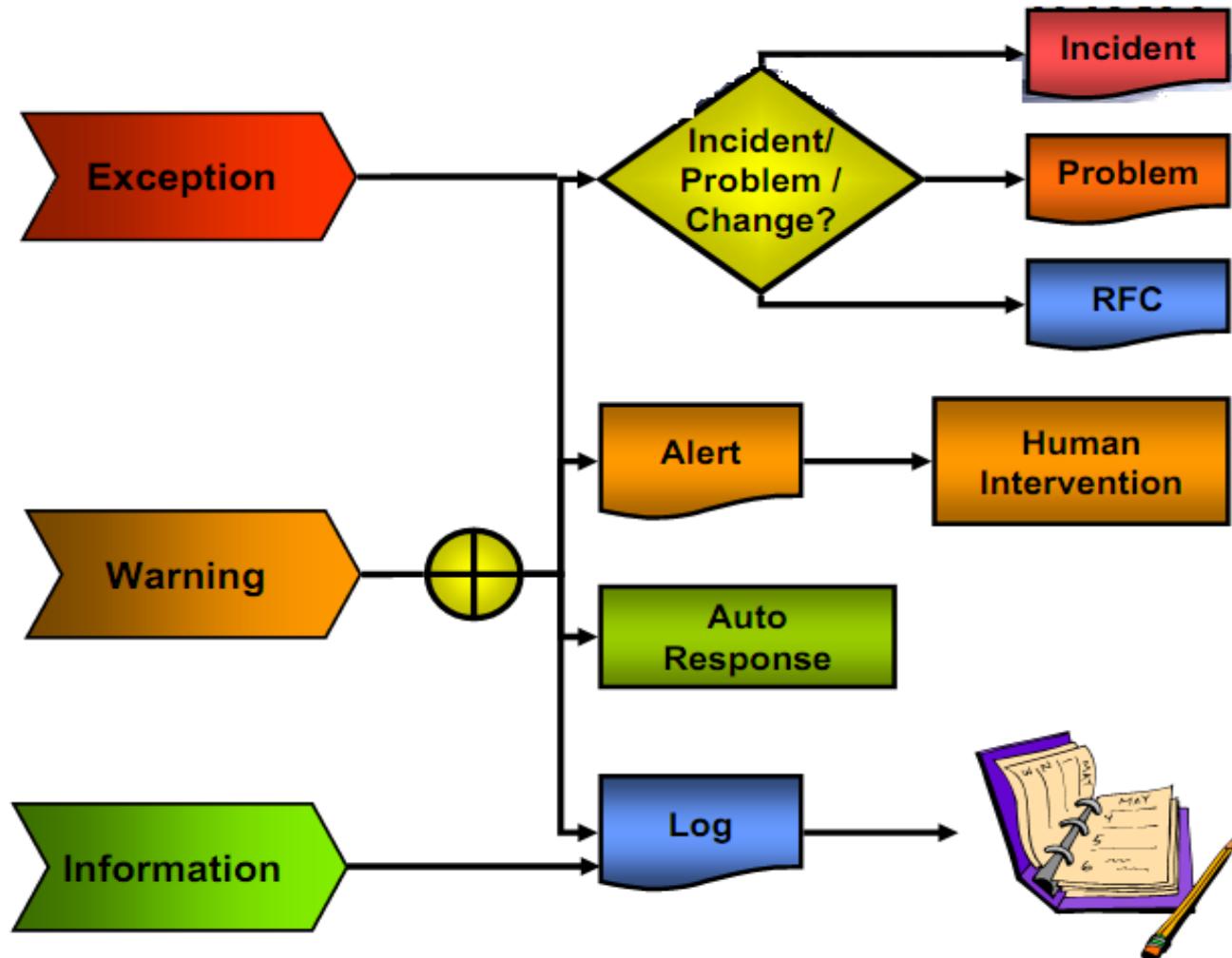
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# Event Management - Event Logging & Filtering



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# Event Management - Event Handling



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# Incident Management - Purpose and Objectives

This process responsible for managing the lifecycle of all incidents. Incident management ensures that normal service operation is restored as quickly as possible and the business impact is minimized.

## Purpose:

- The purpose of incident management process is to restore normal service operation as quickly as possible and thereby minimize the adverse impact on business operations, thus ensuring that the best possible levels of service quality and availability are maintained. Normal service operation implies services operating as per the committed SLAs.

## Objectives:

- Ensure that standardized methods and procedures are used for efficient and prompt response, analysis, documentation, on-going management and reporting of incidents.
- Increase visibility and communication of incidents to business and IT support staff.
- Align incident management activities and priorities with those of the business.

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# Incident Management - Scope and Value to Business

## Scope:

- Managing any disruption or potential disruption to live IT services.
- Incidents identified
  - Directly by users through the service desk.
  - Through an interface from event management to incident management tools
  - Reported and/or logged by technical staff

## Value to Business:

- Lower downtime to the business, which in turn means higher availability of the service
- The capability to identify business priorities and dynamically allocate resources as necessary
- The ability to identify potential improvements to services.

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# Incident Management - Key Concepts

## Time Scales

- Timescales must be agreed for all incident handling stages.
  - Depending on priority & SLAs
  - Documented in OLAs & UCs
- All support groups should be made fully aware of these timescales

## Incident Models

- An incident model is predefined steps to handle a particular incident.
- The incident model should include:
  - The steps that should be taken to handle the incident
  - The order in which these steps should be taken in
  - Responsibilities; who should do what

## Major Incident

- The highest category of impact for an incident. A major incident results in significant disruption to the business. A separate procedure, with shorter timescales and greater urgency must be used for major incidents.

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# Incident Management - Alerts & Incidents

Alerts	Incidents
<ul style="list-style-type: none"><li>▪ A warning that a threshold has been reached, something has changed, or a failure has occurred.</li><li>▪ Alerts are often created and managed by System Management tools</li><li>▪ Alerts are managed by the Event Management Process</li><li>▪ Objective is to notify the concerned stakeholders</li></ul>	<ul style="list-style-type: none"><li>▪ An unplanned interruption to an IT Service</li><li>▪ A reduction in the Quality of an IT Service.</li><li>▪ Failure of an IT Component/ Configuration Item that has not yet affected service but could likely disrupt the service if left unchecked.<ul style="list-style-type: none"><li>▪ For example: Failure of one disk from a mirror set.</li></ul></li></ul>

## Relationship between events, alerts and incidents

- All alerts are events, but not all events trigger alerts
- All incidents are events, but all events are not incidents

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# Incident Management - Impact, Urgency & Priority

