

# IT Service Management

– *With a little help from ITIL<sup>®1</sup> and ISO/IEC 20000*

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## 1. IT Service Management

Brigitte enters an alpine hotel in a middle-sized town in Switzerland. She is on a short business trip and needs to stay over for the next two nights. She has just got out of the taxi and approaches the hotel reception to ask for a service from the hotel: Accommodation.

Brigitte is going to inspect the production of a pharmaceutical company tomorrow and the accommodation enables her to start work very early in the morning and it reduces the geographical constraints put on her by living in Denmark.

Brigitte gets a room that satisfies her need to stay two nights in the Alps without having to undertake the cost and risk of owning her own apartment in Switzerland.

### What is a service?

To understand what Service Management is, we need to understand what we mean by services, and how Service Management can help Service Providers to deliver and manage these services.

The outcomes that customers want to achieve are the reason why they ask for a specific service. The value of the service to the customer is directly dependent on how well the service facilitates these outcomes.

If you buy an apartment, the ownership of the specific costs and risks are transferred to you as part of the trade. But if you stay at a hotel, the ownership of the specific costs and risks remains with the Service Provider. The same is the case if you take a taxi instead of buying a car.

So by definition, a service is *a means of delivering value to customers by facilitating the outcomes customers want to achieve without the ownership of specific costs and risks.*

### What is Service Management?

Service Management then is what enables a Service Provider to provide these services. It is *a set of specialized organizational capabilities for providing value to customers in the form of services.*

These capabilities include the management practices, processes, functions, roles, knowledge and skills that a Service Provider uses to deliver services that create value to the customers or consumers.

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<sup>1</sup> ITIL<sup>®</sup> is a Registered Trade Mark of the Office of Government Commerce in the United Kingdom and other countries

**Resources and capabilities**

To create value in the form of goods and services an organization needs *service assets* in the form of *resources* and *capabilities*. Resources are direct inputs for production while capabilities are used to transform resources into valuable services. A key difference between resources and capabilities is that, typically, unique capabilities only emerge over time.

Capabilities	Resources
Management	Financial Capital
Organization	Infrastructure
Processes	Applications
Knowledge	Information
People	People

Table 1: Examples of service assets in the form of resources and capabilities. Based on OGC ITIL® material.

Brigitte takes a quick walk around the hotel. It's good to be back. Despite its small size, the hotel possesses quite a lot of resources. These include a well-equipped and cozy dining room, a wine cellar, staff members, toilets, information brochures and a car park.

However, Brigitte can't help thinking that these resources would be of no use if it were not for capabilities such as the attitude, skills, knowledge and experience of the staff, their way of organizing the hotel, and a number of well-practiced processes which cannot be taken for granted.

Without the capabilities, a service organization is merely a bundle of useless resources. However, Service Management is more than just a set of capabilities. It is also a professional practice supported by an extensive body of knowledge, experience and skills. A global community of individuals and organizations fosters its growth and maturity.

**2. Service value**

**Preferences, perceptions and outcome**

The value of a service is determined by what the customer prefers (preferences), what the customer perceives (perceptions), and what the customer actually gets (business outcome).

Brigitte's eye catches the information pamphlet that the hotel has left on the table in her room. It contains a number of services such as a wake-up call, parking, laundry service, dining and childcare as well as descriptive attributes of the services such as the number of television channels, cleaning standards and breakfast times.

Brigitte finds most of the services valuable, even though she doesn't need the childcare service on this occasion. But to Brigitte the services are only part of what she appreciates as a hotel guest. For her it is as important that the hotel is situated close to her temporary workplace, that the staff is kind and helpful, that her balcony has a beautiful view over the Alps and that the hotel respects her preference for vegetarian food.

## Utility and warranty

Customers value a service when they see a clear relationship between the service and business value. From the customer's perspective, the business value of a service is a symbiosis of two elements:

- *Service utility.* Service utility is the functionality offered by a service from the customer's perspective.
- *Service warranty.* Service warranty is the assurance that a service will meet its agreed requirements. This assurance may be in the form of an agreement such as a Service Level Agreement or contract.

It is the first time Brigitte is confronted with the concept of utility and warranty. But when she thinks about it, it makes perfectly sense.

She looks around. The bed, table and bathroom are good examples of utility in that they fulfill her need for sleep, the ability to work in her room and to have a bath before she leaves in the morning.

But to create value, the room must be available on the night she needs it, there must be internet bandwidth enough for her to prepare for the next day's work, and she must feel secure in her room. These conditions are examples of warranty.

## 3. Service composition

The composition of an IT service and its constituent parts can be illustrated as in figure 1.

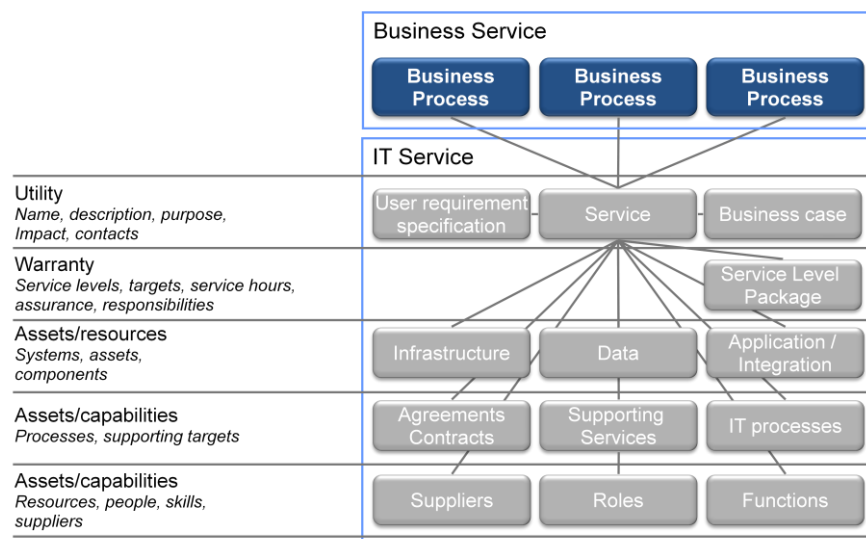


Figure 1: IT service composition. Based on OGC ITIL® material

All the components of the service and their inter-relationships have to be considered, ensuring that the service delivered meets the business needs. However, capabilities such as people and processes are often the most fundamental components although often the most undervalued.

A service like accommodation, which at a first glance looks very simple, might be much more complicated behind the scene. The hotel needs to know Brigitte's 'business processes. Staff need to catalogue the services of the hotel to help Brigitte select the right service for her needs; they need to sign an agreement with Brigitte, to establish and maintain the appropriate infrastructure of the hotel, to secure and operate the environment, and to gather and maintain data not only about Brigitte but also on all other aspects of the service like money, food, facilities and so on.

The hotel needs to provide an internet application, and to acquire supporting services such as wireless access, laundry, newspapers and so on.

The hotel also needs to set up agreements internally with its staff and externally with its suppliers to clarify responsibilities and levels of quality and continually train and measure all parties to ensure a high and consistent quality.

## 4. Good practice

But how does an organization develop the needed capabilities to be a competitive and distinctive service provider?

One way might be to seek help in well-established good practice. By good practice is meant proven activities or processes that have been successfully used by multiple organizations.

There are several sources for good practices, including public frameworks, standards and the proprietary knowledge of organizations and individuals.

ITIL is an example of good practice. It is used by organizations worldwide to establish and improve IT Service Management capabilities.

ISO/IEC 20000 provides a formal and universal standard for organizations seeking to have their Service Management capabilities audited and certified.

The remaining of this paper will focus on ITIL and ISO/IEC 20000 as sources for developing IT Service Management capabilities.

## 5. ITIL

ITIL<sup>®</sup> (formerly known as the Information Technology Infrastructure Library) is a best-practice for IT Service Management, which is used by many thousands of organizations around the world. A whole ITIL philosophy has grown up around the guidance contained within the ITIL books and the supporting qualification scheme.

ITIL emerged from 1986, when the British government determined that spending on IT in government was too high and that a set of good practices for IT Service Management were needed.

The Central Computer and Telecommunications Agency (CCTA) was therefore tasked with developing a framework for efficient and financially responsible use of IT resources within the British government and the private sector.

The first version of ITIL was launched in 1989 and consisted of more than 40

### The history of ITIL

books and was originally called Government Information Technology Infrastructure Management Method (GITIMM).

Even though the books were written by a UK government agency and initially were targeted at government environments, the breakthrough came in the early 1990's when a number of Dutch companies adopted and adapted the ITIL processes with great success.

CCTA later realized that the original books mostly supported the functions of very centralized environments. In 1999 the CCTA and the independent forum for IT Service Management professionals, the IT Service Management Forum (itSMF), started working on the second version of ITIL. Using the knowledge of many IT Service Managers and consultants, the second version focused more on the processes of a distributed environment.

The library changed from the individual sets with multiple books, to a set of ten books of which *Service Support* and *Service Delivery* soon became the most well known.

In year 2000, The CCTA merged into the Office of Government Commerce (OGC) and the ITIL logo and name have since been trademarked by the OGC.

