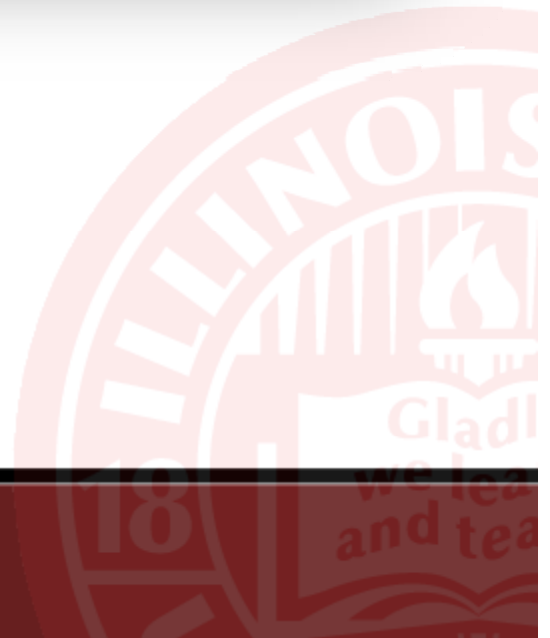




# SERVICE DESIGN



**ADMINISTRATIVE  
TECHNOLOGIES**  
*Illinois State University*



# Service Design



Set of specialized organizational capabilities for providing value to customers in the form of services

SOURCE: ITIL Service Design Publication, p. 11



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*Illinois State University*





# Service Design Goals

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- Design services to:
  - Satisfy business objectives
  - Be efficiently developed with appropriate timescales and cost
  - Identify and manage risks so that they can be removed or mitigated
- Design efficient and effective processes for the design, transition, operation, and improvement of high-quality processes



# Service Design Goals



- Design secure and resilient IT infrastructure, environments, applications, information resources and capabilities
- Design measurement methods and metrics
- Produce and maintain IT plans, processes, policies, standards, architectures, and frameworks
- Develop skills and capability with IT by moving strategy and design activities into operational tasks
- Contribute to improvement of overall quality of IT service





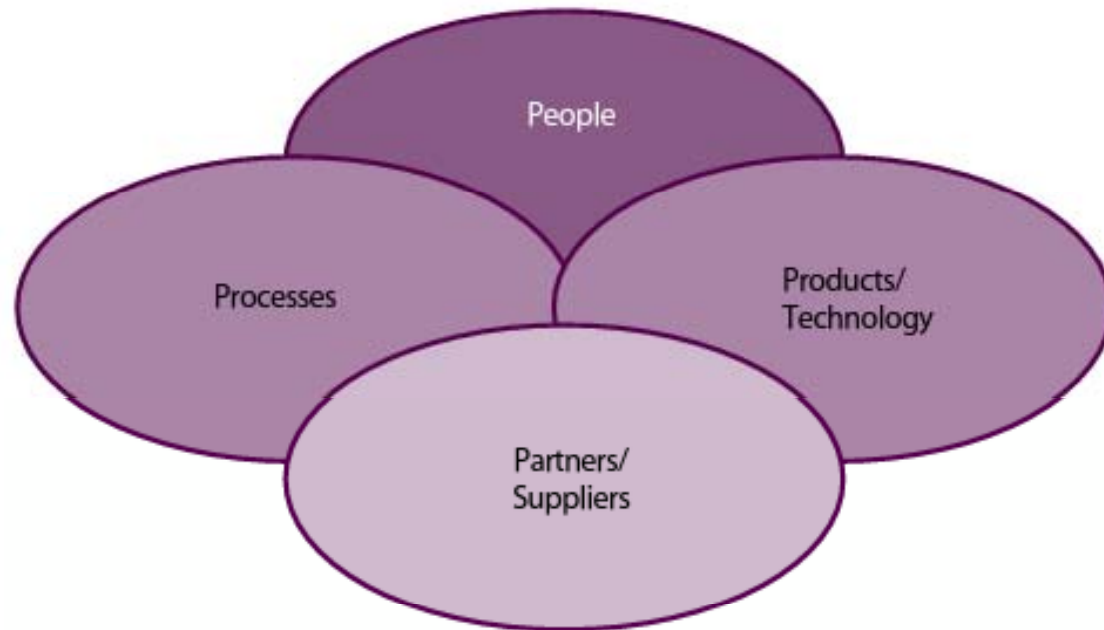
# Scope of Service Design

- New or changed services
- Service management systems and tools, especially the Service Portfolio (including the Service Catalog)
- Technology architecture and management systems
- Required processes
- Measurement methods and metrics

SOURCE: ITIL Service Design Publication, p. 14



# The Four Ps



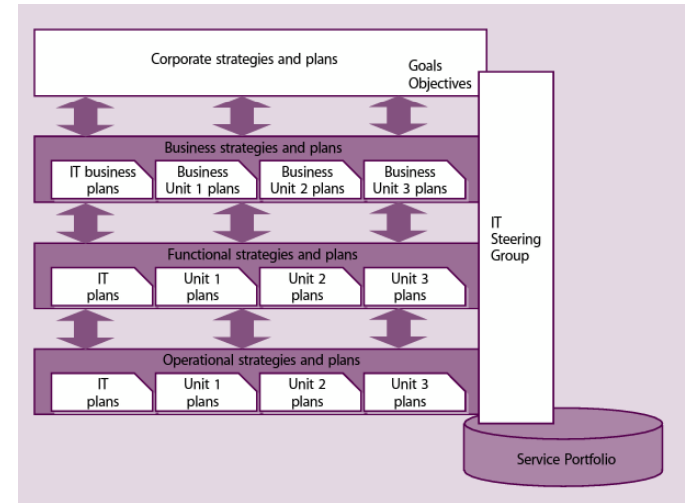
SOURCE: ITIL Service Design Publication, p. 16





