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The ITIL® Process Manual

Key Processes and their Application

James Persse

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The ITIL® Process Manual - Key Processes and their Application

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Colophon

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Foreword

Establishing ITIL in a business already running IT operations can seem like an overwhelming challenge to many technology organizations. As reliance on IT continues to grow, many businesses have turned to ITIL to help ensure smooth, continuous availability of critical systems. ITIL, as an internationally recognized codex of best practices, offers a logical, planned approach to ensure that you:

1. Truly understand what your IT customers need;
2. Can effectively plan for those needs;
3. Gauge how well you are meeting those needs; and
4. Improve your offerings to remain viable and competitive.

The IT industry has adopted ITIL because it provides a straightforward, business-oriented view regarding how IT services can integrate with business objects. ITIL has achieved a proven track record of success since its introduction in the early late 1980s. Its concepts have continued to evolve with the emergence of new technologies; and from it have also grown a well-designed training and certification path. However, when you read the available books, attend the classes, or study the material it can be difficult to relate the concepts to what you do as an IT professional on a daily basis. Relax. You are not alone.

With the *ITIL Process Manual* Dr. James Persse has laid out practical ideas that can help you translate ITIL into a workable solution for your business.

As a Solutions Architect for Lockheed Martin, I have worked with James on a number of ITIL initiatives for government agencies. James and I have worked closely to both develop new operational processes and revise existing processes which help to invoke culture changes within organizations seeking to establish ITIL. With a clear path and an adoptive approach to the ITIL concepts, I have successfully been able to adopt ITIL automation tools based on the groundwork laid out in James' processes.

Too often I see attempts to define process that spring from a tool's particular capabilities, and this can lead to disjointed process adherence or confusing and rapid changes to process flows. Taking the better path, when you start with a set of defined activities – process first -- it becomes easier to see the intersections, responsibilities, and capability needed. Now you are ready to make a plan, and it is ITIL that gives you the basis for that plan.

While there are a number of volumes on what ITIL is, this book is unique in that it helps define a practical and workable approach. James understands that ITIL is not necessarily a word-for-word definition of what an organization must do to be successful, but rather a group of common practices that can be adopted to fit your organization. In the workshops I have conducted, and the innovations I have been a part of, I hear a lot of comments to the effect of "*the ITIL definition says…*", and while that may technically be true, is any organization obligated to take on such a literal definition? Are IT teams ready to make a hard cutover from the typical tower mentality to a shared responsibility model? The likely answer is no. So instead, take the theme of an ITIL-specific process and align to your objectives in such a way so that it can to be easily adopted.

I know that many will say: "*easier said than done*". But the key to this concept is captured in this book (and practiced daily) by James and I. In addition, this book helps you understand that by starting with a vision and tackling achievable goals will be more likely to result in success than trying to be too aggressive. Remember too, that ITIL incorporates a continual improvement philosophy, so you don't necessarily need to be perfect right out of the gate, or have an elaborate thirty page deep process document to get started. Sometimes starting with a familiar set of activities and translating those into repeatable steps, coupled with a plan to revisit them and improve, is the easiest way forward.

With these concepts, infused with real world examples from the projects I have collaborated with him on, his numerous other assignments, and other bodies of written work on ITIL, James has created a true manual for a manageable, scalable rollout of ITIL. We have used this same approach to develop a repeatable method for instilling culture change, solid process development, and automation in the pursuit of efficient ITIL oriented organizations for our customers.

Tobi J. Leiker
IT Service Management Solution Architect
Lockheed Martin
Washington, D.C.

Acknowledgements

This title has been one of the hardest publishing projects we have engaged in. On the face of it, the ITSM processes described in ITIL and also ISO 20000 are basic common sense and should be easy for the user to work with in a practical environment. In practice, there are, rightly, many different approaches to adopting ITSM process within an organizational environment. It is our great fortune that the Author and also the Reviewers used their considerable knowledge and expertise to guide and support the project. Always positive and always open to feedback on the subtleties and nuances in the market, the Publisher is indeed extremely grateful to all involved for making this 'delivery' project a real pleasure.

We would like to thank James Persse for his very considerable patience, expertise and attention to detail. His broad shoulders took on much feedback and the quality manuscript reflects this dedication and experience.

