

BEST PRACTICE

The Service Catalog

A Practitioner Guide



THE SERVICE CATALOG
- A PRACTITIONER GUIDE

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The Service Catalog

A Practitioner Guide



Colophon

Title:	The Service Catalog - A Practitioner Guide
Series:	Best Practice
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Publisher:	Van Haren Publishing, Zaltbommel, www.vanharen.net
ISBN:	978 90 8753 571 1
Copyright:	© Van Haren Publishing 2009
Edition:	First edition, first impression, February 2010
Design & layout	CO2 Premedia bv, Amersfoort-NL

For any further enquiries about Van Haren Publishing, please send an e-mail to:
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Foreword

I was pleased to be asked to provide a foreword to this book. The book aims to provide an understanding on the types of services that can (or often, should) exist and how they all fit together from the customer, business and IT perspective. The book is admirably vendor and framework neutral and references ITIL, MOF, ISO/IEC 20000-1:2005 and USMBOK throughout to put services and the service catalog in the context of more than one framework, hopefully providing as broad a scope as possible.

The service catalog, as with the service portfolio concept, has come to mean many things, the content of them largely being determined by the perspective of the individual or organization offering opinion. Thus the organization purchasing a catalog product and indeed the unfortunate user of that product might well find that their own expectations are somewhat different as to the capabilities of the product.

Putting aside the vagaries of what a “product” should actually provide, the purpose of a catalog (or portfolio) is often not fully determined prior to acquiring software support. Further it is common to discover that products have been purchased for the IT domain assuming use by the business without ever consulting the business about content.

For example, the whole issue of what could/should be in a catalog is a strategic study and involves governance, management and security issues. Is the intention to have a catalog of lines of business? If so, what are the risks to the business, has anyone considered identity and access rights, segregation of duty issues and the possibility of fraud or embezzlement?

What about including applications? Which ones, and again, just what are the implications for the business if users can obtain applications in the catalog? What about “IT services” which are often incorrectly defined as being business services (for example on-boarding new employees). Depending on who you work for and who pays the bills, the “IT service” might well be IT being told to get fifty people ready for work on Monday morning. IT may wish to push that work back to a super-user working in the business area, but not everyone will see that as being an IT service then.

What about password resetting? IT service or just something that would be expected by today’s “IT savvy” business customer? Well, here again it depends on who is paying the bills and what the budget holder is expecting for the money. It also of course has identity and access considerations.

This foreword is not intended to rewrite Mark’s book; it is just to preface your expectations about the service catalog, its (possible) place in society and the implications -and vagaries-of its use. As with all innovations, frameworks, initiatives and projects, there are benefits and risks. As with all of these things, the complexities and the cause and effect of situations are often overlooked until later, when as usual, something has happened that was not foreseen in the rush to embrace the latest and greatest.

This is a good book. Take the time to understand the issues and if you do decide to start collecting for your catalog you will have a better chance of doing it well.

Brian Johnson

Hon. Lifetime vice president itSMF and author/contributor to ITIL and other life changing good practices.

Acknowledgements

We like to thank the team of experts involved in the production of this publication.

First of all we like to thank **author** Mark O’Loughlin for gathering best practice on the service catalog, using his own extensive knowledge and experience, existing literature and information from peers. We sincerely thank Mark for his enthusiasm and persistence, and his willingness to listen to the reviewers and seriously consider their issues. This has enabled us to develop a true *best practice* on the service catalog.

Review team

We also wish to thank the international team of experts who have reviewed the manuscript. They provided the author and editors with encouragement, criticism and useful ideas, to ensure that the book reflects the very best practice. Their expert help has been invaluable.

We thank Aad Brinkman (Apreton, NL) , Janaki Chakravarthy (Infosys, India), Peter van Gijn (Logica, NL), Linh Ho (Compuware, USA), Kevin Holland (NHS, UK), Steven J. Loftness (Sundoya, USA) for their contribution to the “backbone” of the book, the table of contents.

We thank the following experts for reviewing the completed manuscript:

- Hans Bestebreurtje, HP, Netherlands
- Bart van Brabant, Eneco, Belgium
- Federico Corradi, Cogitek, Italy
- Rosario Fondacaro, Quint Wellington Redwood, Italy
- Peter van Gijn, Logica, Netherlands
- Kevin Holland, National Health Service, United Kingdom
- Gareth Johnston, ParryMcGill LLC, Switzerland
- Steve Loftness, Sundoya, USA
- Jeb McIntyre, AIT Partners, USA
- Herve Meslin, ICT Services Department of Immigration and Citizenship, Australia
- Vernon Palango, InteQ Corporation, USA
- Neil Pinkerton, Laughingtree, Australia
- Claudio Restaino, BITIL, Italy
- Rui Soares, GFI, Portugal

Together, they produced approximately 750 issues, which were all taken in account by the editors and author Mark O’Loughlin, improving the manuscript to align with all the expert opinions on what this book should contain. With a final sign-off, all reviewers confirmed that the issues were processed to their satisfaction.

On the author

Mark O'Loughlin (IT Alliance Group) is an experienced consultant and specialist in IT service management (ITSM) frameworks, IT governance and various standards. Mark played a pivotal role in the first ISO/IEC 20000 certification to be awarded to an organization in Ireland as an architect, process manager and systems integration expert. He has achieved the ITIL Expert, Managers, Foundation and various practitioner certifications, is actively involved in his local itSMF chapter and is the editor of the chapter's newsletter. Mark also writes about service management frameworks such as ITIL, MOF, COBIT, ISO-20000 and FITS and on the topic of ITSM. He authored a "best practice" guidance about the service catalog and service portfolio which has been published in *IT Service Management, Global Best Practices - Part One*.

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Introduction

Organizations today are struggling to identify what services they provide (or rely on) to enable business objectives and outcomes. Organizations have found it difficult to understand the different types of services that exist and fail to record this information in a useful and meaningful way.

This book aims to provide practical advice and information that will help organizations to understand how to design and develop a service catalog and to understand the role that the service catalog performs within the service portfolio. To this end, the book will explore the fundamentals of what constitutes a service in the hope of addressing the age old question “what is a service”?

The information contained in this book is intended for those who are about to begin their journey of designing and developing services and service catalogs or for those who have begun but would like assurances that they are on the right track. For those that are mature in their processes they may like to use this as a comparison for their implementation of services and service catalogs. Either way, read on.

Focus will be placed on arming the reader with information and knowledge that will help with:

- understanding what a service catalog is and what it is not
- understanding what the service portfolio is
- providing enough understanding to aid in the basic design of each element of the service catalog
- describing the different types of services within an organization
- showing how all the pieces of the puzzle fit together via the service portfolio pyramid

It is also evident that the service catalog requires ongoing investment, development, ownership and management backing to ensure that it:

- is valid
- is kept up to date
- is scalable
- remains relevant
- provides benefit to users
- adapts to changes in user and business needs and requirements
- is fit for purpose and fit for use
- provides value to the organization and customers
- facilitates doing business in a cost effective manner
- aids organizations in reaching new markets and new customers
- provides value for money and can demonstrate not only Return on Investment (ROI) but also Value on Investment (VOI)

Due to the nature of what is expected and required of certain elements of the service catalog, they may require specialist application software to be fully deployed and utilized. Such software can be custom-made or off-the-shelf. However the focus of this book will be geared towards providing guidance aimed at how to develop a structure for the service catalog and its various elements, independent of the platforms or applications that are available. This is pivotal when looking to setup and implement a service catalog.

It should be noted that from the start this book references a number of different service types. To just keep the discussion limited to IT services is inadequate. If IT is to earn its place in the organization and be recognized as a key business enabler IT needs to stop talking just about IT services and instead talk about the value that is provided to the business by enabling business and customer services that facilitate outcomes that the organization wants to achieve. This is a fundamental change in thinking and practice but in order for organizations to make the change they need to have relevant information that helps them understand the concepts and turn them into reality.

Some of the concepts and guidance provided in this book will be different to the current thinking and understanding of some readers. This book provides the opportunity to challenge existing thinking and presents the opportunity to embrace an explorative understanding of the realm of the service catalog.

In summary, this book can provide a catalyst to achieve a harmonized understanding of services and how they fit into the world of organizations, businesses, suppliers, vendors, and, last but not least, the users and customers.

How to use this book

This book is part of a series of practitioner books that deal with the core elements of IT service management (ITSM). Appendix A provides the basic concepts for IT service management, and is the common philosophy for all books in this series. It is important that anyone - who is not fully aware of the differences between processes and functions - reads this Appendix to avoid conceptual errors in the embedding of service catalog management in their organization.

ITIL and IT service management are most often related to process-based approaches, and service catalog management can follow that approach. Although service catalog management has its own distinct process in ITIL, traditionally it may have been placed as an element of what is often perceived as “the service level management process”, which actually is a group of processes:

- contracting and implementing new or adapted IT services
- reporting and evaluating contracted IT services
- managing the service catalog

In this context, service catalog management delivers the foundation that is required for the other two main elements of service level management, as well as for the daily interaction between the provider and the users of the IT services.

Structure of the book

This book is structured into seven chapters.

The first two chapters offer the basics for the book. Chapter 1 describes the context of the service catalog and chapter 2 explains the basic principles followed in this book, and the terms used.

Chapter 3 focuses on the question “what is a service catalog?” and discusses the various forms of the service catalog.

Chapter 4 and 5 focus on the “how” question: how to create a service catalog and how to develop the different service catalog types.

Once you have created the service catalog, it has to be managed. Chapter 6 shows what is required to manage the service catalog.

Chapter 7 looks at technology considerations for service catalog.

The author closes the book with a final thought.

The remaining chapters are appendices and contain useful information:

- Appendix A provides the basic concepts for IT service management, and is the common philosophy for all books in the Best Practice series.
- Appendix B provides a simple, everyday example of where customer, business and IT services can be found.
- Appendix C lists the acronyms used.
- Appendix D provides details about the frameworks and standards referenced throughout this book.
- Appendix E provides an example of the content that should exist within a service level agreement.

1 Setting the scene

This chapter introduces the what, why and how of the service catalog by describing its context. It ends with an overview of qualifications and standards.

1.1 ITIL and the service catalog

Many people had their first introduction to the actual concept of a service catalog with ITIL. The glossary in the Service Delivery book, from the previous version of ITIL, defined a service catalog as a “written statement of IT services, default levels and options”. This definition is limiting and does not represent the true value that can and should be provided by a service catalog. The Service Delivery book also provided a diagram of what ITIL perceived as being an actual service catalog which is contained within “Annex 4B of Chapter 4” (see figure 1.1).

ITIL describes itself as a source of *good practice*. In 2007 ITIL version 3 was made publically available. ITIL provides guidance on *what* should be aimed for but does not necessarily provide the information and detail on *how to* achieve the stated objectives. Remember though, that ITIL is a framework of good practice and therefore should not necessarily be expected to provide specific *how-to* levels of detail. That is where this book comes into use, at least in regards to the service catalog, and to a lesser degree, the service portfolio, by providing information that will help the organizations to:

1. fully understand the full concept of the service catalog
2. fully understand the scope of the service catalog
3. understand how to build a service catalog
4. understand the true value that a service catalog can deliver to an organization

Further, ITIL continually refers to IT services within the service lifecycle when in fact there are a number of different service types that exist. These service types will be identified in section 2.4.1 and discussed in detail throughout this book.

Over the years technology has advanced at a colossal pace and the way organizations do business with and interact with customers has radically changed. Software vendors have entered the realm of the service catalog space, in some cases, bringing with them their own, usually disparate interpretations of the concepts, scope, benefits, and building instructions regarding service catalogs. Products emerged that claimed to provide the ability for an organization to create service catalogs to varying degrees. Some were, and still are, capable of providing a solid foundation for building a service catalog. Some still have a long way to go before they can realistically offer something of value. More and more service management systems are now offering a service catalog as part of their core offering and some offer a service catalog as a module that can be licensed. Others may offer the ability to interface with different service catalogs and other service management modules, for example the Configuration Management Database (CMDB) or Configuration Management System (CMS).

Annex 4B from the Service Delivery book is shown in table 1.1.