# IT Steering/Strategy Group

- Reviewing business and IT plans
- Demand planning
- Project authorization and prioritization
- Review of projects
- Potential outsourcing
- Business/IT strategy review
- Business/IT Continuity
- Policies and Standards



SOURCE: ITIL Service Design Publication, p. 17-18





# Service Design Processes

- Service catalog management
- Service level management
- Capacity management
- Availability management
- IT service continuity management
- Information security management
- Supplier management



# Service Design Package



- Details all aspects of a service and provides requirements through all subsequent stages of the lifecycle
- The SDP is created in Service Design and passed to Service Transition for implementation





# SDP Contents

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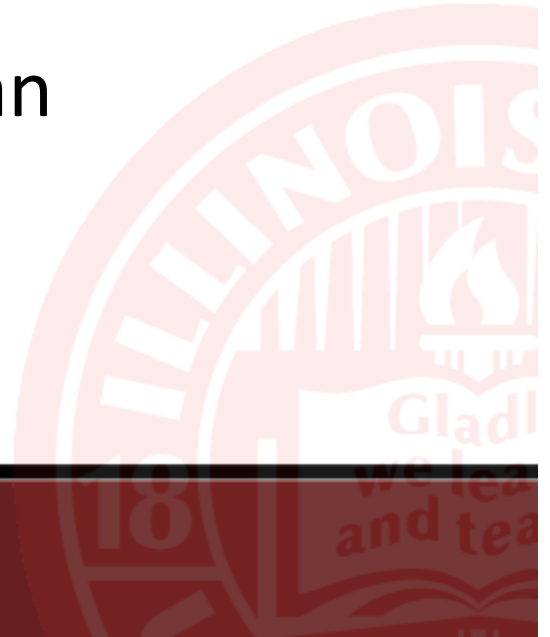
- Business requirements
- Service applicability
- Service contacts
- Service functional requirements
- Service level requirements
- Service and operational management requirements



# SDP Contents



- Service design and topology
- Organizational readiness assessment
- Service program
- Service transition plan
- Service operational acceptance plan
- Service acceptance criteria



# Service Catalog Management



- Provide a single source of consistent information on all agreed upon services and ensure that it is widely available to those approved to access it
- Ensure a Service Catalog is produced and maintained containing accurate information on all operational services and those being prepared to be run operationally

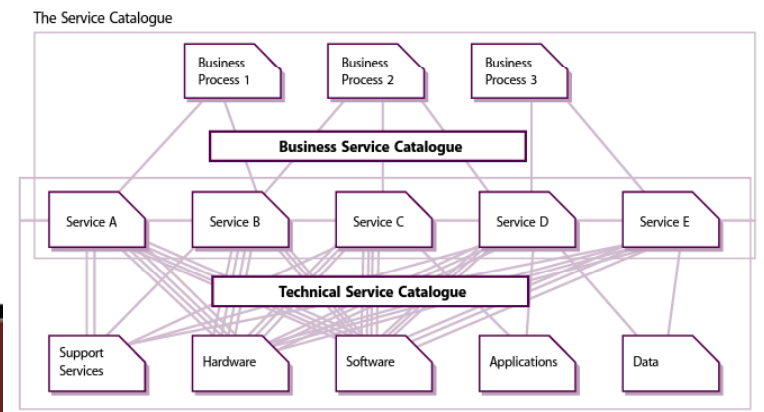




# Service Catalog Types

- Business Service Catalog
  - Details of all IT services delivered to customers
  - Visible to the customer
- Technical Service Catalog
  - Details of all supporting services
  - Not usually visible to customers

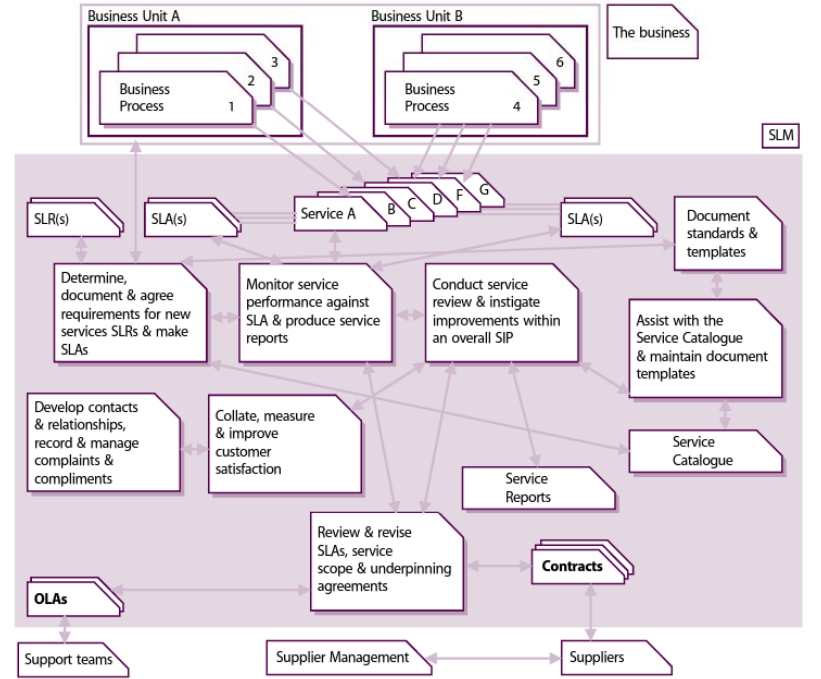
SOURCE: ITIL Service Design Publication, p. 62