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Contents

Foreword . . . V
Acknowledgements . . . VII

Introduction . . . 1

1. Overview of ITIL v3, 2011 edition . . . 7
1.1. Brief history of ITIL . . . 8
1.2. Structure of ITIL . . . 9
1.3. Core components of IT Service Management . . . 26

2. Steps towards implementing an ITIL-based IT Service Management program . . . 29
2.1. Know the model . . . 30
2.2. Appreciate the value . . . 30
2.3. Obtain commitment . . . 30
2.4. Establish a service-based organization . . . 31
2.5. Select the program's scope . . . 32
2.6. Assess the organization . . . 32
2.7. Create your ITIL-based IT Service Management program . . . 32
2.8. Implement the program . . . 33
2.9. Support program use . . . 33
2.10. The ongoing care and maintenance of your program: Plan-Do-Check-Act . . . 35
2.11. Some practical tips . . . 36
2.12. Implementation checklist . . . 38

3. Business Relationship Management . . . 41
3.1. Business Relationship Management activities . . . 42
3.2. Process inputs and outputs . . . 45
3.3. Processes related to Business Relationship Management . . . 47
3.4. Tools and techniques . . . 48
3.5. Key Performance Indicators . . . 49
3.6. Critical Success Factors . . . 50
3.7. Business Relationship Management roles . . . 52
3.8. Benefits of effective Business Relationship Management . . . 54
3.9. Implementation challenges and considerations . . . 55
3.10. Typical assets and artifacts of a Business Relationship Management program . . . 57

4. Service Level Management . . . 59
4.1. Service Level Management work products . . . 60
4.2. Service Level Management activities . . . 62

4.3. Process inputs and outputs 68
4.4. Processes related to Service Level Management 70
4.5. Tools and techniques 71
4.6. Critical Success Factors 72
4.7. Key Performance Indicators 74
4.8. Service Level Management roles 75
4.9. Benefits of effective Service Level Management 77
4.10. Implementation challenges and considerations 79
4.11. Typical assets and artifacts of a Service Level Management program . . . 81

5. Capacity Management 85
5.1. Process activities for Capacity Management 87
5.2. Process inputs and outputs 92
5.3. Processes related to Capacity Management 94
5.4. Tools and techniques 96
5.5. Key Performance Indicators 97
5.6. Critical Success Factors 98
5.7. Capacity Management roles 100
5.8. Benefits of effective Capacity Management 102
5.9. Implementation challenges and considerations 104
5.10. Typical assets and artifacts of a Capacity Management program 106

6. Availability Management 109
6.1. Availability Management activities 111
6.2. Process inputs and outputs 116
6.3. Processes related to Availability Management 118
6.4. Tools and techniques 120
6.5. Key Performance Indicators 121
6.6. Critical Success Factors 123
6.7. Availability Management roles 124
6.8. Benefits of effective Availability Management 127
6.9. Implementation challenges and considerations 129
6.10. Typical assets and artifacts of an Availability Management program . . . 131

7. IT Service Continuity Management 135
7.1. IT Service Continuity Management activities 137
7.2. Process inputs and outputs 141
7.3. Processes related to IT Service Continuity Management 143
7.4. Tools and techniques 145
7.5. Key Performance Indicators 146
7.6. Critical Success Factors 148
7.7. IT Service Continuity Management roles 149
7.8. Benefits of effective IT Service Continuity Management 152
7.9. Implementation challenges and considerations 153
7.10. Typical assets and artifacts of an IT Service Continuity Management program 155

8. Information Security Management 159
8.1. Information Security Management activities 161
8.2. Process inputs and outputs 166
8.3. Processes related to Information Security Management 168
8.4. Tools and techniques 170
8.5. Key Performance Indicators 171
8.6. Critical Success Factors 173
8.7. Information Security Management roles 175
8.8. Benefits of effective Information Security Management 177
8.9. Implementation challenges and considerations 179
8.10. Typical assets and artifacts of an Information Security Management program 181

9. Change Management 185
9.1. Change Management activities 187
9.2. Process inputs and outputs 196
9.3. Processes related to Change Management 197
9.4. Tools and techniques 200
9.5. Critical Success Factors 201
9.6. Key Performance Indicators 202
9.7. Change Management roles 203
9.8. Benefits of effective Change Management 206
9.9. Implementation challenges and considerations 208
9.10. Typical assets and artifacts of a Change Management program 210

