



**ETiDOP**<sup>®</sup>

Egyptian Trademarks and Industrial  
Designs Office Project

# ITIL Foundation

## Training courses on IT Service Management



# Course Content

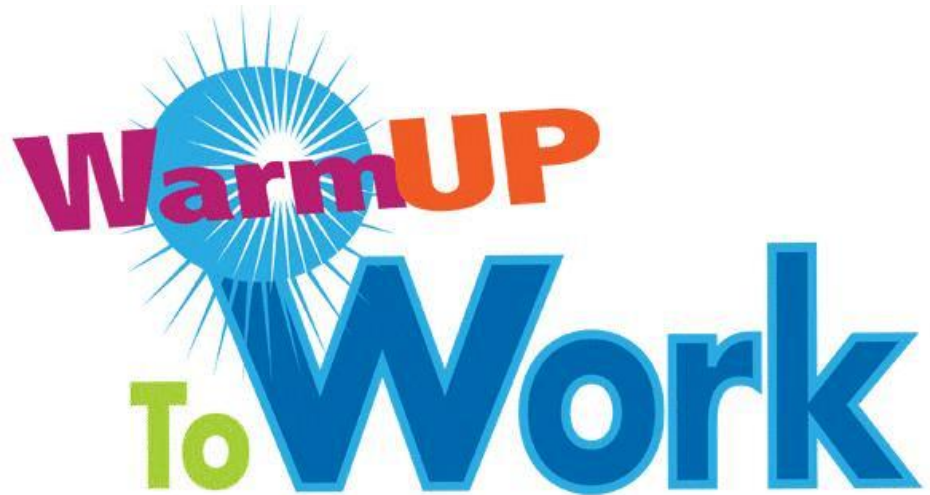
- Warming Up
- IT Service
- IT Service Management
- ITIL as a public Framework
- Service Strategy
- Service Design
- Service Transition
- Service Operation
- Continual Service Improvement

# Warming up Activity

*Is an activity at the beginning of every session, Meeting.*

## Warming up activity Types:

- Story
- Video
- Puzzle



# IT Service

- *A service is a means of delivering **value** to customers by facilitating outcomes customers want to achieve without the ownership of specific costs and risks.*
- Allow Sales people use remote access service to connect to the corporate sales systems from their laptops” .

# Service Management

- ***Service Management is a set of specialized organizational capabilities for providing value to customers in the form of services.***
- Included service strategy, service design, service transition, service operation and continual service improvement.

# IT Service Management

*IT service management is the management framework which plans, monitors and controls the quality of the delivered services.*

## **Three goals of service management:**

- *Adaption*
- *Optimization*
- *Reduction*

# ITIL (Information Technology Infrastructure Library)

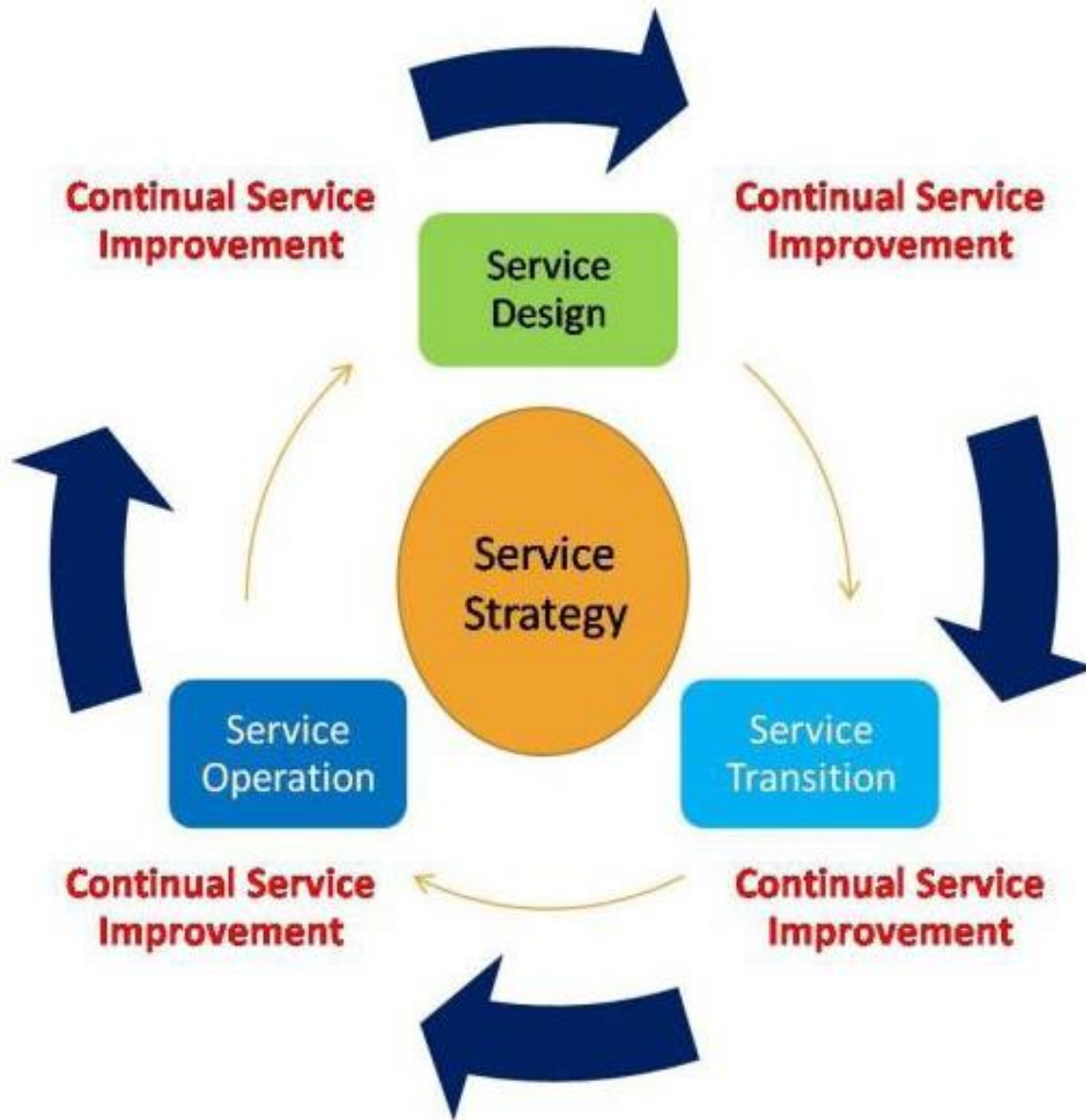
- ITIL is a public framework that describes Best Practices in IT service management.
- It provides a framework for the governance of IT, the 'service wrap', and focuses on the continual measurement and improvement of the quality of IT service delivered, from both a business and a customer perspective.