From the UK and Netherlands, ITIL became, by far, the most widely used IT Service Management good practice approach in the world.

In 2005 the itSMF and OGC started working on the third version of ITIL. ITIL Version 3 was launched in 2007 as a service lifecycle-based practice incorporating five lifecycle titles forming the core of the ITIL framework.

## 5.1. Service lifecycle

The structure of the core guidance takes form in a *service lifecycle*. The service lifecycle is described in a set of five core publications. *Service Design*, *Service Transition* and *Service Operation* are progressive stages of the lifecycle and represent change and transformation. *Service Strategy* represents objectives and direction. *Continual Service Improvement* represents learning and improvement.

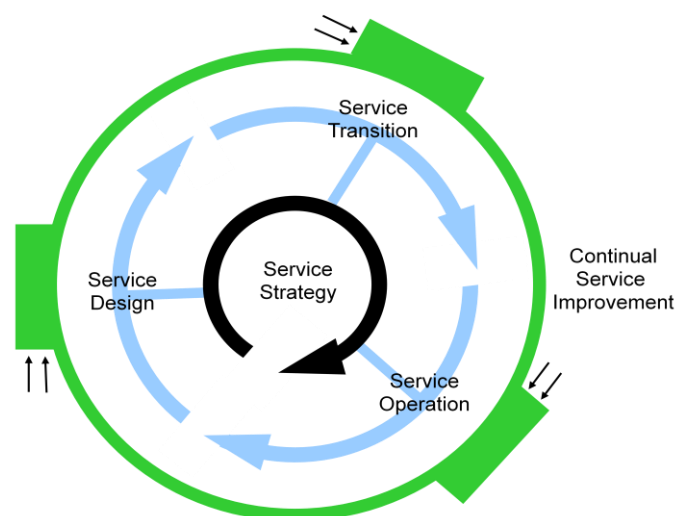


Figure 2: The service lifecycle. © Crown copyright 2007

Last time Brigitte stayed at the hotel, she had a conversation with the hotel manager. He happily told her the history of the hotel. It all began 10 years ago, when a number of industries moved to the area. A local family saw the opportunities for a 'bed-and-breakfast' service, but very soon the need for a hotel arose.

The family used some time to develop their strategy, including identifying the market requirements, defining what services they would deliver, creating a business case, raising funding, analyzing the risks, getting building approval and so on.

When the strategy was clearly defined and the services described, the actual design of the hotel and its services began. This phase involved architects, designers, planners and so on.

After a year the family was ready for transition from the bed-and-breakfast facilities to the new hotel. The hotel was built, inspectors tested that the hotel fulfilled the acceptance criteria and legal regulations, personnel was hired and trained and the hotel opened.

Since then the hotel has been kept operational – through maintenance (plumbers, electricians etc.) and operational services such as garbage collection, cleaning of laundry and a number of other services.

From the very beginning the hotel continually prioritized to improve its services. Small operational changes have frequently been implemented, training programs have been improved year after year, and new services like wireless access have been introduced to fulfill the changing requirements of the guests.

Recently the hotel decided to change the strategy to become more than just a hotel; in the future it will house a conference centre.

Through the conversation Brigitte realized that it is impossible to talk about *the* service lifecycle. In reality there are many intertwined service lifecycles with different extents and cycle frequencies.

### **5.1.1 Service Strategy**

The Service Strategy volume provides guidance on how to design, develop and implement Service Management not only as an organizational capability but as a strategic asset.

Topics covered in the Service Strategy book include the development of markets, internal and external service provision, service assets, service portfolio and implementation of strategy through the entire service lifecycle. Financial management, service portfolio management, organizational development and strategic risks are other major topics.

### **5.1.2 Service Design**

The Service Design volume provides guidance for the design and development of services and Service Management processes. It guides organizations on how to develop design capabilities for Service Management. It covers design principles and methods for converting strategic objectives into portfolios of services and service assets.

The major Service Design activities include:

- Collect requirements
- Analyze requirements, document and agree
- Design service solution
- Evaluate alternative solutions
- Acquire the preferred solution

### 5.1.3 Service Transition

The Service Transition volume provides guidance for the development and improvement of capabilities for transitioning new and changed services into live service operation.

The Service Transition book provides guidance on how the requirements of Service Strategy encoded in Service Design are effectively realized in Service Operation while controlling the risks of failure and disruption. The publication combines practices in release management, program management and risk management and places them in the practical context of Service Management.

Typically activities involved are:

- Planning
- Build and test
- Service testing and pilots
- Perform transfer, deployment and retirement
- Review and close

### 5.1.4 Service Operation

The Service Operation volume embodies practices in the management of the day-to-day operation of services. Service Operation can be viewed as the ‘factory’ of IT.

The purpose of the Service Operation phase is to coordinate and carry out the activities and processes required to deliver and manage services at agreed levels to business users and customers. The book includes guidance on achieving effectiveness and efficiency in the delivery and support of services to ensure value for the customer and the service provider.

### 5.1.5 Continual Service Improvement

The Continual Service Improvement volume provides guidance in creating and maintaining value for customers through better design, introduction, and operation of services. It combines principles, practices, and methods from quality management, change management, and capability improvement. Organizations learn to realize incremental and large-scale improvements in service quality, operational efficiency, and business continuity.

Guidance is provided for linking improvement efforts and outcomes with service strategy, design, and transition. A closed-loop feedback system, based on William Edward Deming’s Plan-Do-Check-Act (PDCA) cycle, is established as a vehicle for improvement.

## 5.2. Service capabilities

ITIL gives guidance on how to adopt and adapt good practices to establish capabilities and resources such as:

- Organization

- Processes
- Knowledge
- People
- Tools and technologies

The following sections will give a brief introduction to each of these practice areas according to ITIL.

## Roles, functions and forums

### 5.2.1 Organization

ITIL does not prescribe how a service organization should look like. Instead ITIL provides a number of 'building blocks' in the form of *roles* (e.g. owners, managers and analysts), *functions* (e.g. Service Desk) and *forums* (e.g. change advisory board).

The key to effective Service Management is ensuring that clear accountability and responsibility is defined to carry out the practices. A *role* is defined as a set of responsibilities, activities and authorities granted to a person or team. A role is often tied to a job description or work group description but does not necessarily need to be filled by one individual.

ITIL defines more than 50 roles of which the service owner and process owner roles are the most important.

The size of an organization, how it is structured, the existence of external partners and other factors will influence how roles are defined and assigned. A particular role may be assigned to a single individual or shared between two or more, but what is more important is the consistency of accountability and execution, along with the interaction with other roles in the organization.

One person or team may have multiple roles. For example the roles of Configuration Manager and Change Manager may be carried out by the same person.

One person can have more than one role, for example a waiter can work as a dishwasher when the guests have left the restaurant. A small hotel might have just one employee undertaking the two roles, whereas a large hotel is more likely to assign only one role to each employee as a general principle.

*Functions* are units of organizations specialized to perform certain types of work and responsible for specific outcomes. They are self-contained with capabilities and resources necessary for their performance and outcomes. Functions have their own body of knowledge, which accumulates from experience. They provide structure and stability to organizations.

Functions tend to optimize their work methods locally to focus on assigned outcomes. Poor coordination between functions combined with an inward focus leads to functional silos that hinder cross-organizational cooperation.

Brigitte sits herself down at the desk in order to go over a few things before the meeting next day, only to realize that the bulb in the lamp on the table has failed. Brigitte calls the reception. It's very easy because the reception acts as a single point of contact to the other functions at the hotel. Soon a staff member from the facilities function knocks on her door to exchange the bulb.

ITIL describes functions such as *IT operations management*, *technical management*, *application management* and probably most important to Service Management the *Service Desk*.

The Service Desk is the primary point of contact for users when there is a service disruption, for service requests or even for some categories of request for change. The Service Desk provides a single point of contact for all users. A good Service Desk can compensate for shortages elsewhere in the IT organization, whereas an ineffective Service Desk can give a poor impression of an otherwise very effective IT organization. To enable them to perform these actions effectively the Service Desk is usually separate from the other functions.

### 5.2.2 Processes

Processes are particularly important from a Service Management perspective. They represent the organization's cumulative knowledge and experience. They are strategic assets when they provide competitive advantage and market differentiation.

Brigitte has been at the hotel on a number of occasions, so she recognizes the various processes. The hotel has processes for booking, check-in, cleaning, fulfilling reasonable needs of the guests, managing errors and complaints, ensuring adequate capacity, managing finances, issuing invoices, cooking, dealing with changes or new demands, maintaining buildings and equipment, and check-out.

A Process is a structured set of activities designed to accomplish a specific objective. A process:

- Takes one or more inputs and turns them into defined outputs.
- Includes all of the roles, responsibilities, tools and management controls required to reliably deliver the outputs.
- May define or revise policies, standards, guidelines, activities, processes, procedures, and work instructions if they are needed.

