



# University of Dar es Salaam

## Computing Centre



# Strategic Management of ICT in the Public Sector (SMICT)

## *Module 5: IT Service Management*

Introduction/IT Governance Foundation

IT Strategic  
Planning

Business/IT  
Alignment

IT Project  
Management

IT Service  
Management

IT Performance Management

*In collaboration with*



# Module Objectives



- Explain the concept of IT Service Management
- Understand ITSM Management processes  
Understand ITSM Frameworks & Standard
- Identify and explain the key processes of IT Service Management based on Service life cycle
- Explain the Quality of IT Services
- Understand Application of IT service management in Public sector



# Module Outline



- IT Service Management Overview
- IT Service Management Processes
- Frameworks, standards and tools for ITSM
- Introduction to an ITSM Framework case of ITIL
- IT service management (ISO 20000), its relation with ITIL in Public sector
- ITSM implementation Best practice
- Case Study on IT Service Management



# IT Service Management Overview



# What Is IT Service Management?




- A set of formalised policies and procedures (based on best IT practices) whereby IT services are planned, operated, managed and controlled for the benefit of an organisation .

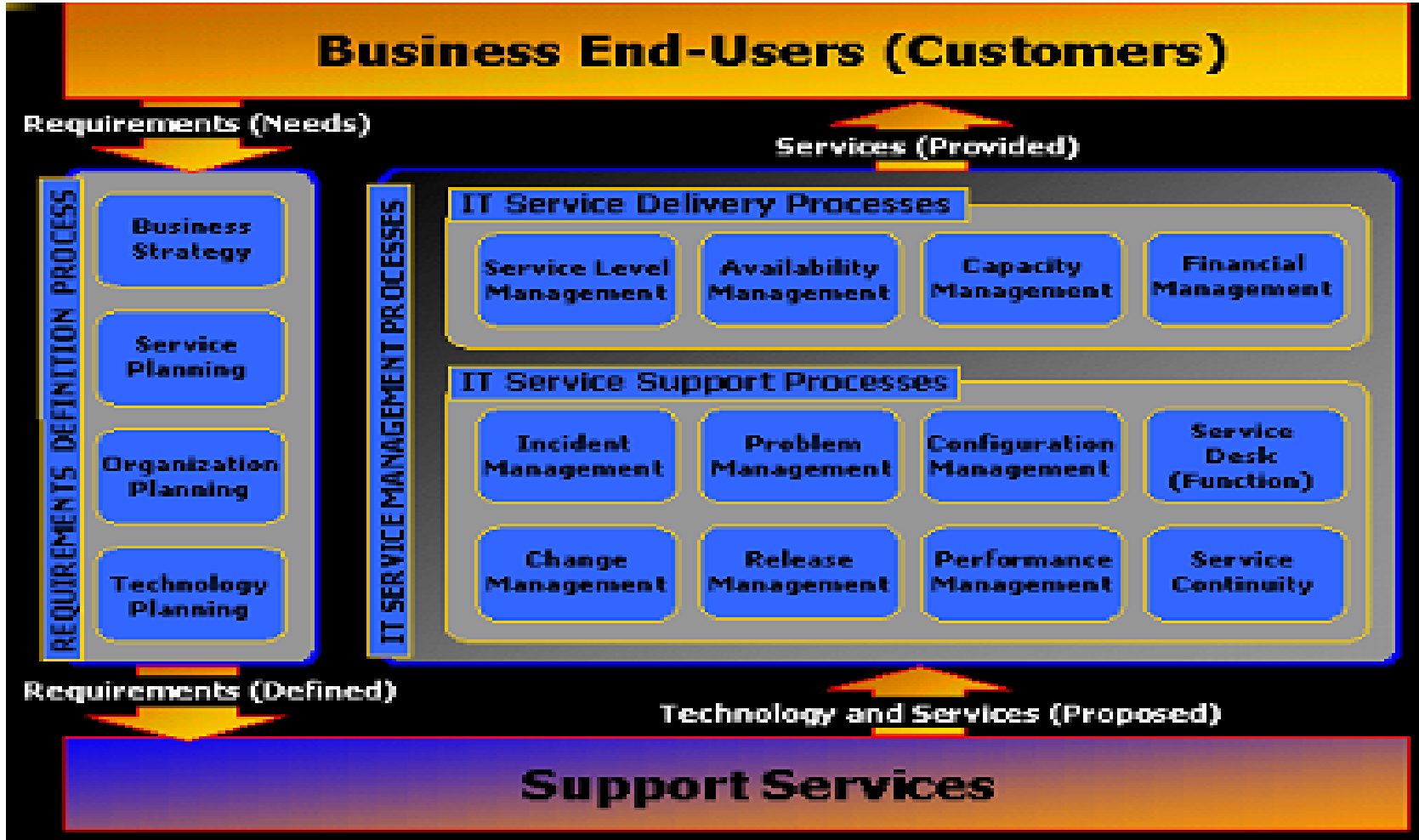
The following represents a characteristic statement from the ITSM literature:

*Providers of IT services can no longer afford to focus on technology and their internal organisation, they now have to consider the **quality of the services** they provide and **focus on the relationship with customers.***

# Business-IT Paradigm

	Traditional IT		ITSM Process
1	Technology focus		Process Centric
2	Reactive (firefighting)		Pro-Active( Preventive)
3	Isolated		Integrated
4	Internal IT Perspective		Customer Perspective
5	IT performance Measures		Services Performance

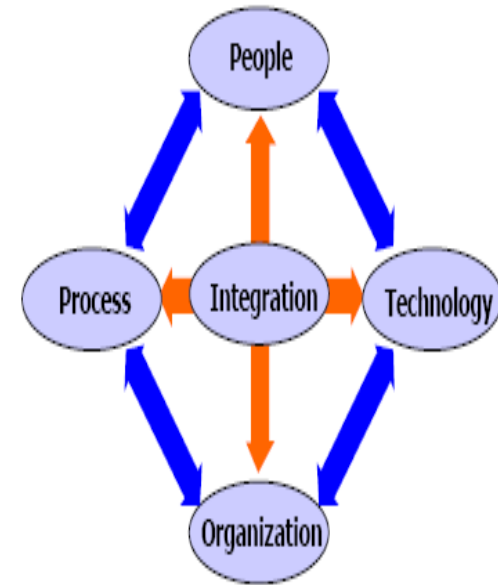
# ITSM Methodology



# ITSM INTERGRATION PERSPECTIVE



- **People** - quantity and quality of expertise and knowledge .
- **Process** - IT and organization specific practices, procedures, guidelines, etc.
- **Technology** - total logical and physical technology infrastructure consisting of hardware, software, communication networks, applications.
- **Organization** - internal and external business factors that affect IT, how IT and the organization interface, what is the organizations "corporate culture", what is the organization's direction and how does that affect IT.
- **Integration** - how is IT integrated within the business model, what services does IT provide, how are the services provided, and how are best practices employed within IT.



# IT Service Management Focal Points



## People

- How people are grouped within the organization, What is their expertise and where do they fit into that organization?

## Processes

- How are activities performed? Are they done effectively and efficiently?

## Technology

- What Technology and tools are used to manage the information?

## Information

- What measurements metrics and reports are required collected and managed? Is there success criteria?

## Service

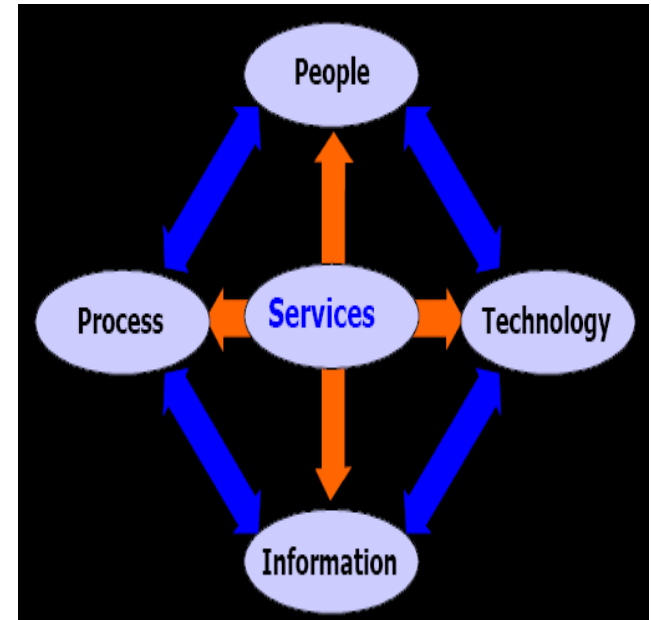
- What are they? What is the cost ?How are they aligned to business requirements and how are they delivered?
- What is the level of service, cost and perceived value of services provided ?,How does this help satisfy business requirements?



# ITSM Objectives

- To enable Effectively, efficient and adaptable IT Service to the business
- Cooperation, coordination Communication and Commitment
- Phased, planned Implementation with minimal disruption to the business
- Agreed to and realistic objectives and achieved
- Utilize effective project and knowledge management

**People** with the appropriate subject matter expertise the right **information**, executing **technology** enabled **processes** that are well defined in order to deliver high quality **services** that **satisfy business requirements**



# Why IT Service Management?

- Meet requirements of stakeholders and customers
- Demonstrate commitment to integrity, service and quality
- IT is now so important that many organisations cannot survive without it.

# Top Ten Concerns of IT Directors / CIO



1. Aligning IT strategy with business strategy.
2. Meeting business and user needs.
3. Coping with change.
4. Dealing with senior management.
5. Managing costs, budgets and resources.
6. Keeping up with technology.
7. Recruiting and retaining staff.
8. Time and resource management.
9. Infrastructure management.
10. Maintaining skills and knowledge



# How ?

- Get top/ executive support
- Establish policies, objectives, etc
- Educate and communicate
- Provide resources
- Conduct reviews
- Document and record
- Ensure customer/ Citizen requirements are met



# Drivers For IT service Management

- **The business drivers:-**
- IT is seen as an enabler of business change and is, therefore, an integral component of the business change programme
- There is additional focus on the quality of IT in terms of reliability, availability, capacity and security
- IT performance becomes even more visible (for example, the Internet) - outages and dissatisfaction increasingly become management issues
- **The technology drivers:-**
- Understand business operations and advise the business on the possibilities and limitations of IT.
- Accommodate more technology change, with a reduced cycle time for realizing change
- Ensure that quality of delivery and support matches the business use of new technology





# Why Should Public Sector implement ITSM?

- ITSM emphasises that IT should be seen as a service to the business.
- ITSM could be (part of) a Quality Management strategy to improve the quality of the IT Service for the business.
- Introducing clear processes should enable the MDA to grow and/or bring on more staff more easily.
- Being based on a “best practice” approach means that you do not have to reinvent the wheel.
- Cost reduction - Standardising “how you do things” can simplify and reduce costs.
- Professionalism / Clear points of contact with external organisations and stakeholders.