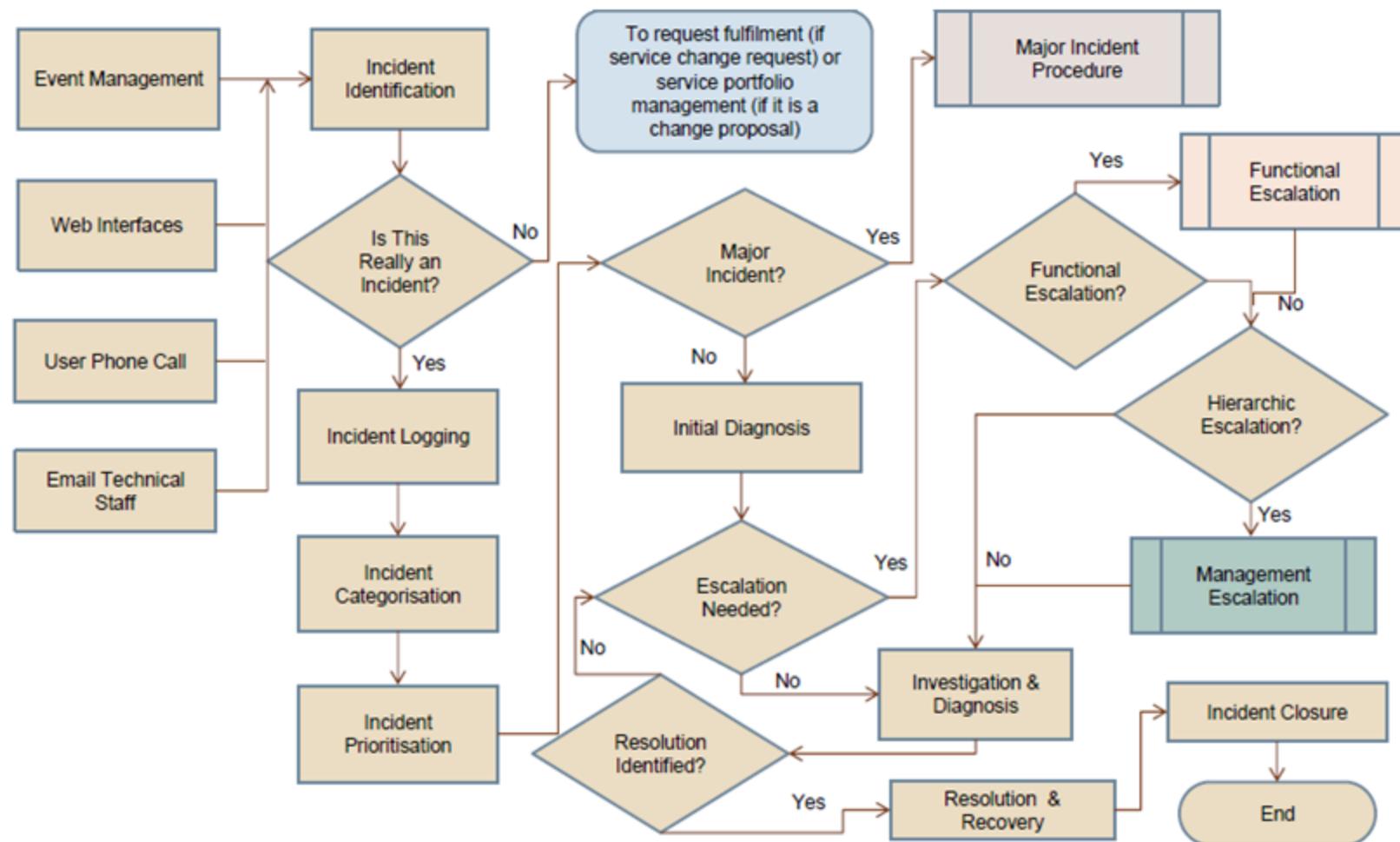
Priority is based on **Impact and Urgency**, and is used to **identify required timelines for actions** to be taken

- **Priority = Impact X Urgency**
- **Impact** = Effect of the incident on the business
- **Urgency** = A measure of how long it will be until the business experiences significant impact

		Impact		
		Priority / Resolution Time	High	Medium
Urgency	High	1/< 4 Hrs..	2/< 8 Hrs.	3/< 24 Hrs.
	Medium	2/< 8 Hrs.	3/<24 Hrs.	4/<48 Hrs.
	Low	3/< 24 Hrs.	4/< 48 Hrs.	5/Planned

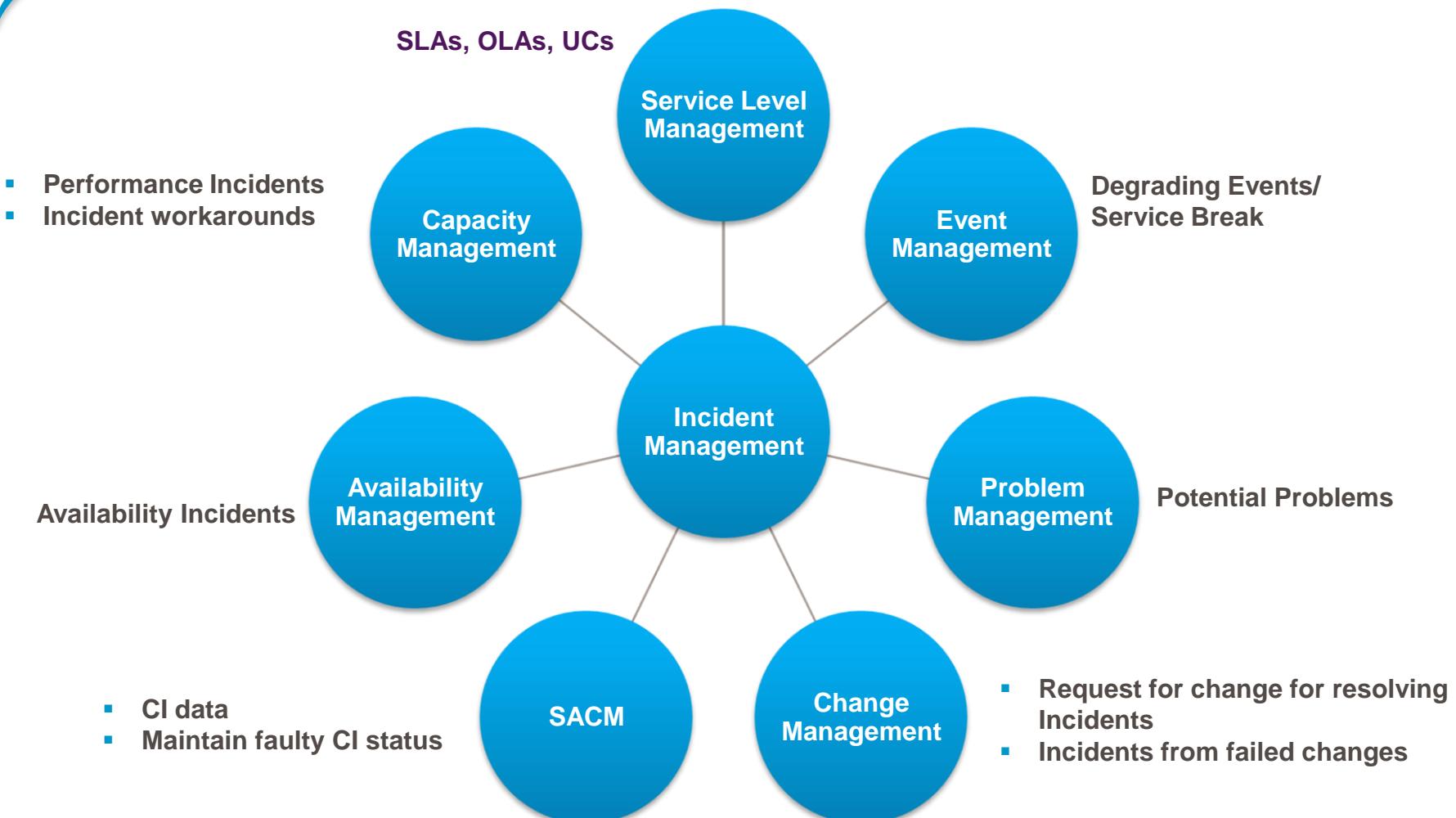
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# Incident Management - Process Flow



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# Incident Management - Process Interfaces



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# Problem Management - Purpose and Objectives

The problem management process is responsible for managing the lifecycle of all problems.

## Purpose:

- Problem management seeks to identify and remove the root cause of incidents in the IT infrastructure.
- Minimize the adverse impact of incidents and problems on the business that are caused by underlying errors.
- Eliminate recurring incidents and minimize the impact of incidents that can not be prevented.

## Objectives:

- To prevent problems and resulting incidents from happening and to eliminate recurring incidents
- To minimize the impact of incidents that cannot be prevented.

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# Problem Management - Scope and Value to Business

## Scope:

- Activities required to diagnose the root cause of incidents and to determine the resolution to those problems.
- Responsible for ensuring that the resolution is implemented through the appropriate control procedures, especially change management and release & deployment management.
- Maintain information about problems and the appropriate workarounds and resolutions.

## Value to Business:

- Together with incident and change management increases IT service availability and quality.
- Reduction in downtimes and disruptions of business critical systems.
- Reduced expenditure on workarounds or fixes that do not work
- Reduction in cost of effort in fire-fighting or resolving repeat incidents.

