

# 1 Introduction

**‘How do you become not optional?’**

**William D. Green, CEO, Accenture**

## 1.1 Overview

In 1937, British-born economist Ronald Coase concluded that the boundaries of firms are determined by *transaction costs*.<sup>2</sup>

The concept of *transaction costs* used here is not to be confused with the discrete cost of *transactions* such as requests, payments, trades and updates to databases. What is referred to here are the overall costs of economic exchange between two parties, including but not limited to costs incurred in finding and selecting qualified *suppliers* for goods or services of required specifications, negotiating an *agreement*, cost of consuming the goods or services, governing the *relationship* with suppliers, to ensuring that commitments are fulfilled as agreed.

Policing and enforcement costs are the costs of making sure the other party sticks to the terms of the *contract*, and taking appropriate action (often through the legal system) if this turns out not to be the case.

Sometimes it makes sense for a *business* to own and *operate assets*, or conduct activities in-house. At other times, the sensible thing is to seek alternatives from the open market. As prevailing conditions change, boundaries of the firm contract or expand with decisions such as *make, buy, or rent*. Coase received the Nobel Prize in Economics for this remarkable idea.

The world is changing at a faster pace than ever before. The forces of the internet, inexpensive computing, ubiquitous connectivity, open platforms, globalization, and a fresh wave of innovation are combining in ways that dramatically alter the *transaction costs* in almost every business. The result is greater dynamism and flexibility in the definition of markets for services. Markets are created almost spontaneously with innovative business *models* and value propositions. They emerge within enterprises, defy standard industry classifications, and extend farther in geography. The digitization of commercial activities, social interactions and government has meant fewer physical constraints on new business models, strategies and relationships. Knowledge and productive capacity are more dispersed than ever before. *Organizations* can *rent* what they were earlier forced to *make* or *own*. Generic concepts like *rent* translate into collaborative relationships with *service providers* who provide access to capabilities and *resources* otherwise not available to the organization.

There is similar growth in consumer services driven by various social and economic factors and technology. Among the forces driving the consumption of services are rising per capita incomes, demand for social services, size and role of the public sector, complexity of work **environments**, increased specialization (division of labour), and relaxation of trade barriers.<sup>3</sup> These trends are contributing worldwide to the growth of the **service** economy in a remarkable fashion.

Information technologies (IT) enable, enhance, and are embedded in a growing number of goods and services. They are connecting consumers and producers of services in ways previously not feasible, while contributing to the productivity of numerous sectors of the services industry such as financial services, communications, insurance, and retail services.<sup>3</sup> Government agencies, too, have experienced similar gains associated with the use of IT.

- **Organizations** exploit resources as and when needed without owning them, even when those resources are remotely located and simultaneously shared.
- They use self-service channels such as websites, mobile phones, and kiosks to expose **business** functions such as billing, order processing, reservations, and **technical support** to consumers. **Quality** of service is no longer constrained by the capacity of branches, stores, and other staffed locations.
- Entrepreneurs and individuals compose new services assembled from existing services available in the commercial and public space.
- **Service-oriented architectures** are allowing organizations to not only reduce complexity of their business applications and infrastructure but to further exploit such **assets** in new ways.

Tremendous **change** and growth is taking place in information-based services. Information, previously a supporting element, has become the basis for value by itself. The relaxation of physical constraints has changed our thinking about how information is produced and consumed. Recent years have seen significant increases in valuation for businesses that simply facilitate interactions or the exchange of information. Capabilities and resources in the management of IT and the management of services are no longer perceived as merely **operational** concern or detail. They are the basis for creating value, for competition, and distinctive **performance**.

The trends noted above require IT **organizations** to have a keener sense of the nature and dynamics of services as a means for providing value to **customers**. It is not surprising that growth and prosperity of a trade are accompanied by greater demands on the tools of the trade. The **practice** of **service management** grows, learns, and matures under the pressure of new challenges and opportunities.

Imagine you have been given responsibility for an IT organization. How would you decide on a **strategy** to serve your customers? Perhaps you would examine **requirements** in detail and plan appropriately. You might track ongoing demand and adjust accordingly, while maintaining operational **efficiency**. Surely an attentive **service provider** with low costs must inevitably succeed. Unfortunately, while these are all necessary factors, things are rarely so straightforward.

First, issues surrounding services are complex. Not only in their individual details but also in the dynamic complexity that comes with many moving and interrelated parts. Long-term behaviour is often different from short-term behaviour. There are many tools for dealing with details but few offer insight into how the problems we have today have developed over time. What are needed are methods to help organizations understand the likely consequences of decisions and actions.

Second, customer specifications are not always clear, certain or even correct. Much is lost in the translation from requirements **document** to service **fulfilment**. The most subtle aspect of strategic thinking lies in knowing what *needs* to happen. Customer outcomes, rather than specifications, are the genesis of services. **Strategic plans**, while critical for enacting **change**, are not enough.

A strategic perspective begins with the understanding of competition. Sooner or later, every organization faces competition. Even IT organizations with a relatively captive internal market of *owner-customers* are not entitled to a perpetual monopoly. The recent trends in **outsourcing** of **business** functions and **operations** have made that clear. A change in prevailing business conditions or a new business strategy pursued by the customer can suddenly expose the IT organization to competition. Even government and non-profit IT organizations have shown themselves to be subject to competitive forces. It is important for IT organizations to review their positions and know for sure how they provide *differentiated value* to their customers.

**Customers** perceive value in economic terms or in terms of social welfare, as is the case with pure public services offered by government agencies, or both. The differentiation can be in traditional terms such the organization's knowledge and experience with the customer's business, excellence in service **quality**, capabilities to reduce **cost**, or innovation.

The idea of *strategic assets* is important in the context of good **practice** in **service management**. It encourages IT organizations to think of investments in service management in the same way businesses think of investing in production **systems**, distribution networks, R&D laboratories, and various forms of intellectual property such as brands and patents. **Assets** such as people, processes, knowledge and infrastructure are by themselves valuable for the benefits they generate for their owners. **Strategic** assets are those that provide the basis for core competence, distinctive **performance**, durable advantage, and qualifications to participate in **business** opportunities. IT organizations can use

the guidance provided by ITIL to transform their service management capabilities into strategic assets.

Having a cost advantage over competition is one among many options. Being the lowest-cost provider is necessary but not always sufficient to support business strategies. There is a need to develop other strengths over and above efficiency in costs. Helping customers enter new markets and quickly scale up operations, for example. An IT organization can better serve customers and outperform competition by better understanding the complexity, uncertainty, and trade-offs the customer is facing. The key is to decide on an objective or end-state that differentiates the value of what you offer, on what terms, and in what form so that it outperforms what customers consider to be alternatives. Strategy need not simply be an exercise in gathering requirements or the pursuit of operational effectiveness. It is a means to become *not optional*.

Formulating strategy has traditionally been in the hands of upper levels of management. Yet in the world of IT, where conditions change rapidly and the knowledge and expertise required for sound decisions are usually found on the front lines, IT leaders have an important role to play. From CIOs to front-line managers, each has the ability to shape and execute service strategies. The rigid 'plan and deploy' model is giving way to the dynamic 'engage and collaborate' model.

The ultimate success of service management is indicated by the strength of the relationship between customers and service providers. The publications of the core ITIL library provide the necessary guidance to achieve such success. In addition to this publication, the volumes Service Design, Service Transition, Service Operation and Continual Service Improvement define a body of knowledge and set of good practices for successful service management. They provide guidance for:

- Converting innovative ideas and concepts into services for customers
- Solving problems with effective and enduring solutions
- Controlling costs and risks that can potentially destroy carefully created value
- Learning from successes and failures to manage new challenges and opportunities.

The guidance can be applied by IT organizations in the public and private sectors; by for-profit and non-profit organizations; for internal service providers with cost-recovery objectives; and commercial outfits with profitability targets. Terms such as profitability, income, pricing, revenue and competition can be interpreted or substituted to be meaningful in the context of all service providers with rare exceptions. As such they are used throughout this publication with minimal annotation or clarification to avoid interrupting the flow of text.

Finally, the frequently cited objective of ‘alignment with the **business**’ characterizes a common problem faced by the leadership of IT organizations in general and CIOs in particular. Those who succeed in meeting this objective are those who understand the need to be business-minded. The increasing popularity of **managed services** and **outsourcing** places tremendous pressures on internal providers to adopt the structure and behaviour of a professionally managed business. A well-managed IT organization can act like a business within a business and deliver value that meets or exceeds the value proposition of commercial alternatives. For this reason, concepts such as **utility**, **warranty**, **market spaces**, portfolios and playing fields, are introduced



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## 1.2 Context

### 1.2.1 Information technology and services

**Information technology** (IT) is a commonly used term that changes meaning with context (Table 1.1). From the first perspective, IT **systems**, **applications** and infrastructure are **components** or sub-assemblies of a larger product. They enable or are embedded in processes and services. From the second perspective, IT is an organization with its own set of capabilities and **resources**. IT organizations can be of various types such as **business functions**, shared services units, and enterprise-level core units.

View	Visualization	Vernacular
IT/ <b>Component</b>	Components of systems and processes	<p>'Our billing system is IT-enabled.'</p> <p>'We use IT to improve interactions with our <b>customers</b> through self-service terminals at key locations.'</p> <p>'IT touches every part of our <b>business</b>. Without appropriate <b>controls</b>, that in itself is a <b>risk</b>.'</p>
IT/ <b>Organization</b>	Internal unit or <b>function</b> of the enterprise or commercial <b>service provider</b>	<p>'Our IT is headed by a CIO with tremendous experience in the transportation business.'</p> <p>'Our heavily centralized IT suits our business <b>model</b> which more than anything requires stability and <b>Contract Portfolio</b> over <b>business operations</b>.'</p> <p>'IT does not understand the language of our business. Much is lost in translation.'</p>
IT/ <b>Service</b>	Type of shared service utilized by <b>business units</b>	<p>'I haven't been able to access the internet since yesterday. When do you expect the service to be restored?'</p> <p>'Our remote-access service is very secure but it is also very difficult to set up and use.'</p> <p>'We decided not to build our own enterprise applications for administrative functions. We are better off utilizing <b>IT Services</b> provided to us under a commercial <b>contract</b>.'</p>
IT/ <b>Asset</b>	Capabilities and <b>resources</b> that provide a dependable stream of benefits	<p>'IT is at the core of our <b>business process</b>. We use IT to create value for our customers. It is part of our core production <b>process</b>.'</p> <p>'Our IT investments are like Cost of Goods Sold (COGS). They are <b>direct costs</b>, not overheads.'</p> <p>'IT is our business.'</p>