# Key Outcomes

- Managing Service Levels
- Managing Performance
- Managing Collaboration
  - “Managing work Vs doing the work

Do Less ,Accomplish More”





# Issues and challenges?

- Informal agreements within and Outside the organization
- Varying document standards
- Reactive service Support Processes (firefighting)
- Non-standard approach to similar processes
- No clear ownership
- Processes not transparent to Customer
- Inconsistent definition of priorities
- Understanding and Acceptance of IT Service Management
- Understanding and Acceptance of ITIL
- Managing the Culture Change
- How do we meet these challenges?  
Through training and agreement, agreement, agreement

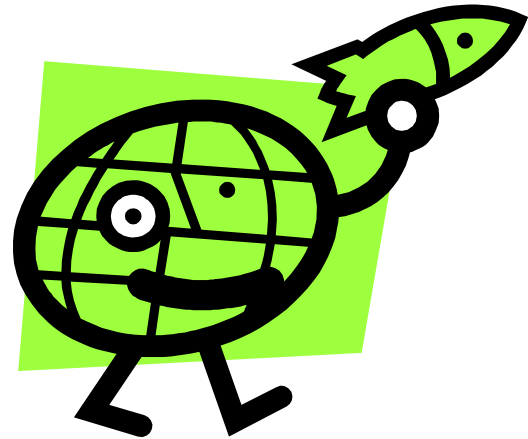


# Group Discussion?

- What are the key issues should ITSM address for your organization (List at least three) One slide each



# IT SERVICE MANAGEMENT PROCESS

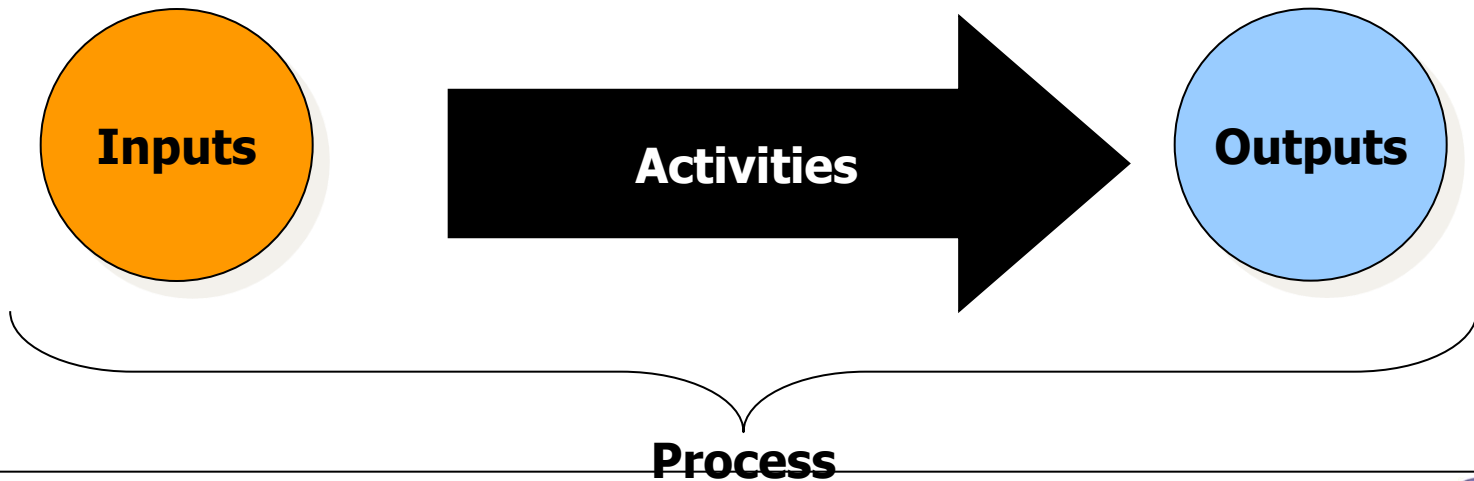


# Definition -Function?

- A function is a sub-division of an organization that is specialized in fulfilling a specified type of work, and is responsible for specific end results
- Functions are independent subdivisions with capabilities and resources that are required for their performance and results

# Definition -Processes

- A structured set of activities designed to accomplish a specific objective
- Transforms inputs into outputs





# Examples of Function and Process

- Services Desk
- Change management
- Availability management
- IT operation

# Availability Management

- The goal is optimize the capacity of the IT infrastructure, services, and supporting organization to deliver a cost effective and sustained level of availability enabling IT to meet their objectives.
- Aims to reduce the occurrence and duration of service unavailability
- Ability of a service or component to perform its required function over a stated period of time.

# Think in terms of Processes rather than Skills?

## Functional Organization



## Process Approach

Using a Process Approach, we no longer think in terms of individual technical teams “doing their own thing”.

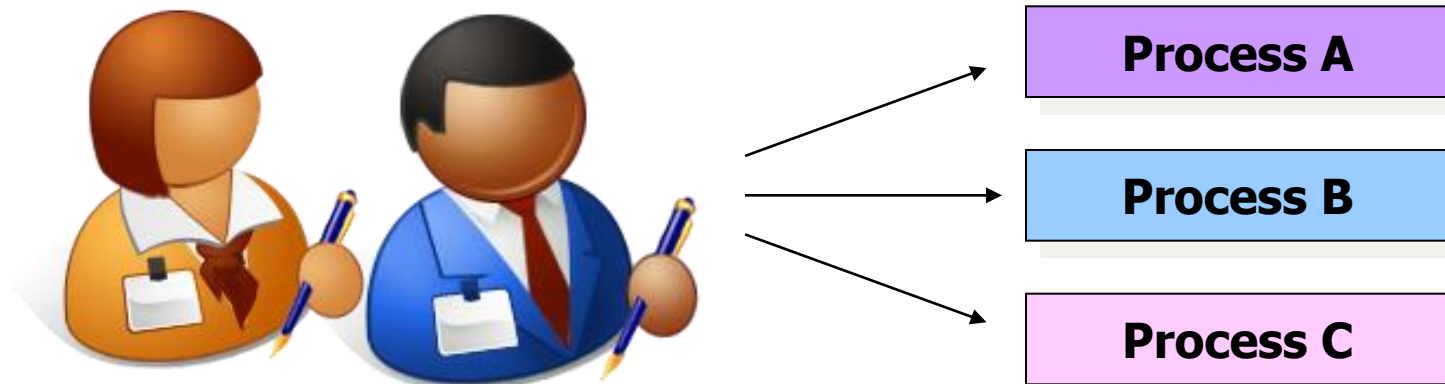
Rather we think in terms of the overall goal which should be directed to the main goals of the organization.

# Process Characteristics

- Measurable – performance driven; cost, quality, duration, productivity
- Deliver a specific result that is individually identifiable & measurable
- Deliver results to a customer or stakeholder (internal or external)
- Respond to a specific event – traceable to a single trigger

# Processes & People

- People can play multiple roles within various processes while having one job
- Each process in the ITIL lifecycle has one **Process Owner**



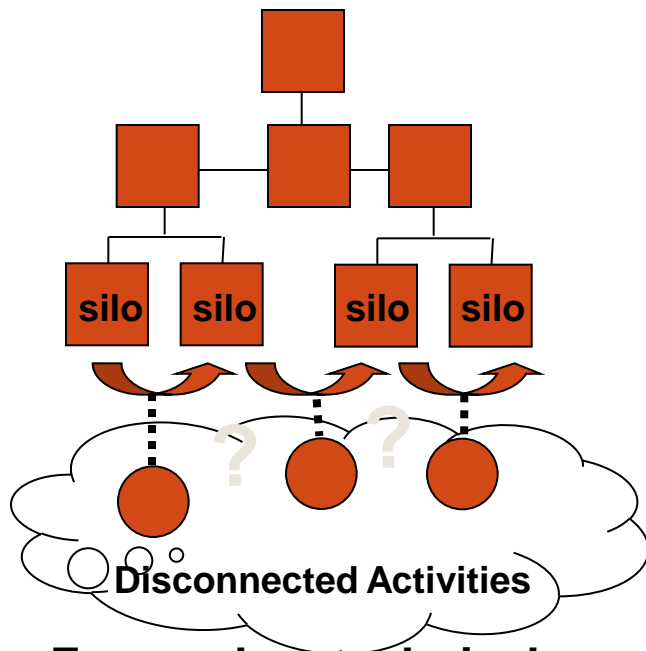
# Quote

- QUOTE
- If you can't describe what you are doing as a process, you don't know what you're doing.
- 94% of problems in Organizations are due to bad systems and structure ,not bad people.

W.Edward Deming (PDAC)

# Processes and Structure-Getting focused on Customer

## Silo Structure

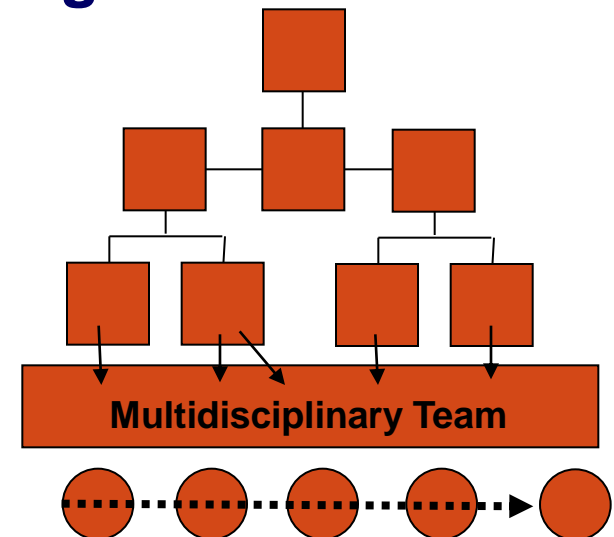


**Focused on technical activities or platforms**

**Functional Alignment**

**Worst Practice**

## Integrated Structure



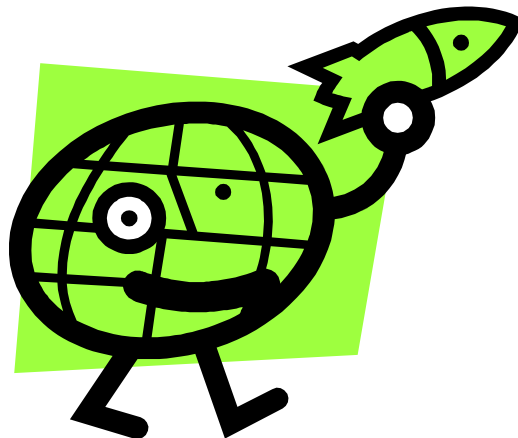
**Coordinated Activities**

**Focused on outcomes and the end-user experience**

**Process Alignment**

**Best Practice-The need of ITIL**

# ITSM FRAMEWORK AND STANDARD



# ITSM Standards and Frameworks in Practices



*Some typical ITSM standard and frameworks practiced worldwide today ...*

Name	Description
BS 15000	This was adopted by UK based organisations for their needs
ISO20000	This standard was fast tracked by the International Standards Organisation and adopted as a ISO standard, ISO 20000
FITS	IT in UK schools
ITIL	Although the UK Government originally created the ITIL, it was rapidly adopted across Europe as the standard for best practice in the provision Of IT Service
	Although the ITIL covers a number of areas, its main focus is on IT Service Management
MOF	Microsoft Operating Framework
COBIT	Publication from the United States



# What's ITIL?

ITIL (Information Technology Infrastructure Library) is a framework of best practices approaches intended to facilitate the delivery of **high quality information technology services.**

- Wikipedia

- A series of publications e. Service support
- Best Practices for IT Service Management
  - Processes
  - Guidelines
  - Checklists
- Worldwide Industry standard

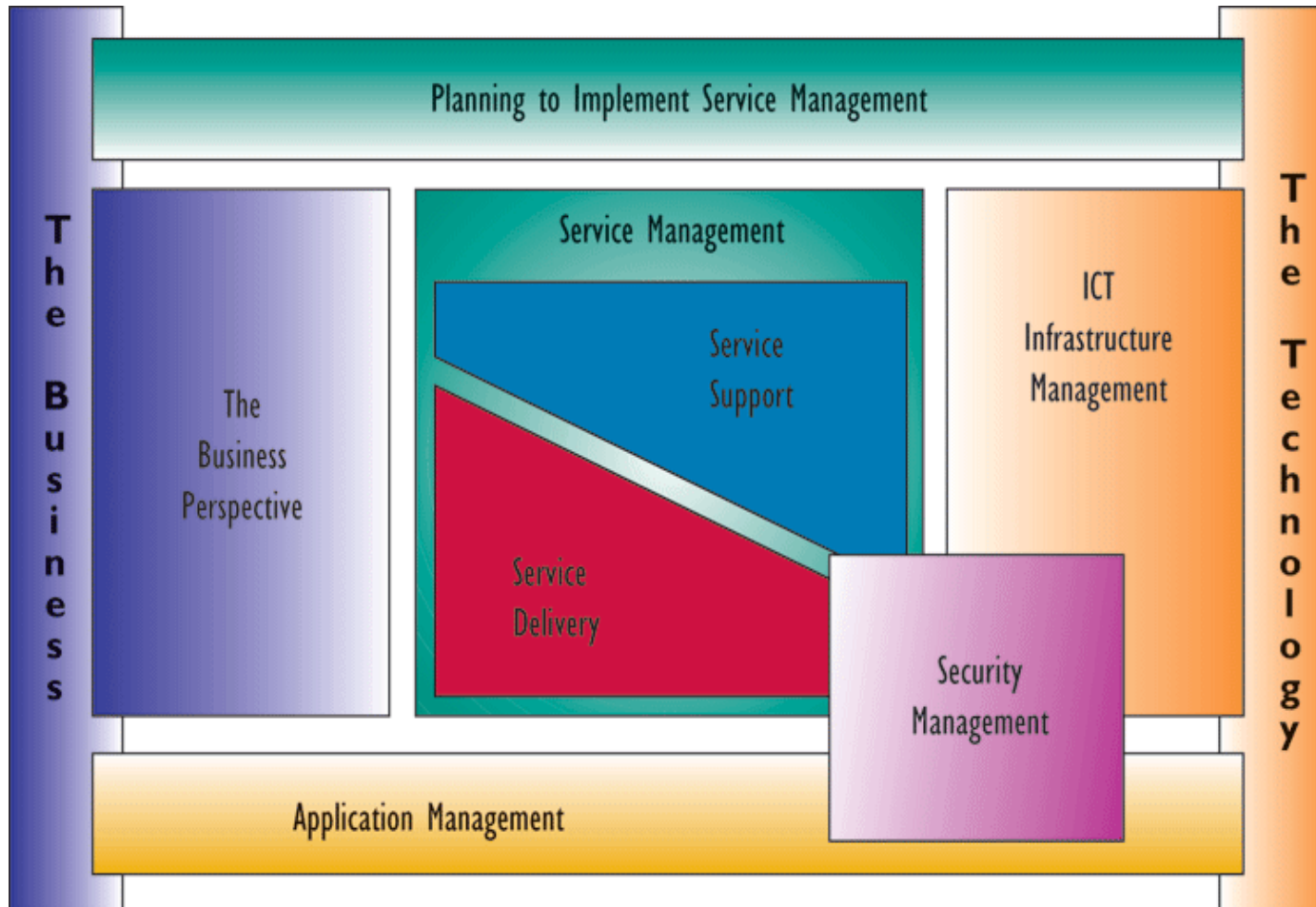
# History of ITIL?