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# Problem Management - Key Concepts

## Problem

- The cause of one or more incidents

## Problem Models

- A model/ set of guidelines to deal with particular types of problems

## Workaround

- A temporary solution / quick fix which enables the user to continue using the service even though the root cause is not identified/removed
- Usually Problem Team suggests workaround & Incident team implements it

## Known Error (KE)

- A Problem that has a documented Root Cause and a Workaround
- A Known Error is resolved by eliminating the root cause permanently (E.g.. via RFC)

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# Problem Management - Key Concepts (Cont'd)

## Known Error Database (KEDB)

- A database containing all Known Error Records
- The KEDB is part of SKMS
- The purpose of this database is to maintain a record of all the previous incidents, problems & known errors

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# Problem Management - Key Concepts

## Proactive Problem Management

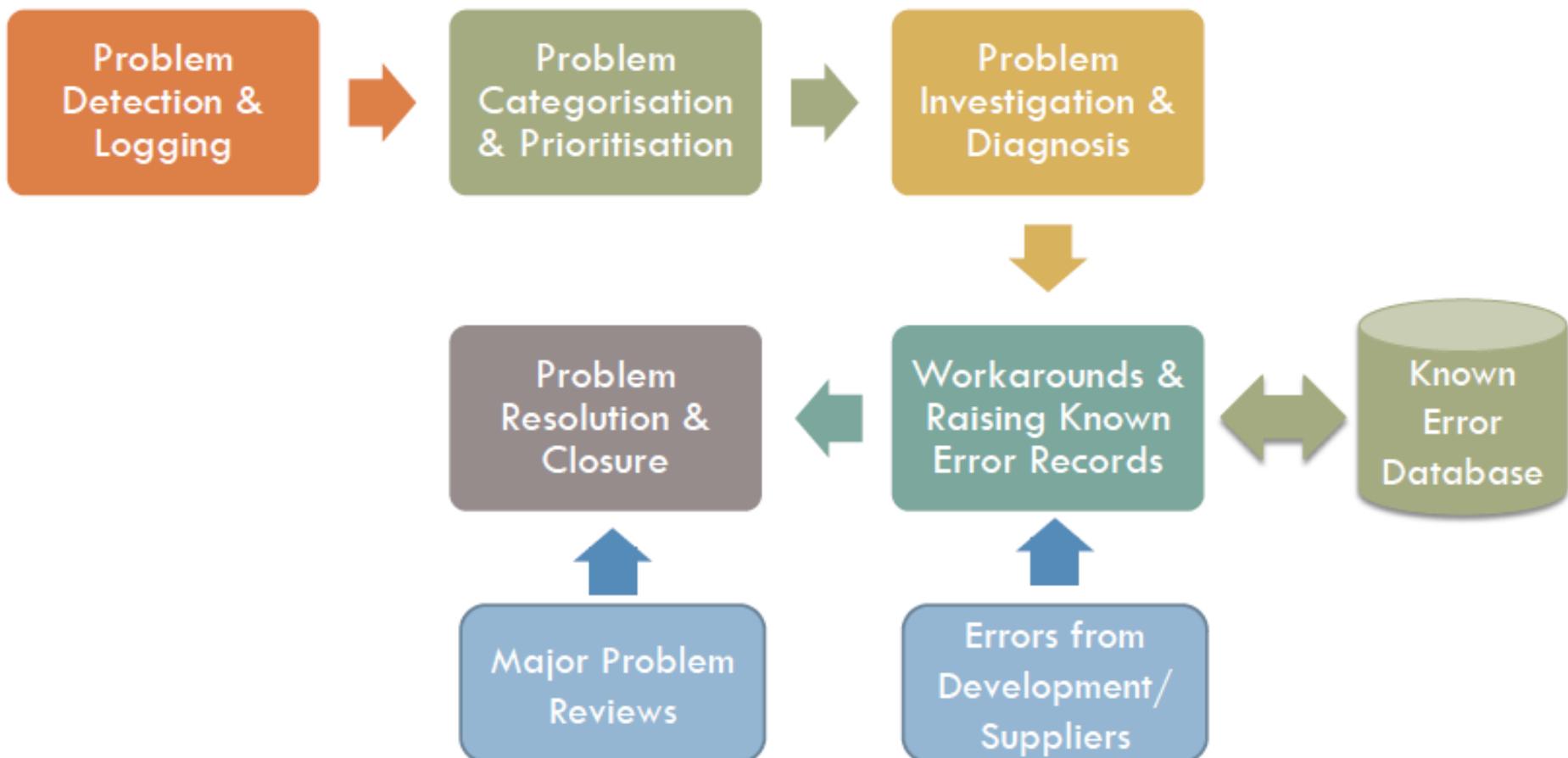
- Initiated in Service Operations phase but is generally driven as part of Continual Service Improvement phase.
- Prevention of future problems by analyzing incident data and other ITSM processes to identify trends or significant problems.

## Reactive Problem Management

- Executed as part of Service Operations phase.
- Resolution of underlying cause(s)
- Activities are similar to those of Incident Management for logging, categorization & classification. Subsequent activities are different where the actual root cause analysis is performed and the known error created.

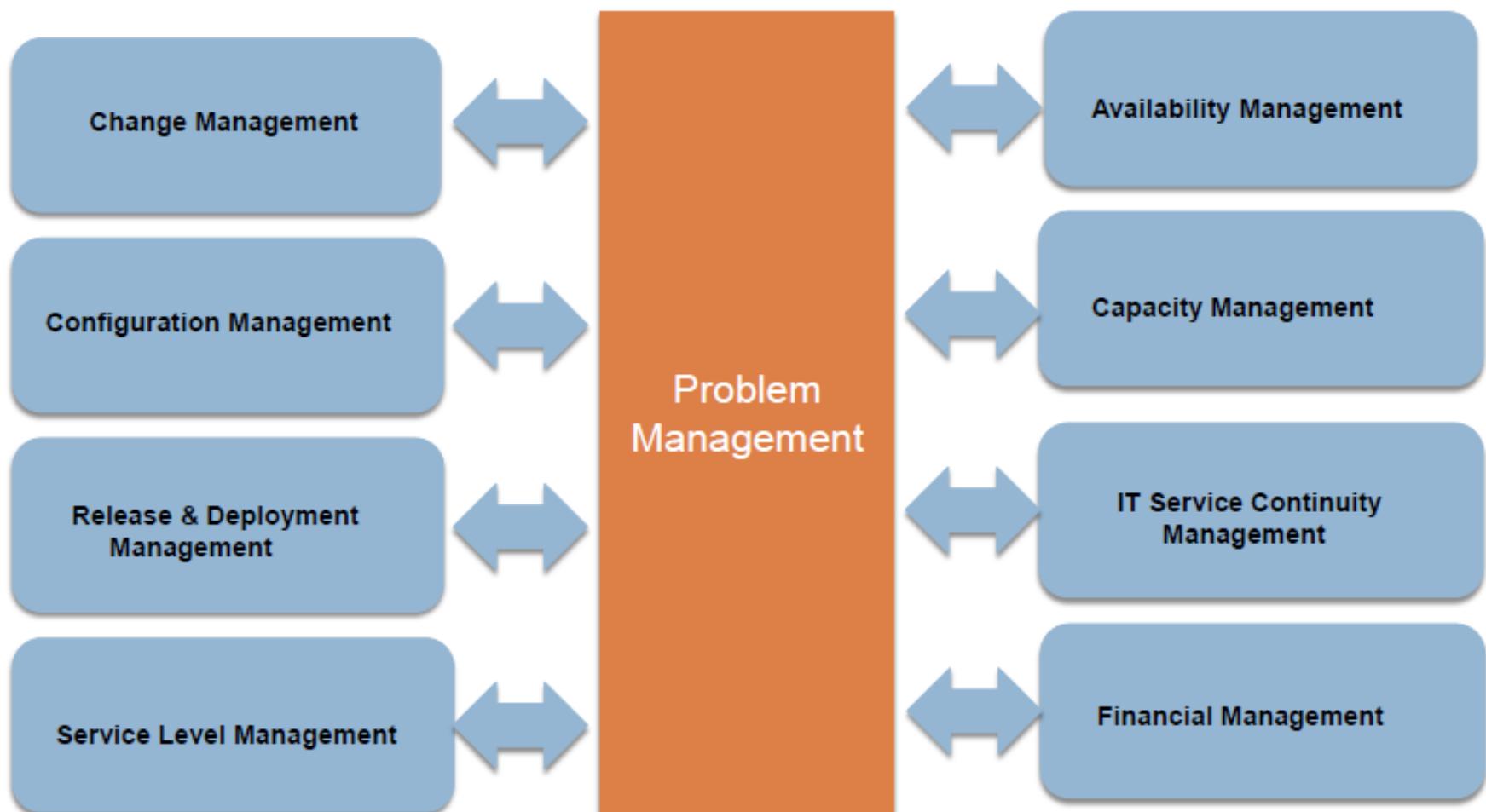
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# Problem Management - Reactive Problem Management Process Flow



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# Problem Management - Interfaces with Other Processes



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# Request Fulfillment - Purpose, Objectives and Scope

The process of dealing with service requests from the users.