Process definitions describe actions, dependencies, and sequence. By defining what the organization's activities are, which inputs are necessary and which outputs will result from the process, it is possible to work in a more efficient and effective manner. Measuring and steering the activities increases this effectiveness. Finally, by adding norms to the process, it is possible to add quality measures to the output.

Each of the five core publications in ITIL contains good practices for a number of processes. In total, ITIL covers 27 processes:

### Service Strategy processes

The *Service Strategy* publication covers:

#### *Strategy Generation*

The process is responsible for managing the Service Strategy. The process covers activities for defining the market, developing the offerings, developing strategic assets and preparing for execution.

#### *Service Portfolio Management*

The process is responsible for managing the service portfolio. Service Portfolio Management considers services in terms of the business value that they provide.

## Service Design processes

### *Demand Management*

The process is responsible for understanding and influencing customer demand for services and provision of capacity to meet these demands. At a strategic level Demand Management can involve analysis of patterns of business activity and user profiles. At a tactical level it can involve definition and use of differentiated offerings.

### *Financial Management*

The process is responsible for managing an IT service provider's budgeting, accounting and charging requirements.

### *Risk Management*

The process is responsible for identifying, assessing and controlling risks.

The *Service Design* publication covers:

### *Service Catalogue Management*

The process is responsible for producing and maintaining the Service Catalogue, ensuring that a central, accurate and consistent source of data is provided, recording the status of all operational services, together with appropriate details of each service.

### *Service Level Management*

The process is responsible for negotiating Service Level Agreements, and ensuring that these are met. Service Level Management must ensure that all IT Service Management processes, operational level agreements, and underpinning contracts, are aligned with the agreed service level targets. Service Level Management monitors and reports on service levels, and holds regular customer reviews.

### *Availability Management*

The process is responsible for defining, analyzing, planning, measuring and improving all aspects of the availability of IT services. Availability Management must ensure that all IT infrastructure, processes, tools, roles etc. are appropriate for the agreed availability service level targets.

### *Information Security Management*

The process is responsible for ensuring the confidentiality, integrity and availability of an organization's assets, information, data and IT services. Information Security Management usually forms part of an organizational approach to security management which has a wider scope than the IT service provider, and includes handling of paper, building access, phone calls etc., for the entire organization.

### *Supplier Management*

The process is responsible for ensuring that all contracts with suppliers support the needs of the business, and that all suppliers meet their contractual commitments.

### *Capacity Management*

The process is responsible for ensuring that the capacity of IT services and the IT infrastructure is able to deliver agreed service level targets in a cost effective and timely manner. Capacity Management considers all resources required to deliver the IT service, and plans for short, medium and long term business requirements.

### *IT Service Continuity Management*

The process is responsible for managing risks that could seriously impact IT services. IT Service Continuity Management ensures that the IT service provider can always provide minimum agreed service levels, by reducing the risk to an

acceptable level and planning for the recovery of IT services. IT Service Continuity Management should be designed to support Business Continuity Management.

## Service Transition processes

The *Service Transition* publication covers:

### *Transition Planning and Support*

The process is responsible for planning all service transition processes and coordinating the resources that they require.

### *Change Management*

The process is responsible for controlling the lifecycle of all changes. The primary objective of Change Management is to enable beneficial changes to be made, with minimum disruption to IT services.

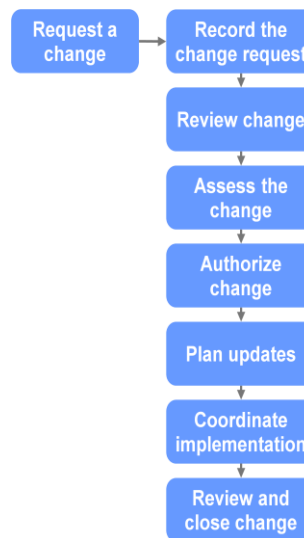


Figure 3: Example of process activities for the Change Management process. Based on OGC ITIL® material

### *Service Asset and Configuration Management*

The process is responsible for maintaining information about service assets and configuration items required to deliver an IT service, including their relationships. In addition the process is responsible for tracking and reporting the value and ownership of the service assets. This information is managed throughout the lifecycle of the service assets.

### *Release and Deployment Management*

The process is responsible for planning, scheduling and controlling the movement of releases to test and live environments. The primary objective of Release and Deployment Management is to ensure that the integrity of the live environment is protected and that the correct components are released.

### *Service Validation and Testing*

The process is responsible for validation and testing of a new or changed IT service. Service Validation and Testing ensures that the IT service matches its design specification and will meet the needs of the business.

### *Evaluation*

The process is responsible for assessing a new or changed IT service to ensure that risks have been managed and to help determine whether to proceed with the change. Evaluation is also used to mean comparing an actual outcome with the

intended outcome, or comparing one alternative with another.

*Service Knowledge Management*

The process is responsible for gathering, analyzing, storing and sharing knowledge and information within an organization. The primary purpose of Knowledge Management is to improve efficiency by reducing the need to rediscover knowledge.

**Service Operation processes**

The *Service Operation* publication covers:

*Event Management*

The process is responsible for monitoring all events that occur through the IT infrastructure to allow for normal operation and also to detect and escalate exception conditions.

*Request Fulfillment*

The process is responsible for managing customer or user requests.

On one of her recent trips, Brigitte one night came back to her room to sleep. While brushing her teeth she noticed that the showerhead had fallen to the ground and was broken.

After finishing her tooth brushing she dialed the reception. The folder next to the telephone guided her on how to report an incident 'If you need any kind of assistance or want to report an incident, please call the reception by dialing 1'. The receptionist asked questions such as: 'What is your problem?', 'Is the shower completely useless or can you use it anyway?', 'Is it important to fix it now or can it wait till tomorrow?' and 'When do you plan to take a shower?'

Brigitte didn't need a shower at that moment – but she had to take a bath in the morning before going back to the factory at 8 a.m. The receptionist was unable to find someone who could fix the shower before 6 a.m. so he tried to identify a workaround: 'Brigitte, do you want to have another room (facing the street so it is a bit noisier) or have a key to the pool area and have your morning shower there?'

*Incident Management*

The process is responsible for restoring the service to users as quickly as possible, in case of an Incident.

*Problem Management*

The process is responsible for analyzing root-causes to determine and resolve the cause of events and incidents, and for proactively detecting and preventing future problems/incidents.

*Access Management*

The process is responsible for granting authorized users the right to use a service, while restricting access to non-authorized users. It is based on being able accurately to identify authorized users and then manage their ability to access services as required during different stages of their human resources (HR) or contractual lifecycle. Access Management is also called Identity or Rights Management in some organizations.

## Continual Service Improvement processes

The *Continual Service Improvement* publication covers:

### *The 7-Step Improvement Process*

The process is responsible for identifying and implementing individual activities to improve IT service quality and improve the efficiency and effectiveness of enabling IT Service Management processes

### *Service Measurement*

The process is responsible for measuring end-to-end services.

### *Service Reporting*

The process is responsible for producing and delivering reports of achievement and trends against service levels. Service Reporting should agree the format, content and frequency of reports with customers.

An overview of the ITIL processes and activities can be found in “ITIL® V3 – The big picture”, a poster that can be downloaded for free on [www.cfnpeople.com](http://www.cfnpeople.com).

## 5.2.3 Knowledge

The purpose of service knowledge is to ensure that the right information is delivered to the right person at the right time to enable informed decisions. Among the service knowledge sources described by ITIL are:

## Service Knowledge Management System

The *Service Knowledge Management System (SKMS)*. Specifically within IT Service Management, knowledge management will be focused within the Service Knowledge Management System (SKMS). Underpinning this knowledge will be a considerable quantity of data, which will be held in a central logical repository or Configuration Management System (CMS). However, clearly the Service Knowledge Management System is a broader concept that covers a much wider base of knowledge, for example:

- The experience of staff
- Records of peripheral matters, e.g. weather, user numbers and behavior, organization’s performance figures
- Suppliers’ and partners’ requirements, abilities and expectations
- Typical and anticipated user skill levels.

Brigitte sits at her balcony enjoying the beautiful sunset over the mountains. It reminds her of the first time she stayed in this suite. She was asked to visit the factory with short notice, and she hoped that the hotel still had rooms available when she called the hotel. The receptionist could see from the registry that Brigitte frequently stayed at the hotel and that all the rooms of her choice were booked, so he offered her a discount. At the same time he made a reservation in the restaurant for her on the first night. She ended up with the suite, and since then she has always ordered it if available.

## Service Portfolio

The *Service Portfolio*. The Service Portfolio is the complete set of services that are managed by a service provider. The Service Portfolio is used to manage the entire lifecycle of all services and it supports management of investments in all services.

The Service Portfolio represents the commitments and investments made by a service provider across all customers and market spaces. It represents present contractual commitments, new service development, and ongoing service improvement programs initiated by Continual Service Improvement. The portfolio

also includes third-party services which are integral part of service offerings to customers. Some third-party services are visible to the customers while others are not.

The portfolio management approach helps managers prioritize *investments* and optimize the allocation of *resources*.