- ITIL started in 80s.
  - 40 publications!
- v2 came along in 2000-2002
  - Still Large and complex
  - 8 Books
  - Talks about **what** you should do and not **how** you should do

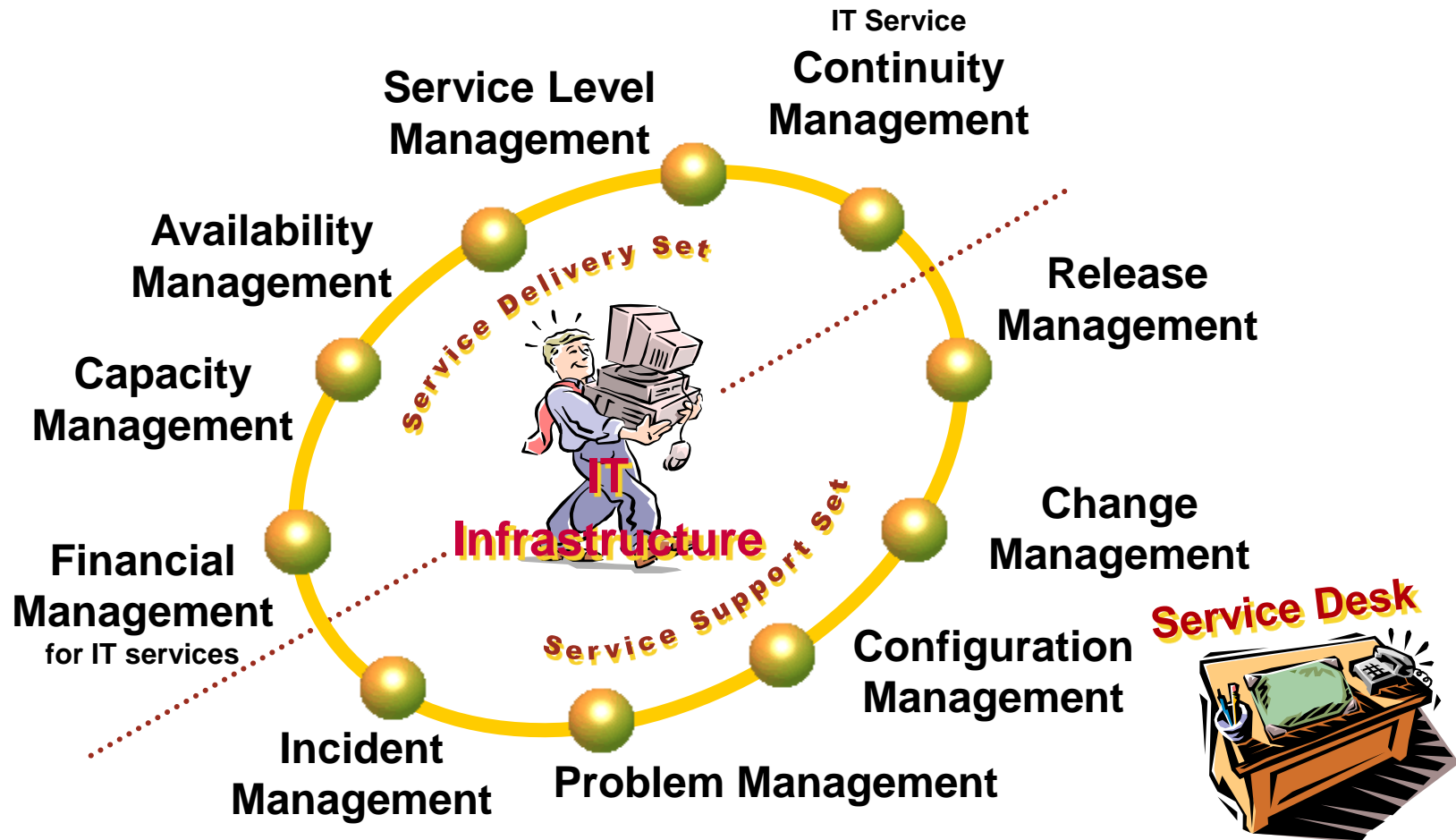
# ITIL V2

- ITIL v2 consists of eleven processes in two IT service management areas, plus a function:
  - IT Service Support: Incident, Problem, Configuration, Change, Release Management
  - IT Service Delivery: Service Level, Financial, Capacity, Service Continuity, Availability
  - Service Desk
- These processes relate to and support one another.
  - Resource: [Service Support](#) and [Service Delivery](#)
- For more details, become ITIL Foundation certified!

# ITIL V2 Framework and Process



# ITSM Components?



# What about ITIL V3?

- ITIL v3 in 2007 current version
  - Much simplified and rationalised to 5 books
  - Much clearer guidance on how to provide service
  - Keeps tactical and operational guidance
  - Gives more prominence to strategic ITIL guidance relevant to senior staff
  - Aligned with ISO20000 standard for service management
  - Service life cycles
  - ITIL v3 explain **how** to implement



# Comparison Between ITIL V2&3?

NO		ITIL v2	ITIL v3
1	FRAMEWORK	Set of 2 core books	Set of 5 Core books
2	FOCUS	Process oriented, linear	Life Cycle approach, Strategic
3	Business- IT Alignment:	Low	High
4	Process	Process focus	Service driven life-cycle focus
5	Others	Outline what should be done in terms of improvement	Explain how process improvement should be done in CSI
		More detailed data on process	Less Detailed data on process

## ITIL V2 or V3?

- Could be either-Depend on the requirements, focus on priorities but V3 preferred
- Focused “organization transformation IT more efficient ,service management more effective organization)
- Adopt and Adapt-Customized to fit the business needs and requirements

# Why need to change to V3?

- Improve consistency - structure, process, etc.
- Add Process Models for every process
- Support all ITIL v2 processes and led the journey
- To move with the industry in some key strategic changes such as outsourced services, cultural change factors
- **Scalability – address small, medium and large**
- To allow synergy with other best practices e.g. COBIT<sup>®</sup>,
- More on business benefits
- Guidance on selecting good tools
- Consistent terms and definitions
- *ITILV3 shows you what to do and more on HOW to do it*

# Value of ITIL



- Align IT objectives with business objectives
  - Provide improved IT services
  - Increase productivity
  - Improve customer satisfaction
  - Improve the use of skills and experience
  - Improve the delivery of third party services
  - Create clear and documented processes for IT Service Delivery
- Business
  - Strategic alignment
    - Derive greater value – ROI
  - Management
    - Clarifies services & expectation
    - Provides a base line to measure services
  - Staff
    - Understand roles & accountabilities
    - Clarifies priorities

# Why Public Sector should adopt ITIL?

- Increased customer satisfaction
- Improved service availability
  - Leads to increased business profits & revenue
- Financial savings
  - Reduced rework & lost time
  - Improved resource management & usage
- Improved time to market for new services
- ITIL is **de facto standard** approach towards IT Service Management
- Improved decision making
- It is about IT delivering quality services that meet the needs of the organization
- Common & consistent language

# Who uses ITIL?



- **PUBLIC SECTOR** - Central & Local Government, Health & Police Authorities
- **PRIVATE SECTOR** - Banking, Insurance, Telecomm, Utilities, Retail, Transport
- **VENDORS** - Product suppliers, Consultancies, Trainers, Legal, Recruitment, Outsourcing
- **In Tanzania –TRA**

# ITIL Trend

- Adoption rate increasing Globally
- Vendors are being pressured by the market to demonstrate deployment of industry-accepted best-practice process models (such as ITIL, as it is currently the most widely known set of public best-practice process models)



# Group exercise



- Select one organization of your choice and Discuss the following questions:-
  - Why should your organization adopt ITIL as the Best Practice?
  - Will it add value to your organization ? (list at least three)
  - What specific areas could ITIL be applied in your organization ? And why

# ITSM (ISO20000) ITS RELATION WITH ITIL IN PUBLIC SECTOR



# What is ISO 20000?

ISO 20000 can be summarised as:

- **A standard** to promote the adoption of an integrated process approach for the effective delivery of managed services to meet business and customer requirements
- A set of “controls” against which an organisation can be assessed **for effective IT Service Management processes**
- The ISO 20000 standard defines the requirements for an organisation to deliver managed services of an acceptable quality for its customers



# Key Benefits of Adopting ISO 20000

- Align IT with the business needs
- Deliver managed services to meet the business and customers requirements
- Help organizations be cost effective via professional service management
- Provide a greater control, greater efficiency and opportunities for improvement
- Improve systems reliability and availability
- Provide a basis for service level agreement and the ability to measure the IT service quality
- A stable standard for IT Service Management
- Commitment that services will be delivered to accepted best practice



# Structure of ISO 20000

The Standard is divided into three distinct parts:

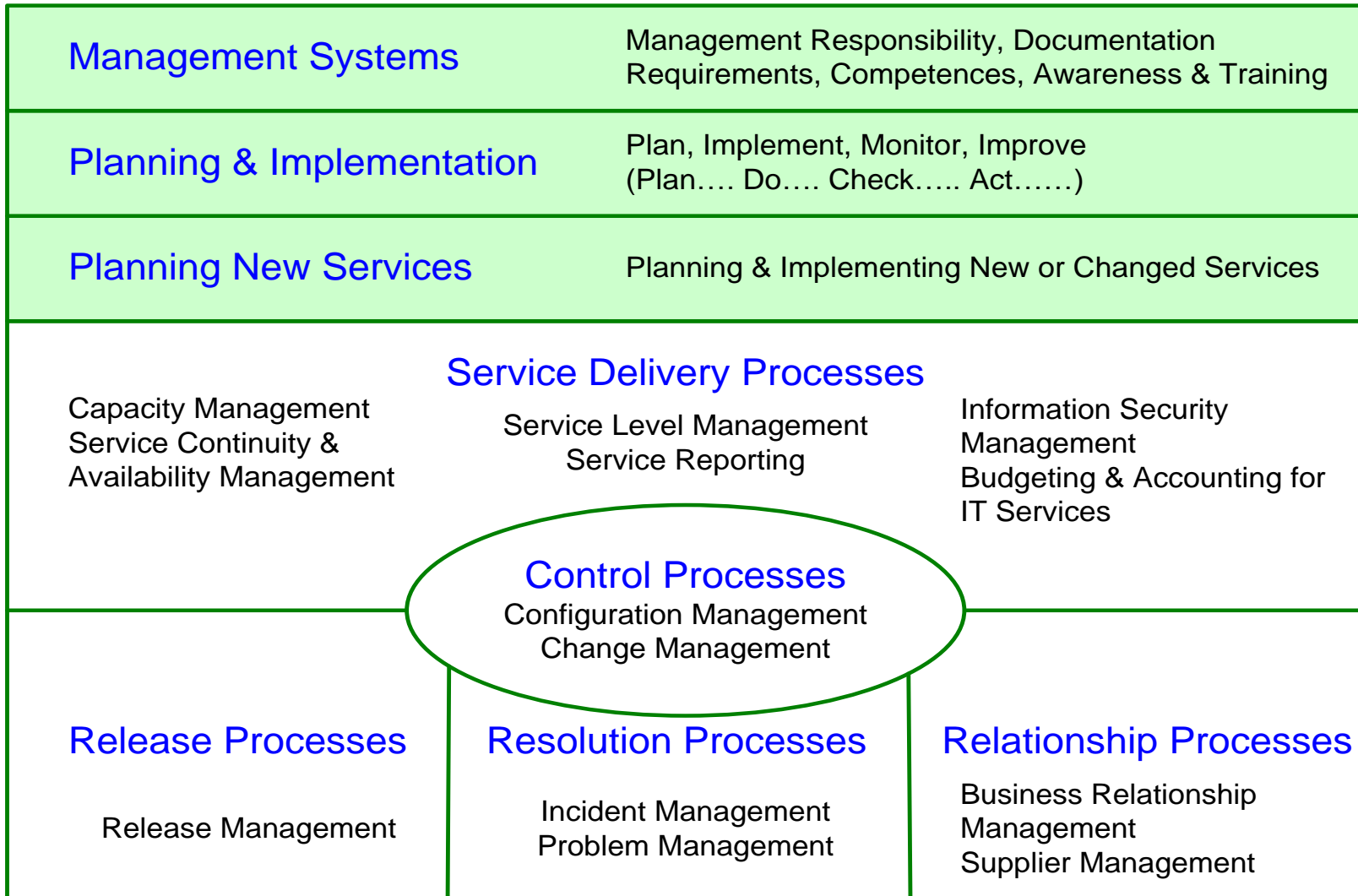
- **Part 1 provides the requirements for IT service management to gain certification**
  - This is relevant to those responsible for initiating, implementing or maintaining IT service management in their organization
  - Senior Management are responsible and accountable for ensuring all requirements of Part One are met if Certification is sought
- **Part 2 - Code of Practice for Service Management**
  - Provides guidance to internal auditors and assists service providers planning service improvements or preparing for audits against ISO 20000
- **Part 3 - Scope & Applicability**
  - Advice on scoping for service management
  - Planning & improvements
  - Scope statements for Certification audits

