

BEST PRACTICE

The IT Service Part 2

The Handbook



Pierre Bernard

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The IT Service
Part 2 The Handbook

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The IT Service Part 2 The Handbook

Pierre Bernard



Colophon

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As Publishers we have met and exchanged views with many people across the world. We are extremely fortunate to consider these people not only colleagues but also good friends who have spent many hours making sure that the works we release into the marketplace do serve that market with beneficial best practice.

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Foreword

“Why make something simple when you can make it complicated?”

Pierre Bernard

The above is just a jest really. It is about pointing out the tendency of many to overcomplicate simple things. A service is not a complicated concept. The complexity comes from all the moving parts making up the service. When people buy a motor vehicle, they are interested in a mode of transportation to bring them from the proverbial point A to point B. They are not interested in all the little parts making up the vehicle. Similarly, people are interested in the business outcomes a service will help deliver; they are not interested in what makes up the system.

A motor vehicle dashboard only displays important information to the driver for the safe operation of the vehicle. Similarly a service should only provide the customer with important information for the proper delivery of the business outcomes expected. This may be an oversimplification but the analogy should “drive” (pun intended) the point home.

As I just mentioned, a service is not a complicated concept. However, because of our business environment and culture, our attitudes and behaviours, we sometimes can't see beyond our area of focus; we can't see the forest for the trees so to speak. The apparent complexity of the concept of a service comes from all the interlocking parts and their dynamics making up the service.

So, why write a book on the service design package? The answer is simple. Because too many books and people make it sound too complicated. A service design package contains a lot of reusable documents, models, and templates. The reader should be able to recognise many of the documents as most of them already exist somewhere in the IT organisation. The primary difficulty is the information not being shared or readily made available. Being honest, creating the service design package will be time consuming at first. Sure there are a lot of components and there may be a lot of paperwork involved but like many things in life, a little planning goes a long way in preventing issues later.

This book is intended as a companion book to “*The IT Service Part 1 The Essentials*” ISBN: 978 90 8753 6671.. However it is also a standalone publication. Where required and where it made sense, the information from “*The IT Service Part 1 The Essentials*” is reused. In regards to the main topic of this book, the service design package, it is important to clarify that not all possible documents are included and that other samples and templates are available from many others sources, namely books, organizations, frameworks, methodologies and the internet.

Where possible, a sample document template or model is presented. However, some documents only contain an explanation, as many of the documents already exist. Additionally, most organisations already have document standards so providing an example is pointless.

I hope this book will provide you with a sense of having made something “*theoretical*” into something more practical and more pragmatic. I sincerely hope this book will be useful to you and your organisation in your service management journey.

Make it simple and keep it simple...

Here are two quotes regarding planning. We need to plan, as things do not materialise out of thin air.

In all things, success depends on previous preparation, and without such previous preparation there is sure to be failure
– Confucius

Everything in strategy is very simple, but that does not mean that everything is very easy.
– Carl von Clausewitz

Good luck on your service management journey and don't forget to have fun and to have a wonderful work/life balance.

Pierre Bernard
CTDP, ITIL expert

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1 Introduction

This book is about identifying the components of the service design package, their usage, and their relationships.

Before discussing the primary topic of this book, it is important to set the stage, so to speak. To properly understand what a service design package (SDP) is, a quick review of the definition and implications of a service is in order. After all, every organisation provides services in some way, shape or form.

ITIL® defines a service as:

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.

- One organisation, the *[provider]*, delivers value to another organisation, the *[customer]*
- The *[provider]* facilitates outcomes the *[customer]* wants to achieve
- Without the *[customer]* owning specific costs
- Without the *[customer]* owning specific risks
- These costs and risks are owned by the *[provider]*

The provider can be one of three combinations

- Internal to the customer organisation
- External to the customer organisation
- A partnership of some sort between an internal and an external provider

The partnerships with the external suppliers range from commodities providers to strategic partnerships. The concepts related to providers will be discussed later in this book.

There is another way to look at the service definition, which is much more powerful for any provider or for anyone working in a provider organisation.

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*.

The above is not a complicated concept to understand. Whatever you do, ask yourself the following questions.

- How does the customer define **VALUE**?
- Does your present activity bring value to the customer?
- Do both parties understand and agree on the definition of value?

- What is the current desired business **OUTCOME** of the customer?
- Does your present activity enable the current desired business outcome of the customer?
- Does your present activity support the current desired business outcome of the customer?
- Do both parties understand and agree on the definition of outcome?
- What is the **COST** of my current activity compared to the overall revenue stream?
- What happens if your activity is over budget?
- What happens if your activity is under budget?
- Do both parties understand and agree on the cost structure?
- What is the **RISK** of not meeting the customer requirements?
- What is the risk of meeting the customer requirements?
- What is the risk of exceeding the customer requirements?
- Do both parties understand and agree on the risks (real or perceived) involved?

Important concepts...

Without the proper context none of the questions in the previous section can be answered adequately. Therefore it is always important for the provider and for the customer to formally agree (more on this later in this book) on the meaning of various terms. Let us start by looking at some of the terms already mentioned.

Table 1.1 Definitions of service specific terms

Cost	The amount of money spent on a specific activity, IT service, or business unit. Costs consist of real cost (money), notional cost such as people's time, and depreciation.
Customer	Someone who buys goods or services. The customer of an IT provider is the person or group that defines and agrees the service level Targets. The term 'customer' is also sometimes informally used to mean users, for example "this is a customer-focused organisation"
Outcome	The result of carrying out an activity; following a process; delivering an IT service, etc. The term outcome is used to refer to intended results, as well as to actual results
Provider	An organisation supplying services to one or more internal customers or external customers. 'Service provider' is often used as an abbreviation for IT provider
Risk	A possible event that could cause harm or loss, or affect the ability to achieve Objectives. A risk is measured by the probability of a threat, the vulnerability of the asset to that threat, and the impact it would have if it occurred.
Value	<ul style="list-style-type: none"> • <i>A fair return or equivalent in goods, services, or money for something exchanged</i> • <i>The monetary worth of something</i> • <i>Relative worth, utility, or importance</i>

Does value mean quality?

The heading above is a good question. One can suppose that many individuals might equate one with the other. However, such is not the case.