# Some of ITIL benefits include

- Increased *user* and *customer* satisfaction with IT services.
- Improved service availability, directly leading to increased business profits and revenue.
- Financial savings from reduced rework, lost time, improved resource management and usage.
- Improved time to market for new products and services.
- Improved decision making and optimized risk.



# Risk.

- Asset
- Risk
- Vulnerability
- Threat

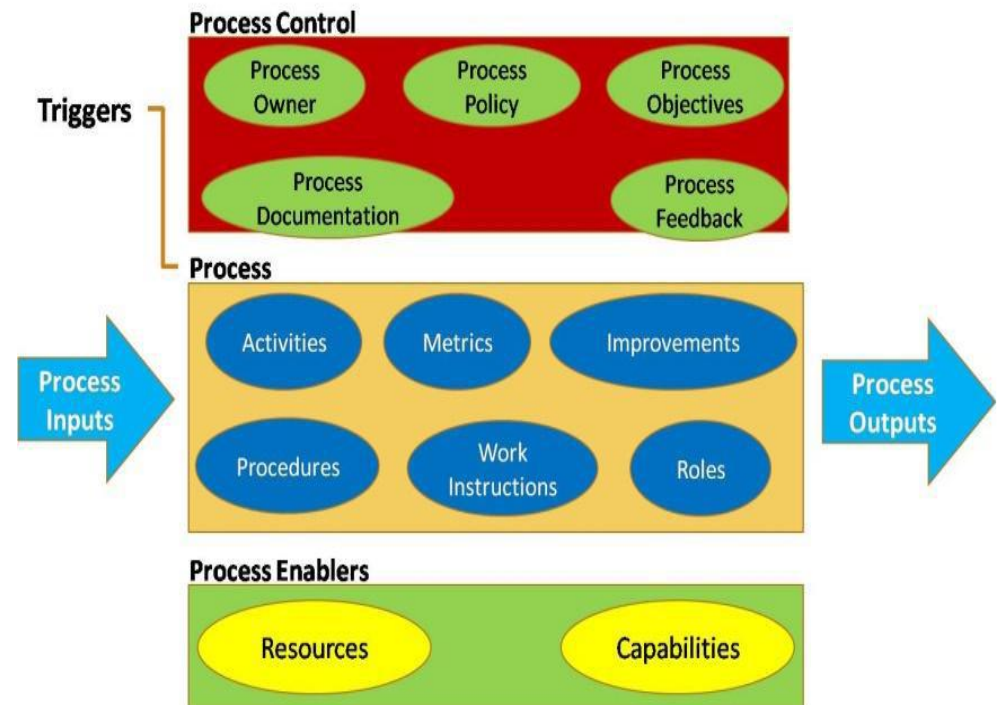


# Processes.

- **Processes** are structured sets of activities designed to achieve a specific objective.
- **Processes** have four basic characteristics:
  - They transform inputs into outputs .
  - They deliver results to a specific customer or stakeholder.
  - They are measurable.
  - They are triggered by specific events

# Processes.

- **Processes terms:**
  - Process control.
  - The Process itself.
  - Process enablers.



# Functions.

- **Functions** are self-contained subsets of an organization intended to accomplish specific tasks. They usually take the form of a team or **group of people** and the **tools** they use.
- **Functions** add structure and stability to organizations.



# Roles.

- **Roles** are defined collections of specific responsibilities and privileges. Roles may be held by individuals or teams.
- **ITIL<sup>®</sup>** emphasizes a number of standard roles include, most importantly:
  - Service Owner
  - Process Owner
  - Service Manager
  - Product Manager

# The RACI Model.

- **ITIL** also utilizes the **RACI model** as a generic tool for reviewing and assigning four key roles to any important task or activity.

		Description	How many in this role for a decision?
<b>R</b>	Responsible	Researches options & consequences, makes recommendations	Usually one (but sometimes more)
<b>A</b>	Approver	Makes the decision	One
<b>C</b>	Consulted	Makes recommendations	Varies (0 to many)
<b>I</b>	Informed	Get informed of the decision after it is made	Varies (0 to many)



# Service Strategy



# Purpose

- **The Service Strategy** of any service provider must be grounded upon a fundamental acknowledgement that its customers do not buy products, they buy the satisfaction of particular needs.
- **Service Strategy** is also about establishment and management of the broadest **policies** and **standards** which govern the way a Service Provider operates.

