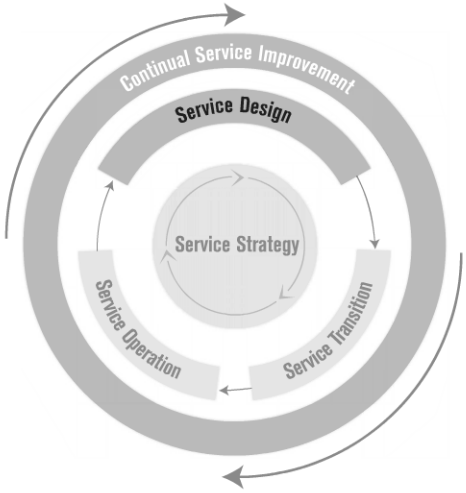
# 3
# Service Design




**Service Design – Objectives**

Service Design is about designing appropriate and innovative IT services–including their architectures, processes, policies and documentation–to meet current and future agreed upon business requirements, through the following objectives:

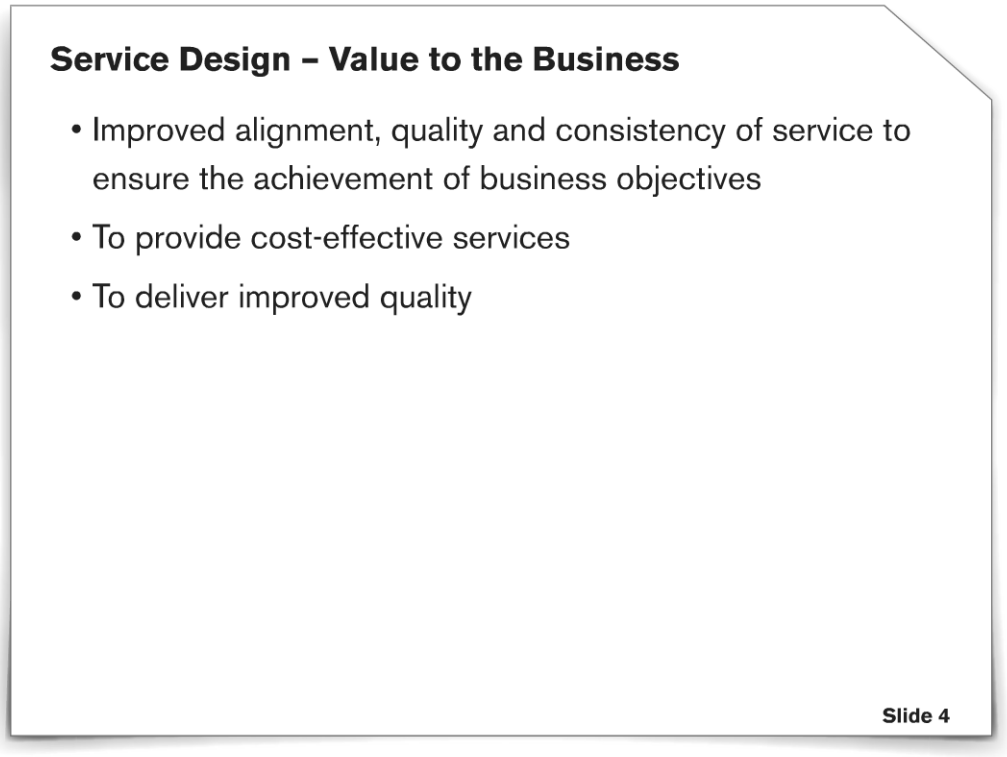
- Design services to deliver more effective and efficient IT and business solutions to satisfy business objectives
- Reduce, minimize or constrain the long-term costs of service provision
- Design efficient and effective processes for the design, transition, operation and improvement of high quality IT services to manage services through their lifecycle
- Design secure and resilient IT infrastructures
- Design measurement methods and metrics for assessing the effectiveness and efficiency of the design processes and their deliverables
- Produce and maintain IT plans, processes, policies, architectures, frameworks and documents
- Develop the skills and capability within IT
- Contribute to the improvement of the overall quality of IT services within the imposed design constraints, especially by reducing the need for reworking and enhancing services


**Service Design – Processes**

The processes included with the Service Design Lifecycle phase are:

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

It is important to note that many of the activities from these processes will occur in other lifecycle phases, especially Service Operation. Additionally, Service Level Management also plays an important role in Continual Service Improvement.



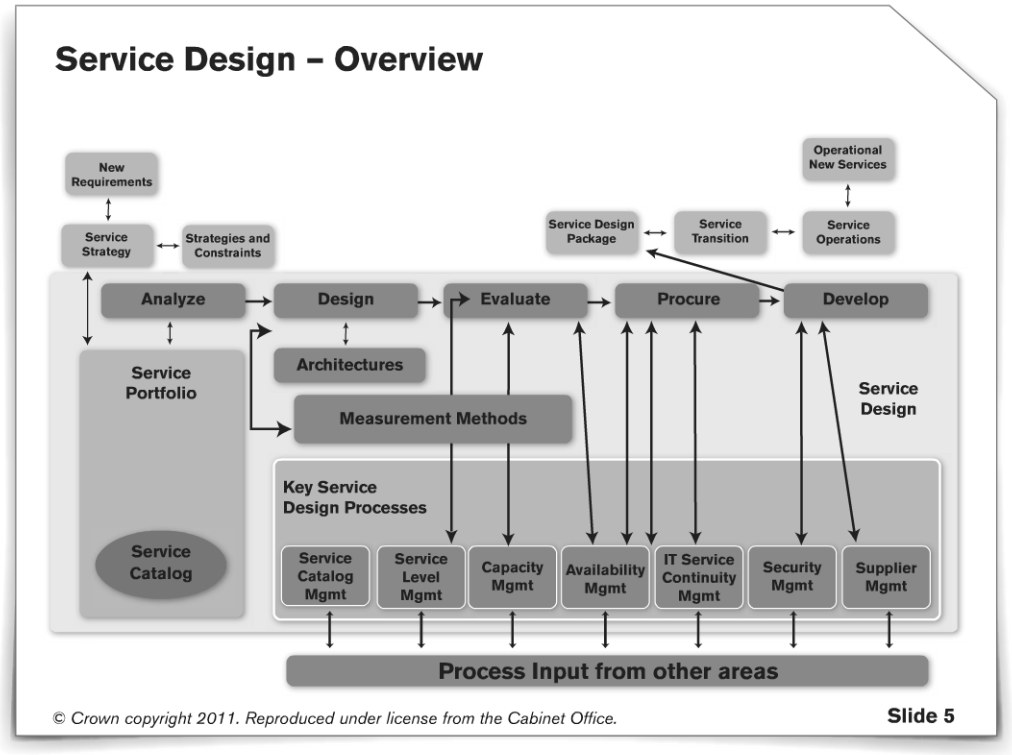

**Service Design – Value to the Business**

With good Service Design it will be possible to deliver high-quality, cost-effective services and to ensure that the business objectives are being met.

The following benefits are a result of a good Service Design practice:

- Reduced Total Cost of Ownership (TCO): Cost of ownership can only be minimized if all aspects of services, processes and technology are designed properly and implemented according to the design.
- Improved alignment, quality and consistency of service: New or changed services match business needs, with services designed to meet the requirements of the business and both service and operational quality will be enhanced.
- Easier implementation of new or changed services: As there is integrated and full Service Design and the production of comprehensive Service Design Packages
- More effective service performance: Incorporation and recognition of Capacity, Financial Availability and IT Service Continuity plans will improve service performance.
- Improved IT governance: Effective IT governance will assist with the implementation and communication of a set of controls.

- More effective Service Management and IT processes: Processes will be designed with optimal quality and cost effectiveness.
- Improved information and decision-making: More comprehensive and effective measurements and metrics will enable better decision-making and continual improvement of Service Management practices in the design stage of the Service Lifecycle.




**Service Design – Overview**

The **key output** of the Service Design stage is the design of service solutions to meet the changing requirements of the business.

However, when designing these solutions, input from many different areas must be considered within the various activities involved in designing the service solution. These inputs will range from identifying and analyzing requirements to building a solution and Service Design Package to hand over to Service Transition.

All designs and design activities must be driven principally by the business needs and requirements of the organization. Within this context they also must reflect the needs of the strategies, plans and policies produced by Service Strategy processes.

In order to develop effective and efficient service solutions that meet and continue to meet the requirements of the business and the needs of IT, it is essential that all of the inputs and needs of all other areas and processes are reconsidered within each of the Service Design activities as illustrated in the diagram above.

This will ensure that all service solutions are consistent and compatible with existing solutions and will meet the expectations of the customers and users. By consolidating these facets of the key processes into all of these Service Design activities, all inputs will be automatically referenced every time a new or changed service solution is produced.

## Training (1/2)

- Training in service management helps service providers to build and maintain their service management capability. Training needs must be matched to the requirements for competence and professional development

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## Training (2/2)

- The official ITIL qualification scheme enables organizations to develop the competence of their personnel through approved training courses. The courses help students to gain knowledge of ITIL best practices, develop their competencies and gain a recognized qualification. The scheme has four levels:
  - Foundation level
  - Intermediate level
  - ITIL Expert
  - ITIL Master
  - More information on ITIL qualifications can be found at www.itil-officialsite.com

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## Competence and Skills Framework (1/2)

- Standardizing job titles, functions, roles and responsibilities can simplify service management and human resource management
- Many service providers use a common framework of reference for competence and skills to support activities such as skill audits, planning future skill requirements, organizational development programs and resource allocation

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**Competence and Skills Framework (1/2)**

Standardizing job titles, functions, roles and responsibilities can simplify service management and human resource management. Many service providers use a common framework of reference for competence and skills to support activities such as skill audits, planning future skill requirements, organizational development programs and resource allocation. For example, resource and cost models are simpler and easier to use if jobs and roles are standard.

## Competence and Skills Framework (2/2)

- The Skills Framework for the Information Age (SFIA) is an example of a common reference model for the identification of the skills needed to develop effective IT services, information systems and technology
- SFIA defines seven generic levels at which tasks can be performed, with the associated professional skills required for each level
- A second dimension defines core competencies that can be combined with the professional skills
- SFIA is used by many IT service providers to identify career development opportunities

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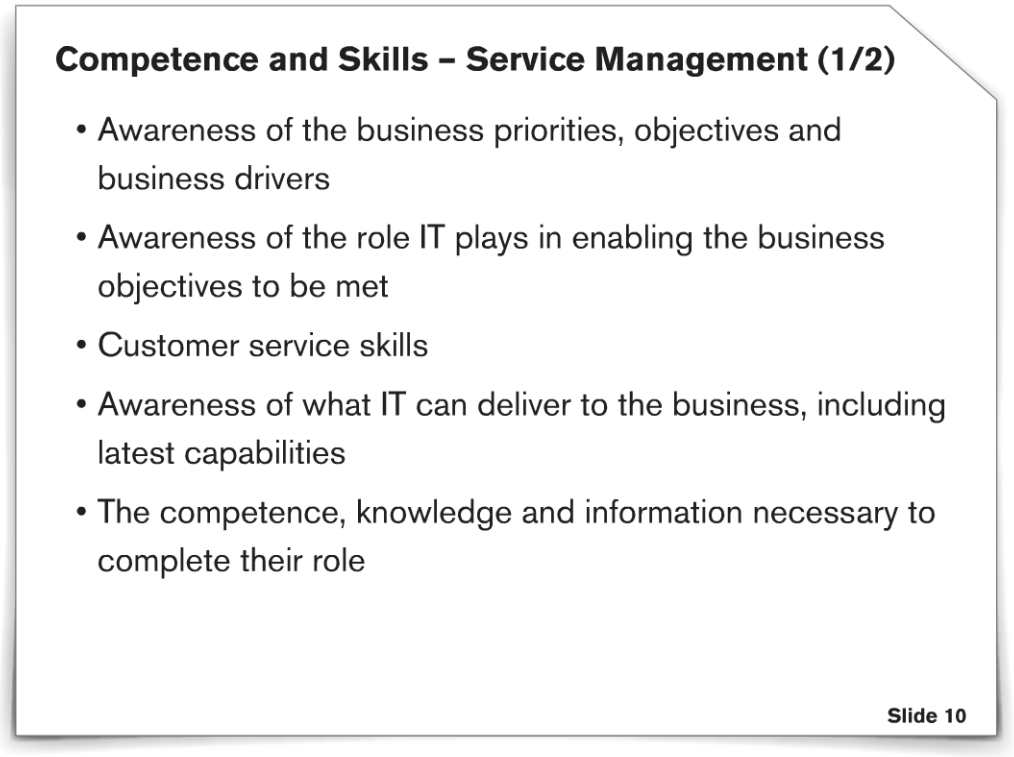
**Competence and Skills Framework (2/2)**

The Skills Framework for the Information Age (SFIA) is an example of a common reference model for the identification of the skills needed to develop effective IT services, information systems and technology. SFIA defines seven generic levels at which tasks can be performed, with the associated professional skills required for each level. A second dimension defines core competencies that can be combined with the professional skills. SFIA is used by many IT service providers to identify career development opportunities.

More information on SFIA can be found at www.sfia.org.uk



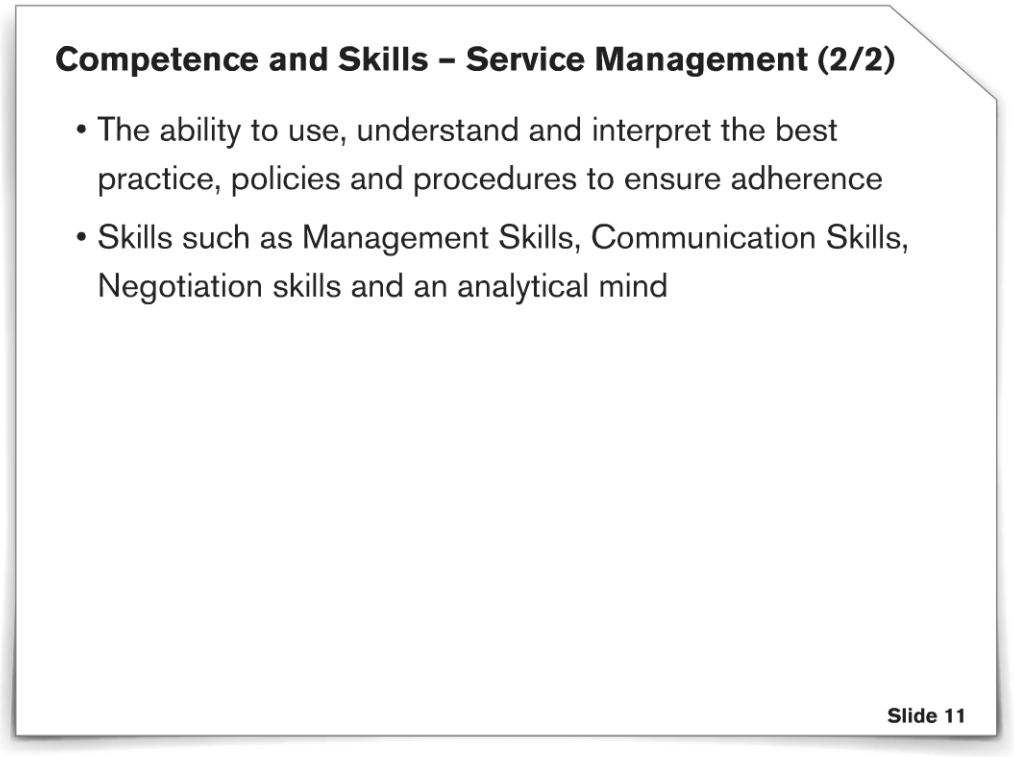

**Competence and Skills – Service Management (1/2)**

Delivering service successfully depends on personnel involved in service management having the appropriate education, training, skills and experience. People need to understand their role and how they contribute to the overall organization, services and processes to be effective and motivated. As changes are made, job requirements, roles, responsibilities and competencies should be updated if necessary.

Each service lifecycle stage depends on appropriate skills and experience of people and their knowledge to make key decisions. In many organizations, personnel will deliver tasks appropriate to more than one lifecycle stage. They may well find themselves allocated (fully or partially) from operational tasks to support a design exercise and then follow that service through service transition. They may then, via early life support activities, move into support of the new or changed services that they have been involved in designing and implementing into the live environment.

The specific roles within ITIL service management all require specific skills, attributes and competences from the people involved to enable them to work effectively and efficiently. However, whatever the role, it is imperative that the person carrying out that role has the following attributes:

- Awareness of the business priorities, objectives and business drivers
- Awareness of the role IT plays in enabling the business objectives to be met
- Customer service skills
- Awareness of what IT can deliver to the business, including latest capabilities
- The competence, knowledge and information necessary to complete their role




**Competence and Skills – Service Management (2/2)**

The specific roles within ITIL service management all require specific skills, attributes and competences from the people involved to enable them to work effectively and efficiently. However, whatever the role, it is imperative that the person carrying out that role has the following attributes:

- Awareness of the business priorities, objectives and business drivers
- Awareness of the role IT plays in enabling the business objectives to be met
- Customer service skills
- Awareness of what IT can deliver to the business, including latest capabilities
- The competence, knowledge and information necessary to complete their role
- The ability to use, understand and interpret the best practice, policies and procedures to ensure adherence.

The following are examples of attributes required in many of the roles, dependent on the organization and the specific roles assigned:

Management skills – both from a person management perspective and from the overall control of process

Ability to handle meetings – organizing, chairing, and documenting meetings and ensuring that actions are followed up

Communication skills – an important element of all roles is raising awareness of the processes in place to ensure buy-in and conformance. An ability to communicate at all levels within the organization will be imperative

Articulateness – both written (e.g. for reports) and verbal

Negotiation skills are required for several aspects, such as procurement and contracts

An analytical mind – to analyze metrics produced from the activity.

Many people working in service management are involved with continual service improvement. ITIL Continual Service Improvement provides specific guidance on the skill levels needed for CSI activities.

## Role – Process manager (1/2)

- The process manager's accountabilities include:
  - Working with the process owner to plan and coordinate all process activities
  - Ensuring that all activities are carried out as required throughout the service lifecycle
  - Appointing people to the required roles
  - Managing resources assigned to the process
  - Working with service owners and other process managers to ensure the smooth running of services
  - Monitoring and reporting on process performance
  - Identifying improvement opportunities for inclusion in the CSI register

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## Role – Process manager (2/2)

- Working with the CSI manager and process owner to review and prioritize improvements in the CSI register
- Making improvements to the process implementation.

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## Process Practitioner

- The process practitioner's responsibilities typically include:
  - Carrying out one or more activities of a process
  - Understanding how their role contributes to the overall delivery of service and creation of value for the business
  - Working with other stakeholders, such as their manager, co-workers, users and customers, to ensure that their contributions are effective
  - Ensuring that inputs, outputs and interfaces for their activities are correct
  - Creating or updating records to show that activities have been carried out correctly.

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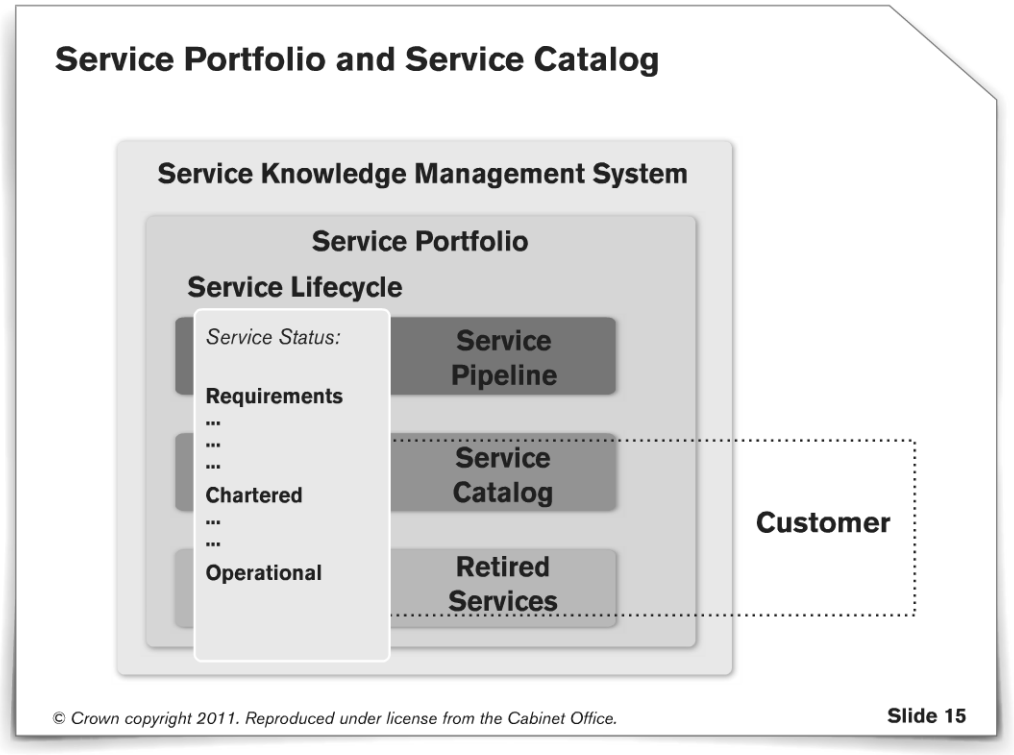


**Service Portfolio and Service Catalog**

The Service Portfolio is produced and maintained to provide a central accurate set of information on all services, and to develop a service-focused culture. It is developed as part of Service Strategy and should include participation by those involved in Service Design, Service Transition, Service Operation and Continuing Service Improvement. Once a service is "chartered" (being developed for use by customers), Service Design produces the specifications for the service and, at this point, the service should be added to the Service Catalog.