10. Service Asset and Configuration Management 213
10.1. Configuration Management activities 214
10.2. Process inputs and outputs 219
10.3. Processes related to Configuration Management 221
10.4. Tools and techniques 222
10.5. Key Performance Indicators 223
10.6. Critical Success Factors 225
10.7. Configuration Management roles 226
10.8 Benefits of effective Configuration Management 229
10.9 Implementation challenges and considerations 231
10.10 Typical assets and artifacts for a Configuration Management program .233

11. Release and Deployment Management 237
11.1. Release and Deployment Management activities 238
11.2. Process inputs and outputs 244
11.3. Processes related to Release and Deployment Management 246
11.4. Tools and techniques 247
11.5. Key Performance Indicators 248
11.6. Critical Success Factors 250
11.7. Release and Deployment Management roles 251
11.8. Benefits of effective Release and Deployment Management 254

11.9. Implementation challenges and considerations 255
11.10. Typical assets and artifacts of a Release and Deployment Management program 257

12. **Incident Management 261**
12.1. Incident Management activities 263
12.2. Process inputs and outputs 268
12.3. Processes related to Incident Management.........................269
12.4. Tools and techniques 272
12.5. Key Performance Indicators 273
12.6. Critical Success Factors 275
12.7. Incident Management roles..277
12.8 Benefits of effective Incident Management.........................280
12.9. Implementation challenges and considerations 281
12.10 Typical assets and artifacts of an Incident Management program......284

13. **Problem Management...287**
13.1. Problem Management activities 288
13.2. Process inputs and outputs 292
13.3. Processes related to Problem Management..........................294
13.4. Tools and techniques 296
13.5. Key Performance Indicators 297
13.6. Critical Success Factors 300
13.7. Problem Management roles...301
13.8. Benefits of effective Problem Management..........................303
13.9. Implementation challenges and considerations 304
13.10. Typical assets and artifacts of a Problem Management program.......307

14. **Service Desk 311**
14.1. Service Desk responsibilities.....................................312
14.2. Processes related to Service Desk 315
14.3. Tools and techniques 317
14.4. Key Performance Indicators 318
14.5. Critical Success Factors 319
14.6. Service Desk roles 321
14.7. Benefits of a well-executed Service Desk function 324
14.8. Implementation challenges and considerations 325
14.9. Typical assets and artifacts of a Service Desk function...............327

15. **Service Management and Service Improvement.........................331**
15.1. Service Improvement activities...................................332
15.2. Process inputs and outputs 335
15.3. Processes related to Service Improvement 337
15.4. Tools and techniques 338
15.5. Key Performance Indicators 339
15.6. Critical Success Factors 340

15.7. Service Improvement roles 341
15.8. Benefits of effective Service Improvement 343
15.9. Implementation challenges and considerations 345
15.10. Typical assets and artifacts of a Service Improvement program 346

16. Implementing a basic Process Quality Assurance function 349
16.1. Objectivity and independence.......................................349
16.2. PQA activities...350
16.3. The value of PQA...353
16.4. Summary: ensuring success..353

Introduction

Since its introduction in the mid-1980s, ITIL® has attained worldwide prominence as the leading process model for the management of IT infrastructures. At the same time, as technology infrastructures have reached into every nook and cranny of corporate operations, senior executives are seeing the value of management through the use of structured IT controls. The result has been more and more companies adopting ITIL.

As is true with any improvement initiative, adopting ITIL in an effective manner requires a set of actions that may not be familiar to many IT organizations, especially those new to process management. For that reason, this book has been prepared: *The ITIL® Process Manual.*

Purpose of this book

This book was written to give IT executives, managers, and process analysts a comprehensive view on how to implement an IT Service Management program using the core components of ITIL as a baseline. In line with that aim, this book is designed to achieve four general objectives:

- Present an overview of ITIL and its role in IT Service Management
- Point you to the key ITIL processes and functions
- Present practical tips and techniques for adopting the processes in an IT organization
- Highlight the relationships and flexibility inherent in the framework

Present an overview of ITIL

The first purpose of this book is to give the reader an overview of ITIL, to describe its focus, shape, and content. This will provide the background necessary for understanding ITIL's core components and for planning the design of a Service Management program. Here we discuss each of the model's five lifecycle phases and then briefly review the processes in each phase.

Orient you to key ITIL processes and functions

There are 26 processes and four functions in the full ITIL framework. Each of these occupies an important place in an IT Service Management program. But not all organizations need to adopt the full set and when it comes to new programs, any expert will advise starting with a carefully selected subset and then growing from there. This book makes an effort to establish that basic subset. It presents the core processes that are essential for delivering, controlling, releasing, and maintaining IT services. Each process is described in full detail, covering process activities, roles, metrics, assets, and artifacts.