Quality can be defined in many ways: for example, the following standards and individuals define quality as:

Table 1.2 Definitions of “quality” according to various standards

ISO 9000	<i>“Degree to which a set of inherent characteristics fulfils requirements”</i>
Six Sigma	<i>“Number of defects per million opportunities”</i>
Philip B. Crosby	<i>“Conformance to requirements”</i>
Joseph M. Juran	<i>“Fitness for use”</i>
Noriaki Kano (and others)	<i>“Products and services that meet or exceed customers” expectations”</i>
American Society for Quality	<i>“A subjective term for which each person has his or her own definition. In technical usage, quality can have two meanings:</i> <ul style="list-style-type: none"> • <i>The characteristics of a product or service that bear on its ability to satisfy stated or implied needs</i> • <i>A product or service free of deficiencies”</i>
Peter Drucker	<i>“Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for”</i>
W. Edwards Deming	<i>“The efficient production of the quality that the market expects</i>

As one can clearly see, value and quality are not synonymous. Value is a combination of “*fit for usage*” and “*fit for purpose*”. The value of something can be expressed in intangible terms and can be related to sentiments or fond memories.

Quality, on the other hand, implies the product or service meets some specific set of criteria set by the customer.

Of course, both can be subjective and are open for debate. However, for the purpose of this book, quality is an element of value.

Chapter summary

So far, not much has been said about the service design package itself. However, the foundation has been laid. Before we start anything we should always be starting with the end in mind. At this time the IT organisation can create its first table regarding the SDP.

Item	High level definition based on the customer's point of view
Customer	Who they are
Outcome	What they are accountable to deliver
Value	What is valuable to them
Cost	Which cost they wish to avoid
Risk	Which risks they want to avoid
Quality	The customer's definition of their goods and services

Why the customer's point of view? The answer is simple.

The IT organisation cannot assume it knows anything about the business unless they talk with (not to) the business utilising a business language.

Why talk "with" the business instead of "to" the business? Again the answer is simple.

Talking to someone invokes in me the feeling that one party is regarded as being in a position of subservience to the other.

Talking with someone invokes in me the feeling of both parties being equals. It creates a better feeling of partnership where both parties listen to each other and work together towards a solution.

2 Overview of the service design package

Introduction

Question: What is a service design package?

Answer: A service design package is a [set of documents] *defining all aspects of an IT service and its requirements through each stage of its lifecycle. A service design package is produced for each new IT service, major change, [or for the retirement of an IT service].*¹

There are two major elements to the above definition. They are...

1. *All aspects of an IT service*
2. *Requirements through each stage of its lifecycle*

All aspects of a service

At first glance, covering all aspects of a service appears to be a daunting task. Let us be frank and honest here; it is a daunting task if an organisation starts with nothing. However, as most organisations already have most of the elements in place, the difficulty resides in:

- Recognising them they are likely to be called by another name
- Inventorying them where are they?
Which is the best/most up-to-date version?
- Identifying who has them getting people to share them
- Conducting a gap analysis. what's missing?
- Prioritising the work which elements are important at this time?

At this point, organisations should remember the three “Rs” of environmental conservation namely; reduce, reuse, and recycle.

- Reduce the number of copies and versions in circulation. Store them in one location.
- Reuse existing elements even if they are not perfect presently
- Recycle elements by using them again or transforming them into templates or models

Of course there is a lot of work to be planned, prioritised, assigned, scheduled, executed, signed-off, and completed. Hum, this looks a lot like project management or even Deming’s Plan-Do-Check-Act (PDCA) cycle. It is, just like anything else in

¹ ITIL Core books – glossary – [emphasis mine]

service management. However, this book is not about all the steps required to create a SDP but rather what is a SDP.

Throughout each chapter, the reader will find various checklists, documents, techniques, and methods discussed in that chapter. These objects can be used in identifying the elements already in place, their present status, prioritisation, and to whom they are assigned.

So, what are the aspects of a service? Let's start with the obvious and look at value creation from both the customer and the service provider (IT) respective perspectives.

Value creation through services

Just as "*beauty is in the eyes of the beholder*" so is value. A person defines value using four basic elements – their desired outcome, their perception, their preferences, and desired attributes of the service or product.

Desired outcomes

Value is defined strictly in the context of outcomes. In regards to service management, the context becomes business outcomes. This business focus, as opposed to having a technology focus, is a critical shift and move forward for providers. It is also relatively new to many IT professionals. It is not that IT professionals do not understand these concepts or are stubborn; the reality is that they may simply not use the same terminology as the one found in proven practice literature.

This new focus represents a shift of emphasis from efficient utilisation of resources to the effective *realisation* of outcomes. Operational efficiency is driven by the need for effectiveness in helping customers realise their business outcomes.

This may sound strange but customers do not purchase services. They purchase the fulfilment of particular needs to serve their customers. This important distinction helps to explain some of the disconnection between the IT organisation and the business it serves. Too often the IT organisation thinks in terms of technology solutions instead of business outcome driven solutions.

Perception

Perceptions of value are influenced by expectations. Customers have reference values on which they base their perceptions of added value from a service. The reference value may be vaguely defined or based on hard facts. Perception is influenced by external sources of information such as advertising, word-of-mouth, and previous experiences with the service (or similar ones). There are many intrinsic personal factors influencing perception. These factors include gender, age, ethnicity, education, upbringing, personal experiences, and how a person is influenced by external sources.

Preference² is defined as

1. a: the act of preferring : the state of being preferred

Prefer:

1: to promote or advance to a rank or position

2: to like better or best

b: the power or opportunity of choosing

2. one that is preferred

3. the act, fact, or principle of giving advantages to some over others

It goes without saying that everyone has preferences. Preferences are influenced by relatively the same factors influencing perceptions albeit from a slightly different combination and weight.

The desired service attributes

In order to be successful, an organisation must deliver the right services to their customers. For this to happen, not only must the organisational services and products have the desired attributes; so too must the IT services. However, what are those IT service attributes? If the IT provider spoke the same language as the business, there would be fewer difficulties. If the IT provider delivered service solutions with the appropriate levels of utility and warranty, again there would be fewer difficulties.

Furthermore, in recent years, as IT has “educated” their customers, or so they think, in using “IT speak”, the customer is now ordering technological solutions which too many IT providers are only too happy to provide. This is actually making it more difficult for the organisation to deliver its services and products

There are many difficulties to surmount. The customer must be able to properly identify and articulate their desired outcomes. The IT provider must be able to:

- Listen to (not just hear) the business
- Articulate its capabilities
- And actually deliver what the customer actually requested

The IT provider and the all business units must realise and accept they are both serving the organisation’s customer in partnership.

Summarizing value

What the customer values is frequently different from what the IT organisation believes it provides – mind the gap.

The operation of service is where the plans, designs, and optimisations are executed and measured. From a customer viewpoint, service operation is where actual value is realised. Value is defined strictly in the context of business outcomes.