The hotel maintains a registry of services that helps the management of the hotel to answer questions such as:

- What value does an overnight stay at our hotel provide to the guests compared to comparative hotels?
- Which supporting services, resources and capabilities are needed to provide our conference service?
- What risks are associated with our dining services?

It is vitally important for the manager that this registry provides the information needed to make the right decisions on the optimal use of the available resources and capabilities.

## Service Catalogues

*Service Catalogues.* A Service Catalogue is a database or a number of structured documents with information about all live IT services, including those available for deployment. The Service Catalogues are the only part of the Service Portfolio published to customers, and they are used to support the sale and delivery of IT services. The Service Catalogues include information about deliverables, prices, contact points, ordering and request processes.

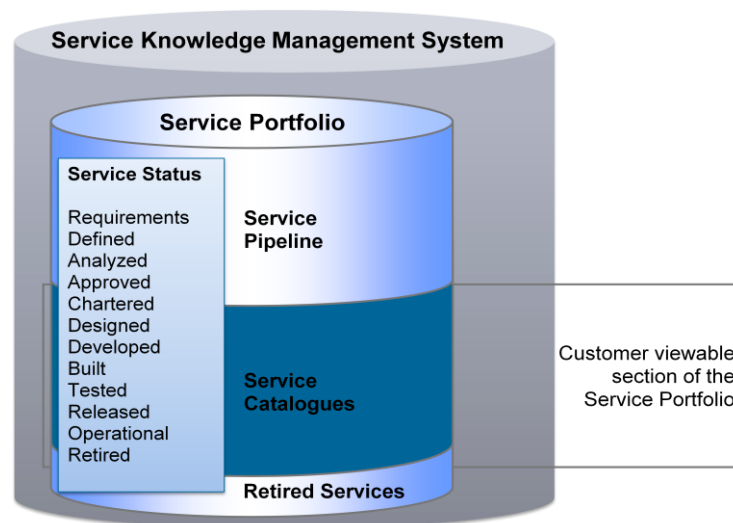


Figure 4: Relationship between the Service Portfolio and the Service Catalogues.  
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## Service Level Agreements

*Service Level Agreements (SLAs).* Service Level Agreements are agreements between an IT service provider and a customer. A Service Level Agreement describes the IT service, documents service level targets, and specifies the responsibilities of the IT service provider and the customer. A single Service Level Agreement may cover multiple IT services or multiple customers.

Brigitte remembers from her conversations with the receptionist that the hotel enters service level agreements with returning customers such as travel agencies. The agreements state the agreed service levels of a stay at the hotel specific to that customer.

### **Operational Level Agreements**

*Operational Level Agreements (OLAs).* Operational Level Agreements are underpinning agreements between a service provider and another part of the same organization that assists with the provision of services.

### **Underpinning Contracts**

*Underpinning Contracts (UCs).* Underpinning Contracts are legally binding agreements between a service provider and a third party, called the supplier. The third party provides goods or services that support delivery of an IT service to a customer. Underpinning Contracts define targets and responsibilities that are required to meet agreed service level targets in Service Level Agreements.

### **Configuration Management System**

The *Configuration Management System (CMS).* The Configuration Management System is a set of tools and databases that are used to manage an IT service provider's configuration data. The Configuration Management System also contains data about employees, suppliers, locations, business units, customers and users as well as the relationships between these components. The Configuration Management System includes tools for collecting, storing, managing, updating, and presenting data about all configuration items and their relationships.

The hotel maintains a database containing data of all relevant equipment, people, suppliers and processes that are used to provide the services. The staff is supposed to register specific assets such as rooms, beds and restaurant tables and the service impact of these items in the database every time they make a change to an item.

During the years the hotel has gained much experience in which data such as equipment, people, suppliers and processes it is important to register and maintain.

This information enables the hotel to manage the provided services and analyze the impact of faults or changes to underpinning items.

## **5.2.4 People**

The most important capability of an IT Service Provider is probably the ability to attract, motivate and develop the right people.

ITIL is primarily focusing on staffing and organizational change management, when it comes to this capability, so the reader is advised to seek inspiration in other sources to complement the practices of ITIL.

### **Staffing**

*Staffing Levels.* An organization must ensure that the correct number of staff is available at any given time to match the demand being placed upon the organization by the business.

*Skill Levels.* An organization must decide on the level and range of skills it requires of its staff – and then ensure that these skills are available at the appropriate times. Required skills among other include:

- Interpersonal skills
- Business awareness
- Service awareness

- Technical awareness
- Diagnosis skills
- Support tools and techniques
- Processes and procedures

*Training.* It is vital that all staff members are adequately trained. A formal introduction program should be undertaken by all new staff.

*Staff Retention.* It is very important that all IT Managers recognize the importance of the staff, and give this special attention. Any significant loss of staff can be disruptive and lead to inconsistency of service – so efforts should be made to make the organization an attractive place to work.

## **Organizational Change Management**

*Organizational Change Management.* Service Management’s basic role is to design, implement and operate new or changed services, making the organization different than it was before.

Most changes implicate organizational change, ranging from moving a few staff to work from new premises through to major alterations in the nature of business working, e.g. from face-to-face retail to web-based trading.

Change is an inevitable and important part of organizational development and growth. Without change, progress does not happen. Effective leaders and managers understand the change process and plan and lead accordingly.

The personnel of the hotel must see the need for the change in attitude and habits when introducing a new or changed service. They need to see the “big picture” of the new service.

But it is not enough to see the need and share a vision. They also need to act. A plan for how to introduce the new service must be crafted and maintained and the necessary resources and competences must be allocated.

There are five important ingredients of change: Necessity, vision, plan, resources and competence. If there is no necessity established, there is lot of resistance from the people; if there is no vision, there is confusion among the employees; if there is no plan, there is chaos in the activities and transition; if there are no/fewer resources, there is a frustration among the employees; and if there is no competence, there is a fear of failure among the employees.

Therefore it is extremely important to pay adequate attention and establish management commitment to take adequate care of these requirements of the change.

## **Change Management strategies**

ITIL refers to a number of strategies that work well in practice:

*Education and commitment.* The sooner managers give people information about the change and the implications for them; the more successful the implementation of change is likely to be.

*Participation and involvement.* Allowing people to participate in the change normally overcomes resistance. On its own it is not enough; it must be used in conjunction with a policy of education and commitment, so that people understand the need for change, and effective monitoring and review for managers to be able to assess the impact of change.

*Facilitation and support.* Managers should be ready to respond positively when fears and anxieties about the change are expressed. Talking through the issues and performing a skills gap analysis may be sufficient, but at other times training in the new processes will be necessary, preferably prior to implementation.

*Negotiation and agreement.* Change is easier to implement if you have agreement; gaining agreement suggests negotiation, so managers should be prepared to negotiate, formally if necessary. The relative cost of gaining agreement should be set against the importance of the change.

*Manipulation and co-option.* It is sometimes necessary to strike deals with those who oppose change, either by making them privy to restricted information or by ‘buying-off’, i.e. giving them extra rewards (financial or otherwise) to gain their participation. This approach should be used with the caveat that it is likely to cause problems later on.

*Explicit and implicit coercion.* There are occasions when coercion is the appropriate tactic. It will come with associated costs, similar to the directive approach of ‘act now, explain later’. Coercion may well run counter to the values and beliefs of your organization and, by inference, to individuals working in it. Strong leadership is needed if using this strategy, together with a full knowledge of the situation and the possible problems that will be caused.

## 5.2.5 Tools and technology

Service Management is supported by technology in two ways:

- Enterprise-wide tools that support the broader systems and processes within Service Management
- Tools targeted more specifically at supporting a Service Lifecycle phase or parts of a phase

There are a number of technologies that supports IT Service Management. These among other include the following:

### IT Service Management suites

#### *IT Service Management suites*

- *Workflow management.* A workflow or process control engine is needed to allow the pre-definition and control of defined processes such as an incident lifecycle, request fulfillment lifecycle, problem lifecycle, change model etc.
- *Portfolio and contract management.*
- *Integrated configuration management.* The tools should integrate to a configuration management system to allow the organization’s IT infrastructure assets, components, services and any ancillary configuration items to be held, together with all relevant attributes, in a centralized or federated location – and to allow relationships between each to be stored and maintained – and linked to Incident, Problem, Known Error and Change records as appropriate.
- *Self-service.* Many organizations find it beneficial to offer ‘Self Help’ capabilities to their users. The technology should therefore support this capability with some form of front-end allowing offering of a menu-driven range of self help and service requests – with a direct interface into the back end process handling software.

### Analytical tools

#### *Administrative and analytical tools*

- *Analysis, simulation and modeling.* Offering prototyping, modeling and

simulation facilities. Enabling “What if?” scenarios to be examined

- *Reporting.* There is no use storing data unless it can be easily retrieved and used to meet the organizations purposes. The technology should therefore incorporate good reporting capabilities, as well as to allow standard interfaces which can be used to input data to industry-standard reporting packages, dashboards etc.

Dashboard type technology is useful to allow ‘see at a glance’ visibility of overall IT service performance and availability levels.

