INTRODUCING ITSM AND ITIL®
A GUIDE TO IT SERVICE MANAGEMENT
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This guide provides an introduction to IT Service Management and the techniques used in the delivery of IT services, as documented within the IT Infrastructure Library (ITIL®). IT Service Management and ITIL® first evolved in the late 1980s and have now become firmly established as the ‘de facto’ industry guidelines for the provision of quality IT services. They are used by thousands of IT organisations worldwide and are based on current ‘best practice’ as used by some of the leading in-house and outsourced IT service provider organisations.

IT Service Management provides a framework for the governance of IT, and focuses on the continual measurement and improvement of the quality of IT service delivered, from both a business and customer perspective. This has resulted in a number of key benefits being obtained by those organisations deploying the associated techniques and processes. These benefits include:

- Increased user and customer satisfaction with IT services;
- Improved service availability, directly leading to increased business profits and revenue;
- Financial savings from reduced rework, lost time, improved resource management and usage;
- Improved time to market for new products and services;
- Improved decision making and reduced risk.

This guide is intended to give a brief non-technical introduction to the subject of IT Service Management and its value to organisations of all sizes. It covers the main areas and topics included within ITIL® explaining the need for them and the benefits they can potentially deliver. The guide is intended for business managers and executives involved in, or with an interest in, the use of effective IT systems and services within their organisation.
INTRODUCTION

Business organisations cannot exist in today’s world without ‘information’. Information has become the key asset and differentiator for many organisations in today’s competitive business environment. The quality, accuracy, availability and security of an organisation’s information are key to its success within the current, highly competitive marketplace.

The flow of information throughout an organisation is like the blood pumping around the human body. It provides the essential ingredients for the efficient and effective operation of the organisation as a whole. Information Technology (IT) is a critical component of the information supply chain and often it is the only component. In today’s society, IT provides the ‘technology’ to collect, process and store vast amounts of data. The people working within organisations are not capable of analysing these vast amounts of data. However, the most successful organisations are those that are able to analyse this data and identify the ‘key information’ necessary to the successful operation of the organisation, ensuring that the right people have access to the right information. This is the concept of ‘information logistics’. It is about ensuring that the people within an organisation are provided with:

• The right information;
• At the right time;
• Of the right quality and accuracy;
• In the right format.

The better the quality and flow of information within an organisation, generally, the better the quality of management decisions made within that organisation and the more effective the organisation. IT has a major role to play in enabling the effective deployment and availability of accurate and timely information to all business units and customers of IT services throughout the organisation.
The dependence of businesses and organisations on their IT services and systems has increased dramatically over the last few years. Many organisations cannot operate for any length of time without their IT services and the information they provide.

Quality IT services do not happen by accident. They need to be carefully designed and planned to meet the business needs of the organisation within which they operate. This can only be achieved by developing close alignment between IT and the business with effective relationships and by recognising that the quality of IT service can always be improved.

The need for IT services should be clearly and carefully defined, documented and agreed with the business and customers in terms of the business outcomes required. The service solution can then be designed, developed and implemented to meet those desired business outcomes. However, this process must be an iterative one as the business outcomes may change during the design and development of the service and, therefore, the service solution needs to change also to ensure that the revised business outcomes can be realised.
The business outcomes required from the proposed service solution should be defined from two business perspectives:

- Firstly, the level of utility or functionality required by the customers and users of the service in terms of what it does, its ‘fit for purpose’;
- Secondly, the level of warranty or guarantee required from the service in terms of its performance and delivery, its ‘fit for use’.

It is important that the service solution provided meets both of these expectations of the users and customers.

Complex relationships are involved in the delivery of IT services. Some organisations’ IT services are provided by another part of the organisation (Internal Service Providers), some use the services of External Service Providers or ‘outsourcers’, whilst others use a combination of the two methods. It is important for an organisation to know whether it obtains effective ‘value for money’ from its IT services, irrespective of the method used for IT service provision. This is the key question facing many businesses today. For some organisations IT is seen as a cost overhead and a large one at that. For the more forward thinking organisation IT is seen as profit centre providing cost effective solutions generating real business value.