# Contents of ISO 20000



- Scope, terms and definitions
- Introduction and overview
- Requirements for a management system
- Planning and implementing service management
- Planning and implementing new or changed services
- Service delivery processes
- Relationship processes
- Control processes
- Release processes

# ISO20000 Service Management Process





# Alignment of ISO 20000 and ITIL

- Driven either through choice, or by customer demand, ITIL has been adopted by many organisations as a proven methodology for managing their IT services
- Many organisations and in particular the Public Sector, see ITIL as a necessary requirement to conduct business
- ITIL however is not a standard, and therefore the alignment between ITIL and ISO 20000 allows an organisation to be effectively measured
- Customer demand for ISO 20000 Certification is fast becoming another business requirement for organisations to remain competitive



# ISO 20000 Implementation

- Determine the current, existing IT infrastructure, processes, and services
- Develop some desired future state of IT and the services that it needs to provide
- Architect a "roadmap" that depicts how to get to the desired state from the current state
- Determine the steps needed to execute the "roadmap"

# Reasons for Implementing in Public Sector

- ISO 20000 assists organisations to enforce process compliance
- ISO 20000 provides the organisation with the means to operate more effectively and efficiently
- ISO 20000 helps to significantly improve the morale of the IT department, the business and ultimately the Customer
- ISO 20000 provides clear evidence that the quality of IT Service Management is taken seriously

# Implementation Approach

- Organize the manpower
- Plan Project schedule
- Conduct Training
- Define Processes
- Process operationalisation
- Audit and Certification

# Plan Project schedules



	Major activities	Date
1	Training on ISO 20000 awareness	
2	Conduct workshop for processes Processes1... Processes2...	
3	Process operationalisation Process1..... Process2...	
4	Internal audits	
5	Pre- Certification and Certification audits	



# Conduct Training

- Objectives and outcomes
- Roles and responsibility
- ISO 20000 awareness
- Process documentation and guidelines
- Audit Procedure
- Project schedules

# Define Processes

- Conduct workshop for each process
- Baseline the current process
- Modify the process to meet ISO 20000 requirements
- Gather feedback on new process and made adjustment
- Review the processes
- Document procedures

# Process Operationalization

- Train the users on new processes
- Conduct Pilot run
- Resolve issues encountered
- Roll out the processes
- Documentation



# Audit and Certification

- Quality Manual
- Supporting Quality Assurance procedures
- Document control, Records control internal audit etc
- Pre- Certification Audit
- Audit
- Post –audit follow –up
- Certification audit



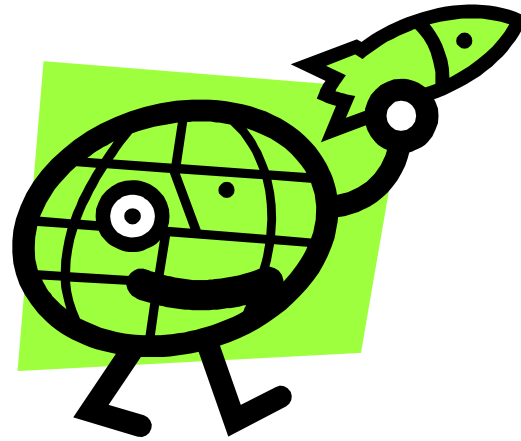


# Individual Exercise

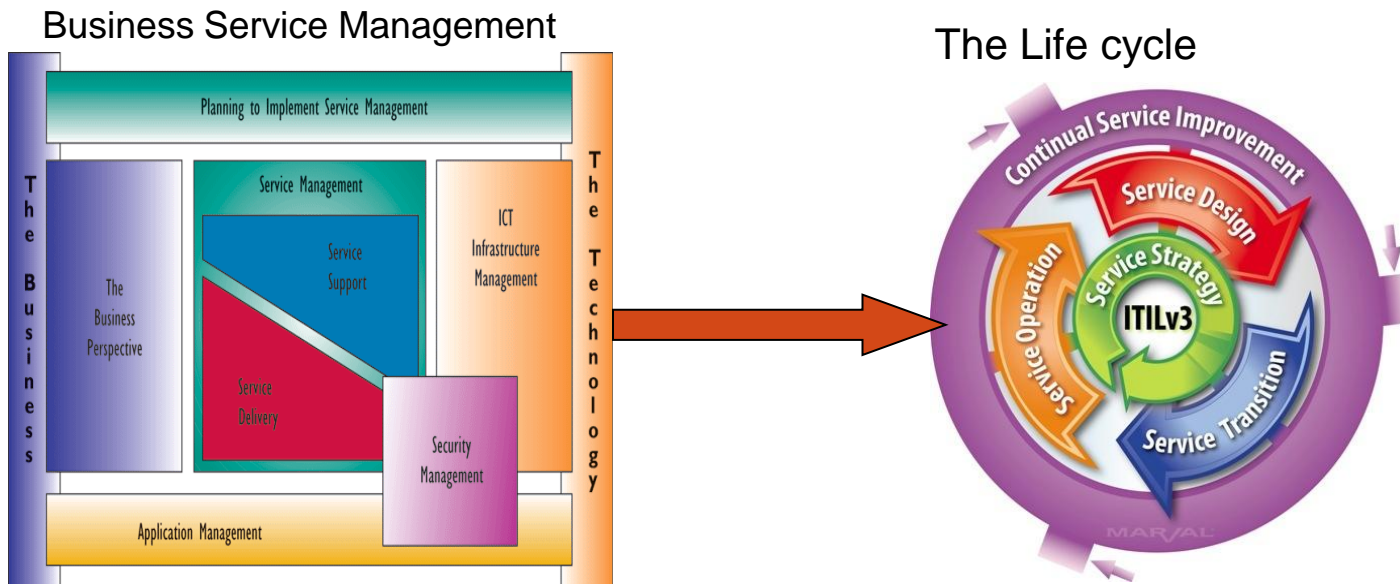
- You have been selected to attend this Training and assuming that you want to implement ISO 20000 for your organization what will you do to convince your management to implement?



# ITIL V3 Best Practice



# ITIL Service management Practice



# ITIL V3



## SERVICE STRATEGY

- Financial Management
- Return on Investment
- Service Portfolio Mgmt
- Demand Management

## SERVICE DESIGN

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

## SERVICE OPERATION

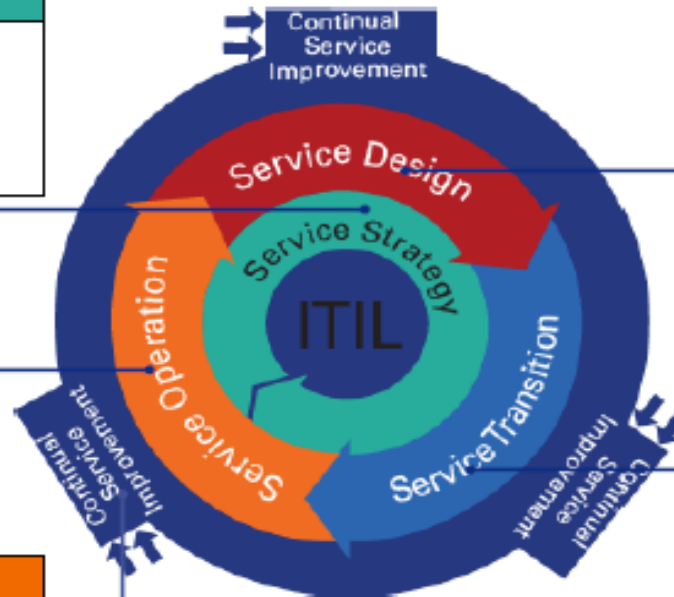
- Event Management
- Incident Management
- Request Fulfilment
- Problem Management
- Access Management

## CONTINUAL SERVICE IMPROVEMENT

- 7-Step Improvement Process

## SERVICE TRANSITION

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



# Service Lifecycle



- ITIL Library
  - Service Strategy (SS)
    - Focuses on service management as a strategic asset.
    - Defines standards & policies that will be used to design IT services.
  - Service Design (SD)
    - Creating or modifying services & infrastructure architecture that are aligned to the business needs.
  - Service Transition (ST)
    - Manages the transition of new or changed services into the production environment.
  - Service Operation
    - Effectiveness & Efficiency in delivery & support.
    - Maintain Stability.
    - Provide best practice advice & guidance on all aspects of managing the day-to-day operation of IT services.
  - Continual Service Improvement
    - Create & maintain value for customers
    - Plan, Do, Check, Act (PDCA)





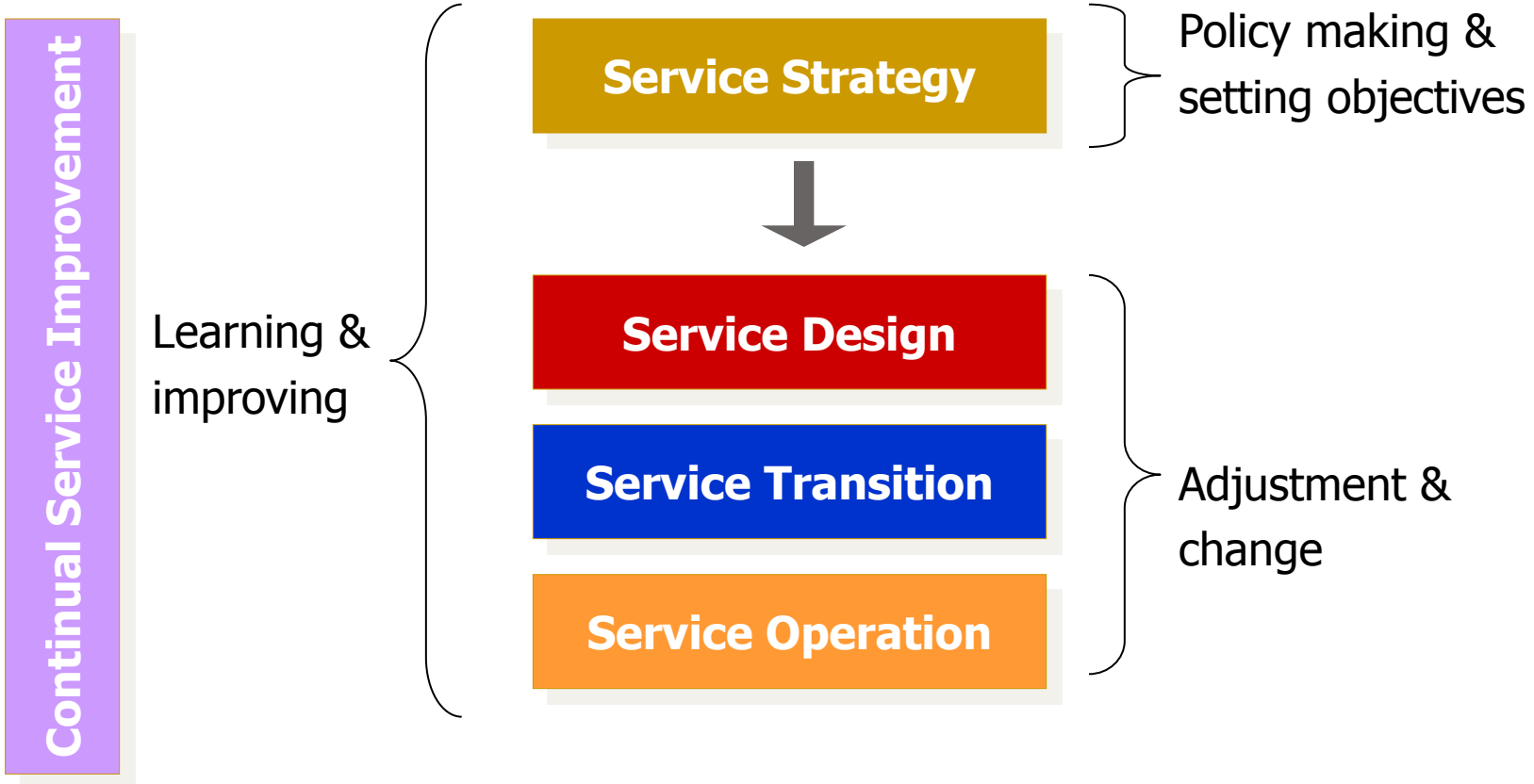
# Service Strategy

The Service Life cycle is an organization model providing insight into:

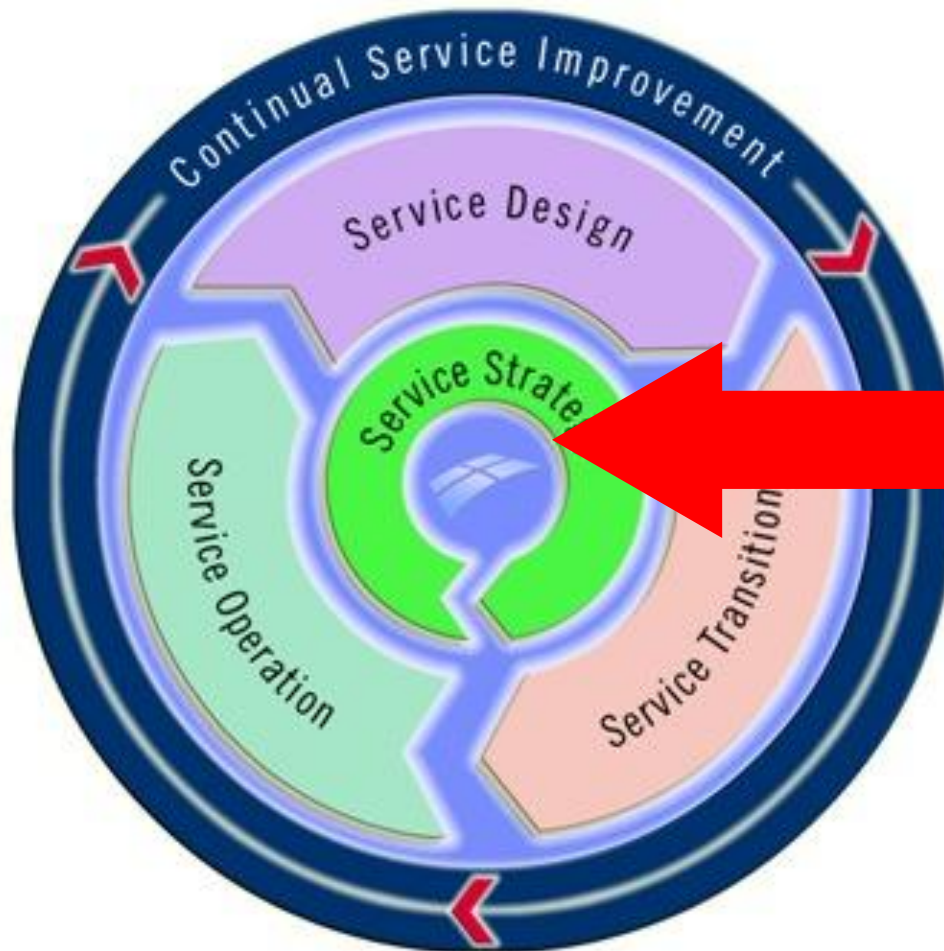
- The way service management is structured
- The way the various lifecycle components are linked to each other
- The impact that changes in one component will have on other component in lifecycle system



# The Five Stages



# Service Strategy Life Cycle



- Financial management
- Demand management

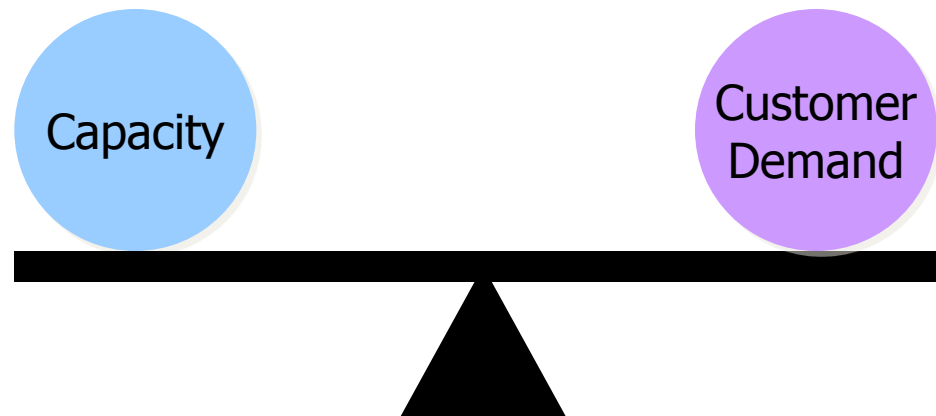
# Demand Management



- Ensures we don't waste money with excess capacity
- Ensures we have enough capacity to meet demand at agreed quality
- Patterns of Business Activity to be considered  
E.g. Economy 7 electricity, Congestion Charging

# Demand Management

- Understand & influence customer demand for IT services
- Provide capacity to meet demand



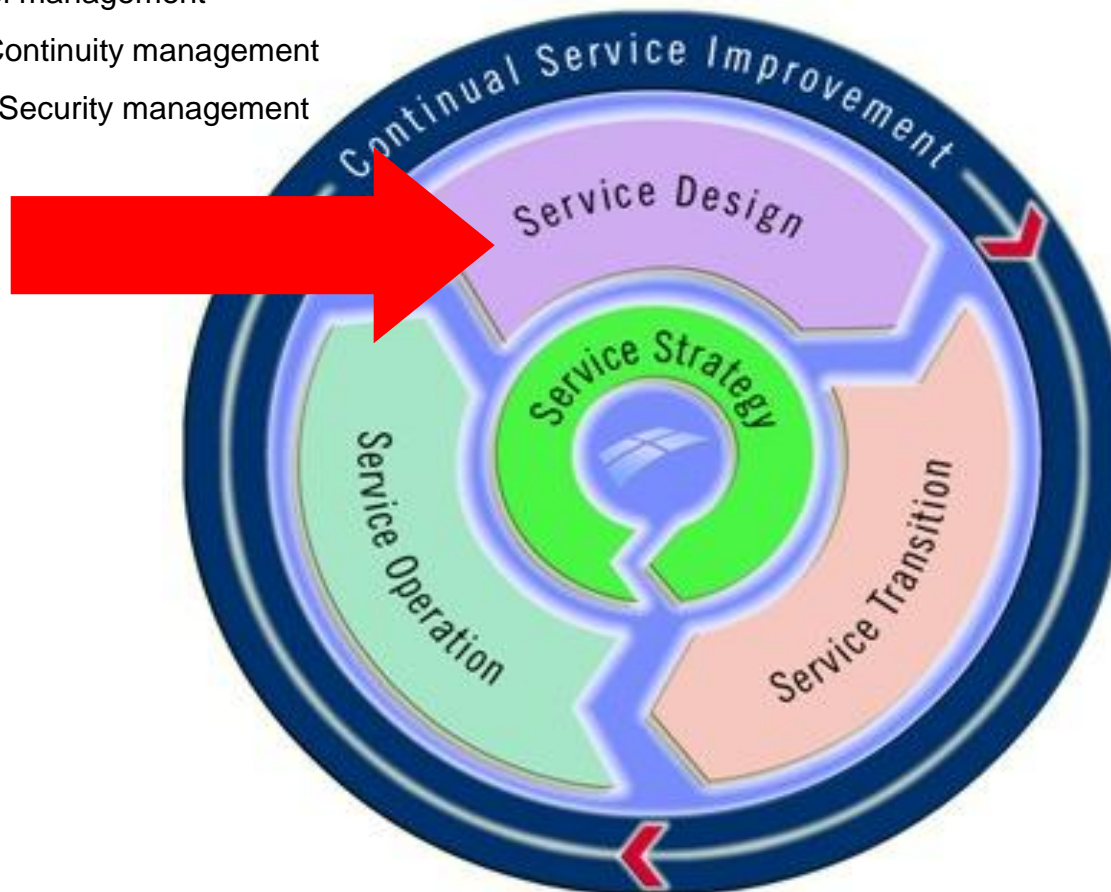
# Financial Management

- An integrated component of service management
- Financial management ensures that the cost of IT services are clear:-
  - Budgeting
  - Accounting
  - Charging requirements



# Service Design Life Cycle

- Capacity management
- Service level management
- IT Service Continuity management
- Information Security management



# Service Design

- How are we going to provide it?
- How are we going to build it?
- How are we going to test it?
- How are we going to deploy it?

# Processes in Service Design

- Availability Management
- Capacity Management
- ITSCM (disaster recovery)
- Service Level Management
- Information Security Management



# Objective of Service Design

- To contribute to the business objectives
- To assess and improve the effectiveness and efficiency of IT services
- To contribute to the quality of IT services
- To minimize or prevent risks
- To contribute to saving time and money



# Service Level Management



- Responsible for negotiating Service Level Agreements & ensuring that these are met
- Service Level Agreement
  - Between an IT Service Provider & a Customer
  - Describes the IT Service, documents service level targets, responsibilities of Provider & Customer
- Operational Level Agreement
  - Between an IT Service Provider & another part of the same business
- Underpinning Contract
  - Agreement between an IT Provider & 3<sup>rd</sup> party supplier



# Things you might Find in a SLA

Service  
Description

Hours of  
operation

User Response  
times

Incident  
Response times

Resolution  
times

Availability &  
Continuity  
targets

Customer  
Responsibilities

Critical  
operational  
periods

Change  
Response Times



## Metric For SLA

- Percentage reduction in SLA targets missed
- Percentage increase in customer satisfaction
- Percentage reduction in SLA breaches



# Availability Management

- The goal is optimize the capacity of the IT infrastructure, services, and supporting organization to deliver a cost effective and sustained level of availability enabling IT to meet their objectives.
- Aims to reduce the occurrence and duration of service unavailability
- Ability of a service or component to perform its required function over a stated period of time .
- Ensure services are available when needed
- Ensure IT infrastructure, processes, tools & staff roles are appropriate for the agreed targets



# Capacity Management

- Can be referred to as supply and demand and is responsible for addressing the evolving demands of the business cost effectively.
- Involves analyzing the current situation and predicting the future use of the IT infrastructure and resources needed to meet the expected demand for IT services.
- Match capacity of IT to the agreed business demands in a cost effective & timely manner
- Current & future needs



## Example : What is capacity planning?

### BUSINESS CAPACITY MANAGEMENT

- Future Service requirements from the Business
- Future Capacity from the Business
- Resource Requirements in future.
- CAPACITY PLAN

### SERVICE CAPACITY MANAGEMENT

- What are the existing requirements?
- Are we meeting SLAs?
- How well are we utilising existing resources today?

### RESOURCE CAPACITY MANAGEMENT

- How well are we using existing technology?
- Are we using each component appropriately?
- What future technologies could be better?



