Chapter

1

Service Management as a Practice

THE FOLLOWING ITIL FOUNDATION EXAM TOPICS ARE COVERED IN THIS CHAPTER:

- ✓ Describe the concept of best practices in the public domain

- ✓ Describe and explain why ITIL is successful

- ✓ Define and explain the concept of a service

- ✓ Define and explain the concept of internal and external customers

- ✓ Define and explain the concept of internal and external services

- ✓ Define and explain the concept of service management

- ✓ Define and explain the concept of IT service management

- ✓ Define and explain the concept of stakeholders in service management

- ✓ Define processes and functions

- ✓ Explain the process model and the characteristics of processes

- ✓ Describe the structure of the ITIL service lifecycle

- ✓ Generic concepts and definitions:
  - ▪ Service provider
  - ▪ Supplier
  - ▪ Types of services
  - ▪ Outcomes
  - ▪ Customers and users

- ✓ Understand how service automation assists with expediting service management processes

This chapter introduces the concept of service management and explores a number of key areas that enable the management of services in an operational environment. It also introduces the ITIL framework, which is a source of best practices in service management.

The ITIL framework consists of five publications, which detail the content of the service lifecycle. Each publication covers a lifecycle stage, and each lifecycle stage shows how processes are used to improve service management in an organization. In this chapter, you will explore the basic concepts of the ITIL framework and learn about the terminology used throughout the lifecycle.

This chapter contains a number of key terms that will be important for your understanding of the framework and that also frequently occur in examination questions.

Best-Practice Approaches and ITIL

ITIL is recognized worldwide as a best-practice approach for delivering IT services and IT service management. It focuses on the processes, functions, and capabilities required to support IT services in business.

Organizations need to remain competitive in the marketplace and can compare themselves to peers to identify where they can gain a competitive advantage. Commonly, they look to industry best practices to ensure they are using the best available methods and techniques to deliver a service. A number of best-practice approaches to IT are available, and organizations can use them as a benchmark to ensure that they are delivering IT services efficiently. It is important to recognize that these approaches must enable IT service providers to meet the needs of the customer, while remaining cost-effective and within the customer's budget.

As shown in Figure 1.1, there are many sources of service management best practices.

FIGURE 1.1 Sources of service management best practices
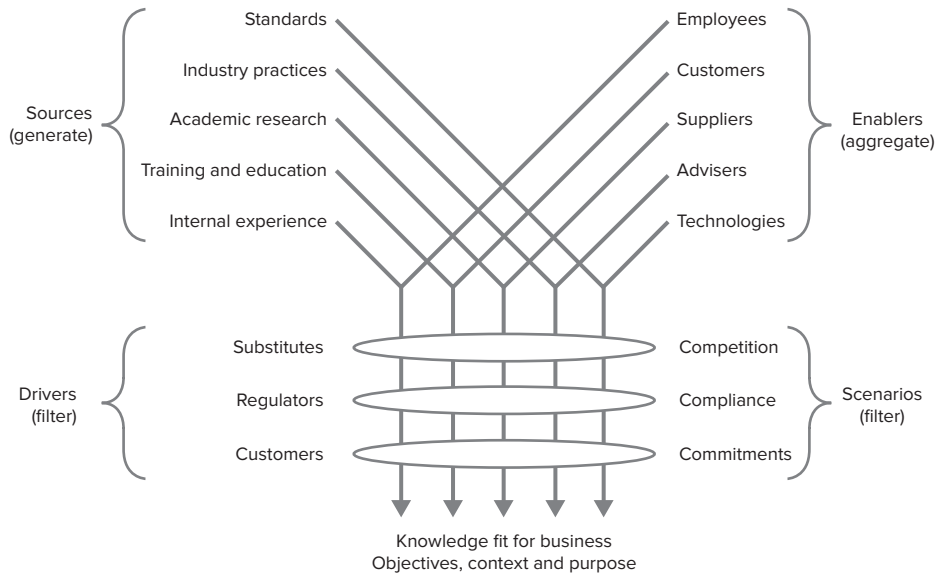
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The sources of service management best practices include the following:

- Proprietary knowledge/internal experience
  - This is often deeply embedded in an organization. Although this is valuable, it is very difficult to share with another organization. It is also often undocumented, held as knowledge by the individual.
  - Proprietary knowledge is specific to the organization and can be so customized as to be ineffective in another organization, unless it requires the same conditions.
  - The sharing of this knowledge may be constrained by ownership, and it may be subject to legal or financial negotiations.
- Standards/industry practices
  - This is preferable to organizations when compared to proprietary knowledge. Standards and commonly used industry practices are captured, documented, and made available publicly.
  - Standards also have the advantage of being verified in a variety of situations and environments, rather than a single organization's experience. The standards are vetted and reviewed by a wide range of partners, competitors, and suppliers.
  - Commonly used standards include the following: ITIL, Lean, Six Sigma, COBIT, CMMI, Prince2, PMBOK, ISO 9000, ISO/IEC 20000, and ISO/IEC 27001.

- Training and education/academic research
  - Information and education on publicly available standards and research let organizations educate their staff in a consistent manner. It is easier for organizations to acquire knowledge through the marketplace, because levels of skill and qualification can be standardized.

Using standards and publicly available knowledge enables organizations to build on their proprietary knowledge and follow best practices for their organizational requirements in service management.

These standards have to be filtered through the constraints that affect all organizations, such as regulatory requirements, compliance, and financial concerns.

Why Is ITIL So Successful?