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ITIL



# The Four **P**s of Strategy

- **Perspective**: the distinctive vision and direction
- **Position**: the basis on which the provider will compete.
- **Plan**: how the provider will achieve their vision
- **Pattern**: the fundamental way of doing things – distinctive patterns in decisions and actions over time.

# Competition and Market Space

- Every Service Provider is subject to competitive forces.
- All service providers and Customers operate in one or more internal or external market spaces.
- The service provider must strive to achieve a better understanding than its Competitors of the dynamics of the market space, its customers within it, and the combination of critical success factors that are unique to that market space.

# Service Provider Types

- **Internal Service Provider:** exists within an organization solely to deliver service to one specific business unit
- **Shared Internal Service Provider:** services multiple business units in the same organization.
- **External Service Provider:** operates as an external service provider serving multiple external customers.

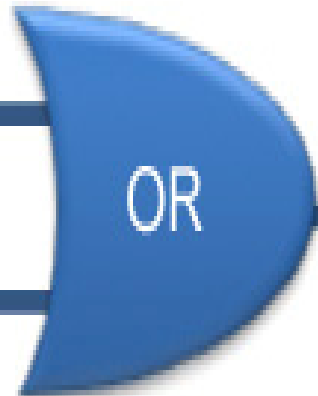
# *Service Value*

- Defined in terms of the customer's perceived business outcomes, and described in terms of the combination of two components:
- **Service Utility**: what the customer gets in terms of outcomes supported and/or constraints removed.
- **Service Warranty**: how the service is delivered and its fitness for use, in terms of availability, capacity, continuity and security.

# UTILITY

Performance supported?

Constraints removed?



T/F

Fit for purpose?



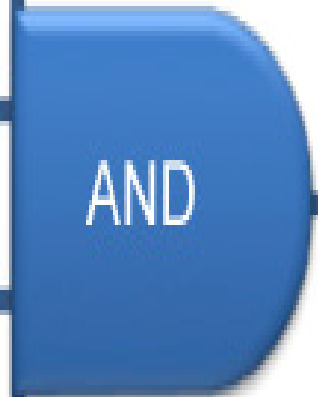
T/F

Available enough?

Capacity enough?

Continuous enough?

Secure enough?



T/F

Fit for use?

# WARRANTY

T: True  
F: False



# Service Management as a Strategic Asset

- **Resources:** the direct inputs for the production of services, e.g. financial, capital, infrastructure, applications, information and people.
- **Capabilities:** the provider's ability (in terms of management, organization, processes, knowledge and people) to coordinate, control and deploy resources

# Service Strategy Processes

- Strategy Generation
- Service Portfolio Management
- Business Relationship Management
- Demand Management
- Financial Management

# Strategy Generation

- Definition of the Market.
- Development of the offering.
- Development of the Strategic Assets.
- All measures in preparation for the implementation of the strategy.

# Service Portfolio Management

- The **Service Portfolio** is the entire set of services under management by a Service Provider. It consists of three major parts:
  - Service Pipeline
  - Service Catalog
  - Retired Services.

# Service Portfolio Management cont.



# Service Belt.

- In the course of delivering services, **Service Provider assets** are engaged with **customer assets** as a means of increasing the performance of customer assets. This causes customer demand for services.
- Customers express that demand by purchasing services which in turn transfers resources to the Service Provider.
- The Service Provider uses payment to replace or augment assets it uses to provide the services. This cycle is known as the **Service Belt**.

# Business Relationship Management

- The goal of Business Relationship Management is to maintain a **positive** relationship with customers.



# Demand Management

- **Demand management** is a critical process within the service strategy lifecycle phase.
- The **Demand Management** process is concerned with understanding and influencing customer demand.
- The absence of demand management can become a risk for the service provider as he cannot adjust to the service demand in time.



# Financial Management

- **IT Financial Management** provides a means of understanding and managing costs and opportunities associated with services in financial terms.
- **IT Financial Management** includes three basic activities:
  - Accounting (Track)
  - Budgeting (Plan)
  - Charging (Secure)

# Service Design



# Service Design

The **Service Design** lifecycle phase is about the design of services and all supporting elements for introduction into the live environment.



# Service Design

## Service Design offers value by:

- Ensuring that services are aligned with business objectives.
- Ensuring that services are able to provide the **utility** and **warranty** required for them to meet the objectives outlined during **Service Strategy**.
- Ensuring that service management systems and tools are capable of supporting service offerings

# Service Design .cont

## Service Design offers value by:

- Ensuring that services are constructed according to agreed architectural standards.
- Ensuring that services are designed so as to be implemented efficiently.
- Ensuring that services are designed so that their performance can be measured.

