SERVICE DESIGN

ITIL - Part 4

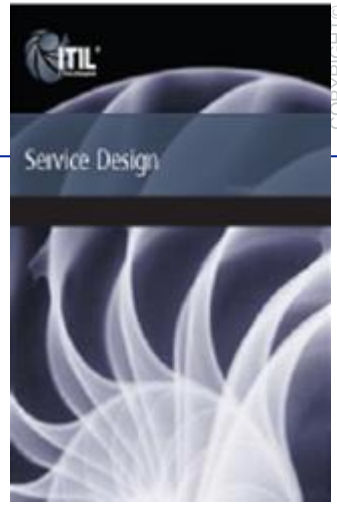
CONNECTING BUSINESS & TECHNOLOGY

DEVOTEAM SOLUTIONS

AGENDA

- Introduction do ITIL
- Service Operation
- Service Transition
- Service Design
  - Service Catalogue Management
  - Service Level Management
  - Supplier Management
  - Availibility Management
  - Capacity Management
  - Information Security Management
  - IT Service Continuity Management
- Service Strategy

SERVICE DESIGN



- Five individual aspects of Service Design in the service delivery scope:
  - Design of a new change or service
  - Design of a new portfolio including service catalogue
  - Design of the technology including management system
  - Design of process required
  - Design of measurement method and metrics

SERVICE DESIGN

- Scope of Service Design : « The four Ps »
  - People:
    - Users, Customers, IT staff and Managers; communication
  - Processes
    - Service Management processes are the core of ITIL and are distributed along the service management lifecycle
  - Products (services, technology and tools)
    - Numerous tools are viewed as conforming to ITIL Guidelines
  - Partners (suppliers, manufacturers and vendors)
    - Service is composed of subparts provided by several groups of the organization, including suppliers; service management includes the management of the services from all contributors

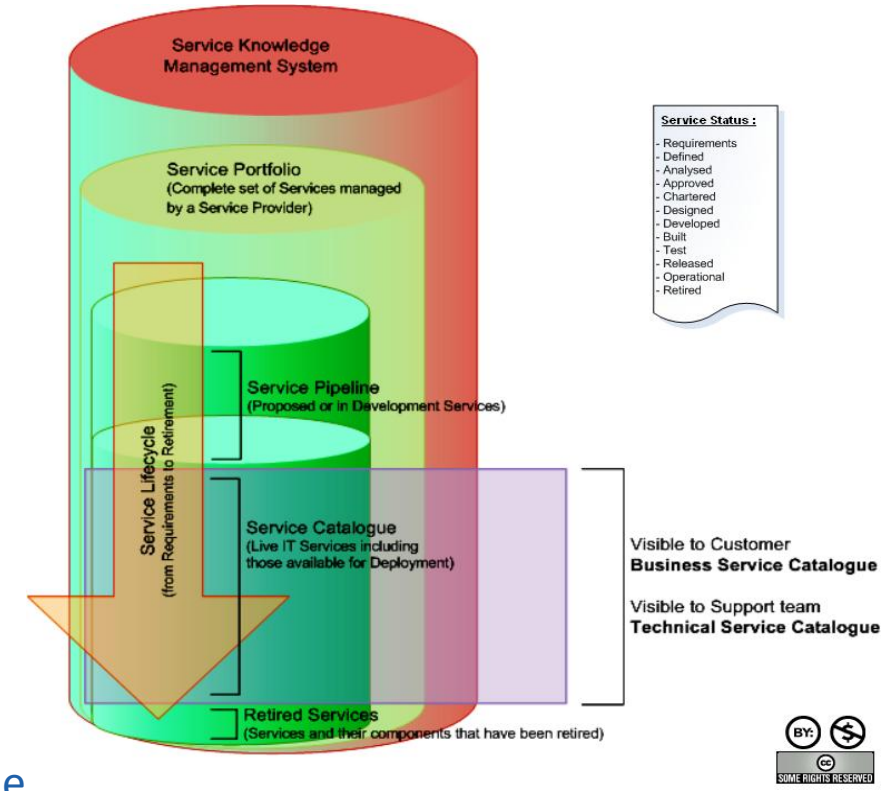
SERVICE DESIGN PACKAGE

- Concept
  - Detail all aspects of a service through all stages of its lifecycle
  - The SDP is passed from Services Design to Service Transition for implementation

- SDP contents
  - Requirements
    - Business requirement
    - Service applicability
    - Service Contacts
  - Service Design
    - Service functional requirements
    - Service Operational Management Requirement
    - Service Design and Topology
  - Organisation of Readiness Assessment
  - Service Lifecycle Plan
    - Service Program
    - Service Transition Plan
    - Service Operational Acceptance plan
    - Service acceptance criteria

SERVICE PORTFOLIO & CATALOGUE

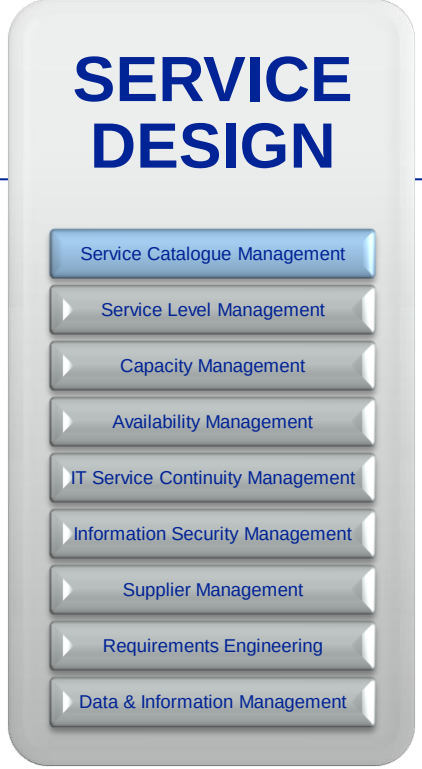
- Service Catalog – basic concept
  - Part of the Service Portfolio
  - Detail of all operational services and those being prepared for transition
  - Business service Catalog
    - Detail of all the IT services delivered to the customers
    - Visible to the customers
  - Technical Service Catalog
    - Detail of all services
    - Not usually visible to the custome



SERVICE DESIGN

SERVICE CATALOGUE MANAGEMENT

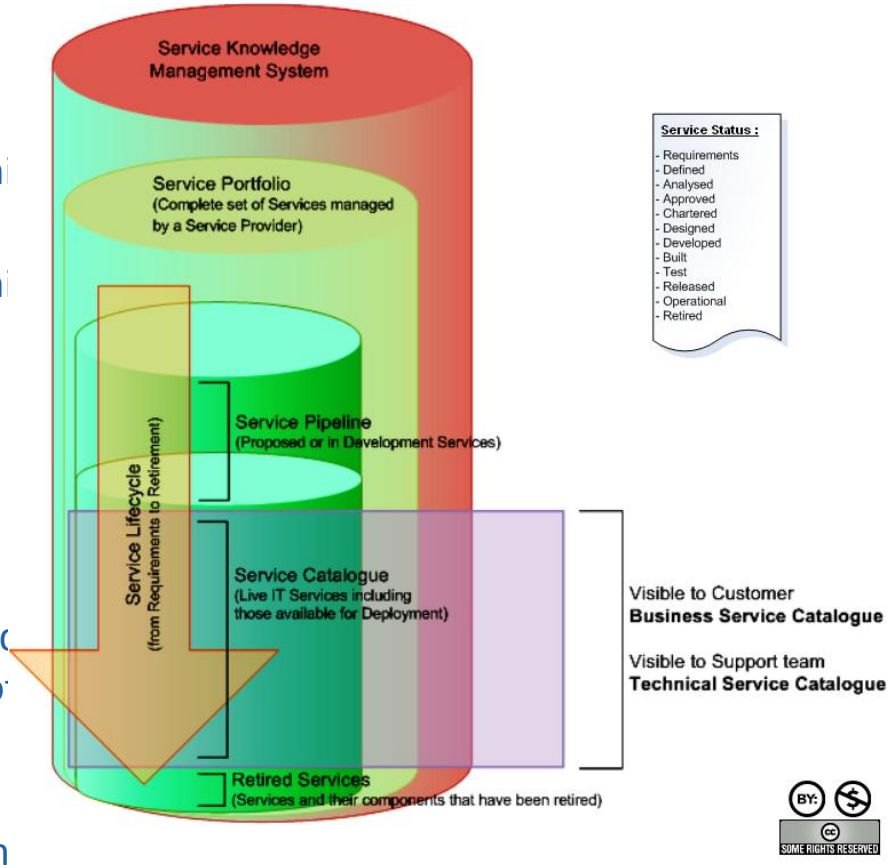
SERVICE CATALOGUE MANAGEMENT



- Objective:
  - Create and manage an accurate Service Catalog
    - A single source of information on all services
- The value for Business
  - Provide the Business with a single source of information on all of agreed services
  - Ensure the Business that a service catalog is produced and maintained containing accurate information on all operational services