Table 1.1 The multiple views of IT

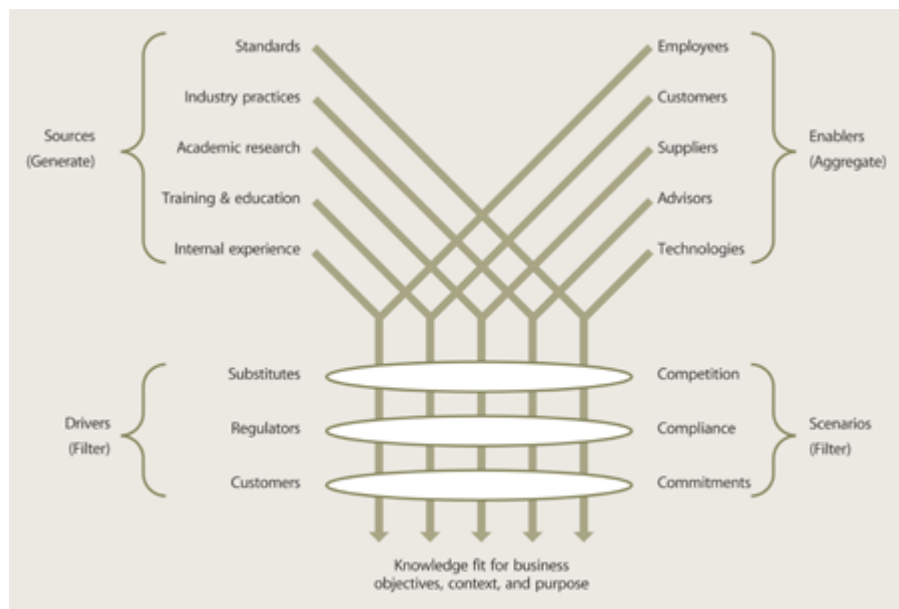


From the third perspective, IT is a **category** of services utilized by **business**. These services are typically IT **applications** and infrastructure that are packaged and offered as services by internal IT **organizations** or **external service providers**. IT costs are treated as business expenses. From the fourth perspective, IT is a category of business assets that provide a stream of benefits for their owners, including but not limited to revenue, income and profit. IT costs are treated as investments. It is important to be clear what the term means in a given context. It is often used with different meanings in the same sentence or paragraph, often exacerbating problems.

## 1.2.2 Good practice in the public domain

**Organizations operate** in dynamic environments with the need to learn and adapt. There is a need to improve **performance** while managing trade-offs. Under similar pressure, customers seek advantage from **service providers**. They pursue sourcing strategies that best serve their own **business** interest. In many countries, government agencies and non-profit **organizations** have a similar propensity to outsource for the sake of **operational effectiveness**. This puts additional pressure on service providers to maintain a competitive advantage with respect to the alternatives that customers may have. The increase in **outsourcing** has exposed **internal service providers** in particular to unusual competition.

To cope with the pressure, organizations **benchmark** themselves against peers and seek to close gaps in capabilities. One way to close such gaps is the adoption of good practices in wide industry use. There are several sources for good practices including public frameworks, standards, and the proprietary knowledge of organizations and individuals (Figure 1.1).



## Figure 1.1 Sourcing of service management practice

Public frameworks and standards are attractive when compared with proprietary knowledge:

- Proprietary knowledge is deeply embedded in organizations and therefore difficult to adopt, replicate, or transfer even with the cooperation of the owners. Such knowledge is often in the form of tacit knowledge, which is inextricable and poorly documented.
- Proprietary knowledge is customized for the local context and specific business needs to the point of being idiosyncratic. Unless the recipients of such knowledge have matching circumstances, the knowledge may not be as effective in use.
- Owners of proprietary knowledge expect to be rewarded for their long-term investments. They may make such knowledge available only under commercial terms through purchases and licensing agreements.
- Publicly available frameworks and standards such as ITIL, COBIT, CMMI, eSCM-SP, PRINCE2, ISO 9000, ISO/IEC 20000, and ISO/IEC 27001 are validated across a diverse set of environments and situations rather than the limited experience of a single organization. They are subject to broad review across multiple organizations and disciplines. They are vetted by diverse sets of partners, suppliers, and competitors.
- The knowledge of public frameworks is more likely to be widely distributed among a large community of professionals through publicly available training and certification. It is easier for organizations to acquire such knowledge through the labour market.

Ignoring public frameworks and standards can needlessly place an organization at a disadvantage. Organizations should cultivate their own proprietary knowledge on top of a body of knowledge based on public frameworks and standards. Collaboration and coordination across organizations are easier because of shared practices and standards. According to research by the UK Department of Trade and Industry (DTI), the value to the UK economy from standards is estimated to be about £2.5 billion per annum.<sup>4</sup>

The following public frameworks and standards are relevant to service management:

- ISO/IEC 20000
- ISO/IEC 27001
- Capability Maturity Model Integration (CMMI®)
- Control Objectives for Information and related Technology (COBIT®)
- Projects in Controlled Environments (PRINCE2®)
- Project Management Body of Knowledge (PMBOK®)
- Management of Risk (M\_o\_R®)
- eSourcing Capability Model for Service Providers (eSCM-SP™)



- Telecom Operations Map (eTOM®)
- Six Sigma™.

Organizations find the need to integrate guidance from multiple frameworks and standards. Expectations on the effectiveness of such integration efforts should be reasonably set as suggested by the following expert on standards:

**‘Frameworks like standards invariably form part of larger complex business systems and as such relating them to each other rigorously requires a systems discipline. Without this you are left with a few cross-references, some guidance notes, and a lot of “tacit knowledge” gluing them together.’**  
**Paul McNeillis, head of professional services at the British Standards Institution**

### 1.2.3 ITIL and good practice in service management

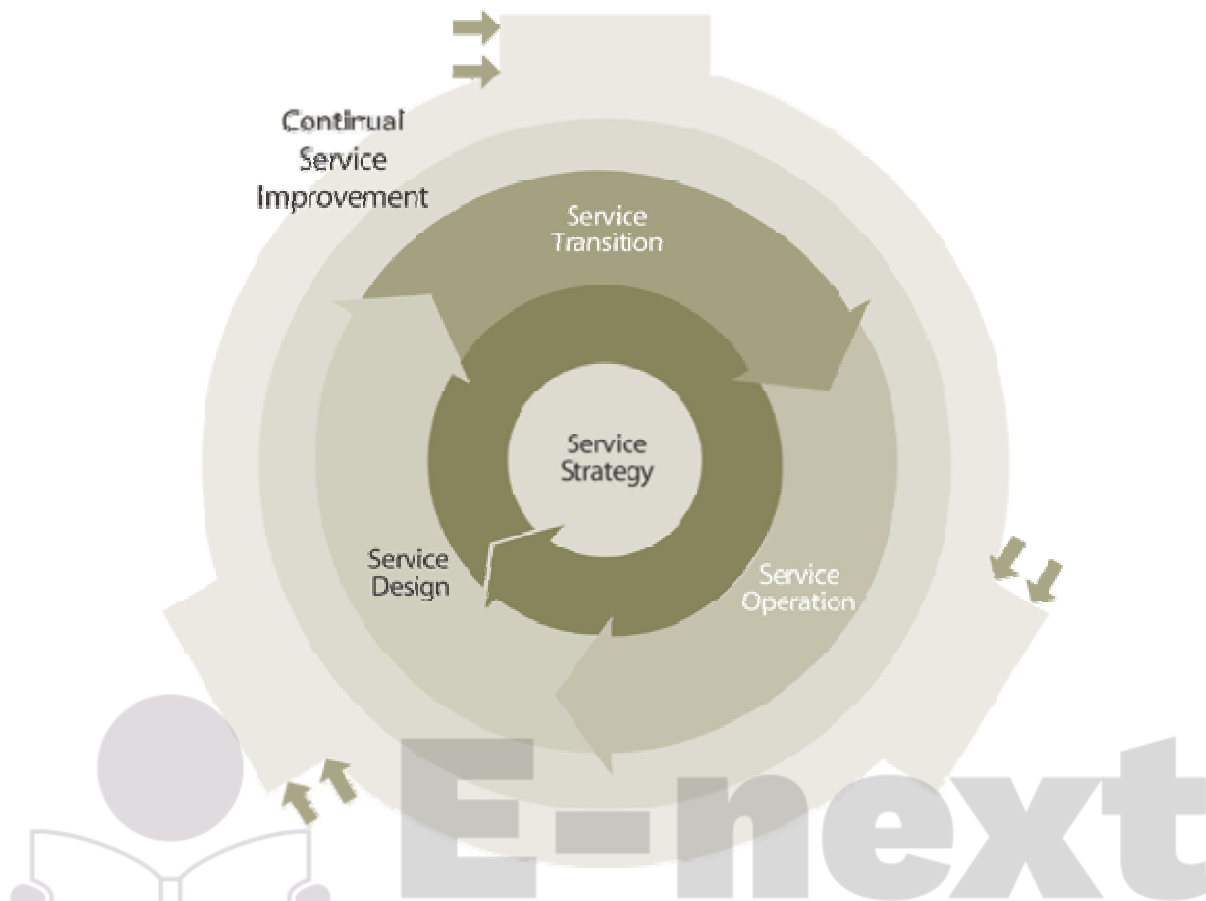
The context of this publication is the ITIL framework as a source of good practice in service management. ITIL is used by organizations worldwide to establish and improve capabilities in service management. ISO/IEC 20000 provides a formal and universal standard for organizations seeking to have their service management capabilities audited and certified. While ISO/IEC 20000 is a standard to be achieved and maintained, ITIL offers a body of knowledge useful for achieving the standard.

The ITIL Library has the following components:

- The ITIL Core: best practice guidance applicable to all types of organizations who provide services to a business.
- The ITIL Complementary Guidance: a complementary set of publications with guidance specific to industry sectors, organization types, operating models, and technology architectures.

The ITIL Core consists of five publications (Figure 1.2). Each provides the guidance necessary for an integrated approach as required by the ISO/IEC 20000 standard specification:

- Service Strategy
- Service Design
- Service Transition
- Service Operation
- Continual Service Improvement.



**Figure 1.2 The ITIL Core**

Each publication addresses capabilities having direct **impact** on a **service provider's performance**. The structure of the core is in the form of a **lifecycle**. It is iterative and multidimensional. It ensures that **organizations** are set up to leverage capabilities in one area for learning and improvements in others. The core is expected to provide structure, stability and strength to **service management** capabilities with durable principles, methods and tools. This serves to protect investments and provide the necessary basis for measurement, learning and improvement.

The guidance in **ITIL** can be adapted for use in various business **environments** and **organizational** strategies. The Complementary Guidance provides flexibility to implement the Core in a diverse range of environments. Practitioners can select Complementary Guidance as needed to provide traction for the Core in a given **business** context, much like tyres are selected based on the type of automobile, purpose, and road conditions. This is to increase the durability and portability of knowledge assets and to protect investments in service management capabilities.

### 1.2.3.1 Service Strategy

The **Service strategy** volume provides guidance on how to **design**, develop, and implement service management not only as an organizational **capability** but also as a *strategic asset*. Guidance is provided on the principles underpinning the **practice** of service management that are useful for developing service management policies, **guidelines** and processes across the ITIL Service Lifecycle. **Service Strategy** guidance is useful in the context of **Service Design**, **Service Transition**, **Service Operation**, and **Continual Service Improvement**. Topics covered in Service Strategy include the **development** of markets, internal and external, **service assets**, **Service Catalogue**, and implementation of **strategy** through the Service Lifecycle. **Financial Management**, **Service portfolio management**, **Organizational Development**, and **Strategic Risks** are among other major topics.