² <http://www.merriam-webster.com/>

- Focus on business outcomes over everything else is a critical advance in outlook for many service providers
- It represents a shift of emphasis from efficient utilisation of resources to the effective realisation of outcomes. Efficiency in operations is driven by the need for effectiveness in helping customers realise outcomes
- Perceptions of value are influenced by expectations. Customers have reference values on which they base their perceptions of added value from a service. The reference value may be vaguely defined or based on hard facts
- Customers do not buy services; they buy the fulfilment of particular needs
- This distinction explains the frequent disconnection between IT organisations and the businesses they serve³

Utility and warranty

The concepts of utility and warranty are not new to the business world but they are to the world of IT Service Management (ISSM). Ask different individuals to describe a service. Not only will many be confused and/or intimidated by this but they are unlikely to come up with a proper definition. Actually these concepts are quite simple to explain and understand.

In order for a product or service to be seen as creating value in the eyes of the customer it must provide both utility (fit for purpose) and warranty (fit for use). Let's try to make things simple.

Remember that a service must be seen to:

- Deliver value to the customer
- Facilitate business outcomes for the customer
- Shield the customer from specific costs
- Shield the customer from specific risks

First, let us look at “utility”. Utility is achieved in one of three ways.

1. It improves the performance
 - OR –
2. It addresses constraints by removing or reducing them
 - OR –
3. It improves performance and reduces constraints

It is possible to improve performance by removing constraints by the way. But first let's look at performance. The Merriam-Webster online dictionary defines performance⁴ as:

1. The execution of an action
 - something accomplished: deed, feat

³ ITIL Core book – Service Strategy

⁴ <http://www.britannica.com/dictionary>

2. The fulfilment of a claim, promise, or request: implementation
3. The action of representing a character in a play
 - A public presentation or exhibition <a benefit performance>
4. The ability to perform: efficiency b: the manner in which a mechanism performs <engine performance>

Performance is quite simply the ability to do more in less time and/or using less effort and/or consuming fewer resources as compared to a previously established baseline.

The world of sports is full of stories regarding athletes who have performed better than others (especially during championships) or better than they did in previous years.

But improving performance is not always possible or the desired outcome. At some point in time the costs and efforts required to improve performance far outweigh the (potential) benefits. This is where we turn our attention to the removal of constraints. A constraint is a restriction, an inability to execute a specific task or activity. Earlier in my career and when mobile technology was relatively new, I was managing a team of trainers as well as being a trainer myself. I needed to be more accessible to my team. So I had to look at purchasing a new mobile phone that would allow me to access my email and the Internet. By doing this, I removed a significant constraint. I had no need to address the performance aspect of utility but utility was addressed in a satisfactory manner.

But looking at utility is not enough. We have to consider the warranty aspect as well. Now the warranty is not the card found in the box of the small kitchen appliance we just bought and that tells us that the product should be free of defects for a finite period from the time of purchase.

In our case, warranty is provided if four distinct conditions are met.

- Is the service available enough?
- Is there enough capacity?
- Is it secured enough?
- Is it continual enough?

Here is a quick clarification on “enough” continuity: It relates to which degree would the service be ready for use even in abnormal and unexpected situations.

Unlike utility, warranty requires that all of the four conditions mentioned above are met. If even just one is missing, then the warranty aspect is not met and the value creation not realised.

Keeping with our mobile phone example, we can say that many phones give us the ability to travel across many regions and still be able to use our phones. This was not always the case. I remember that in the beginning the coverage was usually limited

to major urban centres. Nowadays the coverage is lot more extensive and thus more “available” to us.

However, a customer may perceive a service to be unavailable if there is insufficient capacity. A great example of this relates to traffic gridlock in the downtown core of most major urban centres. The roads are available because they exist but the capacity to handle today’s volumes of traffic is not sufficient. It is next to impossible to expand the roads in a downtown area.

Security is a major concern in today’s technology enabled world. We have to balance our need and desire for security against not only the monetary costs but its (potential) counter effect on utility. Being too secure could impact performance and impose new constraints. Things can be so secure that the service becomes unavailable to the users. It is a difficult balancing act but it needs to be addressed.

Finally we come to the continuity of the service. There is a great example for this. In the summer of 2004, there was a huge power outage that affected many states in the USA as well as many provinces in Canada. At the time I (the author) was delivering a workshop in downtown Toronto so I experienced this first hand. A couple of interesting things happened. Backup and redundant systems became active; services remained available to various business customers in the unaffected regions. Things worked as designed.

However in some organisations, the decision was made not to invoke any of the continuity plans. Why? The answer was simple and obvious; the business units and their customers had not power themselves. People were more interested in finding ways to go home and keeping in touch with family and loved ones. This brings us to the complaints many had that the phone systems failed miserably. The fact is that the phone systems worked as designed; people received a busy signal. The issue was related to the capacity of the phone systems.

Exaggeration: *The phone systems simply did not have the capacity to handle all those “millions” of calls all made at the same instant*

More realistically: *It simply did not have the capacity to provide connectivity for all those calls made during that very short period of time.*

Is warranty independent of utility? Of course not! One influences and is influenced by the other. The value creation will only be realised if the utility and warranty aspects are both met.

In summary, we need to build services that enable the business (and in many cases now the business customers) to perform better and/or with features that remove or reduce constraints (real or perceived) affecting the people using our services. When looking at the warranty aspect we need to design our services to be available when customers need it. The IT provider has to build in sufficient capacity to enable utility

and availability. The whole thing has to meet the security requirements from our customers, and sometimes dictated by legislation as well, but not to the detriment of utility or the other three warranty components. Finally, the service must be provided in a continuous fashion - usually to the same levels as in normal operations but often with reduced attributes such as performance or capacity. This is usually negotiated with the business and communicated to the end-user community to manage expectations.

In the design phase of the service, the IT personnel will execute the activities of many processes as well as utilising the resources provided for the processes by the organisation. Hence, many IT resources, and the performing of many activities of different processes across all phases of the lifecycle are required in order to design the service that will fulfil the utility and availability requirements from the customers.

About resources and capabilities

In order to deliver the utility and warranty aspects of the services and to meet the customer's value proposition (perception, preferences and desired outcomes) the IT organisation requires the required resources as well as the right levels of abilities. These elements are called resources and capabilities.

Resources and capabilities are types of assets used to create value in the form of goods and services. Resources are usually consumed in some way, shape or form while capabilities are the abilities of an organisation to transform the available resources into products and/or services.