SERVICE CATALOGUE TYPES

- The service Catalog has two aspects
  - Business Service Catalog
    - Contains relationship to the business uni and process that rely upon IT services
    - Contains relationship to the business uni and process that rely upon IT services
  - Technical Service Catalog
    - Contains details of all of the IT services delivered to the customer
    - Contains relationship to the supporting services, shared services component and CIs necessary to support the provision o the service to the Business
    - Should underpin the Business Service Catalog and not form part of the custom view



SERVICE CATALOGUE MANAGEMENT

- Activities
  - To define Services
  - To produce and accurate a sharp Service Catalog
  - To interface with service portfolio management
  - To define interfaces and dependencies between services and all the support services
- Input

•Business information from the organization's
•business and IT strategy,
•Business Impact Analysis,
•Business requirements:
•The Service Portfolio
•The CMS
•Feedback from all other processes

Output

• The documentation and agreement of a 'definition of the service'
•Updates to the Service Portfolio: should contain the current status of all services and requirements for services
•The Service Catalogue: should contain the details and the current status of every live service

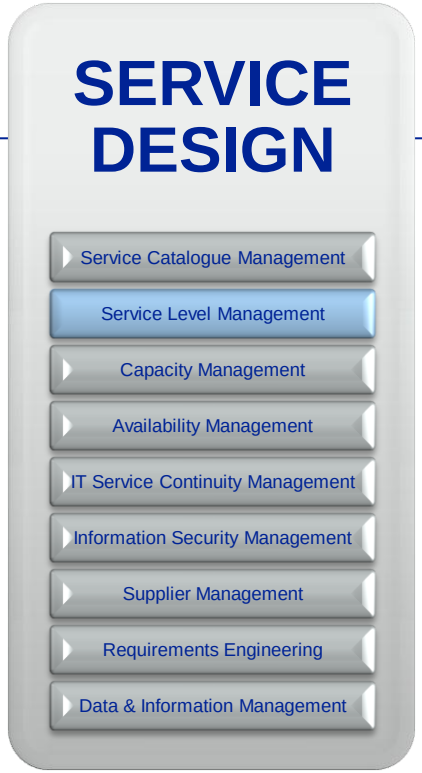
SERVICE CATALOGUE MANAGEMENT

- Service Catalog Manager role
  - Produce and maintain the Service Catalog
  - Ensure all operational services and those being prepares for operational running are recorded
  - Ensure all information in the service Catalog is accurate and up to date
  - Ensure all information is consistent with the information in the Service Portfolio
  - Ensure all information is adequately protected and backed up

SERVICE DESIGN

SERVICE LEVEL MANAGEMENT

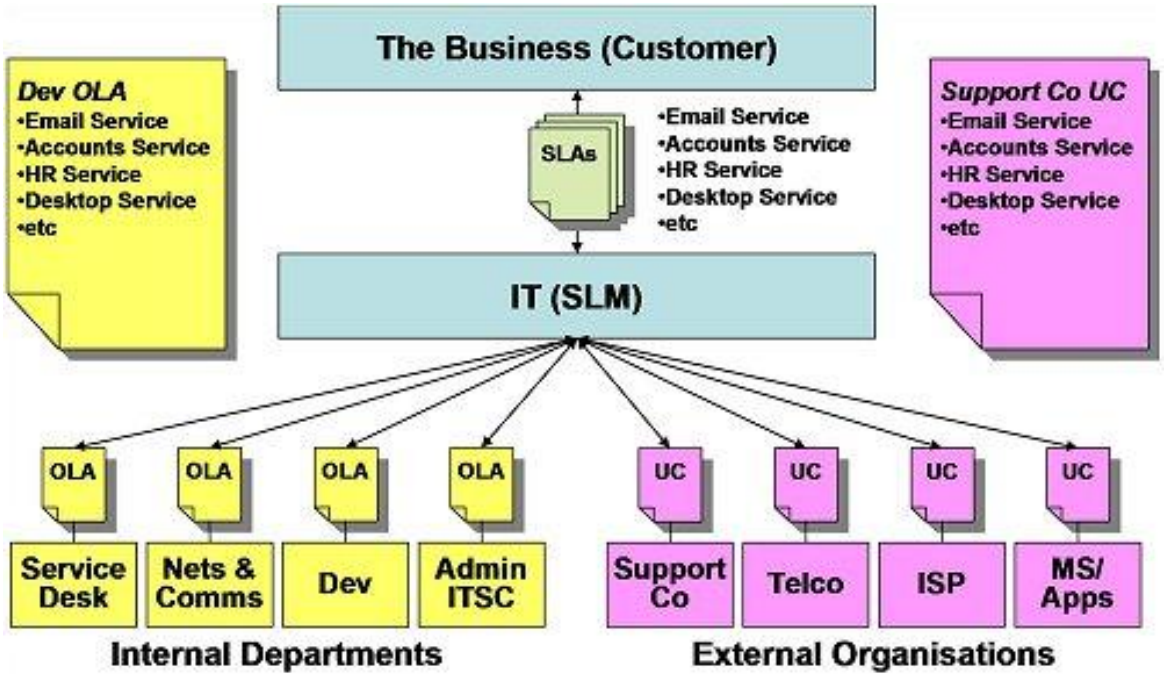
SERVICE LEVEL MANAGEMENT



- Objectives
  - Negotiate agree and document service levels
  - Measure, report and improve service levels
  - Communicates with business and customers
- Value for Business
  - Consistent interface to the business for all IT services related issues
  - Feedback on services failures or breaches & resolution actions taken
  - Reliable communication channel and trusted relationship

SERVICE LEVEL MANAGEMENT

- SLM and SLA
  - SLM is the process of planning coordinating, agreeing , monitoring en reporting SLA
  - SLA is a written agreement between IT Service provider and IT customer
- SLA, OLA and UC
  - SLM is responsible for ensuring that all targets and measures agreed by the SLAs are supported by appropriate underpinning Operational Level Agreements (OLAs) or contract with internal support units and external partners and suppliers