## Purpose:

- The purpose of request fulfillment is to manage all service requests raised by the users throughout the lifecycle.

## Objectives:

- Maintain user and customer satisfaction through efficient and professional handling of all service requests.
- Provide a channel for users to request and receive standard services for which a predefined authorization and qualification process exists.
- Assist with general information, complaints or comments.
- Source and deliver the components of requested standards.

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# Request Fulfillment - Purpose, Objectives and Scope (Cont'd)

## Scope:

- For an organization where large number of service requests has to be handled, it makes sense to handle service requests as a completely separate work stream and to record and manage them as a separate record type.
- What should be handled as a service request needs to be decided by an organization. Anything that is frequently occurring, low cost, low risk, low impact should be considered as a service request.

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# Request Fulfillment - Key Concepts

## Service Request

- A request from a user for information or advice, or for a Standard Change or for access to an IT service.
  - For example : To reset a password, or access to standard applications

## Request Model

- A predefined process-flow to service frequently recurring requests
  - For example: IMACS, password resets, etc.

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# Access Management - Purpose and Objectives

## Purpose:

- The purpose of access management is to grant access to authorized users the right to use a service, while preventing access to non-authorized users.
- In practice, access management is the operational enforcement of the policies defined by information security management and availability management.

## Objectives:

- To grant authorized users the right to use a service and deny access to unauthorized users
- To execute policies and actions defined in security and availability management

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# Access Management - Scope

## Scope:

- Access management is effectively the execution of both availability and information security management.
- It enables the organization to manage the confidentiality, integrity and availability of the organization's data and intellectual property.
- Access management ensures users are given the right to use a service, but it does not ensure that this access is available at all agreed times – this is provided by availability management.

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# Access Management - Key Concepts

1

**Access:** Level and extent of a service's functionality or data that a user is entitled to use

2

**Identity:** Distinguishing information about an individual which verifies the status within the organization. Every user MUST have a unique identity

3

**Rights or privileges:** Level of access provided to a user for a service or group of services

4

**Service or service Groups:** Services clubbed together into a group to facilitate access management according to functional relevance

5

**Directory Services:** Specific type of tool that is used to manage access and rights

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# Service Operations - Functions

Service Desk

Technical Management

Application Management

IT Operations Management



IT Operations Management

Technical Management

Application Management

Operations Control

Facilities Management

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# Service Desk Function - Objectives

## Definition

- A service desk is a functional unit made up of a dedicated number of staff responsible for dealing with a variety of service events, often made via telephone calls, web interface, or automatically reported infrastructure events.
- Acts as daily single point of contact for IT users.

## Objectives

- To restore the ‘normal service’ to the users as quickly as possible.
- Operate as level 1 for incident management and request fulfillment, i.e. log calls, do initial diagnosis and investigation and if possible resolve and close.
- Manage incidents throughout its lifecycle, which also includes user communication and technical & hierarchical escalations.
- Conducting customer/user satisfaction survey.

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# Service Desk Function - Purpose



Improved customer service, perception of IT and satisfaction with IT services.

Increase accessibility to IT services through a single point of contact, communication and information.

Better quality and faster turnaround of customer or user IT requests.

Enhanced focus and a proactive approach to IT service provisioning.

More meaningful management information for decision support.

Improved teamwork and communication amongst IT staff.

A reduced negative business impact.

Improved usage of IT support resources and increased productivity of business personnel.

# Service Desk Function - Organization Structures

## Local Service Desk

Physically close to the users

## Centralized Service Desk

Allows fewer staff to deal with a higher volume of calls

## Virtual Service Desk

Staff are in many locations but appear to the users to be a single team

## Follow The Sun

Service Desks in different time zones providing 24-hour coverage

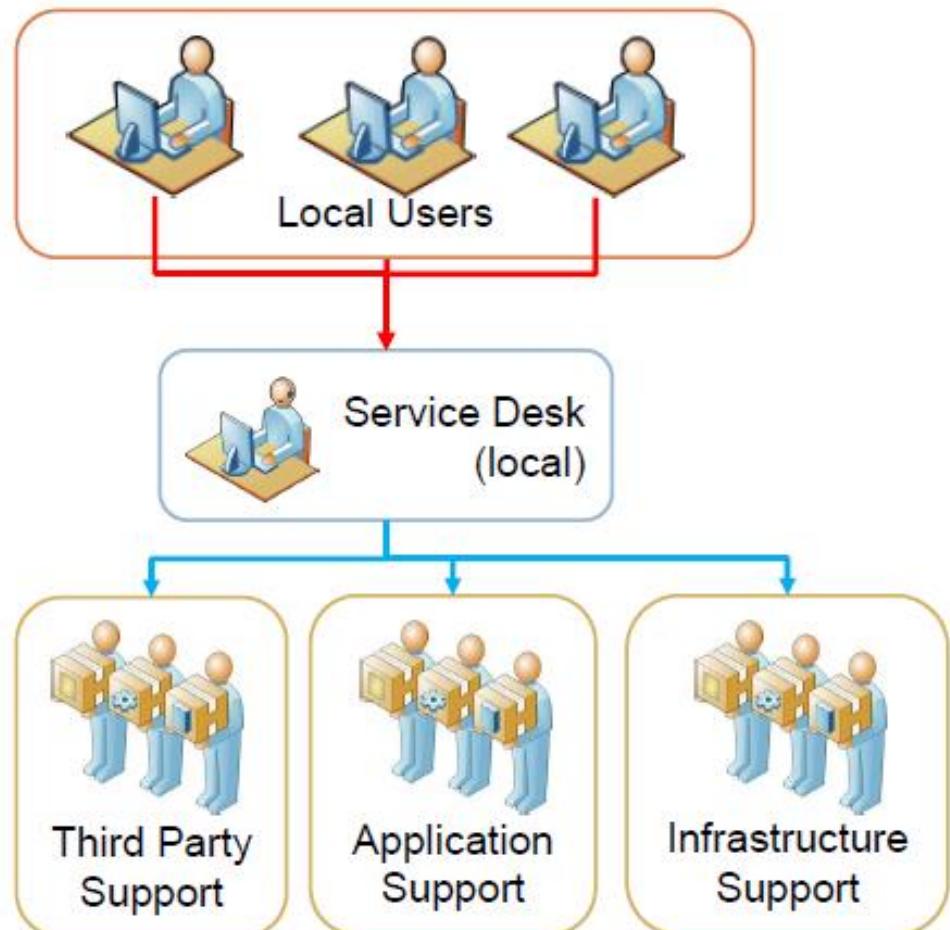
## Specialized

Expert staff dealing with particular IT service or service component

# Service Desk Function - Organisation Structures: Local

## Local

- Aids communication and gives a clearly visible presence
- Can often be inefficient and expensive to resource due to low call volumes
- Reasons for a Local service desk
  - Language and cultural or political differences
  - Different time zones
  - Specialized groups of users
  - VIP/criticality status of users