Resources being items that are "consumed" are easier to explain and to understand. Resources include financial capital (money). Everything costs money and money does not grow on trees and every organisation requires money to function. It is the "fuel" of an organisation. Other resources include the applications and the infrastructure. Applications automate, enhance, codify, and mimic the functions and activities of the capabilities. The infrastructure is generally understood to be the hardware, software, network components, facilities components, etc. Application resources are part of the infrastructure and the infrastructure can be viewed in layers with each layer building on the previous one. Information is the context given to data; more on this in an upcoming section

The following diagram illustrates the five resources.

Capabilities include management, organisation, processes, knowledge, and people. Capabilities are used throughout the lifecycle of a products or service. To oversimplify things, resources are used to plan, do, check and act (Deming's cycle) against products and services.

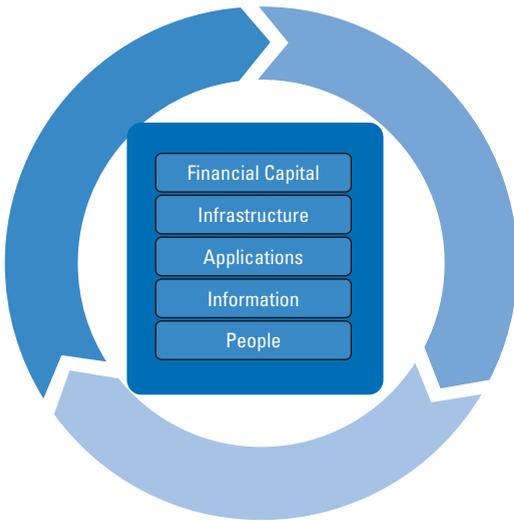


Figure 2.1 The five resources

The following diagram illustrates the five capabilities.

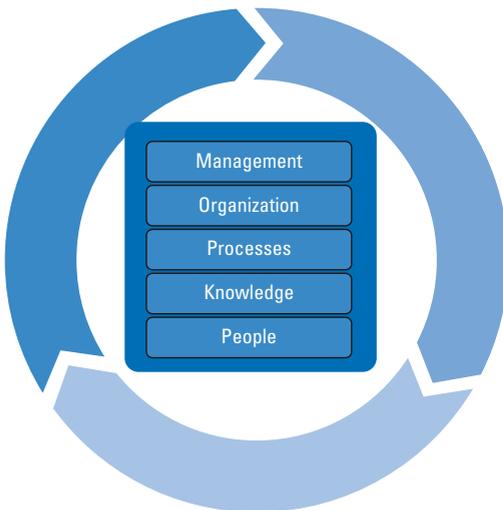


Figure 2.2 The five capabilities

Before we get too ahead of ourselves, let's explore the capabilities in more details. Management influences and is influenced by the hierarchical structure of the organisation, its culture, history, and by the managers themselves. These influences can be both positive and negative. Please make sure you do not dwell only on the negative aspects but on the positive ones as well. Some questions to ask include:

- How long does it typically take for management to make a decision? Wait too long and you may miss the opportunity; respond too quickly and you may miss the mark. This is represented in one of the service operation conflicts of stability vs. responsiveness.
- Are decisions solely/mostly based on costs? Too much emphasis in cost cutting could result in sacrificing quality. This is represented in another of the service operation conflicts of cost vs. quality.
- Is management a victim of analysis paralysis? The organisation might be stuck in a reactive mode instead of being proactive. However, the opposite might be true and the organisation is too focused on being proactive.

There are obviously many other questions that might be asked but management's behaviour needs to be understood in order to identify how resources are managed and how decisions affect the other capabilities as well.

Already we have touched on some aspects of the organisation when we explored the management capability. The organisation capability, like the management capability, influences and is influenced by the hierarchical structure of the organisation, its culture, history, and by management and, again, these influences can be both positive and negative. Some of the issues raised by the organisation capability might include:

- The culture of the organisation
- The make up of the organisation: centralised, localised, decentralised, etc.
- The customer's perception of the organisation
- Recent good or bad press

Processes are also very important capabilities. Think of it as an assembly line. Inputs go in; they get transformed through a set of activities and some outputs come out at the other end. Of course, this is an oversimplification. Processes are a lot more complex than that. They require process control capabilities such as ownership, policies, objectives, documentation, and feedback mechanisms. It also requires process enablers such as process resources and process capabilities. There's the link right there. You may have a great process but if it takes too long to accomplish anything or if it is not followed, what's the use?

How can knowledge be a capability? The answer lies in its definition. Knowledge is putting information into context. Information (and by inference data) is a resource. This concept is explained in the service transition phase in more details but basically the value stores in the fields of a database for example. The information is basically the field types. A series of numbers such as 1, 2, and 3 does not mean anything unless the fields are labelled (context). If 1, 2, and 3 represent degrees of temperatures or distances such as kilometres then we have a better but still incomplete understanding of their meaning. Knowing that the numbers 1, 2, and 3 relate to the distances (in kilometres) between you and the three nearest coffee shops is knowledge.

This indicates that management and the personnel, through their experiences and skills placed in the context of the organisation, will have the capability to transform the information into knowledge. This is why information is the resource and knowledge the capability.

What about people?

People are both capabilities and resources. We employ people's time, energy, skills, knowledge and experience in various roles to help the organisation produce and sell goods and services. This is the resource aspect. An organisation requires of their personnel the use of their time, energy, skills, aptitudes, attitudes, and experience to execute the activities of a process, to make management decisions, to translate information into knowledge or to form a group called an organisation. In short, without people there are no capabilities and the resources certainly won't spontaneously (or auto-magically as per a colleague) transform themselves into goods and services.

Utility, warranty and the capabilities

We can apply the concept of value creation to all the capabilities.

Utility

- Are the capabilities enhancing performance or inhibiting it?
- Are the capabilities removing or reducing constraints?

Warranty

- Are the capabilities available? Example: management? people? knowledge? etc.
- Do we have enough capabilities? Example: people? knowledge? organisation? etc.
- Are the capabilities continuous enough to operate in times of crisis? Example: people? processes? management?
- Are the capabilities secure enough? This applies to all of course.

Utility, warranty and the resources

But can we apply the concept of utility and warranty to the resources? Of course we can. Think about it for a few seconds.

Utility

- Are the resources enhancing performance or inhibiting it?
- Are the resources removing or reducing constraints?

Warranty

- Are the resources available? Do I have the raw materials?
- Do we have enough resources? Do I have enough for all my orders?
- Are the resources continuous enough to operate in times of crisis? Can I order more in time from the same or a difference source without compromising quality?
- Are the resources secure enough? Can my resources be easily stolen or spoiled?