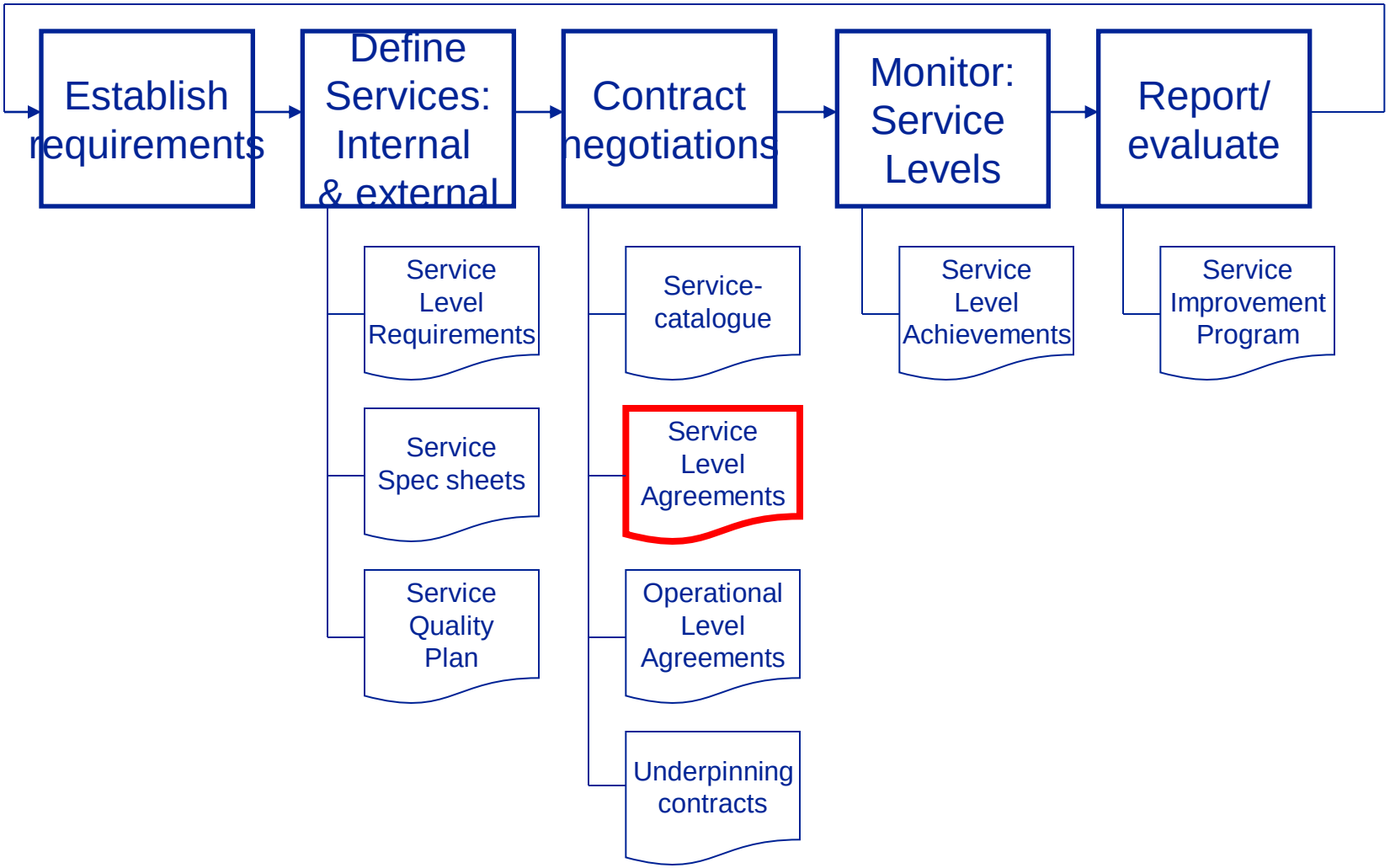
SERVICE LEVEL MANAGEMENT- BASIC CONCEPTS

- Basic Concepts :
  - **Service-based SLAs**: SLAs covering a single service
  - **Multi-level SLAs**: SLAs with multiple structure levels, for instance Corporate, Customer and Service
  - **SLR**: Service Level Requirements
  - **OLA**: Operation Level Agreement
  - **Service Review**: regularly planned meetings with customers to review achieved service levels
  - **SLAM chart**: an « at-a-glance » overview of how achievements have measured up against targets

SERVICE LEVEL MANAGEMENT - PROCESSUS

- Activities
  - Design SLA Frameworks
  - Identify Service Level Requirements (SLRs)
    - Agree and document SLA
    - Negotiate OLA and UCs
  - Monitor service performance against SLA
  - Measure and improve Customer Satisfaction
  - Review and revise underpinning agreement and d
  - Produce service reports
  - Conduct service reviews and instigate improvements
  - Review and revise SLAs OLAs and UCs
  - Develop contacts and relationships
  - Manage complaints and compliments

SERVICE LEVEL MANAGEMENT - PROCESS



SERVICE LEVEL MANAGEMENT

Input

- Business information from the organization's
- business and IT strategy,
- Business Impact Analysis,
- Business requirements:
- The Service Portfolio
- The CMS
- Feedback from all other processes

Output

- Service reports
- Service Improvement Plan (SIP)
- The Service Quality Plan
- Service Level Agreements (SLAs)
- Service Level Requirements (SLRs)
- Operational Level Agreements (OLAs):
- Reports on OLAs and underpinning contracts

SERVICE LEVEL MANAGEMENT- ROLES

- Service Level Manager
  - Process Owner
  - Understand Customers
  - Create and maintains SLAs and OLAs
  - Review and reporting about SLA
  - Ensure that Changes are assessed for impact on services levels

SERVICE LEVEL MANAGEMENT- CHALLENGE

- Challenge
  - Identifying suitable customer representatives with whom to negotiates (who « owns » the service?)

- Interfaces with other processes and role in the lifecycle
  - Service Portfolio Management
  - Service Catalog Management
  - Change Management
  - Configuration Management
  - Incident Management
  - Capacity Management
  - Availability Management

SLM : SLA CONTENTS (1)

- Introduction
  - parties to the agreement
  - title and brief description of the agreement
  - signatories
  - dates: start, end, review
  - scope of the agreement; what is covered and what is excluded
  - responsibilities of both the Service Provider and the Customer
  - a description of the Services covered.
- Service hours
  - the hours that each service is normally required (e.g. 24x7, Monday to Friday 08:00 - 18:00)
  - arrangement for requesting service extensions, including required notice periods (e.g. request must be made to the Service Desk by 12 noon for an evening extension, by 12 noon on Thursday for a week-end extension)
  - special Hours (e.g. public holidays)
  - service calendar.

SLM : SLA CONTENTS (2)

- Availability
  - Availability targets within agreed hours, normally expressed as percentages - measurement period and method must be stipulated. This may be expressed for the overall service, underpinning services and critical components or all three. However, it is difficult to relate such simplistic percentage Availability figures to service quality, or to Customer business activities. It is therefore often better to try to measure service UnAvailability in terms of the Customer's inability to carry out its business activities. For example, 'sales are immediately affected by a failure of IT to provide an adequate POS support service'. This strong link between the IT Service and the Customer's Business processes is a sign of maturity in both the SLM and the Availability Management processes.
- Reliability
  - usually expressed as the number of service breaks, or the Mean Time Between Failures (MTBF) or Mean Time Between System Incidents (MTBSI).

SLM : SLA CONTENTS (3)

- Support
  - support hours (where these are not the same as Service hours)
  - arrangement for requesting support extensions, including required notice periods
  - special hours (e.g. public holidays)
  - target time to respond, either physically or by other method (e.g. telephone contact, e-mail), to Incidents
  - target time to resolve Incidents, within each Incident Priority - targets varies depending upon Incident priorities.
- Throughput
  - Indication of likely traffic volumes and throughput activity (e.g. the number of transactions to be processed, number of concurrent Users, amount of data to be transmitted over the network). This is important so that performance issues which have been caused by excessive throughput outside the terms of the agreement may be identified.
- Transaction response times
  - target times for average, or maximum workstation response times (sometimes expressed as a percentile - e.g. 95% within 2 seconds).

SLM : SLA CONTENTS (4)

- Batch turnaround times
  - times for delivery of input and the time and place for delivery of output.
- Change
  - targets for approving, handling and implementing RFCs, usually based upon the Category or Urgency/priority of the Change.
- IT Service Continuity and Security
  - a brief mention of IT Service Continuity Plans and how to invoke them, and coverage of any security issues, particularly any responsibilities of the Customer (e.g. back-up of free-standing PCs, password Changes)
  - details of any diminished or amended service targets should a disaster situation occur (if no separate SLA exists for such a situation).
- Charging
  - details of the charging formula and periods (if charges are being made). If the SLA covers an Ouitsourcing relationship, charges should be detailed in an Annex as they are often covered by commercial in confidence provisions.

SLM : SLA CONTENTS (5)

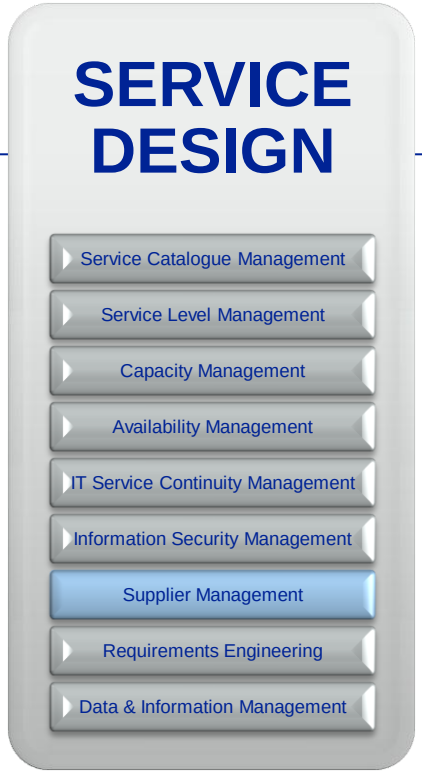
- Service reporting and reviewing
  - the content, frequency and distribution of service reports, and the frequency of service review meetings.
- Performance incentives/penalties
  - Details of any agreement regarding financial incentives or penalties based upon performance against service levels. These are more likely to be included if the services are being provided by a third-party organisation. It should be noted that penalty clauses can create their own difficulties. They can prove a barrier to partnership if unfairly invoked on a technicality and can also make service provider staff unwilling to admit to mistakes for fear of penalties being imposed. This can, unless used properly, be a barrier to effective Problem solving.