How does an organisation know whether it gets value from its IT services? This can be determined by asking a few key questions:

- Are IT impacts and business impacts known, quantified, documented and aligned?
- Are IT risks consistent with business and corporate risks and are they known, quantified, documented and aligned?
- Is IT security aligned and consistent with business and corporate security?
- Are IT recovery and continuity plans aligned and consistent with business continuity plans, have they been tested and are they consistent with business security, impact and risk?
• Is IT governance aligned with business and corporate governance and are appropriate controls, processes, responsibilities in place, agreed, documented and enforced?

• Are IT service quality and IT costs comparable to market benchmarks?

• How much do IT services cost as a whole and individually? What business benefit and value does the organisation obtain from them? Are they cost effective or could better value be obtained elsewhere?

If the answers to the above questions are not readily available then it is unlikely that the current IT services are delivering real business value.
THE DRIVERS FOR QUALITY IN IT

Because so many organisations recognise the dependence of their business on IT, increasing importance is being placed on the quality of IT services and their governance. Quality in IT service is a delicate balance between having the availability, speed, agility and flexibility within IT service provision, whilst maintaining an appropriate level of control and governance within the management processes.

Legal and regulatory requirements

There have been several high profile cases that have highlighted the inadequacies of corporate IT governance within organisations, including examples such as Enron and Worldcom. Events such as these caused a number of codes and regulations to be produced on corporate governance, including:

- The Sarbanes-Oxley Act [http://www.soxlaw.com](http://www.soxlaw.com)
- The EU 8th Directive [http://www.8th-company-law-directive.com](http://www.8th-company-law-directive.com)
- Basle II [http://www.bis.org/publ/bcbs107.htm](http://www.bis.org/publ/bcbs107.htm)

The ‘four P’s’ – people, processes, products and partners

The drive for enhanced corporate governance has placed increasing demands on IT for appropriate IT governance, including the segregation of duties, adequate audit trails and appropriate controls. Therefore there is a need for IT to have effective governance while developing cost effective use of the resources and capabilities of the IT organisation. This means the efficient use and integration of the ‘Four Ps used within IT service provision activities:

![Figure 2: The four Ps](http://www.itemsld.com)
• The **people**: the staff involved within the IT organisation and their roles and responsibilities;

• The **processes**: the way in which IT services are planned, designed, changed, operated and improved;

• The **products** and technology: the infrastructure, environment, applications, data and management systems used to provide the IT services;

• The **partners**, suppliers and vendors: other organisations involved in assisting with IT service provision activities.

IT Service Management is a set of specialised organisational capabilities providing value to customers and the business in the form of IT services. The goal of IT Service Management is to cost effectively provide the agreed level and quality of service required by the business and continually improve the level of service quality delivered. A code of ‘best practice’ for IT Service Management has been produced and documented within the IT Infrastructure Library (ITIL®) to assist organisations to do this effectively. These ‘best practice’ guidelines have been collated from the experiences and knowledge of many of the market leading IT service provider organisations.

One of the main capabilities required within the Service Management processes is the ability to measure the overall level of service quality and the effectiveness and efficiency of the processes:

*If you can’t measure it, you can’t manage it.*

All of the management processes should therefore include measurement, feedback, review and improvement as part of a ‘closed loop’ system. This measurement system will then support the overall quality management activity of measurement, review and improvement of the overall quality of IT service.
WHAT ARE IT SERVICE MANAGEMENT AND ITIL?

IT Service Management has developed over the last twenty years and is now firmly established globally in the IT industry, within all types of IT organisations. ITIL, the IT Infrastructure Library, is now universally accepted worldwide as the set of ‘best practice’ guidelines on IT Service Management. After its initial publication in 1989 by the Office of Government Commerce (OGC) and its early use in the UK and Netherlands, a second version of ITIL was published as a set of revised books between 2000 and 2004. This second version became universally accepted and is now used in numerous countries by thousands of organisations as the basis for effective IT service provision.

The ITIL guidelines

ITIL provides a comprehensive reference set of ‘best’ practice guidelines for IT Service Management. This set of guidelines represents hundreds of years of combined experience and knowledge from many of the leading IT internal and external IT service provider organisations. In the recently published (June 2007) ITIL version 3, this knowledge and experience is consolidated into five core books. These five core books all emphasise the need for continual alignment of IT with the business and cover the complete service lifecycle.

