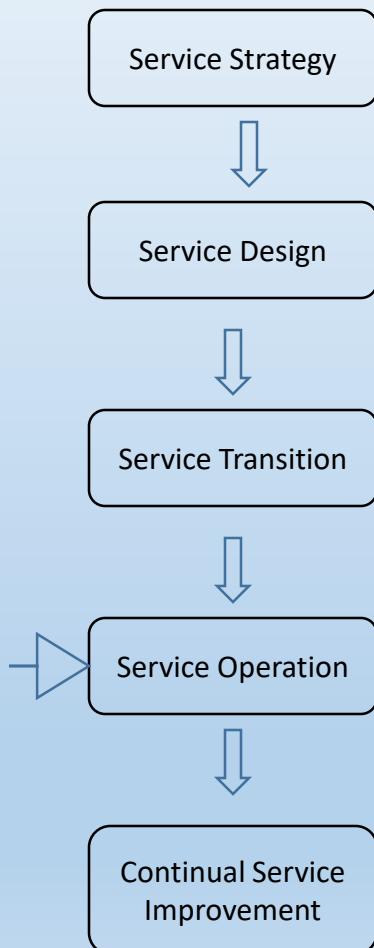


# L3 Service Operation



- Service Operation concepts
  - Objectives
  - Challenges
- Key Processes
  - Event management
  - Incident management
  - Problem management
  - Request fulfillment
  - Access management
  - IT Operations : Service desk ( function )

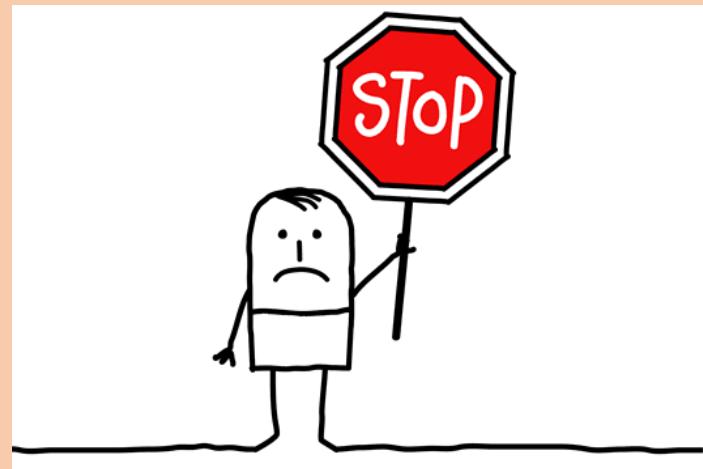
- Learning outcome:

Student will be able to :

- Describe the aims of service operations
- Describe the 5 key processes within service operations:
  - Event management
  - Incident management
  - Problem management
  - Request fulfilment
  - Access management
- Describe 2 key functions within service operations:
  - IT operations
  - Service desk

# \*Objectives :

- Service Operation aims to minimize service interruption by fulfilling all activities required to provide and support services at the agreed service levels. These include:
  - The services
  - The service management processes
  - The technology
  - The people