The Service Portfolio should contain information relative to every service, and the Service Catalog should contain details of all operational services being provided (or those being prepared for transition to the live environment), a summary of their characteristics and details of both the customers and maintainers of each.

Each organization should develop and maintain a policy with regard to both the Service Portfolio and the Service Catalog with regard to the services recorded within them, what details are recorded and what statuses are recorded for each of the services. The policy should also contain details of responsibilities for each section of the overall Service Portfolio and the scope of each of the constituent sections.

## Service Portfolio

- Contains information and all future requirements for every service
- Supports all processes
- Designed by Service Design
- Owned and managed by Service Strategy

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**Service Portfolio**

The Service Portfolio ensures that a new or changed service is consistent with other services, and that all other services that interface, support or depend upon the new or changed services are consistent with the new service.

The Service Portfolio represents the commitments and investments made by a service provider pertinent to all customers and market spaces. It represents current contractual commitments, new service developments and ongoing service improvement programs initiated by Continual Service Improvement. It also includes third-party services that are an integral part of service offerings to customers.

The Service Portfolio contains information relating to every service and its current status within the organization.

## Service Catalog

- Contains:
  - Details of all operational services and those available for deployment
  - Summary of all services and customer characteristics
- Is a subset of the Service Portfolio
- Is a customer-facing view of the IT services in use

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**Service Catalog**

The Service Catalog is the subset of the Service Portfolio and contains the services currently available to customers, including the details of all operational services being provided or those being prepared for transition. It also has a summary of services' characteristics as well as the maintainers of each. Furthermore, it has information on the type of customers that are likely to use the service. Details of customers supply necessary information for the provision of IT service related to the their business characteristics and needs.

The Service Catalog is useful in developing suitable solutions for customers from one or more services. Items in the Catalog may be configured and suitably priced to fulfill a particular need.

The Service Catalog contains a *customer-facing view* of the IT services in use, how they are intended to be used, the business processes they enable and the levels and quality of service the customer can expect from each service.

## Vital Business Function

- The term vital business function (VBF) is used to reflect the part of a business process that is critical to the success of the business
- An IT service may support a number of business functions that are less critical
- The more vital the business function generally, the greater the level of resilience and availability that needs to be incorporated into the design required in the supporting IT services
- For all services, whether VBFs or not, the availability requirements should be determined by the business and not by IT

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**Vital business function**

The term vital business function (VBF) is used to reflect the part of a business process that is critical to the success of the business. An IT service may support a number of business functions that are less critical. For example, an automated teller machine (ATM) or cash dispenser service VBF would be the dispensing of cash. However, the ability to obtain a statement from an ATM may not be considered as vital. This distinction is important and should influence availability design and associated costs. The more vital the business function generally, the greater the level of resilience and availability that needs to be incorporated into the design required in the supporting IT services. For all services, whether VBFs or not, the availability requirements should be determined by the business and not by IT. The initial availability targets are often set at too high a level, and this leads to either over-priced services or an iterative discussion between the service provider and the business to agree an appropriate compromise between the service availability and the cost of the service and its supporting technology.

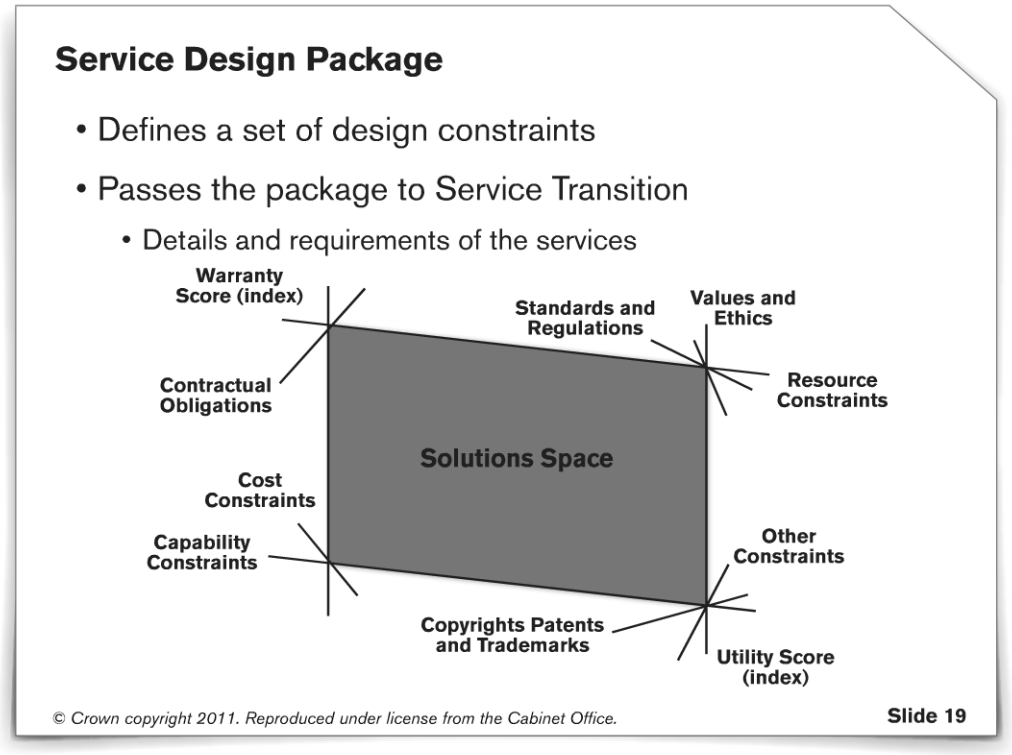
Certain VBFs may need special designs, which are now being used as a matter of course within service design plans, incorporating:

**High availability** A characteristic of the IT service that minimizes or masks the effects of IT component failure to the users of a service.

**Fault tolerance** The ability of an IT service, component or CI to continue to operate correctly after failure of a component part.

**Continuous operation** An approach or design to eliminate planned downtime of an IT service. Note that individual components or CIs may be down even though the IT service remains available.

**Continuous availability** An approach or design to achieve 100% availability. A continuously available IT service has no planned or unplanned downtime.




**Service Design Package**

When designing a service, the customer's needs must be translated into attributes of that service. However, designers are not always able to design a service without any consideration for possible constraints. These constraints come from the business and Service Strategy and cover many different areas, as illustrated in the above diagram. These imposed constraints unfortunately mean that designers are not always able to design the most appropriate solution for the business. The most obvious constraint is the financial one. There may be insufficient budget available for the most appropriate solution, therefore, a less expensive alternative service would have to be identified and agreed upon with the business. The designer can only provide the solution that fits within all of the currently known constraints. The alternative is to renegotiate some of the constraints (e.g., obtain a larger budget).

Clearly, other constraints must be considered along with financial constraints and many of these may be external factors. These may include compliance with relevant standards and regulations, capability constraints, resource constraints and contractual obligations. The designers must recognize the fact that they are free to design solutions, but that they are working in an environment where many external factors may influence the design. It is essential that all designers recognize these constraints and ensure that the designs and solutions they produce have all of the necessary controls and capability within them.

The Service Design Package (SDP) defines a set of design constraints against which the service release and new or changed service will be developed and built. This package is then passed from Service Design to Service Transition, and details all aspects of the service (and its requirements) through all of the subsequent stages of its lifecycle. A Service Design Package (SDP) is produced during the design stage for each new service, major change to a service, removal of a service, or changes to the Service Design Package itself. Validation and testing steps examine the service at its boundaries to check that the design constraints are correctly defined, particularly if there is a design improvement to add or to remove a constraint.

The SDP contains:

- Requirements: Business requirements, service applicability, service contacts
- Service Design: Service functional requirements, Service Level Requirements, service and operational management requirements
- Organizational readiness assessment
- Service Lifecycle Plan: Service program, Service Transition plan, service operational acceptance plan, Service Acceptance Criteria

## Design Coordination – Purpose and Objective (1/2)

The purpose of the design coordination process is to ensure the goals and objectives of the service design stage are met by providing and maintaining a single point of coordination and control for all activities and processes within this stage of the service lifecycle.

The objectives of the design coordination process are:

- Produce service design packages (SDPs) based on service charters and change requests
- Ensure that appropriate service designs and/or SDPs are produced and that they are handed over to service transition as agreed

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**Purpose and objectives (1/2)**

The purpose of the design coordination process is to ensure the goals and objectives of the service design stage are met by providing and maintaining a single point of coordination and control for all activities and processes within this stage of the service lifecycle.

The objectives of the design coordination process are to:

- Ensure the consistent design of appropriate services, service management information systems, architectures, technology, processes, information and metrics to meet current and evolving business outcomes and requirements
- Coordinate all design activities across projects, changes, suppliers and support teams, and manage schedules, resources and conflicts where required
- Plan and coordinate the resources and capabilities required to design new or changed services
- Produce service design packages (SDPs) based on service charters and change requests
- Ensure that appropriate service designs and/or SDPs are produced and that they are handed over
- Improve the effectiveness and efficiency of service design activities and processes

## Design Coordination – Purpose and Objective (2/2)

- Ensure that all service models and service solution designs conform to strategic, architectural, governance and other corporate requirements

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**Purpose and objectives (2/2)**

Ensure that all parties adopt a common framework of standard, reusable design practices in the form of activities, processes and supporting systems, whenever appropriate.

Monitor and improve the performance of the service design lifecycle stage.

## Design Coordination – Scope

- The scope of the design coordination process includes all design activity, particularly all new or changed service solutions that are being designed for transition into (or out of, in the case of a service retirement) the live environment
- The scope does not include
  - Responsibility for any activities or processes outside of the design stage of the service lifecycle
  - Responsibility for designing the detailed service solutions themselves or the production of the individual parts of the SDPs. These are the responsibility of the individual projects or service management processes.

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**Scope**

The scope of the design coordination process includes all design activity, particularly all new or changed service solutions that are being designed for transition into (or out of, in the case of a service retirement) the live environment.

Some design efforts will be part of a project, whereas others will be managed through the change process alone without a formally defined project. Some design efforts will be extensive and complex while others will be simple and swift. Not every design activity requires the same level of rigor to ensure success, so a significant number of design efforts will require little or no individual attention from the design coordination process. Most design coordination process activity focuses around those design efforts that are part of a project, as well as those that are associated with changes of defined types. Typically, the changes that require the most attention from design coordination are major changes, but any change that an organization believes could benefit from design coordination may be included.

Each organization should define the criteria that will be used to determine the level of rigour or attention to be applied in design coordination for each design. Some organizations take the perspective that all changes, regardless of how small in scope, have a 'design' stage, as it is important that all changes have clear and correct plans for how to implement them. In this perspective, the lifecycle stage of service design still occurs, even if the designs for simple or standard changes are usually pre-built and are reused frequently and quickly. Sometimes the stage is quite complex

and long and sometimes it is simply a rapid check that the right 'design' (procedure) is being used. Other organizations take the perspective that only changes that fit certain criteria, such as those associated with a project or major change, have a formal service design stage. In this perspective, changes that fail to meet the agreed criteria may be considered out of the scope of this process.

Whichever perspective is adopted by an organization, the end result should be more successful changes that deliver the required business outcomes with minimal disruption or other negative impacts on business operations. If an organization's approach produces that result, then the organization is performing design coordination correctly.

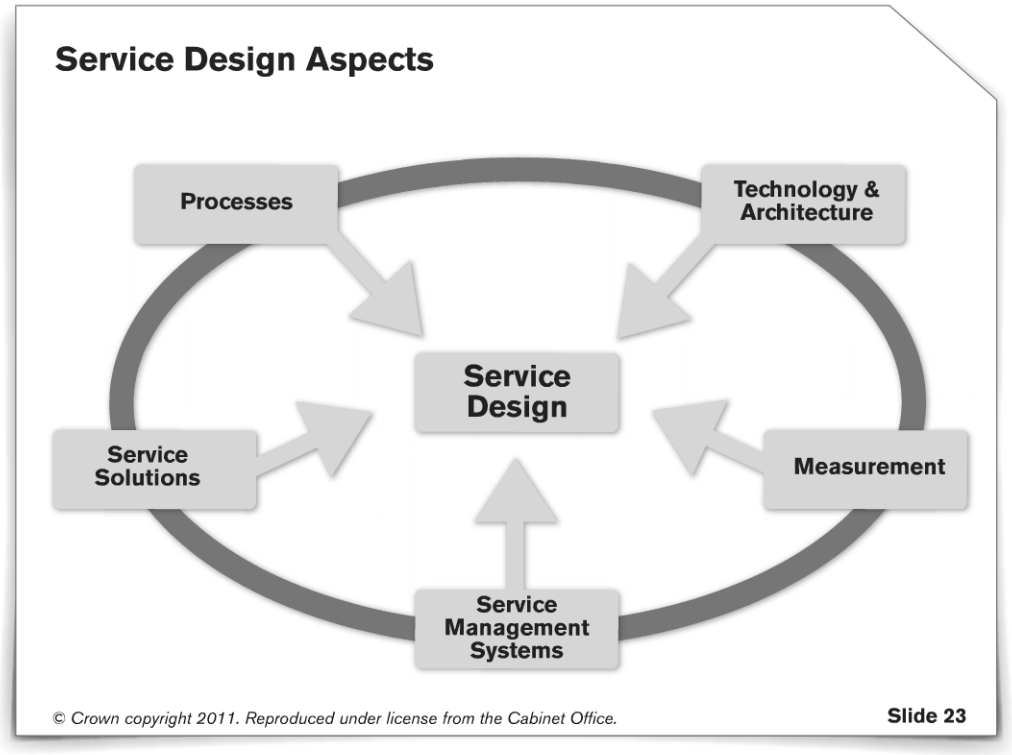
The design coordination process includes:

- Assisting and supporting each project or other change through all the service design activities and processes
- Maintaining policies, guidelines, standards, budgets, models, resources and capabilities for service design activities and processes
- Coordinating, prioritizing and scheduling of all service design resources to satisfy conflicting demands from all projects and changes
- Planning and forecasting the resources needed for the future demand for service design activities
- Reviewing, measuring and improving the performance of all service design activities and processes
- Ensuring that all requirements are appropriately addressed in service designs, particularly utility and warranty requirements
- Ensuring the production of service designs and/or SDPs and their handover to service transition.

**The design coordination process does not include:**

Responsibility for any activities or processes outside of the design stage of the service lifecycle

Responsibility for designing the detailed service solutions themselves or the production of the individual parts of the SDPs. These are the responsibility of the individual projects or service management processes.




**Service Design Aspects**

An overall integrated approach is adopted to the design activities, and covers the following five major aspects of design:

1. **The design of the service solutions, including all of the functional requirements, resources and capabilities needed and agreed upon**

   There are many activities that must be completed within the Service Design stage for a new or changed service. A formal and structured approach is required to produce the new service at the right cost, functionality, quality and within the right timeframe. The main areas that must be considered within the design of the service solution should include:

   - Analysis of the existing IT services and infrastructure, and formulation of alternative service solutions
   - Design of the service solutions to the new requirements
   - Review of the existing IT services
   - Ensuring that the contents of the Service Acceptance Criteria (SAC) are incorporated and the required achievements are planned into the initial design

2. **The design of Service Management systems and tools, especially the Service Portfolio, for the management and control of services throughout their lifecycle**

   The most effective way to manage all aspects of services throughout their lifecycle is by using appropriate management systems and tools to support and automate efficient processes. The Service Portfolio is the most critical management system used to support all processes and describes a provider's services in terms of business value. It articulates business needs and the provider's response to those needs. By definition, business value's terms correspond to market's terms, providing a means for comparing service competitiveness across alternative providers.

3. **The design of the technology and management architecture and tools required to provide the services**

   The architectural design activities within an IT organization are concerned with providing the overall strategic "blueprints" for the development and deployment of an IT infrastructure and a set of applications and data, which satisfy the current and future needs of the business. Although these aspects underpin the delivery of quality IT services, they alone cannot deliver quality IT services, and it is essential that the people, process and partner/supplier aspects surrounding these technological components (products) are also considered. In essence, architectural design can be defined as: "The development and maintenance of IT policies, strategies, architectures, designs, documents, plan and processes for the deployment and subsequent operation and improvement of appropriate IT services and solutions throughout an organization."

   Some terms are used in many different contexts. In this context they are defined as:

   Architecture: The fundamental organization of a system embodied in its components, their relationship's to each other and to the environment, and the principles guiding its design and evolution.

   System: A collection of components organized to accomplish a specific function or set of functions.

4. **The design of the processes needed to design, transition, operate and improve the services**

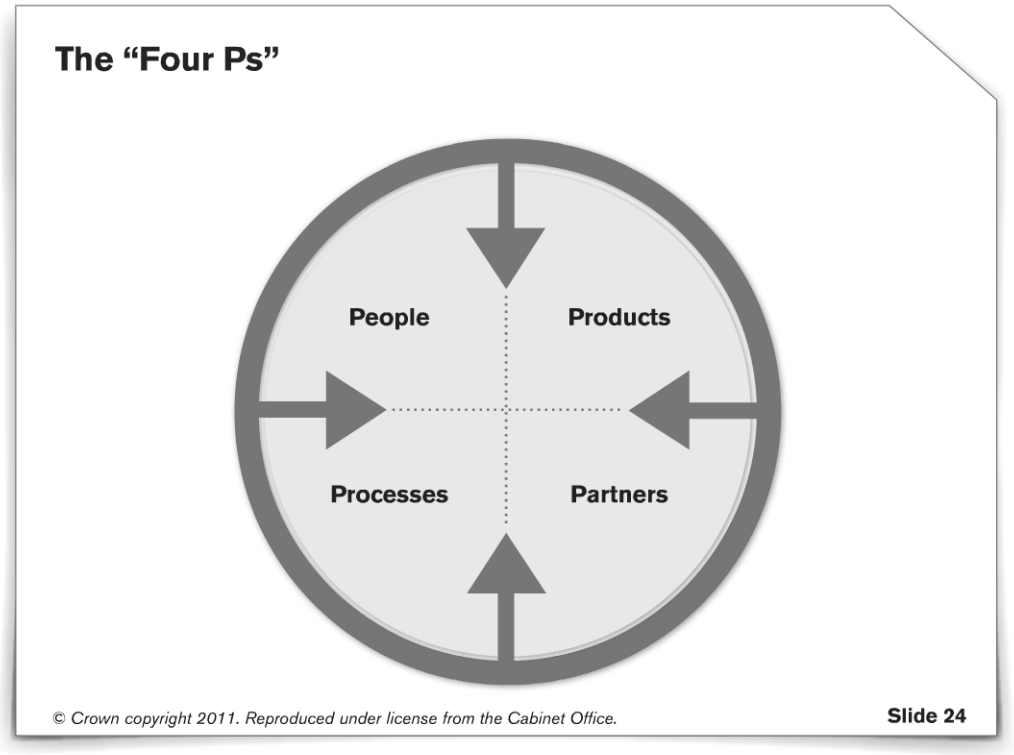
   A process model enables understanding and helps to articulate the distinctive features of a process (a structured set of activities designed to accomplish a specific objective). A process takes one or more inputs and converts them to defined outputs. A process includes all of the roles, responsibilities, tools and management controls required to reliably deliver the outputs. A process may also define or revise policies, standards, guidelines, activities, processes, procedures and work instructions if they are needed. Process control can be defined as: The activity of planning and regulating a process, with the objective of performing a process in an effective, efficient and consistent manner.

5. **The design of the measurement systems, methods and metrics for the services, the architectures and their constituent components and the processes**

   In order to manage and control the design processes they must be monitored and measured. This is true for all aspects of the design processes.

There are four types of metrics that may be used to measure the capability and performance of processes:

- Progress: Milestones and deliverables in the capability of the process
- Compliance: Compliance of the process to governance requirements, regulatory requirements and compliance of people to the use of the process
- Effectiveness: The accuracy and correctness of the process and its ability to deliver the desired result
- Efficiency: The productivity of the process, its speed, throughput and resource utilization




### The "Four Ps"

Many designs, plans and projects fail due to a lack of preparation and management. The implementation of ITIL Service Management as a practice is about preparing and planning the effective and efficient use of the "Four Ps":

#### People

Users, customers, IT staff, and managers are all considered "people." Communication, training and clear definitions of roles and responsibilities for all parties involved are essential.

This aspect of the "Four Ps" is concerned with the "soft" side of IT. Does staff actually have the correct skills and knowledge to perform its roles? Is there a focus on effective communication between all stakeholders (IT staff, customers, users and other stakeholders)?