Annex 4B Example of a simple Catalogue										
Service	Customer	Accounts	Sales	Marketing	Legal	Production	Retail	Warehouse	Transport	Design
Payroll System		✓			✓					
Accounts Sysytem		✓	✓	✓	✓		✓			
Invoicing		✓	✓				✓			
Coustomer D/Base		✓	✓	✓	✓		✓	✓	✓	
Sales D/Base		✓	✓	✓			✓			
Stock Control						✓		✓	✓	
Legal System					✓					
Factory Production						✓		✓		✓
Suppliers D/Base		✓	✓	✓	✓	✓	✓	✓	✓	
Ordering		✓	✓			✓	✓	✓	✓	
Logistics						✓		✓	✓	
Postal Addresses		✓	✓	✓	✓	✓	✓	✓	✓	✓
CAD/CAM						✓				✓
Intranet		✓	✓	✓	✓	✓	✓	✓	✓	✓
Internet		✓	✓	✓	✓					
Routemaster			✓					✓	✓	
Office Suite		✓	✓	✓	✓	✓	✓	✓	✓	✓
E-mail		✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 1.1 Example of a simple service catalog (Source: Service Delivery Book ITIL version 2, OGC)

The current version of ITIL has certainly improved on this and now has a specific chapter on Service Catalog Management in the Service Design book. Table 1.2 depicts how ITIL now represents the service catalog.

Service Name	Service Description	Service type	Supporting services	Business Owner(s)	Business Unit(s)	Service Manager(s)	Business Impact	Business Priority	SLA	Service Hours	Business Contacts	Escalation Contacts	Service Reports	Service Reviews	Security Rating
Service 1															
Service 2															
Service 3															
Service 4															

Table 1.2 Example of a simple service catalog (Source: Service Design Book ITIL version 3, OGC)

1.2 Why a service catalog

The failure of IT to show to the organization the value for money that IT provides and its role in the achievement of business outcomes may leave IT vulnerable in the sense that it is seen as not being as strategically important to the organization as other business processes and functions. If IT fails to provide quality services that are required by the organization, or even fails to cope with changing demands, once again IT may be viewed as a less important strategic asset within the organization. This could lead to the possibility of areas within IT, or IT itself, being downsized or even outsourced.

For IT to be fully successful, IT needs to be strategically aligned to the business and positioned as a key enabler in achieving successful outcomes for the organization. It is not enough for IT alone to consider itself successful at what it does. IT needs to provide real value to the organization that directly achieves business outcomes that the organization wants to achieve and should be able to deal with the ever changing needs and demands of the organizations and their customers. IT should also be capable of demonstrating how it provides business value to the organization to ensure that IT is positioned within the organization as a core strategic asset. How does IT achieve this? The simple answer is for IT to provide services that are required, can deliver value for money which is perceived by users and customers as providing value and by retiring services that do not, or no longer, provide value. IT needs to be able to show the organization the services that are provided in a format that is understood by the organization, as opposed to services described and presented in technical detail.

Imagine a restaurant with no menu. How is the customer to know what can be ordered? How does the chef know what to make with the raw ingredients that are available? How does one restaurant differentiate itself from another? How can the restaurant be profitable if customers do not know what is on offer and management cannot understand the cost of providing their services? Unlike the traditional restaurant menu, the service catalog offers much more to the organization than just a menu of available services. The service catalog provides IT with the capability to showcase to the organization the services that IT provides but also the business process and customer's services that are supported and provided by IT. The service catalog provides users and customers with the means of understanding what services they can actually use. Different views of the service catalog can provide service details and information in a format that is understood by the relevant audience.

The service catalog is the only part of the overall service portfolio that can recover costs or earn profits. The relative cost of services can be identified easier if services can be broken down into reusable components. IT services that can be shared by multiple customers can be identified and economies of scale can lead to potential savings for the organization and lower costs to customers. Using the supplier catalog alone, consolidation of multiple suppliers providing the same services can be achieved, thus reducing the overall cost to the organization. The service catalog provides the platform for IT to charge the organization for their use of services provided in a fair and equitable manner.

The service catalog supports Business Impact Analysis (BIA). A major function of IT is to keep services operational and running during the times that services are required. Identifying potential impact to current live services is important to ensure that services are not affected when introducing changes to the live environment.

ITIL is now based around the service lifecycle. Central to this lifecycle are services. The service catalog plays a key role in the documenting and management of services within the organization and the actionable service catalogs provide the ability to reduce the cost of IT support and decrease manual intervention via automated workflows that support business processes. Customer actionable catalogs allow organizations to reach new markets at reduced costs.

1.3 Business benefits of the service catalog

The following is a list of benefits that can be attributable to the service catalog. All these benefits have a positive effect towards demonstrating return on investment back to the organization. The return provided can be from financial savings or can be provided indirectly via maximizing effectiveness and efficiencies within the organization. Any element of the service catalog that can reduce manual labor may provide a financial return on investment, though this has to be calculated. Having an IT service catalog can reduce lost time spent looking for information by IT support staff.

The service catalog:

- promotes IT into the role of a service provider that is service focused as opposed to technology centric
- facilitates IT to be run like a business and to allocate costs, or service charges, to specific departments within the organization
- reduces IT operational costs by not only providing services that are required but only to the agreed levels of capacity and availability
- reduces IT operational costs by identifying and eliminating IT service waste
- reduces IT service and process inefficiencies
- provides a platform to develop a clearer understanding of business requirements and challenges that must be faced
- provides a platform to improve the understanding of business requirements and issues that are experienced
- allows users and customers to choose the correct service for their needs
- provides the foundation for formal service level management and service catalog management
- improves the relationships and communications between IT and the business, within IT and between users and customers
- assists IT to market itself and build relationships throughout the business
- creates a platform to identify changes in demand. Requirements and demands are identified, understood and provisioned accordingly
- positively promotes a change in the way services are used (consumed)
- acts as a catalyst to drive improved internal and external communications
- increases customer satisfaction
- identifies critical business systems, thus allowing resources to be allocated when needed e.g. during high demand peaks or to prioritize incident resolution
- increases awareness and visibility for IT service provision

These are just some of the benefits that can be realized from the service catalog. Additional benefits are contained within the following chapters.

1.4 We need a service catalog. Make it happen!

Having looked at reasons why the service catalog is necessary, at some point in time the task of creating a service catalog will hopefully be identified. Inevitably, someone (hopefully senior management) within the organization at some point identifies the need to know and understand

what exactly the IT department does, what it provides to the business and its customers, and how it supports users. They may also identify the need to actually charge for the services being provided in order to recover costs or to control the use patterns of services based on current demand and changing demand needs. If they have an understanding of ITIL, then the requirement may be identified as “needing a service catalog”. So far things are straight forward. This requirement eventually lands on a manager’s desk that has just been given responsibility for the simple task of putting together the service catalog. Seems straightforward, all that is needed is to draw up a list of what IT does and we are half way there. Not quite. In effect this approach is likely to lead to an inefficient and ineffective service catalog that offers neither value nor Return on Investment (ROI) and will most likely contribute to wasting a lot of people’s time, resources, efforts and money.

There is certainly a need for guidance to ensure that an organization can:

- maximize the efforts of those involved
- get it right from the start
- design and implement a useable service catalog that is part of the service portfolio
- ensure the design and implementation will provide benefit to the business and customers
- ensure cost benefits and economies of scale are achieved

In looking into how to go about this task there are a number of situations that can be faced:

- there is too much information about a subject and it is difficult to know what is what
- there is too little information about the subject
- wrong information is available about the subject

Suddenly the task seems not as straightforward as originally thought. Throughout this book guidance will be provided that will help the reader to understand what the service catalog is, how it fits within the service portfolio, what the different service catalog types are and most importantly of all how to achieve a quality and effective service catalog,

1.5 Qualifications and standards

This section explores existing qualifications and standards for service catalogs and initiatives to develop (open) standards.

1.5.1 ITIL Service Catalogue qualification

Service Catalogue is a complementary qualification to the ITIL V3 scheme, recommended by IQC, itSMFI’s International Qualification and Certification Subcommittee. Service Catalogue is an APMG-International qualification. APMG-International is a global Examination Institute (EI) accredited by The APM Group which is OGC’s official accreditation body. Service Catalogue is a “foundation plus” qualification based on Blooms Taxonomy levels 2-4. This means it has a higher difficulty level than a standard Foundation exam, but is not as challenging as an Intermediate-level exam. Obtaining the qualification will give candidates 1.5 credits towards the ITIL V3 Expert certification. The following information is taken from the APMG-UK website¹.

¹ Service Catalog. <http://www.apmgroup.co.uk/ServiceCatalogue/ServiceCatalogue.asp>. APM Group 2009.

“Service Catalogue is a new qualification, complementary to the ITIL V3 suite. It looks at new ways to control demand, publish and track service pricing and cost, and automate service request management and fulfillment. The service catalogue provides a clear view of what services IT provides and how IT adds value for the money allocated. It provides a method to request or order the services that are published. The Service Catalogue enables good governance in that the key terms, conditions, and controls defined in the Service Catalogue are integrated into the service delivery processes of the organization. It enables an organization to better plan, deliver and support services while accurately costing and pricing services.

Studies show that implementing a role-driven, online, searchable catalogue with standardized services can convert costly requests for information, status, how-to and new service calls into zero-cost web-based user self-service. The Service Catalogue looks at common activities such as ordering of PC/desktop, telecommunication, collaboration, and support services, which can produce measurable results and assures consistent service pricing and quality.

Service Catalogue also looks at ways to help reduce cycle time; implementing workflow can reduce the time it takes to fulfill services, saving numerous hours per request. Organizations can thus reallocate precious staff time to more strategic initiatives.

The service catalogue certification is aimed at those with an ITIL Foundation certificate (or above) who have an interest in learning more about how a Service Catalogue could benefit their business.”

To be eligible to take the Service Catalogue qualification, candidates should fulfill the following requirements:

- Have attained the ITIL Foundation Certificate, preferably the current version.
- Have attended at least 18 hours of instruction (exclusive of breaks, lunches and the exam) with an accredited training organization or e-learning based on this syllabus, as part of a formal, approved training course.
- It is strongly recommended that candidates have exposure to basic Service Catalogue concepts and related work experience of around two years.

It is also recommended that students complete at least 12 hours of personal study in preparation for the examination. Upon achievement of the qualification, candidates will be able to:

- analyze and adopt new ways to control demand
- publish and track service pricing and cost
- automate service request management and fulfillment

Training courses in Service Catalogue, including the exam, will be available through Accredited Training Organizations (ATOs). Candidates will need to contact the individual training organizations for details of locations, fees and formats for training courses. APMG does not hold information on the ATOs' individual courses but they ensure the training provided by ATOs meets APMG's required standards, in accordance with the quality standard EN45011. Any training company wishing to offer the Service Catalogue qualification must be accredited by APMG-International.

The ITIL V3 Qualification Scheme introduces a modular credit system for each of the V3 certifications. All modules are given a credit value, and candidates meeting the requisite entry criteria and accumulating the required number of credits (22) can apply for ITIL Expert level certification. Certifications from earlier ITIL versions (V1 and V2) are also recognized within the system, together with qualifications endorsed as complementary to the V3 qualification portfolio. The purpose of the ITIL Credit Profiler is to advise ITIL candidates of the total credit value they have attained within the scheme and to provide general guidance on potential routes for further study based on candidate educational or certification objectives.

The ITIL Credit Profiler System is shown in figure 1.1. Over time it is expected that additional complementary certifications will be added.