# Quality Must Be Built-In

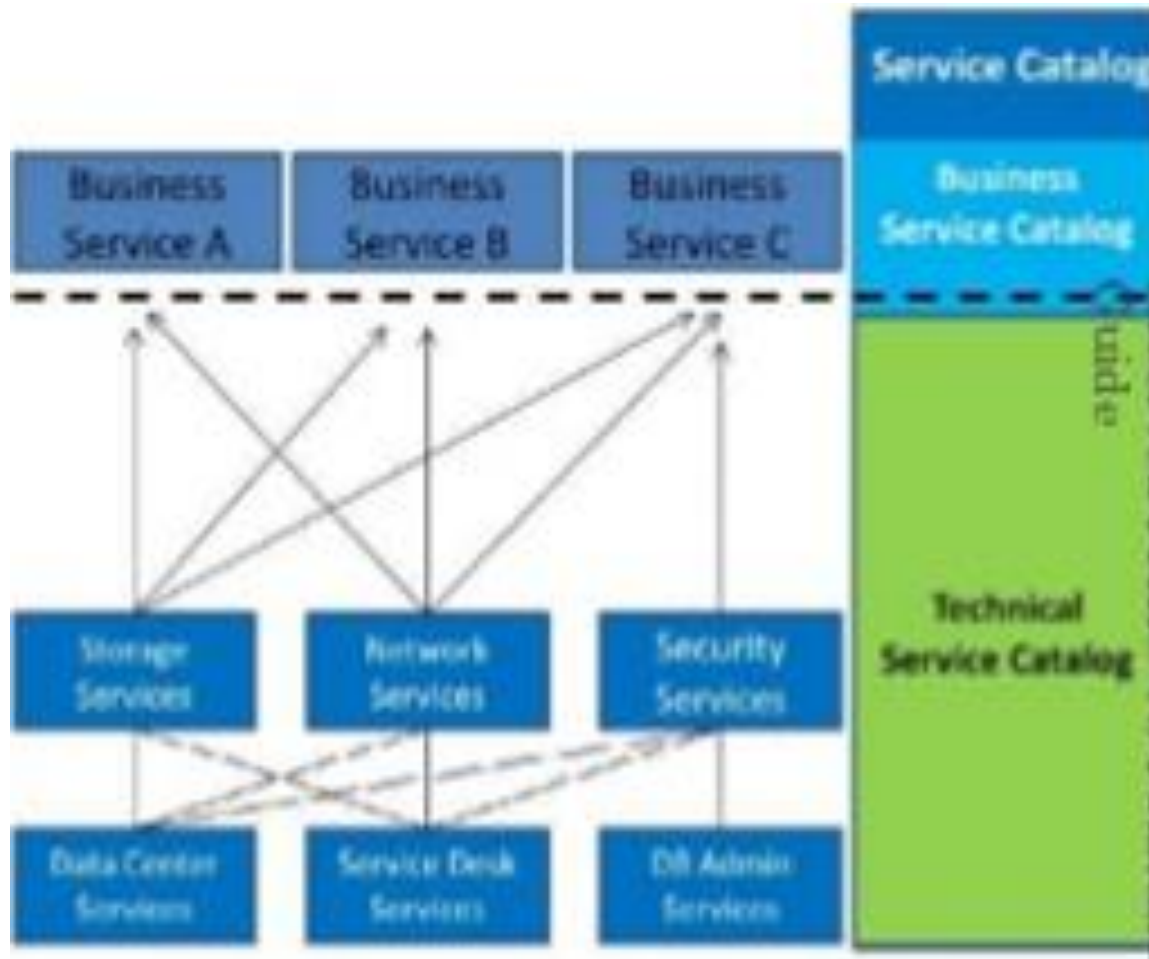
- Targeting **quality** during Service Design ensures that quality can be delivered during Service Operations.



# The Service Catalog

- The **Service Catalog** is the subset of the Service Portfolio which contains services currently available to customers and users.
- The **Service Catalog** is often the only portion of the **Service Portfolio** visible to customers.
- Typically the **Service Catalog** is implemented as a database and is often web-accessible.
- The **Service Catalog** commonly acts as the entry portal for all information regarding services in the live environment.

# The Service Catalog **cont.**





# The Four P's of Service Design

- **People** : Human resources and organizational structures required to support the service
- **Processes**: Service Management Processes required to support the service
- **Products**: Technology and other infrastructure required to support the service
- **Partners**: Third parties which provide services required to support the service

# Five Aspects of Service Design

- The new or changed service itself – with special attention to service requirements
- Service Management processes required to support the service.
- Service Management systems and tools required to support the service (especially the Service Portfolio).
- Measurement systems and metrics necessary to understand the performance of the service.

# Service Design Processes

- Service Catalog Management
- Service Level Management
- Availability Management
- Capacity Management
- IT Service Continuity Management
- IT Security Management
- Supplier Management

# Service Catalog Management

- Service Catalog Management involves management and control of the Service Catalog which contains information about services currently available to customers for use.
- Typically such information includes:
  - Features of the service
  - Guidelines for appropriate use of the service
  - Pricing information
  - Key contact information
  - Service Level Agreement information

# Service Catalog Management **cont.**

- The **Service Catalog Management** process is included within the Service Design lifecycle phase primarily because design activity typically generates a large volume of **documentation** and **information** which should be included in the Service Catalog.



# Service Level Management

- **Service Level Management** is the process charged with securing and managing agreements between customers and the service provider regarding the levels of performance (**utility**) and levels of reliability (**warranty**) associated with specific services.
- **Service Level Management** is part of the Service Design lifecycle phase primarily because it provides an opportunity to establish performance requirements early on so that design work may be specifically directed to meet such requirements.

# Service Level Management **cont.**

- **Service Level Management** results in the creation of **Service Level Agreements (SLAs)** between customers and the provider.



# Service Level Management **cont.**

- **Operational Level Agreements** (OLA's) are performance agreements nearly identical in nature to SLAs except that they exist between parts of the service provider organization specifically for the purpose of supporting '**upstream**' SLAs which require dependable performance by multiple business units, functions, or teams within the service provider organization.