Present practical tips and techniques for implementation

The primary purpose of this book is a practical, tactical one. We will explore a series of tips and techniques that you can use to help design, build, and implement your program. These tips and techniques come from practitioners in the industry who have designed and implemented many similar programs, not just ITIL-based programs, but others as well – the PMI's PMBOK, SEI's CMMI, Six Sigma, ISO 9001, and others. These programs share similar success traits with ITIL, as they are all based in the fundamentals of process improvement and organizational change. The tips and techniques presented here help you make the most of your efforts while avoiding some of the common pitfalls that can stall or even derail a program. These tips and techniques are featured across all chapters and cover inception through implementation on to adoption by your organization. This advice is geared toward helping promote a successful, well-focused operational design and facilitate a smooth implementation as the program is rolled out to live operation.

Highlight the relationships and flexibility inherent in the framework

A couple of traits of ITIL that are often overlooked, or at least under-stressed, are the interrelationships that exist among its elements and the amount of flexibility you have in putting those elements together. Some IT organizations tend to adopt ITIL processes independently of one another, as if they were standalone entities. That approach can work but it usually results in operational redundancies, duplicate work, or operational gaps. In this book we will point out where ITIL elements naturally overlap. By highlighting these relationships, this book can help you make the most of commonalities among all the core components. At the same time the book will highlight the degree of flexibility you have in interpreting the best way to adopt each in your organization. One of the strengths of ITIL is that it is not prescriptive; it does not set out obligatory requirements. It presents proven recommendations. It is your insight and experience that are needed to determine how to best integrate these recommendations across your functional groups. These two together – the interrelationships, and the flexibility – should help you create a streamlined, value-driven program, one that exploits ITIL's insights while accommodating your own cultural traits.

The audience for this book

This book is written primarily for IT professionals who need to acquire a good understanding of the core components of ITIL V3. Because the emphasis is on implementation of ITIL-based processes, this audience is made up of four groups of stakeholders and these stakeholders typically represent those in an IT organization who will assume most of the responsibility for taking a program from concept to realization. They are Chief Technology Officers (CTOs), IT Service Managers, IT Service Management program managers and analysts, and those who will work with the program at the line level. Let's take a quick look at each of these groups.

Chief Technology Officers

In today's business and economic climates, more and more are being asked to establish quality controls throughout their organizations. Many factors are contributing to this. Statutory requirements like those in the Sarbanes-Oxley Act (SOX) make implementing such controls in certain organizations mandatory. Then there is the basic fiduciary responsibility allied with IT spending. Corporate leadership, investors and even industry analysts expect controls to be in place. Then there's the basic issue of managing complex environments that are likely to be growing more complex by the week. Such executives can benefit from this book with its emphasis on practical implementation. Using it, they should be able to position their teams for an effective Service Management design, development, and implementation effort.

IT Service Managers

The managerial heart of an IT Service Management program may be found in the role of the IT Service Managers. These are the people whose job it is to oversee the design and delivery of IT services, anything from email to smartphones to payroll runs. By default they also oversee execution of the IT Service Management program. For that reason it is important they know the IT Service Management program well. In fact, it is important that they help *build* the program. This book can help managers understand the scope of ITIL's core processes, grasp the details that may need to be accounted for in their service areas, and then establish a program designed for success.

ITSM Process Program Managers.

Process Program Managers are those people typically charged with taking an executive vision (the strategy) and making its quality goals and workflows real in the organization (through tactics). Such program owners will find in this book a structural approach to Service Operation that emphasizes the purpose and function of each component while highlighting opportunities for integration. Through this an effective program scope can be established. Process Owners work with senior managers to introduce process elements; they tend to own one or more components of a program. They'll find this book helpful because, especially in Chapters 3 through 14, it presents a tactical picture of how each ITIL process can be accounted for. 'Accounted for' is not simply to be consistent with ITIL recommendations, but designed to be right-sized; that is, to fit well within the organizational culture, to make best use of existing best practices, and to allow for future growth and refinement.