SERVICE DESIGN

SUPPLIER MANAGEMENT

DEVOTEAM SOLUTIONS

SUPPLIER MANAGEMENT



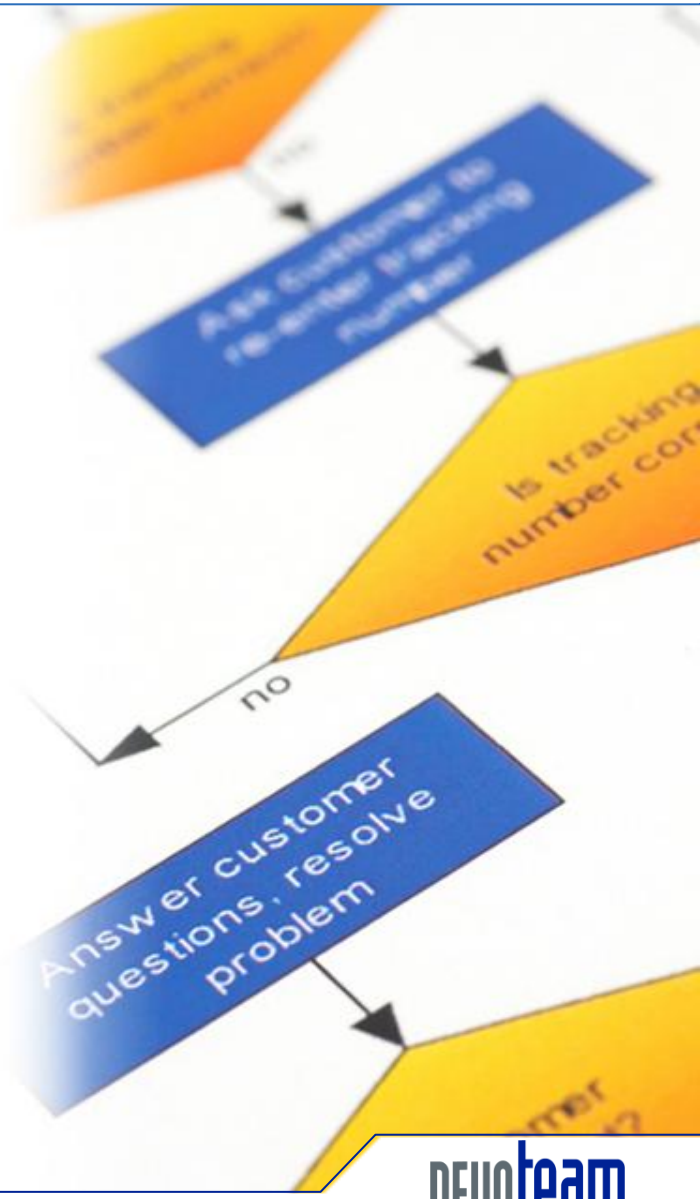
- Objectives
  - Manage suppliers Relationship and performance
  - Negotiate and agree contacts
    - In conjunction with Service Level Manager
    - Ensure the alignment between contacts and business needs
  - Manage contracts throughout Lifecycle
  - Maintain a supplier policy and a supporting Supplier and Contract database.

SUPPLIER MANAGEMENT-CONCEPTS

- Basic Concepts :
  - Supplier
    - - A Third Party responsible for supplying goods or Services that are required to deliver IT Services
  - Supplier Contract Database (SCD)
    - - A database or structured document used to manage Suppliers Contracts throughout their lifecycle
  - Contract
    - - A legally binding agreement between two or more parties

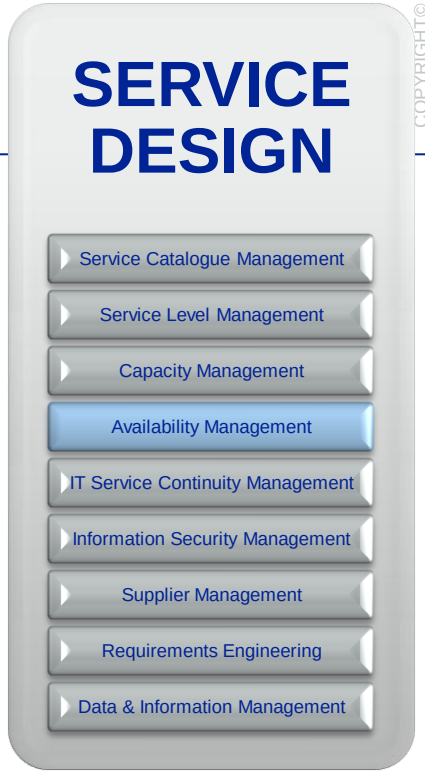
SERVICE DESIGN

AVAILABILITY MANAGEMENT



AVAILABILITY MANAGEMENT

- Objectives
  - Ensure agreed level of availability is provided
  - Continually optimize and improve availability of
    - IT infrastructure
    - Services
    - Supporting organisation
  - Provide cost effective availability improvements that can deliver business and customer benefits
  - Produce and maintain an availability plan