# Service Level Management



- Negotiate, agree, and document service levels
- Measure, report, and improve service levels
- Communicate with business and customers



SOURCE: ITIL Service Design Publication, p. 68



# Types of Service Level Agreements



- Service specific level – specific service, all customers
- Customer level or business unit level – specific customer, all services
- Corporate level – all issues appropriate to every customer throughout the University (less volatile, updates infrequent)



# Service Level Management Activities



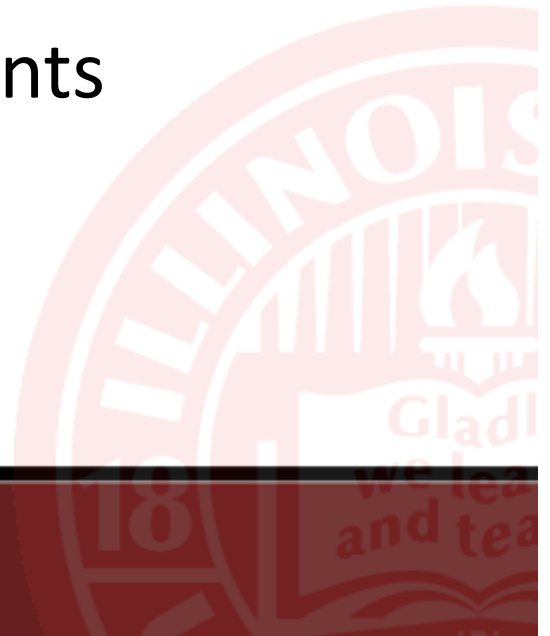
- Design SLA frameworks
- Identify Service Level Requirements (SLRs)
- Monitor service performance against SLA
- Measure and improve customer satisfaction
- Produce service reports



## Service Level Management Activities (cont.)



- Conduct service reviews and initiate Service Improvement Plans (SIPs)
- Review and revise SLAs, OLAs, and Ucs
- Develop contacts and relationships
- Manage complaints and compliments





# Availability Management

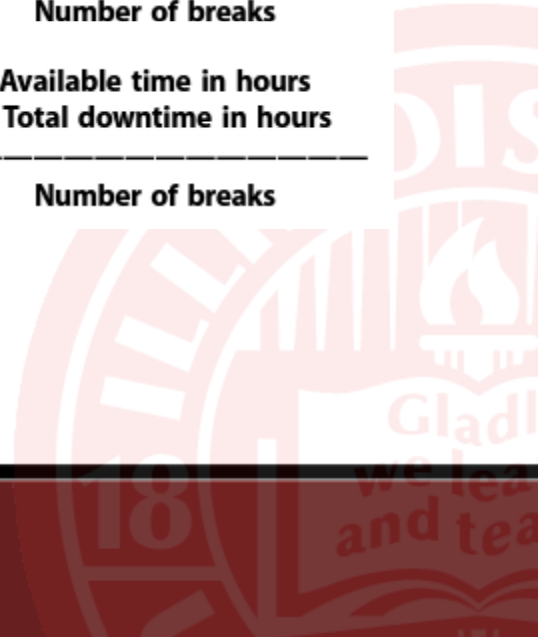
- Ability of a service, component, or configuration item to perform its agreed upon function

$$\text{Availability (\%)} = \frac{\text{(Agreed Service Time (AST) - downtime)}}{\text{Agreed Service Time (AST)}} \times 100 \%$$

$$\text{Maintainability (MTRS in hours)} = \frac{\text{Total downtime in hours}}{\text{Number of service breaks}}$$

$$\text{Reliability (MTBSI in hours)} = \frac{\text{Available time in hours}}{\text{Number of breaks}}$$

$$\text{Reliability (MTBF in hours)} = \frac{\text{Available time in hours} - \text{Total downtime in hours}}{\text{Number of breaks}}$$