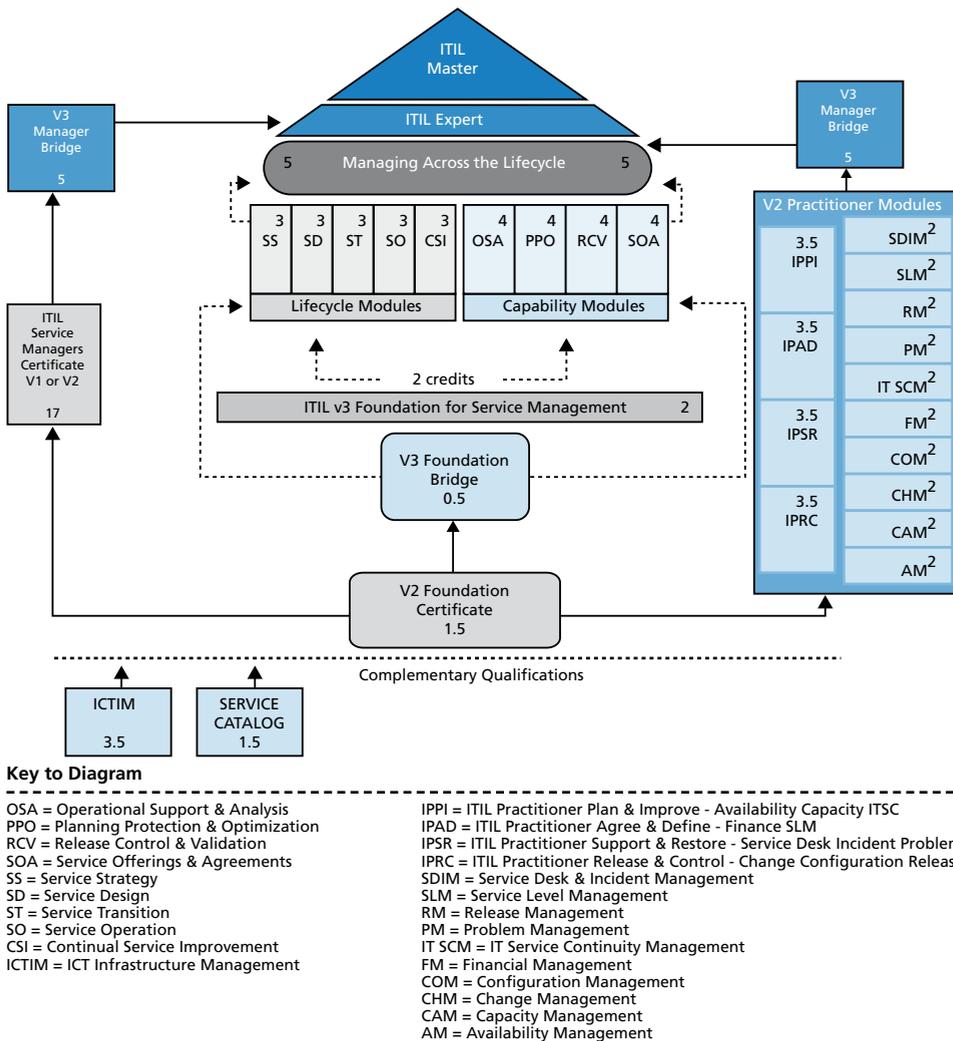


Figure 1.1 ITIL Credit Profiler System (Source: APMG²)

2 The ITIL Credit Profiler System. <http://www.itil-officialsite.com/itilservices/v1/map.asp>, APM Group 2009.

While the service catalog complementary certification is a welcome addition, there is no defined standard (as of yet) for service catalogs although it should be noted that an organization does not need to comply with a standard in order to have a quality service catalog in place. What fits one organization by way of definition, design, implementation and management may not suit another organization. Also what is defined in one organization may not easily be applicable to another. Books, like this one, aim to help organizations understand basic principles and provide information that will help the organization achieve a favorable outcome.

1.5.2 Service Portfolio and Catalog Language (SPACL)

A consortium has been formed in order to collaborate on the development of a vendor neutral open standard definition for service catalog offerings, and for exchanging service requests between Service Catalog systems. This consortium is called the Service Portfolio and Catalog Language (SPACL) and they have a SPACL Public Review Forum available online³. They are also responsible for the formation of an industry standards group to define standards for the exchange of service portfolio and service catalog information between different systems and vendors. This standard will be known as the Service Portfolio and Catalog Language (SPACL). It is the intention of the SPACL consortium to submit the specification to an industry standard group once it is matured. It remains to be seen how vendor neutral the initiative is but that is something beyond the scope of this book and something that you, the reader, can ascertain for yourself if it is something of concern. There should be enough information available on their website or from the group to allow the reader to make an informed decision on the matter.

The following is an extract from their website site⁴:

The SPACL consortium is a collaboration of companies that have joined to develop a vendor-neutral open standard definition for Service Catalog offerings, and for exchanging service requests between Service Catalog systems. These definitions are key to enable service request operations between IT consumers, internal IT organizations, and external service providers – including cloud computing providers. It is the intention of the SPACL consortium to submit the specification to an industry standard group once it is matured.

SPACL Goals

ITIL V3 makes the service catalog central to IT service management implementations. In fact, 22 ITIL processes depend on the service catalog. IT organizations have very high expectations for their service catalog. Unfortunately, many struggle when they go to build their service catalog. There are multiple reasons for this, among them is the lack of standards for defining content, lack of implementation guidance, and difficulty in managing business objectives around catalog implementations.

³ Service Portfolio and Catalog Language - Public review site for SPACL documents, <http://www.spacl.info/>, SPACL 2009.

⁴ Service Portfolio and Catalog Language - Public review site for SPACL documents <http://www.spacl.info/forum/topics/spacl-announcement>, SPACL 2009.
Service Portfolio and Catalog Language - Public review site for SPACL documents http://www.spacl.info/notes/SPACL_Goals/, SPACL 2009.

The SPACL Consortium is actively working to build:

- *an open-standard definition of Service Offerings and Service Requests that is vendor and tool agnostic*
- *provide sufficient rigor to guide customers content generation*
- *clear set of content and data structures so customers can succeed*
- *a definitional model so catalog development is decoupled from operations*
- *content can be defined independently of how it will be use operationally*
- *this simplifies projects, enriches the usability of the catalog*
- *rigorous, normative schema that enables automated exchange of definitions*
- *portfolio can send service definitions to CMDB, Provisioning, Finance, HR, Billing, PPM, etc*

The SPACL specification

The SPACL specification provides a clear set of XML-based schema definitions, content and data structures so that IT organizations and service providers can succeed at implementing and exchanging Service Catalog and Service Portfolio definitions. SPACL is designed to be extensible so customers and vendors can add new elements and attributes while maintaining interoperability.

1.5.3 United Nations Standard Products and Services Code (UNSPSC)

The United Nations have developed a standard (of sorts) in relation to the classification of products and services. While this does not map directly to IT, it may be of interest from a taxonomy point of view and can be found at the following location: <http://www.unspsc.org/>

The United Nations Standard Products and Services Code (UNSPSC®) provides an open, global multi-sector standard for efficient, accurate classification of products and services. Search the code on this website to locate commodity codes that can be used by your company.

The UNSPSC offers a single global classification system that can be used for:

- *company-wide visibility of spend analysis*
- *cost-effective procurement optimization*
- *full exploitation of electronic commerce capabilities*
- *you may browse and download the current version of the code at no cost*

Why should businesses classify products & services?⁵

Classifying products and services with a common coding scheme facilitates commerce between buyers and sellers and is becoming mandatory in the new era of electronic commerce. Large companies are beginning to code purchases in order to analyze their spending.

⁵ Frequently Asked Questions, <http://www.unspsc.org/FAQs.asp#whyclassify>, UNSPC 2009.

By classifying their products & services, businesses can assist their customers with:

- *Finding and purchasing - a product and service coding convention brings many benefits to the purchasing function of a company.*
- *Product discovery - a common naming convention allows computer systems to automatically list similar products under a single category. When a person is searching for the category, he or she finds precisely the things being discovered and nothing else.*
- *Facilitates expenditure analysis - when every purchase transaction of an enterprise is tagged with a common set of product identifiers, purchasing managers are able to analyze enterprise expenditures.*
- *Control and uniformity across the company - codes bring a single, uniform view of all expenditures in a company. It ties together all departments and divisions, including business functions such as purchasing and settlement.*

The United Nations Standard Products and Services Code® (UNSPSC®) provides an open, global multi-sector standard for efficient, accurate classification of products and services. Search the code on this website to locate commodity codes that can be used by your company.

2 Definition and basic concepts

In order to begin our journey into the world of the service catalog, it is important to have a full understanding of a number of key concepts and definitions from the start. The goal of this chapter is to explain terminology and concepts that are used throughout this book and will cover the general terms, definitions and concepts that are to be found in the context of service catalogs. A number of these terms and concepts are described in detail within this chapter while others are described elsewhere throughout this book.

While the focus of this book is the service catalog the service catalog's position within the service portfolio will be discussed. As the service catalog is a major component of the service portfolio, the information provided will enhance understanding. Also, anyone wishing to create a service portfolio will benefit from this information.

2.1 Users and customers

For the purpose of this book, the author will refer to the organizations employees as *users*. Those external to the organization, who are willing to purchase products and services from the organization, will be referred to as *customers*. However some organizations operate a cross-charge policy and in effect, the users become internal customers, who, in the context of this book will be referred to as users.

2.2 Utility and warranty

Throughout the book there will be repeating references made in regard to services delivering value to customers and in supporting outcomes that the organization want to achieve. ITIL uses figure 2.1 to demonstrate the logic of value creation through services. The ITIL Service Strategy book introduces the concepts of *utility* and *warranty* that are referenced throughout the five core ITIL books.

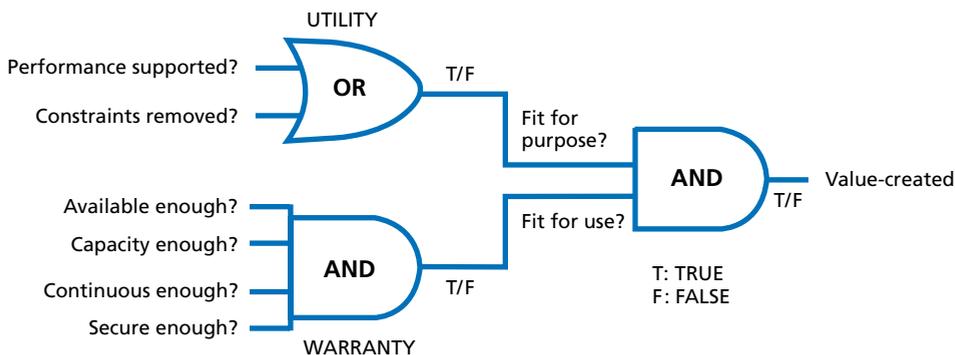


Figure 2.1 Value creation through services (Source: OGC)

The ITIL glossary quite simply states the following:

(ITIL Glossary) “The business value of an IT service is created by the combination of service utility (what the service does) and service warranty (how well it does it).

Utility⁶ 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 dependability in terms of continuity and security. Put another way *utility* is what the customers gets (fit for purpose) and *warranty* is how it is delivered (fit for use). ITIL states that the value perceived by the customer is dependent on supporting the performance of the service or removing constraints that can affect service performance AND by ensuring that the service is available as expected, can handle changing demand requirements, and has adequate security provisions. Value is not perceived if the service can provide appropriate levels of utility but not appropriate levels of warranty and vice versa.

In the context of this book what the ITIL glossary refers to as an “IT service” can actually relate to any of the service types that will be discussed throughout this book. This is because the value of the service that is created is seen through the eyes of the user/customer perspective. As users within the organization will use business services and customers will use customer services, referencing just IT services is far too narrow a context from which to work from.

2.3 What is a service?

There is a lot of misunderstanding as to what exactly a service is, and what components make up a service. This confusion is not confined to organizations. Practitioners, consultants and vendors have struggled with defining services, not in definition, but in the context of what is perceived as a service in an organization and how best to represent these services.

An area where many people find themselves in disagreement is with regards to the definitions of what constitutes a service, never mind what an (IT) system or an (IT) service might actually be. In one sense it may not matter if we disagree. One may argue that whether we call it an (IT) system or an (IT) service is not as important as actually mapping the service accurately and that this is just an exercise in taxonomy. It is necessary to define and understand services but also it is necessary to decompose services into their various components in order to better understand the service end-to-end and to:

- build accurate service maps piece by piece
- price and cost services more accurately
- report on services at different levels

6 The definition of utility and warranty is taken from the ITIL Service Strategy book (OGC)

- utilize the different parts of the service catalog effectively
- develop a clearer picture of what it is that IT does in support of the business (from the most obvious to the most obscure)
- understand how the organization actually relies on IT to do business

In the publication “IT Service Management Global Best Practices, Volume 1”⁷, Karen Ferris has the following to say about the subject in her best practice guidance entitled “Out of one silo and into another”:

“There are so many organizations still trying to determine what they mean by a ‘service’ that is holding them back from determining service ownership and associated roles and responsibilities. Until one can define what is meant by a ‘service’, end-to-end service ownership cannot be established. Once this has been done, service owners can be put in place to own the end-to-end services and ensure that they meet the needs of the business by delivering business value and outcomes that the customer wants.”