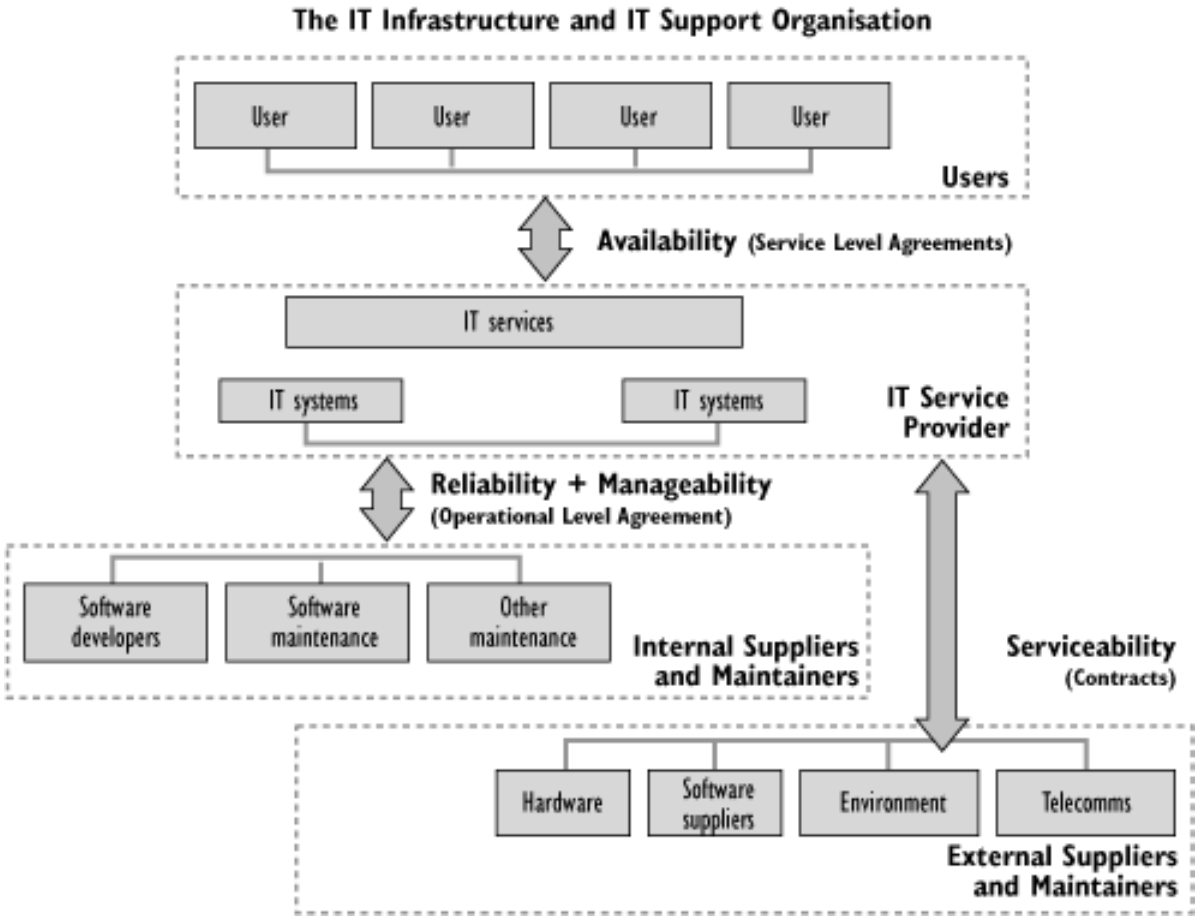


AVAILABILITY MANAGEMENT - CONCEPTS

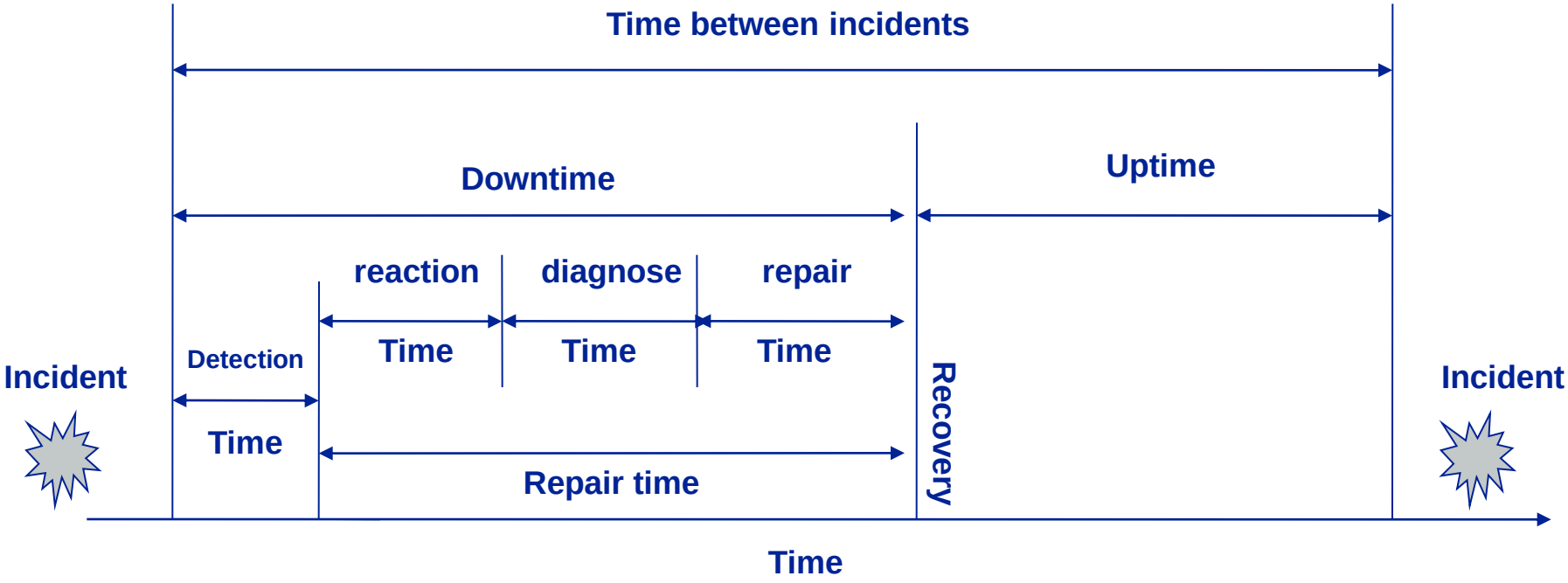
- Availability Management process includes
  - Pro active Activities
    - Design and planning
    - Planning design and improvement of availability
  - Reactive Activities
    - Operational Activities
    - Monitoring, measuring , analysis and management of all events, incidents and problems including un availability
    - Planning design and improvement of availability

AVAILABILITY

- IT infrastructure and IT support organisation



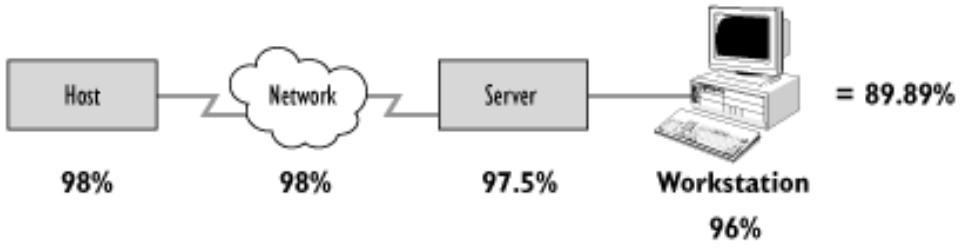
AVAILABILITY MANAGEMENT – MEASUREMENTS



- Mean Time To Repair (MTTR) : average downtime
- Mean Time Between Failures (MTBF) : average elapsed time between failures
- Mean Time Between System Incidents (MTBSI) : the average elapsed time from the occurrence of an Incident to resolution of the Incident.

AVAILABILITY MANAGEMENT – CONCEPTS (1/4)

- Availability definition
  - The ability of a service, component or configuration item to perform its agreed function when required
  - Often measured and reported as a percentage
    - Availability (%)= (Agreed Service Time (AST)-Downtime)/AST *100
  - Most important measurements are those that reflect availability from the business and user perspective



AVAILABILITY MANAGEMENT – CONCEPTS (2/4)

- Definitions
  - Reliability :
    - Measure of how long a service, component or CI can perform its agreed function without interruption
  - Maintainability :
    - Measure of 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 – CONCEPTS (3/4)

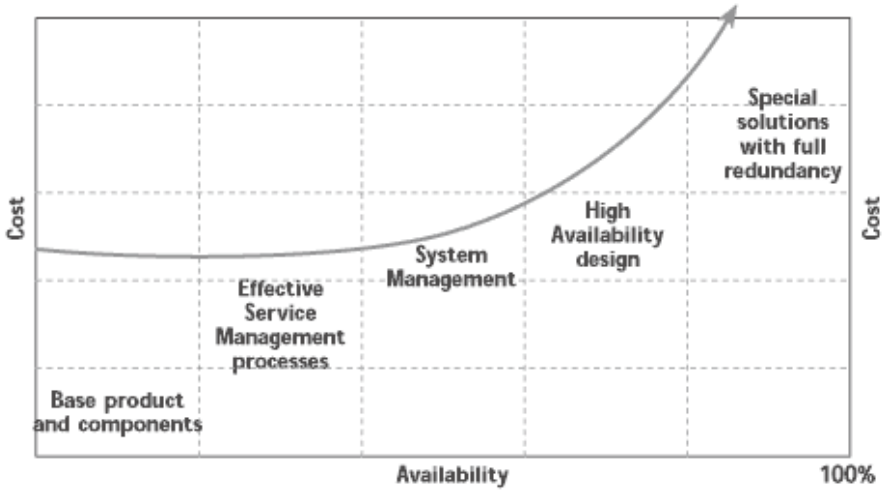
- Definitions
  - Vital Business Function (VBF) :
    - A function of a business process which is critical to the success of t business
  - High Availability :
    - Minimizing or hiding the effects of a component failure
  - Fault Tolerance
    - Ability of an IT service, component or CI to operate correctly after component failure

AVAILABILITY MANAGEMENT – CONCEPTS (4/4)

- Definitions
  - Continuous Operation :
    - Approach or design to eliminate planned downtime of a service
  - Continuous Availability :
    - Approach or design to eliminate planned downtime of a service
    - An IT service that has no planned or unplanned downtime

AVAILABILITY – (UN)AVAILABILITY

- Cost / Availability

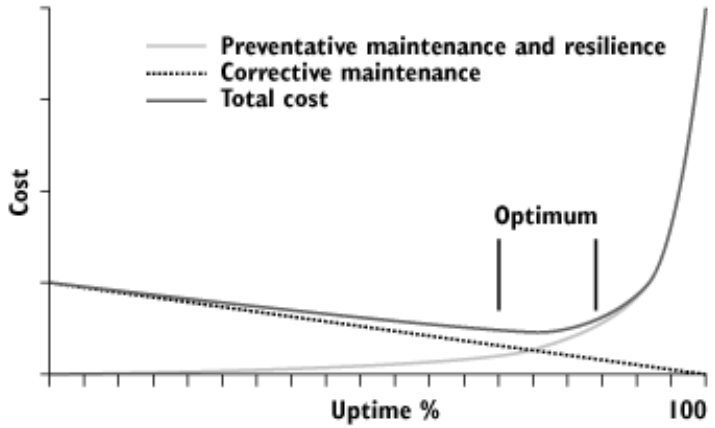


- New IT service
  - provides indication of the costs
  (/ Availability requirement)
  - where costs are seen as too high, enables alternative options with their associated costs and consequences to be presented to the business
  - higher levels of Availability can be achieved when Availability is designed in, rather than added on
  - avoids the costs and delays of late design Changes to meet the required levels of Availability
  - ensures the IT Infrastructure design will deliver the required levels of Availability.