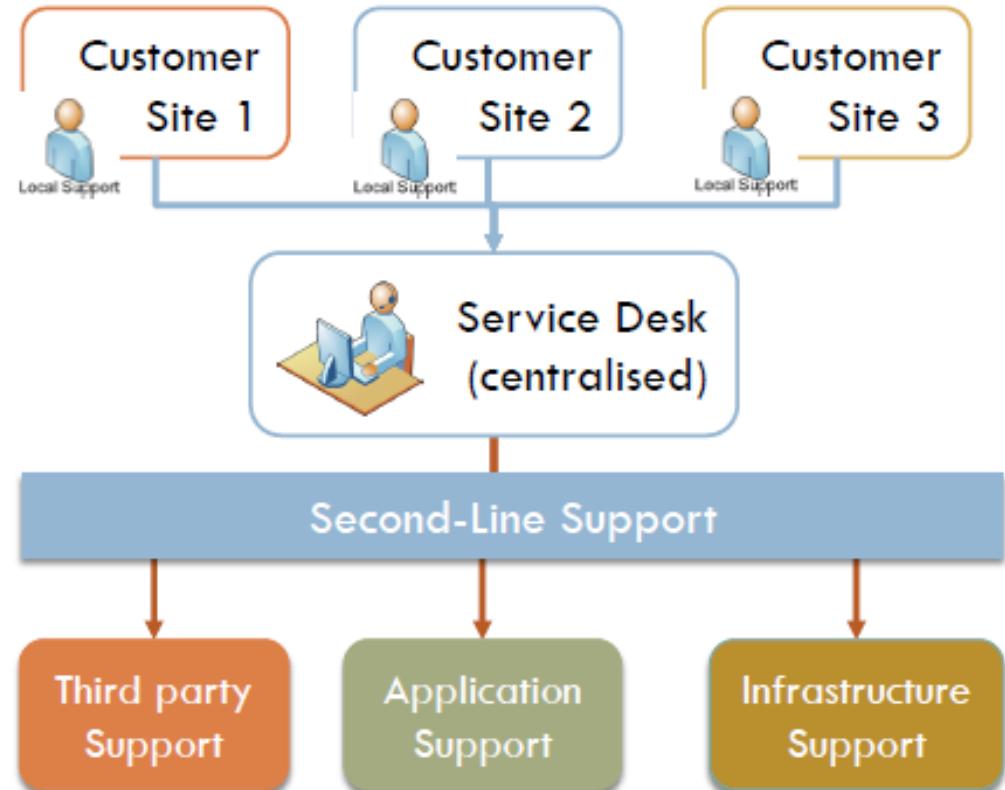


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# Service Desk Function - Organisation Structures: Centralized

## Centralized

- Local service desks merged into one or few locations.
- More efficient and cost-effective, allowing fewer overall staff to deal with a higher volume of calls.
- ‘Local presence’ to handle physical support requirements, but controlled and deployed from the central desk.

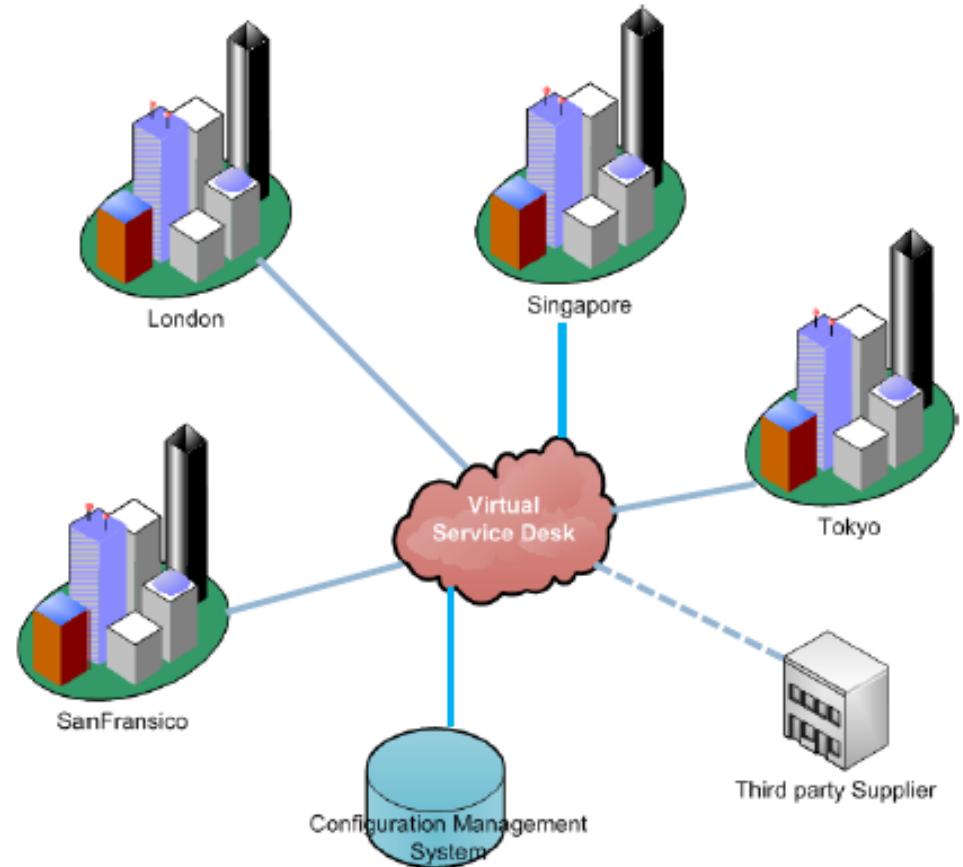


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# Service Desk Function - Organisation Structures: Virtual

## Virtual

- Single visible service desk which may actually be run by staff in multiple locations.
- Allows for ‘homeworking’, secondary support group, off-shoring or outsourcing – or any combination necessary to meet user demand.
- Safeguards are needed to ensure consistency and uniformity in service quality and cultural terms



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# Service Desk Function - Staffing

Correct number and qualification at any given time, considering

- Customer expectations and business requirements
  - E.g. call response time (SLA), budget
- Number of users to support, their language and skills
- Coverage period, out-of-hours, time zones/locations, travel time
- Processes and procedures in place, infrastructure for short breaks

Minimum qualifications

- Interpersonal skills, business and underlying IT understanding
- Skill sets
- Customer and technical emphasis
- Typing skills

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# Service Desk Function - Metrics

Periodic evaluation of health, maturity, efficiency, effectiveness and any opportunity to improve

Realistic and carefully chosen – total number of calls is not by itself good or bad

Some examples:

- First-line resolution rate
- Average time to resolve and/or escalate an incident
- Average Service Desk cost of handling an incident
- The number of calls broken down by time of day and day of week, combined with the average call-time

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# Role of Technical Management Function

The groups, departments or teams that provide technical expertise and overall management of the IT Infrastructure

Custodian of technical knowledge and expertise related to managing the IT Infrastructure.

Provides the actual resources to support the ITSM Lifecycle.

- Ensures that resources are effectively trained and deployed to design, build, transition, operate and improve the technology required to deliver and support IT services.

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# Technical Management Function - Purpose and Objectives

## Purpose

- To help plan, implement and maintain a stable technical infrastructure to support the organization's business processes.
- To provide hands on skills and resources to support the IT infrastructure.

## Objectives:

- Well designed and highly resilient, cost-effective infrastructure configuration.
- Use of adequate technical skills to maintain the technical infrastructure and to speedily diagnose and resolve any technical failures that do occur.

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# IT Operations Management Function

- Responsible for the day to day running of the IT infrastructure.
- Maintaining the “status quo” to achieve infrastructure stability.
- Identifying opportunities to improve operational performance and save costs.
- Initial diagnosis and resolution of operational incidents.

**IT Operations Control:** IT operations control oversees execution and monitoring of operational activities and events in the IT infrastructure with the help of an operations bridge or network operations center.

**Facilities Management:** Facilities management refers to the management of the physical IT environment, typically a data center or computer rooms and recovery sites together with all the power and cooling equipment. Facilities management also includes the coordination of large-scale consolidation projects, e.g. data center consolidation or server consolidation projects.

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# Role Application Management Function

Responsible for managing applications throughout their lifecycle.

- Custodian of technical knowledge and expertise related to managing application, whether purchased or developed in-house.
- It provides the actual resources to support the ITSM lifecycle
- Providing guidance to IT operations about how best to carry out the on-going operational management of applications.
- The integration of the application management lifecycle into the ITSM lifecycle

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# Application Management Function - Purpose and Objectives

## Purpose

- Application management is responsible for managing applications throughout their lifecycle.
- Application management is to applications what technical management is to the IT infrastructure

## Objectives:

- To help identify functional and manageability requirements for application software so as to support the organization's business processes.
- Assist in on-going support/maintenance/improvement of applications.