The five core books are described in detail in Appendix B of this guide.
Applicability of ITIL to organisations of different sizes

As ITIL has been developed around the service lifecycle and the associated processes, it is applicable to any service provider organisation. It is based on the experience of many organisations and provides a set of ‘best practices’ obtained from the best elements of each organisation. Together they provide a set of comprehensive, ‘common sense’ practices that should be adopted in principle by an IT Service Provider organisation and adapted to fit their own situation based on their own individual combination of business, culture, size, environment, people, geography and infrastructure (‘Adopt and Adapt’). Because appropriate processes are required irrespective of the size of an organisation, the guidance can be adapted to fit all, from Small to Medium Enterprises (SMEs) through to large multi-national organisations. It is purely the approach and the implementation that differ, but for all organisations it provides guidelines for the development of an effective and appropriate management system based on a hierarchical framework of policies, processes and procedures.

In large multi-national organisations many people will be focused on IT Service Management and its improvement. However, in SME organisations the whole of IT Service Management frequently becomes the responsibility of a single person, often as only part of their overall set of roles and responsibilities. It is important, therefore, that the activities and processes implemented within the organisation are suitable and appropriate for the size, complexity and needs of the organisation and its business. What is appropriate for global organisations is not appropriate for SME organisations and businesses. Unfortunately all too often processes and activities are either ‘over engineered’, ‘too bureaucratic’ or ‘inadequate’. It is essential that processes are suitable, adequate, ‘fit for purpose’ and above all effective. This is probably the hardest challenge facing all IT service provider organisations, but if appropriate processes can be implemented, then they rapidly become accepted as ‘everyone’s everyday job’ and become part of the culture of the organisation. This means that quality and its measurement and improvement becomes an inherent part of the day-to-day operation of the IT service provider organisation at all levels, from technical staff through to senior management.

Associated frameworks and standards

There are many other related frameworks and standards that are associated with IT systems and services, but ITIL is the single set of ‘best practice’
guidelines that actually provides information on how to implement effective IT Service Management processes. The other principally related and associated frameworks and guidance are:

- **ISO/IEC 20000: IT Service Management Standard**
  ISO/IEC 20000 is an IT Service Management standard published by the International Organisation for Standardisation (ISO). It provides a set of objectives and controls for the adoption of an integrated process approach to the effective delivery of IT services to meet the needs of the business. This standard can be used as a set of objectives to be used for implementation or improvement of Service Management processes, or as the basis for the assessment of the capability of those processes.

  ISO/IEC 27001 is an Information Security Management standard published by the International Organisation for Standardisation (ISO). It lists a set of security control objectives and recommends a set of specific security controls that should be implemented for effective security management. This standard can be used as a set of objectives to be used for implementation or improvement of Security Management processes, or as the basis for the assessment of the capability of those processes.

  ISO 9001 is a set of general Quality Management standards published by ISO, applicable to all organisations, and is not specific to IT service providers. It specifies the processes necessary to meet customer and regulatory requirements while improving customer satisfaction and continual improvement in performance.

- **COBIT®: Control Objectives for IT and related technology**
  The IT Governance Institute (ITGI) has designed and created COBIT, which provides a control framework for effective IT governance. The guidance within COBIT focuses more on measurement and control, rather than on the implementation and execution of the processes involved. It can, therefore, be used to assist with the setting of measurements and objectives for Service Management implementation and improvement projects and programmes.

- **PRINCE 2®: Projects in Controlled Environments**
  PRINCE2 is a process-based approach for project management, providing an easily tailored and scaleable method for managing all types of projects. The
 method is one of the de facto standards for project management in the UK and is adopted worldwide. PRINCE2 provides a sound basis for the successful programme and project management of the implementation of new or changed service solutions.