Summary of utility and warranty

In summary, capabilities and resources have been around for a long time. It is simply that the concept is new to many in IT and it is a new addition to the service management framework. If you think about it, you can apply the utility and warranty concepts throughout history of humankind; from the hunter-gatherers to the pyramid builders; from the Great Wall of China to the aerospace industry. What do they have in common? They all consumed resources and required capabilities.

It is all about integration.

Requirements through each phase of the lifecycle

Newsflash bulletin!

This is just in. We interrupt this book to bring you this ground-breaking news story.

Service managers all over the world have discovered that requirements of all kinds are established for each and every phase of the service lifecycle. Based on facts and supported by numerous books, articles, and whitepapers, it is now confirmed, without the shadow of a doubt that requirements are identified and documented at and for every phase of the service lifecycle.

At the strategy phase, high level business requirements are established and provided to the design phase as well as being communicated to all other phases of the lifecycle. During the design phase, the IT provider and the business discuss and agree on detailing the requirements. These requirements are incorporated into the SDP. They are then communicated to the all other phases of the service lifecycle. This is of course an iterative process involving both the strategy and the design phases.

Once the design requirements are agreed, the IT provider and the business discuss and agree on detailing the transition requirements. These transition requirements are included in the SDP. They are then communicated to the all other phases of the service lifecycle. This is of course an iterative process involving the strategy, the design, and the transition phases.

Once the transition requirements are agreed and incorporated into the SDP, the IT provider and the business discuss and agree on detailing the operational requirements. These operational requirements are incorporated into the SDP. They are then communicated to all other the phases of the service lifecycle. This is of course an iterative process involving the strategy, the design, the transition, and the operational phases.

Once the operational requirements are agreed and incorporated into the SDP, the IT provider and the business discuss and agree on detailing the continual improvement requirements. These continual improvement requirements are incorporated into the SDP. They are then communicated to the all other phases of the service lifecycle. This is of course an iterative process involving the strategy, the design, the transition, the operational and the continual improvement phases.

Stay tuned for more details throughout the upcoming chapters in this book.

We now return to your regularly scheduled book reading already in progress...

Of course, in real life, things are not as simple as described in the above “news bulletin”. Nonetheless, events tend to follow such a pattern, albeit not necessarily in that order. The IT organisation and the business often work in isolation and only meet sporadically. Compounding the issue is the lack of continuity between each phase as different people receive the requirements without knowing all the details. They are often instructed to deliver on time and on budget.

This is common practice. Being on time and on budget does not necessarily guarantee the delivery of the business requirements at the level of quality expected.



Good practice alert!

- Communicate the requirements throughout the entire lifecycle
- Create a communication plan and communicate at regular intervals
- Ensure consistency by involving a common core set of people to represent all phases of the lifecycle
- Discuss, document and agree requirements in partnership, not in isolation
- Deliver the requirements at the right level of quality

The SDP is produced during the design stage, for each new service, for each major change to a service, for the removal of a service or for changes to the SDP itself.

The SDP details all aspects of the service and its requirements through all of the subsequent stages of its lifecycle. Once completed, the SDP becomes a major and significant input into the transition phase.

The following table provides a high-level overview of the categories and their respective sub-categories.

Table 2.1 The SDP categories⁵

Category	Subcategory
Requirements	Business requirements
	Service applicability
	Service contacts

5 Based on ITIL Core book – Service Design – Appendix A

Category	Subcategory
Service design	Service functional requirements
	Service level requirements
	Service and operational management requirements
	Service design architectures
Organisational readiness assessment	Organisational readiness assessment
Service lifecycle plan	Service program
	Service transition plan
	Service operation acceptance plan
	Service acceptance criteria

The above table does not provide an alignment with the service lifecycle phases. However, the following table provides a better alignment of the SDP to the service lifecycle phases and will become the basis for the rest of the book.

Table 2.2 The SDP categories aligned to the service lifecycle

Category	Subcategory
Service Strategy	High-level business requirements
	High-level IT requirements
	Service applicability requirements
	Service contacts – business and IT provider
	Service portfolio requirements
	Financial requirements
	Service demand requirements
	Service program
Service design	Service solution – service design topology
	Core service (package) requirements
	Service level (package) requirements
	Service management systems and tools requirements
	Service architecture requirements
	Service measurement system requirements
	Service management requirements

Category	Subcategory
	Service transition requirements
	Service operation requirements
	Service improvement requirements
	Service acceptance criteria for each phase
	Service processes requirements
	Service level management requirements
	Service catalogue requirements
	Supplier management requirements
	Availability management requirements
	Capacity management requirements
	Service continuity management requirements
	Information security requirements
	Service operational acceptance plan
	Service retirement plan
Organisational readiness assessment	Organisational readiness assessment
Service transition	Service transition plan requirements
	Change management requirements
	Release and deployment policy requirements
	Service asset and configuration plan requirements
	Service validation and test plan requirements
	Service evaluation requirements
	Knowledge management strategy requirements
	Service acceptance criteria
	Performance Test
	Load Test
Service operation	Service operational acceptance plan
	Event management monitoring requirements
	Incident management requirements
	Problem management requirements
	Service request requirements
	Access management requirements
	Functional requirements
	IT operations management requirements
	Technical management requirements
	Applications management requirements
	Service desk requirements
	Service acceptance criteria
Continual service improvement	Service improvement acceptance plan
	Service improvement requirements

Category	Subcategory
	Service solution – service design topology
	Service transition plan
	Service operational acceptance plan
	Service acceptance criteria

According to the ITIL core book on service design, the SDP should contain, at a minimum, the following elements (Table 2.3). Please refer to Table 2.2 for the high-level version of this table.

Table 2.3 Suggested contents of the SDP⁶

Category	Sub-category	Description of what is in the SDP
Requirements	Business requirements	The initial agreed and documented business requirements
	Service applicability	The definition of the “how” and the “where” the customers will use the service. This could reference business, customer and user requirements for internal services
	Service contacts	The business contacts, customer contacts and stakeholders in the service
Service design	Service functional requirements	The changed functionality of the new or changed service, including its planned outcomes and deliverables, in a formally agreed statement of Requirements (SoR)
	Service level requirements	The SLR, revised or new SLA, including service and quality targets
	Service and operational management requirements	Management requirements to manage the new or changed service and its components, including all supporting services and agreements, control, operation, monitoring, measuring and reporting
	Service design and architecture	The design, transition and subsequent implementation and operation of: <ul style="list-style-type: none"> • The service solution and its supporting components, including: • The service definition and model, for transition and operation • All service components and infrastructure (including hardware, software, networks, environments, data, applications, technology, tools, documentation), including version numbers and relationships, preferably within the configuration management system (CMS) • All user, business, service, component, transition, support and operational documentation • Processes, procedures, measurements, metrics and reports • Supporting products, services, agreements and suppliers