For a while after its origins in the 1980s, ITIL was the best-kept secret in the IT sector; however, the framework has become the recognized approach for service management excellence.

The main reason for its widespread adoption is that it is based on a practical approach to service management, utilizing what works in real organizations. The guiding principle behind the framework is to ensure that all efforts have a common goal: to deliver IT services that support the requirements of the business by delivering value to the organization.

This section explores the key factors for ITIL's success:

Vendor Neutrality   The ITIL framework is not based on a specific technology platform or industry type. It is not tied to any specific vendors; it is owned by the U.K. government and has no associations to any commercial proprietary practices or solutions. As a consequence, the guidance it provides for service management is applicable across any industry sector or enterprise. This allows its guidance to be globally adopted by any organization.

Nonprescriptive   From the beginning of its development, ITIL has recommended the approach of "adopt and adapt" to the guidance it offers. The true benefit of its application is in the adaptation to meet the specific requirements for value creation in an individual organization. The guidance contains time-tested, robust, and mature practices that can be utilized by any service organization. It is relevant to public and private sectors, internal and external service providers, and organizations of any size. It is not dependent on the technological environment, and it provides pragmatic guidance applicable and adaptable to any situation.

Best Practice   ITIL delivers the accumulated knowledge and guidance from the best sources of service management practices across the world.

The strength of the ITIL framework, and a key to its success, is that it describes practices that enable organizations to deliver benefits, return on investment, and value on investment through a sustained approach. The following are some of the factors that motivate organizations to adopt the framework:

- Creation of value for customers through the services provided
- The emphasis on integration with the business, ensuring that the business strategy and customer requirements are reflected in the service management strategy
- The ability to measure, monitor, and optimize IT services and the performance of service providers
- Management of the investment for IT services and budgetary controls
- Risk management in alignment with the business
- Knowledge management across the service management enterprise
- The delivery of services effectively and efficiently, through the management of the resources and capabilities required
- The adoption of a standard approach to service management across the organization
- A change of culture as part of the approach to service management, developing and maturing the processes to deliver effective IT services
- Improvement in the interaction and relationship between the service provider and their customers
- The ability to coordinate the delivery of goods and services and to be able to optimize and reduce costs

Services, Customers, and Stakeholders

To understand the service lifecycle, it is necessary to start with the concept of a *service*. The framework defines a service thusly:

> Services are a means of delivering value to customers, by facilitating the outcomes customers want to achieve, without the ownership of specific costs and risks.

NOTE Before exploring the concept further, it is important to ensure that you clearly understand this simple statement. Think of it in terms of an actual service, such as email. Email provides the ability to create a written communication in an electronic format, which is a desirable outcome for a business. But the user of the email service does not want to understand or manage the complexity of the infrastructure that supports the email service (network, server, client and application software, user accounts, and so on). The customer recognizes that the service has a cost and that this cost covers the "hidden" elements of the provision, but the ownership of these costs and associated risks in delivery are managed by the service provider, not the customer.

The services facilitate the desired outcomes by enhancing the performance of the tasks associated with the delivery of service, and reducing the effect of constraints, such as technology limitations, funding, or regulation. By enhancing performance and reducing constraint, the desired *outcome* is more likely to be achieved. This is applicable whether the service is enhancing the performance of a task required by the business or whether it is performing the task itself.

This is a recurring pattern in the delivery of a wide range of services. Understanding these patterns of service provision enables us to manage the delivery more effectively, in terms of complexity, cost, flexibility, and variety. Simply put, it means you can apply the same strategic approach to the management of a wide variety of services and make only minor adjustments to meet the specific requirements of each business. This is the core of ITIL's approach to service management.

ITIL defines the term *outcome* thus:

> The result of carrying out an activity, following a process, or delivering an IT service etc. The term is used to refer to intended results, as well as to actual results.

By focusing on the desired outcome from a customer perspective and managing services according to the delivery of the outcome, you are able to work closer with your organization, achieving IT and business integration, rather than IT and business alignment. It is only when you fully understand the required outcomes that you can deliver your services effectively.

ITIL defines an *IT service* thusly:

> A service provided by an IT service provider. An IT service is made up of a combination of information technology, people and processes. A customer-facing IT service directly supports the business processes of one or more customers and its service level targets should be defined in a service level agreement. Other IT services, called supporting services, are not directly used by the business but are required by the service provider to deliver customer-facing services.

Customer satisfaction with the services you provide is an important aspect of the delivery. Satisfaction with a service will consist of a number of factors, including the cost and value of the service. Customers do not want to have accountability for or ownership of the associated costs and risks, but the costs and risks must still be managed. Service costs will be reflected in financial terms such as return on investment (ROI) and total cost of ownership (TCO). Customers will be exposed only to the overall costs of the service provision but will use this as part of the basis for judging the value of the service being provided and the outcomes that are achieved.

Identifying Types of Service

Services can be grouped together to the value they provide for the customers.

Core Services   These are services that deliver the basic outcomes required by one or more customers. They are services that provide the value the customer wants and for which they

are willing to pay. It is usually this set of core services that provides the capability for the business-critical functions to take place. An example that is often considered to be a core service is email. We will continue this example in the other service groups.

Enabling Services   These are services that are needed to ensure that the core service can be delivered successfully. These services may not be immediately visible to the customer and may not even be perceived as services in their own right. But without them, the core services cannot be delivered. Using our email core service example, the supporting services would cover the infrastructure and network to enable the service to work effectively.