Organizations use the guidance to set **objectives** and expectations of performance towards serving **customers** and **market spaces**, and to identify, select, and prioritize opportunities. *Service Strategy* is about ensuring that **organizations** are in a position to handle the costs and **risks** associated with their **Service Portfolios**, and are set up not just for **operational effectiveness** but also for distinctive performance. Decisions made with respect to Service Strategy have far-reaching consequences including those with delayed effect.

Organizations already practising ITIL may use this publication to guide a strategic **review** of their ITIL-based service management capabilities and to improve the alignment between those capabilities and their **business** strategies. This volume of ITIL encourages readers to stop and think about *why* something is to be done before thinking of *how*. Answers to the first type of questions are closer to the customer's business. Service Strategy expands the **scope** of the ITIL framework beyond the traditional audience of **IT service management** professionals.

### 1.2.3.2 Service Design

The Service Design volume provides guidance for the design and **development** of services and service management processes. It covers design principles and methods for converting **strategic** objectives into portfolios of services and service assets. The scope of **Service Design** is not limited to new services. It includes the changes and improvements necessary to increase or maintain value to customers over the lifecycle of services, the continuity of services, achievement of **service levels**, and conformance to standards and regulations. It guides **organizations** on how to develop design capabilities for service management.

### 1.2.3.3 Service Transition

The Service Transition volume provides guidance for the development and improvement of capabilities for transitioning new and changed services into **operations**. This publication provides guidance on how the requirements of **Service strategy** encoded in **Service design** are effectively realized in **Service operation** while controlling the **risks** of **failure** and disruption. The publication

combines practices in **Release Management**, **Programme Management**, and **Risk Management** and places them in the practical context of service management. It provides guidance on managing the complexity related to changes to services and **service management** processes, preventing undesired consequences while allowing for innovation. Guidance is provided on transferring the control of services between customers and **service providers**.

#### 1.2.3.4 Service Operation

This volume embodies practices in the management of **service operations**. It includes guidance on achieving effectiveness and **efficiency** in the delivery and support of services so as to ensure value for the customer and the service provider. **Strategic objectives** are ultimately realized through service operations, therefore making it a critical **capability**. Guidance is provided on ways to maintain stability in service operations, allowing for changes in **design**, scale, **scope** and **service levels**. Organizations are provided with detailed **process guidelines**, methods and tools for use in two major **control perspectives**: reactive and proactive. Managers and practitioners are provided with knowledge allowing them to make better decisions in areas such as managing the **availability** of services, controlling demand, optimizing **capacity** utilization, scheduling of **operations** and fixing problems. Guidance is provided on supporting operations through new **models** and **architectures** such as shared services, **utility** computing, web services and mobile commerce.

#### 1.2.3.5 Continual Service Improvement

This volume provides instrumental guidance in creating and maintaining value for customers through better **design**, introduction, and **operation** of services. It combines principles, practices, and methods from **quality** management, **Change Management** and **capability** improvement. Organizations learn to realize incremental and large-scale improvements in **service** quality, **operational efficiency** and **business** continuity. Guidance is provided for linking improvement efforts and outcomes with service strategy, design, and **transition**. A closed-loop feedback **system**, based on the **Plan–Do–Check–Act** (PDCA) model specified in ISO/IEC 20000, is established and capable of receiving inputs for **change** from any **planning** perspective.

## 1.3 Purpose

To **operate** and grow successfully in the long-term, service providers must have the ability to think and act in a strategic manner. The purpose of this publication is to help organizations develop such abilities. The achievement of strategic goals or objectives requires the use of strategic **assets**. The guidance shows how to transform service management into a strategic asset. Readers benefit from seeing the relationships between various services, systems or processes they manage and the business models, strategies or objectives they support. The guidance answers questions of the following kind:

- What services should we offer and to whom?
- How do we differentiate ourselves from competing alternatives?
- How do we truly create value for our customers?
- How do we capture value for our stakeholders?
- How can we make a case for strategic investments?
- How can **Financial Management** provide visibility and **control** over value creation?
- How should we define service **quality**?
- How do we choose between different paths for improving **service** quality?
- How do we efficiently allocate **resources** across a portfolio of services?
- How do we resolve conflicting demands for shared resources?

A multi-disciplinary approach is required to answer such questions. Technical knowledge of IT is necessary but not sufficient. The guidance is pollinated with knowledge from the disciplines such as **operations management**, marketing, finance, information **systems**, organizational **development**, systems dynamics, and industrial engineering. The result is a body of knowledge robust enough to be effective across a wide range of business **environments**. Some organizations are putting in place the foundational elements of service management. Others are further up the adoption curve, ready to tackle challenges and opportunities with higher levels of complexity and uncertainty.

## 1.4 Expected use

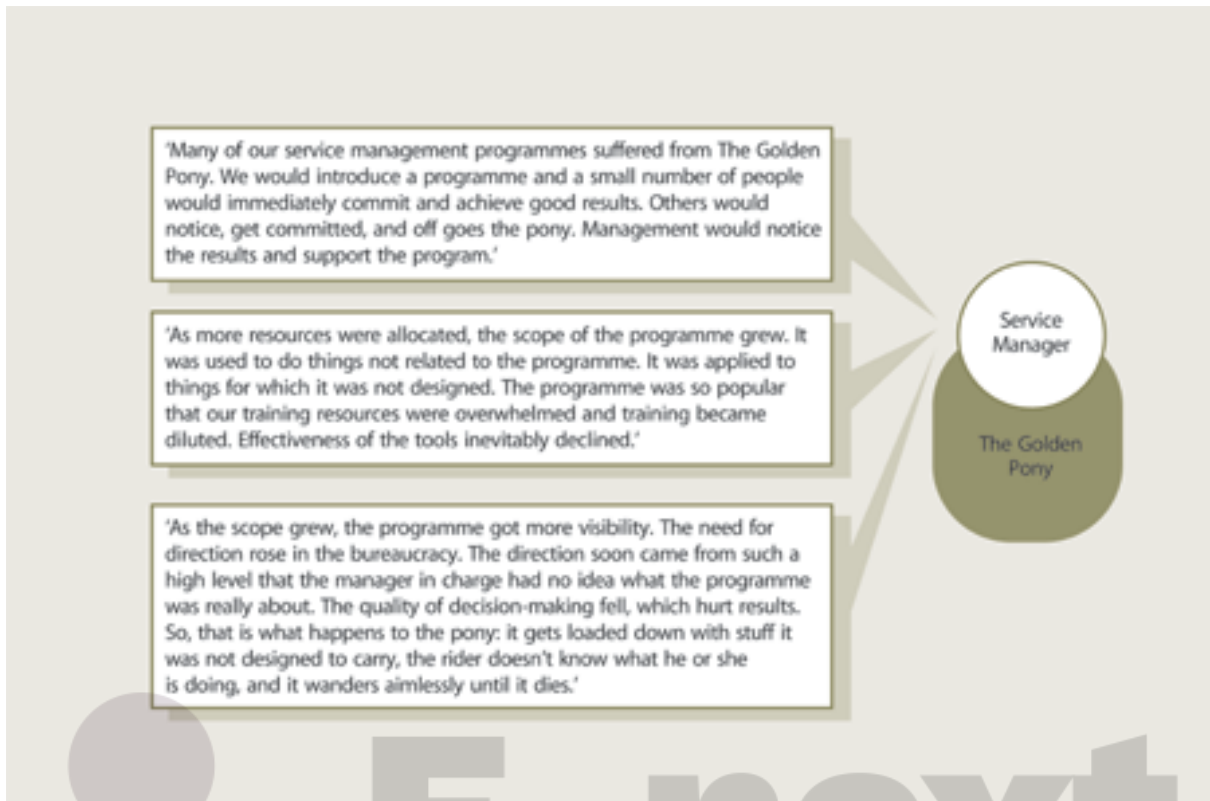
The Service Strategy volume is expected to be useful for IT organizations in developing capabilities in **service management** that set up and maintain a strategic advantage in their goals of being valuable **service providers**. **Service Strategy** covers several aspects of service management. It provides guidance useful in defining **strategic objectives**, providing direction for growth, prioritizing investments, and defining outcomes against which the **effectiveness** of service management may be measured. It is useful for influencing organizational attitudes and **culture** towards the creation of value for customers through services. The publication identifies objectives for effective communication, coordination, and **control** among various parts of a service **organization** having contact with **customers**, partners and **suppliers**. The knowledge in this publication is useful in determining and controlling the consequences of pursuing a particular service strategy with a given set of capabilities and resources. IT organizations are able to innovate and **operate** under constraints such as contractual commitments, **service level requirements**, and government regulations. **Contracts** include both formal legally binding **agreements** as well as informal internal agreements between parts of an organization. **Strategic** decisions and policies are made clear enough to every agent in the organization with a role in delivering **service**. High-level perspectives and positions defining service strategy are broken down into **plans** and actions assigned to specific **roles** and responsibilities in service management.

It is common **practice** to develop capabilities and resources that achieve **strategic** objectives. It is also true that strategic options considered are often constrained by capabilities at hand. Improvements and innovations can extend the range of capabilities and resources, allowing organizations to pursue new or modified objectives, in turn placing new demands on capabilities and resources. These are the dynamics of **business**, and service management plays an active role. Service management creates viable options for **strategy** and helps exercise those options through a portfolio of services. It is therefore important to understand the dependencies between strategy and service management processes.

### 1.4.1 Some warnings

Many problems and situations in IT resist improvement and lack predictability. At times a solution is conceived and deployed, only to present as many unintended consequences as intended ones. The long-term **performance** of a service or **process** may be frustratingly different from its short-term performance. Obvious solutions fail or worsen the situation (Figure 1.3).





**Figure 1.3 The Golden Pony (inspired by Nelson P. Repenning, MIT Sloan School of Management)**

Organizations find it difficult to maintain the benefits from initially successful process improvement programmes. Worse, despite the demonstrated benefits, many process improvement programmes end in failure.<sup>5</sup> In some puzzling instances, successful programmes worsen business performance and decrease morale. This phenomenon is referred to as the 'Improvement Paradox'.<sup>6</sup>

The phrase 'People, Process, and Technology' is a useful teaching tool. A closer examination, however, reveals complexities such as time delays, dependencies, constraints and compensating feedback effects. The following are observations in the real world:

- A process improvement programme reduces the time the staff have for existing service duties, causing a decrease in service quality – exactly the opposite of intended programme goals. As quality falls, pressure to work harder increases. Pressured staff then cut back on improvement efforts.
- Funding cuts affect service quality, which in turn diminishes demand for services. The reduced demand prompts yet more funding cuts.
- Increase in service demand generates increases in operations staff. The ratio of experienced staff to new staff decreases. Less mentoring and coaching opportunities are available for the newcomers; quality of service

suffers; demand for services slows; morale and productivity decrease, and staff are let go.