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Category	Sub-category	Description of what is in the SDP
Organisational readiness assessment	Organisational readiness assessment	“Organisational readiness assessment” report and plan, including: business benefit, financial assessment, technical assessment, resource assessment and organisational assessment, together with details of all new skills, competences, capabilities required of the service provider organisation, its suppliers, supporting services and contracts
Service lifecycle plan	Service program	An overall program or plan covering all stages of the lifecycle of the service, including the timescales and phasing, for the transition, operation and subsequent improvement of the new service including: <ul style="list-style-type: none"> • Management, coordination and integration with any other projects, or new or changed activities, services or processes • Management of risks and issues • Scope, objectives and components of the service • Skills, competences, roles and responsibilities • Processes required • Interfaces and dependencies with other services • Management of teams, resources, tools, technology, budgets, facilities required • Management of suppliers and contracts • Progress reports, reviews and revision of the program and plans • Communication plans and training plans • Timescales, deliverables, goals and quality targets for each stage
	Service transition plan	<ul style="list-style-type: none"> • Overall transition strategy, objectives, policy, risk assessment and plans including: • Build policy, plans and requirements, including service and component build plans, specifications, control and environments, technology, tools, processes, methods and mechanisms, including all platforms • Testing policy, plans and requirements, including test environments, technology, tools, processes, methods and mechanisms <ul style="list-style-type: none"> ○ Testing must include: <ul style="list-style-type: none"> ○ Functional testing ○ Component testing, including all suppliers, contracts and externally provided supporting products and services ○ User acceptance and usability testing ○ System compatibility and integration testing ○ Service and component performance and capacity testing ○ Resilience and continuity testing ○ Failure, alarm and event categorisation, processing and testing ○ Service and component, security and integrity testing ○ Logistics, release and distribution testing ○ Management testing, including control, monitoring, measuring and reporting, together with backup, recovery and all batch scheduling and processing • Deployment policy, release policy, plans and requirements, including logistics, deployment, roll-out, staging, deployment environments, cultural change, organisational change, technology, tools, processes, approach, methods and mechanisms, including all platforms, knowledge, skill and competence transfer and development, supplier and contract transition, data migration and conversion

Category	Sub-category	Description of what is in the SDP
	Service operational acceptance plan	Overall operational strategy, objectives, policy, risk assessment, and plans including: <ul style="list-style-type: none"> • Interface and dependency management and planning • Events, reports, service issues, including all changes, releases, resolved incidents, problems and known errors, included within the service and any errors, issues or non-conformances within the new service • Final service acceptance
	Service acceptance criteria	Development and use of service acceptance criteria (SAC) for progression through each stage of the service lifecycle, including: <ul style="list-style-type: none"> • All environments • Guarantee and pilot criteria and periods

Table 2.4 Suggested contents of the SDP aligned to the service lifecycle⁷

Category	Sub-category	Description
Service strategy	High-level business requirements	The initial agreed and documented business requirements
	High-level IT requirements	The initial agreed and documented IT requirements
	Service applicability requirements	The definition of the “how” and the “where” the customers will use the service. This could reference business, customer and user requirements for internal services
	Service contacts – business and IT provider	The business contacts, customer contacts and stakeholders in the service
	Service portfolio requirements	The service portfolio represents all the resources presently engaged or being released in various phases of the service lifecycle. Each phase requires resources for completion of projects, initiatives, and contracts. Criteria for entry, progress, and exit are approved only with approved funding and a financial plan for recovering costs or showing profit as necessary. The portfolio should have the right mix of services in the pipeline and catalogue to secure the financial viability of the service provider.
	Financial requirements	<p>Planning can be categorised into three main areas, each representing financial results that are required for continued visibility and service valuation:</p> <ul style="list-style-type: none"> • Operating and capital • Demand • Regulatory and environmental (compliance) <p>A budget is an itemised summary of estimated or intended expenditures for a given period along with proposals for financing them. A budget is also a systematic plan for the expenditure of a usually fixed resource, such as money or time, during a given period. Finally, it is the total sum of money allocated for a particular purpose or period of time:</p>

⁷ ITIL Core book – Service design – Appendix A

Category	Sub-category	Description
	Service demand requirements	Service-oriented financial information with factors of demand and supply in order to model anticipated usage by the business, and provisioning requirements by IT. This is for identifying funding requirements, variations, and drivers of those variations, and to assist in the management of service demand.
	Service program	<p>An overall program or plan covering all stages of the lifecycle of the service, including the timescales and phasing, for the transition, operation and subsequent improvement of the new service including:</p> <ul style="list-style-type: none"> • Management, coordination and integration with any other projects, or new or • Changed activities, services or processes • Management of risks and issues • Scope, objectives and components of the service • Skills, competences, roles and responsibilities • Processes required <ul style="list-style-type: none"> • Interfaces and dependencies with other services • Management of teams, resources, tools, technology, budgets, facilities required • Management of suppliers and contracts • Progress reports, reviews and revision of the program and plans • Communication plans and training plans • Timescales, deliverables, targets and quality targets for each stage
Service design	Service solution – service design topology	The design, transition and subsequent implementation and operation of all user, business, service, component, transition, support and operational documentation covering the five aspects and the four Ps of design
	Core service (package) requirements	The service solution and its supporting components, including the service definition and model, for transition and operation
	Service level (package) requirements	The SLR, revised or new SLA, including service and quality targets, supporting products, services, agreements and suppliers
	Service management systems and tools requirements	Service portfolio, integrated service management suite, CMS, data manipulation language (DML), data handling system (DHS), service knowledge management system (SKMS), and tools for service design, transition, operation and improvement
	Service architecture requirements	All service components and infrastructure such as hardware, software, network, environment, data, applications, technology, tools, documentation
	Service measurement system requirements	Vision, mission, key goal areas, goals, objectives, critical success factors, key performance indicators, metrics, measurements, and reporting tools
	Processes	Process model, policies, procedures, work instructions, roles, authority matrices
	Service and operational management requirements	The changed functionality of the new or changed service, including its planned outcomes and deliverables, in a formally agreed statement of Requirements (SoR)