#### Processes

"Processes" is where ITIL enters the design mechanism. It relates to the end-to-end delivery of services based on process flows. The ITIL processes are covered as a phased lifecycle.

#### Products

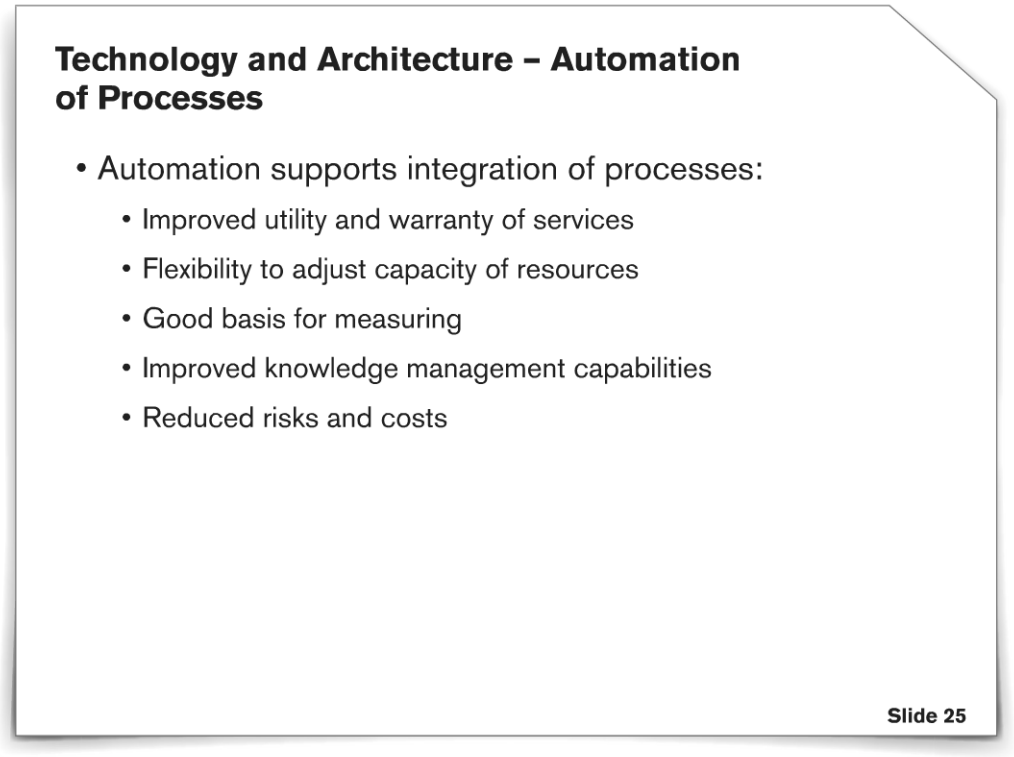
Tools and technology have come a long way since the evolution of ITIL. There are now a number of tools available to IT organizations that are considered "ITIL compatible" and have been developed to complement IT Service Management procedures. They should be regarded as their name

suggests, as a tool that can assist in the implementation and running of IT services; however, simply using one of these tools does not suggest compliance with ITIL standards.

**Partners**

Suppliers and the management of suppliers, partners, manufacturers and vendors are essential to the provision of quality IT services.

**Note**: It is important to remember that only people can become ITIL certified. Vendors, suppliers, tools and products cannot become ITIL certified.




**Technology and Architecture – Automation of Processes**

Following a discussion of the "Four Ps," it is very important to consider that automation can have a particularly significant impact on the performance of service assets such as management, organization, people, process, knowledge, and information. Applying automation indiscriminately may create more problems or exacerbate existing ones, so the following guidelines are recommended:

- Simplify the service processes before automating them.
- Clarify the flow of activities, allocation of tasks, need for information, and interactions.
- In self-service situations, reduce the surface area of contact users have with the underlying systems and processes.
- Do not hurry to automate tasks and interactions that are neither simple nor routine in terms of inputs, resources, and outcomes.

Automation enables service analytics and instrumentation. Information is necessary but not sufficient for answering questions such as why certain data is the way it is and how it will likely change in the future. Information is static. It only becomes knowledge when placed in the context of patterns and their implications. Automation facilitates the transformation of data into information, knowledge and wisdom, reducing complexity and uncertainty.


**Technology and Architecture – Service Operation**

To efficiently manage the Service Operation stage, an integrated IT Service Management technology is needed that includes the following core functionality:

- Self Help: The technology supports this capability with some form of web front-end allowing web pages to be defined, offering a menu-driven range of self help and service requests with a direct interface into the backend process-handling software
- Workflow or Process Engine: The pre-definition and control of defined processes such as an Incident Lifecycle, Request Fulfilment Lifecycle, Problem Lifecycle, Change Model, etc. allows responsibilities, activities, timeframes, escalation paths and alerting to be predefined and then automatically managed.
- Integrated Configuration Management System (CMS): Allow the organization's IT infrastructure assets, components, services and any ancillary Configuration Items to be held in a centralized location–together with all relevant attributes. An Integrated CMS also allows relationships between each record to be stored, maintained and linked to Incident, Problem, Known Error and Change Records as appropriate.

- Discovery/Deployment/Licensing Technology: In order to populate or verify the CMS data and to assist in license management, discovery or automated audit tools will be required
  - Capable of being run from any location on the network
  - Deploys new software to target locations
  - Allow automatic comparison of software licenses details held and actual license numbers deployed
- Remote Control: It is often helpful for the Service Desk analysts and other support groups to be able to take control of the users desktop to allow them to conduct investigations or correct settings
- Diagnostic Utilities: Capability to create and use diagnostic scripts and other diagnostic utilities to assist with earlier diagnosis of incidents
- Reporting: Incorporate good reporting capabilities, as well as allowing standard interfaces that can be used to input data to industry-standard reporting packages, dashboards, etc.
- Dashboards: Displays that are useful to allow “at a glance” visibility of overall IT service performance and availability levels. Dashboards may be included in management-level reports, to users and customers, to give real-time information for inclusion in IT web pages, to provide dynamic reporting and for support and investigation purposes.
- Integration with Business Service Management: Business applications and tools need to be interfaced with ITSM support tools to give the required functionality.

## Technology and Architecture – Service Design Tools (1/2)

- Tools are used for:
  - Hardware and Software Design
  - Environmental Design
  - Process Design
  - Data Design

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**Technology and Architecture – Service Design Tools (1/2)**

There are many tools and techniques that may be used to assist with the design of services and their associated components. These tools and techniques enable:

- Hardware Design
- Software Design
- Environmental Design
- Process Design
- Data Design

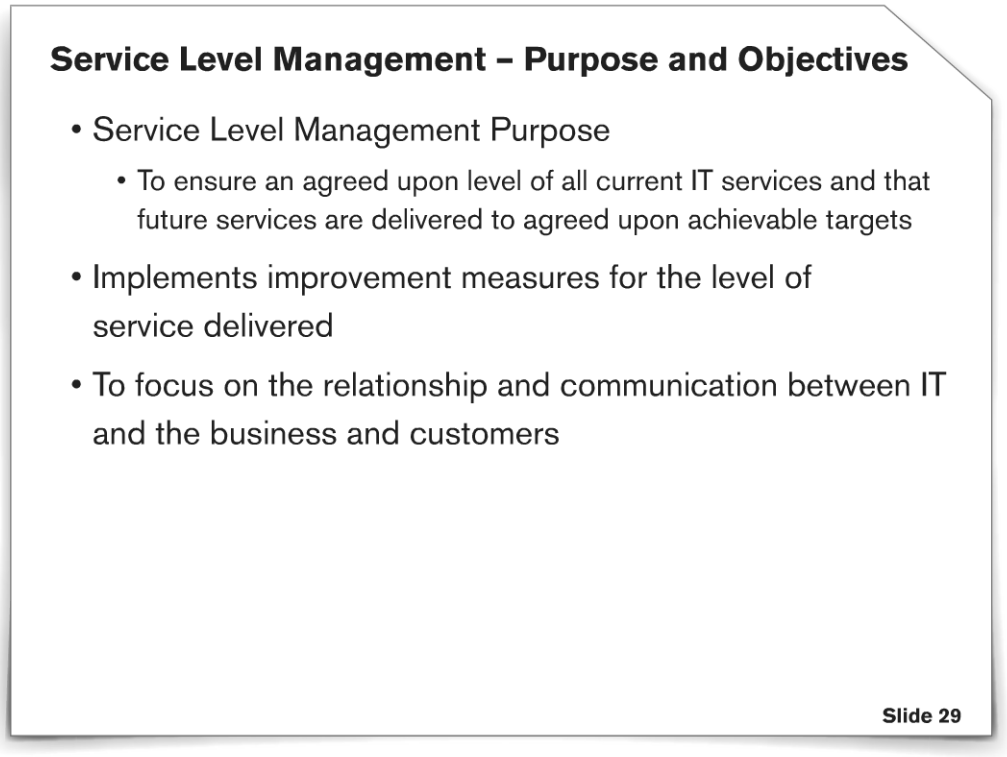

**Technology and Architecture – Service Design Tools (2/2)**

The tools and techniques are many and varied, including both proprietary and non-proprietary, and are useful in:

- Speeding up the design process
- Ensuring that standards and conventions are followed
- Offering prototyping, modeling and simulation facilities
- Enabling "What if?" scenarios to be examined
- Enabling checking and correlation of interfaces and dependencies
- Validating designs before they are developed and implemented to ensure that they satisfy and fulfill their intended requirements

Developing Service Designs can be simplified by the use of tools that provide graphical views of the service and its constituent components, from the business processes to the service and Serving Level Agreement (SLA) to the infrastructure, environment, data and applications, processes, Operational Level Agreements (OLAs), teams, contracts and suppliers. Some Configuration Management tools provide such facilities, and are sometimes referred to as an element of Business Service Management (BSM) tools.

They may contain or be linked to "auto-discovery" tools and mechanisms and allow the relationships between all of these elements to be graphically represented, providing the ability to drill down within each component and obtain detailed information, if needed.



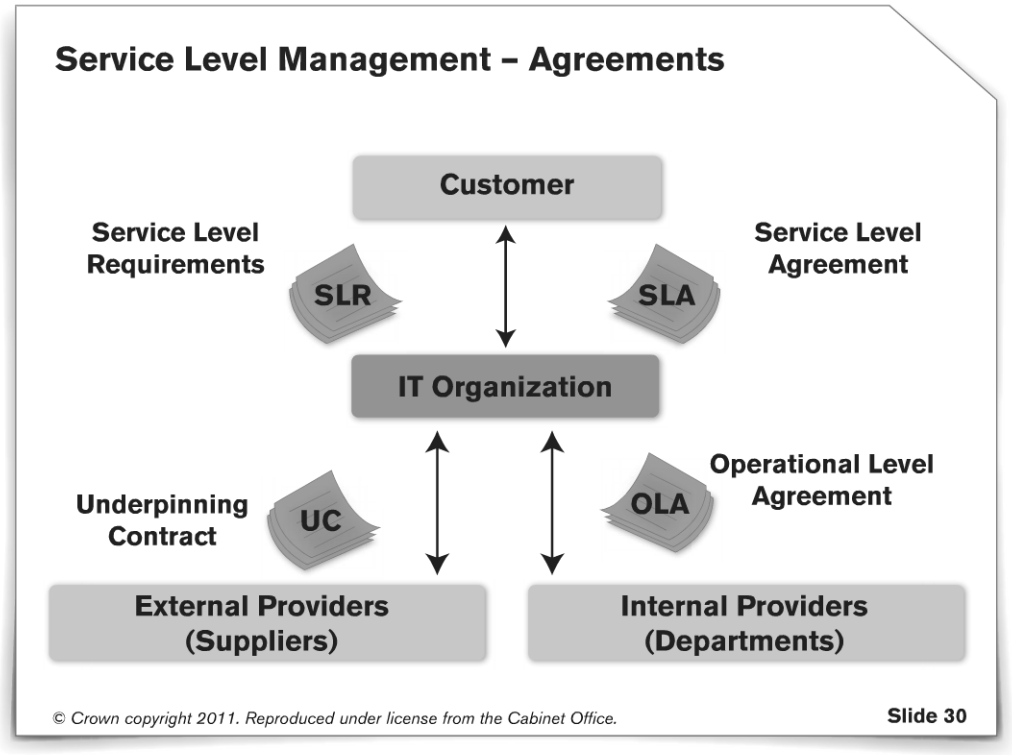

**Service Level Management – Purpose and Objectives**

**PURPOSE**: To ensure that the levels of IT service delivery are achieved, both for existing services and new services, in accordance with the agreed upon targets.

Service Level Management (SLM) provides a consistent interface with the business for all service-related issues. It provides the business with the agreed upon service targets and the required management information to ensure that those targets have been met. SLM ensures that all operational services and their performance are measured in a consistent, professional manner throughout the IT organization and that the services and reports produced meet the needs of the business and customers.

The objectives of SLM are to:

- Define, document, agree, monitor, measure, report and review the level of IT services provided
- Provide and improve the relationship and communication with the business and customers
- Ensure that specific and measurable targets are developed for all IT services
- Monitor and improve customer satisfaction with the quality of service delivered
- Ensure that IT and the customers have a clear and unambiguous expectation of the level of service to be delivered
- Ensure that proactive measures to improve the levels of service delivered are implemented wherever it is cost justifiable to do so




**Service Level Management – Agreements**

To reach Service Level Management objectives, some concepts must be taken into consideration:

**Service Level Requirements (SLR)**: A set of targets and responsibilities documented and agreed upon for each proposed new or changed service. SLRs are based upon business objectives and are used to negotiate agreed upon Service Level Targets.

**Service Level Agreement (SLA)**: A written agreement between an IT service provider and the IT customer, it defines the key service targets and responsibilities of both parties. The emphasis must be on agreement and SLAs should not be used as away of holding one side or the other to ransom. A true partnership should be developed between the IT service provider and the customer, so that a mutually beneficial agreement is reached.

Although the IT organization itself has access to certain resources, it may also acquire resources and/or services from internal providers (such as the network department or the mainframe department) or external providers (such as a telecommunication company). To be able to manage the performance of these hired resources and services, the IT organization must have agreements with these providers. These are called Operational Level Agreements for internal providers and Underpinning Contracts for external providers.

**Operational Level Agreement (OLA)**: An agreement between an IT service provider and another part of the same organization that assists with the provision of services (for instance, a facilities department that maintains the air conditioning, or network support team that supports the network service). An OLA should contain targets that underpin those within an SLA to ensure that targets will not be breached by failure of the supporting activity.

**Underpinning Contract (UC)**: A contract between an IT service provider and an external supplier covering delivery of services that support the IT organization in its delivery of services. In ITIL, the Supplier Management process is responsible for negotiating these UC's with external suppliers and making sure that they align with the needs of the business.

## Service Level Management – Designing SLA Frameworks

- SLM Frameworks
  - SLM must design the most appropriate SLA structure to ensure that all services and customers are covered in a manner best suited to the organization's needs
  - There are a number of potential options, including the following:
    - Service-based SLA
    - Customer-based SLA
    - Multi-level SLA

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**Service Level Management – Designing SLA Frameworks**

Using the Service Catalog as an aid, SLM must design the most appropriate SLA structure to ensure that all services and customers are covered in a manner best suited to the organization's needs. There are a number of potential options, including service-based SLAs, customer-based SLAs and multi-level SLAs.

## Service Level Management – Service-based SLA

- Service-based SLA
  - SLA covers one service, for all the customers of that service
  - Difficulties may arise if the specific requirements of different customers vary for the same service
  - Difficulties may also arise in determining who should be the signatories to such an agreement
  - Multiple classes of service (e.g., gold, silver and bronze) may also be used to increase the effectiveness of service-based SLAs

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**Service Level Management – Service-based SLA**

A service-based SLA covers one service, for all the customers of that service. For example, an SLA may be established for an organization's email service and cover all the customers of that service. This may appear fairly straightforward; however, difficulties may arise if the specific requirements of different customers vary for the same service, or if characteristics of the infrastructure mean that different service levels are inevitable. For example, head office staff may be connected via a high-speed LAN, while local offices may have to use a lower-speed WAN line. In such cases, separate targets may be needed within the one agreement. Difficulties may also arise in determining who should be the signatories to such an agreement. However, where common levels of service are provided across all areas of the business (e.g., email or telephony), the service-based SLA can be an efficient approach to use. Multiple classes of service (e.g., gold, silver and bronze), may also be used to increase the effectiveness of service-based SLAs.

## Service Level Management – Customer-based SLA

- Customer-based SLA
  - This SLA is an agreement with an individual customer group, covering all the services they use
  - Customers often prefer such an agreement, as all of their requirements are covered in a single document
  - Only one signatory is normally required, which simplifies this issue

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**Service Level Management – Customer-based SLA**

A customer-based SLA is an agreement with an individual customer group, covering all the services they use. For example, agreements may be reached with an organization's finance department covering the finance system, the accounting system, the payroll system, the billing system, the procurement system, and any other IT systems that they use. Customers often prefer such an agreement, as all of their requirements are covered in a single document. Only one signatory is normally required, which simplifies this issue.

## Service Level Management – Multi-level SLA

- Multi-level SLAs usually have three layers:
  - **Corporate level**: Covers all the generic SLM issues appropriate to every customer throughout the organization
  - **Customer level**: Covers all SLM issues relevant to the particular customer group or business unit, regardless of the service being used
  - **Service level**: Covers all SLM issues relevant to the specific service, in relation to a specific customer group (one for each service covered by the SLA)

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**Service Level Management – Multi-level SLAs**

Some organizations have chosen to adopt a multi-level SLA structure, such as the three-layer structure as follows:

- **Corporate level**: Covers all the generic SLM issues appropriate to every customer throughout the organization. These issues are likely to be less volatile, so updates are less frequently required
- **Customer level**: Covers SLM issues relevant to the particular customer group or business unit, regardless of the service being used
- **Service level**: Covers SLM issues relevant to the specific service, in relation to a specific customer group (one for each service covered by the SLA)

## Service Level Management – Producing SLRs

- Produce first draft SLR when the Service Catalog has been produced and the SLA structure agreed upon
- Involve customer from the outset
- Start with a first outline draft of the performance targets and the management and operational requirements
- Consult other processes for realistic targets
- Use this draft for in-depth discussion with business, which may require several iterations
- Provisional targets may be included within a pilot SLA
- Establish procedures for agreeing upon SLRs for new services

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**Service Level Management – Producing SLRs**

A draft of the SLR is one of the earliest activities within the Service Design stage of the Service Lifecycle. Once the Service Catalog has been produced and the SLA structure has been agreed upon, a first SLR must be drafted. It is advisable to involve customers from the outset, but rather than going along with a blank sheet to start with, it may be better to produce a first outline draft of the performance targets and the management and operational requirements, as a starting point for more detailed and in-depth discussion.

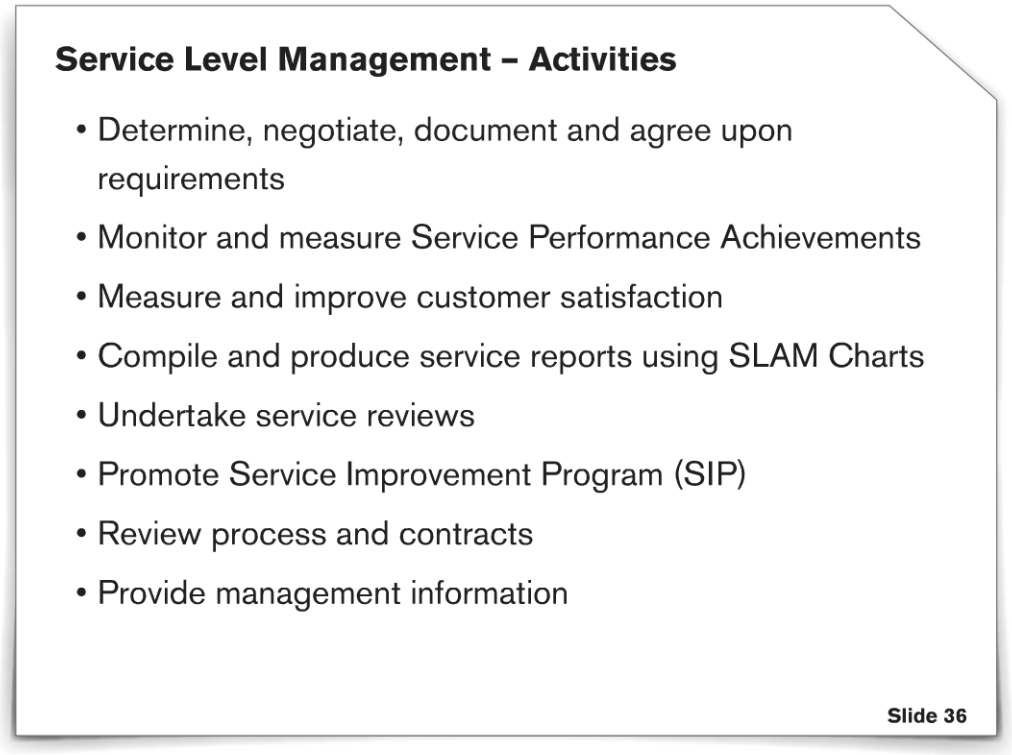
It cannot be overstressed how difficult it is to determine the initial targets for inclusion within an SLR or SLA. All of the other processes need to be consulted for their opinion on what are realistic targets that can be achieved, such as Incident Management on incident targets. The Capacity and Availability Management processes will be of particular value in determining appropriate service availability and performance targets. If there is any doubt, provisional targets should be included within a pilot SLA that is monitored and adjusted through a service warranty period.