Apart from driving **change** through continual improvement, organizations must be prepared for rapid **transitions** and transformations driven by changes in an **organization's environment** or internal situation. **Changes** may be driven by mergers, acquisitions, legislation, spin-offs, sourcing decisions, actions of competitors, technology innovations and shifts in **customer** preferences. **Service management** should respond effectively and efficiently. The approach to service management provided is useful for understanding the combined effects of management decisions, dependencies, actions and their consequences.



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## 2 Service management as a practice

### 2.1 What is service management?

Service management is a set of specialized organizational capabilities for providing value to customers in the form of services. The capabilities take the form of **functions** and processes for managing services over a **lifecycle**, with specializations in **strategy**, **design**, transition, **operation**, and continual improvement. The capabilities represent a service organization's **capacity**, competency, and confidence for action. The act of transforming **resources** into valuable services is at the core of service management. Without these capabilities, a service organization is merely a bundle of resources that by itself has relatively low intrinsic value for customers.

#### Service management

*Service management is a set of specialized organizational capabilities for providing value to customers in the form of services.*

#### Case study

Organizational capabilities are shaped by the challenges they are expected to overcome. An example of this is how in the 1950s Toyota developed unique capabilities to overcome the challenge of smaller scale and financial capital compared to its American rivals. Toyota developed new capabilities in production engineering, **operations management** and supply-chain management to compensate for limits on the size of inventories it could afford, the number of **components** it could make on its own, or being able to own the companies that produced them. The need for financial austerity, tight coordination, and greater **dependency** on **suppliers** led to the **development** of the most copied production system in the world.<sup>7</sup>

**Service management** capabilities are influenced by the following challenges that distinguish services from other **systems** of value creation such as manufacturing, mining and agriculture:

- Intangible nature of the output and intermediate products of **service** processes: difficult to measure, **control**, and validate (or prove).
- Demand is tightly coupled with customer's **assets**: **users** and other *customer assets* such as processes, **applications**, **documents** and **transactions** arrive with demand and stimulate service production.
- High-level of contact for *producers* and *consumers* of services: little or no buffer between the **customer**, the front-office and back-office.
- The perishable nature of service output and service **capacity**: there is value for the customer in receiving assurance that the service will continue

to be supplied with consistent **quality**. Providers need to secure a steady supply of demand from customers.

The characteristics described above are not universal constraints.<sup>8</sup> Innovative **business models** and technological innovation have relaxed the constraining effects of these characteristics. What matters is the need to recognize these characteristics when they do appear, and identify them as challenges in service management.

Service management is also a professional **practice** supported by an extensive body of knowledge, experience, and skills. A global community of individuals and organizations in the public and private sectors fosters its growth and **maturity**. Formal schemes that exist for the education, training and **certification** of practising organizations and individuals influence its quality. Industry **best practices**, academic research and formal standards contribute to its intellectual capital and draw from it.

The origins of service management are in traditional service businesses such as airlines, banks, hotels and telephone companies. Its practice has grown with the adoption by IT organizations of a service-oriented approach to managing IT applications, infrastructure and processes. Solutions to business problems and support for business **models**, strategies and **operations** are increasingly in the form of services. The popularity of shared services and **outsourcing** has contributed to the increase in the number of organizations who are **service providers**, including internal organizational units. This in turn has strengthened the practice of service management, at the same time imposing greater challenges on it.

## 2.2 What are services?

### 2.2.1 The value proposition

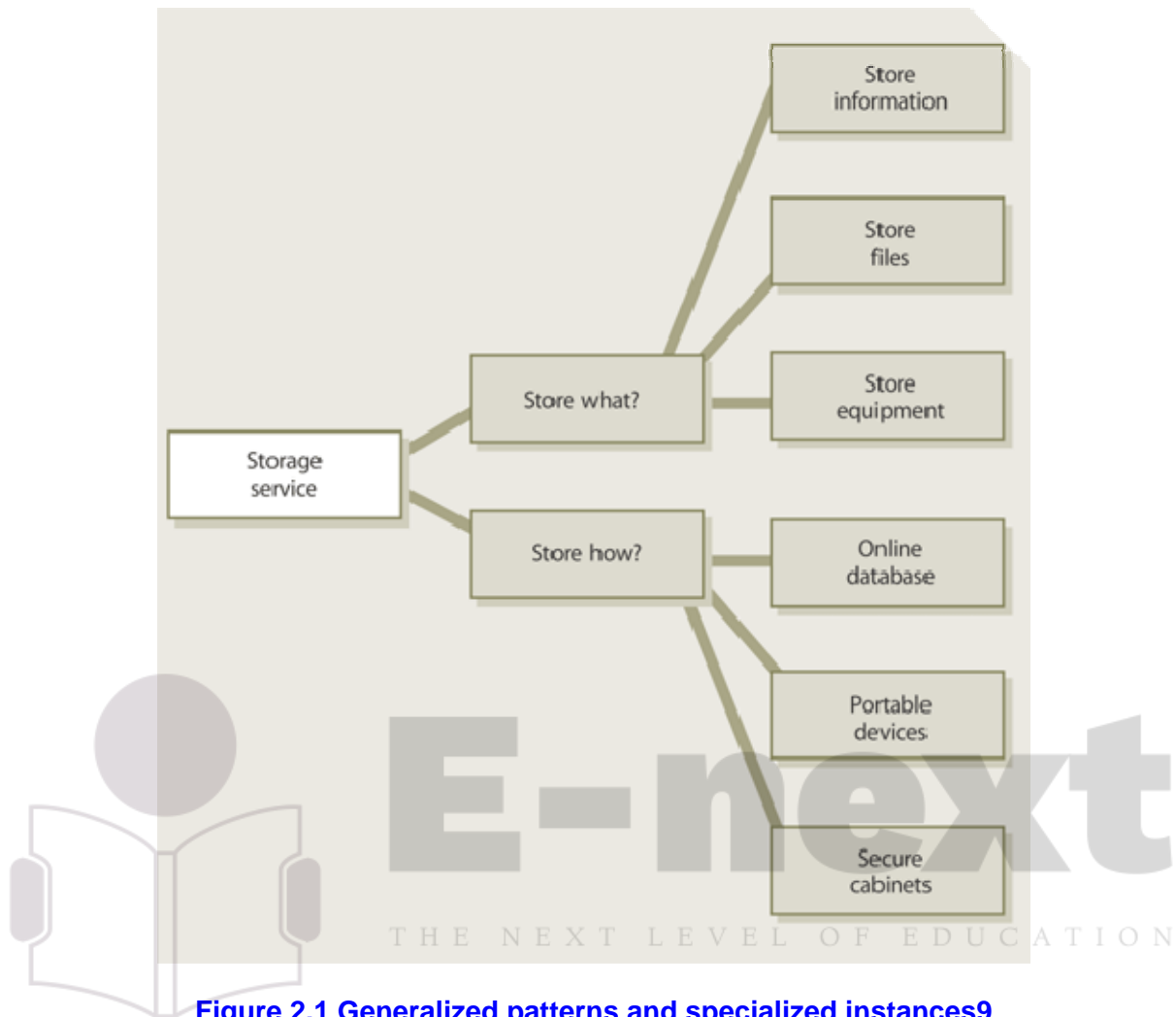
#### Service

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

**Services** are a means of delivering value to customers by facilitating outcomes customers want to achieve without the ownership of specific costs and **risks**. **Outcomes** are possible from the **performance** of tasks and are limited by the presence of certain constraints. Broadly speaking, services facilitate outcomes by enhancing the performance and by reducing the grip of constraints. The result is an increase in the possibility of desired outcomes. While some services enhance performance of tasks, others have a more direct **impact**. They perform the task itself.

The preceding paragraph is not just a definition, as it is a recurring pattern found in a wide range of services. Patterns are useful for managing complexity, costs, flexibility and variety. They are generic structures useful to make an idea work in a wide range of **environments** and situations. In each instance the pattern is applied with variations that make the idea effective, economical, or simply useful in that particular case.

Take, for example, the generalized pattern of a storage **system**. Storage is useful for holding, organizing or securing **assets** within the context of some **activity**, task or performance. Storage also creates useful conditions such as ease of access, efficient **organization** or security from **threats**. This simple pattern is inherent in many types of storage services, each specialized to support a particular type of **outcome** for customers (Figure 2.1).



**Figure 2.1 Generalized patterns and specialized instances<sup>9</sup>**

For various reasons, customers seek outcomes but do not wish to have accountability or ownership of all the associated costs and risks. For example, a **business unit** needs a terabyte of secure storage to support its online shopping system. From a strategic perspective, it wants the staff, equipment, facilities and infrastructure for a terabyte of storage to remain within its span of **control**. It does *not* want, however, to be accountable for all the associated costs and risks, real or nominal, actual or perceived. Fortunately, there is a group within the **business** with specialized knowledge and experience in large-scale storage systems, and the confidence to control the associated costs and risks. The business unit agrees to pay for the storage **service** provided by the group under specific terms and conditions.

The business unit remains responsible for the **fulfilment** of online purchase orders. It is not responsible for the **operation** and maintenance of fault-tolerant configurations of storage devices, dedicated and redundant power supplies, qualified personnel, or the security of the building perimeter, administrative expenses, insurance, **compliance** with safety regulations, contingency measures,



or the optimization problem of idle **capacity** for unexpected surges in demand. The **design** complexity, **operational** uncertainties, and technical trade-offs associated with maintaining reliable high-**performance** storage **systems** lead to costs and risks the business unit is simply not willing to own. The **service provider** assumes ownership and allocates those costs and risks to every unit of storage utilized by the business and any other customers of the storage **service**.

## 2.2.2 Value composition

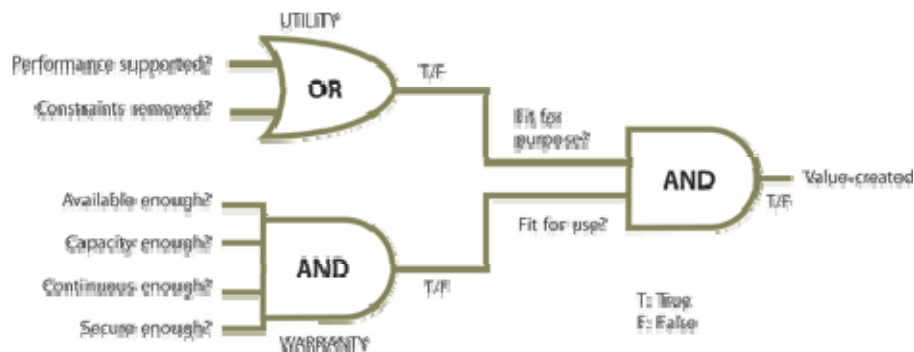
From the customer's perspective, value consists of two primary elements: **utility** or fitness for purpose and **warranty** or fitness for use.

**Utility** is perceived by the customer from the attributes of the service that have a positive effect on the performance of tasks associated with desired outcomes. Removal or relaxation of constraints on performance is also perceived as a positive effect.