## IT Infra-structure Management tools

### *IT Infrastructure Management tools*

- *Monitoring.*
- *Event logging and management.*
- *Diagnostic utilities.* It will be extremely useful for Service Desk and other support groups if the technology incorporated the capability to create and use diagnostic scripts and other diagnostic utilities to assist with diagnosis of incidents and problems. Ideally these should be ‘context sensitive’ and presentation of the scripts is automated so far as possible.
- *Job scheduling.*
- *Automation.* Automation is a means for capturing the knowledge required for a service process.
- *Discovery.* In order to populate or verify the configuration management system data and to assist in license management, discovery or automated audit tools will be required. Such tools should be capable of being run from any location on the network and allow interrogation and recovery of information relating to all components that make up, or are connected, to the IT infrastructure.
- *Remote control.* It is often helpful for the Service Desk analysts and other support groups to be able to take control of the user’s desk-top.
- *Security control.*

## Application Management tools

### *Software and Application Management tools*

- *Release management and version control.*
- *Test and validation management.* Validating designs before they are developed and implemented to ensure that they satisfy and fulfill their intended requirements.
- *Deployment management.* Many IT Service Management tools, particularly discovery and event monitoring tools, will require some client/agent software deploying to all target locations before they can be used. This will need careful planning and execution – and should be handled through formal release and deployment management.
- *License management.*

Now, let us leave ITIL for a moment to briefly concentrate on ISO/IEC 20000.

## 6. ISO/IEC 20000

ISO/IEC 20000 is an international standard for IT Service Management. ISO/IEC 20000 is aligned with ITIL and describes an integrated set of management processes comparable to the ITIL processes for effective delivery of services.

ISO/IEC 20000 was prepared by BSI (as BS 15000) and was adopted, under a special “fast-track procedure”, by Joint Technical Committee ISO/IEC JTC 1, Information technology, in parallel with its approval by national bodies of ISO

and IEC in 2005.

The focus of ISO/IEC 20000 is leadership, integrated processes, intelligent use of metrics as well as 'doing more than documenting'. The standard currently consists of three parts:

*ISO/IEC 20000-1:2005* is the formal Specification and defines the requirements for a Service Management system (SMS) to deliver managed IT services of an acceptable quality for its customers. The specification includes:

- Requirements for a management system;
- Planning and implementing Service Management;
- Planning and implementing new or changed services;
- Service delivery process;
- Relationship processes;
- Resolution processes;
- Control processes; and
- Release processes.

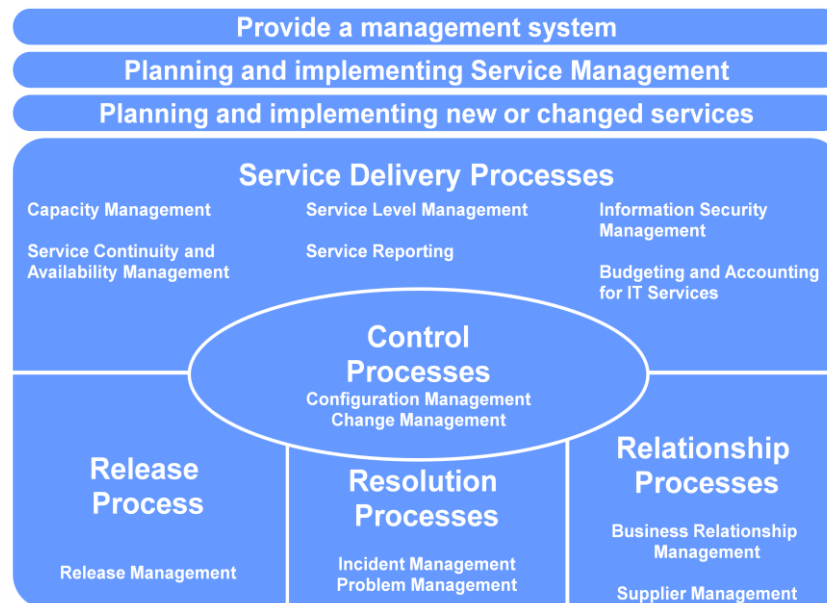


Figure 5: Service Management processes covered by ISO/IEC 20000. Based on ISO/IEC 20000

*ISO/IEC 20000-2:2005* is the Code of Practice which provides generic guidelines for implementing a Service Management system (SMS) in accordance with ISO/IEC 20000-1.

*ISO/IEC 20000-3:2009* gives guidance on scope definition and applicability of ISO/IEC 20000-1. This part of ISO/IEC 20000 gives a list of main points on stating scope, on the applicability of ISO/IEC 20000-1 and on demonstrating conformity to ISO/IEC 20000-1. It also includes examples of scope statements, which vary according to the service provider's circumstances.

According to the standard itself the target groups for ISO/IEC 20000 are:

- businesses that are going out to tender for their services
- businesses that require a consistent approach by all service providers in a

supply chain

- service providers that want to benchmark their IT Service Management
- organizations that need to demonstrate the ability to provide services that meet customer requirements
- organizations that aim to improve service through the effective application of processes to monitor and improve service quality

Approximately 450 organizations have been certified (February 2010) under the itSMF ISO/IEC 20000 certification scheme.

The standard is currently under development. New editions of part 1 and part 2 are being prepared to obtain better alignment with ISO/IEC 9001 and ITIL version 3. Also completely new parts of the standard are in the pipeline:

- Part 4: Process Reference Model (Purpose/Outcome)
- Part 5: Exemplar implementation plan for ISO/IEC 20000-1
- Part *n*: Incremental conformity

## 7. Training and certification

### 7.1. ITIL Qualification Scheme

One of the main reasons why ITIL has become the most widespread IT Service Management practice in the world is the comprehensive qualification scheme that comes with ITIL.

The ITIL Qualification Scheme is a learning system that enables an individual to gain credits for all ITIL courses that can be applied towards a recognized professional achievement (Figure 6). Once candidates have accumulated a sufficient number of credits, they can be awarded the ITIL Expert in IT Service Management certification.

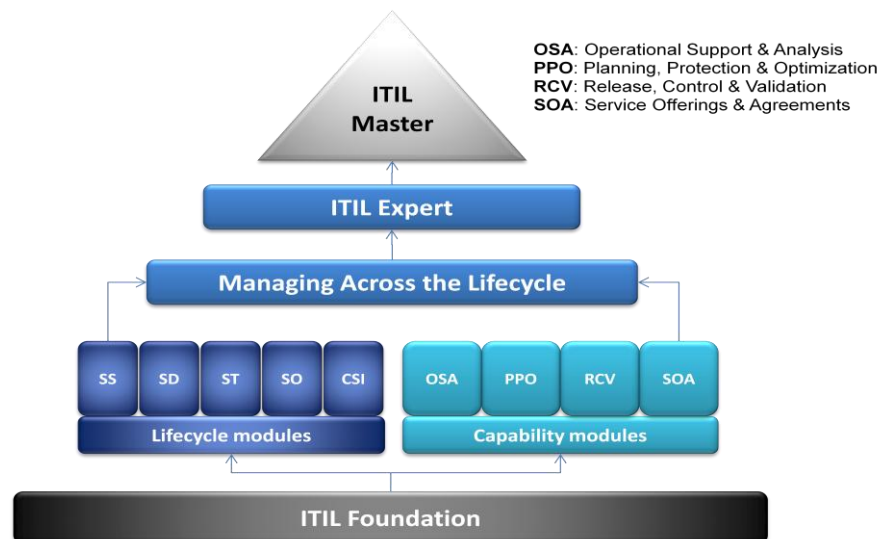


Figure 6: The ITIL Qualification Scheme. © OGC's Official Accreditor - The APM Group Limited 2008

To achieve the ITIL Expert certification, candidates must obtain a minimum of 22 credits, two of which must be from the Foundation module, which is a mandatory first step, and five of which must be from the 'Managing Across the Lifecycle'

module, which is a mandatory final step.

Candidates can choose modules from the Capability stream (four credits per module) or Lifecycle stream (three credits per module) to gain the other 15 credits, but are expected to choose a balanced program overall.

### **ITIL Foundation**

The foundation level offers a general awareness of the Service Lifecycle and the key elements within.

The learning objectives and competencies are focused on an understanding of the overall linkages between the stages in the lifecycle, the processes used and their contribution to Service Management practices.

### **ITIL Intermediate**

The intermediate level is a dual-stream modular certification series, each with a set of certifications and a normalization certification. The purpose of the certificates is to impart and test detailed knowledge about parts of the ITIL core publications. The intermediate qualifications are grouped in three sets:

- The Service Lifecycle stream will be of interest to candidates wishing to obtain knowledge of ITIL practices within the Service Lifecycle context. The prime focus is the lifecycle itself, the use of process and practice elements within it, and the management capabilities needed to deliver quality Service Management practices in an organization. An examination is given for each module.