## \*Introduction :

- AXS machines down for 2 hours nationwide

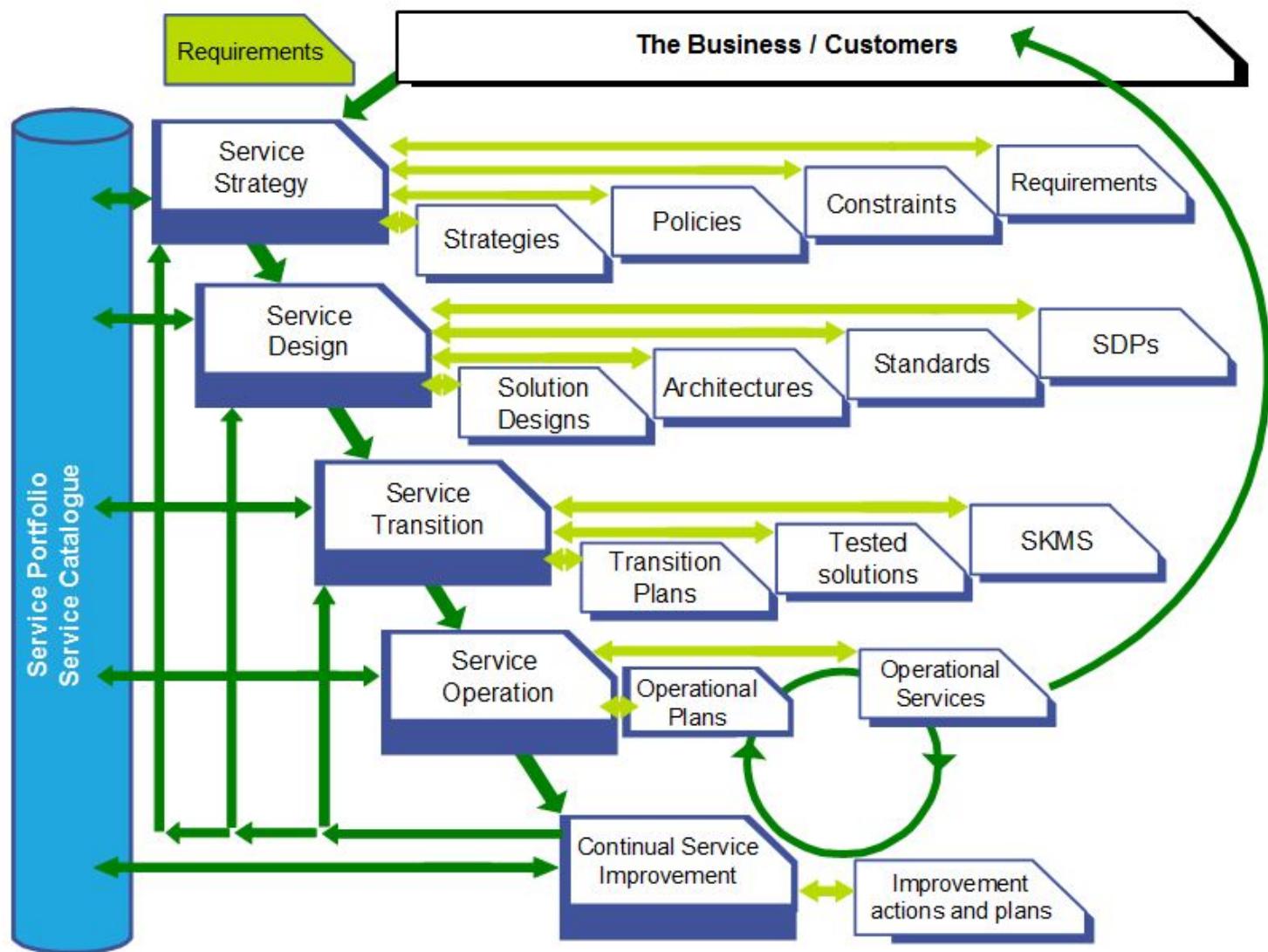


# AXS machines down for 2 hours nationwide

- SINGAPORE: AXS machines broke down island wide on Friday at about 4pm.
  - Users were not able to make self-service payments until some two hours later.
  - Reports of the AXS machines malfunctioning trickled in from 4pm.
  - They seemed to be working normally at first glance, but those who tried to use them were not able to complete their transactions.
  - The machines would display a message informing them that their attempt at payment had failed.
  - AXS has apologized for the incident and is investigating the failure.
- 
- Events detected at 4pm
  - Service affected – Incident Customer
  - What should the IT support officer do ?