While many organizations have to give initial priority to introducing SLAs for existing services, it is also important to establish procedures for agreement of SLRs for new services being developed or procured. The SLRs should be an integral part of the Service Design criteria, of which the functional specification is a part. They should, from the very start, form part of the testing/trialing criteria as the service progresses through the stages of design and development or procurement.

This SLR will gradually be refined as the service progresses through the stages of its lifecycle, until it eventually becomes a pilot SLA during the Early Life Support period. This pilot or draft SLA should be developed alongside the service itself, and should be signed and formalized before the service is introduced into live use.

It can be difficult to draw out requirements, as the business may not know what they want–especially if not asked previously–and they may need help in understanding and defining their needs, particularly in terms of capacity, security, availability and IT service continuity. Be aware that the requirements initially expressed may not be those ultimately agreed upon. Several iterations of negotiations may be required before an affordable balance is struck between what is sought and what is achievable and affordable.

Using the draft agreement as a basis, negotiations must be held with the customer(s), or customer representatives to finalize the contents of the SLA and the initial service level targets, and with the service providers to ensure that these are achievable.




**Service Level Management – Activities**

The key activities within the SLM process include:

- Determine, negotiate, document and agree upon requirements for new or changed services in SLRs. Manage and review SLRs through the Service Lifecycle into SLAs for operation services.
- Monitor and measure service performance achievements of all operational services against targets within SLAs.
- Compile, measure and improve customer satisfaction.
- Produce service reports. A useful technique is to include a SLA Monitoring (SLAM) chart at the front of the service reports to give an overview of the achievements. Most effective is to use color codes. (also known as RAG - Red, Amber, Green - charts)
- Conduct service reviews and initiate improvements within an overall Service Improvement Program/Plan (SIP)
- Review and revise SLAs, service scope OLAs, contracts and any other underpinning agreements
- Develop and document contacts and relationships with the business, customers and stakeholders

- Develop, maintain and operate procedures for logging, handling and resolving all complaints, and for logging and distributing compliments
- Log and manage all complaints and compliments
- Provide the appropriate management information to aid performance management and demonstrate service achievement
- Make available and maintain up-to-date SLM document templates and standards

## Service Level Management – Service Reviews

- Service Reviews
  - Periodic review meetings must be held with customers to review the service achievement (monthly or quarterly)
  - Actions must be placed upon the customer and provider as appropriate to improve weak areas where targets are not being met
  - Particular attention should be focused on each SLA breach to determine the cause and what can be done to prevent any recurrence

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**Service Level Management – Service Reviews**

Periodic review meetings must be held on a regular basis with customers (or their representatives) to review the service achievement in the last period and to preview any issues for the coming period. It is normal to hold such meetings monthly or, as a minimum, quarterly. Actions must be placed upon the customer and provider as appropriate to improve weak areas where targets are not being met. All actions must be minuted, and progress should be reviewed at the next meeting to ensure that action items are being followed up on and properly implemented.

Particular attention should be focused on each breach of service level to determine exactly what caused the loss of service and what can be done to prevent any recurrence. If it is decided that the service level was, or has become, unachievable, it may be necessary to review, renegotiate, or review-agree different service targets. If the service break has been caused by a failure of a third-party or internal support group, it may also be necessary to review the underpinning agreement or OLA. Analysis of the cost and impact of service breaches provides valuable input and justification of Service Improvement Program (SIP) activities and actions. The constant need for improvement needs to be balanced and focused on those areas most likely to give the greatest business benefit.

Reports should also be produced on the progress and success of the SIP, such as the number of SIP actions that were completed and the number of actions that delivered their expected benefit.

**Hints and tips:** *"A spy in both camps"*

Service level managers can be viewed with a certain amount of suspicion by both the IT service provider staff and the customer representatives. Due to the dual nature of the job, they are acting as an unofficial customer representative when talking to IT staff, and as an IT provider representative when talking to the customers. This is usually aggravated when having to represent the "opposition's" point of view in any meeting, etc. To avoid this the service level manager should be as open and helpful as possible (within the bounds of any commercial propriety) when dealing with both sides, although colleagues should never be openly criticized.

## Service Level Management – Service Improvement Program (SIP)

- Service Improvement Program
  - All processes and all areas of the service provider organization should be involved in the SIP
  - If service quality is adversely impacted, SLM must instigate an SIP to restore service quality
  - SIP initiatives may also focus on such issues as user training, service and system testing and documentation
  - The SIP needs to be owned and managed, with all improvement actions being assessed for risk and impact on services, customers and the business

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**Service Level Management – Service Improvement Program (SIP)**

The SLM process often generates a good starting point for an SIP–and the service review process may drive this, but all processes and all areas of the service provider organization should be involved in the SIP. Where an underlying difficulty has been identified that is adversely impacting on service quality, SLM must, in conjunction with Problem Management and Availability Management, instigate an SIP to identify and implement whatever actions are necessary to overcome the difficulties and restore service quality. SIP initiatives may also focus on such issues as user training, service and system testing and documentation. In these cases, the relevant people need to be involved and adequate feedback given to make improvements for the future. At any time, a number of separate initiatives that form part of the SIP may be running in parallel to address difficulties with a number of services.

Some organizations have established an up-front annual budget held by SLM from which SIP initiatives can be funded. This means that action can be undertaken quickly and that SLM is demonstrably effective. This practice should be encouraged and expanded to enable SLM to become increasingly proactive and predictive. The SIP needs to be owned and managed–with all improvement actions being assessed for risk and impact on services, customers and the business–and then prioritized, scheduled and implemented.


**Service Level Management – KPIs**

Key Performance Indicators (KPIs) and metrics may be used to judge the efficiency and effectiveness of the Service Level Management activities and the progress of the Service Improvement Plan (SIP). These metrics should be developed from the service, customer and business perspective, and should cover both subjective and objective measurements.

If an organization is outsourcing its Service Delivery to a third party, the contract should explain at the outset the issue of service improvement and should be budgeted for. Otherwise, there will be no incentive during the lifetime of the contract for the supplier to improve service targets– especially if additional expenditure will be needed to make the improvements.

## Service Level Management – Challenges

- Identifying a suitable representative within the business
- Designating appropriate representatives from within the IT organization (internal or external)
- Getting Service Desk commitment
- Formalizing and communicating the agreements

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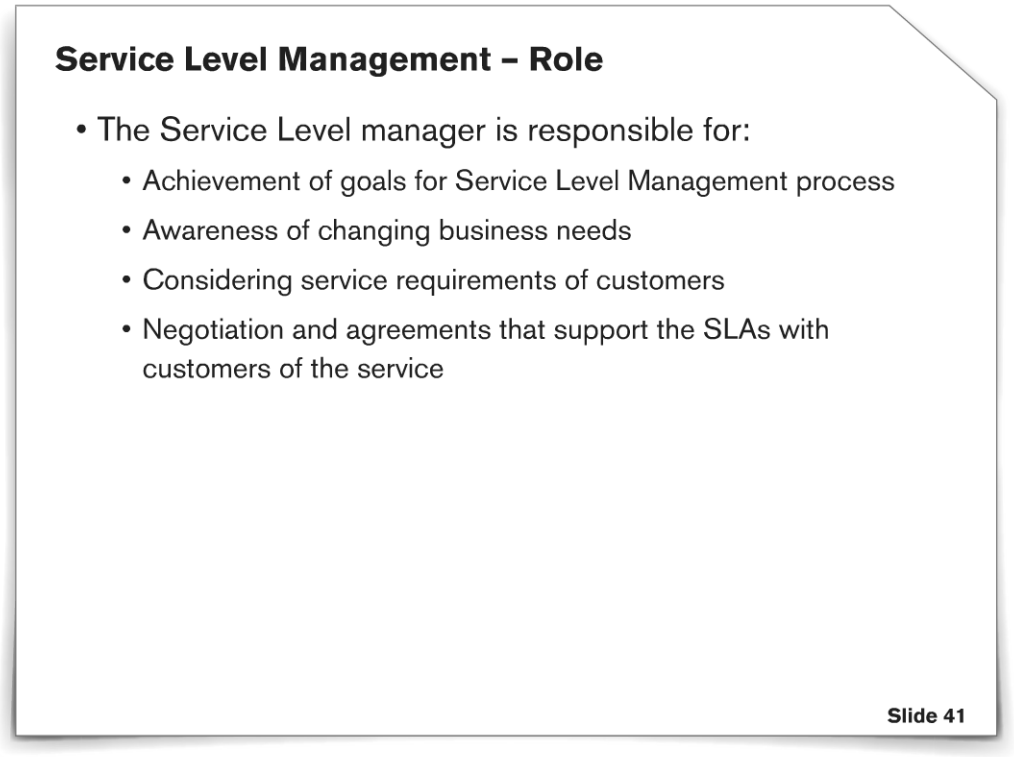
**Service Level Management – Challenges**

In some cases, identifying the appropriate customer representative may be obvious, and a single customer manager is willing to act as the signatory to the agreement. In other cases, it might take quite a bit of negotiating or cajoling to find a representative "volunteer." (Beware that volunteers often want to express their own personal view rather than represent a general consensus.) Or it may be necessary to get all customers to sign. Another difficulty sometimes encountered is that staff at different levels within the customer community may have different objectives and perceptions about services.

When negotiating, designate appropriate representatives within the IT organization whom agree that targets are realistic, achievable and affordable. If they are not, further negotiations will be needed until a compromise acceptable to all parties is agreed upon. The views of suppliers should also be taken into account during the negotiation stages.

At the end of the drafting and negotiating process, one point to ensure is that the SLA *is actually signed* by the appropriate managers on both the customer and IT service provider sides of the agreement. The signature gives a firm commitment by both parties that every attempt will be made to meet the agreement on both sides. Once an SLA is agreed upon and signed, the IT organization must use wide publicity to ensure that customers, users and IT staff are aware of the agreement.

It is important that the Service Desk staff is committed to the SLM process and become proactive ambassadors for SLAs, embracing the necessary service culture, as they are the first contact point for customers' incidents, complaints and queries. If the Service Desk staff is not fully aware of SLAs in place and do not act upon their contents, then customers very quickly lose faith in SLAs.




**Service Level Management – Role**

The **Service Level Manager** has responsibility for ensuring that the aims of Service Level Management are met. This includes responsibilities such as:

- Keeping aware of changing business needs
- Ensuring that the current and future service requirements of customers are identified, understood and documented in SLA and SLR documents
- Negotiating and agreeing upon levels of service to be delivered with the customer (either internal or external). Formally documenting these levels of service SLAs
- Negotiating and agreeing to OLA's (and in some cases other SLAs) and agreements that underpin the SLAs with the customers of the service
- Assisting with the production and maintenance of an accurate Service Portfolio, Service Catalog, Application Portfolio and their corresponding maintenance procedures
- Ensuring that targets agreed upon within underpinning contracts are aligned with SLA and SLR targets
- Reviewing service scope, SLAs, OLAs and other agreements on a regular basis, ideally at least annually

- Ensuring that all changes are assessed for their impact on service levels, including SLAs, OLAs and Underpinning Contracts, including attendance at Change Advisory Board (CAB) meetings if appropriate
- Developing relationships and communication with stakeholders, customers and key users
- Measurement, recording, analysis and improvement of customer satisfaction

## Interfaces to SLM

- Incident Management (IT Service Operations) derives solution time criteria from SLM
- Business Relationship Management (IT Service Strategy) identifies business needs and focuses on the relationship between customer and provider
- Availability, Capacity, Continuity and Security Management support Service Level Management in deciding and agreeing the required warranty for a service

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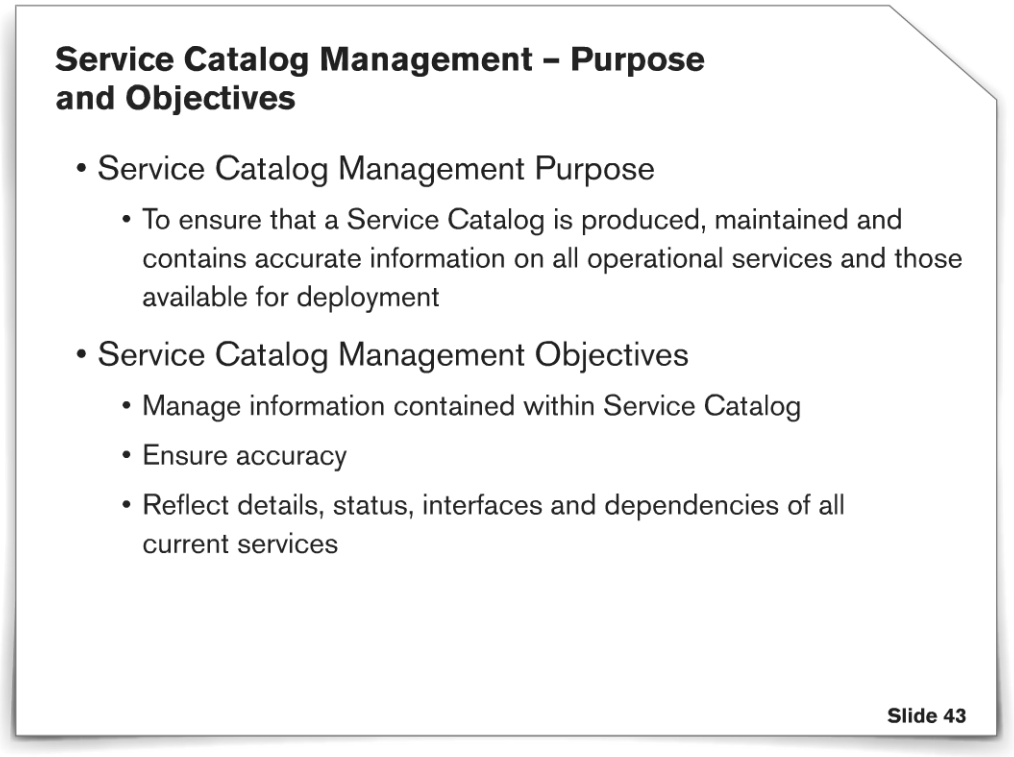
**Interfaces to SLM**

While the SLM process exists to ensure that agreed achievable levels of service are provided to the customer and users, the business relationship management process is focused on a more strategic perspective. Business relationship management takes as its mission the identification of customer needs and ensuring that the service provider is able to meet the customers' needs. This process focuses on the overall relationship between the service

provider and their customer, working to determine which services the service provider will deliver. See section 4.5 of ITIL Service Strategy for a detailed discussion of business relationship management and the relationship between it and the SLM process.




**Service Catalog Management – Purpose and Objectives**

**PURPOSE**: To ensure that a Service Catalog is produced, maintained and contains accurate information on all operational services and those ready for deployment.

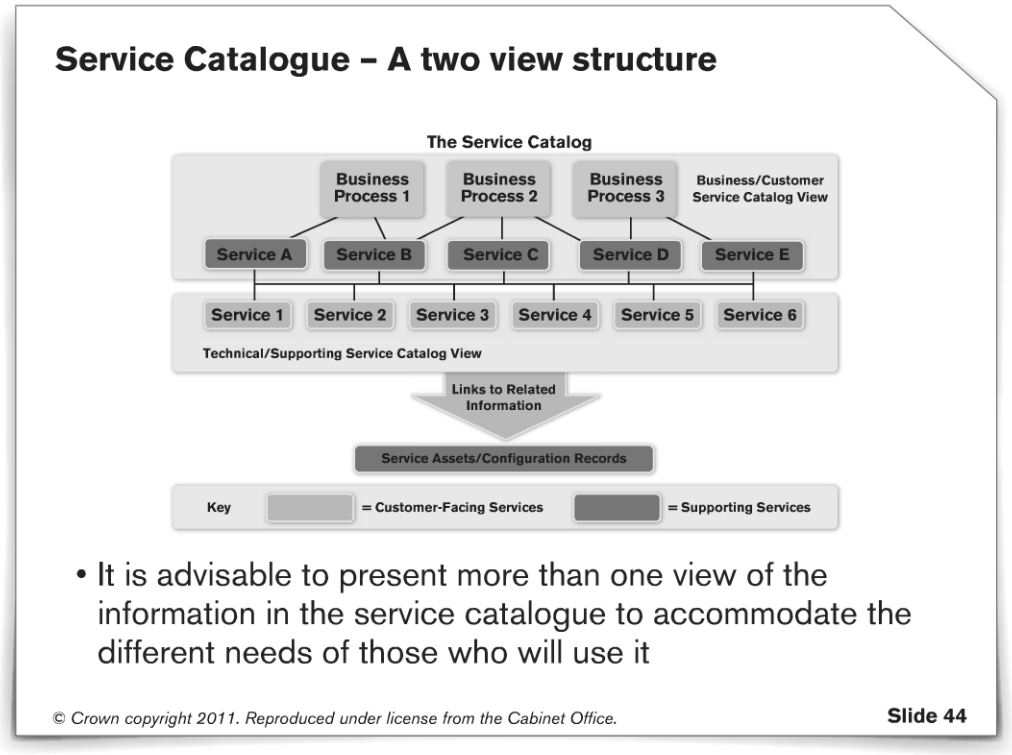
The objective of Service Catalog Management (SCM) is to manage the information contained within the Service Catalog and to ensure that it is accurate and reflects the current details, status, interfaces and dependencies of all services that are being run (or being prepared to run) in the live environment. The Service Catalog Management process must ensure that all of the details within the Service Portfolio are accurate and up to date as the requirement and its new or changed service is migrated into the live environment. This will involve a close liaison with all Service Transition activities.

The key activities within the Service Catalog Management process includes:

- Agreeing upon and documenting a service definition
- Interfacing with Service Portfolio Management
- Producing and maintaining a Service Catalog
- Interfacing with the business and IT Service Continuity Management
- Interfacing with support teams, suppliers and Configuration Management
- Interfacing with Business Relationship Management and Service Level Management

The two main KPIs associated with the Service Catalog and its management are:

- The number of services recorded and managed within the Service Catalog as a percentage of those being delivered and transitioned in the live environment
- The number of variances detected between the information contained within the Service Catalog and the "real world" situation

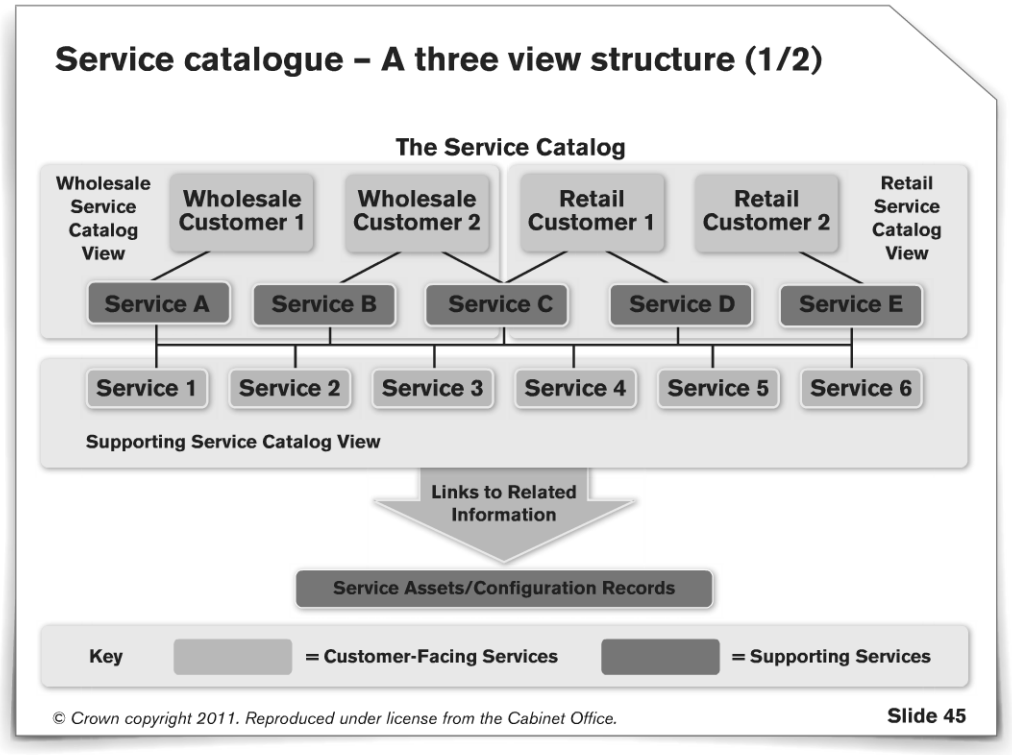



**Service Catalogue – A two view structure**

It is advisable to present more than one view of the information in the service catalogue to accommodate the different needs of those who will use it. In order to ensure that both the customer and IT have a clear understanding of the relationship between the outcome-based, customer-facing services and the business processes they support, it is recommended that a service provider, at the minimum, defines two different views, each one focusing on one type of service: a view for customers that shows the customer-facing services, and a second view for the IT service provider showing all the supporting services. The data stored in the service catalogue, regarding relationships and dependencies between items, would allow information in one view to be accessed from another when deemed appropriate.