Those who work within an IT Service Management program

Finally, this book should be helpful to those staff members required to operate within an IT Service Management program. While it is not necessary for everyone in an organization to understand the details of ITIL, key staff (e.g. team leads) would benefit from having some exposure to the framework and access to the detail as required. This will help them to appreciate the focus that ITIL brings to Service Management and understand how their IT duties may contribute to success on a broader level. Such a big-picture appreciation can help them operate more effectively and lead their teams in a more informed and directed manner.

How this book is organized

This book is organized in three parts. Part 1 presents an overview of ITIL and general considerations for how process programs can be implemented. Part 2 contains descriptions of each of the core ITIL processes. Part 3 presents a discussion on the importance of continual process improvement and of ITIL's relation to ISO/IEC 20000. The chapters break down as follows.

Chapter 1 presents a high level overview of ITIL. This is in place to give you a feeling for the scope of the framework across its five lifecycle phases and to provide context for the discussions of the core components. For this book the core components are the following processes:
- Service Level Management
- Capacity Management
- Availability Management
- IT Service Continuity Management
- Information Security Management
- Change Management
- Service Asset and Configuration Management
- Release and Deployment Management
- Incident Management
- Problem Management
- Continuous Service Improvement

Chapter 2 presents a series of steps and considerations helpful for initiating and implementing a process program. Because practical implementation is the focus of this book this chapter presents a high level implementation architecture that can be used as a management umbrella for the implementation approach contained in the chapters describing the individual processes.

Chapters 3 through 15 present discussions of each of the core processes or functions. The chapters are organized to contain the following details:
- Introduction – a description of the process in its operational context
- Activities – steps recommended for this process
- Inputs/outputs – typical inputs, entry criteria, outputs, and exit criteria for the process
- Related processes – other core processes that might interact with or influence this process
- Tools and techniques – common tools and techniques to help with process implementation
- Key Performance Indicators – a set of conventional measures that can be used to gauge the performance of the process
- Critical Success Factors – a set of measures to determine the operational success of the process
- Roles – a description of the kinds of job roles that organizations commonly use for process activities and management

- Benefits – a description of the kinds of organizational benefits that can be realized through effective process implementation.
- Implementation challenges and considerations – descriptions of the kinds of typical hurdles that may have to be addressed in order to maximize process effectiveness
- Typical assets and artifacts – a listing of the typical assets and artifacts commonly associated with process implementation and use

Chapter 16 supports program implementation and governance with a discussion of how to establish a basic process quality assurance function in the organization.

That is the structure of this book. There is also a theme that runs through the book. It rests on five general points of principle that lie at the heart of IT Service Management both as a discipline and a management philosophy. These five points are:

- Technology assets in a business domain are the same, in spirit, as any other corporate asset and, like other assets, should be deployed in pursuit of defined business objectives.
- The activities required for harnessing technology assets to the needs of the business should be considered 'services' that the IT organization provides on an ongoing basis.
- The IT organization (with executive support) should forge a close partnership with its business customers in order to determine as a team what technology services are needed and how they ought to perform.
- The IT organization should regularly measure the performance of its service-related activities and report its achievements back to the business.
- Together, IT management and business management should periodically review performance measures and seek in the data opportunities for improvement.

ITIL, with its focus on Service Management and its integration of industry best practices, can help you realize each of those five points. As you begin the process of implementing your ITIL-based program you will see how each of the five points demonstrably contributes to the levels of quality, control, consistency, and predictability one would expect to see in a well-managed IT environment. To begin our look at implementation let's start with an overall high-level look at ITIL.

1. Overview of ITIL v3, 2011 edition

ITIL is the acronym for the Information Technology Infrastructure Library, a collection of five volumes that set out proven practices for how organizations can effectively manage IT infrastructures. But while it is a collection of practices, it is not a process program, as is sometimes thought. Rather, ITIL is a framework that organizations can use to construct their own custom-built process programs. From the standpoint of focus, ITIL is designed to support IT Service Management. This is a management approach that treats the delivery of IT capabilities in much the same way that, say, the power company delivers electricity into homes - as a service.

That is not the way IT has traditionally been regarded. The traditional view sees technology as a specialized function within an organization, one whose mission may be to support the business but whose domain remains somewhat separate from the business. In this view, IT management tends to make technology decisions based mainly on technological considerations. How this view came about is easy to understand. Computing, and information technology in general, is relatively new to the world of business. The digital transformation began less than fifty years ago – practically a blink when considering that accounting practices have been around for 9,000 years. And when computers were first harnessed for business they *were* a specialized function. They performed very select jobs; they needed meticulous care; they required a new breed of employee. On top of that, technology by necessity had to be separate from the company – set apart in sealed, air-conditioned rooms with raised floors. That naturally bred the view that technology should be treated as a meta-function to the business.