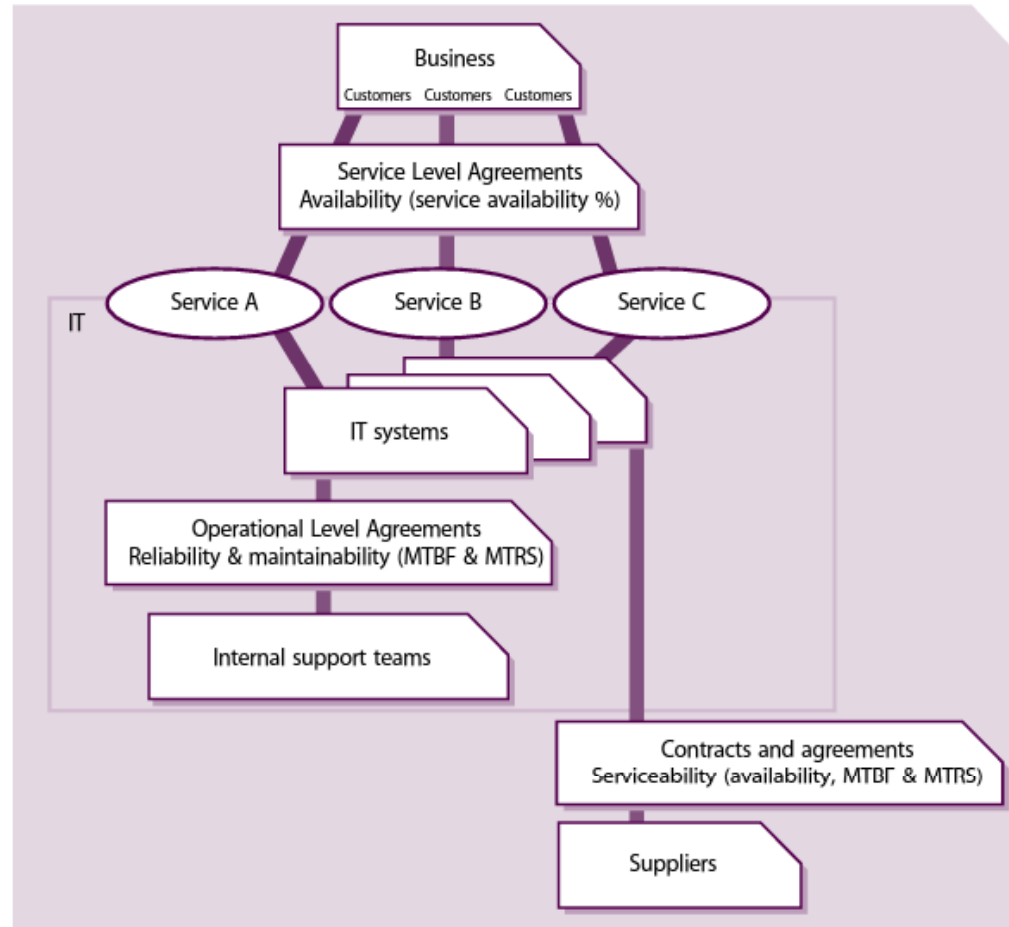
# Availability Management Definitions



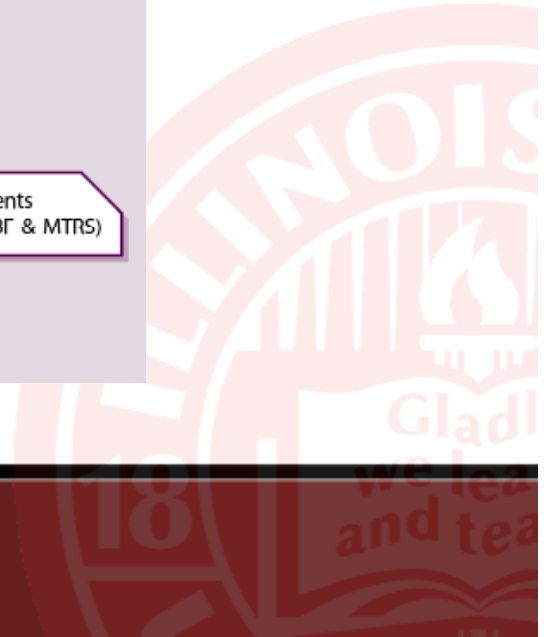
- Reliability – how long service, component, or configuration item (CI) can perform function without interruption
- Maintainability – how quickly and effectively a service, component, or CI can be restored to normal working after a failure
- Serviceability – Ability of a third-party supplier to meet the terms of their contract