Enhancing Services   These are additional services that enhance the core service, making it more attractive or appealing to the customer. They are not essential to the delivery of the core services but are extra factors that make the offerings more attractive to the customer. Using our core service email example, an enhancing service associated to the core might be the ability to access the email service remotely, through a web-based portal or the use of smart phone access to email. It is not an essential element of the core service functionality but adds something that provides value and customer satisfaction.

Understanding the Customer, Internal and External

Although it may not be relevant in your particular organization, for a great percentage of businesses, there are two types of customers. ITIL differentiates between internal and external customers, because there is a difference between those customers who work within the same organization and those working for a separate organization.

Internal Customers   These are people who work in the same organization as the service provider. For example, the HR department is an internal customer of the IT department because it uses IT services. It is likely that the service provider is funded through the internal accounting system, rather than as a revenue stream, although obviously this is entirely dependent on the financial strategy within the organization. Funding internally can sometimes cause challenges in managing the budget for IT services, because it may be hard to demonstrate the direct benefit to the business in terms of revenue.

External Customers   These are people who are not employed by the organization or are employed by a separate legal entity. External customers pay for services under agreement through a legally binding contract. In this situation, funding is direct, rather than through the internal accounting systems, and is managed through the specified contractual obligations.

There is often a requirement for internal IT service providers to deal directly with external customers through online services that are part of a standard offering. Organizations need to ensure that the strategies they adopt for IT service provision reflect these requirements and understand the implications for funding and commitment to customers.

Whatever the customer relationship, either internal or external, it is important to ensure that the service is delivered according to the agreed service definition, under the service level agreements in place.

Differentiating Between Internal and External Services

Just as there are internal and external customers, ITIL identifies internal and external services, as Figure 1.2 illustrates.

FIGURE 1.2   Internal and external services
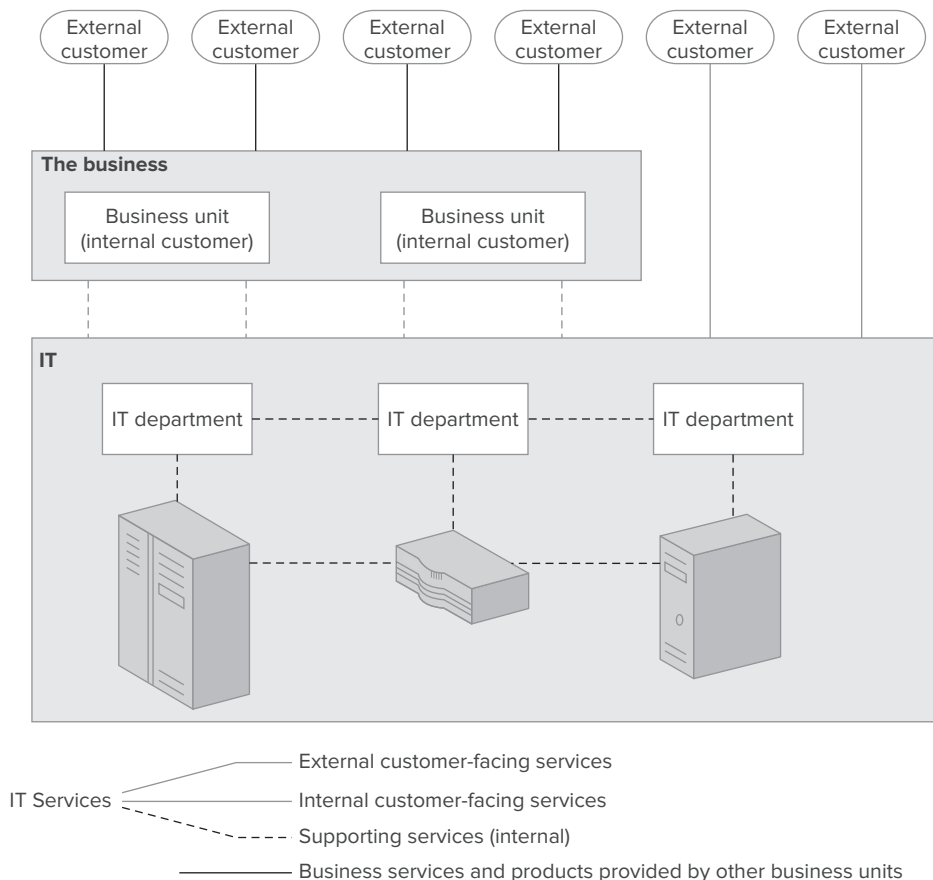
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Internal services are delivered between departments or business units within the same organization. As you would expect, external services are those delivered to an external customer.

As you can see in Figure 1.2, some services are provided internally, and others externally, but all are being provided by the same service provider.

There are sound reasons for differentiating between these two types of service. Remember, the definition of *service* includes the phrase "facilitating outcomes customers want to achieve." You need to be able to differentiate between services that support an internal activity and those that deliver business outcomes. It is often the case that an internal service needs to be linked to an external service before you can fully appreciate its contribution to a business outcome. This will have an impact on the funding and management of the services.

As we have identified, an IT service is a service that is provided to one or more customers by an IT service provider. Services are made up of the combination of technology, people, and processes and are based on the use of information technology and support the customer's business processes.

Table 1.1 shows the differentiation between internal and external services via an extract in the ITIL Service Strategy publication (specifically, Table 3.4, "Types of IT Service").