**The business/customer service catalogue view** This contains details of all the IT services delivered to the customers (customer-facing services), together with relationships to the business units and the business processes that rely on the IT services. This is the customer view of the service catalogue. In other words, this is the service catalogue for the business to see and use.

**The technical/supporting service catalogue view** This contains details of all the supporting IT services, together with relationships to the customer-facing services they underpin and the components, CIs and other supporting services necessary to support the provision of the service to the customers.




**Service catalogue – A three view structure (1/2)**

Some organizations maintain a service catalogue that includes only the customer-facing services, while others maintain information only on the supporting services. The preferred situation adopted by the more mature organizations maintains both types of service within a single service catalogue, which is in turn part of a totally integrated service portfolio. Some organizations project more than two views. There is no correct or suggested number of views an organization should project. The number of views projected will depend upon the audiences to be addressed and the uses to which the catalogue will be put.

**Wholesale customer view** This contains details of all the IT services delivered to wholesale customers (customer-facing services), together with the relationships to the customers they support.

**Retail customer view** This contains details of all the IT services delivered to retail customers (customer-facing services), together with the relationships to the customers they support.

**Supporting services view** This contains details of all the supporting IT services, together with relationships to the customer-facing services they underpin and the components, CIs and other supporting services necessary to support the provision of the service to the customers.

## Service catalogue – A three view structure (2/2)

- Some organizations project more than two views. There is no correct or suggested number of views an organization should project
- The number of views projected will depend upon the audiences to be addressed and the uses to which the catalogue will be put

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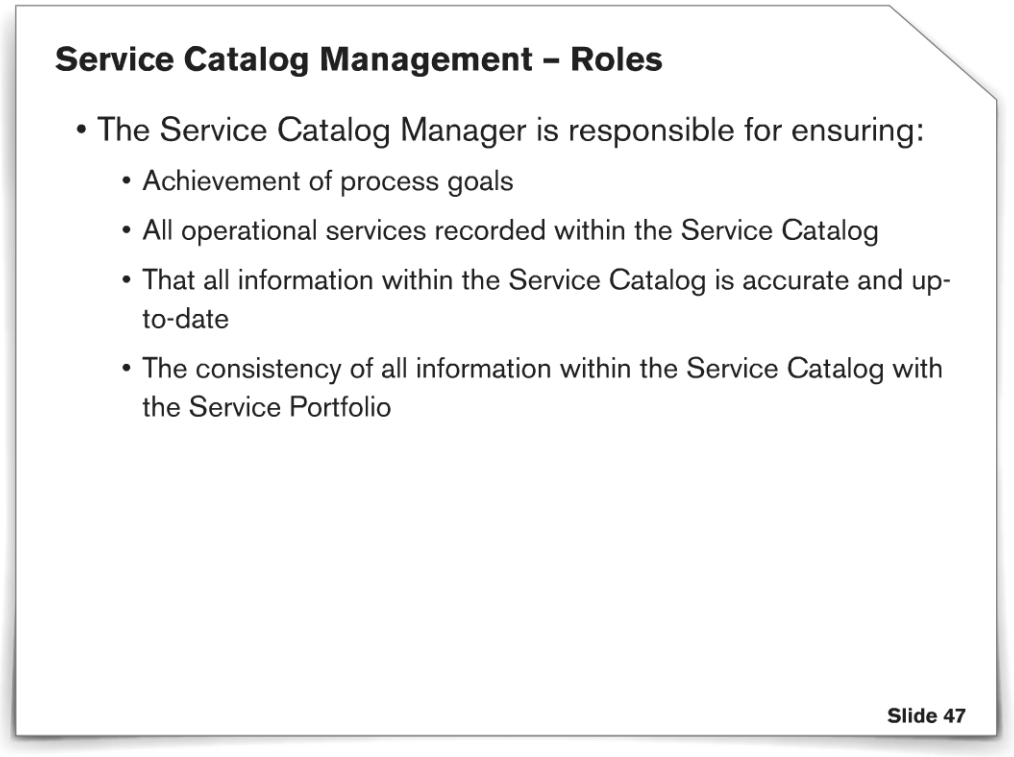
**Service catalogue – A three view structure (2/2)**

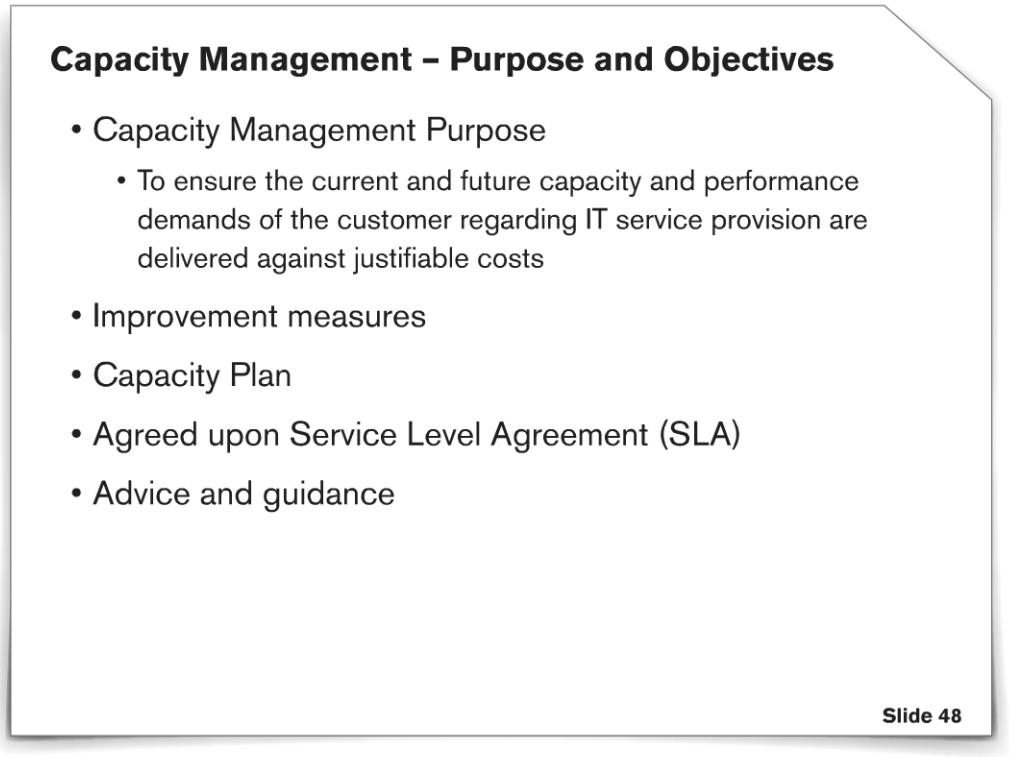
Note in this example how customer-facing service C appears in both the wholesale view and the retail view. It is also possible that the different views might reflect hierarchical relationships beyond one level of customer and one level of supporting service. Services are also likely to be packaged and then service packages will be shown in the appropriate service catalogue view(s).




**Service Catalog Management – Roles**

The Service Catalog Manager has responsibility for achieving the process goals, and producing and maintaining the Service Catalog. This includes responsibilities such as:

- Ensuring that all operational services and all services being prepared for operational running are recorded within the Service Catalog
- Ensuring that all of the information within the Service Catalog is accurate and up-to-date and consistent within the Service Portfolio
- Ensuring that the information within the Service Catalog is adequately protected and backed up.




**Capacity Management – Purpose and Objectives**

**PURPOSE**: To ensure the current and future capacity and performance demands of the customer regarding IT service provision are delivered against justifiable costs.

Capacity Management ensures 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 has overall responsibility for ensuring that there is adequate IT capacity to meet required levels in the SLA and for ensuring that senior IT management is correctly advised on how to match capacity and demand, and to ensure that use of existing capacity is optimized.

Capacity Management is a process that extends across the Service Lifecycle. A key success factor in managing capacity is ensuring it is considered during the design stage.

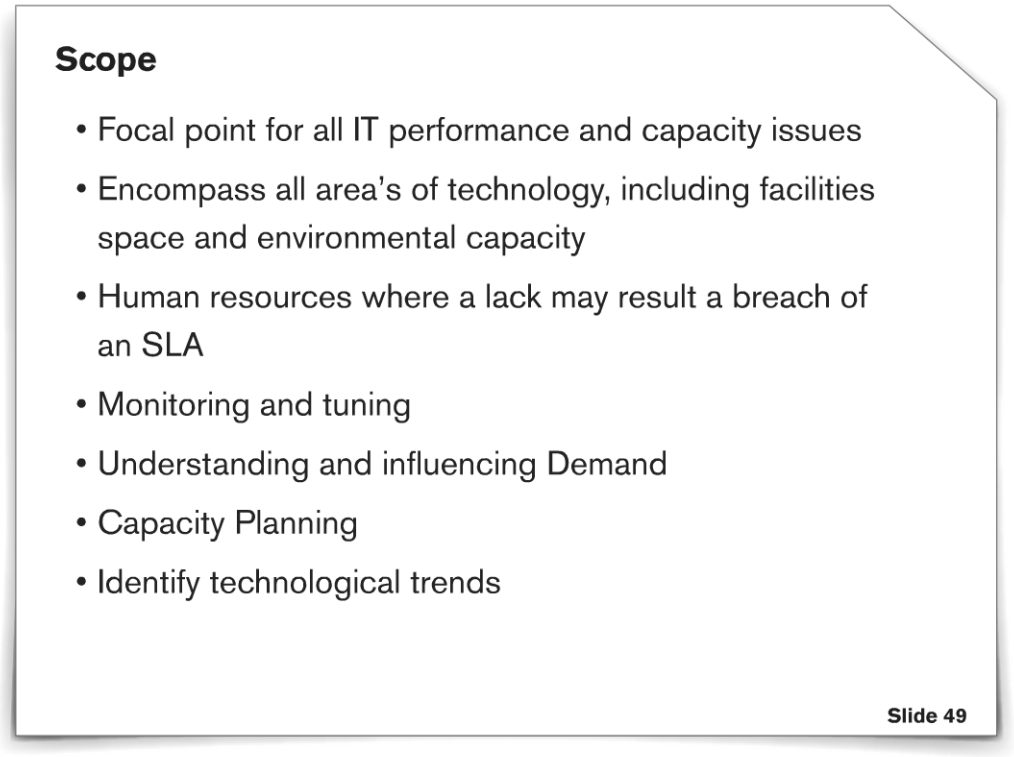
The **objectives** of Capacity Management are:

- To produce and maintain an appropriate and up to date Capacity Plan that reflects the current and future needs of the business
- To provide advice and guidance to all other areas of the business and IT on all capacity- and performance-related issues
- To ensure that service performance achievements meet or exceed all of their agreed upon performance targets, by managing the performance and capacity of both services and resources

- To assist with the diagnosis and resolution of performance- and capacity-related Incidents and Problems
- To assess the impact of all changes to the Capacity Plan and the performance and capacity of all services and resources
- To ensure that proactive measures to improve the performance of services are implemented wherever it is cost justifiable to do so

Capacity Management is the process that manages:

- The right capacity
- At the right location
- At the right moment
- For the right customer
- Against the right costs




**Scope**

Capacity management should focus on all IT performance and capacity issues. It considers all resources required to deliver an IT service, and plans for short-, medium- and long-term business requirements. It should touch all areas of technology. Capacity management considers space planning and environmental systems capacity and it could consider human resource capacity where a lack would result in a breach of SLA or OLA targets(e.g. overnight data backups not completed in time because no operators were present to load required media).

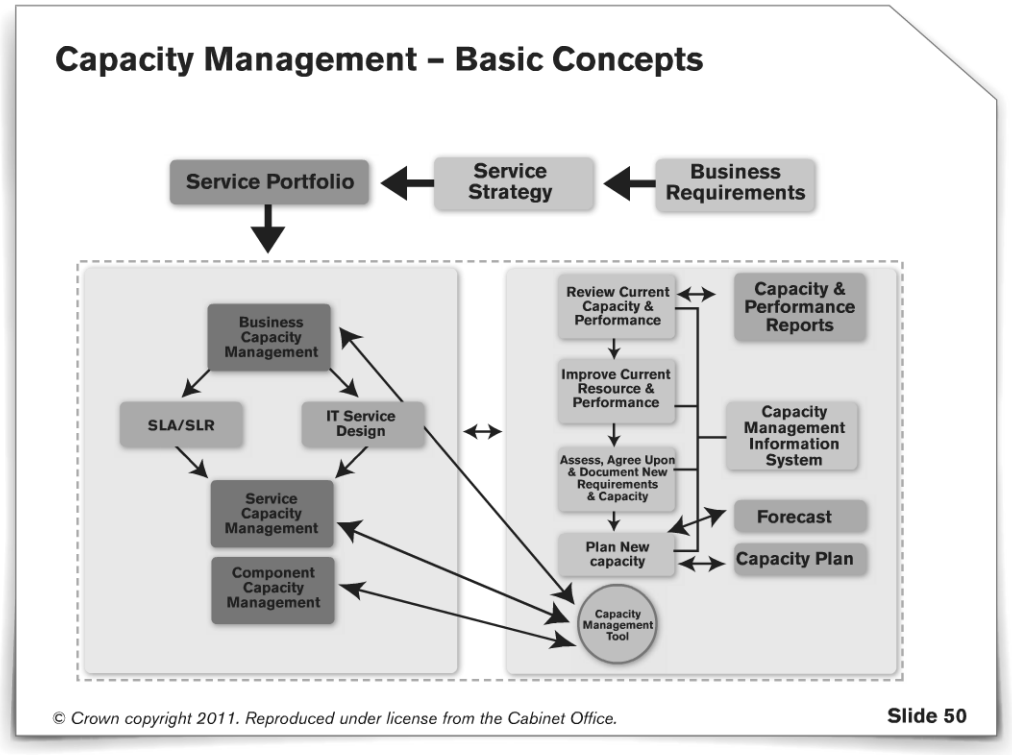
The capacity management process should include:

- Monitoring performance, utilization and throughput of IT services, the production of reports on service and component capacity and performance
- Tuning activities to make the most efficient use of existing IT resources
- Understanding current and future customer demands for IT resources and producing forecasts for future requirements
- Influencing demand in conjunction with the financial management for IT services and demand management processes
- Producing a capacity plan that covers a sufficient planning time-frame to meet service levels as defined in the service portfolio and SLRs

- Assisting with identification and resolution of incidents and problems on component capacity or performance
- Proactive improvement of service or component performance, that is cost-justifiable and meets the needs of the business.

Capacity management has a close, two-way relationship with the service strategy and planning processes within an organization. The service strategy will reflect the business plans and strategy. Capacity management needs to understand the short-, medium- and long-term plans of the business and IT while providing information on the latest ideas, trends and technologies being developed by the suppliers of computing hardware and software.

The organization's business plans drive the specific IT service strategy, the contents of which capacity management needs to be familiar with, and to which capacity management needs to have had significant and ongoing input. The right level of capacity at the right time is critical. Service strategy plans will be helpful to capacity planning by identifying the timing for acquiring and implementing new technologies, hardware and software.




### Capacity Management – Basic Concepts

There are many similar activities that are performed by each of the Capacity Management sub-processes, but each sub-process has a very different focus.

### Business Capacity Management

This sub-process translates business needs and plans into requirements for service and IT infrastructure, ensuring that the future business requirements for IT services are quantified, designed, planned and implemented in a timely fashion. The main objective of the Business Capacity Management sub-process is to ensure that the future business requirements (customer outcomes) for IT services are considered and understood, and that sufficient IT Capacity to support any new or changed services is planned and implemented within an appropriate timeframe.

### Service Capacity Management

The focus of this sub-process is the management, control and prediction of the end-to-end performance and capacity of the live, operational IT services usage and workloads. It ensures that the performance of all services, as detailed in service targets within SLAs and SLRs, is monitored and measured, and that the collected data is recorded, analyzed and reported.

The main objective of the Service Capacity Management sub-process is to identify and understand the IT services, their use of components, working patterns, peaks and troughs, and to ensure that the services meet their SLA targets.

**Component Capacity Management**

The focus in this sub-process is the management, control and prediction of the performance, utilization and capacity of individual IT technology components (e.g., CPU, disk). It ensures that all components within the IT infrastructure that have finite resource are monitored and measured, and that the collected data is recorded, analyzed and reported.

The following are some important concepts about Capacity Management:

- **Demand Management**: The Capacity Management process must be able to understand the agreed upon current and future demands being made by the customer for IT resources as well as producing forecasts for future requirements. Capacity Management works closely with Demand Management to influence user and customer demand for IT services and manage the impact on IT components.
- **Modeling**: A prime objective of Capacity Management is to predict the behavior of computer systems under a given volume and variety of work. Modeling is an activity that can be used to benefit any of the Capacity Management sub-processes. The different types of modeling range from making estimates based upon experience and current component utilization information, to pilot studies, prototypes and full scale benchmarks. The former is less expensive and a reasonable approach for day-to-day small decisions, while the latter is more expensive but may be advisable when implementing a large new project. Some modeling techniques are:
  - **Baselining**: The first stage in modeling is to create a baseline model that reflects accurately the performance that is being achieved. When this baseline model has been created, predictive modeling can be done, i.e., ask the "what if?" questions that reflect failures, planned changes to the hardware and/or the volume/variety of workloads.
  - **Trend analysis**: Can be done on the component utilization and service performance information that has been collected by the Capacity Management process. It can be held in various forms and used to develop the utilization of a particular component over a period of time, and how it can be expected to change in the future. Typically trend analysis only provides estimates of future resource utilization information.
  - **Analytical models**: Are representations of the behavior of computer systems using mathematical techniques (e.g., multi-class network queuing theory). Typically a model is built using a software package, by specifying within the package the components and structures of the configuration that needs to be modeled, and the utilization of the component (e.g., CPU, memory and disks, by the various workloads or applications).
  - **Simulation modeling**: Simulation involves the modeling of discrete events (e.g., transaction arrival rates against a given hardware configuration).
  - This type of modeling can be very accurate in sizing new applications or predicting the effects of changes on existing applications, but can also be very time consuming and therefore costly.
- **Application Sizing**: The primary objective of application sizing is to estimate the resource requirements to support a proposed change to an existing service or the implementation of

a new service, to ensure that it meets its required service levels. The sizing of the application should be refined as the design and development process progresses. The use of modeling can be used within the application sizing process.

- **Capacity Plan**: In conjunction with the business and their plans, Capacity Management provides a Capacity Plan which outlines the IT resources and funding needed to support the business plan, together with a cost justification of that expenditure. The production and maintenance of a Capacity Plan should occur at predefined intervals. It is, essentially, an investment plan and should therefore be published annually, in line with the business or budget lifecycle, and completed before the start of negotiations on future budgets. The Capacity Plan is used by all areas of the business and IT management and is acted upon by the IT service provider and senior management of the organization to plan the capacity of the IT infrastructure, and also provides planning input to many other areas of IT and the business. The Capacity Plan contains information on the current usage of service and components and plans for the development of IT capacity to meet the needs in the growth of both existing service and any agreed new services. The Capacity Plan should be actively used as a basis of decision-making.
- **The Capacity Management Information System (CMIS)**: Holds the information needed by all sub-processes within Capacity Management. For example, the data monitored and collected as part of Component and Service Capacity Management is used in Business Capacity Management to determine what infrastructure components or upgrades to components are needed, and when.