# Continuity Management

- The process that ensures that the required IT technical services and facilities can be recovered from a failure or disaster.
- Service Continuity Planning is a systematic approach to create a plan and/or procedure to prevent, cope with and recover from the loss of a critical service for extended periods.
- Ensures that agreed service levels can be resumed in event of a disaster





# Information Security management

- Confidentiality
  - Making sure only those authorised can see data
- Integrity
  - Making sure the data is accurate and not corrupted
- Availability
  - Making sure data is supplied when it is requested

# Information Security Management

- Manage IT security risks
- Confidentiality – information is available only to those who have a right to know
- Integrity – information is complete & accurate
- Availability – info is available when needed

**CI A**



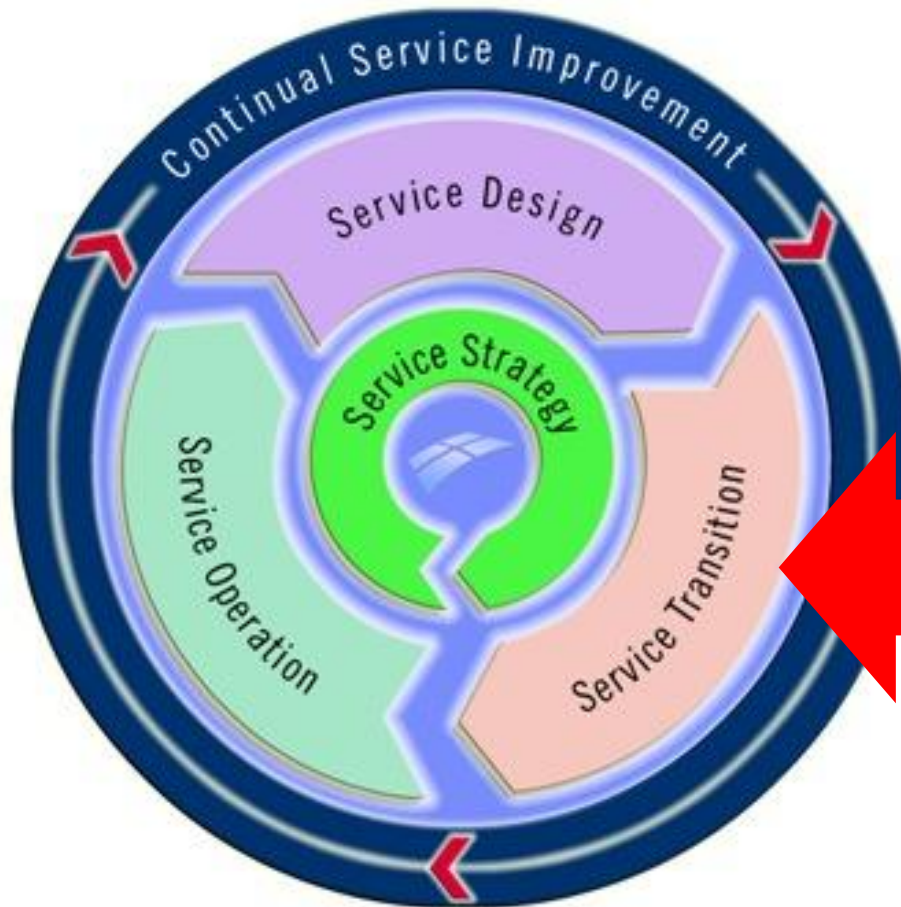
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# Service Transition Stage



- Change management
- Release and deployment management
- Knowledge management

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- Ability of a service or component to perform its required function over a stated period of time.

# Availability Management



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# Availability Management

*Not every change is an improvement, but every improvement is a change.*

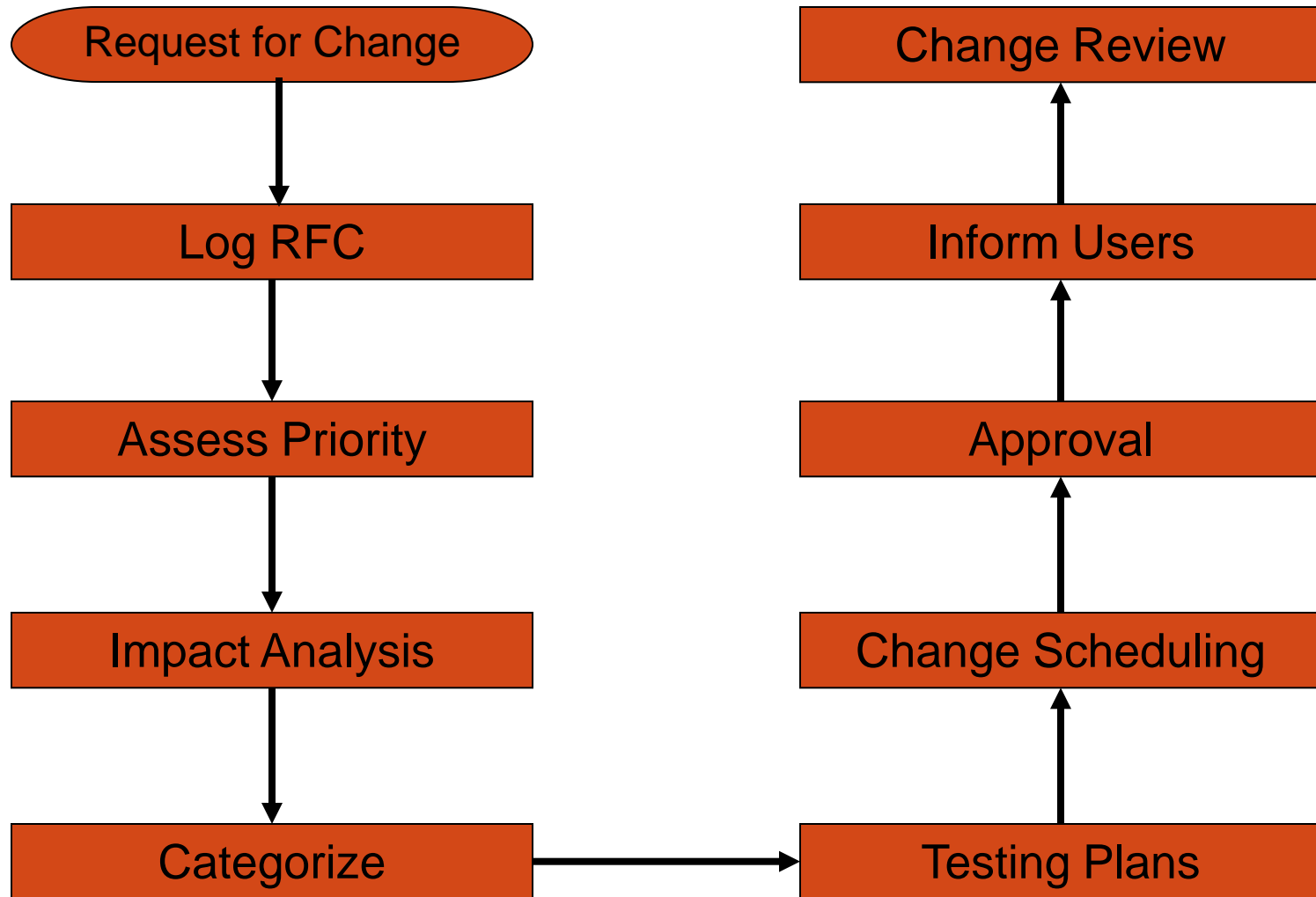
- Is responsible for **managing changes introduced in the IT environment**
- Ensures that **standardized methods and procedures** are used
- Aims to **minimize the impact of change-related incidents and improve day-to-day operations** with minimum disruption to IT Services.



# Availability Management

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# Example: Process management Change





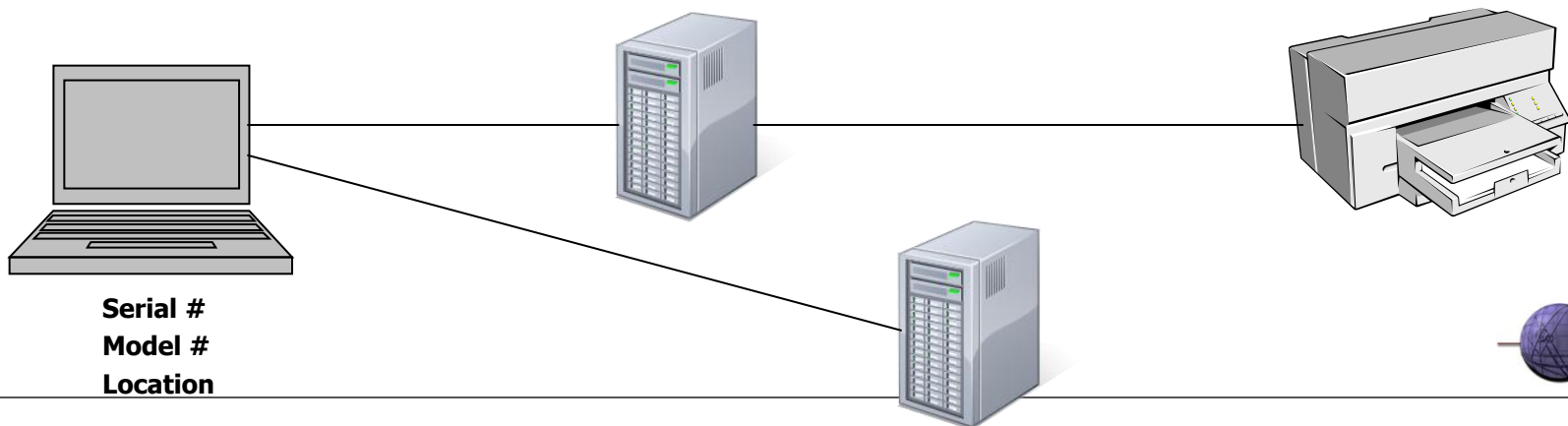
# Change Management steps

- Change planning management
- Release planning
- Communication
- Change authorization
- Set up recovery plan
- Reporting
- Continual improvement



# Service Asst & Configuration Management

- Configuration Item (CI)
  - IT component (services, hardware, software, buildings, people, documentation)
- Configuration Management Database (CMDB)
  - Stores configuration records about the attributes of CI's (including relationships)



# Major CI Types



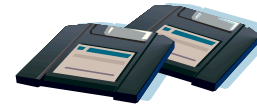
## People

Users, Customers,  
Who, Where, What  
Skills, Characteristics,  
Experience, Roles



## Documentation

Designs; Reports;  
Agreements; Contracts;  
Procedures; Plans; Process  
Descriptions; Minutes;  
Records; Events (Incident,  
Problems, Change Records);  
Proposals; Quotations



## Data Files

What, Where,  
Most Important



## Environment

Accommodation; Light,  
Heat, Power; Utility  
Services (Electricity,  
Gas, Water, Oil); Office  
Equipment; Furniture;  
Plant & Machinery



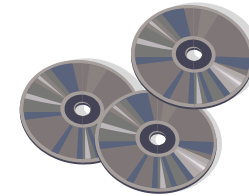
## Hardware

Computers, Computer  
components, Network  
components & cables  
(LAN, WAN),  
Telephones, Switches



## Services

Desktop Support,  
E-mail, Service Desk,  
Payroll, Finance,  
Production Support



## Software

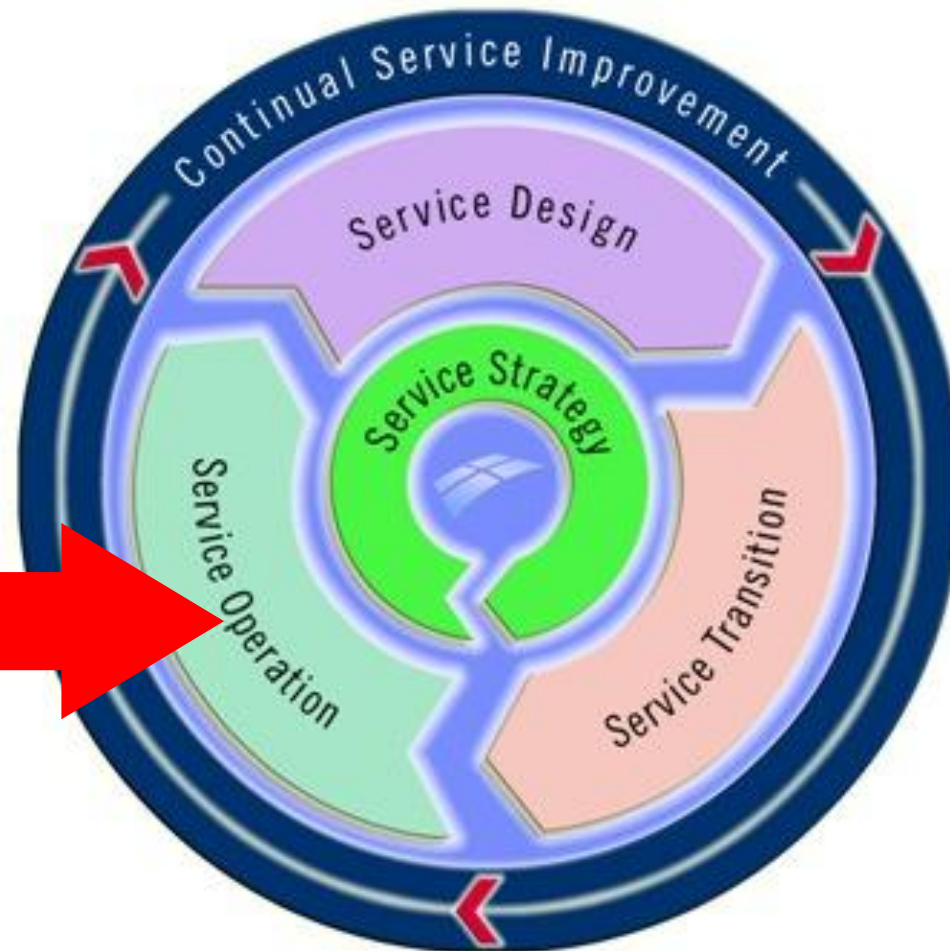
Network Mgmt Systems;  
In-house applications; O/S;  
Utilities (scheduling, B/R);  
Packages; Office systems;  
Web Management

# Availability Management

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# Service Operation Stage

- Incident Management
- Problem Management
- service Desk





# Incident Management

The process responsible for managing the life-cycle of all incidents.