Category	Sub-category	Description
	Service transition requirements	The requirements for transitioning a service into the live environment such as models and plans for change, configuration, configuration items (CIs), release, build, deployment, implementation, early life support, validation, tests, and evaluation, CI type CI information, CI relationships
	Service operation requirements	Targets for service levels, operational levels and contacts levels. Operational requirements for batch, report, backup and report, and maintenance. Support targets
	Service improvement requirement	Reasons for measuring; vision, mission, goals, objectives, critical success factors (CSFs), key performance indicators (KPIs), metrics, what should and what can be measured
	Service acceptance criteria for each phase	Development and use of service acceptance criteria (SAC) for progression through each stage of the service lifecycle, including: <ul style="list-style-type: none"> • All environments • Guarantee and pilot criteria and periods
	Service processes requirements	Service level requirements Service level targets Personnel <ul style="list-style-type: none"> • knowledge, skills, and aptitudes Organisational chart Business plans Patterns of business activities User profiles Current tasks, roles and responsibilities of internal personnel Current tasks, roles and responsibilities of external suppliers
	Service level management requirements	Targets for service levels, operational levels and contacts levels. Contact information, who uses the service Service review meeting schedules, agenda and service improvement plan
	Service catalogue requirements	Service details across its lifecycle Functionalities and views (user profiles) for business and technical catalogues
	Supplier management requirements	Supplier policy, supplier and contract database (SCD), targets for service levels, operational levels and contacts levels. Contact information, who uses the service Service review meeting schedules, agenda and service improvement plan
	Availability management requirements	Hours of operations, mean time to restore (MTTR), mean time between failures (MTBF), reliability, unavailability impacts, peak utilisation periods, maintenance windows
	Capacity management requirements	Hours of operations, resilience, peak utilisation periods, maintenance windows, business, service and component capacity
	Service continuity management requirements	Business continuity plans, vital and critical business functions, targets, test schedules, suppliers involved
	Information security requirements	Information security policy, data and information confidentiality, integrity and availability, user profiles, physical and logical security, legislation, compliance and governance, international standards

Category	Sub-category	Description
Organisational readiness assessment	Organisational readiness assessment	"Organisational readiness assessment" report and plan, including: business benefit, financial assessment, technical assessment, resource assessment and organisational assessment, together with details of all new skills, competences, capabilities required of the service provider organisation, its suppliers, supporting services and contracts
Service transition	Service transition plan requirement	Overall transition strategy, objectives, policy, risk assessment and plans including: <ul style="list-style-type: none"> • Build policy, plans and requirements, including service and component build • Plans, specifications, control and environments, technology, tools, processes, • Methods and mechanisms, including all platforms • Testing policy, plans and requirements, including test environments, technology, • Tools, processes, methods and mechanisms Testing must include: <ul style="list-style-type: none"> • Transition, data migration and conversion
	Change management requirements	Deployment policy, release policy, plans and requirements, including logistics, deployment, roll-out, staging, deployment environments, cultural change, organisational change, technology, tools, processes, approach, methods and mechanisms, including all platforms, supplier and contract
	Release and deployment policy requirements	Models and plans release, build, deployment, implementation, early life support, validation, tests, and evaluation, dealing with outstanding known errors
	Service asset and configuration plan requirements	Configuration model, CI model, CI type, CI information, CI relationships, identification, control, reporting, verification and audit
	Service validation and test plan requirements	<ul style="list-style-type: none"> • Functional testing • Component testing, including all suppliers, contracts and externally provided supporting products and services • User acceptance and usability testing • System compatibility and integration testing • Service and component performance and capacity testing • Resilience and continuity testing • Failure, alarm and event categorisation, processing and testing • Service and component, security and integrity testing • Logistics, release and distribution testing • Management testing, including control, monitoring, measuring and reporting, together with backup, recovery and all batch scheduling and processing
	Service evaluation requirements	Predicted and actual performance, intended and unintended effects, reports,
	Knowledge management strategy requirements	Knowledge, skill and competence transfer and development,

Category	Sub-category	Description
	Service acceptance criteria	Development and use of service acceptance criteria (SAC) for progression through each stage of the service lifecycle, including: <ul style="list-style-type: none"> • All environments • Guarantee and pilot criteria and periods
Service operation	Service operational acceptance plan	Overall operational strategy, objectives, policy, risk assessment, and plans including: <ul style="list-style-type: none"> • Interface and dependency management and planning • Events, reports, service issues, including all changes, releases, resolved incidents, problems and known errors, included within the service and any errors, issues or non-conformances within the new service • Final service acceptance
	Event management monitoring requirements	Tools, business, service, component, process monitoring, normal activity, warning and alert thresholds
	Incident management requirements	CMS, support roles and responsibilities, supplier information, support targets, tools, self-help, soft skills, technical and investigation skills, business impact, urgency and priority
	Problem management requirements	CMS, support roles and responsibilities, supplier information, support targets, tools, self-help, soft skills, technical and investigation skills, business impact, urgency and priority
	Service request requirements	CMS, support roles and responsibilities, supplier information, support targets, tools, self-help, soft skills, technical and investigation skills, business impact, urgency and priority
	Access management requirements	User profiles,
	Functional requirements	
	IT operations management requirements	Roles and responsibilities, processes, authority matrices, resources and capabilities, involvement in various phases Targets for service levels, operational levels and contacts levels. Operational requirements for batch, report, backup and report, and maintenance. Support targets Facilities requirements such as cabling, power, air conditioning, heating, ventilation, humidity
	Technical management requirements	Roles and responsibilities, processes, authority matrices, resources and capabilities, involvement in various phases Targets for service levels, operational levels and contacts levels. Operational requirements for batch, report, backup and report, and maintenance. Support targets
	Applications management requirements	Roles and responsibilities, processes, authority matrices, resources and capabilities, involvement in various phases Targets for service levels, operational levels and contacts levels. Operational requirements for batch, report, backup and report, and maintenance. Support targets
Service desk requirements	Roles and responsibilities, processes, authority matrices, resources and capabilities, involvement in various phases Targets for service levels, operational levels and contacts levels. Operational requirements for batch, report, backup and report, and maintenance. Support targets	

Category	Sub-category	Description
	Service acceptance criteria	Development and use of service acceptance criteria (SAC) for progression through each stage of the service lifecycle, including: <ul style="list-style-type: none"> • All environments • Guarantee and pilot criteria and periods
Continual service improvement	Service improvement acceptance plan	See continual service improvement and service level management
	Service improvement requirement	See continual service improvement and service level management
	Service solution – service design topology	See service design
	Service transition plan	See service transition
	Service operational acceptance plan	See service operation requirements
	Service acceptance criteria	See service design

Service strategy requirements

The following table is a list of the requirements and their definitions for the strategy phase of the service lifecycle. This list is unfortunately not exhaustive but provides a sound starting point. Further details about these requirements will be provided in upcoming chapters. These requirements, like those of all other phases, may be identified in any of the other phases as they become needed. The requirements are provided in alphabetical order for clarity. These requirements, once documented and agreed, are incorporated into the SDP and may be used throughout the lifecycle of the service.