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# Application Development

**Application management working together with technical management, ensures that the knowledge required to design, test, manage and improve IT services is identified, developed and refined.**

Application Management	Application Development
It is on-going set of activities to oversee and manage applications throughout their entire lifecycle.	It is one time set of activities to design and construct application solutions.
Performed for all applications, whether purchased from third parties or developed within the organization.	Performed for applications developed within the organization.
It focuses on both utility and warranty aspects	It focuses only on the utility aspect.
It focuses both on functionality and the delivery procedures of the final product.	Its main focus is to build functionality for their customers.
Also focuses on the manageability aspects of the application.	Mainly interested in the functions of the application than how it is operated.

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# Service Operations - Summary

<b>Purpose</b>	Coordinate and carry out the activities and processes required to deliver and manage services at agreed levels to business users and customers (including the ongoing management of technology to deliver and support services)
<b>Key Concepts</b>	<b>Processes</b> <ul style="list-style-type: none"><li>▪ Event<ul style="list-style-type: none"><li>▪ Information</li><li>▪ Warning</li><li>▪ Exception</li></ul></li><li>▪ Service Request</li><li>▪ Incident</li><li>▪ Major Incident</li><li>▪ Problem</li><li>▪ Known Error (KE)</li><li>▪ KEDB</li></ul> <b>Functions</b> <ul style="list-style-type: none"><li>▪ Event Management</li><li>▪ Access Management</li><li>▪ Request Fulfillment</li><li>▪ Incident Management</li><li>▪ Problem Management</li></ul> <ul style="list-style-type: none"><li>▪ Service Desk</li><li>▪ Technical Management</li><li>▪ Applications Management</li><li>▪ IT Operations Management</li></ul>

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## Which of the following is NOT a type of Service Desk?

- A. Local Service Desk
- B. Central Service Desk
- C. Virtual Service Desk
- D. Configuration Service Desk

**Answer : D**

Local SD, Centralized SD, Virtual SD, Follow the sun, Specialized SD are the types of Service Desk

# Quiz

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A request from a user for information or advice, or for a Standard Change or for access to an IT service is \_\_\_\_\_.

- A. Service Request
- B. Request Model
- C. Incident Request
- D. Problem Model

Answer : A

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## Which among the following is NOT a process of Service Operation?

- A. Problem Management
- B. Technical Management
- C. Incident Management
- D. Request Fulfillment

Answer : B

Technical Management is one of the function of Service Operation

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## What is the objective of Access Management?

- A. To provide security staff for Data Centers and other buildings
- B. To manage access to computer rooms and other secure locations
- C. To manage access to the Service Desk
- D. To manage the right to use a service or group of services

**Answer : D**

### **Objectives of Access Management:**

- To grant authorized users the right to use a service and deny access to unauthorized users
- To execute policies and actions defined in security and availability management

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## What are the two major processes of Problem Management?

- A. Technical and Service
- B. Resource and Proactive
- C. Reactive and Proactive
- D. Reactive and Technical

Answer : C

# Module 5.5: Lifecycle Phase 5 – Continual Service Improvement



## Processes

- Seven Step Improvement

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# Continual Service Improvement: Purpose and Objectives

## Purpose

- To align IT services with changing business needs by identifying and implementing improvements to IT services and processes that support the business.
- Improve effectiveness, efficiency and economics of all processes associated with delivering services.

## Objectives:

- Review, analyze, prioritize and make the recommendations on improvement and opportunities in each lifecycle stage.
- Review and analyze service level achievement.
- Identify and implement specific activities to improve IT service quality and improve the efficiency and effectiveness of the enabling processes.

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# Continual Service Improvement: Scope

## Scope of CSI:

- Overall health of ITSM. It takes care of entire ITSM as well as all dependent services.
- Continual alignment of the service portfolio with business needs.
- After implementing and operating processes, CSI helps maturing the processes.
- Continual improvement of all aspects of IT service and service assets that support them.

## Organization's need to:

- Review management information and trends of service delivery.
- Ensure outputs of enabling ITSM are achieving results.
- Conduct audits to access maturity of process, compliance of processes.
- Conduct customer satisfaction surveys.

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# Continual Service Improvement: Value to Business

Adopting and implementing standard and consistent approaches for CSI will:

- Lead to a gradual and continual improvement in service quality, where justified.
- Ensure that IT services remain continuously aligned to business requirements.
- Result in gradual improvements in cost effectiveness through a reduction in costs and/or the capability to handle more work at the same cost.
- Use monitoring and reporting to identify opportunities for improvement in all lifecycle stages and in all processes.
- Identify opportunities for improvements in organizational structures, resourcing capabilities, partners, technology, staff skills and training and communications.

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# CSI and Organizational Change

- Organizational change is required for achieving successful CSI
- Organizational change comes with challenges which need to be managed well for successful CSI
- Use formal approaches to address people-related issues:
  - John Kotter's "Eight steps to transforming your organization"
  - Project Management

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# Continual Service Improvement: CSI Register

- The **CSI Register** is used to record and manage improvement opportunities throughout their lifecycle. The addition of new entries to the CSI Register is typically triggered by Continual Service Improvement.
- Improvement initiatives are either :
- Internal initiatives pursued by the service provider on his own behalf, for example to improve processes or make better use of resources.
- Initiatives which require the customer's cooperation, for example if some of the agreed service levels are found to be no longer adequate.
- And it is important that all initiatives are recorded, captured and benefits realized.
- The CSI manager should have accountability and responsibility for the preparation and maintenance of the CSI register

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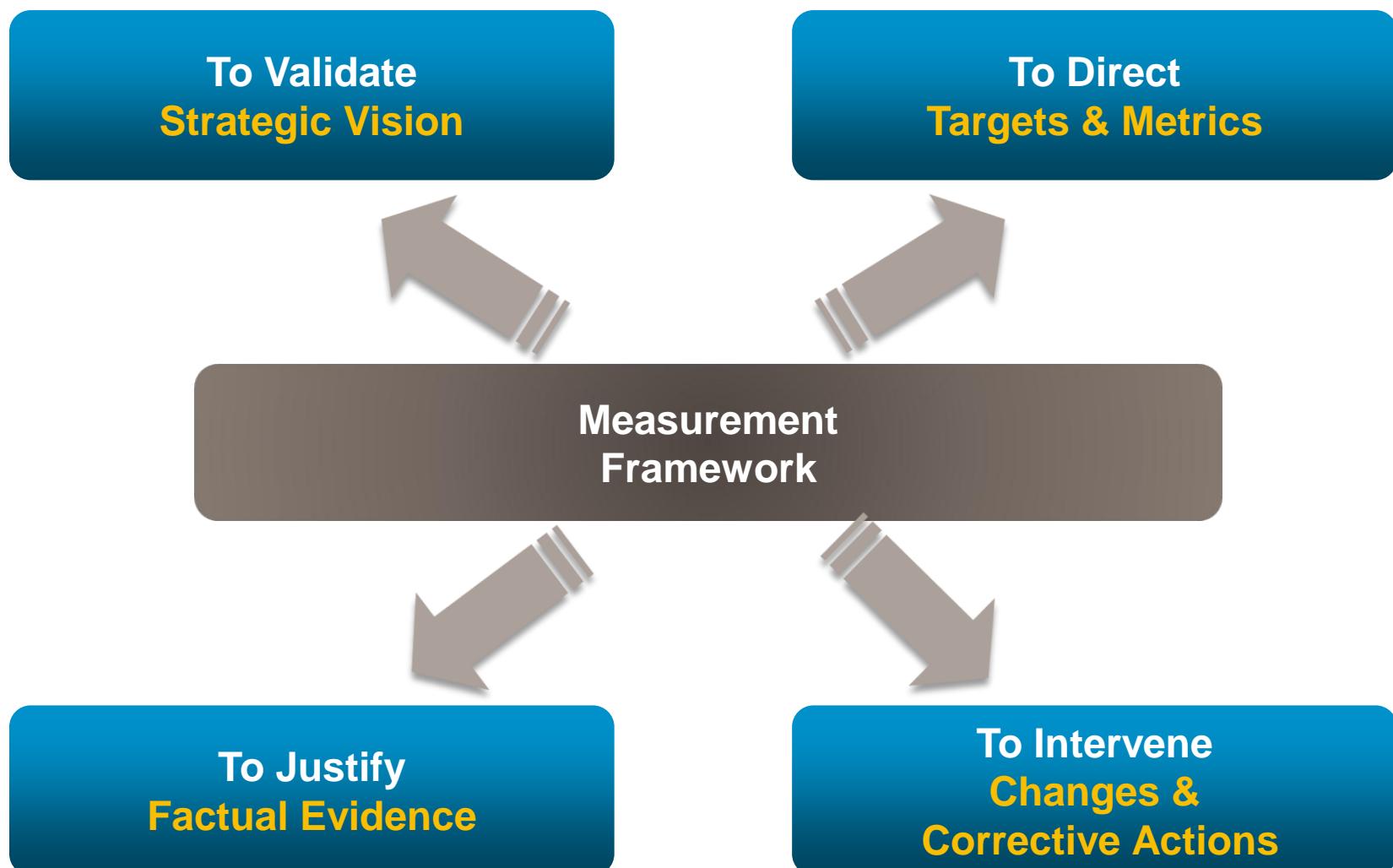
# Continual Service Improvement: Service Measurement