The use of these standards and frameworks by an IT service provider organisation and the inter-relationships between them and ITIL are illustrated in the following diagram:

Figure 4: The relationships between ITIL and other frameworks

The Service Management guidelines contained within ITIL assist organisations with the design of effective management processes and provide suggestions and advice on how these processes should be implemented. The standards drive the development of the processes by detailing what the processes should do in order to achieve a level of effective management capability and control appropriate for the organisation.
The business benefits

The success of implementing IT Service Management within an organisation is entirely dependent upon securing commitment and resources from senior IT and business management. It is impossible to achieve sustained success without it. Therefore one of the earliest tasks facing an IT organisation when embarking on an IT Service Management implementation or improvement programme or project is to sell the business benefits of what will be delivered. This can be difficult to do if few of the ITIL processes are in place. In order to demonstrate business benefits some basic measurements and metrics need to be in place, such as:

- The amount of service downtime or ‘unavailability’ in total and per service per month;
- The amount of rework required on new or changed ‘service solutions’;
- The number and cost of late, poor and/or failed projects;
- The amount of time spent in reactive ‘fire fighting’ activities caused by functional or operational service issues;
- The amount of time and resources wasted in duplicated or redundant activity;
- The amount of time and resources wasted because of a lack of accurate service information.

For example, one of the services provided within a Financial Services organisation may be a Financial Information Service. If this system is unavailable on average for 30 minutes every month, then the cost of service unavailability can be calculated as follows:

Assuming the average employee cost is £40 per hour and the average number of users of the service at any one point in time is 5,000 then the monthly cost of ‘service unavailability’ can be calculated as follows:

Total service unavailability = downtime (in hours) x no. of users (in user service user hours)

= 0.5 x 5,000 = 2,500 hours

Cost of service unavailability = 2,500 x £40 = £ 100,000
This does make some basic assumptions:

- That employees cannot do anything else while the service is unavailable;
- That no external customers are impacted as a result of loss of service;
- That no external revenue is lost as a result of loss of service.

If assumption 1 is not true, then the cost of ‘service unavailability’ will decrease; however if either assumption 2 or 3 are not true then the cost could significantly increase. For the sake of argument let us assume that the assumptions are valid. If by implementing greater resilience within the service the ‘service unavailability’ can be reduced by half, then this will bring about a £50,000 reduction in the cost of ‘service unavailability’ for each month. If the cost of providing greater service resilience is £150,000 then this improved resilience will pay for itself within three months. It will also hopefully lead to other less tangible, but no less important, improvements in increased user and customer satisfaction and improved business perception and relationships.

**Identifying IT service quality metrics**

The availability of services may not be the key IT service quality metric for every business. So each IT service provider organisation should identify the IT service quality metrics for their customers and business. These metrics should then become the driver for the improvement process. All improvement initiatives should be prioritised in terms of their impact on business value and service quality. Those with the biggest business impact should be scheduled first, although often there are some ‘quick wins’ that can also be achieved rapidly to demonstrate the effectiveness and the overall business value of the Service Management activities. Before starting on any of this activity, a ‘baseline’ of the current situation should be established. This can be achieved in many ways, by external assessment, benchmarking, internal review or audit. It should also involve some means of measuring where an organisation currently is with regard to its overall management maturity and capability. This can be done either on a process by process basis or through an overall assessment of management capability:

Initially within organisations that have not focused on Service Management activities, the processes are poorly documented and enforced and the management capability can be said to be largely ‘reactive’, focused mainly
on ‘fire fighting’ activities, moving from crisis to crisis. As processes and management capability develop, processes become more consistent and comprehensive, with events and data being analysed rather than purely accumulated. Thus more effective decisions can be taken, based on early measurements and data. The management then becomes more ‘active’. As the processes and management develop, more of the data is analysed and more effective information is produced. This enables management and processes to identify relationships and trends within the information and to obtain greater knowledge, to become ‘proactive’ and make even better informed decisions. The increased knowledge obtained by both management and the processes involved can be then be used to develop wisdom and ‘predict’ future events and to plan preventative actions and even ‘pre-emptive’ actions.

This process of evolving maturity within Service Management activities enables IT to become ever more effective and efficient within IT service provision activities. But how do the business and IT recognise and demonstrate this? If the IT service quality metrics are agreed between the business and IT and represent business value and Return on Investment (ROI), they can be used to demonstrate the real business payback over a period of time. Use of such metrics also helps IT to recognise business priorities and for all IT personnel to focus on those activities that will deliver the greatest business benefit. Many organisations are now taking a further step of certification against ISO/IEC 20000, the IT Service Management international standard. This involves an organisation committing to the external audit of its people and processes to demonstrate commitment to continual improvement and the delivery of increased business value. These activities are best approached as a collaborative initiative between the business and IT to ensure continued alignment of priority and focus.
The hardest thing of all with regard to implementing or improving IT Service Management within an organisation is deciding where to start. There is no universal answer to this question. The first action is to gain senior management commitment to the overall approach. This will involve justifying the approach and articulating the benefits of such an activity to the organisation concerned. This is not easy, but help is at hand. Many IT service providers have already completed this activity within their own organisations. The trouble is how do you get to meet and talk to them? The ideal places to meet and talk to people that have already done it are:

- The IT Service Management Forum (itSMF: www.itsmf.co.uk). This is a not-for-profit organisation dedicated to the on-going development and promotion of IT Service Management ‘best practice’. It regularly organises seminars, conferences and workshops where people interested in Service Management can network and discuss topics of mutual interest;

- The Institute of Service Management (ISM: www.iosm.com). The Institute exists in order to provide guidance and support to individuals throughout the IT Service Management community and again regularly hosts seminars and workshops to discuss personnel issues associated with the development of individuals’ skills and knowledge of Service Management issues.

There are also many specialist organisations that have experience in assisting businesses with the implementation and deployment of IT Service Management. Such specialist organisations are members of the itSMF and further information can be obtained from the itSMF UK chapter on 0118 918 6500 or by visiting their website at www.itsmf.co.uk
SUMMARY

With the ever increasing demands from businesses for accurate and timely information, IT is becoming an increasingly valuable centre for the delivery of real business value. IT needs to recognise this increased dependency of the business on its technology systems and services and respond accordingly. Many businesses make considerable financial investment in the IT services, systems and assets and are now expecting to see demonstrable Return on Investment (ROI) and realisation of true business benefit. This, together with the other corporate drivers for increased governance, improved business value and reduced IT costs, has put increasing demands on IT for the delivery of quality IT services.

IT Service Management provides the focus on business alignment, priority and risk, and the ITIL framework and guidelines provide a consolidation of industry ‘best practice’ within IT Service Management. Why reinvent the wheel? A lot of effort, experience, mistakes and learning have been put into ITIL, which can save IT service provider organisations considerable time and money. So each service provider should adopt the ITIL framework and adapt it to fit their own unique combination of circumstances.

If information flow and accuracy are critical to the success of the business, then IT service providers should recognise this and model themselves as either a business (external service provider) or a business within a business (internal service provider) and focus on the information accuracy and flows within IT.

ITIL gives guidelines on appropriate and effective processes, structures and systems that will provide IT with accurate and timely management information. This will enable the IT service provider to learn from past experience and develop the knowledge and wisdom necessary to make informed decisions aligned to business needs, irrespective of the size and nature of the organisation.
One of the hardest activities for many IT service provider organisations is the definition and agreement of what constitutes an IT service. Each organisation needs to agree this definition with its customers and business. This requires the common understanding of what constitutes an IT service.

Within ITIL an IT service is defined as: a means of delivering value to customers by facilitating outcomes based on the use of IT to support a business process.

An IT service consists of many components:

- **Service**: the IT service itself that is being delivered to the customers and the business by the IT service provider, e.g. billing, sales, finance (the functionality or utility);
- **SLAs/SLRs**: the Service Level Agreements or Service Level Requirements are documents agreed with the customers that specify the level, scope and quality of the service to be provided (the guarantee or warranty);
- **Technology**: the resources, assets and systems necessary to deliver the required level of service including the infrastructure, environment, data/information and applications;
- **Support services**: any services that are necessary to support the operation of the delivered IT services, e.g. a shared service or network service;
- **OLAs and contracts**: the Operational Level Agreements and contracts are the underpinning agreements necessary to deliver the service to the quality agreed within the SLAs;
- **Support teams**: any internal support team providing second or third line support for any of the components required to provide the service, e.g. the servers, networks, Unix;
- **Suppliers or partners**: any external third parties necessary to provide third or fourth line support for any of the components required to provide the service, e.g. networks, hardware, software.