# Availability Management



SOURCE: ITIL Service Design Publication, p. 101



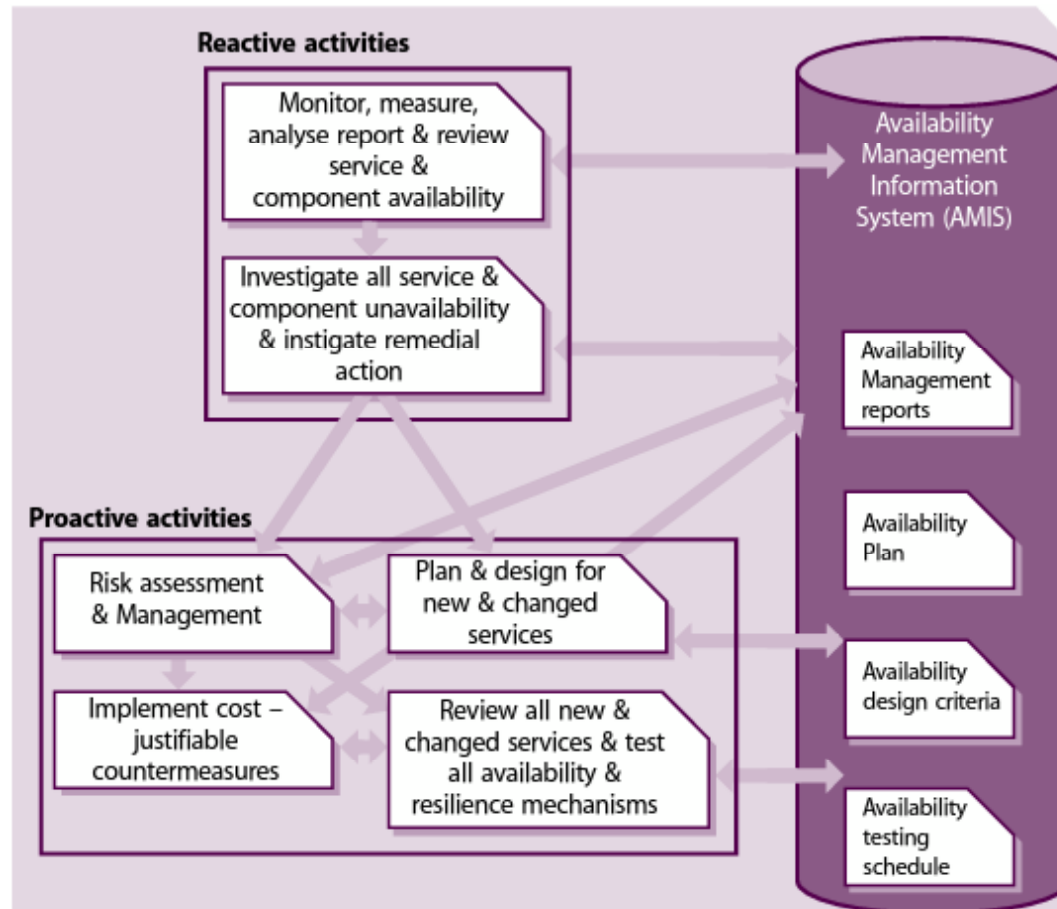
# Availability Management Goals



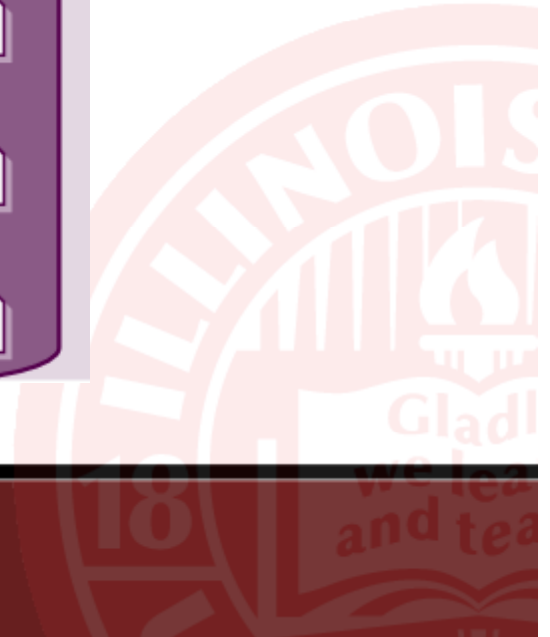
- Ensure agreed upon level of availability provided
- Continually optimize and improve availability of services, IT infrastructure, supporting organization
- Provide cost effective availability improvements
- Produce and maintain availability plan



