ITIL Introduction and Overview

WEEK 02

Overview

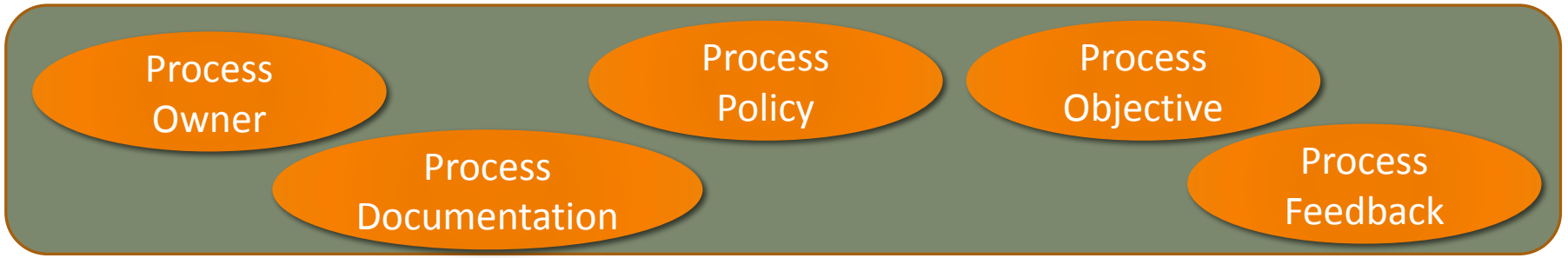
- Processes (including Selected Process of SLC)
- Functions
- ITIL Functions
- The RACI Model
- Technology and Automation

Processes

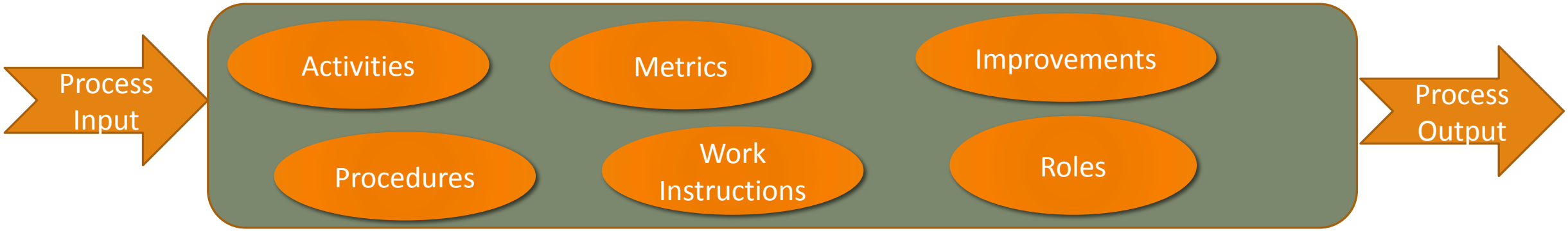
Processes

- Structured set of activities
  - Designed to achieve a specific objective
- Four basic characteristics
  1. Transform inputs into outputs
  2. Deliver results to specific customer or stakeholder
  3. Measurable
  4. Triggered by specific events

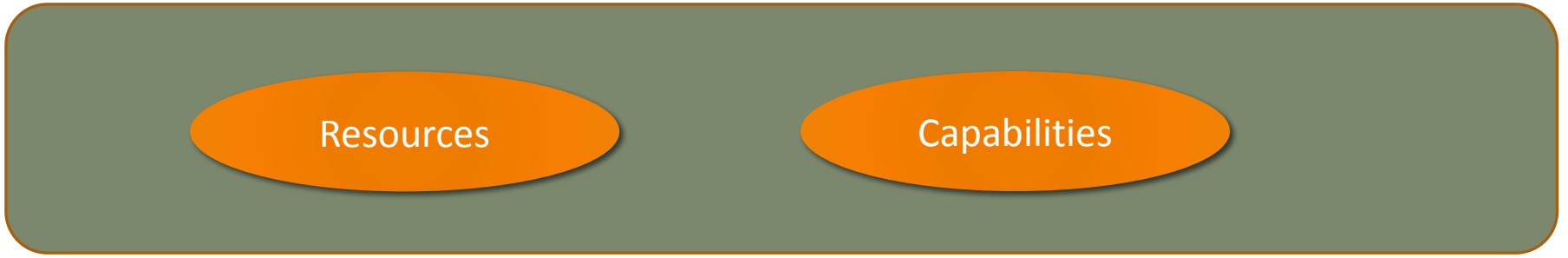
Process Control



Process Itself



Process Enablers



Selected Processes in SLC

SLC :: Service Design

- Purpose
  - Converting the strategy into reality, through the use of a consistent approach to the design and development of new service offerings
- 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?