- An **incident** defined as **an unplanned, unexpected or unexplained disruption in service**. This is any event which is not part of the standard operation of a service and which causes or may cause an interruption to or a reduction in the quality of the service that is provided.
- *E.g. mail server not responding to incoming or outgoing messages.*
- Incident Management – restoring service
- Problem Management – root cause



# Incident Management



- Incident - an unplanned interruption or a reduction in the quality of an IT Service
  - Printer in ER is not working
  - User cannot log in to a clinical system
- Purpose of Incident Management is to
  - Restore normal service as quickly as possible
  - Minimize adverse impact on business operations





# Incident Management

- Incidents are
  - Categorized - who should work on them
  - Prioritized
  - Incidents that cannot be resolved within service level parameters are escalated
  - Technical support +/- or mgmt
- A tool is essential to record & manage Incident information
  - eHealth uses Service Desk Express



# Impact, Urgency & Priority

<b>Impact</b>	A measure of the business criticality of an incident or problem (e.g. numbers affected, magnitude)
<b>Urgency</b>	A measure of the <i>speed</i> with which an incident or problem requires resolution (i.e. how much delay will the resolution bear)
<b>Priority</b>	The <i>order</i> in which an incident or problem needs to be resolved, based on impact and urgency



# Illustrative Examples

**Payroll Application:** System run once per month to run payroll

	<b>Impact</b>	<b>Urgency</b>	<b>Priority</b>
Failure of payroll server (first week in month)	High: will effect all employees	Low : Payroll not run for 3 weeks	Low (at the moment)
Failure in payroll server (last week of month)	High: will effect all employees	High : Fix needed before 06:00 tomorrow morning	High

# Problem Management

- A **Problem** is defined as **the unknown underlying cause**
- Problem Management aims to Stabilize IT services through:
  - Minimizing the consequences of incidents
  - Removal of the root causes of incidents
    - Prevention of incidents and problems
    - Prevent recurrence of incidents related to errors
    - Both reactive process and proactive process.
- *E.g. mail server not responding to incoming or outgoing messages, and the root cause is identified as power has been lost because the server was accidentally unplugged due to other servers being un-plugged and relocated to another part of the building.*



# Problem Management

- Problem - root cause of one or more Incidents
- Problem management includes
  - Diagnosing causes of Incidents
  - Determining resolution
  - Ensuring the resolution is implemented (where appropriate)
  - Maintaining information about Problems, workarounds & resolutions

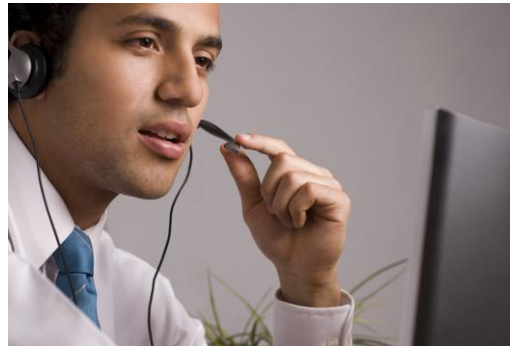
# Incident & Problem Scenario

## Customer



Can't print & calls the Service Desk

## Service Desk Analyst



- 1) Creates ticket & classifies it as an Incident
- 2) Checks the Known Error Database but does not find a match
- 3) Troubleshoots without success
- 4) Changes default printer so that customer can print to another printer (workaround)
- 5) Closes the Incident
- 6) Creates a Problem record & relates the Incident to it

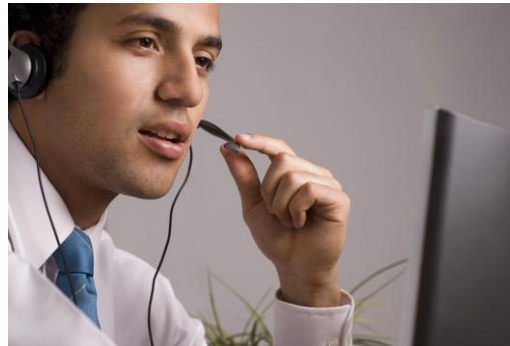
# Incident & Problem Scenario

## Customer



Can't print to same printer & calls the Service Desk

## Service Desk Analyst



- 1) Creates ticket & classifies it as an Incident
- 2) Sees that this is a Known Error & immediately applies the workaround
- 3) Relates the Incident to the Problem record
- 4) Closes the Incident



# Responsibilities

- Receive and record all calls from users
- Provide first-line support (using knowledge resources)
- Refer to second-line support where necessary
- Monitoring and escalation of incidents
- Keep users informed on status and progress
- Provide interface between ITSM disciplines
- Produce measurements and metrics



# Problem solving Tools

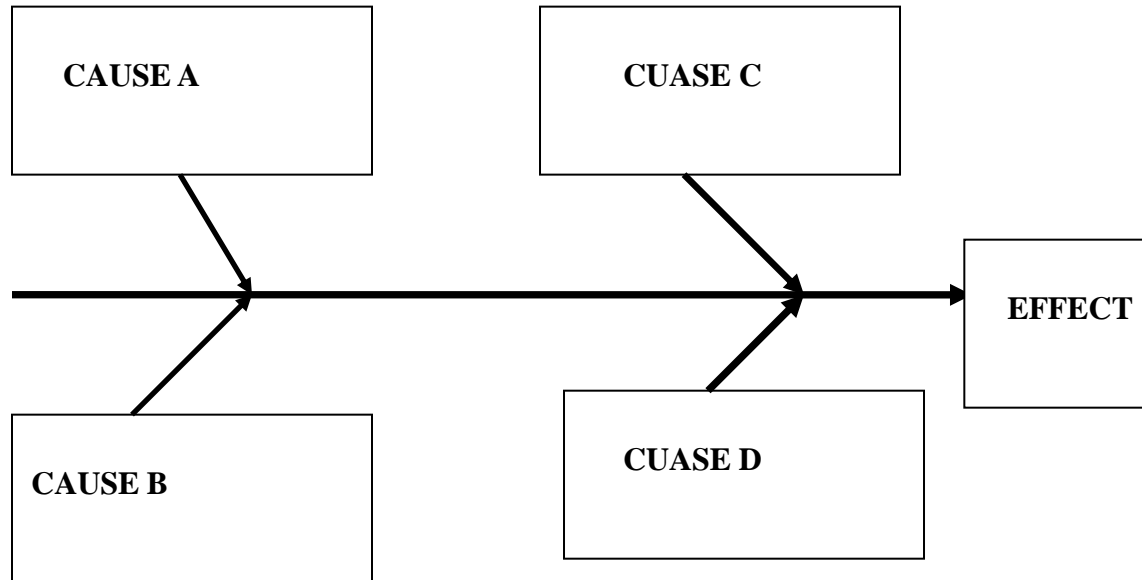
- A graphic tool that helps to identify, sort, and display possible causes of a problem or quality characteristic / Services delivery
- ISHIKAWA/FISHBORN METHOD



# Benefit of Using A Causes-and Effect

- Help to determine root causes
- Encourage group participation
- Uses an orderly ,easy-to-read format
- Indicates possible causes of variation
- Increases process knowledge
- Identifies areas for collecting data/

# Basic Layout of Cause and Effect Diagram





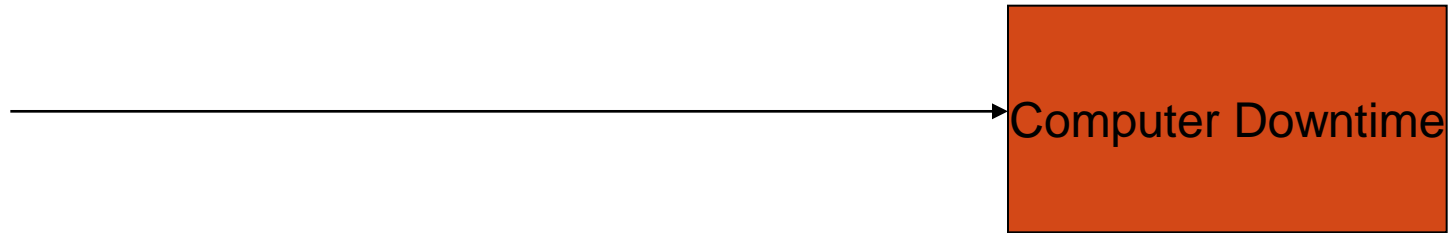
# Step 1-Identify and Define Effect

- Decide on the effect to examine
- Phrase effect as
  - Positive an Objective or
  - Negative (a Problem)

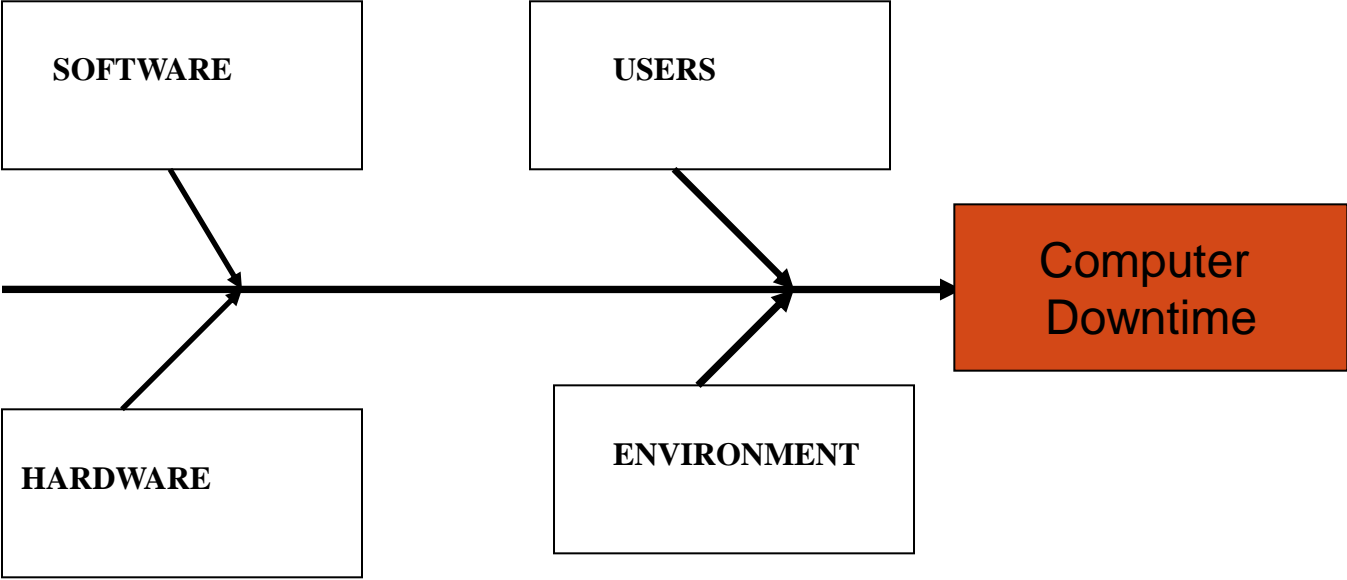




## Step2-Fill the Effect Box and Draw spine



# Step3-Identify Main Categories





# Group Exercise 1

- This group Exercise will enable you team to practices constructing and analyze Cause-and - Effect Diagrams. Construct a Causes- and Effect- Diagram to identify the causes of Poor IT service delivery in your organization.