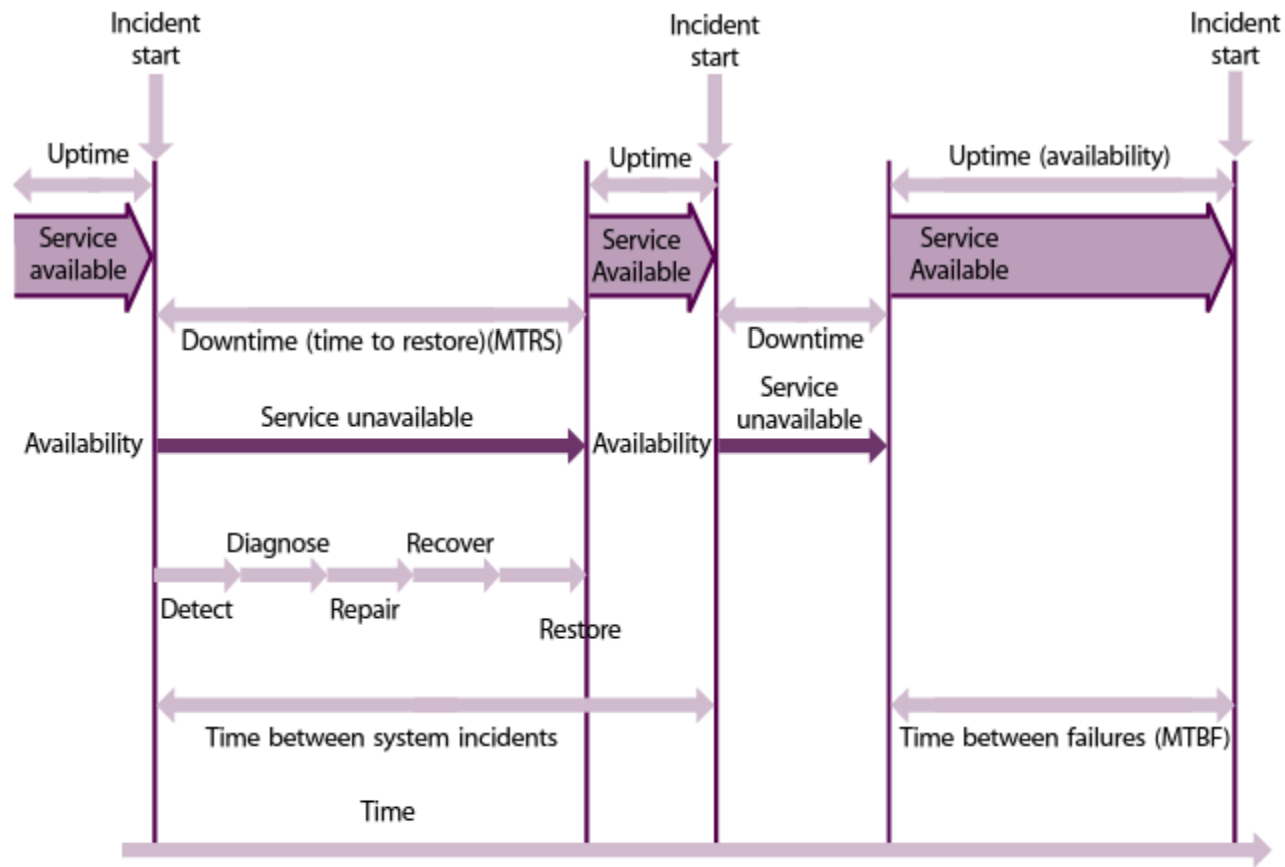
# Availability Management



SOURCE: ITIL Service Design Publication, p. 99



# Incident Lifecycle



SOURCE: ITIL Service Design Publication, p. 106





# Availability Terms

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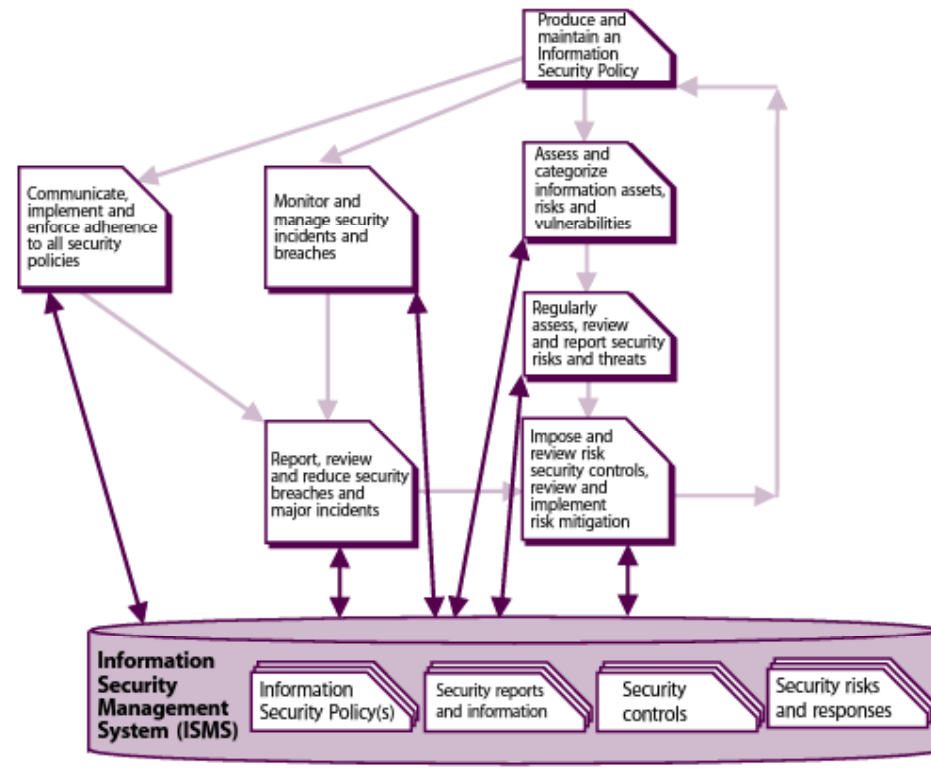
- High availability – minimizing or hiding effects of component failure
- Fault tolerance – ability to operate correctly after component failure
- Continuous operation – eliminate planned downtime of a service
- Continuous availability – achieve 100% availability; no planned or unplanned downtime



# Information Security Management



- Provide a focus for all aspects of IT security and manage all IT security activities



SOURCE: ITIL Service Design Publication, p. 145





# Information Security Management Principles

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- Align IT security with business security
- Dependent upon overall governance framework
  - Strategic direction for security activities
  - Ensures activities achieved
  - Ensures risks are appropriately managed
  - Ensures enterprise information resources used responsibly



# Information Security Management



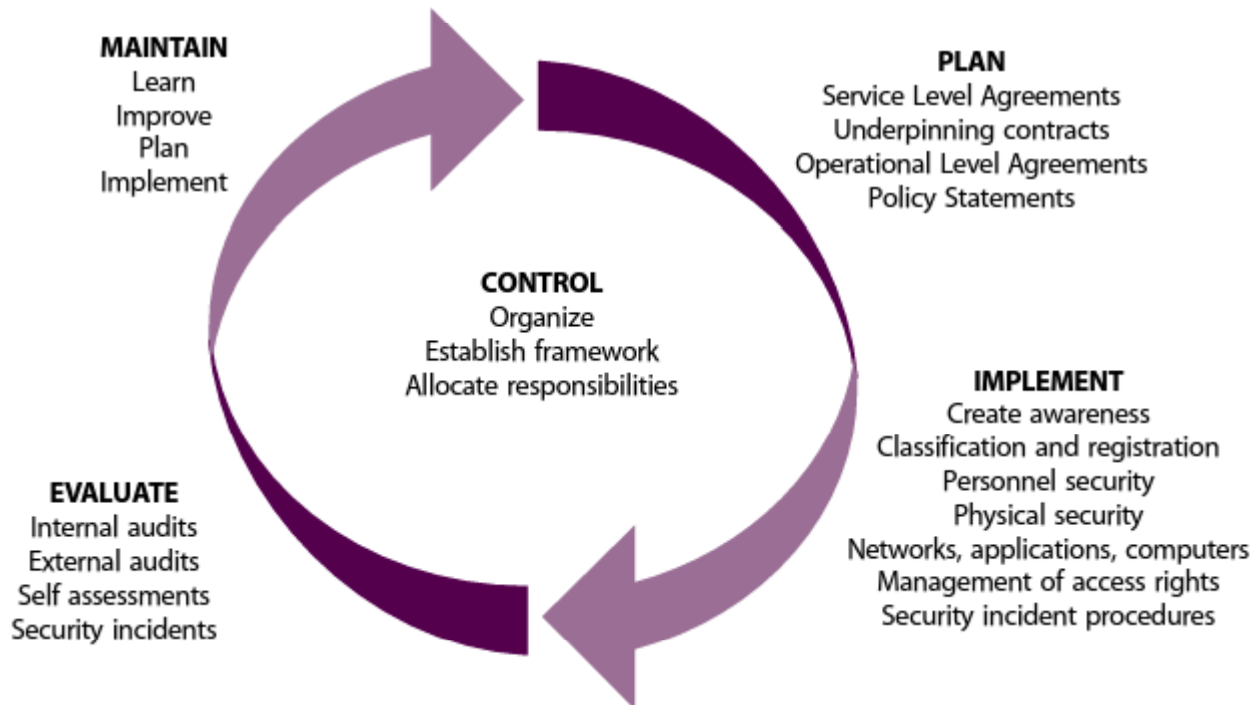
- Information available and usable when required and system can resist attacks and recover from or prevent failures (availability)
- Information disclosed to only those with a right to know (confidentiality)
- Information is complete, accurate, and protected from unauthorized modification (integrity)
- Business transactions can be trusted (authenticity)