# IT Service Lifecycle



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# Service Lifecycle

## Service Strategy (SS)

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

## Service Design (SD)

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



## Service Transition (ST)

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

## Service Operation (SO)

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

## Continual Service Improvement (CSI)

- Seven-Step Improvement Process

# \*Service Operations Processes :

- 
- 1 • Event management
  - 2 • Incident management
  - 3 • Problem management
  - 4 • Request fulfillment
  - 5 • Access management
  - 6 • Monitoring and control (activity)
  - 7 • IT operations (function)

## \*Event management

- An **event** is an occurrence that affects the IT infrastructure or the provision of an IT Service
- Events are **notifications** created by an IT service, configuration item or monitoring tools
- Event management system surveys all events that occurs in the IT infrastructure in order to **monitor** the regular performance, and which can be **automated to trace** and escalate unforeseen circumstances

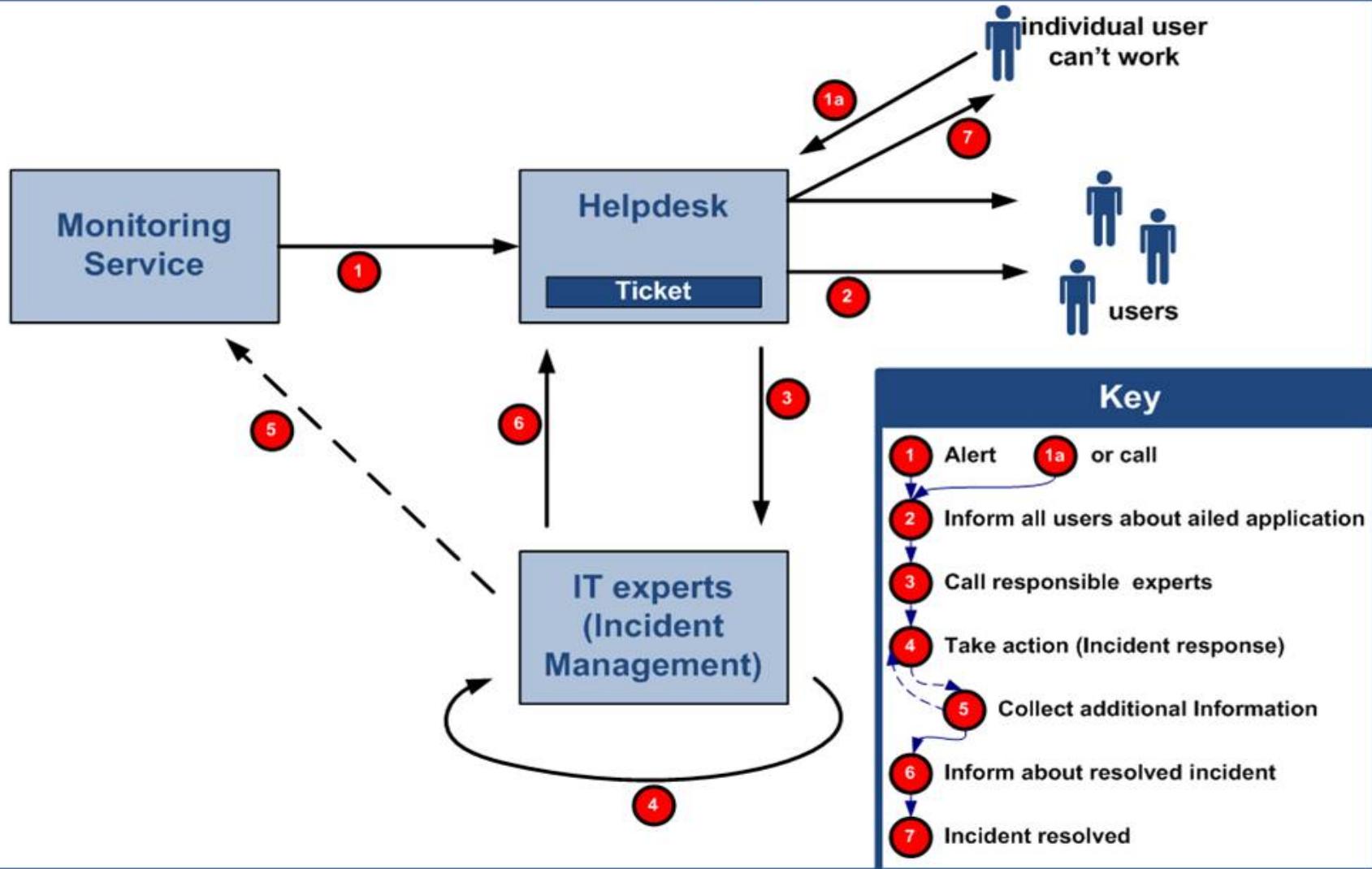
Eg. Warning messages received by the network monitoring device that the packet loss rate of a communication link is exceeding the normal rate.