TABLE 1.1   Extract from Table 3.4 "Types of IT service"

Type of service	Definition	Description
Supporting service, sometimes called an infrastructure service, although they are often broader than just infrastructure	A service that is not directly used by the business, but is required by the IT service provider so they can provide other IT services – for example, directory services, naming services, the network or communication services.	Supporting services are defined to allow IT teams to identify the interdependencies between IT components. They will also show how these components are used to deliver internal and external customer-facing services.
		Supporting services enable IT processes and services, but are not directly visible to the customer.
		Some IT teams view recipients of supporting services as 'customers'. Although this promotes good service quality, it is also misleading. Supporting services only exist to be combined with other supporting services to produce customer-facing services. If they cannot, they are of no value and their existence should be questioned.
		There can be no service level agreements for supporting services as they are all internal to the same department. Instead, the performance of supporting services should be managed using operational level agreements.

TABLE 1.1 Extract from Table 3.4 "Types of IT service" *(continued)*

Type of service	Definition	Description
		It should be noted that the diagram only refers to services originating inside the organization. In some cases supporting services are sourced from outside the organization. In these cases they are managed in the same way as other supporting services, but using underpinning contracts rather than operational level agreements.
Internal customer-facing service	An IT service that directly supports a business process managed by another business unit – for example, sales reporting service, enterprise resource management.	An internal customer-facing service is identified and defined by the business. If it cannot be perceived by the business as a service, then it is probably a supporting service.
		Internal customer-facing services rely on an integrated set of supporting services, although these are often not seen or understood by the customer or user.
		Internal customer-facing services are managed according to service level agreements.
External customer-facing service	An IT service that is directly provided by IT to an external customer – for example, internet access at an airport.	An external customer-facing service is available to external customers and is offered to meet business objectives defined in the organization's strategy.
		An external customer-facing IT service is also a business service in its own right, since it is used to conduct the business of the organization with external customers.
		Depending on the strategy of the organization, the service is either provided free of charge (many government agencies provide services to the public for no fee), or it is billed directly to the person or organization using the service. In other cases, the service may be provided free to the customer, but paid for by a third party, such as an advertiser or sponsor. These services are managed using a contract – even a simple online agreement constitutes a contract of sale and purchase with terms and conditions.

Who Are the Stakeholders in Service Management?

ITIL classifies stakeholders as those individuals or groups that have an interest in an organization, service, or project and are potentially interested or engaged in the activities, resources, targets, or deliverables from service management.

There may be many different stakeholders in a service provider organization, including the functions, groups, and teams that deliver a service. There are also other stakeholders external to the service provider organization; they include the following types:

Customers   These are the individuals or groups that buy goods or services. They are responsible for agreeing on and defining the targets in the service level agreements with the IT service provider. They are the people within the organization who have financial authority over the services provided by the IT service provider and may be the key signatories for the service level agreement.

As you have already seen in this section, customers may be internal to the organization or external, dependent on whether they work within the organization or outside of it.

In organizations where the business model is to directly cross charge for IT services, it is easy to understand the concept of the customer. It becomes more complicated when the IT funding is managed through the accounting system and there is no direct connection between the IT services received and the cost for them. The definition of a customer implies that customers have financial authority over the agreements associated to the service. Often one of the most challenging elements of the process service level management is identifying and working with the appropriate customers. Service level management is discussed in Chapter 5, "Service Level Management: Aligning IT with Business Requirements."

Users   This term is used to refer to those individuals or groups that use the service on a day-to-day basis. They are distinct from customers, because they have no overall authority over the service, and customers may not use the service directly.

A key challenge for service management is to ensure that the users are well informed about the items that concern them. An example is keeping users informed of the progress of incidents. Another challenge is to ensure that users are adequately informed of the agreements that have been made in service level management. This can be achieved by using the service catalog, which provides information about the operational services. This will be discussed in Chapter 6, "The Other Service Design Processes."

Suppliers   Suppliers are classed as third parties who have responsibility for the supply of goods or services that are required to deliver IT services. There are many examples of suppliers, such as hardware or software vendors, network providers, and so on.

The engagement of suppliers is now a critical part of most IT service providers organizations, making sure that they perform according to the specification of the contract. This is managed through the supplier management process, which will be discussed in Chapter 6, "The Other Service Design Processes."

Understanding the Concepts of Service Management and IT Service Management

This section explores the key concepts of service management and IT service management.

Service Management

In today's business environment, IT has become considered a "utility" for a successful organization; in much the same way as you expect water to flow from a tap, your users expect their IT services to "flow" from your screens and devices. The technology has now improved to the point where this expectation is not only realistic but also achievable. The management of the technology to deliver the service is crucial to the success of your organization's required business outcomes. But the technology is not the sole element that makes up the services, which is why *service management* is more than technology management.

ITIL provides this definition for the concept of *service management*:

> A set of specialized organizational capabilities for providing value to customers in the form of services.

This is the definition provided for a *service provider*:

> An organization supplying services to one or more internal or external customers.

The organization of the *resources* and *capabilities* and their use in delivering valuable services is the core of service management. Resources and capabilities are important concepts in the way service management delivers value to customers. They are fully defined in Chapter 2, "Understanding Service Strategy." An IT service provider must understand the needs and requirements of the business and meet them in a cost-effective and efficient manner through the management of the resources and capabilities. The more mature the service management capability and organization, the greater the ability to deliver high-quality services.

Service management also provides a professional approach through the use of a wide body of knowledge, experience, and skills captured from a global community of organizations and individuals in all industry sectors. Within this there are formal schemes available for the education and training of staff so that organizations wanting to adopt this approach are able to benefit from industry-wide best practices.