The intermediate Service Lifecycle stream is built around the five ITIL core publications:

- 1 Service Strategy (SS)
- 2 Service Design (SD)
- 3 Service Transition (ST)
- 4 Service Operation (SO)
- 5 Continual Service Improvement (CSI)

- The Service Capability stream will be of interest to candidates who wish to be certified in a deep-level understanding of ITIL processes and roles. Attention to the Service Lifecycle is illustrated as part of the curriculum; however, the primary focus is on the process activities, execution and use throughout the Service Lifecycle. An examination is given for each module

The intermediate Service Capability stream is built around four clusters:

- 1 Operational Support and Analysis (OSA)
- 2 Service Offerings and Agreements (SOA)
- 3 Planning, Protection and Optimization (PPO)
- 4 Release, Control and Validation (RCV)

- Managing Across the Lifecycle (MALC) brings together the full essence of the lifecycle approach to Service Management. This certification completes the Lifecycle and Capability streams by focusing on the knowledge required to implement and manage the necessary skills associated with the use of the lifecycle practices.

### **ITIL Expert and Master**

Once a candidate has gained the required number of credits through their education and has successfully passed the required examinations at the foundation and intermediate levels, they will be awarded the ITIL Expert in IT Service Manage-

ment certificate. No further examination or course is required to gain the ITIL Expert certificate.

The ITIL master level assesses an individual's ability to apply and analyze the ITIL concepts in new areas.

## 7.2. ISO/IEC 20000 Qualification Schemes

When it comes to ISO/IEC 20000 the picture is not as clear as for the ITIL qualification scheme.

Numerous ISO/IEC 20000 qualification schemes exist of which the schemes owned and managed by itSMF UK, EXIN and ISEB are the most widespread. Some of the players work together on some of the qualification levels and compete on other levels.

Most of the schemes includes two tracks:

- A track aimed at internal and external IT consultants who wish to assist organizations to prepare for certification
- A track aimed at internal and external auditors.

Most of the schemes offer different levels of certification like the ITIL qualification scheme. EXIN, for example, provides certifications at three levels: Foundation, professional and executive.

## 8. An IT Service Management improvement initiative

There is an old Danish saying that goes "One thing is to read a chart - commanding a ship is another thing".

Good practices such as ITIL must be *adopted* and *adapted*. When an organization realizes that some of the ITIL or ISO/IEC 20000 principles and practices fit the needs and situation of the organization it has to decide how to approach the application of the practices.

ITIL itself recommends a simple process for improving services and practices.

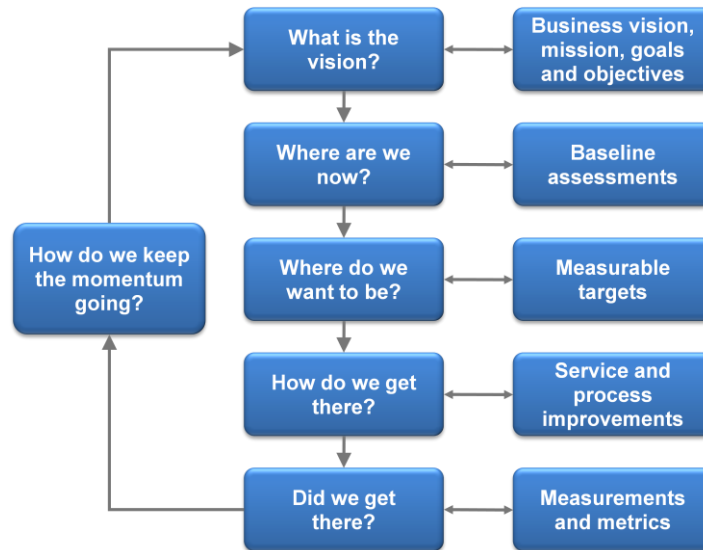


Figure 7: The Continual Service Improvement model. © Crown copyright 2007

The Continual Service Improvement model is an example of the Deming cycle. The figure illustrates a constant cycle for improvement. The improvement process can be summarized in six steps:

1. Embrace the *vision* by understanding the high-level *business objectives*. The vision should align the business and IT strategies.
2. Assess the *current situation* to obtain an accurate, unbiased snapshot of where the organization is right now. This baseline assessment is an analysis of the current position in terms of the business, organization, people, process and technology.
3. Understand and agree on the priorities for improvement based on a deeper development of the principles defined in the vision. The full vision may be years away but this step provides *specific goals and a manageable timeframe*.
4. Detail the Continual Service Improvement plan to achieve higher quality Service provision by *developing and implementing* IT Service Management processes.
5. Verify that *measurements and metrics* are in place to ensure that milestones are achieved, processes compliance is sufficient, and business objectives and priorities were met by the level of service.
6. Finally, the process should ensure that the momentum for quality improvement is maintained by assuring that *changes become embedded* in the organization.

The following is not intended as a complete or prescriptive roadmap for an IT Service Management improvement initiative but as inspiration. Be aware that the initiative can be organized as a project, but that it might turn out in many organizations that the initiative is better anchored in the basis organization.

## 8.1. What is the vision?

No IT Service Management initiative should be started without knowing why. IT Service Management good practices and standards are means to solve specific challenges or exploit opportunities – never ends in themselves.

### Imperatives

Based on the projects CFN People have gained insight into, we've collected a number of imperatives for which ITIL and ISO/IEC 20000 have proved to be

suitable means:

- Low customer or end-user satisfaction
- Lack of control, predictability and transparency
- Unclear roles, responsibilities and expectations
- Quality issues in Service Operation and Transition
- High costs and inefficiency
- Dependency of individuals
- Issues in management of suppliers
- Mergers and acquisitions
- Sourcing considerations
- Regulatory requirements, compliance requirements etc.

### Creating a shared vision

Before launching an IT Service Management improvement initiative the organization therefore needs to assess if ITIL and/or ISO/IEC 20000 are at all relevant to the organization and situation and to agree on a shared vision for the initiative.

This phase might include all or some of the following activities:

Activity	Description
Stakeholder analysis	<ul style="list-style-type: none"> <li>• Perform a stakeholder analysis to identify the stakeholders of IT Service Management as well as their interest and influence.</li> </ul>
Assessment of the relevance of ITIL and ISO/IEC 20000	<ul style="list-style-type: none"> <li>• Identify the organization's challenges and opportunities.</li> <li>• Assess whether ITIL or ISO/IEC 20000 are relevant, appropriate and effective means to resolve the identified challenges and opportunities.</li> </ul>
Collection of knowledge and experience	<ul style="list-style-type: none"> <li>• Gather knowledge on IT Service Management through literature studies, courses, games, dialogue with other organizations or use of external consultants</li> <li>• Gather experiences from like-minded organizations with similar problems, goals, culture, skills and technologies.</li> </ul>
Prioritization of the portfolio of organizational initiatives	<ul style="list-style-type: none"> <li>• Prioritize the IT Service Management improvement initiative compared to other IT-related projects or programs in the organization.</li> </ul>
Creation of a shared vision	<ul style="list-style-type: none"> <li>• Involve the stakeholders to envision the desired future situation and define the high level outcome goals and objectives for the initiative.</li> </ul>

Table 2: Typical activities in a vision phase.

The duration of this phase will vary depending on the organization's situation and IT Service Management maturity.

The initial phase can be initiated by many different stakeholders. It may be customers or users, pushing the IT organization for increased service quality or lower costs. It may be business management who has heard of ITIL and convinces the IT organization to assess whether ITIL is relevant. It may be IT managers who want to achieve some specific objectives in the IT Service Management area or to solve some practical challenges. Or it may be employees who, through their net-

work, previous experience or education, attempt to influence the organization to establish more structured working settings, with clearer roles and responsibilities.

## 8.2. Where are we now?

### Baseline

The purpose of the second phase is to get a better understanding of the current situation and establish a baseline in terms of business, organization, people, process and technology.

Activity	Description
Situation analysis and eventual maturity assessment	<ul style="list-style-type: none"> <li>Analyze strengths, weaknesses, threats and opportunities of the existing IT Service Management resources and capabilities.</li> <li>Possibly supply the analysis with self-evaluation or external evaluation of the capabilities (e.g. maturity assessment or benchmark)</li> </ul>

Table 3: Typical activities in the baseline phase.

This phase typically lasts a month or so and could be centered on a couple of workshops involving the key stakeholders.

Experience shows that IT organizations often forget to involve stakeholders such as users and customers in establishing the basis for an IT Service Management initiative. Experience also shows that lack of stakeholder involvement later backfires, so it is important to involve key stakeholders in the assessment of the IT services and Service Management, as well as in the identification of their needs and future expectations.

Regarding maturity assessments and benchmarks our general experience is that the results of formal evaluations often don't match the amount of resources involved. But maturity assessments and benchmarks may make sense if the organization regularly repeats the evaluations to follow up on service and process improvements.

## 8.3. Where do we want to be?

### Goals and metrics

The purpose of this phase is to understand and agree on the priorities for improvement based on specific outcome goals and performance metrics.