**Warranty** is derived from the positive effect being available when needed, in sufficient capacity or magnitude, and dependably in terms of continuity and security.

**Utility** is *what* the customer gets, and warranty is *how* it is delivered.

**Customers** cannot benefit from something that is **fit for purpose** but not fit for use, and vice versa. It is useful to separate the logic of utility from the logic of warranty for the purpose of design, development and improvement (Figure 2.2). Considering all the separate controllable inputs allows for a wider range of solutions to the problem of creating, maintaining and increasing value.

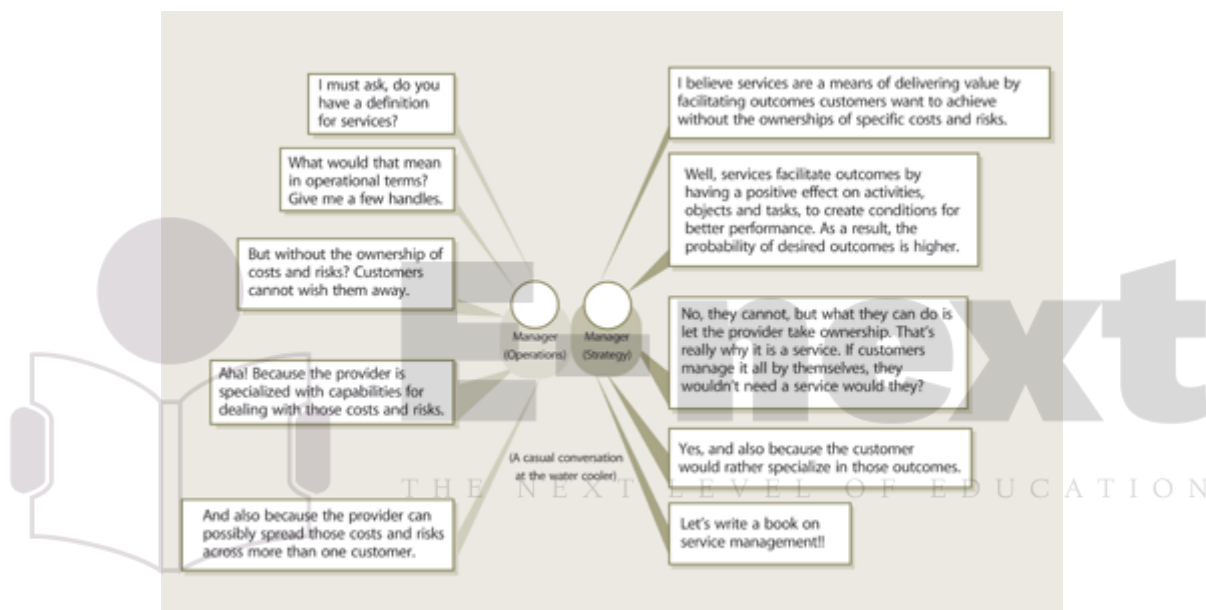


**Figure 2.2 Logic of value creation through services**

Take the case of the **business unit** utilizing the high-performance online storage service. For them the value is not just from the functionality of online storage but also from easy access to no less than one terabyte of fault-tolerant storage, as and when needed, with **confidentiality**, **integrity**, and availability of data. Chapter

3 of Service Strategy provides further detail on the concepts of utility and warranty.

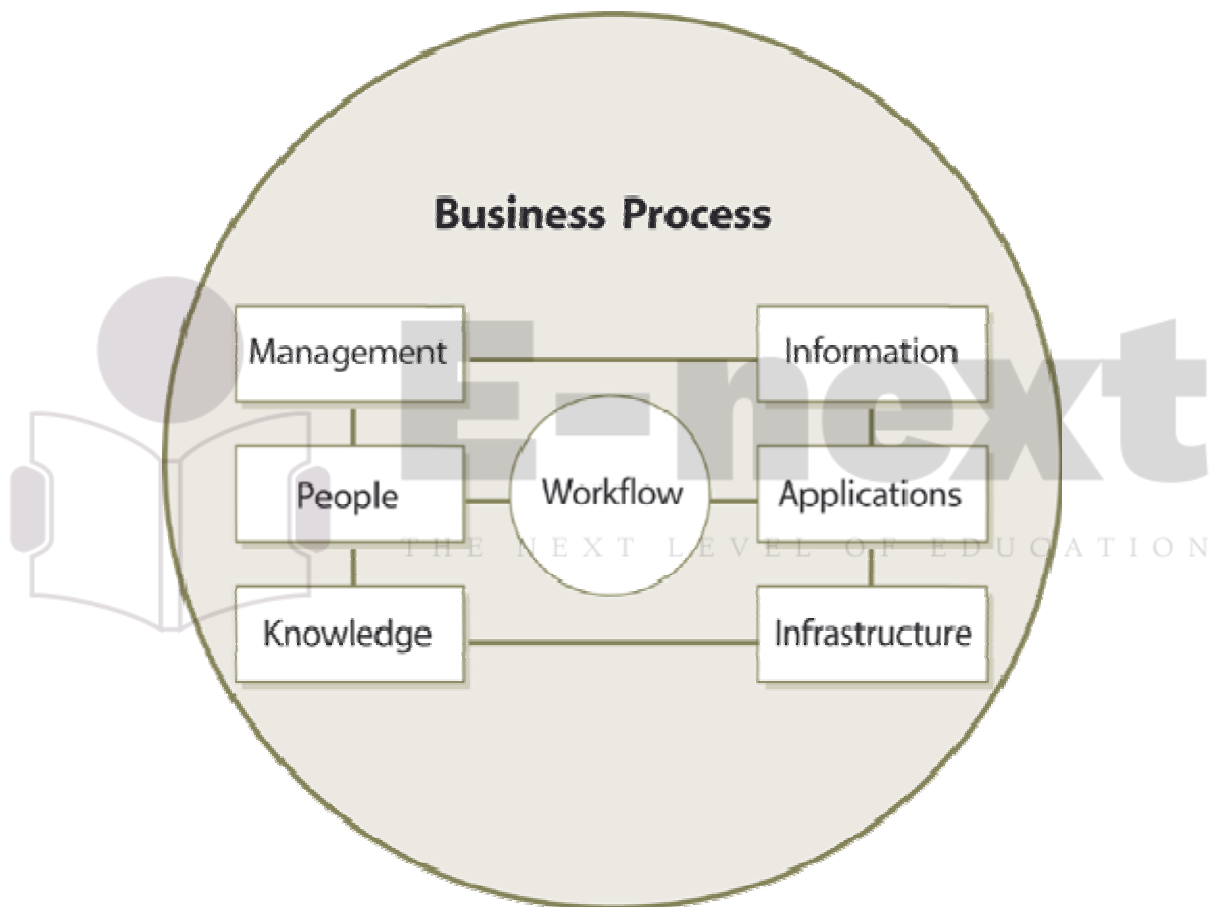
An **outcome**-based definition of service moves IT organizations beyond Business-IT alignment towards Business-IT integration. Internal dialogue and discussion on the meaning of services is an elementary step towards alignment and integration with a **customer's business** (Figure 2.3). Customer outcomes become the ultimate concern of Product Managers instead of the gathering of **requirements**, which is necessary but not sufficient. **Requirements** are generated for internal coordination and **control** only after customer outcomes are well understood. Chapter 4 of Service Strategy provides detail on the practical use of outcome-based definitions.



**Figure 2.3 A conversation about the definition and meaning of services**

## 2.3 The business process

**Business** outcomes are produced by **business processes** governed by **objectives**, policies and constraints. The processes are supported by **resources** including people, knowledge, **applications** and infrastructure. Workflow coordinates the execution of tasks and flow of control between resources, and intervening action to ensure adequate **performance** and desired outcomes. **Business processes** are particularly important from a **service management** perspective. They apply the **organization's** cumulative knowledge and experience to the achievement of a particular outcome (Figure 2.4).

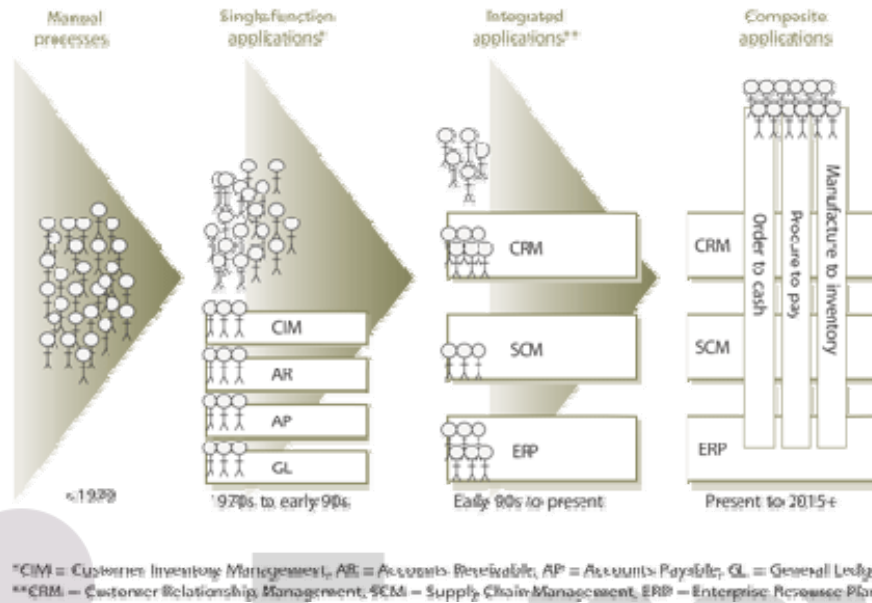


**Figure 2.4 Business processes apply experience, know-how and resources**

**Processes** are strategic **assets** when they create competitive advantage and market differentiation. As a result, **business** processes define many of the challenges faced by service management. The nature and dynamics of the **relationship** between business processes and IT best explains this.

The workflow of business processes is a factor of business productivity. Business processes can span organizational and geographic boundaries, often in complex variants creating unique designs and patterns of execution (Figure 2.5). As the

importance of business process has emerged, businesses have realized they must consider not only internal practices, but also their interactions with **suppliers** and customers. These fundamental needs form the basic motivation for the management of business processes as valuable assets.



**Figure 2.5 The end points of a business process are often defined by enterprise applications**

**Business** managers demand IT **systems** that make processes more transparent, dynamically serving and expediting **business process** flows. End-to-end business processes have come to depend on distributed systems. Business managers challenge IT organizations to engage with them at the level of business processes. They want assurance that **applications** and infrastructure will support new business initiatives. However, there are coordination and cooperation problems between the two sides. Business managers may not understand the complexity and detail of creating the business process within the realm of information, applications, and infrastructure. IT managers may not have a clear understanding of exactly what **business** managers are trying to accomplish. The problem gets worse with complexity, duplication, and the absence of clear **models** for coordination and **control**. The following section shows how the principles of service management are useful in solving many of these problems between the business and IT.