Eg Ping [www.nyp.edu.sg](http://www.nyp.edu.sg) Tools : Splunk

# Event management model activities are :

-  Event occurs
-  Event notification
-  Event detection
-  Event filtering
-  Evaluate event significance
-  Event correlation
-  Trigger response
-  Response selection
-  Action assessment
-  Close event

## Incident Management



# \*Incident Management

- Incident management aims to restore failure of service as quickly as possible for customer, so that it has a minimal impact on the business
- Incident management includes any event that interrupts or can interrupt a service and events report by customers

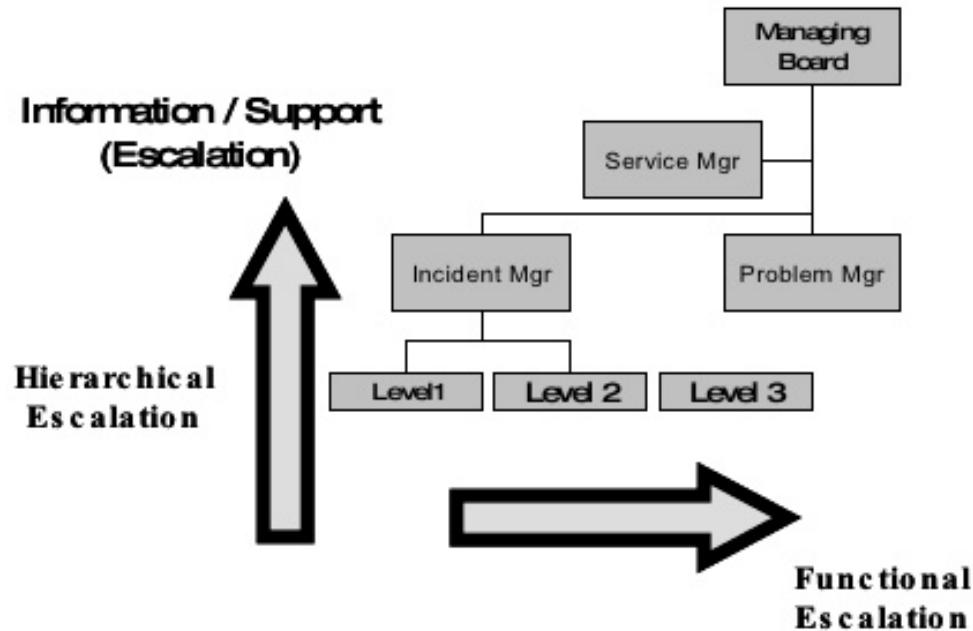
Eg. Customer called the help desk that he cannot receive/send any email. Why this is an incident ?

# \*Incident management model activities:



## Incident Management: Types of Escalation

Functional versus hierarchical escalation



## \*Request fulfillment

- The **goals** of the request fulfillment process are :
  - Offering users a channel where they can request and receive standard services; there must be an agreed approval and qualification process for this
  - Providing information to customers about the availability of services and the procedure to obtain them
  - Providing the standard services components
  - Assisting with general information,
  - Handling complaints or remarks

Eg. Customer asks help desk staff for advice on service access.  
Customer requests service desk staff to replace the printer paper.