Holistic approach to determine the impact of change introduction on the existing services and management processes

Processes in Service Design

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

Service Level Management

- Service Level Agreement
  - Operational Level Agreements
    - Internal
  - Underpinning Contracts
    - External Organisation
    - Supplier Management
  - Can be an annex to a contract
  - Should be clear and fair and written in easy-to-understand, unambiguous language
- Success of SLM (KPIs)
  - How many services have SLAs?
  - How does the number of breaches of SLA change over time (we hope it reduces!)?

Things you might find in an 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

Types of SLA

- Service-based
  - All customers get same deal for same services
- Customer-based
  - Different customers get different deal (and different cost)
- Multi-level
  - These involve corporate, customer and service levels and avoid repetition

ITSCM

- IT Service Continuity Management
- Ensures resumption of services within agreed timescale
- Business Impact Analysis informs decisions about resources
  - E.g. Stock Exchange can't afford 5 minutes downtime but 2 hours downtime probably wont badly affect a departmental accounts office or a college bursary

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

SLC :: Service Transition

- Key Purpose
  - To bridge both the gap between projects and operations more effectively
  - Improve any changes that are going into live service
- Build
- Deployment
- Testing
- User acceptance
- Bed-in

Knowledge Management

- Vital to enabling the right information to be provided at the right place and the right time to the right person to enable informed decision
- Stops data being locked away with individuals
- Obvious organisational advantage