The concept of service management did not originate with IT but with traditional service businesses, such as banks, hotels, and airlines. As IT organizations have adopted a service-oriented approach to the management of IT infrastructure, applications, and processes, the practice of service management has grown. Increasingly, the support for business operations and the solutions to business problems are delivered in the form of services. As outsourcing and shared service solutions have increased in popularity with

organizations, so have the number of IT service provider organizations, including internal IT service providers. This has brought new challenges in the management of services across a broad range of providers but has improved the best practices applied through service management.

IT Service Management

Now let's consider the role that IT has in service management, by looking at the definition for *IT service management (ITSM)* and *IT service provider.*

> IT service management (ITSM): The implementation and management of quality IT services that meet the needs of the business. IT service management is performed by IT service providers through an appropriate mix of people, process and information technology.

> IT service provider: A service provider that provides IT services to internal or external customers.

Every IT department should consider itself an IT service provider and adopt the principles and practices of service management to deliver IT services.

ITSM should be carried out efficiently and effectively, managing IT provision by understanding the business perspective of the value that IT brings.

This requires a good relationship between the IT service provider and its customers, achievable by the customer receiving the services it requires at an affordable cost and acceptable level of quality and performance. The IT service provider needs to work out how to provide services that achieve the balance of these three areas, while communicating effectively with the customer if there are any constraints that may prevent successful delivery.

ITSM recommends that this relationship and the service requirements of business need, cost, and performance are documented in a *service level agreement (SLA).* The SLA should describe the service, the targets for performance, and the responsibilities of the customer and the IT service provider. An agreement may cover many IT services or customers. We will cover the details of service level agreements in Chapter 5.

IT Service Provider Types

ITIL suggests that there are three main types of service provider. The different types will share most aspects of service management, but other aspects such as the contracts, revenue, and strategy, as well as the customer types, will vary and take on different meanings according to the service provider type. This is how ITIL defines the three provider types:

Type I: Internal Service Provider   The internal service provider is located within the business unit it supports. There may be several Type I service providers within a single organization. An example of this is the support offered to the individual faculties of a university or within an organization with multiple sites with local support teams.

Type II: Shared Services Unit   This is an internal service provider that provides shared IT services to more than one business unit. An example of this is the centralized IT department for a large multidivisional organization.

Type III: External Service Provider   This type of provider provides IT services to external customers. An example of this is an outsourcing partner, who would deliver their services to customers outside of the provider organization.

You will often find that ITSM concepts are described according to only one of these service provider types, and there may be an inference that only one service provider type exists in an organization.

Reality is much more complicated, and there may be a mix of provider types at work in your own organization. There is guidance in the ITIL Service Strategy core publication on how to manage these complex relationships. For your foundation course, we do not cover the details of this management, but it is covered in the next level of qualification, as part of the intermediate courses.

Understanding Processes and Functions

It is important to differentiate between processes and functions. This section explores the concepts of processes and functions, as well as the definitions provided by the framework for each.

Processes in the Service Lifecycle

ITIL provides defines a *process* thusly:

> A process is a structured set of activities designed to accomplish a specific objective. A process takes one or more defined inputs and turns them into defined outputs.

Processes are a vital component in the service management approach. The ITIL framework is based on processes, because the mechanisms used to ensure services are delivered according to a controlled set of activities, enabling the delivery of a specific outcome.

Within a process, we are able to define actions, dependencies, and sequence. A process that is well defined and managed can improve productivity across the organization or function, carrying out the activity identified as part of the process.

The Process Model

Figure 1.3 illustrates the process model. This is a key figure in your understanding of the service lifecycle because each process you consider should follow this model.

FIGURE 1.3   Process model
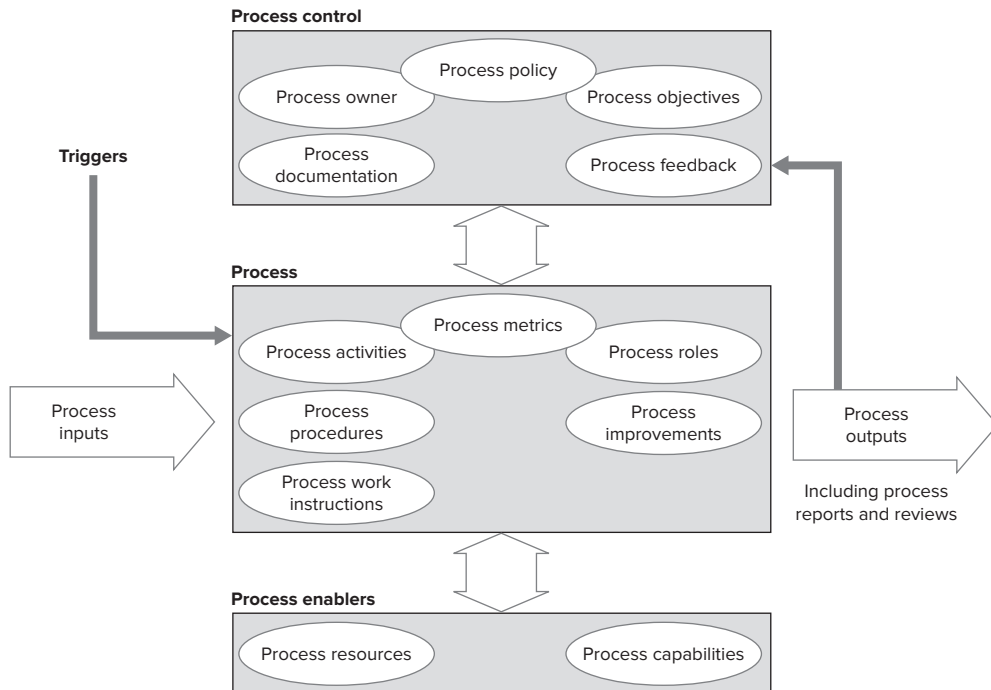
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In the process model you can see three distinct sections. The upper section of Figure 1.3 shows the required controls for the process to take place.