# Information Security Management System (ISMS)



## Customers – Requirements – Business Needs



SOURCE: ITIL Service Design Publication, p. 143

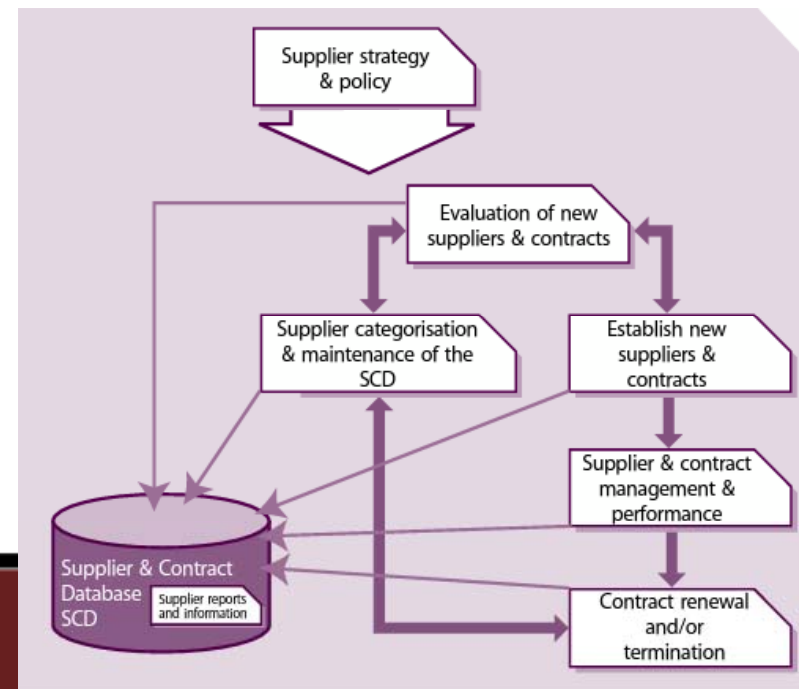




# Supplier Management

Manage suppliers and the services they supply, to provide seamless quality of IT service to the business, ensuring value for the money is obtained