# Availability Management

- The **Availability Management** process is concerned with management and achievement of agreed availability requirements as established in Service Level Agreements.
- In ITIL®, **availability** is defined as the ability of a system, service, or configuration item to perform its function when required.



# Availability Management **cont.**

- **Three Key Principles of Availability**

- IT services must be constantly accessible.
- One-time disruptions must be addressed rapidly and completely **NO** repeat incidents.
- Availability is mission critical business / infrastructure component.



# Availability Management **cont.**

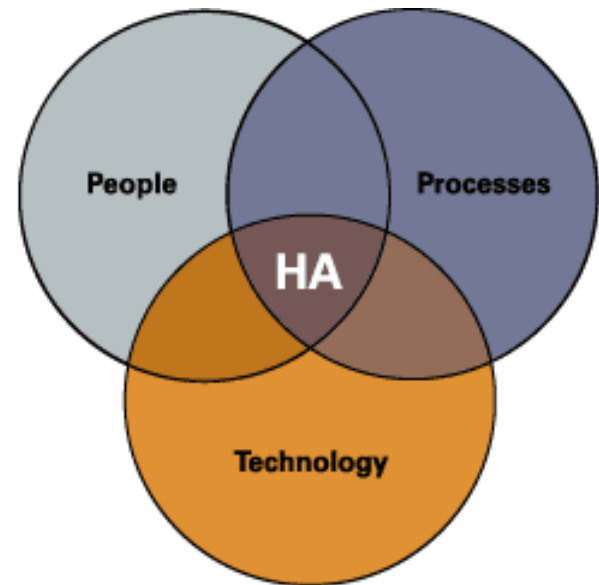
- **Basic abilities of Availability:**

- Availability
- Reliability (resilience)
- Maintainability (**preventive maintenance**)
- Serviceability (**SLA**)



# Availability Management **cont.**

- **Three levels of Availability:**
  - High Availability (**unplanned**)
  - Continuous Operation (**Planned**)
  - Continuous Availability (**Planned and unplanned**)



# Availability Management **cont.**

- **Availability Management and Metrics:**
  - MTTR
  - MTBF
  - MTBSI (MTTR + MTBF)
  - MTRS

Nines	% Available	Downtime per year	Downtime per month	Downtime per week
one nine	90%	36.5 days	72 hours	16.8 hours
two nines	99%	3.65 days	7.20 hours	1.68 hours
three nines	99.9%	8.76 hours	43.2 minutes	10.1 minutes
four nines	99.99%	52.56 minutes	4.32 minutes	1.01 minutes
five nines	99.999%	5.26 minutes	25.9 seconds	6.05 seconds
six nines	99.9999%	31.5 seconds	2.59 seconds	0.605 seconds

# Capacity Management

- **Capacity Management** is concerned with ensuring that cost-effective capacity exists at all times which meets or exceeds the agreed needs of the business as established in Service Level Agreements.
- In ITIL®, **capacity** is defined as the maximum throughput a service, system, or device can handle.



# Capacity Management **cont.**

- ITIL®'s treatment of **Capacity Management** is divided into three major activities:
  - **Business Capacity Management (BCM)**
  - **Service Capacity Management (SCM)**
  - **Component (Resource) Capacity Management (CCM)**



# Capacity Management **cont.**

- **Activities of Capacity Management:**
  - Develop the Plan (**Requirements**)
  - Modeling (**Tools**)
  - Application Sizing (**resources for new or modified services**)
  - Monitor (**cpu, disk, network etc...**)
  - Analyze (**evidence**)
  - Tune (**optimize**)
  - Implement (**change management**)
  - Demand management
  - Create and input to Capacity Database



# IT Security Management

- **IT Security Management** is the process concerned with the protection of IT assets (including services) from security threats.

**How secure is your data?**



# IT Security Management **cont.**

- IT Security Management focuses on protection of five basic qualities of information assets:
  - **Confidentiality:** Assurance that the asset is only available to appropriate parties
  - **Integrity:** Assurance that the asset has not been modified by unauthorized parties
  - **Availability:** Assurance that that asset may be utilized when required
  - **Authenticity:** Assurance that transactions and the identities of parties to transactions are genuine.
  - **Non-Repudiation:** Assurance that transactions, once completed, may not be reversed without approval.

# Supplier Management

- **Supplier Management** is the process charged with obtaining value for money from third-party suppliers.
- **Supplier Management** plays a very similar role to that of Service Level Management, but with respect to external suppliers rather than internal suppliers and internal/external customers.



# Supplier Management **cont.**

- **Supplier Management** is critical to effective design because for nearly all IT organizations, dependency on external suppliers is increasingly central to their ability to deliver services to their own customers.
- **Supplier Management** handles supplier evaluation, contract negotiations, performance reviews, renewals and terminations.