Using this model enables IT service provider organisations to develop the capability of their IT Service Management processes into the area of Business Service Management. This is an approach to the management of IT services
that considers the business processes supported and the business value provided. This allows IT service providers to be closely aligned with the needs and priorities of the businesses they serve. This approach also enables the IT service provider to exploit the concept of shared services. This concept of shared services is more than just the centralisation or consolidation of similar activities in one location. Shared services means running these services like a business and delivering services to internal customers effectively and efficiently in line with competitive alternatives by exploring opportunities to reuse and extend the use of such services in more than one area of the business.
The five core books of ITIL cover each stage of the complete service lifecycle from the initial definition and analysis of the business requirements in Service Strategy and Service Design, through migration into the live environment within Service Transition, to its live operation and improvement in Service Operation and Continual Service Improvement:

- **Service Strategy**: provides guidance on the design, development and implementation of Service Management, as both an organisational capability and a strategic asset. It includes material on market development, internal and external service assets, the service portfolio and implementation of strategy through the service lifecycle. This strategy book also contains information on the following processes:
  - Service Portfolio Management;
  - Demand Management;
  - Financial Management;
  - Business Relationships.

- **Service Design**: provides guidance on the design and development of services and Service Management processes and systems, and covers topics including design principles and methods and the design and development of Service Management capabilities. This design book also contains information on the following processes:
  - Service Catalogue Management;
  - Service Level Management;
  - Capacity Management;
  - Availability Management;
  - IT Service Continuity Management;
  - Information Security Management;
  - Supplier Management.

- **Service Transition**: provides guidance on the transition of new or changed services into the live operation and deals with the complexity of managing changes to services and Service Management processes. This book on transition also contains information on the following processes:
- Transition Planning;
- Change Management;
- Service Asset and Configuration Management;
- Release and Deployment;
- Service Validation and Testing;
- Evaluation;
- Knowledge Management.

• **Service Operation:** provides guidance on achieving effectiveness and efficiency in the delivery and support of live services, including information on maintaining stability of live operational environments, using effective processes and both reactive and proactive tools. This operations book also contains information on the following processes:
  - Incident Management;
  - Problem Management;
  - Event Management;
  - Request Fulfilment;
  - Access Management.

• **Continual Service Improvement:** provides guidance on maintaining and enhancing customer value by establishing an environment of continual improvement, based on quality management, change management and capability improvement practices. This book on improvement also contains information on the following processes:
  - Service Improvement;
  - Service Reporting;
  - Service Measurement.

There is also a sixth book, scheduled for publication in August 2007, called ‘The Official Introduction to the ITIL Service Lifecycle’, which provides an overview of all of the books and how they integrate together within the context of the service lifecycle.
Together these books provide a comprehensive and integrated framework of guidelines on the Service Management processes and ‘best practice’ required within IT to provide quality IT services that are aligned to business needs. IT Service Management is a set of specialised capabilities that combine and integrate resources or assets into the delivery of valuable IT services. Without this activity they would remain a set of disparate resources or, at best, a poorly developed service. However, Service Management is more than just a set of capabilities; it is also a professional practice providing extensive guidance and education on industry best practice and also formal standards and certification. ITIL Service Management also provides a framework for the integration and overall workflow through the service lifecycle.

The backbone of the current version of ITIL is provided by the Service Knowledge Management System (SKMS) and the Service Portfolio. These two related systems are used as both input and output by all stages in the lifecycle and provide IT with all of its key information for managing and integrating the activities within each stage of the service lifecycle.

Just like a business which is dependent upon the quality and flow of its information, an IT service provider is totally dependent upon its information on IT services. The SKMS and the Service Portfolio are the ‘life blood’ of an IT service provider and are invaluable in assisting them to provide quality, business aligned IT services. The Service Portfolio provides a set of information about all of the services provided by IT and their current status. This information is used to manage each service and its journey through the service lifecycle, from a set of requirements to a live operational service and subsequently into retirement. The SKMS contains all of the information relating to the design, development, transition, operation and improvement of services. It consists of a set of related databases which together provide a comprehensive and consistent set of information on all aspects of the IT service provider’s operation.

**Service Strategy**

This provides guidance on interfaces and relationships with the business, ensuring that IT strategy is aligned to business strategy. It also recommends that requirements in terms of business outcomes should be identified and documented for input to the subsequent stages of the lifecycle. Service Strategy
activities should also provide information on the overall IT strategies, policies, resources and constraints, which will govern the way in which all subsequent stages of the lifecycle actually function. All of this information should be recorded in the Service Knowledge Management System (SKMS) and the Service Portfolio and used to drive each of the subsequent stages of the lifecycle.