## Capacity Manager – Role

- The Capacity Manager is responsible for ensuring:
  - Achievement of the goals of the process
  - Adequate IT capacity to meet required levels of service
  - Correctly advising senior IT management on how to match capacity and demand
  - Optimization of the use of existing capacity

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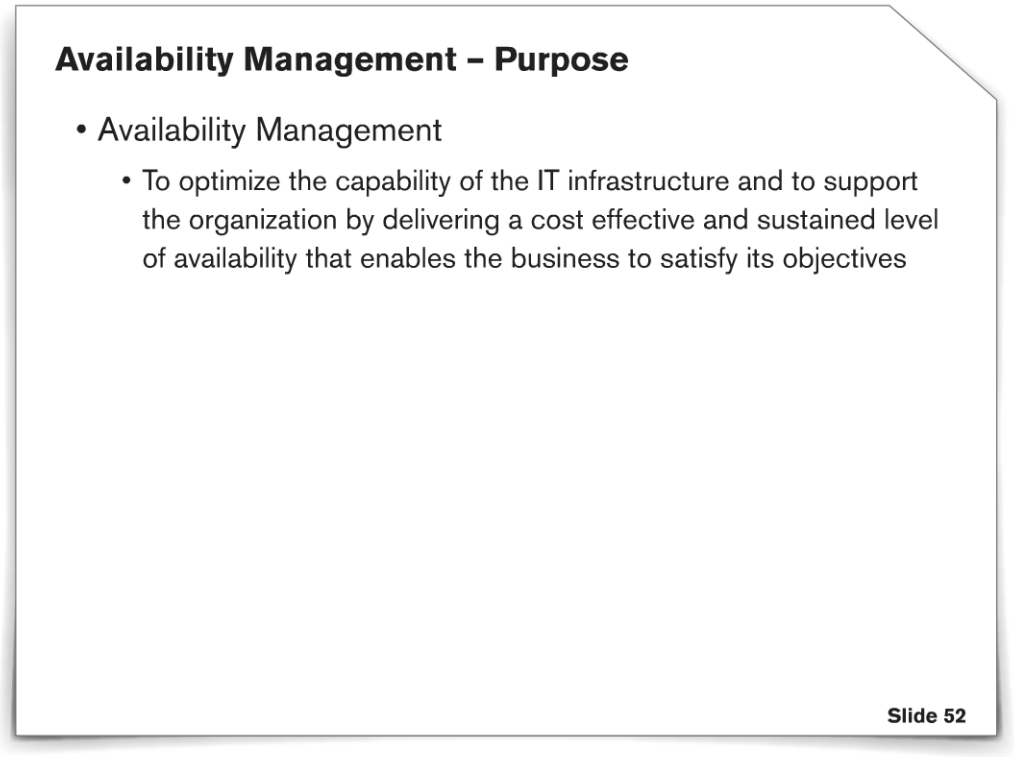
**Capacity Manager – Role**

A Capacity Manager has responsibility for ensuring that the aims of Capacity Management are met. This includes such tasks as:

- Ensuring that there is adequate IT capacity to meet required levels of service, ensuring that senior IT management is correctly advised on how to match capacity and demand, and ensuring that use of existing capacity is optimized
- Identifying, with the Service Level Manager, capacity requirements through discussions with the business users. Remembering that the Service Level Manager is responsible for the negotiations with customer
- Understanding the current usage of the infrastructure and IT services, and the maximum capacity of each component
- Performing sizing on all proposed new services and systems, perhaps by using modeling techniques, to ascertain capacity requirements
- Forecasting future capacity requirements based upon business plans, usage trends, sizing of new services, etc.
- Production, regular review and revision of the Capacity Plan in line with the organization's business planning cycle, and identifying current usage and forecast requirements during the period covered by the plan

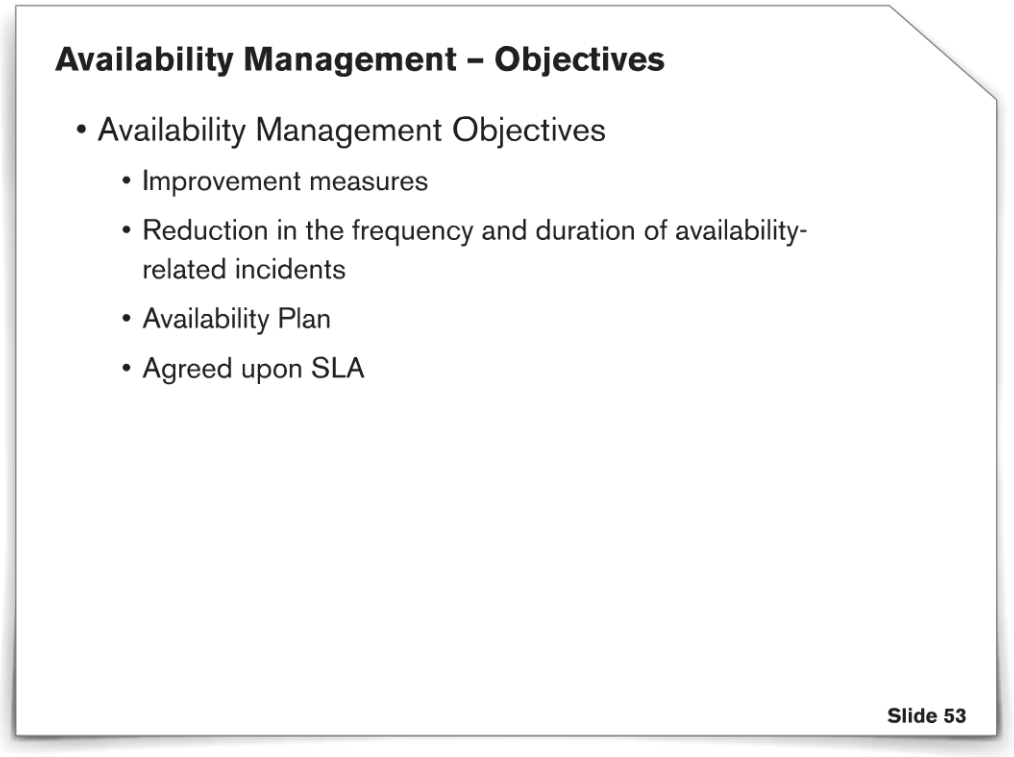
- Ensuring that appropriate levels of monitoring of resources and system performance are set
- Analysis of usage and performance data, and reporting on performance against targets contained in SLAs
- Raising Incidents and Problems when breaches of capacity or performance thresholds are detected, and assisting with the investigation and diagnosis of capacity-related Incidents and Problems
- Ensuring that all changes are assessed for their impact on capacity and performance and attendance at Change Advisory Board (CAB) meetings when appropriate
- Carrying out of performance testing on new services and systems
- Determining performance service levels that are maintainable and cost justified
- Acting as a focal point for all capacity and performance issues




**Availability Management – Purpose**

**PURPOSE**: To optimize the capability of the IT infrastructure and to support the organization by delivering a cost effective and sustained level of availability that enables the business to satisfy its objectives.

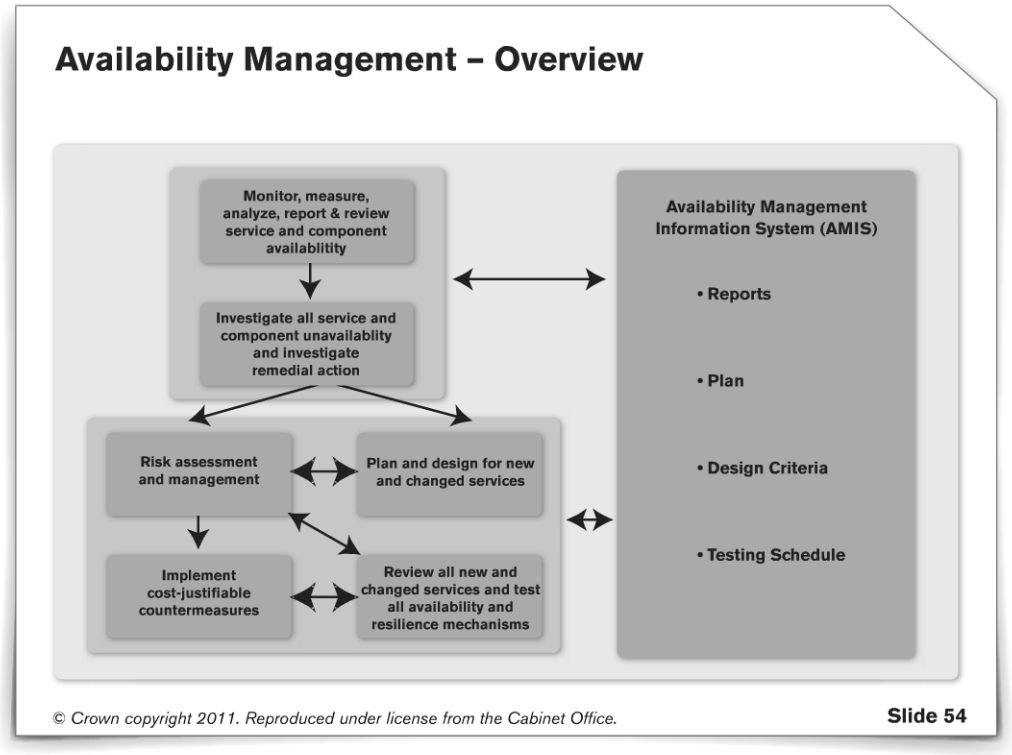
The Availability Management process ensures that the availability of systems and services matches the evolving agreed upon needs of the business. The role of IT within the business is pivotal because the availability and reliability of IT services can directly influence customer perception and satisfaction and the reputation of the business. Today, Availability Management is essential to ensure that IT delivers the right levels of service availability required by the business to satisfy its business objectives and deliver the quality of service demanded by its customers.




**Availability Management – Objectives**

The objectives of Availability Management are:

- To produce and maintain an appropriate and up-to-date Availability Plan that reflects the current and future needs of the business. This should be a forward-looking document
- To provide advice and guidance to all other areas of the business and IT on all availability-related issues
- To ensure that service availability achievements meet or exceed all of their agreed upon targets, by managing services and resources related to availability performance
- To assist with the diagnosis and resolution of availability-related Incidents and Problems
- To assess the impact of all changes on the Availability Plan and the performance and capacity of all services and resources
- To ensure that proactive measures to improve the availability of services are implemented wherever it is cost justifiable to do so



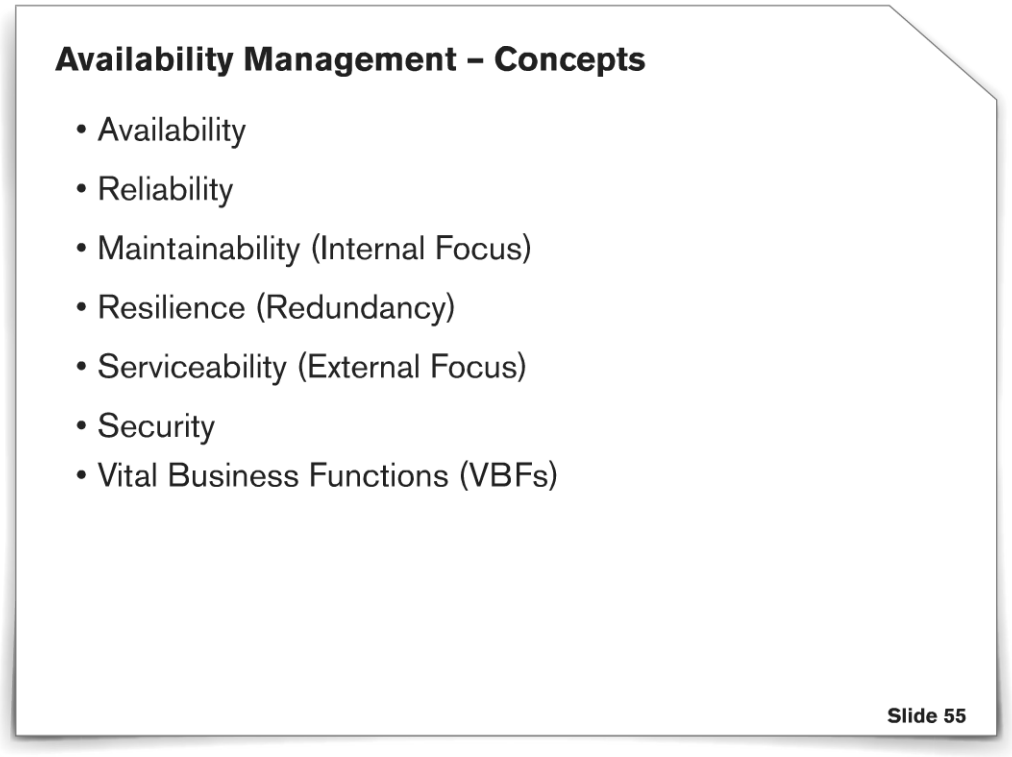

### Availability Management – Overview

The Availability Management process contains two key elements:

- **Reactive activities**: The reactive aspect of Availability Management involves the Monitoring, Measuring, Analysis and Management of all Events, Incidents and Problems involving unavailability. These activities are principally involved within operational roles and are performed to ensure that all agreed upon service targets are measured and achieved. *The actual work in dealing with reactive activities is done with the Service Operation phase.*
- **Proactive activities**: The proactive activities of Availability Management involve the proactive planning, design and improvement of availability. These activities are principally involved within design and planning roles. It is more cost-effective to design the right level of service availability into a service from the start, rather than having to redesign it at a later point.

Availability Management is completed at two inter-connected levels:

- Service availability: This level involves all aspects of service availability and unavailability and the impact of component availability, or the potential impact of component unavailability on service availability.
- Component availability: This level involves all aspects of component availability and unavailability.



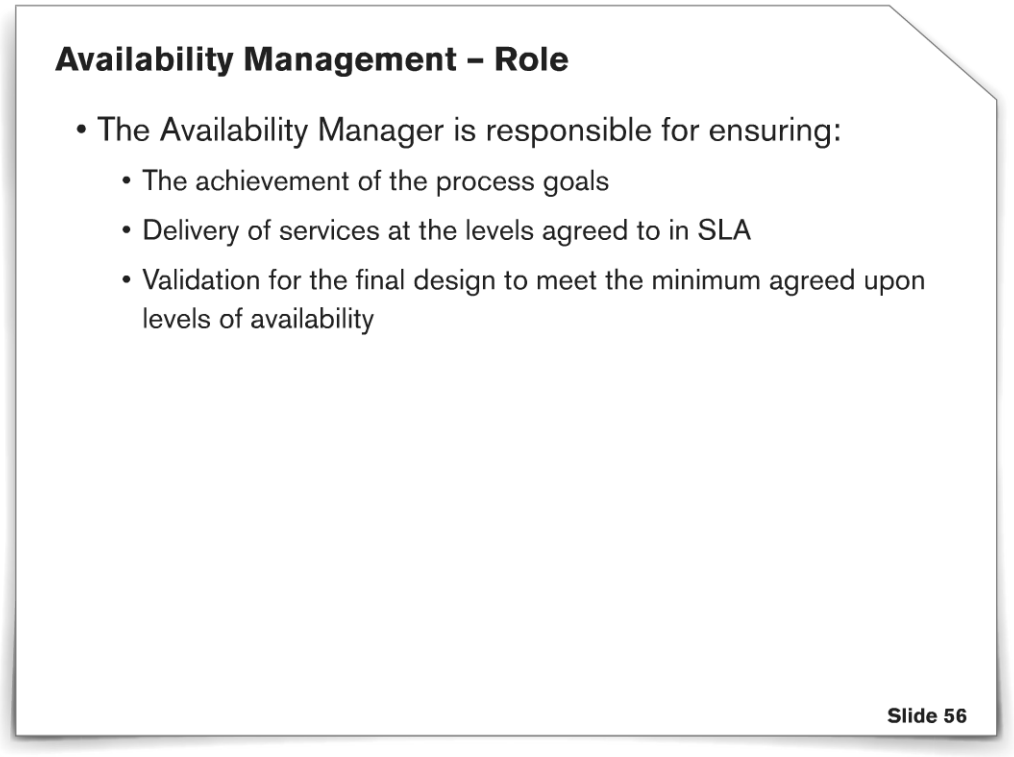

**Availability Management – Concepts**

Some important Availability Management concepts include:

- **Availability**: The ability of a service, component or Configuration Item (CI) to perform its agreed upon function at a stated time, at a stated instant or over a stated period of time
- **Reliability**: Freedom from operational failure–a measure of how long a service, component or CI can perform its agreed upon function without interruption
- **Maintainability**: A measure of how quickly and effectively a service, component or CI can be restored to normal working after a failure. This is performed from an internal staff perspective.
- **Resilience (Redundancy)**: The ability to withstand failure or the ability of a component or service to maintain operation where one or more components have failed. Availability always reduces for components in series and increases for components in parallel. That is why resilience is the best solution when customers request a very high availability.
- **Serviceability**: The ability of a third party supplier (external focus) to meet the terms of its contract
- **Security**: Information Security Management determines the security requirements of a service, while Availability Management implements the measures.

Another important concept is:

- **Vital Business Function (VBF)**: Reflects the business critical elements of the business process supported by an IT service. For example, the VBF for an automated teller machine (ATM) is to dispense cash (for the user) and to credit the account (for the bank). Providing a receipt, while useful, may be considered a non-critical business element.



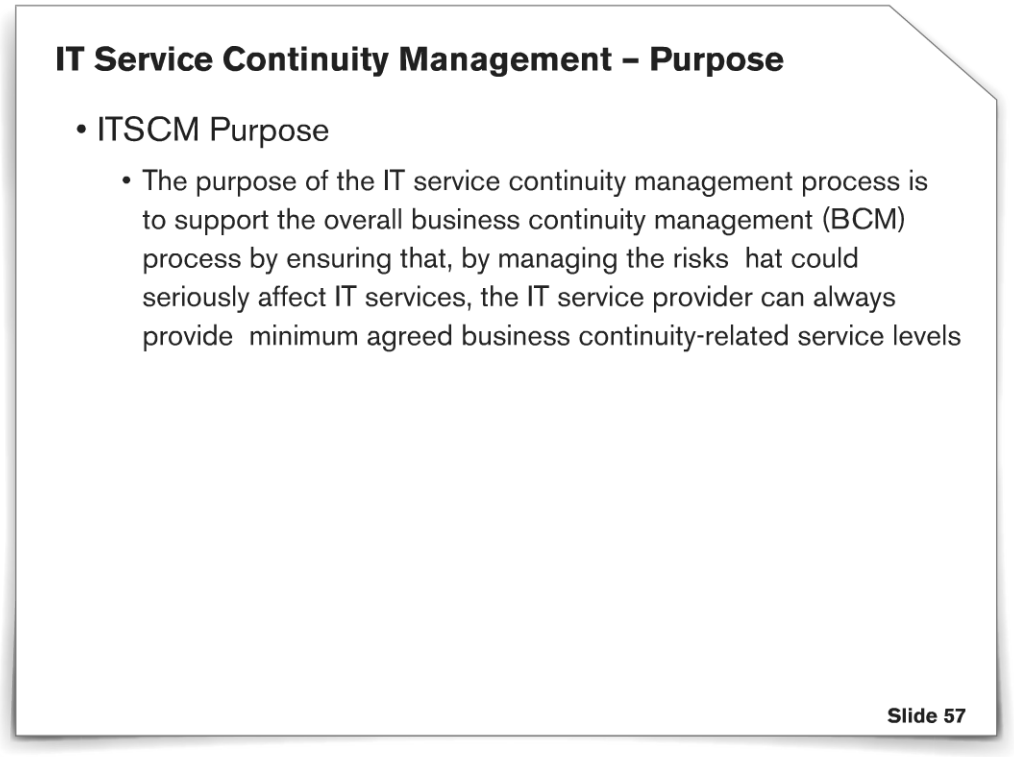

**Availability Management – Role**

**Note**: The Availability Manager does NOT seek to achieve 100% availability, but instead seeks to deliver availability that matches or exceeds the business requirements.

An Availability Manager has responsibility for ensuring that the aims of Availability Management are met. This includes responsibilities such as:

- Ensuring that all existing services deliver the levels of availability agreed upon with the business in SLAs
- Ensuring that all new services are designed to deliver the levels of availability required by the business, and validation of the final design to meet the minimum levels of availability for IT services as agreed upon by the business
- Assisting with the investigation and diagnosis of all Incidents and Problems that may cause availability issues or unavailability of services or components
- Monitoring of actual IT availability achieved against SLA targets and to provide a range of IT availability reporting to ensure that agreed upon levels of availability, reliability and maintainability are measured and monitored on an ongoing basis
- Proactively improving service availability wherever possible and optimizing the availability of the IT infrastructure to deliver cost effective improvements that deliver tangible benefits to the business

- Creating, maintaining and regularly reviewing a forward-looking Availability Plan
- Working with Financial Management to ensure that the levels of IT availability required are cost justified
- Assisting Security and IT Service Continuity Management with the assessment and management of risk
- Assessing changes for their impact on all aspects of availability including overall service availability and the Availability Plan
- Attendance at CAB meetings whenever appropriate

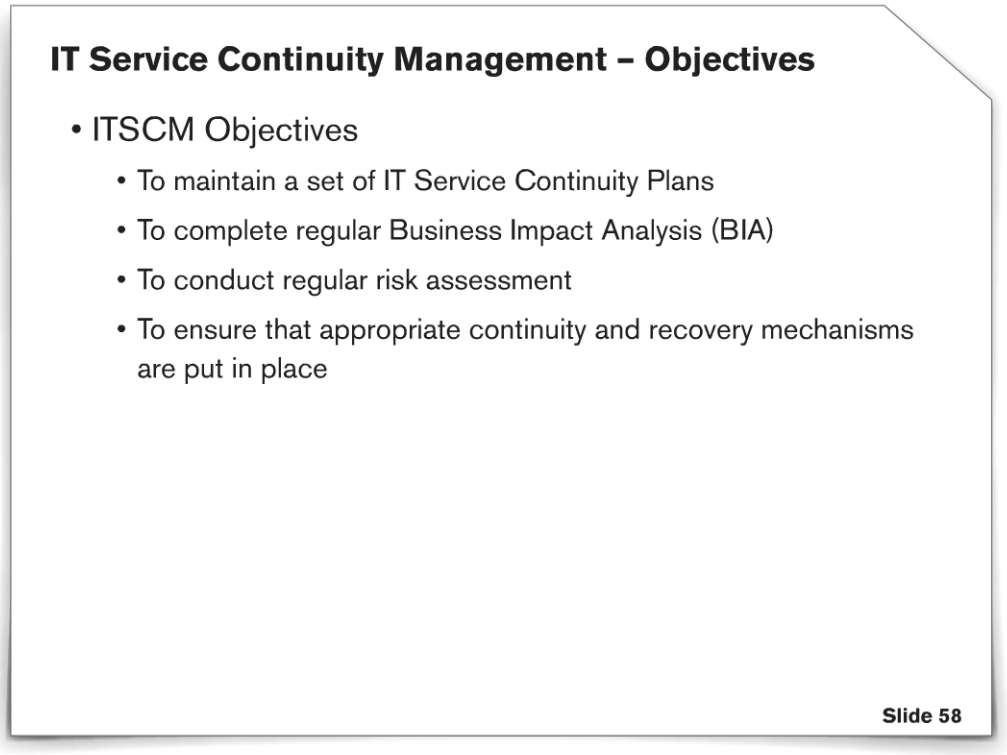



**IT Service Continuity Management – Purpose**

**PURPOSE**: To support the overall Business Continuity Management by ensuring that the required IT infrastructure and the IT service provision can be recovered within required and agreed upon business timeframes.