Over the years a number of best, and good, practice frameworks, standards, Bodies of Knowledge (BOKs) and toolkits have been developed or published and are widely available. Some are proprietary and vendor specific and others are vendor neutral instead offering general guidance and best practice that can be applied irrespective of the technology used and the structure of the organization. Most come at a cost while a few are freely available or at least supplemental reference material is provided freely. Standards have also been developed for organizations to use. The following are a number of frameworks and standards in general use, but there are many more available. Additional information on these can be found in Appendix D:

- ITIL®
- CobiT®
- MOF
- ISO/IEC 20000:2005
- USMBOK™
- ISM™

Throughout this book, references will be made to these frameworks and the definitions that they provide for a number of key areas. This is to provide the reader with a broad overview of key concepts in regards to how they are defined in the different knowledge domains. Currently, there is no defined standard for service catalogs and therefore different knowledge domains can and will use different definitions.

7 Ferris, Karen (2008). “Out of one silo and into another”, *IT Service Management Global Best Practices, Volume 1*. Van Haren Publishing 2008. ISBN-9087531001.

Framework definitions of a service

Framework	Definitions of service
Service Delivery (previous ITIL version)	One or more IT systems which enable a business process.
(Service Design)	<p>A means of delivering value to customers by facilitating outcomes customers want to achieve without the ownership of specific costs and risks.</p> <p>In taking this further the ITIL Service Design book (page 62) states the following: (Service Design) “So what is a service? The question is not as easy to answer as it may first appear, and many organizations have failed to come up with a clear definition in an IT context. IT staff often confuse a “service” as perceived by the customer with an IT system. In many cases one “service” can be made up of other “services” (and so on), which are themselves made up of one or more IT systems within an overall infrastructure including hardware, software, networks, together with environments, data and applications. A good starting point is often to ask customers which IT services they use and how those services map onto and support their business processes. Customers often have a greater clarity of what they believe a service to be. Each organization needs to develop a policy of what is a service and how it is defined and agreed within their own organization.”</p>
MOF	<p>Customer Service SMF</p> <p>A collection of features and functions that enable a business process.</p>
ISO/IEC 20000-1:2005	<p>Although IT uses products in the delivery of IT services, it is now considered to be a typical services domain. So what is the difference between a product and a service? This can be expressed in terms of the following characteristics:</p> <ul style="list-style-type: none"> – services are intangible – services are produced and consumed at the same time – services are very variable – the user takes part in the production of the service – satisfaction is subjective
USMBOK	<p>(Introduction to Service) As the legal definition states, a service is generally described as work performed by one group that benefits another. The following simplistic definition taken from an established reference (1) will form the basis for the definition of a service in this document:</p> <p>A service is any act or performance that one person can offer to another that is essentially intangible and does not result in any transfer of ownership. The value of the service to the customer is through the results achieved through its use - the outcome. The importance of the service to the provider is through the satisfaction and value it provides the customer, the revenue it generates for the provider, versus the cost of production. Its distribution and use may be tied to a physical product.</p> <p>(1) Marketing Management 7th Edition, Philip Kotler, 1991</p>
ISM	<p>A service is functioning functionality.</p> <p>The ISM definition is based on the ISM Infrastructure Paradigm, showing the decomposition of a service into a variety of infrastructure elements (the “functionality”), where various quality terms (the “functioning”) apply.</p>

Table 2.1 Framework definitions of service

The author would like to provide the following definition of what is a **service**:

*A **service** is any act or performance that one person can offer to another, that is intangible, produced at the moment of delivery and does not result in transfer of ownership. Service value and quality is based on customer perception, where satisfaction is based on outcomes and is subjective.*

Three main services are:

***Customer service:** services provided to the organizations customers*

***Business service:** support business processes that enable the organization to achieve its desired outcomes*

***IT service:** provides IT capabilities that support and deliver business and customer services*

So, if the context of a service is not new, and if the available frameworks define what they see a service as, then why is it so difficult for organizations:

- to understand what a service is in the IT and business arenas
- to define what services exist in the context of an organization
- to build a service catalog that is fit for purpose and fit for use

Is it to do with the fact that:

- service definition has been defined in too broad a context
- standards, frameworks and best practices have not provided guidance on the *how* element in designing and building service models or service catalogs
- services can, and will be, perceived differently from one person to another
- little focus has been placed on how the organization is to:
 - *develop* their understanding of their organizations services
 - *design* a service mapping relevant to the organization's offerings
 - *deliver* a service catalog that is relevant and fit for purpose

An important point to note is that it is essential for organizations to state clearly how they define services within the context of their organization. This includes the definition of the service and the service model i.e. how the different services map together. The previous definitions should help with understanding what a service is. Failing to correctly define services can lead to a service catalog that is ineffective and provides no real value to any part of the organization. If services are not defined with the relevant audience in mind, they will not be understood so how could they be viewed as being strategically important to the organization? The following sections will help with understanding what the main service types are which should help clarify things further. If the question still remains “what is a service”, an examination of the service catalog should help reveal some more important aspects to this question in regards to finding the answer.

2.4 The service catalog

This section explores existing definitions of the service catalog and integrates the several elements of the service catalog in a final basic definition.

While the mainstream Bodies of Knowledge (BOKs) that exist in the public domain define the service catalog they do not provide enough practical information and guidance that shed light on how to achieve the following:

- understand the service catalog
- plan the service catalog
- design the service catalog
- develop the service catalog
- manage the service catalog
- maintain the service catalog

The core ITIL books, in particular Service Strategy and Service Design, provide details about the service catalog. They provide details about what the service catalog is while allowing for complementary books, such as this one, to delve into more detail and provide specific information on the subject. So, if this book is about understanding service catalogs in more detail and how they can be developed for an organization, what exactly is a service catalog?

To shed some light, the ITIL glossary has the following information:

(Service Design) Service Catalog: “A database or structured Document with information about all Live IT Services, including those available for Deployment. The Service Catalogue is the only part of the Service Portfolio published to Customers, and is used to support the sale and delivery of IT Services. The Service Catalogue includes information about deliverables, prices, contact points, ordering and request Processes. See Contract Portfolio.”

The ITIL Service Strategy book offers more insight into the subject of the service catalog. Have a look at chapters three and four for some specific information. The following are some relevant extracts from this section in the book which will be expanded on in detail throughout this book. This is an example of the information that ITIL and other frameworks offer.

Framework	Definitions
Service Strategy	<p>The service catalog is the subset of the service portfolio visible to customers. It consists of services presently active in the service operation phase and those approved to be readily offered to current and prospective customers.</p> <p>It serves as a service order and demand channeling mechanism.</p> <p>It acts as the acquisition portal for customers, including pricing and service-level commitments, and terms and conditions for service provisioning.</p> <p>It is in the service catalog that services are decomposed into components; it is where assets, process and systems are introduced with entry points and terms for their use and provisioning.</p>
MOF	<p>Business-IT Alignment SMF</p> <p>A comprehensive list of services, including priorities of the business and corresponding SLAs.</p>

Framework	Definitions
ISO/IEC 20000-1:2005	<p>(The code of practice): Service catalog A service catalog should define all services. It can be referenced from the SLA and should be used to hold material considered volatile for the SLA itself. The service catalog should be maintained and kept up to date. Note: The service catalog can include generic information such as:</p> <ol style="list-style-type: none"> the name of the service targets, for example, time to respond or install a printer, time to re-instate a service after a major failure contact points service hours and exceptions security arrangements <p>The service catalogue is a key document for setting customer expectation and should be easily accessible, and widely available to both customers and support staff.</p>
USMBOK	<p>The service catalog A service catalog markets an authorized service portfolio, or subset. A service catalog consists of one or more descriptions of current service offerings and optionally, future service capabilities. A service catalog is defined in terms understood by its intended customer audience and is the basis for requesting and negotiating service, and desired levels of service. A service catalog entry is the first stage of influencing and setting service level expectations.</p>
ISM	<p>A service catalog provides a description of (partial) services that can be provided by the service provider, in part or in combination. A specific choice of these services can be agreed in an SLA.</p>

Table 2.2 Service catalog definitions

So there we have it:

*The **service catalog** is a repository that contains information about services or it is a comprehensive list of services. It defines all services. It is an ordering mechanism with pricing. It is where services are decomposed into components. It sets customer expectations. It is the entry point of influencing and settling service levels.*

Is that all we need to know? Could it be that simple?

A list of services on its own does not provide any real benefit to the business. On its own a list of IT services does not allow:

- end-users and customers to interact and order services
- the business to understand how IT enables their operations
- chargeback for services consumed
- the ability for IT to know what it delivers in support of the business
- the business to understand its reliance on IT in order to be able to carry out key, critical and core business functions and objectives
- service impact assessments

Definitions serve a purpose but only go so far. Bodies of Knowledge have a vast spectrum to cover and may not provide such level of detail. In recent years vendors have closed the gap in providing information on the subject. It should be observed that some may also have clouded the issue, as tools and practices adopted by some vendors may provide neither a consistent definition of services, nor the service catalog.

Service catalog repository considerations

The information that the service catalogs hold and the relationships between the different service catalog types is key to the service catalog structure. There are a number of realistic options available, some of which can include:

- spreadsheets
- documents
- Configuration Management Database (CMDB)/Configuration Management System (CMS)⁸
- service management systems
- service catalog/specialist software applications

These options are discussed in more detail in chapter 7.

ITIL is heavily focused on services, on the service lifecycle and on the value that services are delivering to the organization and their customers. Paramount to this is the service catalog. The service catalog is generally referred to in the singular. Therefore, it is quite common for people to develop a single service catalog or to believe that they must develop a single catalog. However, the service catalog is not just one entity. There are a number of service catalog types that can exist within an organization.

The following section provides details on not just the two catalogs described in ITIL but details eight distinct, but complementary, service catalog types represented within the Service Portfolio Pyramid - explained later in this chapter - and will deal with the commonly asked question: “How do we represent these service catalog types?”

2.4.1 Service types and catalog types

There are many different types of services that can exist in an organization. Each organization is different and each organization will use and offer different services to fulfill the needs of their users and customers. Equally, there are a number of basic service types that exist through many organizations. These, if used constructively, will form the basis of a service catalog that can apply to, and have relevance within, many different organizations. At a minimum the service catalog should define services for the following service types:

- IT systems
- IT services
- business services
- customer services

Actionable service catalogs include:

- business actionable services
- customer actionable services

Optional catalogs that provide value will include:

- product catalog
- supplier catalog
- professional services catalog

⁸ The CMS which was introduced in ITIL V3 extends/integrates the concept of the CMDB.

Figure 2.2 shows how all these service catalog types are logically linked together. Using this taxonomy allows for the different service types to be recorded and presented to and understood by the relevant audience. In theory the service catalog could be a single repository. However, the reality is that the service catalog may actually span multiple repositories. These service catalog types will be discussed in more detail in chapter three and a service catalog design schematic is provided in chapter 5.

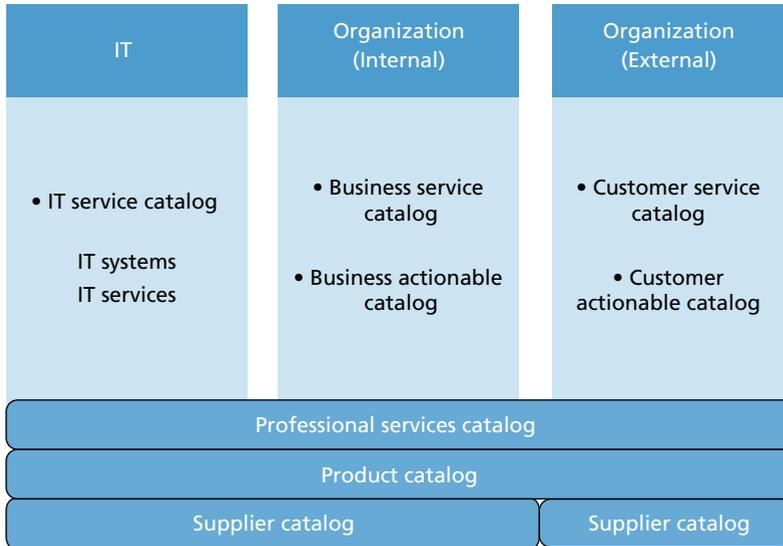


Figure 2.2 The different service catalog types and their target audience

2.5 Service records

The term *service record* is used within this chapter and throughout this book. Therefore it is important at this juncture to explain the concept of service records.

A service record is a form that contains specific details about each service and its associated attributes. This is in much the same way that a CI record contains information about a CI and the attributes of the CI. The service record can be created within a spreadsheet, a document, a service management application, a specific service catalog application or even a bespoke purpose built system. Obviously there are drawbacks to creating service records in documents, the main one being that the information exists in isolation from other service records with no direct links. Reporting on services is also manual and time consuming. Spreadsheets offer a little more functionality but have limitations and may not support anything more than basic service mappings.