**Service Design**

This stage of the lifecycle takes all of the information from Service Strategy and, together with those business requirements that have been approved for implementation, designs the most appropriate new or changed ‘service solutions’ that will meet the desired business outcomes. These ‘service solutions’ must also fit within the documented strategies, policies and constraints from Service Strategy and also be consistent with the architectures, management systems, processes and measurements systems maintained by Service Design activities. For each new or changed ‘service solution’ a Service Design Package (SDP) is produced and stored in the SKMS. The SDP contains all of the information necessary to take the new or changed service successfully through the remaining stages of its lifecycle, including a set of Service Acceptance Criteria (SAC) to be achieved before transitioning the service into the live environment.

**Service Transition**

This stage takes the SDP and uses the information to plan the transition of the new or changed service into the live environment. Within the Service Transition stage the new or changed service is thoroughly assessed, tested and evaluated before the deployment of the service is carefully planned and implemented to minimise the impact of the release on the business. An essential activity of this stage is the accumulation, storage and transfer of all of the information and knowledge on the new or changed service to the SKMS, so that the services can be effectively managed during their operation within the live environment.
Service Operation
The next stage ensures the protection of the live environment and the live services. It provides a stable basis for the delivery of quality IT services. Operations, however, is a delicate balance between protection of the live services, meeting their quality targets and meeting the ever-changing requirements of the business. This balance should be dictated by business priorities. Some businesses require a greater emphasis on stability, whereas others require a greater emphasis on the need for agility and change. Service Operation must provide that business oriented balance between stability and agility.

Continual Service Improvement
The final stage establishes a culture of continual improvement. The whole IT organisation should recognise that no matter how good they are there is always room for improvement. By formalising the processes and establishing a framework for measuring, managing and implementing improvements everyone within the IT Service Provider is focused on the measurement of quality, customer satisfaction and their continual improvement.
QUALITY AND CONTINUAL IMPROVEMENT

Defining IT service quality
The measurement and continual improvement of service quality is the one of the key principles of IT Service Management. Therefore the definition and agreement of what constitutes ‘service quality’ is critical to the success of all Service Management activity. The definition of IT service quality needs to be driven by the business with the agreement of IT and should be focused on a few key metrics that can be used to measure the quality of IT service delivered to the business. These metrics should be based on the vision of the business and IT, and can be used to measure the success of the service provider in meeting its agreed IT objectives and vision.

Selecting the right metrics
These key metrics will be used to change the behaviour, culture and performance of IT staff and processes and their activities. So if these key metrics are not the correct metrics then all IT Service Management people, processes and activities will be driven in the wrong direction. Great care should, therefore, be taken in the selection of these metrics, to ensure that the right key metrics are used to drive the changes in culture required to produce the desired outcomes. An example of a set of ‘key metrics’ could be:

- Overall service availability/unavailability;
- Customer satisfaction;
- The number or associated cost of late or failed projects or changes;
- The amount or wasted, redundant or duplicated effort;
- The cost of service provision.
The preceding diagram illustrates the basic continual improvement process, based around the ‘Plan, Do, Check, Act’ cycle of Demming. This cycle has then been extended in this diagram to the eight boxes shown to include the additional steps to review and improve the measurement systems also.

Once the key metrics have been agreed, a baseline measurement should be taken of these metrics in order to determine the current situation. However, it is often the case that IT does not have the capability to measure some of the key metrics. Then those measurements and metrics that can be measured should be measured and the capability to measure the other key metrics should be developed. The interpretation and analysis of these measurements and metrics should then provide the basis for the identification and prioritisation of all improvement actions, based on the ‘Data, Information, Knowledge, Wisdom’ model discussed earlier. Don’t reinvent the wheel, wherever possible use industry ‘best practice’ and adapt it to fit the specific business environment and requirements of the organisation. This overall Service Improvement Programme and continual process of improvement should be regularly discussed and reviewed with the business, to ensure that it remains in alignment with business needs.
IT: Information Technology: all of the hardware, software, networks, facilities, etc. that are required to develop, test, deliver, monitor, control or support IT services.

IT Service: A service provided to one or more customers, based on the use of IT to support a business process.