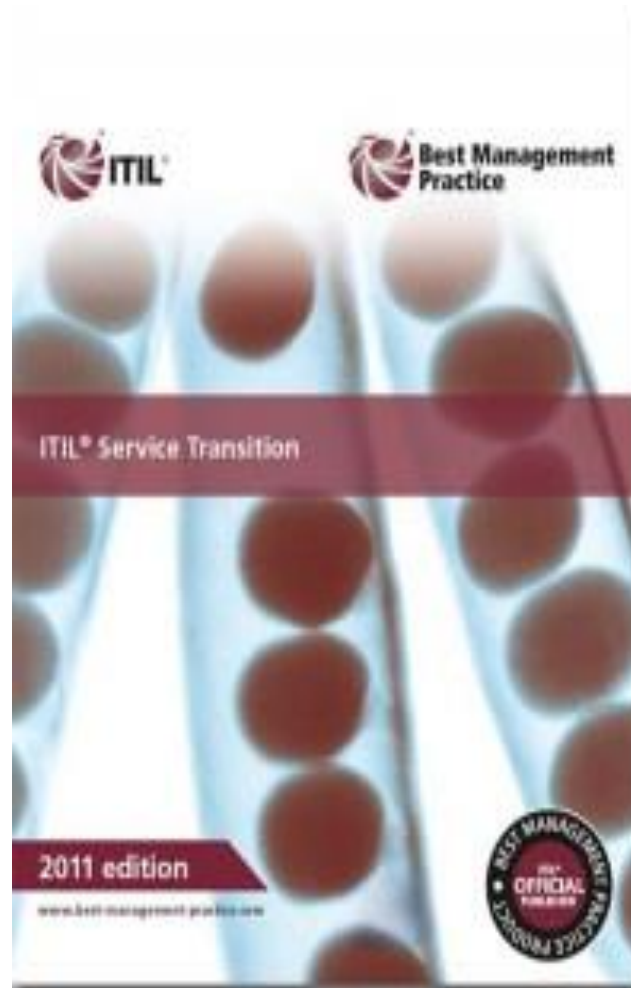


# IT Service Continuity Management

- The **IT Service Continuity Management process (ITSCM)** is responsible for ensuring that the IT Service Provider can always provide minimum agreed Service Levels.
- **ITSCM** is largely concerned with management of risks and with planning for the recovery of IT Services in the event of disaster.



# Service Transition



# Service Transition

- **Service Transition** is concerned with management of **change** and, more specifically, with the introduction of new and changed services into the live environment.



# Service Transition

In Service Design, we need to:

- Plan, manage service changes with efficiency.
- Successfully deploy the new or changed services.
- Make sure that the service changes meet the agreed requirements.
- Educate with the appropriate knowledge & information about services and assets.
- Manage Risks



# Service Transition

## Service Transition Benefits:

- Enable more accurate cost, timing and resource requirements.
- Make it easier for people to adopt and follow.
- Reduce delays due to unexpected clashes and dependencies.
- Improve expectation setting for all stakeholders.
- Ensure that new or changed services will be maintainable.
- Improve control of service assets and configuration.

# Service Transition Processes

- Transition Planning and Support
- Change Management
- Service Asset and Configuration Management
- Knowledge Management.
- Release and Deployment Management
- **Service Validation and Testing**
- **Evaluation.**

# Transition Planning & Support

The goals of Transition Planning and Support are to:

- Plan and coordinate resources to ensure that the requirements of Service Strategy encoded in Service Design are effectively realized in Service Operations
- Identify, manage and control the risks of failure and disruption across transition activities.
- You need to make sure that you have what you need in order to succeed.

# Transition Planning & Support **cont.**

## Release policy:

- Major Release
- Minor Release
- Emergency Release

## **SKMS** Service Knowledge Management System:

- The system that has all kind of information, guidelines and standard.

# Change Management

## Terms to know:

- **Change:** ITIL® defines a change as the *addition, removal, or modification* of anything that could have an effect on an IT service. All changes involve risk.
- **Change Model:** A repeatable way of dealing with a particular category of change. It defines specific pre-defined steps that will be followed.

# Change Management **cont.**

## **Terms to know:**

- **Request for Change RFC:** is a form you fill in and make a request for change to be made.
- **RFCs** may be issued by any one: customers, IT staff, users, etc. and are received by the Service Desk and handled via the Change Management process.
- **Change Record** : that has all details of the change including the lifecycle of the change and this is created for every RFC you have.
- **Remediation Planning:** Rollback
- **NO Change Plan without Remediation Plan.**

# Change Management **cont.**

- **Change Advisory Board CAB:** The Change Advisory Board or CAB is a group of experts convened by the Change Manager to advise on the approval/rejection and planning for a specific change.



# Change Management **cont.**

- **Change Management** ensures that changes are recorded, evaluated, authorized, prioritized, planned, tested, implemented, documented and reviewed in a controlled manner.
- The purpose of the Change Management process is to ensure that standardized methods are used for the efficient and prompt handling of all changes, that all changes are recorded in the Configuration Management System and that overall business risk is optimized.



# Change Management **cont.**

- **Configuration Management System** is the controlled repository and interfaces for management of information concerning items under configuration control (**Configuration Items**) in the environment.
- The purpose of the CMS is to provide accurate and up-to-date information regarding how the environment is configured.
- The CMS stores records of Configuration Items in the **Configuration Management Database (CMDB)**.

# Change Management **cont.**

- Change Management is relevant across the whole lifecycle, applying to all levels of service management – Strategic, Tactical and Operational.



# Service Asset & Configuration Management (SACM)

## Terms to know:

- **Asset:** Any resource or capability that could contribute to the delivery of a service.
- **Configuration Item:** any component that needs to be managed in order to deliver an IT service.

# Service Asset & Configuration Management (SACM)

- **Service Asset & Configuration Management** supports the business by providing accurate information and control across all assets and relationships that make up an organization's infrastructure. (.exe & .msi)
- The purpose of **SACM** is to identify, control and account for service assets and configuration items (CI), protecting and ensuring their integrity across the service lifecycle.

# Service Asset & Configuration Management (SACM)

- The scope of SACM also extends to non-IT assets and to internal and external service providers, where shared assets need to be controlled.
- To manage large and complex IT services and infrastructures, SACM requires the use of a supporting system known as the **Configuration Management System (CMS)**.