A process is organized around a set of objectives, which drive the main outputs from the process. The objectives will include the process measurements (metrics) and other outputs, such as the required performance reports and process improvement actions.

In the central section of Figure 1.3, you can see the input, output, and activities. The output produced by the process should meet the requirements as specified by the business objectives. The business objectives will set out the standard or "norm" that is required for the output. Once the output has been confirmed as achieving this requirement, the process can be declared as effective. It can then be repeated, measured, and therefore managed to achieve the desired outcomes. If the activities are carried out utilizing the minimum resources, we can also declare the process to be efficient.

The inputs to the process are the data or information that is used by the process, and this may, of course, be the output from another process.

There will be a trigger for the initiation of the process or an activity within the process. There are many different mechanisms that can act as triggers, such as the arrival of an

input or other event or an output from another process. This might be a failure report triggering the event management or incident management process.

Within the process, it is possible to establish the roles, responsibilities, tools, and management controls that are required in order to deliver the outputs to the required norm. The process may also define other elements, such as any required activities, work instructions, standards, and policies that are required to ensure the process will be carried out successfully.

Once a process has been defined and the inputs, outputs, and controls have been agreed on, it should be documented and controlled. The process can be repeated and managed once the controls are established, and metrics and measures can be incorporated into the controls. These measures and metrics will then be able to provide feedback and improvement in the form of regular management reports.

Supporting the process are the enablers: the resources and capabilities. We will cover these enablers in Chapter 2, "Understanding Service Strategy," as part of the key concepts covered by the service strategy lifecycle stage.

There are many examples of processes both in the IT environment and outside of IT.

Consider something as simple as making a cake. The inputs are the ingredients, the activities are the method, and the output is, of course, the cake.

Decisions need to be made on the type of ingredients based on the required 'outcome' or how many slices of cake are required. It must also satisfy the stakeholders in terms of quality.

In order to bake the cake, the correct resources and capabilities must be employed: the right number of cooks with the correct equipment and with the right skills, for baking.

The trigger for the process is the need for the cake, perhaps a special occasion like a birthday.

When this is translated into the IT environment, remember all of these factors must be considered in order to deliver a successful process.

Fixing a failed item of infrastructure requires the correct resources, capabilities, inputs and activities in order to deliver the required outcome.

Process Characteristics

Some common characteristics apply to all processes:

Measurability   It is important to ensure that all processes can be measured in a relevant manner. Processes are based on the performance of activities to deliver a specific output, so the measurement should be performance based.

Different perspectives for the activities will require different measurement. For example, managers will typically be more interested in the measurement of cost, quality, and other variables of the performance, while those engaged in carrying out the performance are likely to be more concerned with duration and productivity.

Specific Results   Processes exist to deliver a specific result, or else they should not be taking place. This result must be individually accountable and identifiable for it to have any measurable worth or value.

Customers/Stakeholders   Every process should deliver its primary result for the benefit of a customer or stakeholder. The process should meet the expectation of the recipient, regardless of whether they are an internal or external customer or IT or business stakeholder.

Responds to a Trigger   It makes no difference if the process is repeated or continual; the actions should be traceable to a specific trigger.

Organizing for Service Management

Obviously there is no single approach that can be adopted by all organizations for the structure of the service provider. The individual organization will have to tailor the structure and resources applied to service management according to constraints of cost, size, and needs of the business. However, there is a requirement to have a basic functional capability, no matter what size or other organizational constraints you have.

Functions

A *function* is defined by ITIL as a team or group of people and the other resources or tools that are used to carry out a process or process activities.

Commonly, in larger organizations, functions are broken down and carried out by individuals, groups, or teams with specific or specialist skills appropriate to the tasks. An obvious example of this is the service desk. In smaller organizations, there may be fewer specialist groups or teams, and one team may carry out a number of functions; for example, the service desk is incorporated into the wider technical support team.

It is important to define the roles and responsibilities required to carry out the processes and activities for each service lifecycle stage. Within the functions, you need to ensure you allocate the appropriate roles to individuals and that the structure of our teams, groups, or functions are managed to meet the service management requirements.

ITIL provides a set of defined roles:

Group   A number of people who are performing similar activities. Groups are not normally viewed as formal structures but are used to ensure processes are carried out in the same way across a number of different areas. An example is a group of people engaged in problem or incident management.

Team   A more formal structure for those working together with a common objective. Teams are very useful for collaboration and can be located in the same place or multiple locations. Examples are as diverse as a project team, incident resolution teams, or application development teams.

Departments   Formal organizational structures within an organization. There is usually a hierarchical structure that allows for the day-to-day management of staff in the department.

Division   A number of departments that have been grouped together, often self-contained within an organization.