The ability to predict and report service performance against targets of an end-to-end service is known as service measurement.

- Will require someone to take the individual measurements and combine them to provide a view of the customer experience.
- This data can be analyzed over a period of time to produce a trend.
- This data can be collected at multiple levels (for example, CIs, processes, services).

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# Continual Service Improvement: Why Monitor & Measure



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# Continual Service Improvement: Types of Metrics

**Technology Metrics:** Mostly associated with component and application-based metrics such as performance, availability etc.

**Process Metrics:** Measure the performance of service management processes based on Key Performance Indicators (KPIs) which stem from Critical Success Factors (CSFs)

- KPIs can help answer questions around quality, performance, value and compliance of following the process
- These metrics are inputs to improvement opportunities for each process

**Service Metrics:** End-to-end service

- Component metrics are used to compute the service metrics

# Continual Service Improvement: Measurement & Metrics

Measurement and metrics consists of:

- **Critical Success Factors:** It is the term for an element that is necessary for an organization or project to achieve its mission.
- **Key Performance Indicators:** A set of quantifiable measures that a company or industry uses to gauge or compare or evaluate performance in terms of meeting their strategic and operational goals.
- **Baselines:** A benchmark used as starting point or reference point for later comparisons

Critical Success Factors	Key Performance Indicators
<ul style="list-style-type: none"><li>▪ Elements that are vital for a strategy to be successful.</li><li>▪ Drives the strategy forward, it makes or breaks the success of the strategy.</li><li>▪ Example: CSF = Installation of a call center for providing superior customer service (and indirectly, influencing acquiring new customers through customer satisfaction).</li></ul>	<ul style="list-style-type: none"><li>▪ KPIs are measures that quantify management objectives, along with a target or threshold, and enable the measurement of strategic performance.</li><li>▪ Example: KPI = Number of new customers. (Measurable, quantifiable) + Threshold = 10 per week [KPI reached if 10 or more new customers, failed if &lt;10]</li></ul>

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# Continual Service Improvement: Key Definitions

**Improvement** – Favorable outcome showing a measurable increase in a desirable metric or a decrease in an undesirable metric. Example: XYZ Corp achieved 15% reduction in failed and backed out changes through implementation of formal Change Management process.

**Benefits** – The gains achieved through realization of improvements, it may or may not be always expressed in monetary terms. This is generally associated with ROI or VOI. Example: XYZ Corp's 15% reduction in failed and backed out changes has resulted in productivity improvement and decrease in rework with a net benefit of \$498,000

**ROI (Return on Investment)** – The difference between benefit (savings) achieved and expended amount, usually expressed as a percentage. It is quantifiable monetary benefit. Example: XYZ Corp spent \$200,000 for implementation of formal change management process that saved \$498,000. The ROI at the end of first year of operation is 149% (\$298,000).

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# Continual Service Improvement: Key Definitions (cont'd)

**VOI (Value on Investment)** – Non monetary benefit, such as branding, achieved by expending a certain amount of money. ROI is sub-component of VOI. Example: XVZ Corp's establishment of formal Change Management process improved the ability of organization to respond quickly to changing market conditions.

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# Continual Service Improvement: PDCA - Deming Cycle

## Plan:

- Establish the objectives and processes necessary to deliver results in accordance with customer requirements and the organization's policies.

## Do:

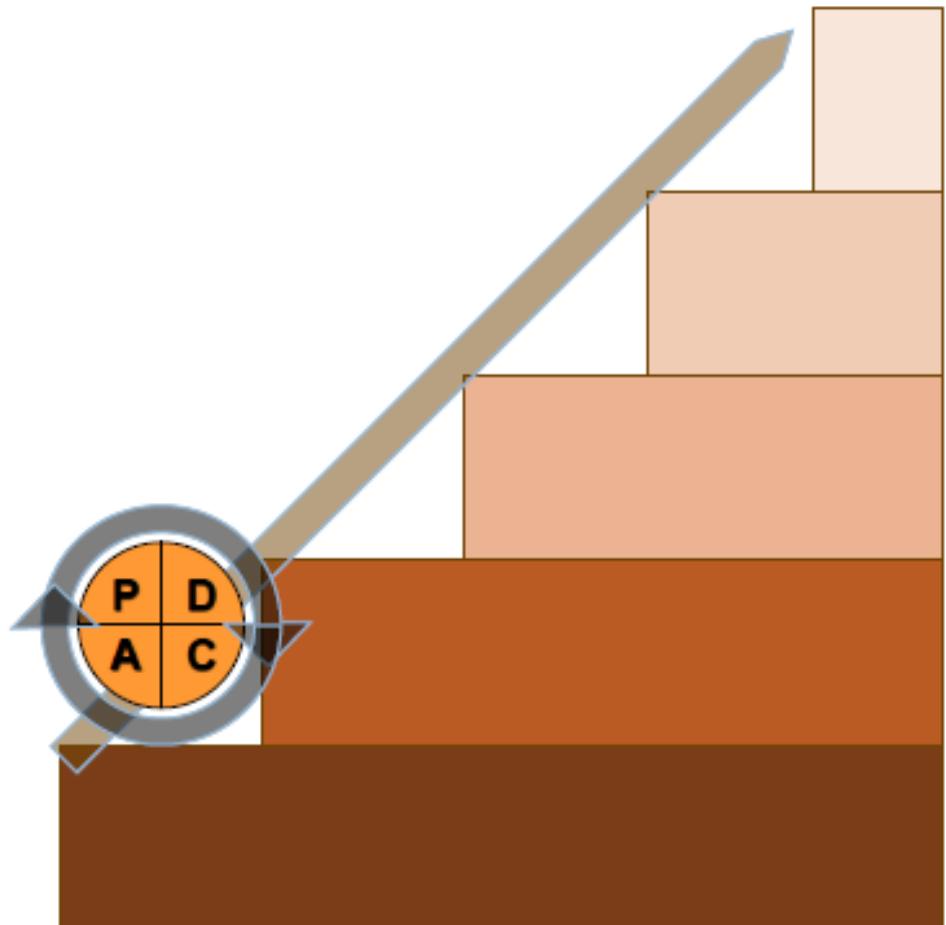
- Implement the processes.

## Check:

- Monitor and measure processes and product against policies, objectives and requirements for the product and report the results.

## Act:

- Take actions to continually improve process performance.



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# Continual Service Improvement - Processes

## Seven Step Improvement Process

# Seven Step Improvement Process - Purpose and Objectives

## Purpose

- *The purpose of the seven step improvement process is to define and manage the steps needed to identify, define, gather, process, analyze, present and implement improvements.*

## Objectives:

- *Identify opportunities for improving services, processes, tools, etc.*
- *Reduce the cost of providing the services and ensuring that IT services enable the required business outcomes to be achieved.*
- *Identify what needs to be measured, analyzed and reported, to establish improvement opportunities.*
- *Continually review service achievements to ensure they remain matched to business requirements, continually align and re-align service provision with outcome requirements.*
- *Understand what to measure, why it is being measured and carefully define the successful outcome.*

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# Seven Step Improvement Process - Scope

The seven step improvement process includes analysis of the performance and capabilities of services, processes throughout the lifecycle, patterns and technology.