# Knowledge Management

The purpose of **Knowledge Management** is to ensure that the right person has the right knowledge, at the right time to deliver and support the services required by the business.

## **This delivers:**

- More efficient services with improved quality.
- Clear and common understanding of the value provided by services.
- Relevant information that is always available.

# Knowledge Management **cont.**

- From a practical perspective, **Knowledge Management** belongs in Service Transition simply because Service Transition has responsibility for most **testing** and **validation** where the most valuable operational data is gathered prior to release into the live environment.

# Release & Deployment Management

- The goal of the Release and **Deployment Management** process is to assemble and position all aspects of services into production and establish effective use of new or changed services.
- Effective release and deployment delivers significant business value by delivering changes at optimized speed, risk and cost, and offering a consistent, appropriate and auditable implementation of usable and useful business services.



# Service Validation & Testing

- Successful testing depends on understanding the service holistically – how it will be used and the way it is constructed. All services – whether *in-house* or *bought-in* – will need to be tested appropriately, providing validation that business requirements can be met in the full range of expected situations, to the extent of agreed business risk.

# Evaluation

- *Ensuring* that the service will be useful to the business is central to successful Service Transition and this extends into ensuring that the service will continue to be relevant by establishing appropriate metrics and measurement techniques.

# Key Roles & Responsibilities

- The staff delivering **Service Transition** within an organization must be organized for effectiveness and efficiency, and various options exist to deliver this.
- It is not anticipated that a typical organization would consider a separate group of people for this role, rather there is **a flow of experience and skills** – meaning the same people may well be *involved* in multiple lifecycle stages.

# Service Operation



# Service Operation

- The purpose of Service Operation is to deliver agreed levels of service to users and customers, and to manage the Applications, Technology and Infrastructure that support delivery of the services.
- It is only during this stage of the lifecycle that services actually deliver value to the business, and it is the responsibility of Service Operation staff to ensure that this value is delivered.

# Service Operation

It is important for Service Operation to balance conflicting goals:

- *Internal IT view* versus *External business view* (CRA case)
- *Stability* versus *Responsiveness*
- *Quality of Service* versus *Cost of Service*
- *Reactive* versus *Proactive activities* (Ahmad & Ibrahim)



# Service Operation **cont.**

- During Service Operation, the importance and criticality of Communication is especially acute. ITIL stresses the importance of communication:
  - Between users and the IT Service Provider
  - Between customers and the IT Service Provider
  - Between different processes, functions, teams, etc. within the IT Service Provider
  - Between the IT Service Provider and its suppliers



# Service Operation **cont.**

- **Incident:** An incident is any occurrence which causes *or may cause interruption or degradation to an IT Service.*
- **Problem:** A problem is the unknown underlying cause of one or more incidents. A problem is NOT just a particularly serious incident.
- **Event:** An event is any change of state of an infrastructure or other item which has significance for the delivery of a service.





# Warm up

- Using eight eights and addition only, can you make 1000?
- If a hen and a half lay an egg and a half in a day and a half, how many eggs can a hen lay in three days?

# Service Operation

- Five Processes  
How to do?
- Four Functions  
Who will do?

# ITIL Functions

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

# Service Desk.

- **Service Desk** provides a single point of contact between users and the IT organization. The Service Desk processes inbound incidents, service requests, change requests, etc.
- **Service Desk configurations:**
  - Local (expensive, knowledge transfer, culture)
  - Centralized (ONE Service desk)
  - Virtual (global organization)
  - Follow-the- Sun

# Technical Management.

- The **Technical Management** function is charged with plan, development, and management of the **technical skill sets** and **resources required** to support the infrastructure and the IT Service Management effort.
- **Specialty areas:**
  - Networking
  - Security
  - Database
  - Etc .....

# Application Management.

- **Application Management** is concerned with the **end-to-end** management of applications in the environment.



# IT Operation Management.

- **IT Operations Management** is concerned with the **day-to-day** maintenance of the **IT infrastructure** and the **facilities** which house it.
- It is divided into two sub-functions: **Operations Control** and **Facilities Management**.



# Operations Control.

- The **Operations Control** sub-function is concerned with **regular maintenance cycles** associated with infrastructure management.
- **These include such activities as:**
  - Console Management
  - Backup and restore operations
  - Media management
  - Batch job execution



# Facilities Management.

- **Facilities Management** is concerned with maintenance of the facilities which house IT operations, e.g. data centers, call centers, development facilities, etc.
- **Its areas of responsibility include things like:**
  - HVAC
  - Fire suppression
  - Facilities access
  - Power

# Service Operation Processes

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



# Event Management Process

- **An event** is a change of state that has significance for the management of a configuration item or IT service.
- An Event may indicate that something is not functioning correctly (Exception), leading to an incident being logged.
- Events may also indicate normal activity (Informational), or a need for routine intervention (Warning) such as changing a tape. (SCOM)

# Event Management Process **cont.**

- **Event Management** is concerned with detection of events in the infrastructure and with selection of appropriate response actions.
- By facilitating early detection of incidents, Event Management helps reduce the number of incidents which impact users and can greatly improve the performance of the Incident Management process itself.



# Incident Management Process

- **Incident Management** is concerned with the rapid restoration of services and with minimization of impact to the business.
- In most but not all cases the Incident Management process is owned and executed by the **Service Desk**.