Chapter 10, "Delivering the Service: The Service Operation Lifecycle Stage," explores the detail of the basic functions that ITIL identifies as part of the service lifecycle. Briefly, these functions are as follows:

Service Desk   Single point of contact for users into the IT service provider

Technical Management   Expertise and management of the technological infrastructure

Application Management   Expertise and management of the applications

IT Operations Management   Day-to-day management of the infrastructure and applications, including operation control and facilities management

> **NOTE**   These functions are described in the Service Operation core publication, but all the service lifecycle stages make use of them.

Service Automation

Now that we've covered the function as a group or team, we'll cover the tools that can be applied to assist with service management.

Automation can be extremely beneficial to the delivery of services and improve the performance of processes and service assets. This can be applied in all areas, for example, management, organization, people, process, knowledge, and information. Applications are a means of automation in their own right, but even these can be enhanced by additional technology where they need to be shared across people and process assets. There has been such an increase in the capability of technologies (examples such as artificial intelligence, machine learning, and the massive increase in rich media technology), which has increased the potential of software-based service tools to handle a wider variety of tasks.

Improving the automated capability of your service provision offers advantages in several areas:

Capacity Management   Automation for capacity management enables a more rapid response to demand variations without human intervention and allows ease of management for a 24-hour service without an increase in staffing costs.

Measurement   Automation allows for a consistent measurement and identification of improvement, without the human variable. This can also show where the human element of knowledge, skills, and experience are providing benefits.

Optimization   More efficient optimization activities are often outside the human capability for processing data and scheduling and routing.

Knowledge Capture   System-driven knowledge management reduces the reliance on individual knowledge and the difficulties of sharing proprietary knowledge.

Internal IT service providers often find it challenging to address the funding requirements for introducing suitable automation, but when applied appropriately, there should be benefits. Reducing costs and risks by managing complexity in a consistent manner will improve the quality of service.

There are a number of areas throughout service management where automation can provide significant benefit:

- Design and modeling. Modeling tools can assist with projection and forecasting.

- Service catalog. Implementing an automated service catalog can enable the capture of demand for services, by recording interactions from the business.

- Pattern recognition and analysis. Understanding patterns of business activity allows you to manage demand.

- Classification, prioritization, and routing. Incident management can benefit from an automated approach based on the targets in service level agreements.

- Detection and monitoring. Service quality and speed to restore service can be improved through automated tools for availability management.

- Routine service requests can also be handled with some level of automation.

To ensure that automation fulfills the promises of benefit realization, it is necessary to do some preparation, or there may be more problems created than are solved. First simplify the service processes prior to automation. This will help reduce the variations in the process, which may impede successful automation.

Simplification should ensure that you retain the outcome of the process; it is important to make sure that there are no necessary steps or information removed from the process during this activity.

Then you need to clarify the exact steps that are to be undertaken and automated. This includes inputs, dependencies, and interactions that are critical for the process to succeed. Once this has been established, the automation should be tested, and then if corrections are required, they can be applied.

Self-service technology can be extremely beneficial, but it does need to ensure that the users have the best possible experience, with the minimum requirement for interaction with the system.

The only tasks and interactions that should be automated, or considered for automation, are those that have a recognizable recurring pattern and clear inputs, activities, resources, and outputs.

By utilizing the data and information you capture from automation, you can perform service analysis to understand where enhancements can be achieved. In this way, you will be able to improve service quality.

Introducing the Service Lifecycle

In Figure 1.4 you can see the ITIL core, which represents the five ITIL service lifecycle publications. The publications explore the processes and concepts for each lifecycle stage and how they interact with each other. Each lifecycle stage feeds into the others, with the stage of continual service improvement interacting with all of the others. Each of the publications provides guidance on a particular aspect of service management and builds to form an integrated approach.

FIGURE 1.4   The ITIL service lifecycle
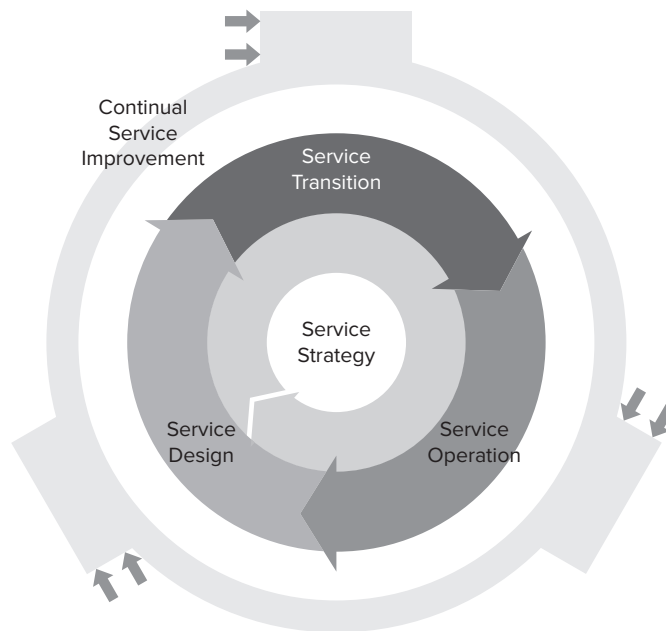
Based on Cabinet Office ITIL material. Reproduced under license from the Cabinet Office.

The following are the five ITIL publications:

Service Strategy   This covers the core of the lifecycle, setting the strategic approach for service management activities.

Service Design   This provides guidance on the design and development of services according to the requirements of the customer and the strategic approach.

Service Transition   This provides guidance on the transition of new or changed services into the live environment, including the development and improvement of capabilities.