A service record:

- holds information about the service
- is related to other service records which forms the basis for service mapping

- links to related documentation, for example SLAs, Operational Level Agreements (OLAs), work instructions
- identifies the status of the service which denotes its place in the service lifecycle

It should be possible to create the IT catalog within the CMDB/CMS by using CI records or forms and classifying them as IT service records. This is a way to benefit from using an existing CMDB/CMS within the organization and to leverage economies of scale by not having to invest in a specific or standalone service catalog application. It would be necessary for the CMDB/CMS to be capable of making relationships between the records in order to map out the services. IT system records are related to IT service records in order to create a mapping for the IT services. IT service records are related to business service records in order to create a mapping of business services and their supporting IT services.

In the author's experience, a lot of CMDB applications are well capable of creating CI relationships and support the use of service records to map services to each other, while some CMDB applications are not. If the CMDB is to be considered an appropriate repository for creating service records then be sure to check the CMDB capabilities to ensure that good relationships can not only be made but also displayed in an appropriate format as some CMDB products are good at relationships but poor on how they represent these relationships back to the user.

Table 2.3 shows some of the more basic information that should be stored within the different service catalog records. The listing provides some idea of the basic information that should be recorded for the different types of service catalogs. Recording too much information will give information overload and require a great deal of administration to keep relevant and up to date. Recording too little will be of minimal or even no use. Not only does the organization need to know what services exist, they also need to know enough about those services in order to understand, provide, support and maintain each service. Therefore there is the need to record such information about each service.

IT service catalog	Business service catalog	Customer service catalog	Business & customer actionable service catalogs ⁹	Information access
These help define and filter the service				This information may be presented to the users of the service
Service name	Service name	Service name	Service name	
Description	Description	Description	Description	
Status	Status	Status	Status	
Service type	Service type	Service type	Service type	
Classification	Classification	Classification	Classification	
Service objective	Service objective	Service objective	Service objective	

IT service catalog	Business service catalog	Customer service catalog	Business & customer actionable service catalogs ⁹	Information access
These help understand how and where the service is supported & who has access				This information should be available to support personnel and management
Service owner	Service owner	Service owner	Service owner	
Link to OLA	Link to SLA	Link to contracts	Link to SLA	
Level 1 support	Level 1 support	Initial point of contact	Initial point of contact	
Level 2 support	Level 2 support	Support hours	Support hours	
Level 3 support	Level 3 support	Entitlement	Entitlement	
Level 1 support hours	Level 1 support hours			
Level 2 support hours	Level 2 support hours			
Level 3 support hours	Level 3 support hours			
Link to policies & procedures	Link to policies & procedures	Link to policies & procedures	Link to policies & procedures	
Supplier	Supplier	Supplier	Supplier	
Service configuration details				Service record is generally linked to this information
CI relationships (from the CMDB/ CMS)	Service relationships	Service relationships	Service relationships	
Link to technical & project documentation (from the CMDB/CMS)	Link to business specifications	Link to customer specifications	Link to business & customer specifications	
			Workflows & design documents	
A few extra fields - this is where it gets organizational specific				This information should be available to support personnel and management
Agreed availability hours	Agreed availability hours	Agreed availability hours	Agreed availability hours	
Critical availability periods	Critical availability periods	Critical availability periods	Critical availability periods	
Service maintenance windows	Service maintenance windows	Service maintenance windows	Service maintenance windows	
Backup and recovery procedures	Backup and recovery procedures	Backup and recovery procedures	Backup and recovery procedures	
Charging arrangements	Charging arrangements	Charging arrangements	Charging arrangements	

Table 2.3 Basic information to be recorded in the different service catalog types

There is no limit to the information that can be stored in a service record but bear in mind that too much information can be as useless as too little. If starting out with service records remember that less is more. It is easier to grow service records and add more information in over time than it is to reduce the data that is being recorded. The same applies to the CMDB. Reengineering and reducing the information stored within either the service catalog or the CMDB is a challenging task. It is not impossible, but there are a lot of considerations, vested interests and hurdles that need to be dealt with before the tasks and activities can be completed. Regardless of where the service records are stored, they must be placed under change control. This is to ensure that the information that they contain is updated as services change or are modified and also to ensure that the data contained within the service records remain accurate and valid.

An example of a basic service record for an IT service is provided in figure 2.3. It has many attributes and fields that are similar to what should be recorded against a business service, a customer service or an IT service. The *service type* is what distinguishes the service records from one another, and based on the classification, the relevant fields and attributes can be made available to the person completing the service catalog record. Recording service catalog records within a specific application will make it more likely for information to be added in a controlled way, by using predefined drop down lists, requesting specific information and setting text only or numeric fields. It also facilitates reporting on the service records. How many services are in use? How many services are provided by IT? Is service charging taking place, and if so how does the organization know what to charge for? What IT services make up a business service and vice versa? The information provided in this example shows some of the basic yet important information from the previous table that should be recorded. In reality the service record form may have additional sections, presented over different tabs, provided by a different looking interface.

There are a number of sections within this example which are described below.

General information

Provides general details about the service.

- *Status* denotes where the service is within its lifecycle. In this case the service is operational and is in use – Live.
- *Service type* denotes that this service record contains the details and information for an IT service.
- *Classification* is used to group and filter the service records and to report on them.

Support information

Provides support information about the service. Links to documents are included.

Service levels

Service levels provide details about the agreed levels of service as per the service requirements and any agreed service level targets. If an SLA exists for the service then details can be included here or the SLA document link can be included. In this example the agreed availability hours may seem high but the reality is that an organization is likely to want to have their communications services operations and available all the time. Service level agreements are discussed further in chapter 6 and Appendix E contains an example of a service level agreement template.

General information		Support information		Service levels	
Service name	Instant messaging	Service owner	Mark O'Loughlin	Agreed availability hours	24*7 365
Status	Live	Link to OLA	http://docserv1/OLA-IM.doc	Critical availability periods	Financial year end
Service type	IT service	Level 1 support	Service desk	Service maintenance windows	1st Sunday of every month between 03.00 - 05.00 hrs GMT
Classification	Communication services	Level 1 support hours for service	24*7 365	Backup and recover procedures	http://docserv1/IMBP.doc
Description / Service objective	Allows all users within the organisation to communicate with each other using a desktop client.	Level 2 support	Technical group	Charging arrangements	Bundled with and charged as part of the 'Communication services'
		Level 2 support hours for service	07:00hrs-19:00hrs GMT otherwise on call	Service last reviewed	20-Oct-09
		Level 3 support	None		
		Level 3 support hours for service	Not applicable		

Service map				Process relationships	
Up level services		Down level services		Modules	ID Number
Customer service	Business service	IT system name	Related CIs		
	Communication services	MS Exchange	Exchange server-1	Service requests	10301 Request client install
			Exchange server-2		27036 Request for new user
			Messaging server-1		282318 Request for new user
		Active directory	Directory server-1	Incidents	10356 Client not logging in
			Storage server-1		10391 Error
			Messaging server-1	Problems	3287 Error code 121
			LAN switch-1	Change requests	8390 Roll out new client
			Router-1		9210 Make new features available
				10175 Change in support hours	

Figure 2.3 Example of a service catalog record for an IT service

The last two sections are the additional elements of the service catalog record that should be included within the service catalog record. These sections provide a critical link in mapping the service records together and relating the service to the ITIL processes used to support the services. This may not be feasible if the service records are recorded within word documents, spreadsheets or very simple application and service management tools.

Service map

This is the section that links together all the different service records that make up the service. In this example the CIs are shown with the IT systems that they are related to in order for those IT systems to function. The IT systems that are needed to provide this IT service are related to this service record. The business service that requires this IT service is also related. The relationships shown here are shown in a basic hierarchal manner. Some service catalogs provide an interface that shows these relationships in an actual map while others do not. The benefit of this is that it is easier to visualize how the service is constructed. Chapter 4 provides additional details about mapping services and chapter 5 includes a service catalog schematic that helps to visualize how services interconnect and join up.

Process relationships

Another powerful element of a service catalog record is the ability to relate service requests, incidents, problems and change requests to each service record. Over time this allows for business

intelligence style reporting which can report on the issues that affect each service, which will have associated costs to support and fix the requests that are logged for each service, showing demand patterns increasing or decreasing over time and change activity taking place to the service or a related service type, helping to identify potential impact and single points of failure. This is very powerful information to have and is only possible if the service records can be related to these processes. Some service management systems will have this capability and some won't. Again, recording services within word documents or spreadsheets will not allow for this type of reporting to be possible.

2.6 The service portfolio

The previous sections have briefly looked at services and have identified the service types that will constitute the service catalog. However, the journey does not end there. The service catalog is actually a subset of the service portfolio. Therefore the service portfolio and the service catalog must interface with each other. Understanding these interfaces will help organizations get the most from their investment in both the service catalog and service the portfolio and to get one step closer to establishing the ITIL service lifecycle. Although this book is primarily focused on exploring the service catalog, this section contains information about the service portfolio and where the service catalog is positioned within the service portfolio. This leads us to the next question “So what exactly is the service portfolio?”.

At a basic level the service portfolio:

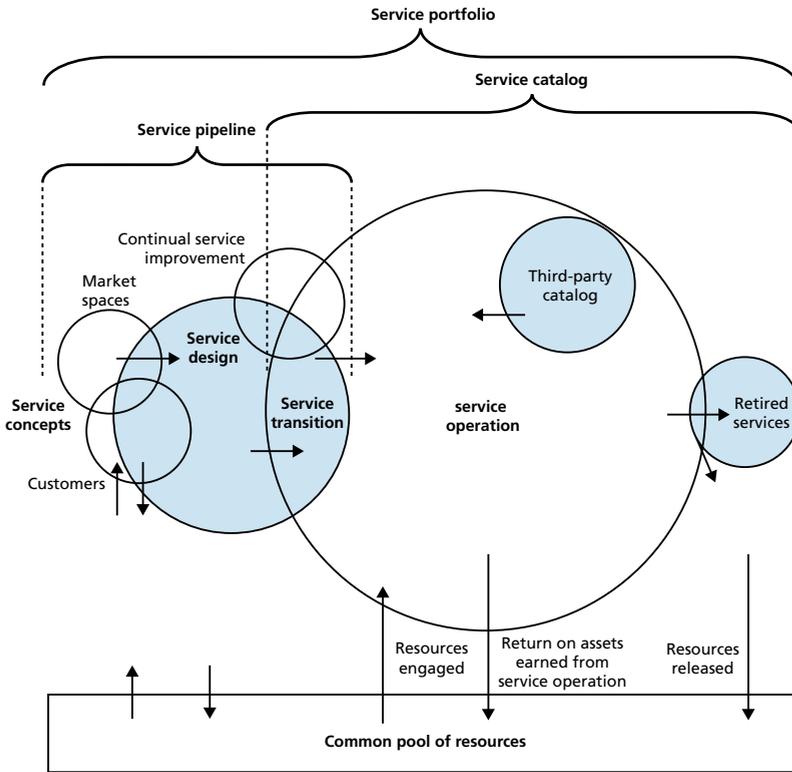
- is an executive-level view that allows an organization to map their services to the business requirements
- is used to analyze where investment is needed or is being allocated
- can also assist with the allocation of resources, risk management and financial modeling
- can help prioritize investment decisions
- represents the ability of the organization to provide services to customer and market places
- represents commitments and investment made by the organization
- represents all services within the service lifecycle
- helps to identify and understand the true costs involved in service provision while the service catalog is concerned with the pricing of the service to users and customers

The service portfolio is defined as:

Framework	Service portfolio definitions
Service Strategy	<p>The complete set of services that are managed by a service provider. The service portfolio is used to manage the entire lifecycle of all services, and includes three categories: service pipeline (proposed or in development); service catalog (live or available for deployment); and retired services.</p> <p>The service portfolio represents the commitments and investments made by a service provider across all customers and market spaces. It represents present contractual commitments, new service development, and ongoing service improvement plans initiated by continual service improvement. The portfolio also includes third-party services, which are an integral part of service offerings to customers. Some third-party services are visible to customers while others are not.</p> <p>ITIL provides figure 2.4 in the Service Strategy book to further expand on this concept.</p>

Framework	Service portfolio definitions
MOF	Business-IT Alignment SMF An internal repository that defines IT services and categorizes them as currently in service, in queue to be developed, or in queue to be decommissioned. All services support a specific business process or function.
USMBOK	A service portfolio is a collection of services managed as an investment by the service provider organization to maximize the total beneficial value derived from its use of resources. USMBOK provides the following comparison between the service catalog and the service portfolio: A service catalog is NOT a service portfolio. A service portfolio is an approach to manage information system services as investments with profit and loss based perspective. A service catalog is a marketing tool for service portfolios. They coexist and a service catalog enables and supports a service portfolio.