Table 2.5 List of service strategy requirements

Accounting	Funding	Quality
Budget	Governance	Recovery
Business	Information	Regulatory
Charging	IT	Risk latency
Compliance	Knowledge	Security
Contract	Legislative	Service
Contractor	Non-negotiable	Stakeholder
Contractual	Planning	Technical support
Corporate	Portfolio	Technology
Data	Program	Usability
Financial	Project	

The reader is invited to consult the official ITIL glossary available on the Official ITIL website.⁸

Service design requirements

The following table is a list of the requirements and their definitions for the design phase of the service lifecycle. This list is unfortunately not exhaustive but provides a sound starting point. Further details about these requirements will be provided in upcoming chapters. These requirements, like those of all other phases, may be identified in any of the other phases as they become needed. The requirements are provided in alphabetical order for clarity. These requirements, once documented and agreed, are incorporated into the SDP, and may be used throughout the lifecycle of the service.

The reader is invited to consult the official ITIL glossary available on the Official ITIL website.⁹

Table 2.6 List of service design requirements

Business impact analysis	Input	Pilot
Business capacity	Insourcing	Prototyping
Business relationship	Integration	Reporting
Component	Integrity	Response
Component availability	Liaison	Risk analysis
Component capacity	Lifecycle	Risk management
Confidentiality	Maintenance	Scalability
Controllability	Maintenance window	Service availability
Could have	Manageability	Service capacity
Current	Management information	Service design
Demand	Mandatory	Should have
Design	Measurement	Software
Early life support	Monitoring	Sub-contractor
Effectiveness	Must have	Supplier
Efficiency	Network	Support
Engineering	Operability	Systems management
Enterprise	Operational levels	Testability
Future	Operational targets	Trigger
Hardware	Output	User profile
Implementation	Outsourcing	Won't have

⁸ www.itil-officialsite.com/home/home.aspx – click on the glossaries of terms link

⁹ www.itil-officialsite.com/home/home.aspx – click on the glossaries of terms link

Service transition requirements

The following table is a list of the requirements and their definitions for the transition phase of the service lifecycle. This list is unfortunately not exhaustive but provides a sound starting point. Further details about these requirements will be provided in upcoming chapters. These requirements, like those of all other phases, may be identified in any of the other phases as they become needed. The requirements are provided in alphabetical order for clarity. These requirements, once documented and agreed, are incorporated into the SDP, and may be used throughout the lifecycle of the service.

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Table 2.7 List of service transition requirements

Acceptance	Education	Radio frequency interference
Accountability	Electromagnetic interference (EMI)	Reliability
Agreed	Emergency generator/power	Resilience
Air quality	End-user	Resources
Air-conditioning	Engineering access	Roll-out
Application	Environmental	Safety
Approach	Equipment	Segregation of duty
Architectural	Expected	Service level
Auditability	Facilities	Service management
Availability	File format	Service target
Baseline	Health	Serviceability
Build environment	Heat	Size and equipment footprints
Cabling	Humidity	Skills
Capabilities	Industry standards	Skills development
Capacity	Infrastructure	Snapshot
Circuit-breaker ratings	Intellectual property rights	Staffing
Codes of conduct	Internal standards	Staging
Company policies	International standards	Statutory
Competence	IT equipment space	Storage
Configuration	Job scheduling	Supplier transition
Continuity	Knowledge	Contract transition
Control	Knowledge development	Technology
Cooling	Knowledge transfer	Temperature
Copyright issues	Licensing	Test environment
Cultural	Logistics	Toll

¹⁰ www.itil-officialsite.com/home/home.aspx – click on the glossaries of terms link

Cultural change	Maintainability	Tools
Customer	Management	Traceability
Data collection	Mandatory	Training
Data conversion	Negotiated	Transition
Data migration	Network	Uninterruptible power supply (ups)
Data retention	Noise reduction	Usability
Deployment	Organisational	Utility
Deployment environment	Organisational change	Ventilation
Design	People	Warranty
Development	Performance	Weight / false floor loadings
Development environment	Power requirements	Workload
Documentation	Print	
Door clearance	Processes	

Service operation requirements

The following table is a list of the requirements and their definitions for the operation phase of the service lifecycle. This list is unfortunately not exhaustive but provides a sound starting point. Further details about these requirements will be provided in upcoming chapters. These requirements, like those of all other phases, may be identified in any of the other phases as they become needed. The requirements are provided in alphabetical order for clarity. These requirements, once documented and agreed, are incorporated into the SDP, and may be used throughout the lifecycle of the service.

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Table 2.8 List of service operation requirements

Access	Group	Reporting
Access control	Internal	Role
Administration	Management	Security monitoring
Cleaning	Off-hours support	Self-help
Communication	On-site support	Signage
Customer service	Operational model	Stability
Departmental	Policy	Team
External	Proactive	Tool integration
Functional	Quality	Unforeseen
Generic	Reactive	Waste disposal

¹¹ www.itil-officialsite.com/home/home.aspx – click on the glossaries of terms link

Continual service improvement requirements

The following table is a list of the requirements and their definitions for the continual improvement phase of the service lifecycle. This list is unfortunately not exhaustive but provides a sound starting point. Further details about these requirements will be provided in upcoming chapters. These requirements, like those of all other phases, may be identified in any of the other phases as they become needed. The requirements are provided in alphabetical order for clarity. These requirements, once documented and agreed, are incorporated into the SDP, and may be used throughout the lifecycle of the service.

The reader is invited to consult the official ITIL glossary available on the Official ITIL website.¹²

Table 2.9 List of continual service improvement requirements

Portfolios	Business and IT plans	Communication plan
Application	Budget types	Metrics
Customer	Business unit plans	Process
Customer agreement	Business cycles	Service
Program	Funding model	Technology
Project	Operational plans	Tension
Service	Tactical plans	Release policy
Service catalogue	Strategic plans	Release calendar
Service pipeline	Change policy	Reports
	Change calendar	Guidelines
		Standards

¹² www.itil-officialsite.com/home/home.aspx – click on the glossaries of terms link

Chapter summary

This chapter covered the basic building blocks of a service. When starting the service design package it is important to identify the following elements.

All aspects of a service:

- ✦ Utility
- ✦ Warranty
- ✦ Resources
- ✦ Capabilities

The requirements through each phase of the lifecycle:

- ✦ Service strategy
- ✦ Service design
- ✦ Service transition
- ✦ Service operation
- ✦ Continual service improvement