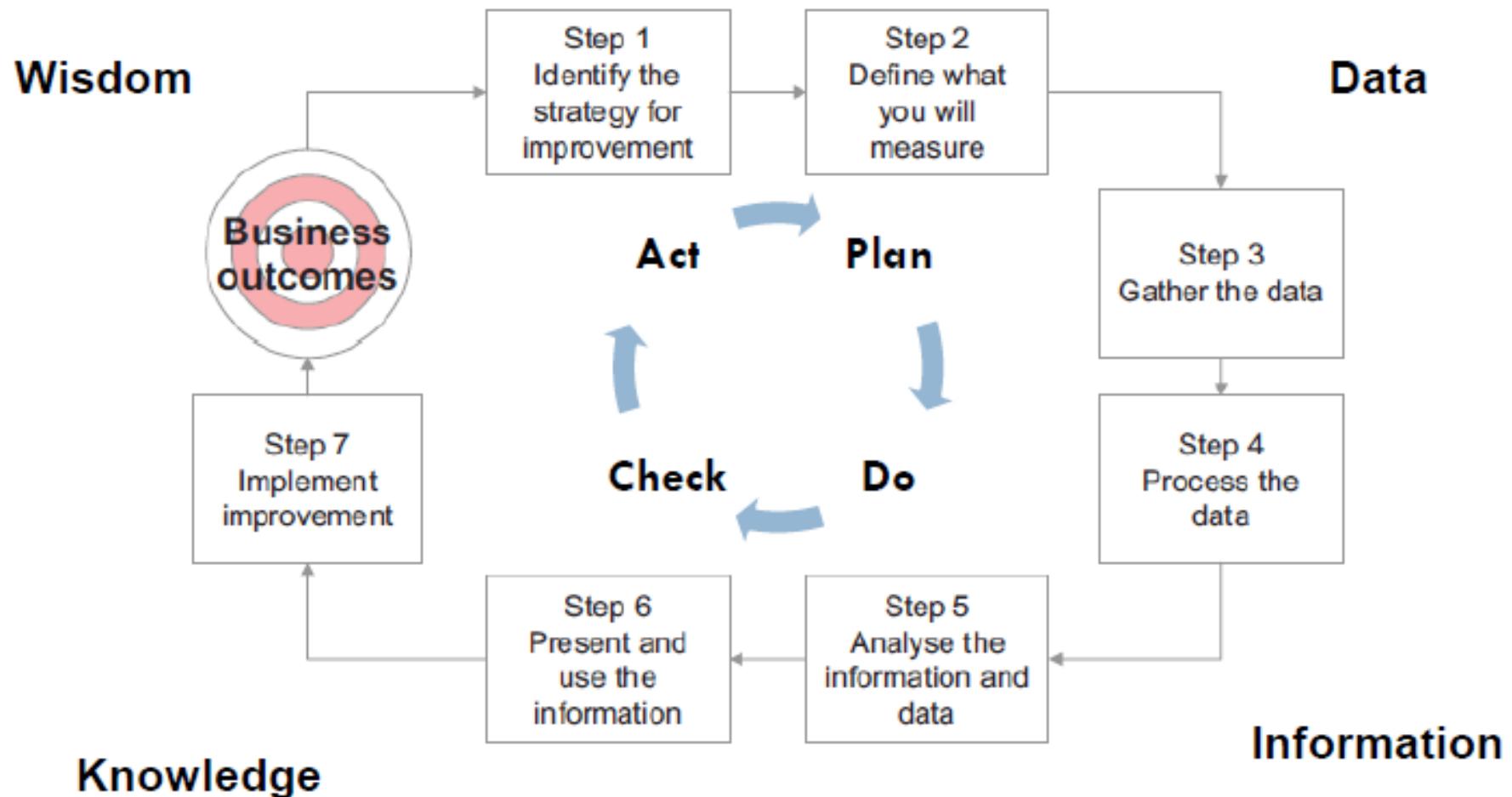
It includes the continual alignment of the portfolio of IT services with the current and future business needs as well as the maturity of the enabling IT processes for each service.

It also includes making best use of the technology that the organization has and looks to exploit new technology as it becomes available where there is a business case for doing so.

Also within the scope are the organizational structure, the capabilities of the personnel, and asking whether people are working in appropriate functions and roles, and if they have the required skills.

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# Seven Step Improvement Process - PDCA Cycle



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# Continual Service Improvement Model



Measurements and Management
You Cannot Manage What you Cannot Control
You Cannot Control What you Cannot Measure
You Cannot Measure What you Cannot Define

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# Continual Service Improvement - Summary

## Purpose

Continual Service Improvement is the phase that binds all the other elements of the Service Lifecycle together and ensures that both the services and the capabilities for providing them continually improves and matures.

## Key Concepts

- CSI Register
- CSI Model
- Measurement Framework
- Types of Metrics

## Processes

- Seven Step Improvement Process

# Quiz

**What is the CORRECT set of steps in the Continual Service Improvement (CSI) approach?**

- A. Devise a strategy; Design the solution; Transition into production; Operate the solution; Continually improve
- B. ‘Where do we want to be?'; ‘How do we get there?'; ‘How do we check we arrived?'; ‘How do we keep the momentum going?’
- C. Identify the required business outcomes; Plan how to achieve the outcomes; Implement the plan; Check the plan has been properly implemented; Improve the solution
- D. ‘What is the vision?'; ‘Where are we now?'; ‘Where do we want to be?'; ‘How do we get there?'; ‘Did we get there?'; ‘How do we *keep the momentum going?*’

**Answer : D**

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# Quiz

**Which three types of metric support Continual Service Improvement (CSI) activities?**

- A. Technology metrics, service desk metrics and Key Performance Indicator (KPI) metrics
- B. Process metrics, software metrics and financial metrics
- C. Technology metrics, process metrics and service metrics
- D. Service metrics, technology metrics and Key Performance Indicator (KPI) metrics

**Answer : C**

Technology, process and service are the three types of metric that support CSI activities, as stated in the CSI publication.

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## Where would all the possible service improvement opportunities be recorded?

- A. CSI register
- B. Known error database
- C. Capacity management information system
- D. Configuration management database

Answer : A

The CSI register contains all improvement opportunities to be considered.

The known error database (answer B), as indicated by the name, contains known errors. The capacity management information system (answer C) contains the business, service and component data to allow the capacity management process to function. The CMDB (answer D) contains CI information.

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## Check, Plan and Act are three stages of the Deming Cycle. Which is the fourth?

- A. Perform
- B. Do
- C. Measure
- D. Implement

**Answer : B**

The four stages of Deming Cycle (PDCA Cycle) are Plan, Do, Check, Act

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## Which of the following is NOT an objective of Continual Service Improvement?

- A. Review and Analyse Service Level Achievement results
- B. Identify activities to improve the efficiency of service management processes
- C. Improve the cost effectiveness of IT services without sacrificing customer satisfaction
- D. Conduct activities to deliver and manage services at agreed levels to business users

Answer : D



# Module 6: Summary and Exam Preparation

# ITIL® Foundation Exam Pattern

Type	Online, multiple choice, 40 questions. The questions are selected from the full ITIL® Foundation in IT Service Management examination question bank.
Duration	Maximum 60 minutes. Candidates sitting the examination in a language other than their native language have a maximum of 75 minutes
Supervised	Yes
Open Book	No
Pass Score	65% (26 out of 40)
Where?	AEC Authorised Examination Centres

# Sample Papers

#	Sample Paper	Answer with Rationales
1	 <a href="#">ITIL_FND_2011_EN_Sample_PaperC_v1</a>	 <a href="#">ITIL_FND_2011_Rationale_EN_Sample_Pap</a>
2	 <a href="#">ITIL_FND_2011_EN_SamplePaperD_v1</a>	 <a href="#">ITIL_FND_2011_Rationale_EN_SamplePap</a>



Thank you



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