AVAILABILITY – (UN)AVAILABILITY

- Existing IT services
  - Where high levels of Availability are already being delivered it may take considerable effort and incur significant cost to achieve a small incremental Availability improvement
  - A key activity for Availability Management is to continually look at opportunities to optimise the Availability of the IT Infrastructure. The benefits of this approach being that enhanced levels of Availability may be achievable but with much lower costs

  - Scope should not be restricted to the IT Infrastructure, but also include a review of the Business process and other end-to-end business owned responsibilities



SERVICE DESIGN

CAPACITY MANAGEMENT

CAPACITY MANAGEMENT

- Objective
  - To produce and regularly update Capacity Plan
  - To provide advice and guidance on capacity an performance related issues
  - To ensure services meet or exceed performance targets
  - To assist in diagnosing an resolving capacity related problems and incidents
  - To assess the impact of changes on the capacity plan
  - Proactive capacity and performance measures

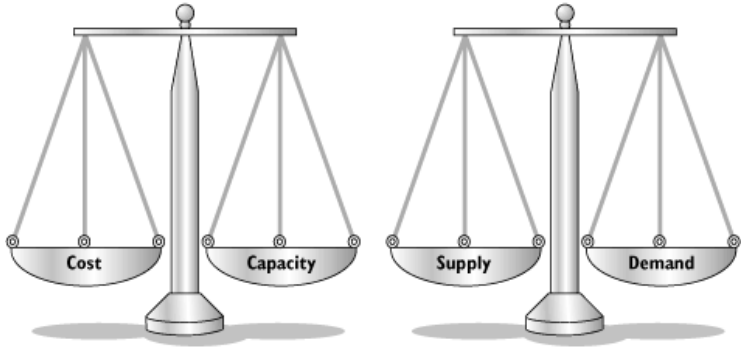
CAPACITY MANAGEMENT

- The two laws of capacity management :
  - **Moore's Law**
    - In 1965 Gordon Moore, one of the founders of Intel, observed that each new memory chip produced contained about twice as much processing Capacity as its predecessor, and that new chips were released every 18 - 24 months. This trend has continued ever since, leading to an exponential increase in processing power.
  - **Parkinson's Law of Data**
    - We all know that work expands to fill the time available to complete it, but a variation on that law is that 'data expands to fill the space available for storage'.

While these two laws hold true then effective Capacity Management is even more important as supply and demand grow exponentially.

- The Capacity Management process's goal is to ensure the cost justifiable IT Capacity always exists and that it is matched to the current and future identified needs of the business.

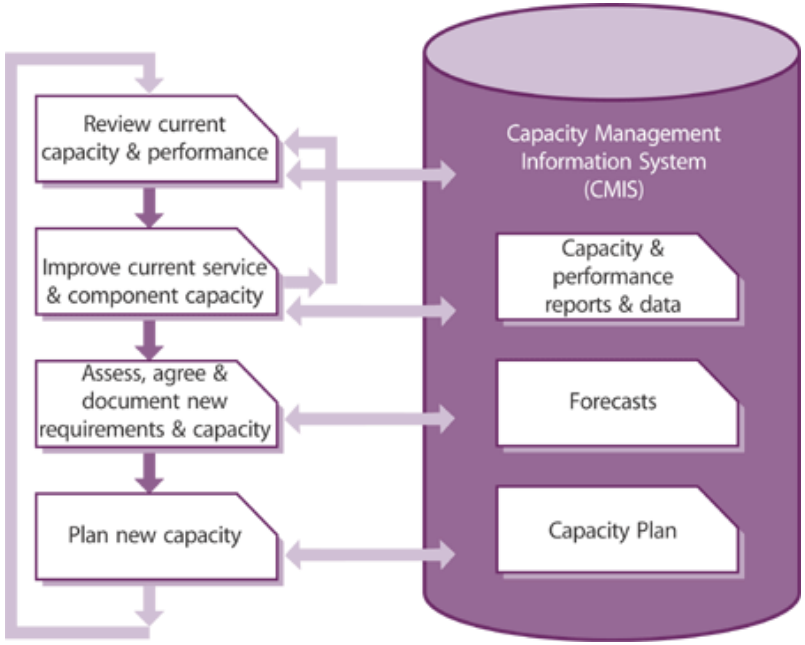
CAPACITY MANAGEMENT - CONCEPTS



- Basic Concepts
  - Balancing costs against resources needed
  - Balancing supply against demand
  - Should be involved of all stage of the lifecycle
  - Forward looking, regularly updated capacity Plan
  - Three levels of concerns
    - Business Capacity management : Translate business needs and plans into requirements for service and IT infrastructure
    - Service Capacity management : Ensure that the performance of all services is monitored and measured and meet SLA targets
    - Component capacity management : Ensure that all components within the IT infrastructure that have finite resource are monitored and measured and the collected data is recorded and analyzed.