Table 2.4 Framework definitions of service portfolio



Area of circle is proportional to resources currently engaged in the lifecycle phase (Service portfolio and financial management)

Figure 2.4 Service portfolio (Source: OGC)

The three elements of the ITIL service portfolio are briefly described as follows:

Element	Description
Service pipeline	Services proposed or in development
Service catalog	Services live or available for deployment
Retired services	Services no longer in use

Table 2.5 Three elements of the service portfolio (ITIL)

A simplified version of the service portfolio is represented in figure 2.5 (service lifecycle). These elements make up what is in effect the lifecycle of a service from cradle to grave, i.e. conception to retirement.



Figure 2.5 Simplified view of the service portfolio

So what does the service portfolio offer the organization above and beyond being a list of services that are being developed, live or retired? Why would an organization want to have a service portfolio? The service portfolio represents the commitments and investments made by a service provider / or the organization. It is the source of information regarding contractual commitments, new services that are under development and ongoing service improvements and describes services in terms of their business value. It is the main source of information regarding the requirements of new services which need to be designed carefully to ensure that they meet the needs of the uses and customers. The service portfolio helps the organization’s management to prioritize investments and investment decisions in regards to what services should and should not be provisioned and to improve the allocation of resources in the design, build and operate stages of each service. The service portfolio acts as a platform to promote appropriate financial disciplines necessary to avoid investments that will not yield value. The following table provides details of basic activities of each service portfolio element and also includes suggested status codes that can be used to define where services are within the service lifecycle stage.

Element	Activities	Service status code
Service pipeline	<ul style="list-style-type: none"> • budgeting decisions • identify economies of scale from existing services • identification of Service Level Requirements (SLRs) (service design stage) • investment prioritization • understanding of costs involved in creating the service • business cases • risk analysis 	<ul style="list-style-type: none"> • definition • analysis • approved • charter • design • in development • built • under testing • user acceptance t(UAT) • pre production

Service catalog	<ul style="list-style-type: none"> • service charging • service maps • impact assessment • identify single point of failure • service offerings (actionable service catalog) 	<ul style="list-style-type: none"> • in production • not in service
Retired services	<ul style="list-style-type: none"> • record of services no longer in use • shows past investments • can aid decisions on new service investments by understanding previous issues 	<ul style="list-style-type: none"> • retired

Table 2.6 What does the service portfolio offer the organization?

As stated in the previous section the service status code can be used to denote which part of the service portfolio the service is residing in at that point in time. A number of unique service status codes can apply across the whole of the service portfolio. Some very basic service status codes are provided in table 2.6. Each status should be unique and should apply to only one of the three service catalog elements. It is an exercise in itself to come up with service status codes that are unique and relevant for each of the three service portfolio elements but it is an exercise worth undertaking and doing correctly. Creating too many status codes may prove difficult to maintain and to keep up to date. Having too few codes may not provide a clear depiction of the services and where they are within the service portfolio.

ITIL's representation of the elements of a service portfolio and service catalog is shown in figure 2.6.

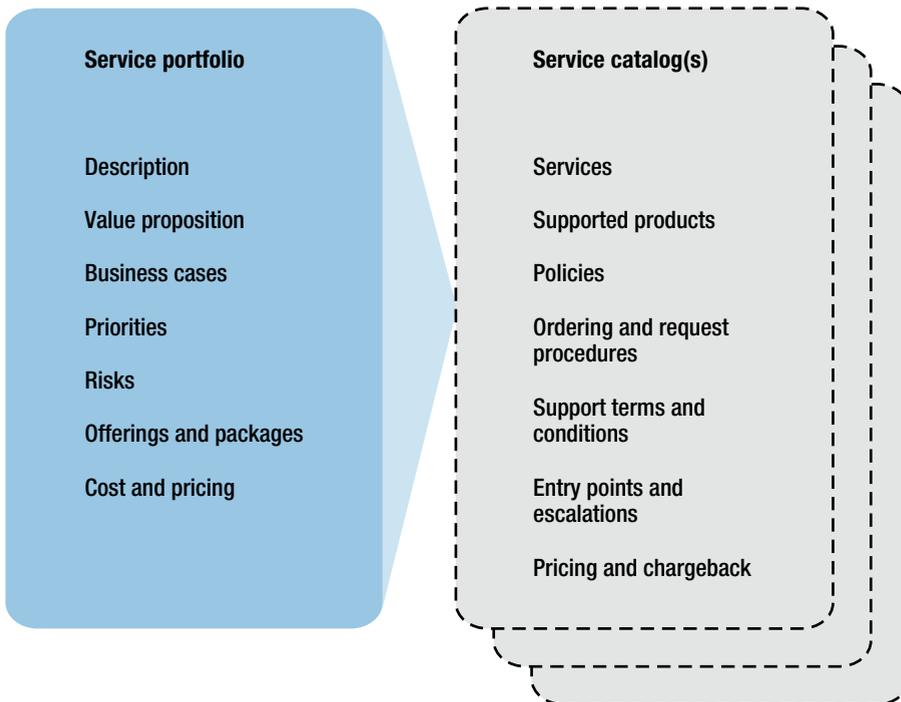


Figure 2.6 ITIL's representation of the elements of a service portfolio and service catalog (Source: OGC)

ITIL focuses on the service lifecycle covering services from *cradle to grave* and recommends that the place to start from is to define the service portfolio. However, in reality, how many organizations start by defining a service portfolio? How many organizations are playing catch-up? How many organizations *don't get it* or worse still *don't care to get it*? Some general reasons organizations may cite for not starting a service catalog or portfolio initiative at all can include:

- lack of commitment
- lack of senior management backing
- lack of interest
- lack of understanding
- lack of resources/time/effort
- lack of a basic understanding regarding the service portfolio
- not seen as a risk to the business if not done
- lack of service portfolio capable applications on the market
- costs involved can be high, or perceived to be high
- other business requirements take precedence over the service portfolio

Chapter four provides a framework for creating a service catalog. As part of the “Initiation” phase a feasibility study is to be undertaken which should be used to help understand, amongst others, the reasons for not starting a service catalog or service portfolio initiative mentioned above.

At first glance, creating a service portfolio seems fairly straightforward. Just know what services are coming on line, and what services are active and what services are no longer in use. Put all this information into a document, spreadsheet, database, web page, or repository and there it is: a service portfolio. Well yes, in one sense. As already stated ITIL breaks down the service portfolio into three elements. It makes sense to record all three elements in the same central repository if at all possible. However in reality this may not be possible but is it imperative to **link** together all three elements via a federated approach that links the three elements of the service portfolio together. It is possible to record the service pipeline, service catalogs and retired services in one central repository or via a federated approach, relating service records between different applications. If a single repository is to be used for the entire service portfolio it has to be fit for purpose and fit for use. A single repository may well suit small and medium sized organizations and that is why it has been mentioned here. However the practicalities of finding such a repository may prove difficult. Therefore, the single repository approach may not be realistic for larger organizations due to a number of reasons:

- complexities of services and service mappings
- availability and configurability of service catalog applications software
- lack of integrated systems used in the development and delivery of large scale services
- lack of access to such systems due to purchasing constraints

A process to manage the overall service portfolio will also be required. One key element of the service portfolio management process is the management of the service pipeline which may need to integrate with other processes in the organization, for example financial processes, project management processes and other management functions and any other process that would be involved in bringing services into the service pipeline or retiring them. An output of financial decisions made may be to explore the potential use of a new service in the future. This decision should input into the service portfolio management process and ensure that details about this potential service are added to the service pipeline.

2.6.1 The service portfolio pyramid

This book introduces the service portfolio pyramid represented in figure 2.7. The service portfolio pyramid is a device that helps to identify, by way of a visual aid, the different types of service catalog that can exist in a single diagram. To reiterate, the main focus of this book is placed on the service catalog not the service portfolio, however the service portfolio pyramid is a device that can be used to position the service catalog within the service portfolio, showing the other two elements of the service portfolio which are the service pipeline and the retired services. The concepts within the service portfolio pyramid are not new and should be easily identifiable to those familiar with IT service management. This representation has not been taken directly

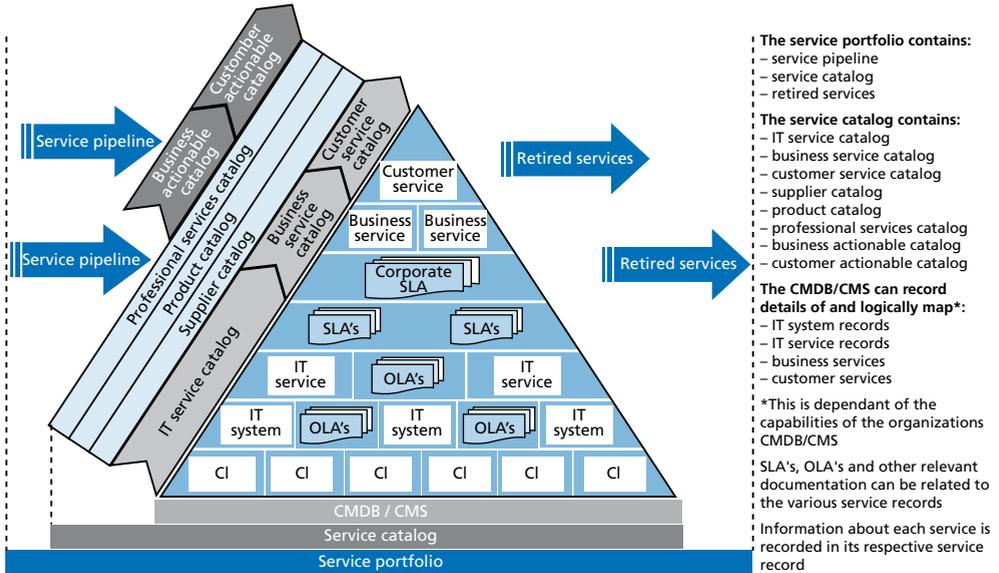


Figure 2.7. The service portfolio pyramid

from any of the ITIL books, but has been developed by the author in order to represent the key elements that make up the service portfolio as described throughout ITIL. It has been kept at a high level to ensure clarity and for ease of use. The service catalogs represented in the service portfolio pyramid will be explained in detail in chapter three and their construction detailed in chapter 4 and 5.

The various elements that go together to make up the service portfolio and where they fit in, are easy to identify in the pyramid. Organizations may find it difficult to implement all elements of the service portfolio at the same time. Taking on too much scope at one time can be ineffective. A gradual approach can help to provide balance and is generally taken. An initial step is generally taken with the need to have a service catalog. Organizations can identify what type of service catalog they need, which will provide value to the business both internally (for example automated service requests reducing labor costs), and externally (for example a customer actionable service catalog that can increase sales and penetrate new markets).

A service catalog can mean different things to different people. Departments working in isolation or silos may not appreciate or even understand the interlink between the different elements that make up the service portfolio pyramid. The different service catalogs can interface with each other, but a unified approach is required to achieve success. It should be clear that no single department or team will be responsible for completing a service portfolio that spans the service portfolio pyramid. If an organization is mature enough to actually have a service portfolio, accountability lies with the service portfolio manager to ensure that the service portfolio exists and is up to date. This does require that the service portfolio manager works closely with the various service catalog managers. If a service portfolio does not exist within the organization, the service catalog manager will retain accountability for managing whatever service catalogs are in place.

The service portfolio pyramid provides a reference to what constitutes the service portfolio.

The service portfolio pyramid is an easy to use representation showing the different service portfolio elements, service catalog types and their associated service records that comprise the service portfolio which helps explain the concept of the service portfolio.

The service portfolio pyramid provides a clear representation of the various catalogs that can exist in any organization:

- *The elements that make up the service portfolio are the service pipeline, service catalog and retired services.*
- *The pyramid represents the different service records that will contain information about each service.*
- *The side of the pyramid represents the different service catalog types that can exist within an organization and maps to their specific service catalog records.*

2.7 The basics - twelve guiding principles

The following section lists twelve guiding principles that apply to the service catalog. These principles are, in the author's view, key aspects that relate to the service catalog. They have not been gathered directly from any framework, standard or reference model. They serve to reference key aspects of the service catalog and to highlight important information at a high level which should be understood and is explained further throughout this book. In essence they have been kept as simplistic in nature as possible to allow the reader to remember key principles that apply to the service catalog. Once these key principles are understood, the task of understanding and creating the relevant service catalog and its various components should become a lot easier.