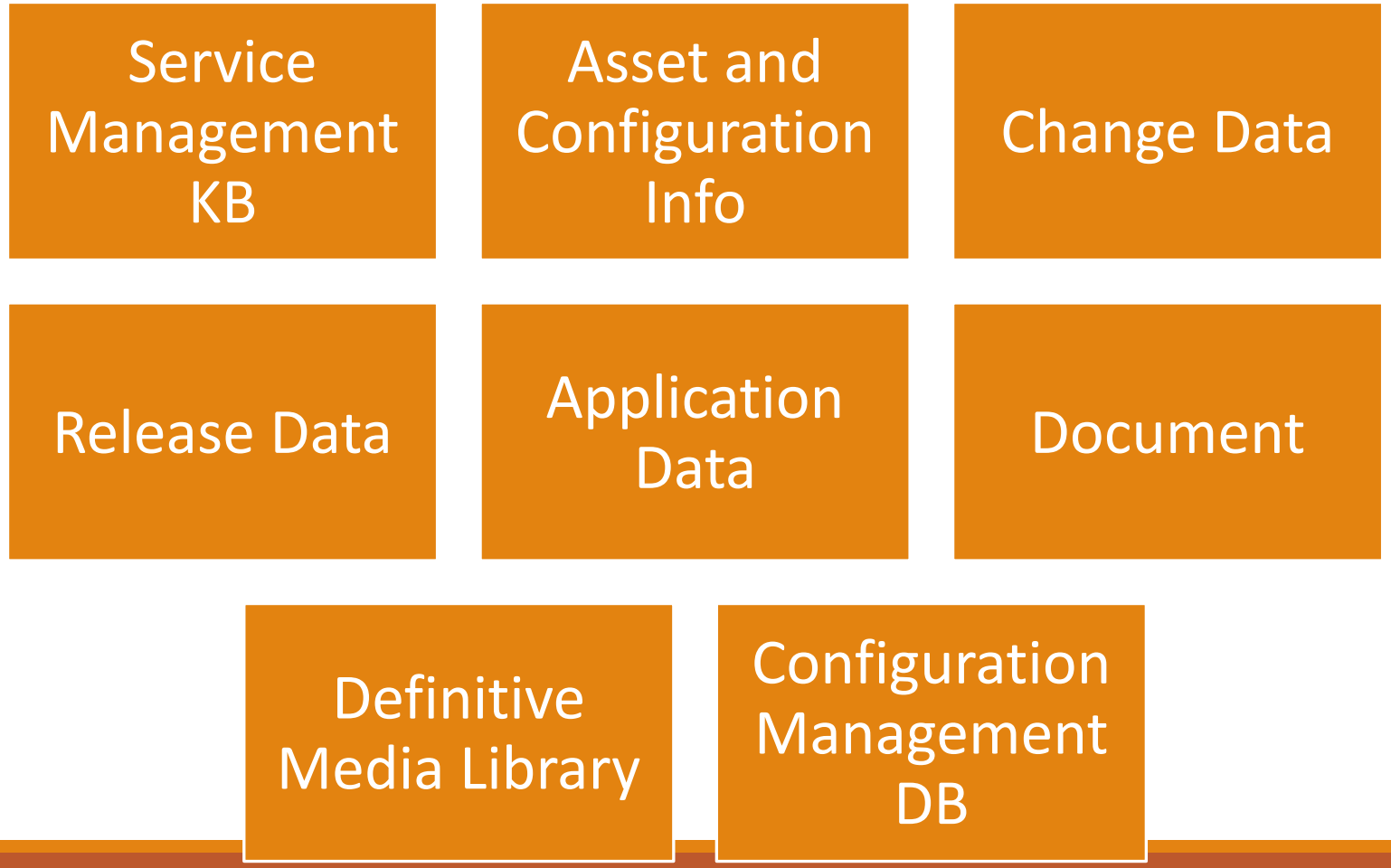
Data-Information-Knowledge-Wisdom

- Wisdom cannot be assisted by technology it only comes with experience!
- Service Knowledge Information Management System is crucial to retaining this extremely valuable information

Service Asset and Configuration

- Managing these properly is key
- Provides Logical Model of Infrastructure and Accurate Configuration information
- Controls assets
- Minimised costs
- Enables proper change and release management
- Speeds incident and problem resolution

Configuration Management System



Painting the Forth Bridge...

- A Baseline is a “last known good configuration”
- But the CMS will always be a “work in progress” and probably always out of date. But still worth having
- Current configuration will always be the most recent baseline plus any implemented approved changes

Change Management

- Respond to customers changing business requirements
- Respond to business and IT requests for change that will align the services with the business needs
- Roles
  - Change Manager
  - Change Authority
    - Change Advisory Board (CAB)
    - Emergency CAB (ECAB)
- 80% of service interruption is caused by operator error or poor change control (Gartner)

Change Types

- Normal
  - Non-urgent, requires approval
- Standard
  - Non-urgent, follows established path, no approval needed
- Emergency
  - Requires approval but too urgent for normal procedure

Change Advisory Board

- Change Manager (VITAL)
- One or more of
  - Customer/User
  - User Manager
  - Developer/Maintainer
  - Expert/Consultant
  - Contractor
- CAB considers the 7 Rs
  - Who RAISED?, REASON, RETURN, RISKS, RESOURCES, RESPONSIBLE, RELATIONSHIPS to other changes

Release Management

- Release is a collection of authorised and tested changes ready for deployment
- A rollout introduces a release into the live environment
- Full Release
  - e.g. Office 2007
- Delta (partial) release
  - e.g. Windows Update
- Package
  - e.g. Windows Service Pack

Phased or Big Bang?

- Phased release is less painful but more work
- Deploy can be manual or automatic
- Automatic can be push or pull
- Release Manager will produce a release policy
- Release MUST be tested and NOT by the developer or the change instigator

SLC :: Service Operation

- Maintenance
- Management
- Realises Strategic Objectives and is where the Value is seen

Processes in Service Operation

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

Incident Management

- Deals with unplanned interruptions to IT Services or reductions in their quality
- Failure of a configuration item that has not impacted a service is also an incident (e.g. Disk in RAID failure)
- Reported by:
  - Users
  - Technical Staff
  - Monitoring Tools

Problem Management

- Aims to prevent problems and resulting incidents
- Minimises impact of unavoidable incidents
- Eliminates recurring incidents
- Proactive Problem Management
  - Identifies areas of potential weakness
  - Identifies workarounds
- Reactive Problem Management
  - Indentifies underlying causes of incidents
  - Identifies changes to prevent recurrence

Access Management

- Right things for right users at right time
- Concepts
  - Access
  - Identity (Authentication, AuthN)
  - Rights (Authorisation, AuthZ)
  - Service Group
  - Directory

Service Desk

- Local, Central or Virtual
- Examples?
- Single point of contact
- Skills for operators
  - Customer Focus
  - Articulate
  - Interpersonal Skills (patient!)
  - Understand Business
  - Methodical/Analytical
  - Technical knowledge
  - Multi-lingual
- Service desk often seen as the bottom of the pile
  - Bust most visible to customers so important to get right!