Service Operation   This covers the management of the day-to-day delivery of services, including optimizing effectiveness and efficiency.

Continual Service Improvement   This provides guidance on the maintenance of value creation and continual alignment to changing business needs.

We review each stage of the service lifecycle in the following chapters.

In each chapter, we explore aspects of the concepts and processes in each lifecycle stage:

- Chapters 2 and 3: Service Strategy
- Chapters 4, 5, 6, and 7: Service Design
- Chapters 8 and 9: Service Transition
- Chapters 10, 11, and 12: Service Operation
- Chapter 13: Continual Service Improvement

Each chapter considers the capabilities that have a direct effect on the service provider's performance and delivers structure to the service management enterprise by describing principles and processes for best practices.

ITIL guidance can and should be adapted to support your specific organizational environment and strategy. The core publications are designed to provide a flexible approach that can be incorporated into any size or type of environment.

To assist with the adaptation and tailoring your approach to its use, the core is supported by complementary publications. These are often specific to a particular industry sector and help with the provision of context when utilizing the generic guidance. Complementary publications are available from a variety of sources, including online resources and documentation.

Summary

This chapter set out the basic concepts that support service management. It provided an initial introduction to the ITIL terminology, the service lifecycle, and the process model. The remaining chapters will follow the service lifecycle and cover each of the stages of the lifecycle in turn. We will explore each in more detail and review the processes that make up the lifecycle stages.

In this chapter, you studied the following concepts:

- Best practices in the public domain
- Why ITIL is successful
- Internal and external customers
- Internal and external services
- Stakeholders in service management
- The ITIL process model and the characteristics of processes
- Processes and functions
- Service automation
- The structure of the service lifecycle

Exam Essentials

Understand that ITIL is a source of best practices.   Best practices are available in a variety of sources, and ITIL is one of them. ITIL should be used in association with other best-practice approaches. Standards and industry practices should be used to complement proprietary knowledge to achieve best practices for your organizational requirements.

Understand why ITIL is successful.   The guidance that exists in the framework is based on a pragmatic approach of "adopt and adapt." The key factors that make it successful are the nonprescriptive, vendor-neutral best practices that form the core service lifecycle publications.

Be able to recall the definitions of the key terms used in this chapter.   The most important terms to remember are service, IT service, outcome, service management, IT service management, and IT service provider.

Understand that services may be grouped together.   Services are grouped into core (business-critical services), enabling (services that support the delivery of core services), and enhancing (services that add value to the core services).

Understand the different types of customer that ITIL defines.   Internal customers are based in the same organization as the service provider. External customers are based outside of the organization of the service provider.

Be able to differentiate between the three service provider types.   The three types are Type I (internal, within individual business units), Type II (shared, providing services shared across a number of business units), and Type III (external, providing services to external customers).

Understand the difference between the stakeholder types.   The stakeholder types are customers who are individuals or groups that buy goods or services, users who use the services on a daily basis, and suppliers who are third parties who provide services that support or enable IT services.

Be able to name the characteristics of processes.   The characteristics of processes are that they are measureable, respond to a trigger, deliver a specific result, and deliver to a customer or stakeholder.

Understand that automation is used to help improve efficiency and effectiveness. Although it is not explicitly referred to in every process or lifecycle stage, automation and the use of technology are key enablers for process enhancement and improvements.

Be able to name the core stages of the service lifecycle.   The core lifecycle stages are service strategy, service design, service transition, service operation, and continual service improvement.

Understand that the ITIL core publications are supported by complementary guidance.   This guidance may be industry-specific or provide context to the adoption of service management best practices.

Review Questions

You can find the answers in Appendix A.

1. Which of the following is *not* a recognized source of IT best practices according to ITIL?

   A. Proprietary knowledge

   B. Industry standards

   C. Training

   D. Auditors

2. Which of the following is a reason an organization might want to adopt ITIL best practices?

   A. Advice on the technical specification of infrastructure

   B. Advice on business strategy

   C. Development of programming techniques

   D. Management of IT services and budgetary controls

3. Which of the following is the correct description of a service?

   A. Restores normal operations as soon as possible

   B. Delivers value to customers, without ownership of specific costs and risks

   C. Investigates the underlying cause of issues

   D. Monitors targets according to contractual obligations

4. What is this? "The result of carrying out an activity, following a process, or delivering an IT service."

   A. A procedure

   B. A work instruction

   C. An outcome

   D. An input

5. What is an IT service made up of?

   A. A combination of information technology, people, and processes

   B. A combination of best practices, information technology, and outcomes

   C. A combination of best practices, outcomes, and inputs

   D. A combination of controls, outcomes, and inputs

6. Which of these is *not* a recognized type of service according to ITIL?

   A. Core service

   B. Supplier service

   C. Enabling service

   D. Enhancing service

7. Which of these statements is/are correct?

   1. Internal services are delivered between departments or business units within the same organization.

   2. External services are those delivered to an external customer.

   A. 1 only

   B. 2 only

   C. Both

   D. Neither

8. Which of these statements describes an IT service provider?

   A. A third-party service provider delivering components of services

   B. A business unit responsible for IT processes

   C. A function that provides controls for IT infrastructure

   D. A service provider that provides IT services to internal or external customers

9. How many service provider types does ITIL identify?

   A. 1

   B. 2

   C. 3

   D. 4

10. Which of these is *not* a characteristic of a process?

   A. Delivers functions

   B. Responds to a trigger

   C. Delivers a specific result

   D. Is measurable