## Process10

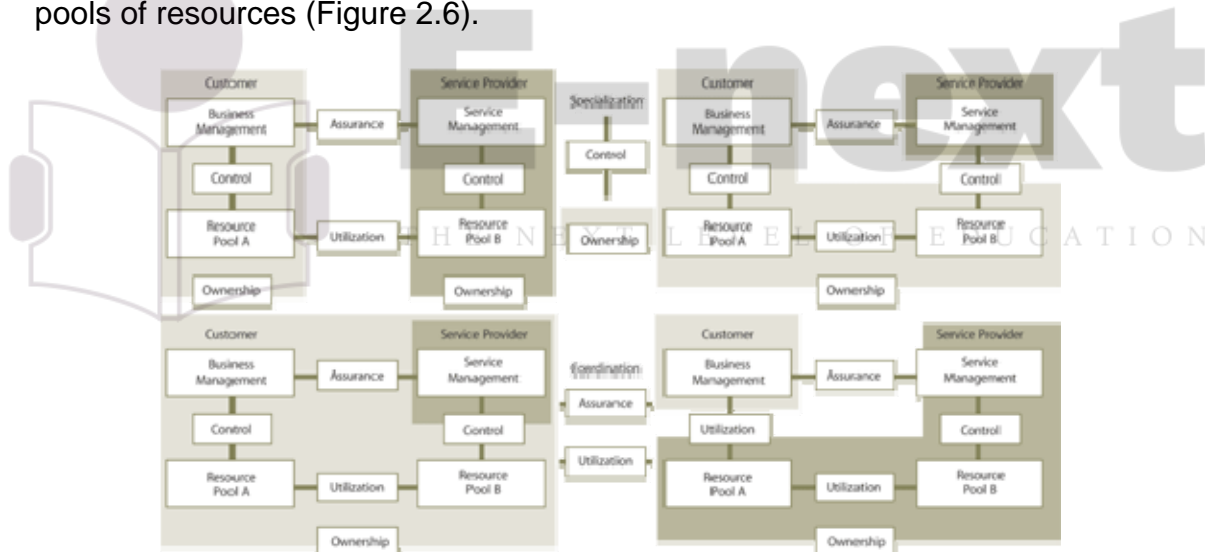
*A process is a set of coordinated activities combining and implementing resources and capabilities in order to produce an outcome, which, directly or indirectly, creates value for an external customer or **stakeholder**.*

## 2.4 Principles of service management

**Service management** has a set of principles to be used for analysis, inference, and action in various situations involving services. These principles complement the **functions** and processes described elsewhere in the **ITIL Core Library**. When functions and processes are to be changed, these principles provide the necessary guidance and reference. When solving problems related to services, these principles are to be used to resolve ambiguity and conflict.

### 2.4.1 Specialization and coordination

The aim of service management is to make available capabilities and **resources** useful to the **customer** in the highly usable form of services at acceptable levels of **quality**, **cost**, and **risks**. **Service providers** help relax the constraints on customers of ownership and **control** of specific resources. In addition to the value from utilizing such resources now offered as services, customers are freed to focus on what they consider to be their core competence. The **relationship** between customers and service providers varies by specialization in ownership and control of resources and the coordination of dependencies between different pools of resources (Figure 2.6).



**Figure 2.6 Relationships defined by the dynamics of ownership, control and utilization**

**Customers** specialize in **business** management to achieve one set of outcomes using a set of resources (Pool A). Similarly, service providers specialize in service management with another set (Pool B). Service management coordinates the dependencies between the two sides through assurances and utilization. Customers are content with utilization of certain resources (Pool B) unless ownership is a prerequisite for strategic advantage.

Specialization is a necessary condition for developing organizational capabilities. Management potential accumulates from specialized knowledge and experience with a set of resources.<sup>11</sup> Specialization drives the grouping of capabilities and resources under the same span of **control** to achieve focus, expertise, and excellence. Coordination of capabilities and resources is easier when they are under the same span of control because of accountability, authority and managerial attention. Capabilities and resources with high degree of **dependency** and interaction are grouped together to reduce the need for coordination.<sup>11</sup> Where coordination is easy through well-defined interfaces, protocols and **agreements**, they are placed under the control of the group most capable of managing them.<sup>11</sup> The strength of specialized capabilities on one side relative to the other creates the difference in potential, which justifies the transfer of resources from Pool A to Pool B and makes the case for a new or changed **service**.

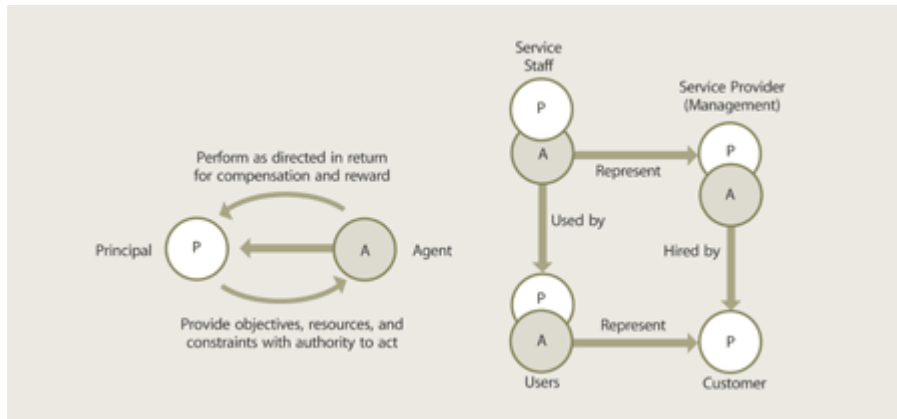
It is important to note in this context that scale and **scope** of the customer and service provider organizations vary, from large enterprises to small businesses, autonomous **business units** and sub-divisions to small internal groups and teams who provide services. The principles remain the same. What may change are the values of variables such as the **transaction** costs, strategic industry factors, **economies of scale** and regulatory **environments**.

**Transaction** costs, the nature of resources to manage, the feasibility of encapsulating them into services, and confidence in service management drive decisions on specialization and coordination. While **outsourcing** is a noticeable trend, there are many instances of customers deciding to retain certain capabilities in-house or even bring them back in.

### 2.4.2 The agency principle

Principals employ or hire agents to act on their behalf towards some specific objectives. Agents may be employees, consultants, advisors or **service providers**. Agents act on behalf of principals who provide objectives, **resources** (or funds), and constraints for agents to act on. They provide adequate sponsorship and support for agents to succeed on their behalf. Agents act in the interest of their principals, for which they receive compensation and reward, and in their own self-interest (Figure 2.7). Written or implied **contracts** record this agreement between principals and agents. Employment contracts, **service** agreements and **performance** incentive **plans** are examples.





**Figure 2.7 The agency model in service management**

Within the context of **service management**, customers are principals who have two types of agents working for them – service providers contracted to provide services, and **users** of those services employed by the customer. **Users** need not be on the payroll of the customer. Service agents act as intermediary agents who facilitate the exchange between service providers and customers in conjunction with users. Service agents are typically the employees of the service provider but they can also be **systems** and processes that users interact with in self-service situations. Value for customers is created and delivered through these interlocking relationships between principals and agents. The agency **model** is also applied in **client/server** models widely used in software **design** and enterprise **architecture**. Software agents interact with users on behalf of back-end **functions**, processes, and systems to which they provide access.

### 2.4.3 Encapsulation

**Customers** care about affordable and reliable access to the **utility** of **assets**. They are not concerned with structural complexity, technical details, or low-level operations. They prefer simple and secure interfaces to complex configurations of resources such as **applications**, data, facilities, and infrastructure. Encapsulation hides what is not the customer's concern and exposes as a service what is useful and usable to them. **Customers** are concerned only with utilization.

Encapsulation follows three separate but closely related principles: **separation of concerns**, modularity, and loose coupling.

#### 2.4.3.1 Separation of concerns

Complex issues or problems can be resolved or separated into distinct parts or concerns. Specialized capabilities and resources address each concern leading to better outcomes overall. This improves focus and allows optimization of

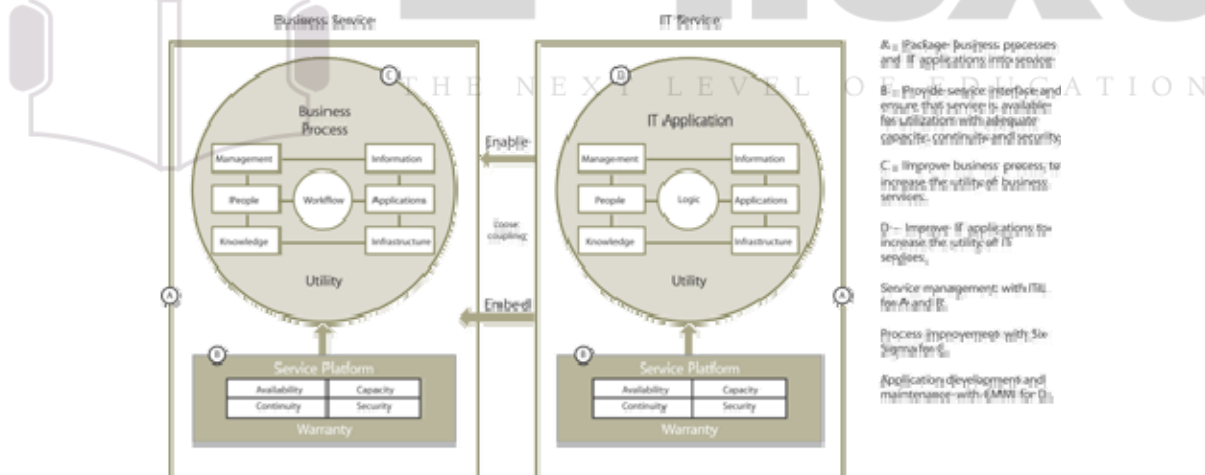
systems and processes at a manageable scale and **scope**. Challenges and opportunities are suited with appropriate knowledge, skills, and experience.

It is necessary to identify persistent and recurring patterns, to separate fixed elements from those that vary, and to distinguish what from how (Figure 2.1). These separations are important for a service-oriented approach to IT management or simply service orientation. For example, it is useful to identify and consolidate demand with common characteristics but different sources and serve it with shared services.

### 2.4.3.2 Modularity

Modularity is a structural principle used to manage complexity in a system.<sup>12</sup> Functionally similar items are grouped together to form modules that are self-contained and viable. The functionality is available to other systems or modules through interfaces. Modularity contributes to **efficiency** and economy by reducing duplication, complexity, administrative overheads, and the **cost** of changes. It has a similar **impact** through the reuse of modules.

Encapsulation is possible at several levels of granularity, from software and hardware **components** to **business processes** and organizational **design**. Figure 2.8 illustrates the **role of service management** in encapsulating **business processes** and IT applications into **business services** and **IT services**.