Guiding principle No. 1

The service catalog is a subset of the service portfolio of which the service portfolio consists of 3 elements:

- service pipeline
- service catalog
- retired services

Guiding principle No. 2	<p><i>There are a number of different service catalog types:</i></p> <ul style="list-style-type: none"> • customer actionable catalog • customer service catalog • business actionable catalog • business service catalog • IT service catalog (consisting of IT services and IT systems) • professional services catalog • product catalog • supplier catalog
Guiding principle No. 3	<p><i>At a minimum there must be one overall service catalog covering all service catalog types</i></p> <ul style="list-style-type: none"> • in reality a <i>federated</i> approach may be required.
Guiding principle No. 4	<p><i>The service catalog consists of a minimum of four service record types:</i></p> <ul style="list-style-type: none"> • customer services • business services • IT services • IT systems
Guiding principle No. 5	<p><i>The service catalog should provide a means to link service records together:</i></p> <ul style="list-style-type: none"> • link IT systems to IT services • link IT services to business services • link business services to customer services • (The CMDB/CMS can provide views of the IT service catalog)
Guiding principle No. 6	<p><i>A service catalog does not just consist of a list of services:</i></p> <ul style="list-style-type: none"> • service records should contain key information about each service
Guiding principle No. 7	<p><i>The service catalog is built on relationships between the different service records:</i></p> <ul style="list-style-type: none"> • without relationships the different service catalog types will remain unconnected; in isolation they will provide limited value • services should be built from a collection of relevant relationships between IT, business and customer service records
Guiding principle No. 8	<p><i>Develop the service catalog(s) as early as possible, preferably during the initial design of services:</i></p> <ul style="list-style-type: none"> • it is generally harder to retrospectively understand and map services • coincide with CMDB development especially regarding the IT service catalog • it's better to start late than not at all

Guiding principle No. 9	<p><i>The service catalog should be scalable:</i></p> <ul style="list-style-type: none"> • the service catalog should be designed to meet the current and known future needs of the organization • the service catalog should also be flexible enough to meet future requirements.
Guiding principle No. 10	<p><i>The service catalog should be easy to use:</i></p> <ul style="list-style-type: none"> • the service catalog is made up of a number of different service catalog types each type having different audiences who will have their own specific needs • each service catalog view should be designed so that each audience can use the service catalog view that is relevant to them with ease
Guiding principle No. 11	<p><i>The journey is not over once the service catalog is completed:</i></p> <ul style="list-style-type: none"> • the service catalog is only as up to date as the last time that it was updated • services and service requirements may change throughout the service lifecycle • changes to services and their respective service record should be controlled under a change management process to ensure controlled change takes place and that service records are kept up to date
Guiding principle No. 12	<p><i>The customer trinity:</i></p> <ul style="list-style-type: none"> • the customer is King • the customer has many faces (internal/external) • respect and serve the customer

Table 2.7 Guiding principles

3 The service catalog

The service portfolio pyramid presented in the last chapter clearly shows that there are a number of different service catalog types that can exist within an organization. Some organizations may need to have all these service catalog types in place and operational, while others may not, instead identifying those that will yield the best return to the organization. What these organizations share in common is that they need to be able to identify the different service catalog types and to understand the purpose of each service catalog type in order to effectively decide what service catalog will meet their needs and how to achieve implementing it. This chapter looks at the *what* and chapter four and five look at the *how*.

3.1 Service catalog types

IT systems and IT services are separate service catalog types but together they constitute the IT service catalog. IT personnel may see IT systems as actually IT services. Confusion can be experienced all round when business services are introduced. This is not a failing on anyone's behalf but may be borne from a lack of guidance and information. One reason may be that IT views the services from the technology layer and generally not in the same context as how the user of a business service or the customer of a customer service perceives the service. Regardless it is necessary to clarify these basic definitions throughout the organization to ensure that everybody is talking the same language and that it is clear to all the differences between IT services and IT systems. IT systems and IT services will be discussed in more detail in the following sections.

3.1.1 IT service catalog

Technology enables organizations to work more efficiently and effectively and to deliver more to users and customers quicker, faster and smarter. In order to achieve the required benefits from technology the organization should identify and invest adequately in the technology that is required and discontinue investment in technology that is no longer needed or can be replaced with cheaper alternatives such as investing in virtual technology instead of traditional standalone servers. Cost savings are one of many benefits of taking this approach. Organizations need to understand what technology is required for the core business applications and to ensure that adequate support and maintenance is provided by each supplier/partner. Organizations should identify any gaps in the provision of support in order to address and close out any gaps with the relevant suppliers. Technology decisions should not be based on the latest buzz or hype. They should be based on the best fit that will achieve the organizational requirements that will provide value at an acceptable cost. In the IT service catalog, technology can be broken down into IT systems and IT services. IT systems will be broken down into the CIs that make up that system.

The IT service catalog contains a listing of the **IT systems** and **IT services**, along with information regarding key attributes for the IT systems and IT services contained in their respective service records. The IT service catalog also maintains the relationships between the IT system and IT service records.

IT system:

- is a grouping of CIs that make up an end-to-end IT solution, for example an authentication system or a storage system.
- provides a capability to satisfy a need or objective, for example the ability for all staff to store data, for example file storage
- is built from CIs that (should) exist in the CMDB via relationships between those CIs
- is seen from the IT perspective as a collection of IT CIs

IT service:

- is based on one or more IT systems
- is an IT system that can be charged for/outsourced/paid for
- provides the means to deliver a business or a customer service
- is seen from the IT perspective as a collection of IT systems
- charging can be applied to users of the IT service
- maps to IT systems and not to CIs directly

Key points to note are that the IT service catalog:

- contains details of the technical services
- contains the relationships between IT systems and IT services
- contains relationships between, or links to, CIs and IT systems
- generally written and presented in a technical language or view

Note the use of the word IT within the context of ITIL. ITIL is now heavily focused on the lifecycle of *IT services*. However IT services only form one element of the overall service catalog. The various other elements are discussed in the following paragraphs. Also, IT services form only one element of a service when perceived from the perspectives of the business user or the customer. As explained throughout this book, neither of these audiences sees services as pure technical entities.

The term *IT service* is more frequently used than *IT system* even when people are referring to what are in effect IT systems or even low level IT functions. For example, in the IT world the technologists will even refer to specific daemon functions as services in their own right. In reality these daemon services are generally service programs running on operating systems or applications to ensure that certain activities and tasks are carried out.

It is not enough to just list applications within an IT catalog, as does happen, and assume that constitutes the IT service catalog. Applications play a major part in supporting IT functions and business process. However an application cannot exist on its own. Applications rely on IT infrastructure such as connectivity, storage and security to name just a few. If the application provides functionality that is used by the business, it should be placed in the business service catalog with an appropriate business service record that is linked back to the IT services and IT systems that are required in order for it to work.

An example of this is a content or document management application that is used by a number of business functions such as HR or finance. Such a system provides functionality that supports these business processes and is seen from the view of the user and not in technical terms. However, IT should map the technical elements of this service within the IT service catalog. The application itself may require an IT service record to record its technical details and information and to relate it to the IT systems e.g. infrastructure that is needed to make it work. The users may refer to the content or document management application by its commercial name which may in effect become the service name, in the language of the users and customers.

3.1.2 Business service catalog

The business service catalog contains a listing of the business services, along with information regarding key attributes for the business services contained in their respective service records. The business service catalog should also contain relationships with the IT service records. This catalog represents the services used by personnel within the organization and should be recorded from their perspective in language and format that they understand. Business services rely on technology so there is a direct relationship between the two. Inadequate technological design, support and maintenance can render the best business service ineffective and inefficient.

Business service:

- supports business processes, for example HR service provided by IT services which are made up of IT systems
- is one or more IT services that enable a business process or function
- are services used by the business to support the business
- charging can be applied to the business service
- is seen from the perspective of the business
- is something that delivers value to the business

Key points to note are that the business service catalog:

- contains details of the business services
- should contain the relationships between IT services and business services
- should be written and presented in a language or view that is understood by the business

A further three additional service catalog types that exist, which are not explicitly stated in ITIL, are listed below. They are the:

- customer service catalog
- business actionable catalog
- customer actionable catalog

It is just as important to know and understand these three additional service catalog types as they have quite an important role to play. These are also represented within the *service portfolio pyramid* from chapter 2.

3.1.3 Customer service catalog

Customer services rely on IT services (technology) and adequate business services. Thus, there is a direct relationship between the IT systems, IT services and business services that enable the customer services. Inadequate technological and business design, support and maintenance can also render the best customer service ineffective and inefficient.

The customer service catalog contains a listing of the customer services along with information regarding key attributes for the customer services contained in their respective service record. The customer service catalog should also contain relationships between the business service records which in turn are related to the IT services. This catalog represents the services used by the organization's customers and should be recorded from their perspective.

Customer service:

- is provided to a customer that allows the customer to interact with the organization
- is seen from the perspective of the customer
- is something that you can sell to a customer
- is something that a customer can buy, is willing to pay for and use
- is something that delivers value to customers

Key points to note are that the customer service catalog:

- contains details of the customer services
- contains services that are used by customers to interact with the organization
- should contain the relationships to business services
- should be written and presented in a language or view that is understood by the customer

Note: the three types of service catalog discussed so far, i.e. the IT, business and customer service catalogs, all contain information regarding their particular services and equally as important, they contain the relationships between their different service records. If done correctly, this can build into an end-to-end service model which maps out all the services used by an organization and their customers. This truly is the endgame but be under no illusion as to the complexities that can be faced with achieving such an end-to-end service mapping for any sizeable organization. An example of an end-to-end service mapping (service catalog schematic) is provided in chapter 5.

There is another type of service catalog called “the actionable service catalog” which can be provided to the business users and customers. It is an actual capability to allow users and customers to interact with the organization and order various services. It is still a catalog but needs to do much more than the other three types of service catalog. The actionable service catalog is in effect a service itself. The two types of actionable service catalogs are covered in the following section.

3.2 The actionable service catalog

The service catalog types discussed in the previous sections do not provide functionality that allows users or customers to order goods and services from. They are static by nature and provide a means to represent service mappings and provide information about each service via service

catalog records. The actionable service catalog is an element of the service catalog that is published to users and customers and allows them to order goods and services. This service catalog type is considered dynamic.

Actionable service catalogs can be utilized to enable staff to work more efficiently and effectively and to reduce the cost of supporting them by using IT to automate the delivery of service requests. Customers are presented with more and more online and internet capabilities that allow them to interact with organizations even from the comfort of their armchair, given an ordinary computer and a broadband/dial-up connection.

It is quite common that an organization can have any of the following in which to communicate with and provide products and services to both employees and customers:

- an intranet site (internal website)
- an internet site (external public facing website)
- an extranet site (a combination of the two)

An organization may have an internal service catalog (via an intranet) and an external public service catalog and product catalog (via the internet or extranet). The same principle of a service catalog applies in that either type of service catalog exists to allow an end-user or customers to interact with the organization.

The actionable element of the internal service catalog could simply be an extension of the organizations service management system if it has such capability. If so leveraging this ability can aid in maximizing investment made in the service management system and can also help yield an appropriate return on investment by not having to purchase another system.

This approach can:

- utilize economies of scale (less cost)
- utilize existing assets and infrastructure
- automatically create service request records
- utilize service management systems workflow engine/capabilities

While some service management systems have inbuilt functionality to provide actionable service catalog capabilities, for example APIs (Application Programming Interface) and web page functionality, others do not or are so basic that they are not fit for the purpose of an actionable service catalog. Either way the organization should:

- recognize the importance of understanding what it is they need from the actionable service catalog (the requirements)
- know who is involved (people)
- have clear understanding of what will happen (the process)
- identify the correct technology (products & partners)

It is important to involve a number of users of the actionable service catalogs in the design and testing of the catalogs. Their input is required in developing an actionable service catalog that will be relevant, understood and successful with its users. Users should also be allowed to test the catalog and be part of the User Acceptance Testing (UAT) of the catalog before it is fully

published to all. This approach should ensure that a useable and relevant actionable service catalog is provided in a format that is clear, understandable and easy to use. Service catalog design is examined in more detail in chapter 4 and 5.