IT Service Continuity Management (ITSCM) provides an invaluable role in supporting the Business Continuity Planning process. In many organizations 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. The ITSCM should be driven by business risk as identified by Business Continuity Planning and ensures that the recovery arrangements for IT services are aligned to identified business impacts, risks and needs.

It is very important to make clear that IT Service Continuity Management is NOT about dealing with incidents on a day-to-day basis. ITSCM is about disaster recovery and making sure that the appropriate continuity and recovery mechanisms are put in place to meet business needs in case of a disaster.




**IT Service Continuity Management – Objectives**

The objectives of ITSCM are:

- To maintain a set of IT Service Continuity Plans and IT recovery plans that support the overall Business Continuity Plans (BCPs) of the organization
- To complete regular Business Impact Analysis (BIA) exercises to ensure that all continuity plans are maintained in line with changing business impacts and requirements
- To conduct regular risk assessment and management exercises, particularly in conjunction with the business and the Availability Management and Security Management processes that manage IT services within an agreed upon level of business risk
- To provide advice and guidance to all other areas of the business and IT on all continuity and recovery-related issues
- To ensure that appropriate continuity and recovery mechanisms are put in place to meet or exceed the agreed upon business continuity targets
- To assess the impact of all changes on the IT Service Continuity Plans and IT recovery plans
- To ensure that proactive measures to improve the availability of services are implemented wherever it is cost justifiable to do so
- To negotiate and agree to the necessary contracts with suppliers for the provision of the necessary recovery capability to support all continuity plans in conjunction with the Supplier Management process

The Availability Management process does not include Business Continuity Management and the resumption of business processing after a major disaster. The support of BCM is included within IT Service Continuity Management (ITSCM). However, Availability Management does provide key inputs to ITSCM and the two processes have a close relationship particularly in the assessment and management of risks and in the implementation of risk reduction and resilience measures.

## Scope

- Focus on business 'Disaster' events
- Align with Business Continuity Management (BCM)
- Business Impact Analysis (BIA) helps define 'Disaster'
- Set critical requirements for survival
- ITSCM supports the IT Service requirements
- Aagreements on scope and policies
- Risk assessment and Risk Management
- ITSCM strategy and plans* Testing and maintenance on plans

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**Scope**

ITSCM focuses on events significant enough to be treated as a 'disaster'. Less significant events will be dealt with as part of the incident management process. The impact of a loss of a business process, such as financial loss, damage to reputation or regulatory breach, is measured through a BIA exercise, which determines the minimum critical requirements. IT technical and service requirements are supported by ITSCM.

ITSCM primarily considers IT assets and configurations that support the business processes. If (following a disaster) it is necessary to relocate to an alternative working location, provision will also be required for items such as office and personnel accommodation, copies of critical paper records, courier services and telephone facilities to communicate with customers and third parties.

The scope will need to take into account the number and location of the organization's offices and the services performed in each.

ITSCM does not usually directly cover longer-term risks such as those from changes in business direction, diversification, restructuring, major competitor failure, and so on. While these risks can have a significant impact on IT service elements and their continuity mechanisms, there is usually time to identify and evaluate the risk and include risk mitigation through changes or shifts in business and IT strategies, thereby becoming part of the overall business and IT change management programme.

ITSCM does not usually cover minor technical faults (for example, non-critical disk failure), unless there is a possibility that the impact could have a major impact on the business. These risks would be expected to be covered mainly through the service desk and the incident management process, or resolved through the planning associated with the processes of availability management, problem management, change management, service asset and configuration management and 'business as usual' operational management.

The ITSCM process includes:

- The agreement of the scope of the ITSCM process and the policies adopted
- BIA to quantify the impact loss of IT service would have on the business
- Risk assessment and management
- Production of an overall ITSCM strategy that must be integrated into the BCM strategy.
- Production of an ITSCM plan, which again must be integrated with the overall BCM plans
- Testing of the plans
- Ongoing operation and maintenance of the plans.

## Purpose of Business Impact Analysis

- The purpose of a BIA is to quantify the impact to the business that loss of service would have
- This impact could be a 'hard' impact that can be precisely identified – such as financial loss – or 'soft' impact – such as public relations, moral, health and safety or loss of competitive advantage
- The BIA will identify the most important services to the organization and will therefore be a key input to the strategy.

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## Risk Assessment

- This is an assessment of the level of threat and the extent to which an organization is vulnerable to that threat
- Risk assessment can also be used in assessing and reducing the chance of normal operational incidents and is a technique used by availability management to ensure the required availability and reliability levels can be maintained
- Risk assessment is also a key aspect of information security management

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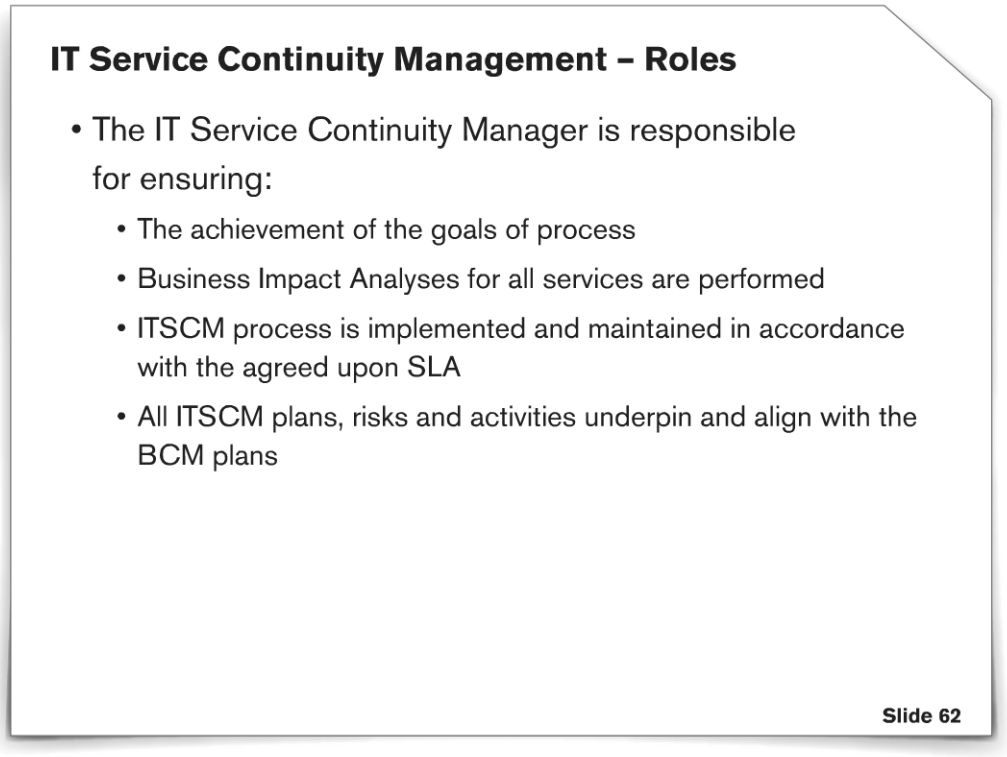
**Risk Assessment**

This is an assessment of the level of threat and the extent to which an organization is vulnerable to that threat. Risk assessment can also be used in assessing and reducing the chance of normal operational incidents and is a technique used by availability management to ensure the required availability and reliability levels can be maintained. Risk assessment is also a key aspect of information security management.

A number of risk assessment and management methods are available for both the commercial and government sectors. Risk assessment is the assessment of the risks that may give rise to service disruption or security violation. Risk management is concerned with identifying appropriate risk responses or cost-justifiable countermeasures to combat those risks.

A standard methodology, such as the Management of Risk (M_o_R), should be used to assess and manage risks within an organization. The M_o_R framework is described in greater detail in Appendix M.

Conducting a formal risk assessment using M_o_R or another structured method will typically result in a risk profile, containing many risks that are outside the defined level of 'acceptable risk'. Following the risk assessment it is possible to determine appropriate risk responses or risk reduction measures (ITSCM mechanisms) to manage the risks, i.e. reduce the risk to an acceptable level or mitigate the risk. Wherever possible, appropriate risk responses should be implemented to reduce either the impact or the likelihood, or both, of these risks from manifesting themselves. In the context of ITSCM, there are a number of risks that need to be taken into consideration.

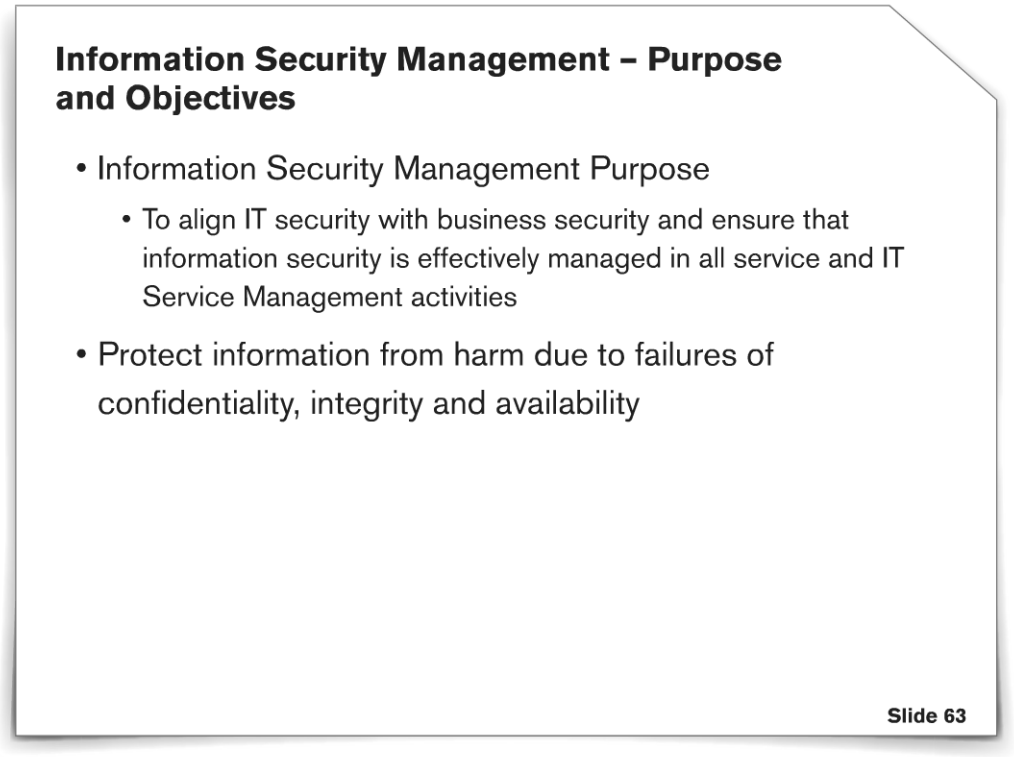



**IT Service Continuity – Roles**

The IT Service Continuity Manager has responsibility for ensuring that the aims of IT Service Continuity Management are met. This includes such tasks and responsibilities as:

- Performing Business Impact Analyses for all existing and all new services
- Implementing and maintaining the ITSCM process in accordance with the overall requirements of the organization's Business Continuity Management process and to represent the IT services function within the Business Continuity Management process
- Ensuring that the development and maintenance of all ITSCM plans, risks and activities underpin and align with all BCM plans, risks and activities, and are capable, under any circumstances, of meeting the agreed upon and documented targets
- Performing risk assessment and risk management to prevent disasters where cost justifiable and where practical
- Managing the IT Service Continuity Plan while it is in operation
- Maintaining a comprehensive IT testing schedule, including the testing of all continuity plans in line with business requirements and after every major business change
- Communicating and maintaining awareness of ITSCM objectives within the business areas supported and IT service areas

- Undertaking regular reviews, at least annually, of the ITSCM plans with the business areas to ensure that they accurately reflect the business needs
- Negotiating and managing contracts with providers of third party recovery services
- Assessing changes for their impact on IT Service Continuity and IT Continuity Plans
- Attendance at CAB meetings whenever appropriate




**Information Security Management – Purpose and Objectives**

**PURPOSE**: To align IT security with business security and ensure that information security is effectively managed in all service and IT Service Management activities. Information Security Management ensures that the *confidentiality, integrity* and *availability* of an organization's assets, information, data and IT services is maintained.

Information Security Management (ISM) ensures that an Information Security Policy is implemented, maintained and enforced that fulfills the needs of the Business Security Policy and the requirements of corporate governance. ISM raises the awareness of the need for security within all IT services and assets throughout the organization, ensuring that the Information Security Policy is appropriate for the needs of the organization. ISM manages all aspects of IT and information security within all areas of IT and Service Management activity.

ISM provides assurance of business processes by enforcing appropriate security controls in all areas of IT and by managing IT risk in line with business and corporate risk management processes and guidelines.

For most organizations, the security objective is met when the following are properly managed:

- **Availability**: Information is available and usable when required, and the systems that provide it can appropriately resist attacks and recover from or prevent failures (e.g., UPs, resilient systems)
- **Confidentiality**: Information is observed by or disclosed to only those who have a right to know (e.g., passwords, swipe cards, firewalls)
- **Integrity**: Information is complete, accurate and protected against unauthorized modification (e.g., rollback mechanisms, test procedures, audits)
- **Authenticity and Non-repudiation**: Business transactions, as well as information exchanges between enterprises or with partners, can be trusted
- **Security Baselines**: The security level adopted by the IT organization for its own security and from the point of view of "due diligence." It would be possible to have multiple baselines (e.g., through security access based upon employee rank/title)

## Scope

- Focal point for all security issues
- Produce, maintain, enforce a security policy
- Understand the business security environment (Business security, future plans, legislature, risks and risk management)
- Prioritization of confidentiality, integrity and availability
- Implement and document controls
- Manage supplier contracts regarding security
- Manage security breaches
- Promote awareness

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### Scope

Information security management should be the focal point for all IT security issues. It must ensure that an information security policy is produced, maintained and enforced that covers the use and misuse of all IT systems and services. Information security management needs to understand the total IT and business security environment, including the:

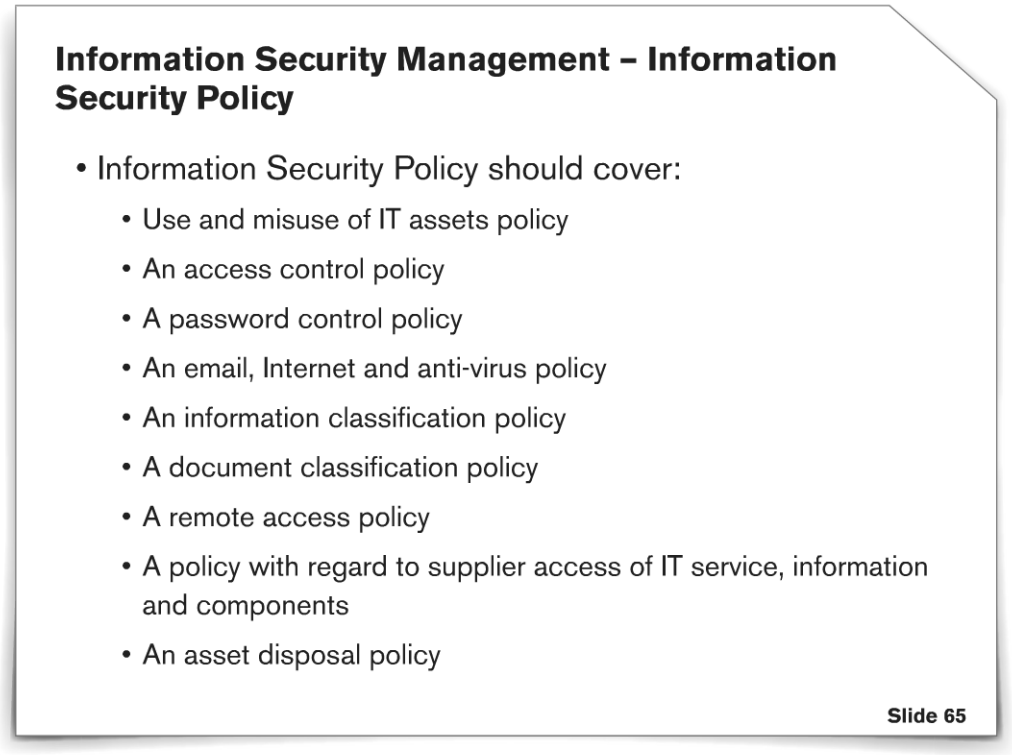
- Business security policy and plans
- Current business operation and its security requirements
- Future business plans and requirements
- Legislative and regulatory requirements
- Obligations and responsibilities with regard to security contained within SLAs
- The business and IT risks and their management.

This will enable information security management to ensure that current and future security aspects and risks of the business are cost-effectively managed. Prioritization of confidentiality, integrity and availability must be considered in context with the business processes. The primary guide to defining what must be protected and the level of protection has to come from the business. To be effective, security must address entire business processes from end to end and cover the physical and technical aspects.

The information security management process should include:

- Production, maintenance, distribution and enforcement of an information security policy and supporting security policies
- Understanding agreed (current and future) security requirements and the existing business security policy and plans
- Implementation of security controls and manage risks of access to services, information and systems
- Documentation of all security controls, with their operation and maintenance and associated risks
- Management of suppliers contracts regarding access to systems and services, together with supplier management
- Management of security breaches, incidents and problems associated with systems and services
- Proactive improvement of security controls, security risk management and the reduction of security risks
- Integration of security aspects within all other ITSM processes.

To achieve effective information security governance, management must establish and maintain an information security management system (ISMS) to guide the development and management of a comprehensive information security programme that supports the business objectives.

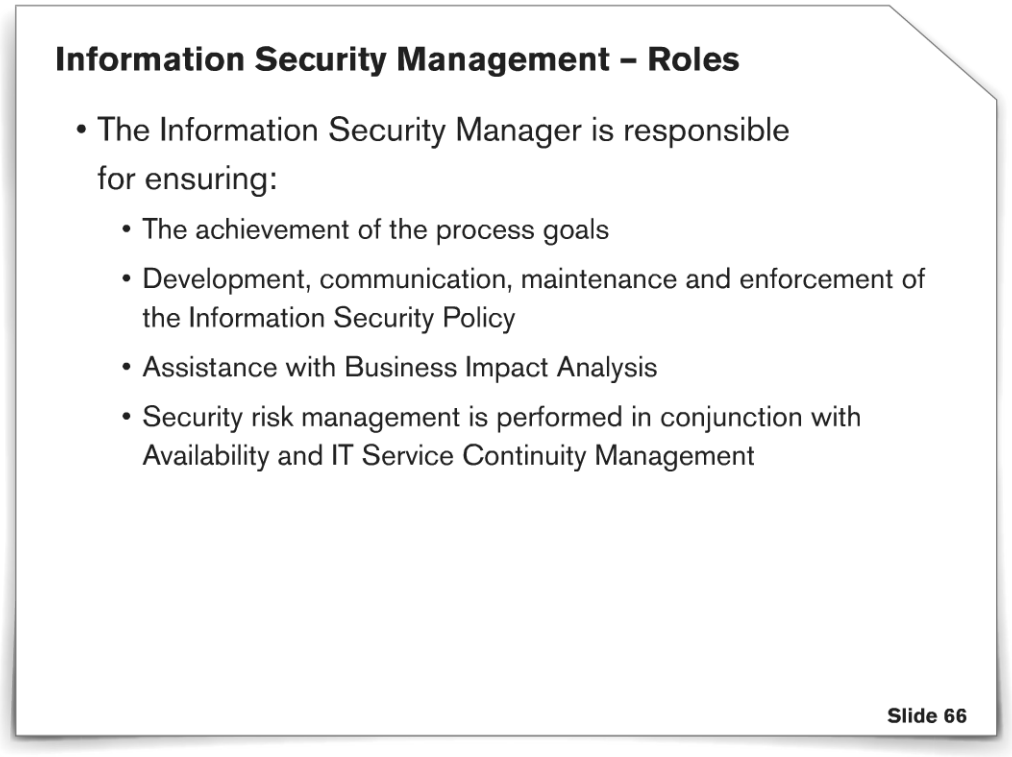



**Information Security Management – Information Security Policy**

Information Security Management activities should be focused on and driven by an overall Information Security Policy and a set of underpinning specific security policies. The ITP should have the full support of top executive IT management and ideally the support and commitment of top executive business management. The policy should cover all areas of security, be appropriate, meet the needs of the business and should include:

- An overall Information Security Policy
- Use and misuse of IT assets policy
- An access control policy
- A password control policy
- An email policy
- An Internet policy
- An anti-virus policy
- An information classification policy
- A document classification policy
- A remote access policy
- A policy with regard to supplier access of IT service, information and components
- An asset disposal policy.