**Figure 2.8 Encapsulation based on separation of concerns and modularity**

### 2.4.3.3 Loose coupling

**Separation of concerns** and modularity facilitate loose coupling between **resources** and their **users**. With loose coupling, it is easier to make changes internal to the resource without adversely affecting utilization. It also avoids forcing changes on the customer's side, which can add unexpected costs to the **customer**. Loose coupling also allows the same set of resources to be

dynamically assigned to different uses. This has several advantages, including shared services, **Demand Management**, **redundancy**, and investment protection for the customer and the **service provider** from reduced lock-in. Loose coupling requires good design, particularly of **service** interfaces, without which there will be more problems than benefits.

## 2.4.4 Principles of systems

### System

*A system is a group of interacting, interrelated, or interdependent components that form a unified whole, operating together for a common purpose.*

### 2.4.4.1 Open-loop and closed-loop control processes

There are two types of **control** processes: open-loop and closed-loop. **Control** processes in which the value of the **outcome** has no influence on the **process** input are open-loop. Control processes in which the value of the outcome has influence (with or without some delay) on the process input in such a manner as to maintain the desired value are closed-loop. Open-loop **systems** take controlling action based simply on inputs. Changes in inputs result in changes in action. **Effectiveness** of open-loop systems depends excessively on foresight in design of all possible conditions associated with outcomes. When there are exceptions, open-loop systems are unable to cope. **Control** action in closed loop systems is goal driven and sensitive to disturbances or deviations.

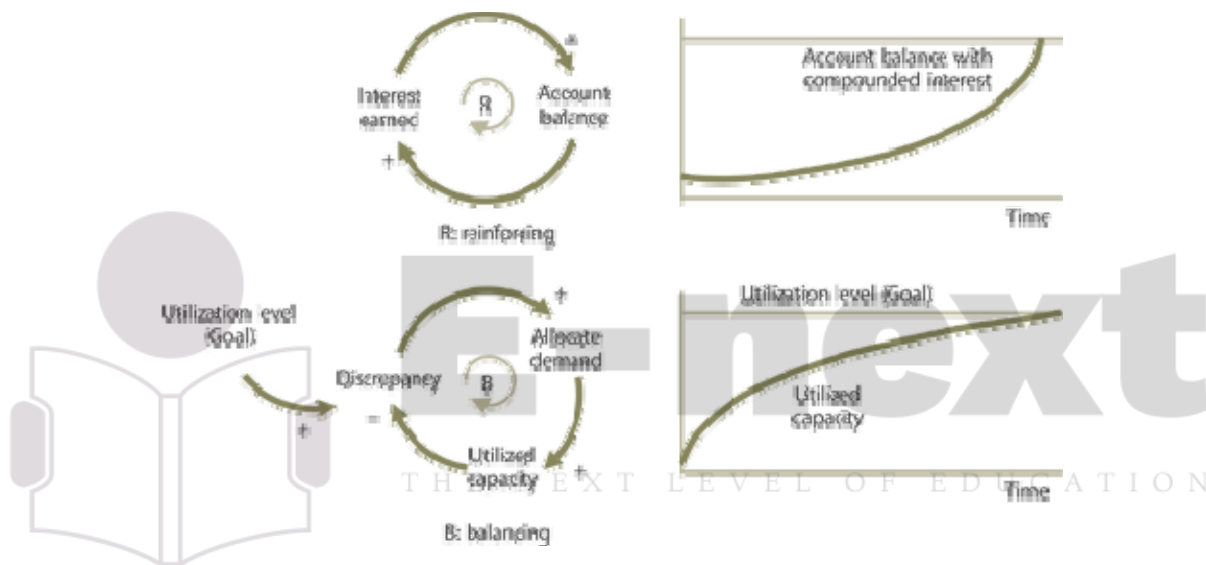
Open-loop solutions attempt to solve the problem by good design, to make sure it does not occur in the first place. Once a design is implemented, **mid-course corrections** are not made. Closed-loop solutions, however, are based on compensating feedback. A well-designed household air-conditioner or furnace leaves the home too cool or too warm – unless regulated by the feedback of a thermostat. It is an outcome-based mindset.

Conventional brakes in automobiles apply stopping action or friction against the rotating wheels as long as the brake pedal is pressed down by the driver. Serious accidents happen when the brakes lock and cause the vehicle to lose control. To avoid this undesired situation drivers are taught not to slam the brakes, rather apply them in pumping action while constantly **monitoring** the braking outcome. This open-loop design expects too much of the driver's braking skills and composure by ignoring the possibility of conditioned reflexes, not taking into account the human limits of information processing, and other complicating factors such as road condition, weather, and vehicle load. Anti-lock brakes (ABS) use electronic sensors to detect the locking of brakes and loss of traction under the wheels and immediately adjust the input, cutting off and applying the braking action in rapid succession until the optimal pressure is applied on the wheels. They can override the driver's input by taking into account other factors that the

driver may not be able to quickly apply. In that sense, the **outcome** is maintained even in the presence of rogue input.

#### 2.4.4.2 Feedback and learning

Learning and growth are essential aspects of the way successful organizations function. Learning occurs from the presence of feedback as an input to a **process** in one cycle based on **performance** or outcome in the previous cycle. The feedback can be positive or self-reinforcing, leading to exponential growth or decline (Figure 2.9). It can be negative or self-correcting leading to balance or equilibrium. Goal-seeking behaviour is a widely observed pattern of control possible because of self-correcting feedback.



**Figure 2.9 Types of feedback**

**Functions**, processes, and organizations can have more than one feedback loop of each type. The interaction of the feedback loops drives the behaviour of the process as it functions as a dynamic system. It is possible to visualize IT organizations as dynamic **systems** with functions and processes, with specialization and coordination, providing each other feedback towards the goal of meeting **customer objectives**. Interaction can be between processes, **lifecycle** phases, and functions. It is important to note that delays in negative feedback lead to oscillations or swings in the system due to intervening corrections. Improved measurement and reporting can reduce this destabilizing effect. The changes in output are not always linear or proportional to changes in input. This means that non-linearity is a widely observed characteristic of real-world systems such as service organizations. Understanding these principles helps managers correctly identify the nature of challenges and opportunities by observing patterns in performances and outcomes of functions and processes

### 2.5 The Service Lifecycle

### Case example 1: Telecommunication Services

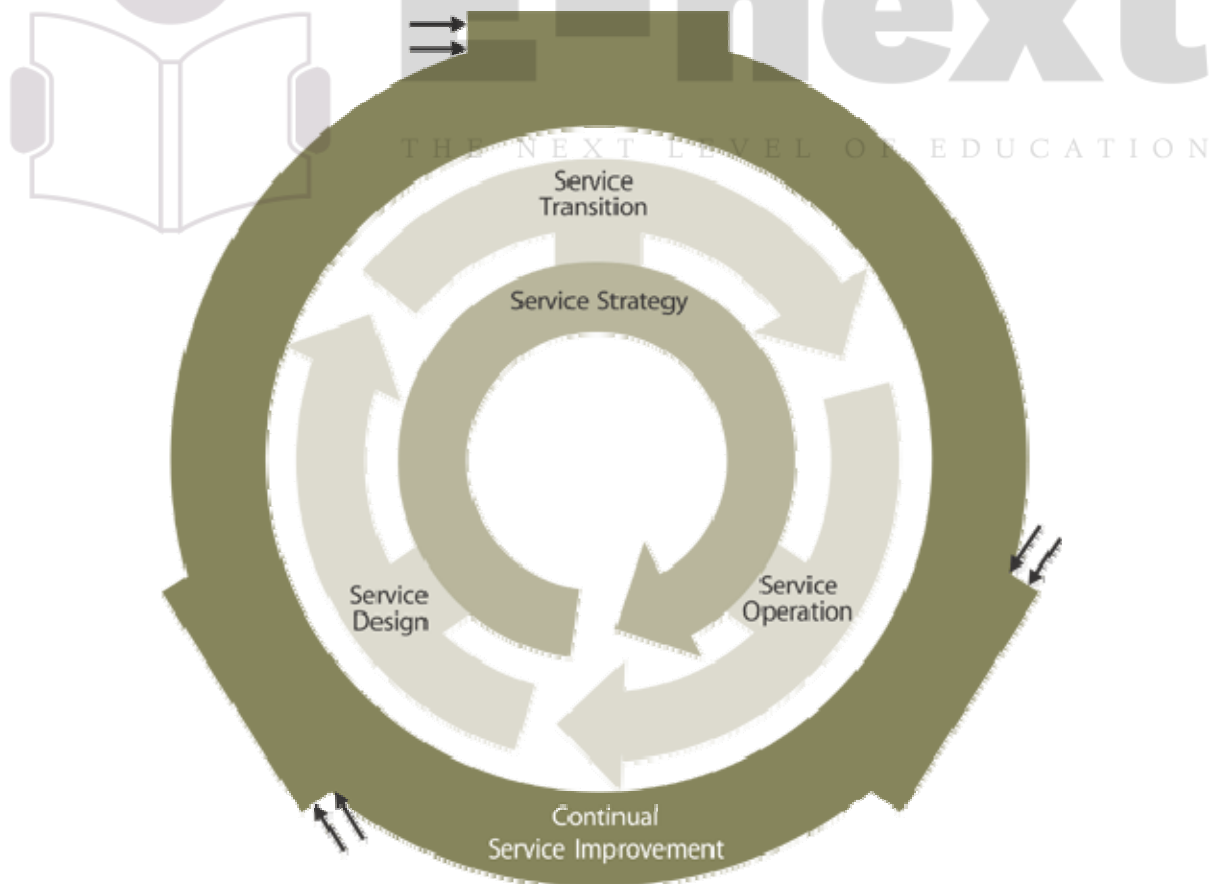
Some time during the 1990s, a large internet **service provider** switched its internet service offerings from variable **pricing** to all-you-can-use fixed pricing. The strategic intent was to differentiate from competitor services through superior pricing **plans**. The **service strategy** worked exceedingly well – customers flocked to sign up. The outcomes, however, included large numbers of customers facing congestion or the inability to log on.

Why was there such a disconnection between the **strategy** and operations?

*(Answer at the end of the chapter)*

## The Lifecycle

The architecture of the **ITIL** Core is based on a Service **Lifecycle**. Each volume of the core is represented in the Service Lifecycle (Figure 2.10). **Service Design**, **Service Transition** and **Service Operation** are progressive phases of the Lifecycle that represent **change** and transformation. Service Strategy represents policies and **objectives**. **Continual Service Improvement** represents learning and improvement.