3.2.1 Public face of the service catalog

The business and customer service catalog provides information about services which is contained in the different service records and also provides a logical representation of the services by the relationships between the service records. The actionable service catalogs allow for users and customers to use specific services that are provided to them in an interface that allows them to order services from. There is another element to the service catalog that will help realize such requirements. Presenting the service catalog in a manner that allows users to interact with, or request some action in regards that service, is in fact providing an actionable service catalog. This type of service catalog can help the organization realize:

- cost savings
- efficiencies
- automation
- improved customer experience
- improved customer service
- breaking into new markets and market spaces

The most basic internal actionable service catalog can be found in organizations that allow users to log service requests via an intranet page. The most general external service catalog can be represented by online stores that allow users to not only by products and services, but that also allow them to manage their own account and specific details about their preferences and to submit queries and problems to a support group.

Typical traits of an actionable service catalog include:

- it should be presented in everyday language that the user understands
- it needs to be easy to navigate for the user to find what it is that they are looking for
- it presents a list of the services that the users understand which are available for them to *order*, for example a new laptop request, the ability for a user to release a blocked email themselves, the ability to book an appointment, et cetera
- it may have the functionality of a shopping cart
- different users can have different levels of access depending on their entitlement to a particular service
- it may also allow the user to see the status of their interaction and any history associated with it, for example is it pending, approved or declined (like the Amazon.com tracking facility)
- it provides management with a view of the services being used, who ordered the services and the number people using particular services

The actionable service catalog is an interface presented to users and customers for them to *order* particular services that relate to them. The services are presented to the user or customer in a manner that they can understand and relate to.

The basics of an actionable service catalog are outlined in figure 3.1.

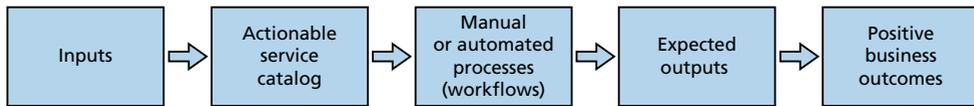


Figure 3.1 Basics of an actionable service catalog

It is important to ensure that expected output and positive business outcomes are achieved. The actionable service catalog is capable of realizing these if it has been set up correctly and if it fulfills users and customers needs and wants. Not only does the technology have to be set up correctly but it must support the underlying processes and sub-processes that are needed. Both must co-exist and work together if expected outputs and positive outcomes are to be achieved.

3.2.2 Business actionable catalog

The business actionable catalog is the service catalog *service* that allows the organizations users (staff) to interact with the organization in relation to ordering services that are made available to them. The business actionable catalog is an interface that provides a list of additional services that the organizations users can request, similar to a shopping list, which can then be logged, processed, managed, fulfilled and completed. The business service catalog provides the means to order these additional services, and it is the request fulfillment process that manages the completion of these service requests. Actionable service catalogs tend to utilize high standards of presentation along with ease of use, although standards may decrease with the business service catalog as it is not public facing. Strive to ensure that this does not happen as the organizations employees are, after all, customer of IT.

At a basic level the organizations staff could be offered the facility to log online requests to the service desk and order available goods and services via a website. The user could also have the ability to manage their preference options for the website. A simple website offering such basic functionality could be built around the organizations existing service management system and could provide a basic actionable service catalog. The ability to integrate the existing service management system with the actionable service catalog will help streamline the provision of services and the fulfillment of requests. The service request may be completed automatically using automated workflow from within the service management system or at a minimum logged automatically within the service management system and assigned to the appropriate group for completion.

Typical traits of a business actionable catalog include:

- it is made available to employees of the organization
- it is generally provided through the organizations internal web presence (intranet)
- it is not generally accessible via the public domain (internet) but can be made available via VPN (Virtual Private Networks)
- it provides access to services that support and allow users carry out their duties
- it uses workflow to provision requests quicker and reduce time lost and the costs associated with manually completing service requests

Key points to note are that the business actionable catalog:

- should be written and presented in a language or view that is understood by the user
- provides an interface or ability for a user to use services provided internally by the business
- provides services that facilitate the organization in achieving its objectives

3.2.3 Customer actionable catalog

The customer actionable catalog is the service catalog *service* that allows the organizations **customers** to interact with the organization and allows them to use or consume services that are made available to them. Similar to the business actionable catalog, the customer actionable catalog is an interface that provides a list of additional services that the organizations customers can request, similar to a shopping list, which can then be logged, processed, managed, fulfilled and completed. The customer service catalog provides the means to order these additional services, and it is the request fulfillment process that manages the completion of these service requests.

Typical traits of a customer actionable service catalog are that it:

- is made available to customers of the organization
- is generally provided through the organizations external web presence (internet)
- is accessible via the public domain (internet)
- provides customers with access to services offered by the organization
- generally offers services that facilitates customers in ordering products and services from the organization
- utilizes high standards of presentation along with ease of use for the customer

Key points to note are that the customer actionable catalog:

- is the service catalog *service* that allows customers to interact with the organization
- should be written and presented in a language or view that is understood by the customer
- provides services that facilitate customers to interact with the organization
- may be provided with a product catalog as additional value-add services

There are an additional three catalogs that may need to be created. None of these appears in the ITIL glossary (at the time of printing) but do have relevance and merit in their own right. These are not discussed in detail throughout this book but are referenced in the *service portfolio pyramid* and do serve very useful functions:

- product catalog
- supplier catalog
- professional services/auxiliary services catalog

3.2.4 Product catalog

A product catalog is at its simplest, a catalog of product listings. Traditionally product catalogs were paper based detailing products available from an organization. More advanced product catalogs can be produced and many are now available online via the internet. Many of these are now utilizing newer technologies such as web 2.0 and advances in specific applications and languages that help render specific content to specific markets and customers. A product catalog can provide additional information such as:

- product description
- product availability

- product price
- product reviews
- product comparisons

It is quite common to have a product catalog and an actionable catalog presented together within the same interface. The product catalog provides the means to find and view information about products that are available to users and customers. The actionable service catalog provides the ability and interface to order these products and to use any other services that are provided to users and customers. Table 3.1 represents some differences between products being offered internally within an organization to its users or externally to the organizations customers. The main difference is that the customer has ultimate control over what they want (as long as it is within their means and is available) but the end-user within the organization may be restricted to making choices for products due to a limited selection available for financial reasons.

Internal services (organization user)	External services (customer)
Limited selection to choose from, for example specific models.	As wide a model selection as the organization can offer.
Limited configurations, for example only specific peripherals.	As wide a configuration selection as the organization can offer.
Generally requires internal approval before being purchased, for example line management/ procurement (internal order process).	Requires payment credentials to be approved generally through a 3rd party service, for example credit card services.
Delivery may be to a central department, for example service desk/line manager.	Delivery as per customer's instructions.
Financial constrains such as a maximum budget to spend during a certain period may be exceeded thus preventing any additional purchasing to take place.	Adequate supplies need to be maintained or are capable of being sourced on demand.

Table 3.1 Differences between products being offered internally or externally

Services

The service offered depends on whether it is offered to the organizations users or their customers, each having different traits and elements to the services.

HR employee on-boarding and off-boarding, also known as the new-hires and leavers process is a specific service that can be initiated or requested from the actionable service catalog. Typically this could include any of the following activities:

- request new accounts, for example directory services account
- email account & setup
- new computer
- security access card
- new phone (desk, cell)

However HR employee on-boarding may not be typical of services that an organization would provide to their customers. Instead services such as setting an online account or viewing and tracking orders can be provided. Regardless of whether these services apply internally or externally their activities are associated with request fulfillment which is now recognized in ITIL as its own distinct process.

Paper based catalogs - really?

An example of a paper based product catalog is a catalog of toys that is produced and distributed by a toy store retailer. They will most likely produce and distribute a printed catalog on a regular basis. Like any decent product catalog it shows the customer what the store has to sell. It also provides the customer with information on store opening times, store locations, store phone numbers, and prices. This is an example of a traditional paper based product catalog. The retailer could provide the exact same content through its website which would be the electronic version of the paper based product catalog. A mail order catalog is an example of a product catalog that allows the customer to purchase products and potentially services from an organization. In the mail order catalog example the product catalog has become an actionable catalog as it allows the customer to order products and potentially services from the organization. Equally, the retailer could provide the exact same content through its website which would be the electronic version of the paper based actionable catalog.

These paper based product catalogs still have a place in today's society. Using paper based catalogs is the way that some organizations, particularly retailers, have "interacted" with customers in the past. Not every customer will have a PC but most people have a mailbox and an address. While customers may have a PC and access to the internet some may neither trust online shopping to be safe and secure nor be comfortable with using, nor know how to use, online shopping sites. Organizations have recognized this and some will continue to send out their product catalogs as well as continue to offer goods and service via their website. Some organizations strategy may just focus exclusively on web content as a route to market, some stick to paper based catalogs and others may use a blend of both.

3.2.5 Supplier catalog

The supplier catalog can be used to record information about the suppliers that provide services, systems and support to the organization. It could also be used to record services that your organization provides to other organizations. If using this type of catalog be sure to identify clearly which type it is. If it is to include both "service supplied to ..." and "services supplied by ..." type services be sure to categorize these clearly. If using this type of catalog it would be beneficial to link the service records from the technical and business catalogs to the service records contained in the supplier catalog. That way the suppliers of each service are clearly identifiable, and information about each supplier including contact details and agreed service levels are easily assessable.

Another approach to take is to record supplier details directly within the relevant service catalog service records. Details of the service supplier such as *supplier name*, *support responsibilities* and *contact details*, to name but a few, can be recorded as attributes of the service records. This approach allows the organization to utilize current service catalog technology to provide a supplier catalog without the need for further investment in additional products or applications and integrates with the current service catalog types in place.

ITIL references a supplier and contracts database (SDC) within the Service Design book. The scope of this type of database and its function is outside of the scope of this book but it is mentioned here to allow the reader to refer to ITIL for further information if required.

3.2.6 Professional services catalog

The professional services catalog is where details of specific services that can be provided by the organization or within the organization are recorded. These professional services are generally services provided by people as opposed to applications. Some professional services utilize internal staff, some external personnel and other a mixture of both. The professional services catalog is an optional catalog as not every organization will have the need for one. Although these services may be provided exclusively by IT their presentation to the organization should not be through a technical catalog or described in technical language (as is the case for the IT service catalog). It is realistic to record information about the professional services within the business service catalog and classify them as professional services for clarity. The professional services catalog can utilize business service records to record information about these services. In addition, professional services can be offered to the business or customers via an actionable service catalog from which they can actually order these services. To recap, the information about professional services can be recorded within the business service catalog and users and customers can order these services via an actionable service catalog. A professional services catalog can provide additional information such as:

- services that can be provided by resources within IT, or by other parts of the organization
- services that facilitate IT services & business systems, for example business analysis, architecture & design and project management
- costs and prices associated with using the professional services
- details of how to use the service
- details on how to order these services

Examples of professional services include:

- technical consulting
- internal audit preparation
- testing
- architecture and design
- application development

It is reasonable for a department or business unit to cross charge another department or business unit for using a particular professional service, especially if charging has been established within the organization.

It is possible to come up with additional service types. However, plan to start with the service types that have been discussed within this chapter initially as there is a good chance of fitting many of the services found in organizations under one of these service type categories. Remember to:

- start with the minimum number of service types
- see how they fit within the mappings of existing services
- identify any additional service type categories (only those that are needed)
- keep it manageable

The different service catalog types, with the possible exception of the actionable service catalog, can be conceivably stored in one repository. In ITIL terms this single repository could conceivably be the CMS but it does not have to be. Regardless of the medium used, service records should be categorized for identification purposes, which can be achieved quite easily, and

related to each other. If not, the service records can be interlinked between different repositories and categorized appropriately. The organizations services are represented by the service records and the relationships that exist between the service records. That is why they could exist within a CMDB, providing it has the capability to relate service records to one another. It is also important to be able to measure delivery of service against agreed levels of service as defined in service level targets.

Actionable service catalogs will require specific functionality and may need specialist applications and functionality. They can be unique in their overall design and content but at the same time use familiar elements such as shopping carts, personalized recommendations and payment options and facilities. There are a number of specialist applications now available that provide actionable service catalog functionality for both internal and external use. Careful consideration must be made if choosing to purchase or even build an actionable service catalog. Identify and understand the current requirements but equally try as much as possible to plan now for future user and development requirements.