Functions & Roles

Functions

- Self contained subsets of an organization
  - Intended to accomplish specific tasks
- Takes the form of a team or group of people and the tools being used
- Add structure and stability to organizations
- Supported by budget and reporting structures

Roles

- Collections of specific responsibilities and privileges
  - Held by individuals or teams
- Standard roles include;
  - Service Owner
  - Process Owner
  - Service Manager
  - Product Manager

Roles :: Service Owner

- Service Owner
  - Accountable for the overall design, performance, integration, improvement, and management of a single service
  - responsible for continual improvement and management of change affecting Services under their care
- Example
  - The owner of the Payroll Service

Roles :: Service Owner :: Responsibilities

- To act as prime Customer contact for all Service related enquiries and issues
- To ensure that the ongoing Service delivery and support meet agreed Customer requirements
- To identify opportunities for Service Improvements, discuss with the customer and to initiate changes for improvements if appropriate.
- To liaise with the appropriate Process Owners throughout the Service Management lifecycle
- To solicit required data, statistics and reports for analysis and to facilitate effective Service monitoring and performance

Roles :: Process Owner

- Process Owner
  - Accountable for the overall design, performance, integration, improvement, and management of a single process
- Example
  - The owner for the Availability Management Process

Roles :: Process Owner :: Responsibilities

- Assisting with process design
- Documenting the process
- Make sure the process is being performed as documented
- Making sure process meetings it aims
- Monitoring and improving the process over time