These policies should be widely available to all customers and users, and their compliance should be referred to in all SLRs, SLAs, contracts and agreements. The policies should be authorized by top executive management within the business and IT, and compliance to them should be endorsed on a regular basis. All security policies should be reviewed – and, where necessary, revised – on at least an annual basis.

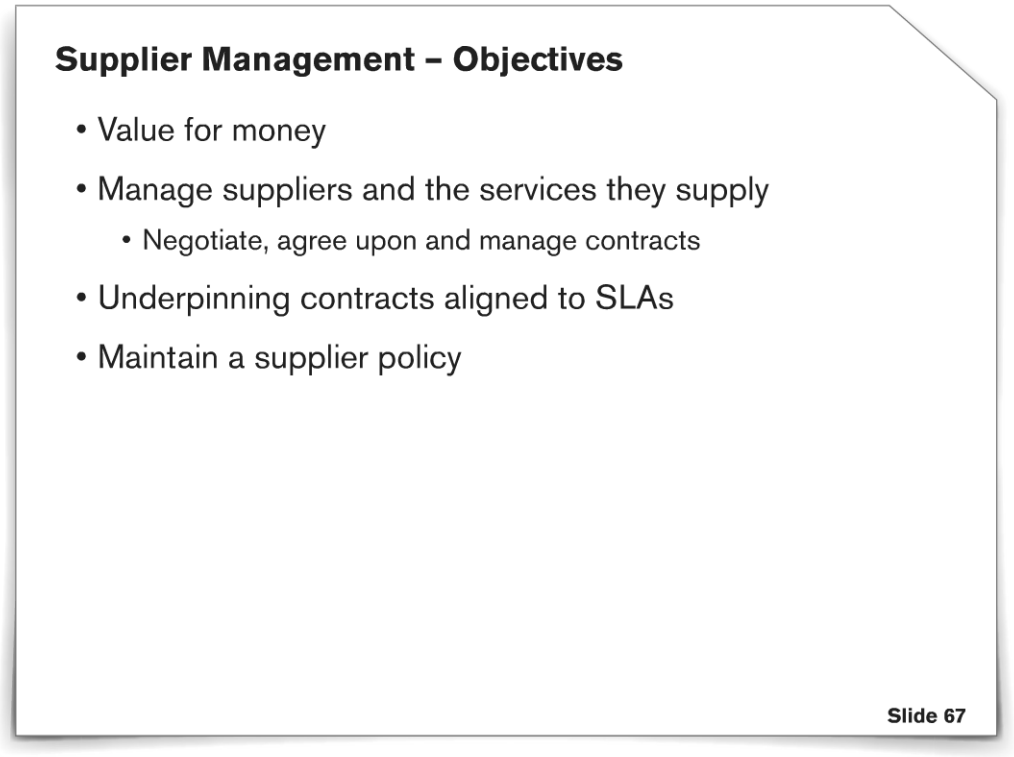



**Information Security Management – Roles**

The Information Security Manager has responsibility for ensuring that the aims of Information Security Management are met. This includes such tasks and responsibilities as:

- Developing and maintaining the Information Security Policy and a supporting set of specific policies, ensuring appropriate authorization, commitment and endorsement from senior IT and business management
- Communication and publicizing of the Information Security Policy to all appropriate parties
- Identifying and classifying IT and information assets (Configuration Items) and the level of control and protection required
- Assisting with Business Impact Analysis
- Performing security risk analysis and risk management in conjunction with Availability and IT Service Continuity Management
- Designing security controls and developing security plans
- Monitoring and managing all security breaches and handling security incidents, taking remedial action to prevent recurrence wherever possible
- Reporting, analysis and reduction of the impact and volumes of all security incidents in conjunction with Problem Management
- Promoting education and awareness of security

- Ensuring all changes are assessed for impact on all security aspects including the Information Security Policy and security controls, and attendance at CAB meetings when appropriate
- Performing security tests
- Participating in any security reviews arising from security breaches and instigating remedial actions
- Ensuring that the confidentiality, integrity and availability of the services are maintained at the levels agreed upon in the SLAs and that they conform to all relevant statutory requirements
- Ensuring that all access to services by external partners and suppliers is subject to contractual agreements and responsibilities
- Acting as a focal point for all security issues




**Supplier Management – Objectives**

**Supplier Management** aligns with all corporate requirements and the requirements of all other IT and SM processes, particularly ISM and ITSCM. This ensures that the business obtains value from supporting supplier services and that they are aligned with business needs.

The **purpose** of the Supplier Management process is to obtain value for money from suppliers and to ensure that suppliers perform to the targets contained within their contracts and agreements while conforming to all of the terms and conditions. The process ensures that suppliers and the services they provide are managed to support IT service targets and business expectations.

The main **objectives** of the Supplier Management process are to:

- Obtain value for money from supplier and contracts
- Ensure that underpinning contracts and agreements with suppliers are aligned to business needs, and support and align with agreed upon targets in SLRs and SLAs, in conjunction with SLM
- Manage relationship's with suppliers
- Manage supplier performance
- Negotiate and agree upon contracts with suppliers and manage them through their lifecycle
- Maintain a supplier policy and a supporting SCMIS

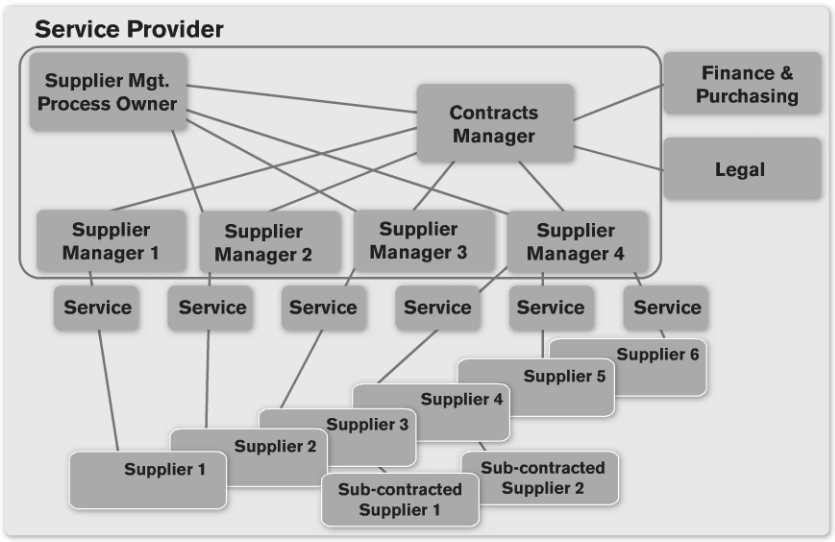
The following **processes** are involved in the stages of the contract lifecycle:

- Evaluation of new suppliers and contracts
- Supplier categorization and maintenance of the SCMIS
- Establishing new suppliers and contracts
- Supplier and contract management and performance
- Contract renewal and/or termination

Many **Key Performance Indicators (KPIs)** and metrics can be used to assess the effectiveness and efficiency of the Supplier Management process and activities. These metrics must be developed from the service, customer and business perspective such as:

- Business protection from poor supplier performance or disruption
- Alignment of supporting services and their targets with business needs and targets
- The availability of services is not compromised by supplier performance
- Clear ownership and awareness of supplier and contractual issues

## Supplier Management – Roles and Interfaces



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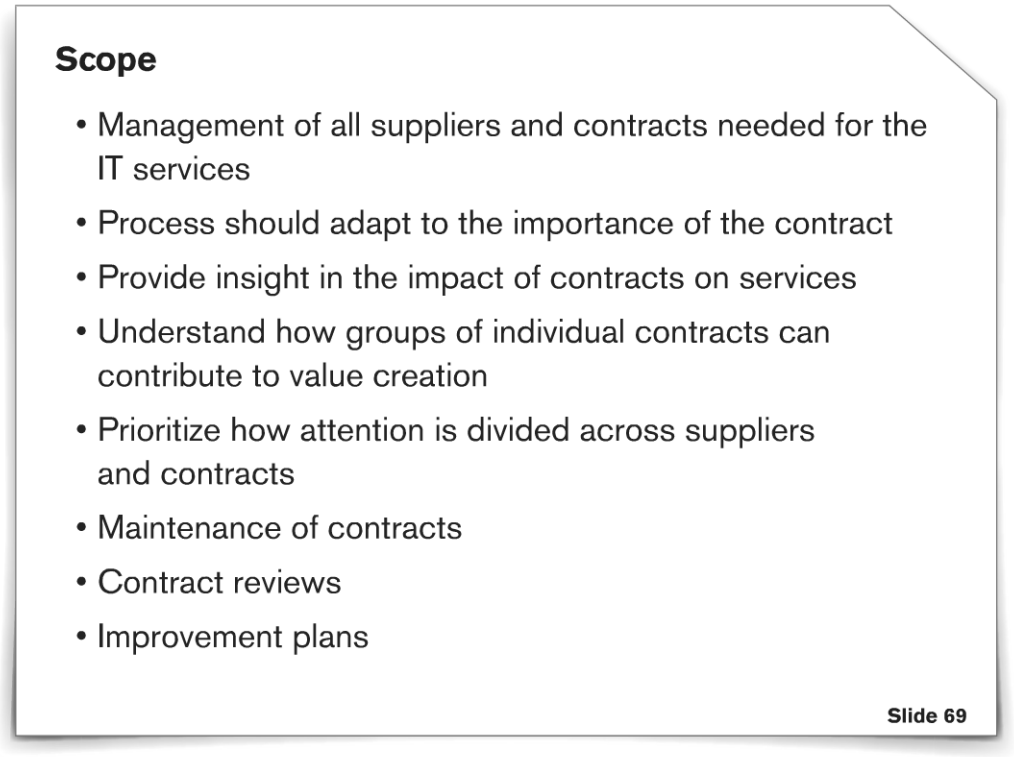



**Scope**

The supplier management process should include the management of all suppliers and contracts needed to support the provision of IT services to the business. Each service provider should have formal processes for the management of all

suppliers and contracts. However, the processes should adapt to cater for the importance of the supplier and/or the contract and the potential business impact on the provision of services. Many suppliers provide support services and products that independently have a relatively minor, and fairly indirect, role in value generation, but collectively make a direct and important contribution to value generation and the implementation of the overall business strategy.

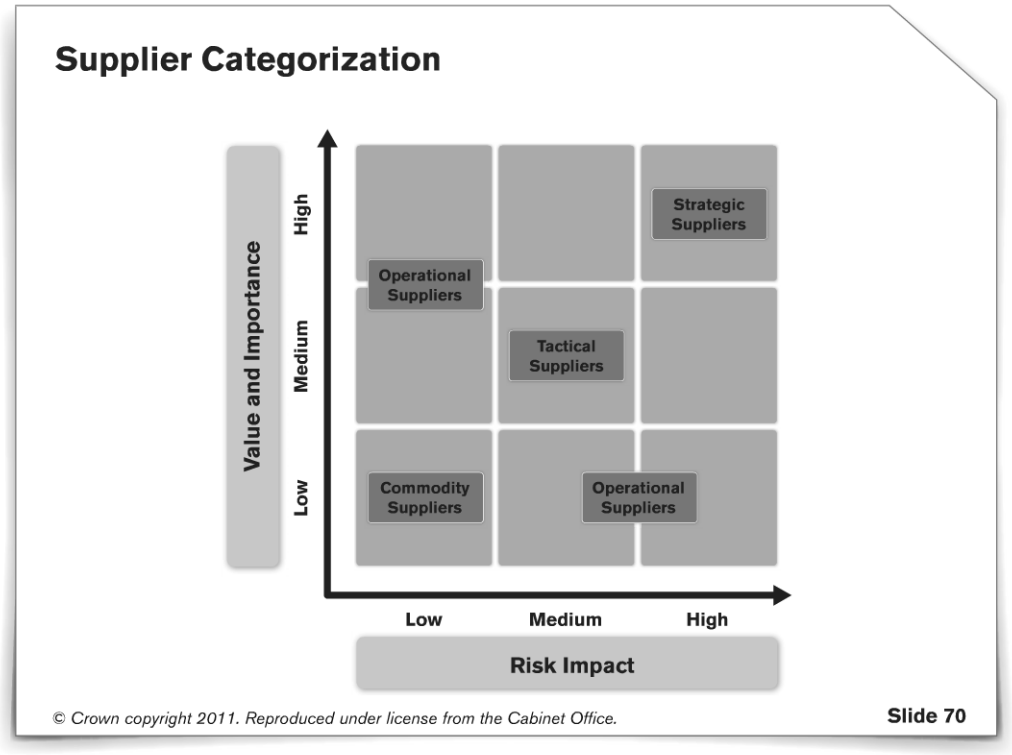
The greater the supplier contribution to the business , the more effort the service provider should put into management of that supplier and the more that supplier should be involved in the development and realization of the business strategy. The smaller the supplier's contribution, the more it will be managed mainly at an operational level, with limited interaction with the business. It may be appropriate in some organizations, particularly large ones, to manage internal teams and suppliers, where different business units may provide support of key elements.

The supplier management process should include:

- Implementation and enforcement of the supplier policy
- Maintenance of an SCMIS

- Supplier and contract categorization and risk assessment
- Supplier and contract evaluation and selection
- Development, negotiation and agreement of contracts
- Contract review, renewal and termination
- Management of suppliers and supplier performance
- Identify improvement opportunities for the CSI register, and service and supplier improvement plans
- Maintenance of standard contracts, terms and conditions
- Management of contractual dispute resolution
- Management of sub-contracted suppliers.

IT supplier management has to comply with standards, guidelines and requirements, particularly those of corporate legal, finance and purchasing. In order to ensure that suppliers provide value for money and meet their service targets, the relationship between each supplier should be owned by an individual within the service provider organization. However, a single individual may own the relationship for one or many suppliers. To ensure that relationships are developed in a consistent manner and that suppliers' performance is appropriately reviewed and managed, roles need to be established for a supplier management process owner and a contracts manager. In smaller organizations, these separate roles may be combined into a single responsibility.



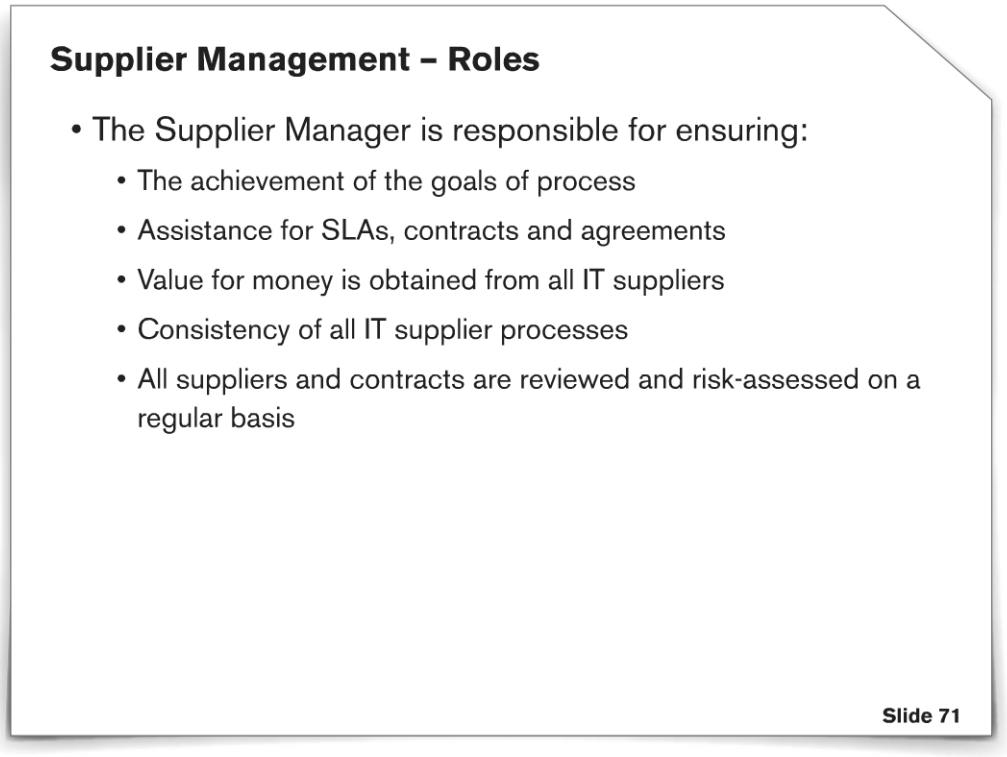

**Supplier Categorization**

**Strategic** For significant 'partnering' relationships that involve senior managers sharing confidential strategic information to facilitate long-term plans. These relationships would normally be managed and owned at a senior management level within the service provider organization, and would involve regular and frequent contact and performance reviews. These relationships would probably require involvement of service strategy and service design resources, and would include ongoing specific improvement programmes (e.g. a network service provider supplying worldwide network service and their support).

**Tactical** For relationships involving significant commercial activity and business interaction. These relationships would normally be managed by middle management and would involve regular contact and performance reviews, often including on-going improvement programs (e.g. a hardware maintenance organization providing resolution of server hardware failures).

**Operational** For suppliers of operational products or services. These relationships would normally be managed by junior operational management and would involve infrequent but regular contact and performance reviews (e.g. an internet hosting service provider, supplying hosting space for a low-usage, low-impact website or internally used IT service).

**Commodity** For suppliers providing low-value and/or readily available products and services, which could be alternatively sourced relatively easily (e.g. paper or printer cartridge suppliers).




**Supplier Management – Roles**

The Supplier Manager has responsibility for ensuring that the aims of Supplier Management are met, including such tasks as:

- Providing assistance in the development and review of SLAs, contracts, agreements or any other documents for third party suppliers
- Ensuring that value for money is obtained from all IT suppliers and contracts
- Ensuring that all IT supplier processes are consistent and that they interface with all corporate supplier strategies, processes and standard terms and conditions
- Maintaining and reviewing a Supplier and Contract Management Information System (SCMIS)
- Reviewing risk assessment of all suppliers and contracts on a regular basis
- Ensuring that any underpinning contracts, agreements or SLAs developed are aligned with those of the business
- Ensuring that all supporting services are scoped and documented and that interfaces and dependencies between suppliers, supporting services and supplier processes are agreed and documented
- Ensuring all roles and relationships between lead and any subcontracted suppliers are documented, maintained and subject to contractual agreement

- Performing contract or SLA reviews at least annually and ensuring that all contracts are consistent with organizational requirements and standard terms and conditions wherever possible
- Updating contracts or SLAs whenever required, ensuring that the Change Management process is followed
- Monitoring, reporting and regularly reviewing supplier performance against targets, identifying improvement actions as appropriate and ensuring these actions are implemented
- Ensuring changes are assessed for their impact on suppliers, supporting services and contracts. and attendance at CAB meetings when appropriate
- Coordination and support of all individual IT supplier and contract managers, ensuring that each supplier/contract has a nominated owner within the service provider organization

## Service Design – Summary (1/2)

- Service Design
- Service Design Package
- Service Portfolio
- Service Catalog
- The “Four Ps” (People, Processes, Products, Partners)

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**Service Design – Summary**

This module presented the Service Design stage. The following are the main concepts that were introduced in this chapter:

- Service Design: The design of new or changed services
- Design Package: Defines a set of design constraints
- Service Portfolio: Information and all future requirements for every service and supports all processes
- Service Catalog: Details of all operational services/summary of all services and customer characteristics
- The “Four Ps” (People, Processes, Products, Partners)
- Sourcing Approaches: In-sourcing, Outsourcing, Co-sourcing, Partnership, Multi-sourcing, Business Process Outsourcing, Application Service Provision, and Knowledge Process Outsourcing

## Service Design – Summary (2/2)

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

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**Service Design – Summary**

- Service Level Management: Ensures agreed upon level of all current IT services and that future services are delivered to agreed upon achievable targets
- Service Catalog Management: Manages the information contained within the Service Catalog
- Capacity Management: Cost justifiable IT capacity to meet needs of the business, within the allocated timeframe
- Availability Management: Optimize capability of the IT infrastructure, services and supporting organization with justifiable cost
- IT Service Continuity Management: Appropriate continuity and recovery mechanisms to meet SLA
- Information Security Management: To protect information from harm, corruption or loss due to failures of availability, confidentiality and integrity
- Supplier Management: Manage suppliers and the services they supply
- Design Coordination: Ensure that all service models and service solution designs conform to strategic, architectural, governance and other corporate requirements