SOURCE: ITIL Service Design Publication, p. 151





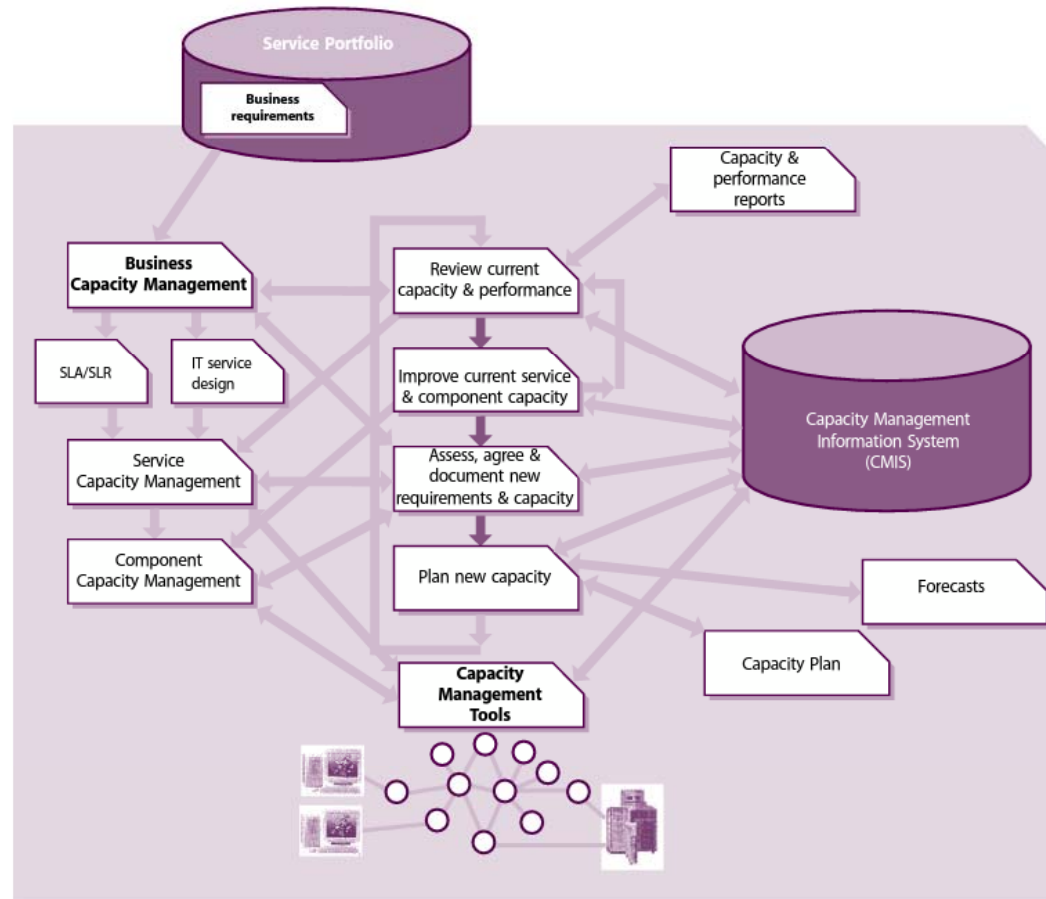
# Capacity Management Goal

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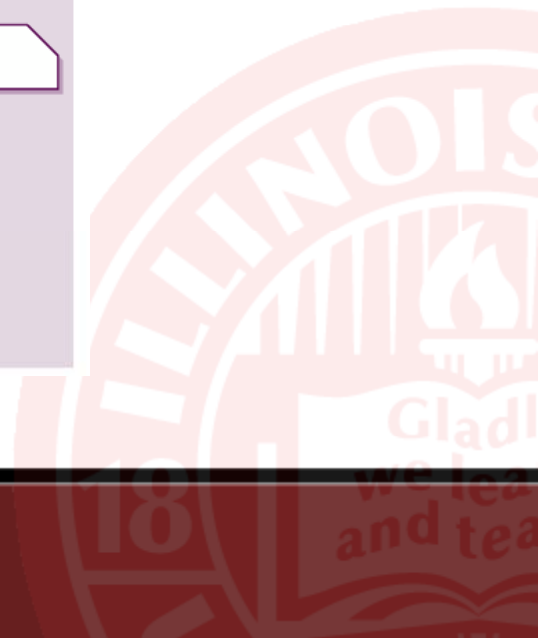
Ensure that cost-justifiable IT capacity in all areas of IT always exists and is matched to the current and future agreed upon needs of the business, in a timely manner



# Capacity Management Sub-Processes



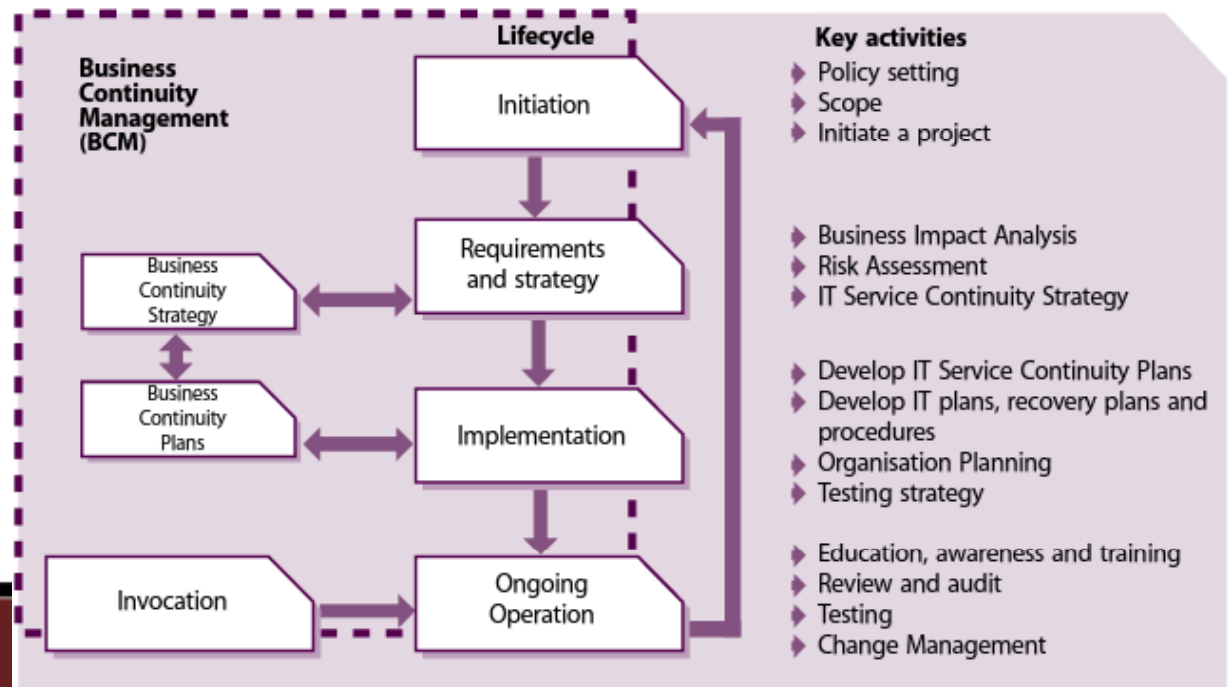
SOURCE: ITIL Service Design Publication, p. 83





# IT Service Continuity Management

Ensure that required IT technical and service facilities can be resumed within required and agreed upon business timelines



SOURCE: ITIL Service Design Publication, p. 127



# IT Service Continuity Management



- Maintain service continuity and IT recovery plans to support business continuity plans
- Complete regular business impact analysis
- Conduct regular risk assessment
- Provide advice and guidance on issues
- Implement measures to meet or exceed business continuity targets
- Check impact of changes on existing plans
- Negotiate contracts with suppliers



# Up Next



## Service Transition



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