Activity	Description
Goal setting	<ul style="list-style-type: none"> <li>Specify measurable, attainable, realistic and timely (SMART) outcome goals and performance metrics for the IT Service Management initiative based on the identified challenges and opportunities, vision and situation analysis.</li> </ul>
Prioritization and selection of target process areas	<ul style="list-style-type: none"> <li>Prioritize and select target process areas. The target areas might not necessarily include end-to-end processes but could as well include individual sub processes or even process activities from different processes to meet the specified goals and objectives.</li> </ul>

Activity	Description
Organization of the initiative	<ul style="list-style-type: none"> <li>Decide how the initiative should be organized, including sponsoring, governance, management, stakeholder involvement, use of consultancy, supplier involvement, etc.</li> </ul>
Documentation of the basis for the initiative	<ul style="list-style-type: none"> <li>Agree and document the basis for the IT Service Management improvement initiative, including purpose, vision, goals and objectives, a business case including cost and benefit calculation where appropriate, deliverables, risk management, etc.</li> </ul>

Table 4: Typical activities in the goal setting phase.

This phase typically can be completed through a 1 to 2 days management workshop supplied with a couple of weeks of work by a project manager.

From a long-term point of view ideally a business case for the initiative should be developed to quantify the costs engaged in and benefits returned by the initiative. At least, measurable targets should be defined to validate, justify, direct and govern the initiative. These targets can also serve as the basis for selection of IT Service Management process areas to be addressed, as it is important that the practices in scope provides the highest return on investment relative to the specified goals and objectives.

## 8.4. How do we get there?

The purpose of this phase is to detail the improvement plan and to achieve higher quality service provision by actually improving the IT Service Management practices. Experience shows that the most successful IT Service Management improvement initiatives are based on a thorough planning.

### Governance planning

Activity	Description
IT Governance	<ul style="list-style-type: none"> <li>Agree a policy for future adjustments of the organizational structure that supports a process oriented organization.</li> <li>Establish IT governance principles, including responsibility and decision authority related to IT Service Management.</li> </ul>
Process ownership	<ul style="list-style-type: none"> <li>Describe the role and responsibilities of a process owner.</li> <li>Appoint process owners for the affected IT Service Management processes</li> </ul>
Tool support	<ul style="list-style-type: none"> <li>Plan configuration and customization of existing tools to support the improvement of the practices.</li> <li>To the extent that the organization does not have adequate tools to support the improvement of the practices the organization may need to initiate a request for proposal (RfP) to acquire the necessary tools.</li> <li>Determine standards, guidelines and tools for documentation of processes, roles, goals, etc.</li> </ul>

Organizational change management	<ul style="list-style-type: none"> <li>Plan ongoing organizational change management initiatives in the form of communication, involvement, training, events, etc.</li> </ul>
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Table 5: Typical activities in the governance planning phase.

This phase typically can be completed through a well prepared 1 or 2 days management workshop supplied with a couple of weeks of work by a project manager.

The governance settings for improvement initiative should be determined. These include process controls such as process ownership, roles and functions and standards for process documentation as well as principles for tool support, principles for management by objectives, etc.

## Organizational change planning

Changes in attitudes, behavior and culture do not come by itself. Organizational change requires planning in the same way as changes to technology, processes or organizational structures. The planning should therefore include ongoing organizational change management initiatives in the form of communication, involvement, education, training, events, etc. throughout the full life cycle of the initiative.

A good organizational change management plan typically includes the following elements:

- *Communication.* The communication plan should focus on continually repeating why the initiative was initiated in the first place, what the expected results are, what the “future” looks like, how it will be perceived and how the organization will be able to fulfill the vision. Communication can take many forms: Meetings, cascading communication down through the line organization, dialogue between departments, use of intranet, e-mail, etc. etc. The communication should be targeted at both brain and heart, for example through storytelling.
- *Involvement.* Involving stakeholders in the change process and leaving them with real responsibility for the improvement will ensure true ownership and a higher quality in the deliverables. All activities should be thought through to assess which degree of involvement that is appropriate.
- *Education and training.* Employees should understand the “big picture”, to allow them to operate autonomously and make decisions about their own work. Generally it is recommended that key roles such as process owners and process managers are trained at the ITIL Intermediate level, and that one or two in the organization might be certified ITIL Experts. Some organizations have benefitted from offering all affected employees the ITIL Foundation certification. However, one should note that certification by some may be perceived as theoretical and formalistic, and that the certification itself may stand in the way of the purpose of the training. It is more important to understand than to pass! And last but not least, training in the new processes requires planning: The affected employees must be trained in the processes, roles and tools just in time for the use in real life.
- *Performance measurement, monitoring and rewarding.* The organizational change management plan should ensure that the desired outcomes are measured, published and also rewarded if appropriate.

Each of the activities of the organizational change management plan should target

one or more individual stakeholder groups. The plan should be based on the stakeholder analysis from the first phase to ensure that the activities address each of the stakeholder groups, in a way that reflects how the improvement initiative will affect and involve them.

## Improve- ment plan- ning

The next step is to plan the actual improvement of the IT Service Management practices.

The detailed planning of the improvement of the practices is not trivial. The planning must balance several conflicting needs:

- An efficient and short course
- Scarce resources
- High degree of stakeholder involvement
- Time for employees to accept and adapt to new practices.

The IT Service Management practices often affect the IT operations and support organization, which in its essence is not project oriented. The employees are often not accustomed to work autonomously based on work packages and deadlines. Experience shows that the best way to organize an IT Service Management initiative is a sequence of workshops where the actual work is being accomplished.

Such a workshop course can be planned in a way so that only the facilitator and the process owner have “homework” to do between each workshop, while the remaining participants can concentrate on their daily work until the next workshop. In an intense initiative, each participant typically should be allocated at least one day a week while the facilitator and process owner usually must devote more time.

The workshop sequence can be planned in numerous ways, but two approaches are common:

- Process re-engineering
- Continual process improvement

The differences between these approaches are highlighted in the following two sections.

### 8.4.1 Process re-engineering

The assumption underlying the process re-engineering approach is, that reality can be designed and implemented based on good practices and standards. Good practices and standards are ideal models for the reality.

## Design and implement

The process re-engineering approach views process improvement as a phase transition from one stable state to another. The approach starts from a “blank sheet of paper” and is typically organized as a waterfall project with stages such as:

1. Establish a baseline for the process
2. Design the process
3. Configure and customize tools to support the process
4. Implement the process and mitigate risk
5. Measure progress, effectiveness, efficiency, quality and compliance
6. Correct mistakes

A process improvement team works according to a process improvement plan to design, document, and implement a specific process. Each step is centered around

one or two days workshops:

Activity	Description
Establish a process improvement team	<ul style="list-style-type: none"> <li>• Appoint members for the process improvement team</li> <li>• Set up the process improvement team</li> <li>• Introduce the process improvement team to the relevant process and the initiative</li> </ul>
Map current process  (Workshop: 2 days)	<ul style="list-style-type: none"> <li>• Baseline</li> <li>• Break down goals and objectives to process metrics</li> <li>• Identify and plan for quick wins</li> <li>• Analyse process properties</li> <li>• Analyse process strengths, weaknesses, opportunities and threats</li> <li>• Document current process(es)</li> </ul>
Design ideal process  (Workshop: 2 days)	<ul style="list-style-type: none"> <li>• Design the ideal process</li> </ul>
Design optimal process  (Workshop: 2 days)	<ul style="list-style-type: none"> <li>• Identify obstacles and preconditions for the ideal process</li> <li>• Analyse deviations between the ITIL and/or ISO/IEC 20000 process and the proposed ideal process</li> <li>• Design optimal process</li> <li>• Document detailed procedures</li> <li>• Document roles and responsibilities</li> <li>• Identify requirements to process measurements and reporting</li> </ul>
Identify tool requirements  (Workshop: 2 days)	<ul style="list-style-type: none"> <li>• Specify tool requirements</li> <li>• Perform Request for Proposal and acquire tools (if needed)</li> <li>• Configure and/or customize tools</li> <li>• Adjust process to match tools where needed</li> </ul>
Plan implementation  (Workshop: 2 days)	<ul style="list-style-type: none"> <li>• Test process and tools</li> <li>• Plan implementation</li> </ul>
Implementation	<ul style="list-style-type: none"> <li>• Train people</li> <li>• Set up measurement and reporting</li> <li>• Convert data</li> <li>• Go live</li> <li>• Ongoing monitoring of the process to ensure it is followed and appropriate.</li> <li>• Coaching</li> <li>• Auditing</li> <li>• Measure progress, effectiveness, efficiency, quality and compliance</li> <li>• Correct mistakes</li> <li>• Initiate continual process improvement programme</li> </ul>

*Table 6: Typical activities in the improvement phase according to the process re-engineering approach.*

A typical process improvement sequence is estimated to last 18-20 weeks. It typically involves a process improvement team of 5-10 members (including the upcoming process owner). To get access to IT Service Management knowledge and experience the organization might consider involving external consultants as workshop facilitators and process designers.

The implementation step is probably the most critical, but usually also the hardest in this approach. It is far better to introduce 80% perfect processes that are fully

implemented than 100% perfect processes that are only 50% implemented.

The driving forces in the implementation phase are the process owner, the process improvement team and IT management. The implementation phase requires a high degree of presence of both process owners and IT managers, which should be reflected in their calendars.