# Incident Management Process **cont.**

- Within ITIL<sup>®</sup>, Incident Management consists of a number of basic activities or steps:
  - Detection (User call or system alert)
  - Logging (Incident System Management)
  - Classification
  - Prioritization (Impact and Urgency)
  - Investigation and Initial Diagnosis (check known Error Database KEDB)
  - Escalation
  - Resolution and Recovery
  - Closure (flagged as being closed)

# Problem Management Process

- **A problem** is a cause of one or more incidents. The cause is not usually known at the time a problem record is created, and the problem management process is responsible for further investigation.
- **Problem Management** is concerned with the identification and correction of flaws or errors in the environment which cause incidents.
- Problem Management helps reduce and prevent incidents.

# Problem Management Process **cont.**

- **Problem Management** is broadly divided into two major sub-processes:
  - **Reactive Problem Management:** which is charged with responding to problems as they arise in the environment, usually driven by the Incident Management process.
  - **Proactive Problem Management:** which is charged with proactively seeking out improvements to services and infrastructure before incidents occur.



# Problem Management Process **cont.**

- The production and maintenance of the **Known Error Database (KEDB)** is one of the most important outputs of the Problem Management process.
- The Known Error Database is used by the Incident Management process to more rapidly resolve incidents.



# Request Fulfillment Process

- ***Service Request***: is a request from a user for information or advice, or for a standard change, or for access to an IT service.



# Request Fulfillment Process **cont.**

- ***Service Request Fulfillment*** is the process charged with assisting users in situations where no service degradation or interruption is involved.
- ***Service Request Fulfillment*** provides a means of addressing common user requests for non-incident support, new equipment, training, etc.

# Access Management Process

- The purpose of the **Access Management** process is to provide the rights for users to be able to access a service or group of services, while preventing access to non-authorized users.
- **Access Management** helps to manage *confidentiality*, *availability* and *integrity* of data and *intellectual property*.



# Continual Service Improvement



# Continual Service Improvement

- **Continual Service Improvement (CSI)** is concerned with maintaining value for customers through the continual evaluation and improvement of the quality of services and the overall maturity of the ITSM service lifecycle and underlying processes. (*Mobiles*)



# Continual Service Improvement **cont.**



# Continual Service Improvement **cont.**

- **CSI** combines principles, practices and methods from Quality management, Change Management, working to improve each stage in the service lifecycle, as well as the current services, processes, and related activities and technology.





# Continual Service Improvement **cont.**

- **CSI** defines **Three processes** for the effective implementation of continual improvement:
  - The 7-Step Improvement Process (*for life!*)
  - Service Measurement
  - Service Reporting.



# The **7-Step** Improvement Process

- The 7-step improvement process covers the steps required to collect meaningful data, analyze this data to identify trends and issues, present the information to management for their prioritization and agreement, and implement improvements.
- Each step is driven by the strategic, tactical and operational goals defined during Service Strategy and Service Design.



# Step 1: Define what you should measure

- A set of measurements should be defined that fully support the goals of the organization.
- The focus should be on identifying what is needed to satisfy the goals fully, without considering whether the data is currently available.



## Step 2: Define what you can measure

- Organizations may find that they have limitations on what can actually be measured, but it is useful to recognize that such gaps exist and what risks may be involved as a result.
- It is possible that new tools or customization will be required at some stage.



## Step 3: Gather the data

- This covers monitoring and data collection.
- A combination of monitoring tools and manual processes should be put in place to collect the data needed for the measurements that have been defined.



## Step 4: Process the data

- Raw data is processed into the required format, typically providing an end-to-end perspective on the performance of services and/or processes.
- Processing the data is an important CSI activity that is often overlooked.



# Step 5: Analyze the data

- Data analysis transforms the *information* into *knowledge* of the events that are affecting the organization.
- Once the data is processed into information, the results can be analyzed to answer questions such as:
  - Are we meeting targets?
  - Are corrective actions required?
  - What is the cost?



# Step 6: Present and use the Information

- The knowledge gained can now be presented in a format that is easy to understand and allows those receiving the information to make strategic, tactical and operational decisions.
- The information needs to be provided at the right level and in the right way for the intended audience.





# Step 7: Implement corrective action

- The knowledge gained is used to optimize, improve and correct services, processes, and all other supporting activities and technology. The corrective actions required to improve the service should be identified and communicated to the organization.
- **The 7-Step Improvement Process is continual and loops back to the beginning.**



# Service Measurement

There are four basic reasons to monitor and measure, to:

- **Validate** previous decisions that have been made.
- **Justify** that a course of action is required, with factual evidence.
- **Direct** activities in order to meet set targets - this is the most prevalent reason for monitoring and measuring.
- **Intervene** at the appropriate point and take corrective action.



# The Three Measurement Metrics

- **Technology metrics:** often associated with component and application based metrics such as performance, availability.
- **Process metrics:** captured in the form of Critical Success Factors (CSFs), Key Performance Indicators (KPIs) and activity metrics.
- **Service metrics:** the results of the end-to-end service. Component/technology metrics are used to compute the service metrics.

# Service Measurement **cont.**

- An integrated Service Measurement Framework needs to be put in place that defines and collects the required metrics and raw data, and supports the reporting and interpretation of that data.



# Service Reporting

- A significant amount of data is collated and monitored by IT in the daily delivery of quality service to the business, but only a small subset is of real interest and importance to the business.



# Service Reporting **cont.**

- It is not enough to present reports depicting adherence or otherwise to SLAs.
- IT needs to build an actionable approach to reporting, i.e. what happened, what IT did, how IT will ensure it doesn't impact again and how IT are working to improve service delivery generally.



# Thank You