## Group Exercise 2

1. Select one Process of your choice in your organization
2. Who are the customers of this process of your choice
3. What are the Processes performance Indicators? (list 2-3 indicator)
4. What are the major activities?
5. Are there any processes that could be improved using ITSM standards / Framework? List them

# Instruction



1. Draw a Horizontal arrow to the right, write the effect (**Poor IT Service Delivery**) and draw a box around it.
2. Identify the main causes contributing to the effect of poor IT delivery
3. Draw the boxes around the main categories and connect the boxes to the horizontal arrow with diagonal arrows to form the fishbone.
4. For each branch, identify specific factors which may be the causes of the effect.
5. Add increasingly detailed levels of the causes.
6. Analyze the diagram and cycle causes that you can take action on
7. Prepare ACTION List or to do list





# The Service Desk

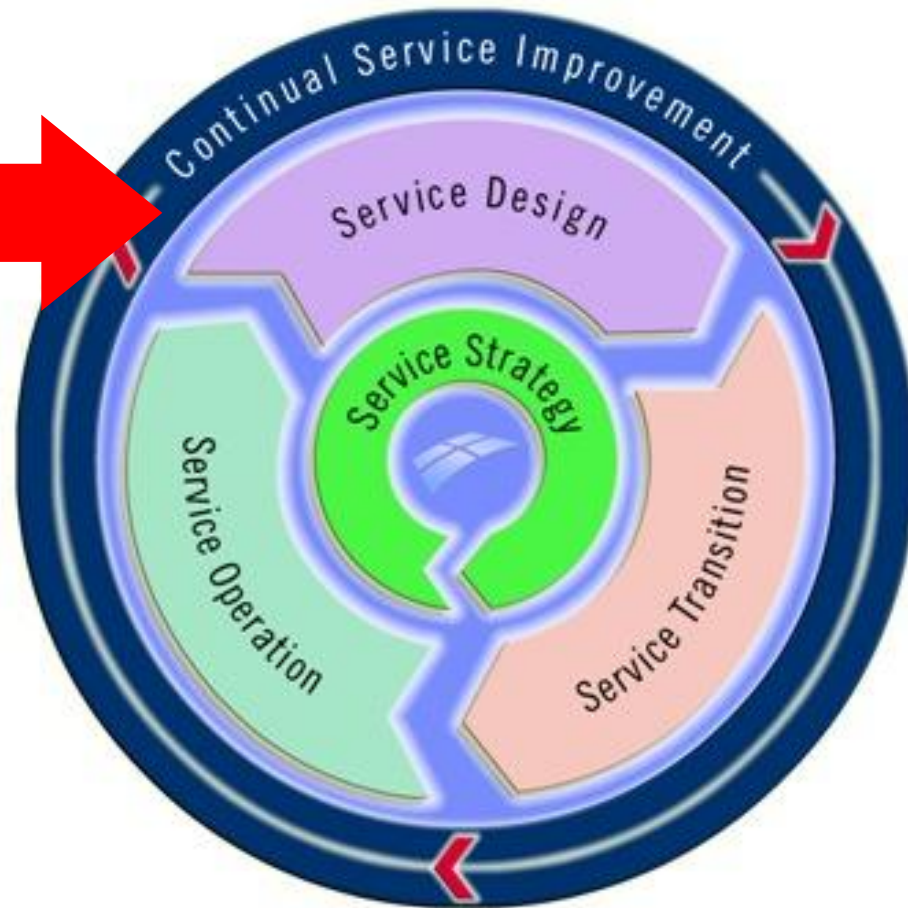
- To act as the **single point of contact** between the User and IT Service Management and track status of all customer interactions
- To handle Incidents and requests, and provide an interface for other activities such as Change, Problem, Configuration, Release, Service Level, and IT Service Continuity Management

# Why Service Desk

- The Service Desk is more than just a Help Desk
- The first and single point of contact
- High quality support to meet business goals
- Help identify costs of IT services
- Proactive support and communication of changes
- Increase user perception and satisfaction
- Identification of business opportunities
- Identification of Training Opportunities

# CSI Stage

- 7-Step Improvement Process
- Service reporting
- Service measurement

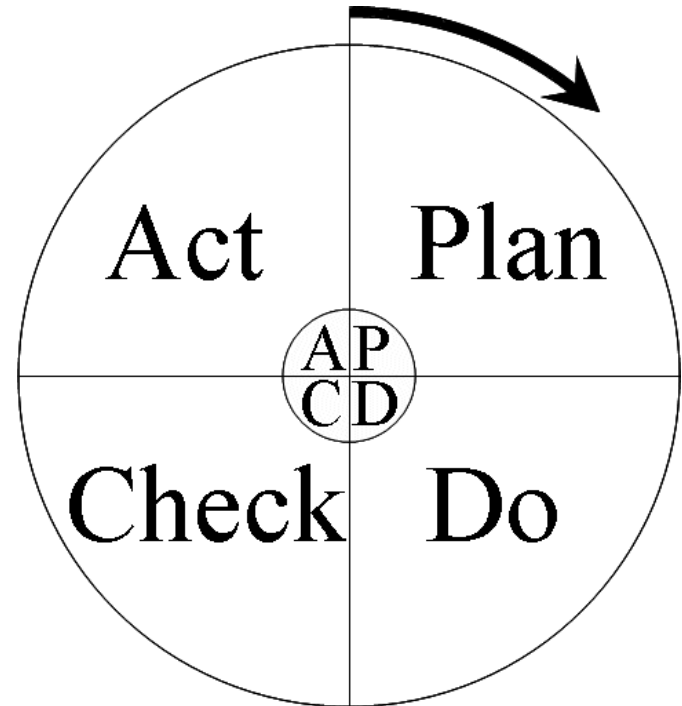


# Quality Improvement Model

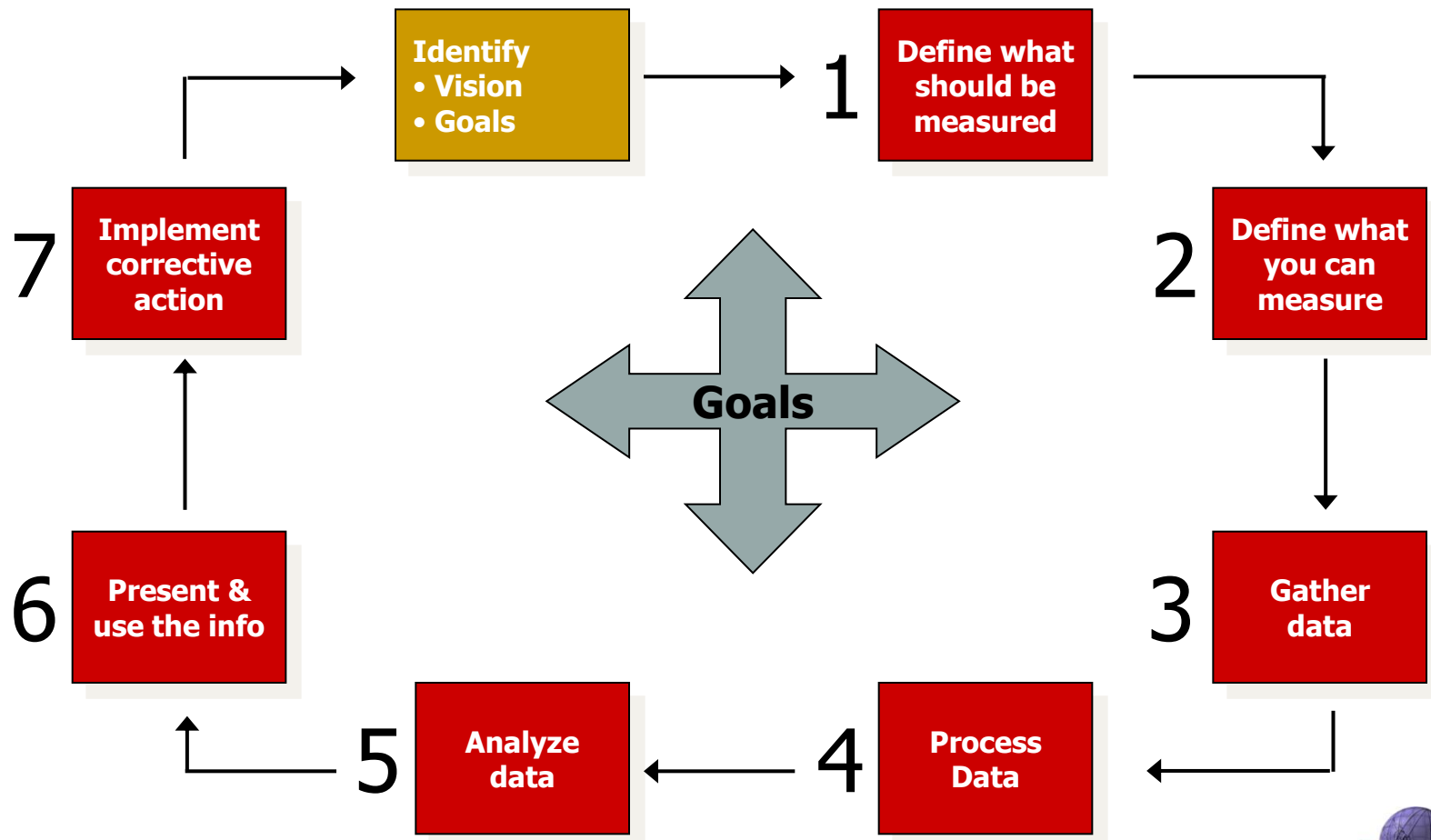


## Deming Circle (PDCA)

- **Plan**: Plan ahead for change. Analyze and predict the results.
- **Do**: Execute the plan, taking small steps in controlled circumstances.
- **Check**: Study the results
- **Act**: Take action to standardize or improve the process



# 7-Step Improvement Process



# Service Measurement

There are 4 basic reasons to measure:

- VALIDATE previous decisions
- DIRECT activities to meet targets
- JUSTIFY that a course of action is required
- INTERVENE & take corrective action



## IT Service management (ITIL Implementation)

- Each organization is unique
- Client and market demands
- financial and organizational objectives
- organization values and culture



## Phase 2: Prepare Environment for IT Service Management acceptance

- Build middle-management commitment and organization support for the Service Management
- Identify staffing and training requirements
- Perform a gap analysis of existing processes to ITIL®
- Identify service management tool requirements



## Phase 3: IT Service Management Strategy and Design

- Partner with the client to identify and acquire service management staff
- Evaluate and recommend automated monitoring, data collection, cataloging and metric reporting tools
- Define requirements, business services, service levels, key performance indicators and reporting to properly meet business service needs
- Design and build customer specific process documents and workflow diagrams for each process area
- Design and deliver process training for each process area





## Phase 4:IT Service Management Deployment

- Officially deploy the service management processes to each information technology process area
- Serve as a subject matter expert lead in automated service management tool deployment or improvement
- Conduct service management tips, techniques and best practices learning sessions
- Define service management continuous improvement process
- Ensure smooth business alignment during transition



## Phase5:IT service Management Continuous Support



Organization who continue to improve information technology service management in their organizations ensure that their technology teams continuously improve service to the business and align with the strategic goals of the organization

# Summary

- Business requirement and customer satisfaction are primary considerations
- Information Services are a vital and core part of the business
- We need to think end-to-end service
- IT Service Management isn't optional
- Quality process-driven approaches and professional staff really deliver value
- Professional qualifications and certifications are becoming increasingly important
- ITIL and ISO 20000 provide a solid framework for developing an appropriate solution

# Case Study –Online Job application (TaeSA)



# Service Strategy

- Initial planning-Team building
- Will there be a demand for this service?
- How will fund this Project ?
- Where will it be located? HR office or IT
- What is the time frame?
- Who will design this systems ?



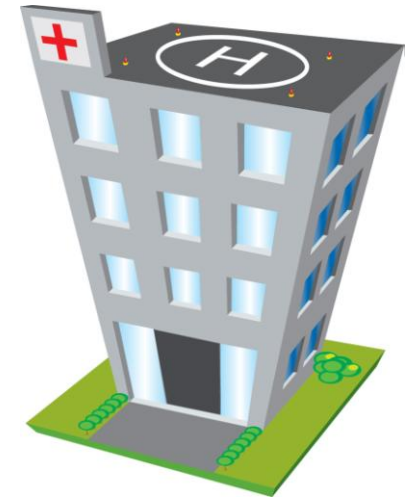
# Service Design

- What will the capacity be?
- What services will be offered?
- What are the associated costs?
- What service levels will need to be met?
- What supplier agreements need to be placed?



# Service Transition

- Construction phase
- How will traffic be diverted? From Traditional methods to Technology...
- How will changes be communicated to the public & other stakeholders?
- What determines when the System is ready?



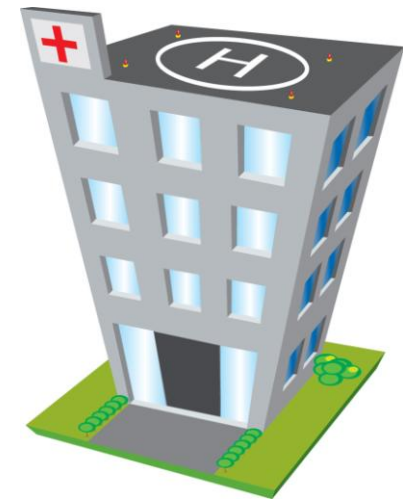
# Service Operation

- Day to day activity of TAeSA
- Availability for job applicant
- Staffing
- Customer service
- Billing
- Feedback e.g sms,email



# Continual Service Improvement

- Analyze reports
- Which areas need improvement?
- Implement corrective actions
- KPI



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# Face the Challenge

- Management commitment
- Pick a ITIL Project owner
- Focus on people: training and early involvement in redefining the processes
- Take baby steps. One process, then another e.g Problem management
- Don't reinvent the wheel: build upon existing processes
- Think of implementing ITIL as a transition to improve services, not as an absolute change and upheaval to IT
- Produce quick-wins



# Group Discussion

Choose one services of your choice in your Organization and apply all five stages of Service life cycle eg. Service Desk and prepare good presentation for each group



# Case Study on ITIL implementation

## Manchester Town Council



# Self reflection

What did you learn in this module? What are implications to your Organization?