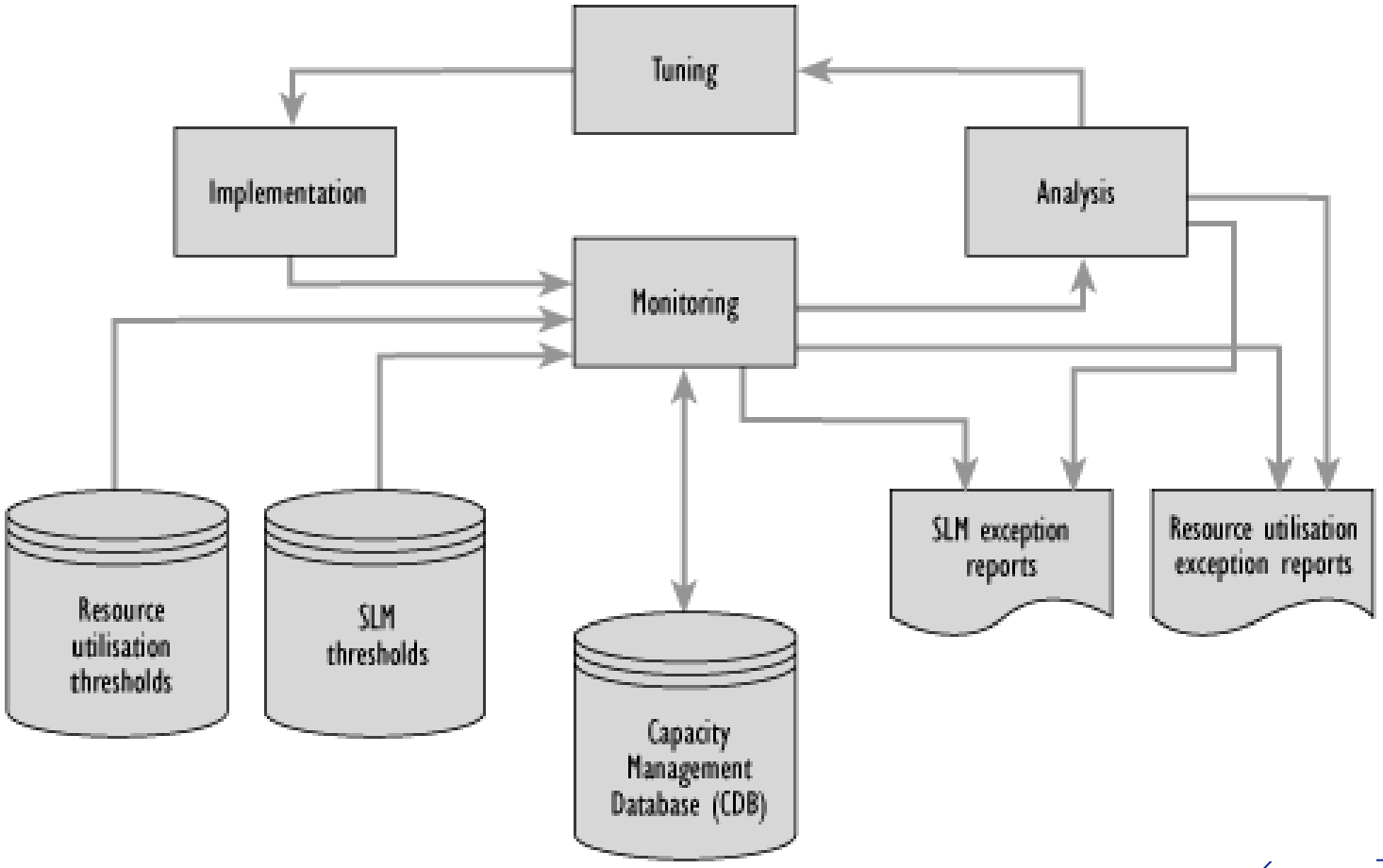
CAPACITY MANAGEMENT - CONCEPTS

- Basic Concepts
  - Try continually to cost effectively match IT resources and capacity to the ever changing needs and requirements of the business
  - Require tuning and optimization of the current resources
  - Require effective estimation and planning of the future resources



  - Capacity Management Information System
    - The CMIS holds the information needed by all sub-processes within capacity management.

CAPACITY MANAGEMENT – ACTIVITIES



SERVICE DESIGN

INFORMATION SECURITY MANAGEMENT

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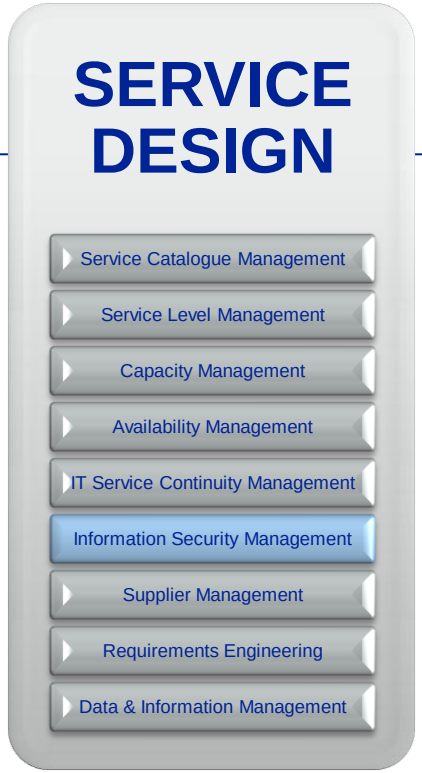


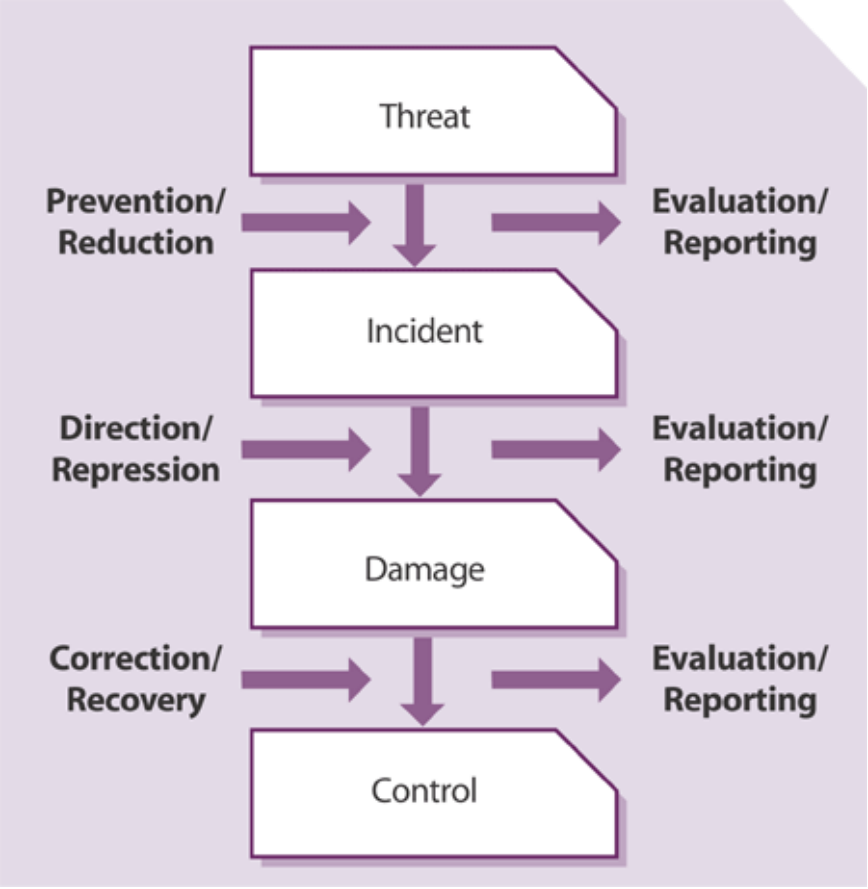
- Objectives
  - To protect the interests of those relying on information
  - To protect the system and communication that deliver the information
  - Specifically related to harm resulting from failure of
    - Confidentiality
    - Integrity
    - Availability
  - The ability to do ,business with others organization safely

INFORMATION SECURITY MANAGEMENT - CONCEPTS

- Basic Concepts :
  - Information Security Policy (ISP) :
    - The policy should cover all areas of security, be appropriate and meet the needs of the business
  - Information Security Management System (ISMS) :
    - Framework containing the standards management procedures and guidelines supporting the information security policies
  - Risk analysis and risk management :
    - Performing security risk analysis and management in conjunction with availability and IT Service Continuity Management
  - Security Controls :
    - Information security must be an integral part of all services and systems and is an ongoing process that needs to be continuously managed using a set of security controls

SECURITY MANAGEMENT CONTROL

- Security Control :
  - Design to support and enforce the ISP
  - Design to minimize all recognized and identified threats
  - Security controls more cost effective if included within the design of all services
  - Ensure continued protection of all existing services
  - Ensure new services an access to them are in line with the ISP



INFORMATION SECURITY MANAGEMENT

- Value for business
  - ISM ensures that an Information Security Policy is maintained and enforced that fulfils the needs of the Business Security Policy and the requirements of corporate governance
  - ISM raises awareness of the need for security within all IT services and assets throughout the organization

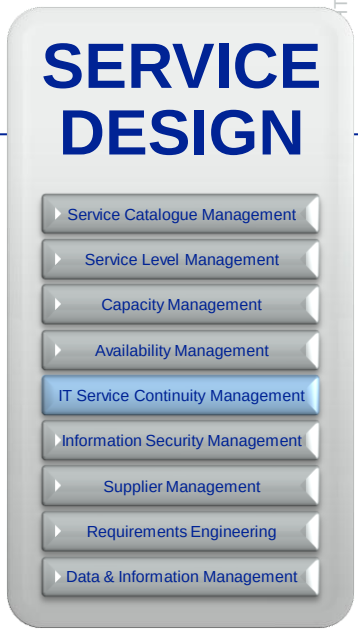
INFORMATION SECURITY MANAGEMENT ROLE

- Security Manager
  - Process owner
  - Develop and maintain Information Security Policy
  - Communicate and publicize security awareness and policy
  - Perform security risk analysis and risk management
  - Monitor and manage security breaches and incident