## \*Problem management

- Problem management is responsible for analyzing and resolving the root causes of incidents
- Includes all activities that are needed for diagnosis of the underlying cause of incidents and to determine a resolution for those problem
- Eg. Customer feedback to the service desk that the sending and receiving email is very slow, the service desk contacted the network department engineer to investigate the root of the problem. The problem management process starts when the engineer is notified and ends when the causes are identified. Repairing the fault is under change management.

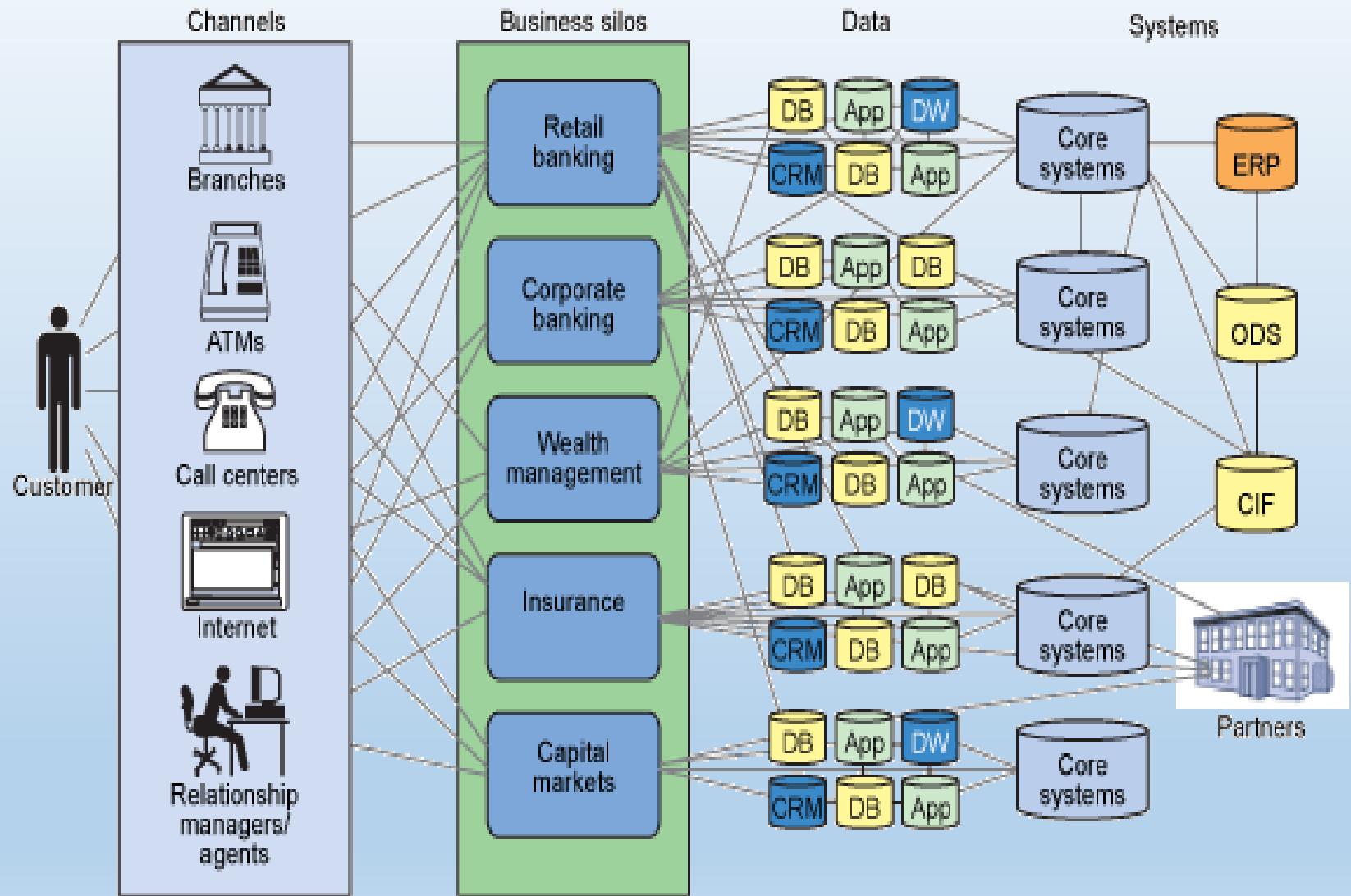
## \*Reactive Problem Management Activities