IT Service Provider: A service provider, providing IT services to internal or external customers.

OLA: Operational Level Agreement is an agreement between an IT service provider and another part of the organisation, which defines goods or services to be provided and the responsibilities of both parties.

Process: A structured set of activities, taking one or more defined inputs to produce a defined set of outputs.

SAC: Service Acceptance Criteria, a set of criteria used to ensure that an IT service meets its functionality and quality requirements and that the IT service provider is ready to operate the new or changed service.

SDP: Service Design Package, produced for each new or changed service, defining all aspects of an IT service and its requirements through each stage of its lifecycle, including the SAC.

SKMS: The Service Knowledge Management System (SKMS) incorporates a set of tools and databases that are used to manage knowledge and information.

SLA: Service Level Agreement, an agreement between an IT service provider and a customer which describes the service, the service level targets and specifies the responsibilities of the service provider and customer.

SLR: Service Level Requirement, a customer requirement for an aspect of a service which is based on business objectives.

Service Lifecycle: The service lifecycle approach to Service Management considers the strategy, design, transition, operation and continual improvement of services, emphasising the need for control and coordination of all aspects.

Service Management: Service Management is a set of specialised organisational capabilities for providing value to customers in the form of services.

Service Portfolio: The complete set of services provided by the service provider. The Service Portfolio is used to manage the entire lifecycle of all services.
COMPLEMENTARY BOOKS AND RELATED STANDARDS

Related standards and complementary books

- ITIL Service Strategy
- ITIL Service Design
- ITIL Service Transition
- ITIL Service Operations
- ITIL Continual Service Improvement
- COBIT: Control Objectives for Information and related Technology
- ITIL: The IT Infrastructure Library
- PRINCE 2: Projects in Controlled Environments

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ACKNOWLEDGEMENTS AND USEFUL WEBSITES

Acknowledgements
To be advised.

Useful websites

- www.itSMF.com – the home website of the itSMF, used to provide information on Service Management for its members and for the industry as a whole.

- www.isoiec20000certification.com – a website also run by the itSMF, containing information on the ISO/IEC 20000 Certification Scheme.

- www.ogc.gov.uk – the home website of the OGC, containing details of all of their guidance and publications.

- www.iso.org – the home website of the International Standards Organisation, containing details and information of all International standards.

- www.bsi-global.com – the home website of The British Standards Institute (BSI), containing details and information of all British standards.

- www.best-management-practice.co.uk – the OGC official umbrella website, providing easy access to OGC best practice guidance.


- www.itil-officialsite.com – the main link into ITIL information from the OGC.
THE AUTHOR

Colin Rudd

Colin has been working in the IT industry for over 35 years and is internationally recognised as a leading authority on Service Management. He has been heavily involved in the development of IT Infrastructure Library (ITIL®) since the early 1990’s. Colin was involved as a lead author in the development of ITIL® Versions 1, 2 and 3 and was responsible for the design of the Version 2 framework. Colin now works for his own company, IT Enterprise Management Services Ltd., and is actively involved assisting a number of major clients with the improvement of their Service Management processes and solutions. He has delivered training and consultancy all over the world and has presented at many International conferences on all aspects of Service Management. He has also written many publications, books, articles and white papers on all aspects of IT Service Management.

He was former President of the Institute of IT Service Management, former member of the itSMF Management Board, and is a leading Service Management examiner and Chair of the itSMF Standards Management Board, in which he has been a driving force for the establishment of the Service Management certification schemes, particularly ISO/IEC 20000. He is an active member of many standards and Service Management groups and workgroups responsible for the improvement of Service Management practices. Colin’s contribution to the Service Management industry was recognised in 2002, with the presentation of the itSMF’s ‘Paul Rappaport’ lifetime achievement award.

IT Service Management Forum

The itSMF is the only internationally recognised and independent organisation whose sole focus is on the on-going development and promotion of IT Service Management ‘best practice’, standards and qualifications. The forum for its 14,000 UK members provides an option to discuss ‘best practice’, while its regional meetings, special interest groups and annual conference in November present invaluable networking opportunities with like-minded people.

Formed in the UK in 1991, there are now itSMF official chapters in 44 countries. Further information can be found at www.itsmf.co.uk.