### 8.4.2 Continual process improvement

The assumption underlying the continual process improvement approach is, that services and service capabilities best are managed and improved through continual iterative cycles. The approach is inspired by lean thinking. Improvement happens when people work and learn together.

In this view good practices and standards might be used as an inspiration for the construction of a social reality, but should never be used as a prescriptive cooking book.

#### Incremental improvements

Solid practices emerge through small simultaneous incremental improvements of the existing processes and sustainable changes are maintained through changes to the process documentation. Process documentation is therefore developed along with the design of the “real world” practices.

Some of the challenges incorporated in this approach are that:

- It's easy to lose sight of the goal
- The duration of the initiative may become so long that the project loses attention in the organization
- The emerging processes do not benefit from “good practice” and therefore becomes too costly and inefficient.

It is therefore important to set specific measurable targets for the initiative and to continually evaluate and adjust accordingly. Furthermore, it is the job of the management to ensure that the outcome is within the expected boundaries of “good practice”.

The continual process improvement approach views process improvement as an ongoing activity. No improvement is too small and improvement must be a natural part of the daily work and culture. Some of the basic principles are:

- Make activities and results visible and known
- Don't tell people specifically how to do their work
- Examine not only the results but also the causes and factors behind
- Provide constant feedback and communication between management and employees
- Think “end-to-end” processes
- Seek the spirit of the law – not only the letter

#### Kaizen board meetings

Based on experience it makes sense to concentrate the improvement activities around weekly or bi-weekly half-day workshops or meetings. These might be organized around a kaizen board to document the emerging process, agree on improvements and to keep track of activities and achievements. The agenda could look like the following:

1. Discussion of changed requirements and needs of the stakeholders and fulfillment of the specified requirements and needs.
2. Follow up on goals and achievements since last meeting.
3. Follow up on agreed activities since last meeting.

4. Brainstorm on issues and opportunities (errors, underperformance, improvement potentials, etc.)
5. Determine causes (cause - effect) and propose solutions and changes to processes, tools and organization.
6. Prioritize and agree specific activities to be implemented before the next meeting.

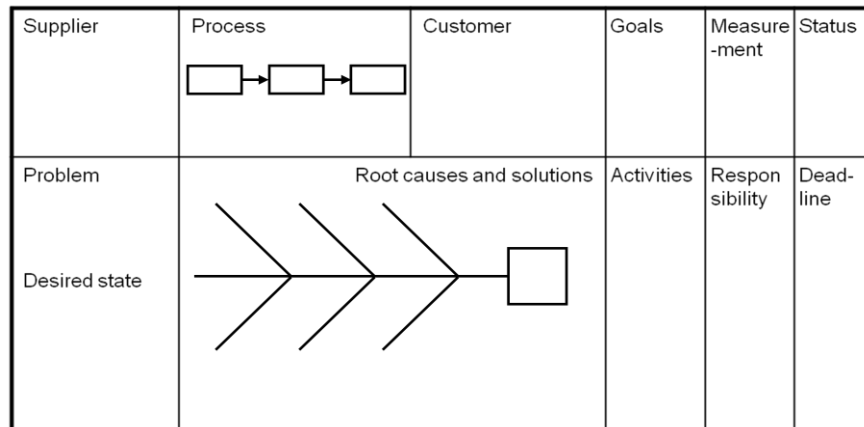


Figure 8: An example of a kaizen board.

A continual process improvement course typically involves a process improvement team of 5-10 members (including the upcoming process owner).

## 8.5. Did we get there?

The purpose of this phase is to ensure that milestones are achieved, process compliance is sufficient, and business objectives and priorities are met by the level of service.

Activity	Description
Measurement, reporting, feedback and correction	<ul style="list-style-type: none"> <li>• Measure the objectives of the initiative (incl. cost / benefit) as well as the individual process metrics.</li> <li>• Report</li> <li>• Follow up on deviations</li> <li>• Incorporate corrections in continuous service improvement program</li> </ul>
Audit	<ul style="list-style-type: none"> <li>• Perform internal or external audits of the process if applicable</li> </ul>
Maturity assessment and benchmarking	<ul style="list-style-type: none"> <li>• Perform process maturity assessment if applicable</li> <li>• Perform process or performance benchmarking with comparable organizations if applicable</li> </ul>

Table 7: Typical activities in the measurement and evaluation phase.

## 8.6. How do we keep the momentum going?

The purpose of this phase is to ensure that the momentum for quality improvement is maintained by assuring that changes become embedded in the organization.

IT Service Management will never be perfect. The organization must continually correct and improve its practices. Part of the return on investment achieved by the IT Service Management improvement initiative, must therefore be fed back into

the organization in terms of resources to improve its capabilities.

Activity	Description
Continual Service Improvement	<ul style="list-style-type: none"> <li>Implementation, monitoring and maintenance of a rolling program for continual service and practice improvement.</li> </ul>
Training of new employees	<ul style="list-style-type: none"> <li>Training of new employees in the organization's IT Service Management practices.</li> <li>Possibly training of new staff in ITIL and ISO/IEC 20000.</li> </ul>
Continual professional development and training of existing employees	<ul style="list-style-type: none"> <li>Training of existing employees in practice changes as well as practices that are not well institutionalized.</li> <li>Possibly training of existing staff in ITIL and ISO/IEC 20000.</li> </ul>

*Table 8: Typical activities in the consolidation and institutionalization phase.*

**It never ends** With the introduction of IT Service Management good practices, IT organizations are embarked on a road that never ends, as good practices always require ongoing improvements to ensure that the IT organization at any given time can satisfy the business needs of tomorrow.

## 9. Literature

### **The official OGC ITIL library**

Service Strategy (ISBN: 9780113310456)

Service Design (ISBN: 9780113310470)

Service Transition (ISBN: 97801133104879)

Service Operation (ISBN: 9780113310463)

Continual Service Improvement (ISBN: 9780113319494)

Official Introduction to the ITIL® Service Lifecycle (ISBN: 9780113310616)

### **Official OGC Complementary Guidance**

Key Element Guide Service Strategy (ISBN: 0113310706)

Key Element Guide Service Design (ISBN: 0113310714)

Key Element Guide Service Transition (ISBN: 0113310722)

Key Element Guide Service Operation (ISBN: 0113310730)

Key Element Guide Continual Service Improvement (ISBN: 0113310749)

Passing your ITIL Foundation Exam - The Official ITIL Foundation Study Aid (ISBN: 9780113312061)

### **ISO/IEC publications**

A Managers Guide to Service Management (ISBN: 0580479226)

ISO/IEC 20000-1:2005 IT Service Management - Part 1: Specification

ISO/IEC 20000-2:2005 IT Service Management - Part 2: Code of practice

ISO/IEC 20000-3:2009 IT Service Management - Part 3: Guidance on scope definition and applicability of ISO/IEC 20000-1

IT Service Management - A Self-assessment Workbook (BIP 0015-2005) (ISBN: 0580479234)

## 10. Links

### *ITIL*

<http://www.itil.com>

<http://www.best-management-practice.com>

<http://www.itil-officialsite.com>

<http://www.itsmf.org>

### *Certification*

<http://www.apmgroup.co.uk>

<http://www.bcs.org>

<http://www.exin-exams.com>

<http://www.dansk-it.dk>

<http://www.dfs.se/dfcertifiering>

<http://www.lcsexams.com>

### *ISO/IEC 20000*

<http://www.iso.org>

<http://www.isoiec20000certification.com>

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## 12. About the author

CFN People was founded in 2004 by Christian Feldbech Nissen and he is still the CEO of the company. Christian is dedicated to IT Service Management and IT Governance and he has more than twenty years of experience in these and related areas – from systems programming to management of larger IT Service Management organizations.



Among others Christian has been the head of 150 employees in the IT Service Management unit at Post Danmark (Royal Danish Mail), and the IT Operations Manager of Danish Payment Systems A/S.

Christian is a widely used speaker at international conferences and seminars. He was the founder of itSMF Denmark and its first chairman. Today he is a member of the itSMF International Publications Executive Sub Committee (IPESC), the itSMF International Editorial Advisory Taskforce (EAT) as well as the board of the Danish Computer Society (DANSK IT).

Christian has contributed to the development of good practices in many ways. He was a member of the ITIL version 3 International Advisory Group (IAG), as well as mentor on the ITIL version 3 “Service Operation” book. He is now a member of the APMG ITIL version 3 Senior Exam Panel. And last but not least, he is the author of “Passing your ITIL Foundation Exam - The Official ITIL Foundation Study Aid” from TSO.

Christian is a lecturer at the IT University of Copenhagen teaching IT Service Management at the Master in IT Management. He is Fellow at the Institute of IT Service Management (FISM), IT Service Manager (ITIL V2 Manager), ITIL V3 Expert, accredited ITIL trainer (ISEB and Dansk IT), certified ISO/IEC 20000 consultant, CGEIT, CISM, TOGAF 9 Certified, COBIT Certified, accredited COBIT trainer, PRINCE2 Foundation, Datanom and Graduate Diploma in Business Administration (HD)