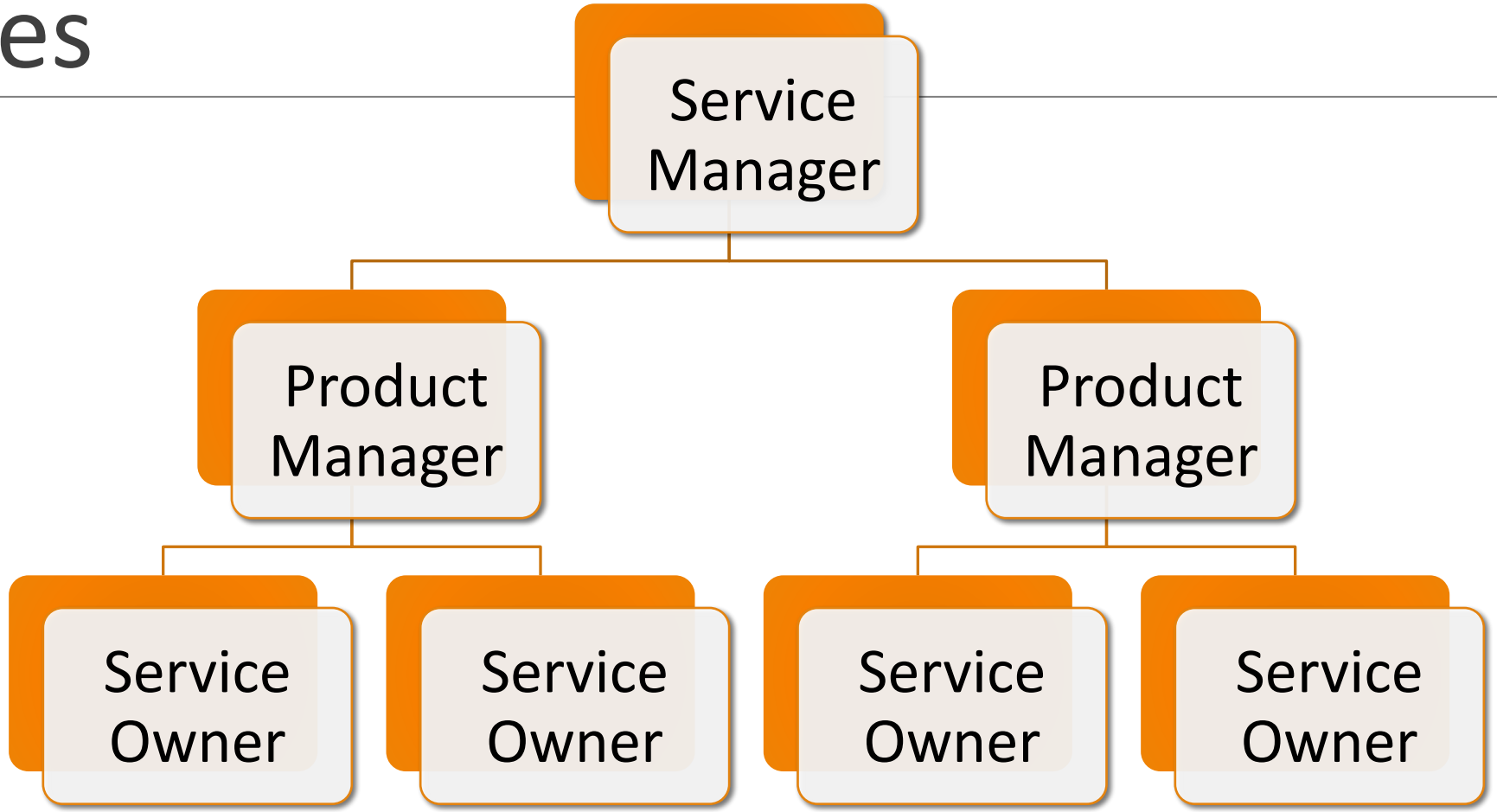
Roles :: Service Manager

- Service Manager
  - Accountable for the development, performance, and improvement of all services in the environment

Roles :: Product Manager

- Service Manager
  - Accountable for development, performance, and improvement of a group of related services

Roles


Service Manager
Product Manager
Product Manager
Service Owner
Service Owner
Service Owner
Service Owner

ITIL Functions

ITIL Functions

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

Service Desk

- Provides a single point of contact
  - Between users and IT
- Processes inbound incidents, service requests, change requests, etc.
- Owns and executes incident management process
- Acts as a hub for all communications internal to IT Service Provider

Technical Management

- Charged with procurement, development, and management of the technical skill sets and resources
  - Required to support the infrastructure and the ITSM effort
- Primary task is to ensure…
  - Service Provider has the right skill sets available to deliver the offered services!
- Seeks and represents different specialized teams or functions within an IT organization
  - Networking, Security, Storage, Database, Servers, etc.

Application Management

- Concerned with the end to end management of applications
- Seeks specialized skills sets required to support organization's applications.
- Executes and is supported by different ITIL core processes

IT Operations Management - I

- Deals with the day to day maintenance of the IT infrastructure and facilities
- Divided into two sub-functions
  1. Operations Control
  2. Facilities Management

IT Operations Management - II

1. Operational Control
   - Involves regular maintenance cycles associated with infrastructure management
     - Console management, Backup and restore operations, Media management, Batch job execution
2. Facilities Management
   - Involves maintenance of the facilities housing IT operations
   - Looks after HVAC, Fire suppression, Facilities access, Power, etc.

The RACI Model

The RACI Model - I

- Ensures that roles are appropriately filled in processes
- R = Responsible
  - Execute or perform the task
- A = Accountable
  - Own the task and answerable for outcomes
- C = Consulted
  - Review and provide advice and authorization for the task
- I = Informed
  - Receive updates as the task progresses

The RACI Model - II

Activities	Service Owner	Process Owner	Security Manger	IT Head	Chief Architect	Process Manager
Create a framework for defining IT services	C	C	C	A/R	C	I
Build an IT service catalogue	C	A/R	I	C	I	I
Define SLA for critical IT services	A	R	C	R	C	I
Monitor and report SL performance	I	A/R	I	I	I	R
Review SLAs, OLAs and UCs	A	R	C	R	I	R
Review and Update IT service catalogue	C	A/R	I	C	I	C
Create service improvement Plan	I	A/R	I	C	C	R

Technology and Automation

Technology and Automation - I

- Automation (Tools) are extremely useful to improve utility and warranty of services:
  - Real time and historical data for analysis
  - Correlation of data from multiple devices
  - Service Impact analysis for prioritization
  - Service Performance optimization

Technology and Automation - II

- Automation of service processes helps improve the quality of service, reduce costs and reduce risks by reducing complexity and uncertainty, and by efficiently resolving trade-offs.
- Some of the areas where service management can benefit from automation
  - Design and modeling
  - Service catalogue
  - Pattern recognition and analysis
  - Classification, prioritization and routing
  - Detection and monitoring
  - Optimization.

Technology and Automation - III

- Service Management Tools functionality include;
  - Self Help
  - Workflow or Process Engine
  - Integrated CMS
  - Discovery/Deployment technology
  - Remote Control
  - Diagnostic scripts & utilities
  - Reporting & Dashboards