- **Reactive activities** consists of:

- Detection
- Logging
- Categorizing
- Prioritizing
- Investigating and diagnosing
- Determining workaround
- Identifying a known error
- Finding a resolution
- Closing
- Review major problem
- Mistakes in development environment

## \*Access management

- Access management is the process of **allowing authorized users access** to use a service, while access of unauthorized users is limited
- Access management help ensure that the service access is always available at agreed time In **accordance with the security policy.**
- Service operation staff does not have the power to decide who has rights to access services. They follow the policy only.



# \*Access management activities

- Access management consist of:
  - Requesting access
  - Verification
  - Assigning rights ( according to security policy )
  - Monitoring of the identity status
  - Logging and tracking access
  - Removing or restricting rights

# \*IT operations ( Function )

- IT Operations activities refer to the **day-to-day operational activities** that are needed to manage the IT infrastructure:
  - Console management/ operations bridge
  - Job scheduling
  - Backup and restore



# \*Service Desk

- A service desk is **a functional unit** with a number of staff members who deal with a variety of service events
- The prime contact point for IT users, and it processes all incidents and service requests
- Often staff use software tools to record and manage events



## \*Service Desk Objectives

- The principal goal of the service desk is to restore the “normal service” for users as soon as possible. This could entail resolving a technical error, fulfilling a service request or answering a question.
- It supports :
  - Local service desk
  - Centralized service desk
  - Virtual service desk
  - Follow the sun- “24/7” service
  - Specialized service desk groups

# Service Operations ( Review Questions )

- Q1 What is the objective of service operations? What is the scope?
- Q2 List steps covered in the event management model.
- Q3 What is the aim of incident management?
- Q4 Describe the involvement of IT operations.
- Q5 What are the 5 key activities in Access management?

# Revision MCQ

- 1 What is the BEST description of the purpose of service operations?
  - A. To decide how IT will engage with suppliers during the service lifecycle
  - B. To proactively prevent all outages to IT services
  - C. To design and build processes that will meet business needs
  - D. To deliver and manage IT services at agreed levels to business users and customers
  
- 2 The BEST description of an incident is:
  - A. An unplanned disruption of service unless there is a backup to that service
  - B. An unplanned interruption to service or a reduction in the quality of service
  - C. Any disruption to service that is reported to the Service desk, regardless of whether the service is impacted or not
  - D. Any planned or unplanned interruptions to the IT infrastructure.
  
- 3 Which of the following activities is performed by Access management?
  - A. Providing physical security for staff data centres and other buildings
  - B. Managing access to computer rooms and other secure locations
  - C. Managing access to the service desk
  - D. Managing the rights to use a service or group of services

# Revision MCQ

- 4 What is the BEST description of the purpose of problem management?
- A. To decide how to handle the reported incidents
  - B. To proactively resolve customer's problems
  - C. To analyze and resolving the root causes of incidents
  - D. To address inter-personal problems within the IT support team members
- 5 The BEST description of an event is \_\_\_\_\_.
- A. an occurrence that affects the IT infrastructure or the provision of IT services
  - B. An unplanned interruption to the roster of IT staff
  - C. Any disruption to the delivery of IT equipment to the Service desk
  - D. Any planned or unplanned interruptions to the workload of IT support staff
- 6 Which of the following activities is NOT covered by the service desk?
- A. resolving a technical error
  - B. fulfilling a service request
  - C. answering a question
  - D. deciding the rights to use a service