SERVICE DESIGN

IT SERVICE CONTINUITY MANAGEMENT

IT SERVICE CONTINUITY MANAGEMENT



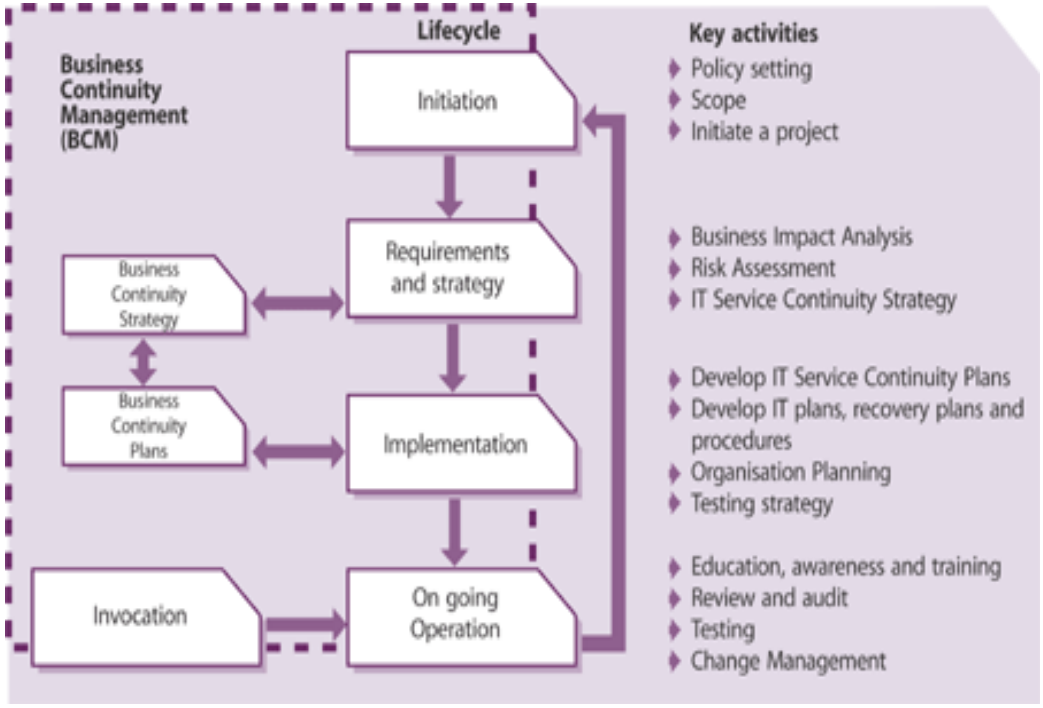
- Objectives
  - To maintain Service Continuity and IT Recovery plan that support the business continuity plan
  - To complete regular Business Impact Analysis exercise to ensure that plans are current and relevant
  - To conduct regular risk assessment and management activities
  - To provide advice and guidance on issue related to service continuity
  - To implement measures to meet or exceed Business Continuity targets
  - To check the impact of changes on existing plan
  - To negotiate necessary contacts with suppliers

IT SERVICE CONTINUITY MANAGEMENT - CONCEPTS

- Concepts
  - ITSCM should be based on Business Continuity
    - - Appropriate protection and recovery measures
    - - Written recovery plans
  - Lifecycle approach
    - - Initiation , Requirements & Strategy, Implementation, Operation
    - - Regular Business Impact Analysis (BIA), Risk Assessment and Risk Management to ensure plans remain valid
    - - Regular testing of plans
  - Negotiate with suppliers as necessary
  - Assess changes for impact on ITSCM

IT SERVICE CONTINUITY MANAGEMENT CONCEPTS

- ITSCM is Cyclic process through the lifecycle to ensure alignment between Service Continuity / Recovery plan and Business Continuity plan / Business priorities



IT SERVICE CONTINUITY MANAGEMENT – RECOVERY OPTIONS

- Common Recovery Options include
  - Manual workarounds
  - Reciprocal Arrangements
  - Gradual Recovery (Cold Standby) : >72h, empty room
  - Intermediate Recovery (Warm Standby) : 24<72h, accommodation with hardware
  - Fast Recovery (Hot Standby) : <24h, need to restore last backup
  - Immediate Recovery : mirrored sites

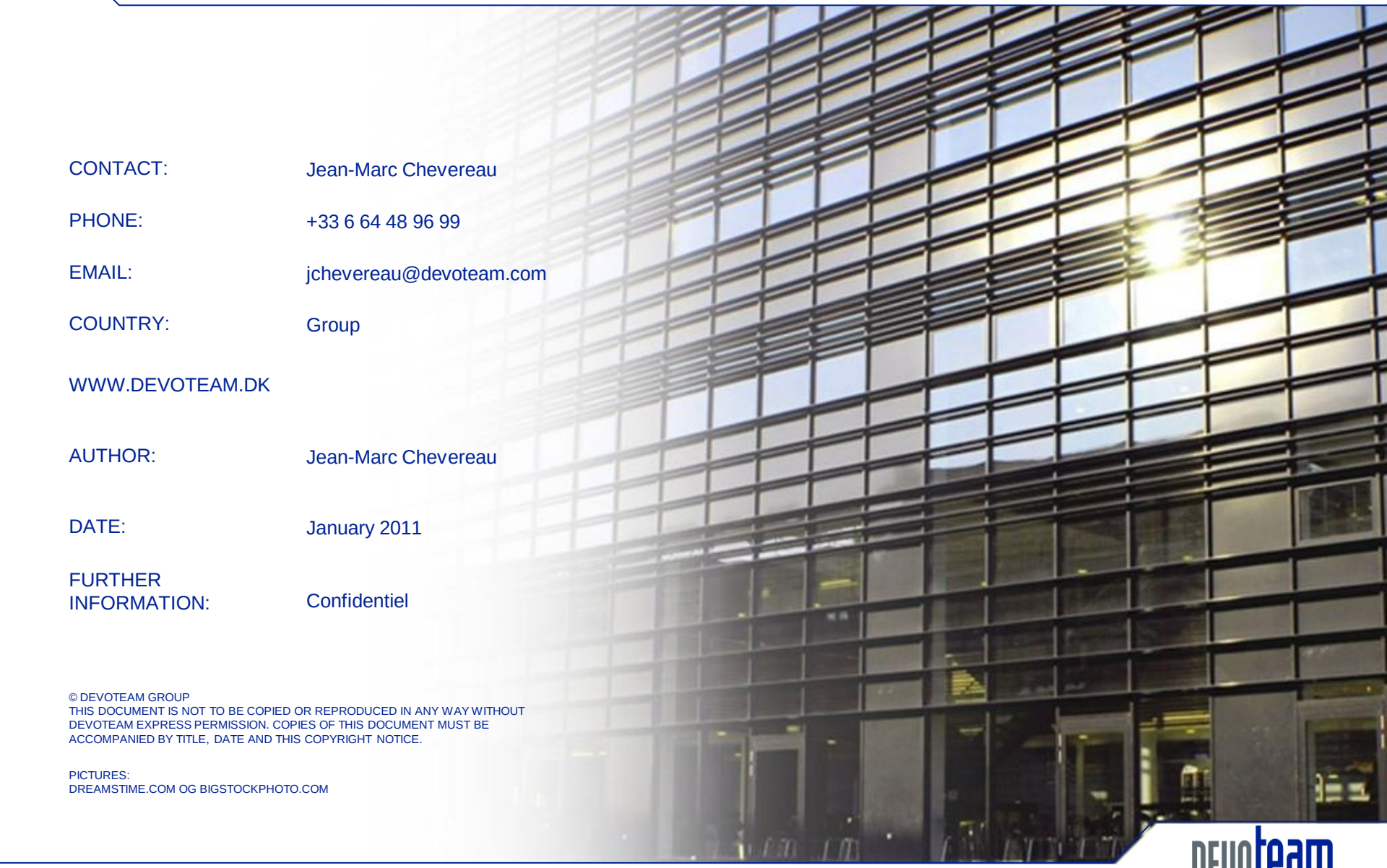
IT SERVICE CONTINUITY MANAGEMENT

- Value for business
  - ITSCM is used to raise awareness of continuity and recovery requirements and is often used to justify and implement a Business Continuity Planning process and Business Continuity Plans.
  - ITSCM should be driven by business risk as identified by Business Continuity Planning

IT SERVICE CONTINUITY MANAGEMENT-ROLE

- Service Continuity Manager
  - Process owner for ITSCM
  - Responsible for producing testing and maintain service continuity plan
  - Part of overall Business Continuity Team

END



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FURTHER INFORMATION: Confidentiel

PICTURES:
DREAMSTIME.COM OG BIGSTOCKPHOTO.COM