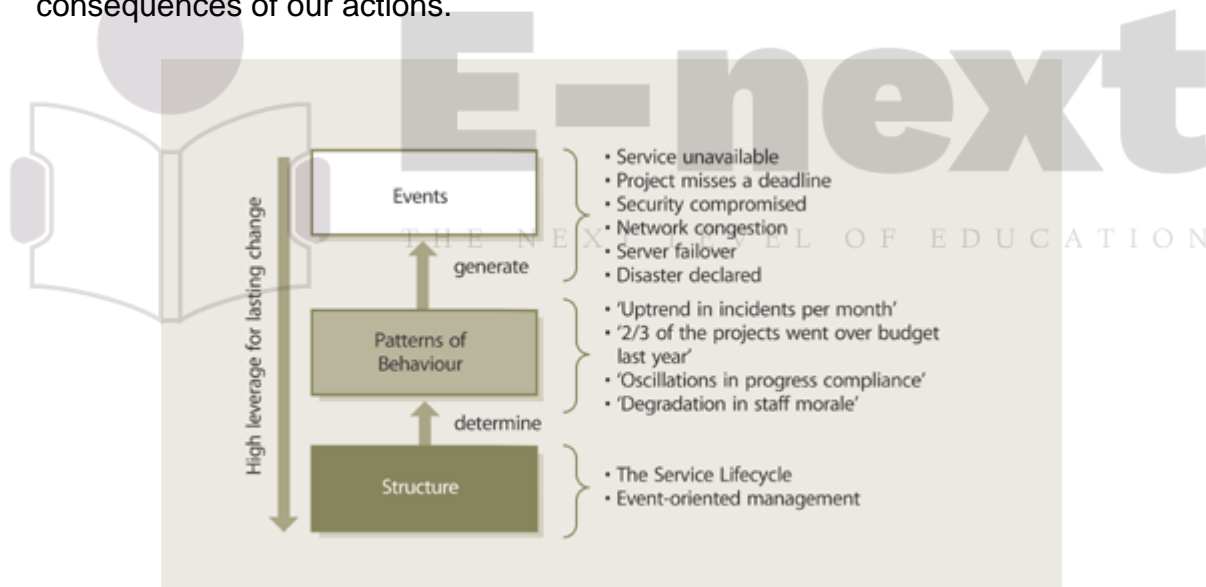


**Figure 2.10 The Service Lifecycle**

**Service Strategy** (SS) is the axis around which the lifecycle rotates. Service Design (SD), **Service Transition** (ST), and **Service operation** (SO) implement strategy. **Continual Service Improvement** (CSI) helps place and prioritize improvement programmes and projects based on strategic objectives.

### 2.5.1 Lifecycle and systems thinking

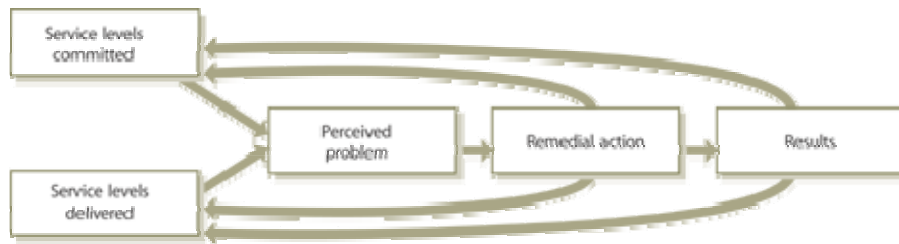
While feedback samples output to influence future action, structure is essential for organizing unrelated information. Without structure, our **service management** knowledge is merely a collection of observations, practices and conflicting goals. The structure of the Service **Lifecycle** is an organizing framework. **Processes** describe how things change, whereas structure describes how they are connected. Structure determines behaviour. Altering the structure of service management can be more effective than simply controlling discrete **events** (Figure 2.11). Without structure, it is difficult to learn from experience. It is difficult to use the past to educate for the future. We believe we can learn from experience but we never directly confront many of the most important consequences of our actions.



**Figure 2.11 Great leverage for sustainable change lies in structure**

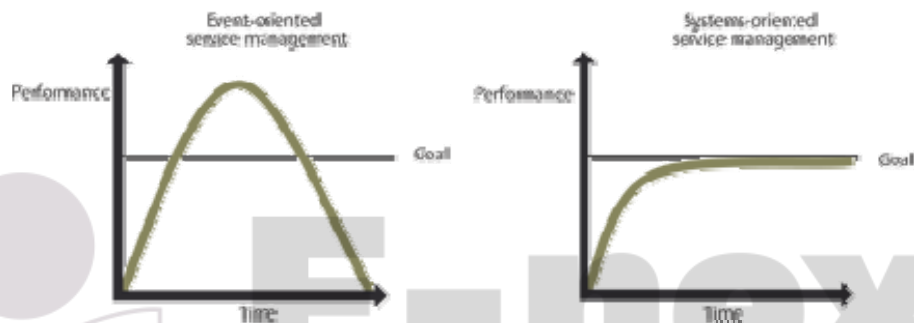
The Service Lifecycle is a comprehensive approach to service management: seeking to understand its structure, the interconnections between all its **components**, and how changes in any area will affect the whole **system** and its constituent parts over time (Figure 2.12). It is an organizing framework designed for sustainable **performance**.





**Figure 2.12 Today's problem is often created by yesterday's solution<sup>13</sup>**

A systems approach to **service management** ensures learning and improvement through a big-picture view of services and service management. It extends the management horizon and provides a sustainable long-term approach (Figure 2.13).



**Figure 2.13 Performance over time for differing service management structures**

## 2.6 Functions and processes across the Lifecycle

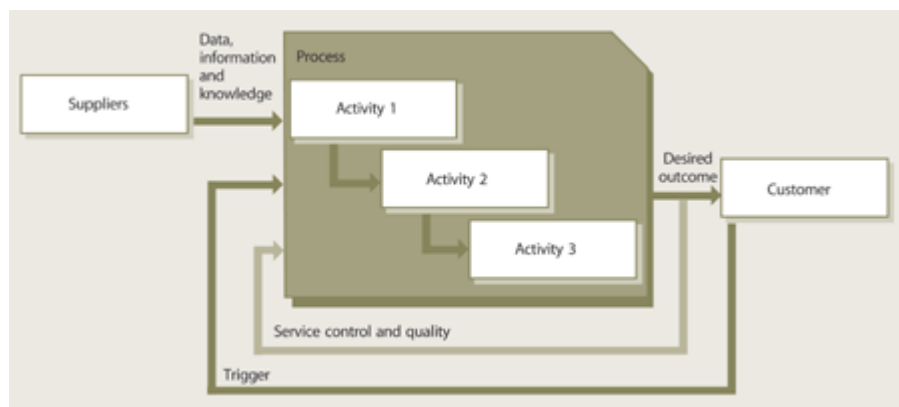
### 2.6.1 Functions

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

Functions are a way of structuring organizations to implement the specialization principle. Functions typically define **roles** and the associated authority and responsibility for a specific performance and outcomes. Coordination between functions through shared processes is a common pattern in **organization design**. Functions tend to **optimize** their work methods locally to focus on assigned outcomes. Poor coordination between functions combined with an inward focus lead to functional silos that hinder alignment and feedback critical to the success of the organization as a whole. **Process models** help avoid this problem with functional hierarchies by improving cross-functional coordination and **control**. Well-defined processes can improve productivity within and across functions.

### 2.6.2 Processes

**Processes** that provide transformation towards a goal, and utilize feedback for self-reinforcing and self-corrective action, function as closed-loop **systems** (Figure 2.14). It is important to consider the entire process or how one process fits into another.



**Figure 2.14 A basic process**

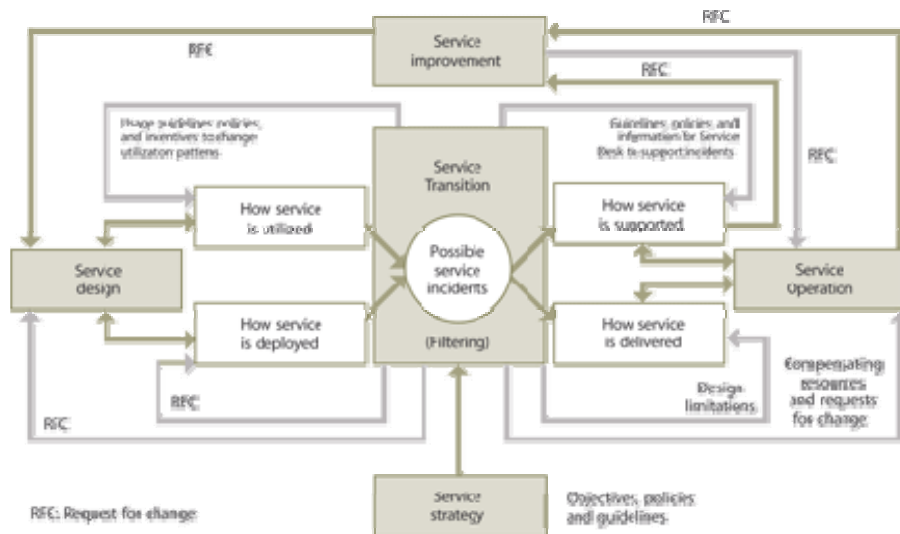
**Process** definitions describe actions, dependencies and sequence. Processes have the following characteristics:

- Processes are measurable – we are able to measure the **process** in a relevant manner. It is performance driven. Managers want to measure **cost, quality** and other variables while practitioners are concerned with duration and productivity.
- They have specific results – the reason a process exists is to deliver a specific result. This result must be individually identifiable and countable. While we can count changes, it is impossible to count how many Service Desks were completed. So **change** is a process and **Service Desk** is not: it is a **function**.
- Processes have customers – every process delivers its primary results to a **customer** or **stakeholder**. They may be internal or external to the organization but the process must meet their expectations.
- They respond to specific **events** – while a process may be ongoing or iterative, it should be traceable to a specific trigger.

**Functions** are often mistaken for processes. For example, there are misconceptions about **Capacity Management** being a **service management** process. First, Capacity Management is an organizational **capability** with specialized processes and work methods. Whether or not it is a function or a process depends entirely on **organization** design. It is a mistake to assume that Capacity Management can only be a process. It is possible to measure and control **capacity** and to determine whether it is adequate for a given purpose. Assuming that it is always a process with discrete countable outcomes can be an **error**.

### 2.6.3 Specialization and coordination across the lifecycle

Specialization and coordination are necessary in the **lifecycle** approach. Feedback and control between the functions and processes within and across the elements of the lifecycle make this possible (Figure 2.15). The dominant pattern in the lifecycle is the sequential progress starting from SS through SD-ST-SO and back to SS through CSI. That, however, is not the only pattern of action. Every element of the lifecycle provides points for feedback and control.



**Figure 2.15 Service management processes are applied across the Service Lifecycle**

The combination of multiple perspectives allows greater flexibility and control across environments and situations. The lifecycle approach mimics the reality of most organizations where effective management requires the use of multiple control perspectives. Those responsible for the design, development and improvement of processes for service management can adopt a process-based control perspective. Those responsible for managing agreements, contracts, and services may be better served by a lifecycle-based control perspective with distinct phases. Both these control perspectives benefit from systems thinking. Each control perspective can reveal patterns that may not be apparent from the other.

#### **Case example 1 (solution): The lack of a Service Lifecycle**

The decision to adopt the pricing strategy did not appear to be coordinated with service design, service transition or service operations, indicating a lack of holistic or systems thinking in crafting the service pricing strategy. Though strategically sound, the pricing strategy did not consider the many interrelated parts of the entire system.

Among the unintended consequences is a service strategy that appeared in the front pages of world newspapers as a colossal blunder in service management