Of course that is not the case today. The personal computer (PC) revolution of the 1980s changed that forever. Since then technology use, and the influence on technology's direction, has moved steadily out from the sealed rooms onto the desks of accounting, marketing, manufacturing, human resource, and distribution workers. In that time technology has certainly grown more specialized and exponentially more sophisticated, but it can no longer be isolated from the business. It is too important to the business. In many ways it *is* the business. Today business and technology have become so intertwined it is often difficult to distinguish where technology ends and business begins. The result is that the power of computing has become singularly important to business users. Paradoxically, it is also their desire that it becomes invisible.

The value of IT Service Management is based in that duality. Users need technology but they should not need technology's technicalities. They just want to flip the switch and see the lights come on. When they send an email they just want to know that it arrives. What goes on behind the scenes in order for that email to arrive may be quite complex. Software, servers, network lines, routers, switches – all these have to work in harmony. It is the job of the infrastructure (and the people who manage and operate the infrastructure) to establish and maintain that harmony, and thus –and this is key – allow business processes to flow.

What's new here is the view required of management. The software, servers, routers and switches should no longer be seen as independent devices, to be configured and maintained in isolation. Now they should be seen as the integrated components of an IT service, in this case an email service. In order for that email service to be delivered in a consistent and reliable way those components need to be managed as a continuous stream of capability. This requires close cooperation and collaboration between technical teams, a level not readily achieved in steeply separated IT organizations. But more importantly, in this new paradigm the IT organization is required to become a closely allied partner with most aspects of the business. Technology decisions should now be based mainly on business drivers. The voice of the customer should be echoed in every service configuration. The IT organization's responsibility is to deliver demonstrable value to the business; its job is not to be technologically astute so much as it is to become market savvy. And that's where ITIL comes in.

1.1. Brief history of ITIL

ITIL was developed in the mid-1980s by the UK Central Computer and Telecommunications Agency (CCTA), subsequently renamed the Office of Government Commerce (OGC)[1]. OGC at that time was not satisfied with the level of service that the UK government was receiving from its many IT contractors. In response, OGC commissioned the creation of a set of guidelines that could be followed by IT service providers to enhance consistency, establish common performance goals, and – ultimately –improve delivery quality. OGC was not interested in a proprietary standard. It wanted instead to borrow practices already proven in the IT industry and build the guidelines around those good practices; this is the path that was taken. The first version of ITIL appeared in 1989. It was a collection of guides across a series of management areas. Some of the earliest were Service Level Management, Contingency Planning, and Change Management.

Right from the start ITIL proved popular, and many IT organizations began adopting it. About 10 years later, OGC released ITIL V2. Version 2 was not much different in content from V1, but there was a structural improvement. The guides were presented in two domains, Service Support and Service Delivery. With Version 2, ITIL began to reach an international audience, and its popularity and adoption rates rose significantly. It was during this time that ITIL became recognized as the emerging framework when it came to service design, development, deployment, and

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[1] Since 2000 OGC has been the custodian of the Best Management Practice (BMP) portfolio, including ITIL, on behalf of UK Government. In June 2010 as a result of UK Government reorganization the Minister for the Cabinet Office announced that the BMP functions have moved into Cabinet Office.

IT operations. Then in 2007 OGC released ITIL V3. Version 3 greatly expanded the scope of ITIL and also embedded a strong emphasis on service management as an extension of business mission management. There was also another structural shift. OGC grouped ITIL processes and functions into a series of five lifecycle phases. Lastly, in the late summer of 2011, a refreshed edition of the library set was released, known as ITIL 2011 (developed by the UK Cabinet Office, which now owns ITIL along with other best practices). The 2011 edition presents more stylistic updates than actual content changes. Consistencies have been introduced across lifecycle phases and processes; clarifications and amplifications have been added. The biggest change content-wise is that business relationship management, a topic treated inferentially in the former framework, has now been treated explicitly as its own process. (See Chapter 3.) Version 3's 2011 edition is the version available today, and the one on which this book is based.

ITIL today is recognized as the de facto standard as the basis for implementing an IT Service Management program. The five volumes that comprise the library cover a broad field of information, the overriding theme being effective and responsive management of IT infrastructures. At its detailed base, ITIL is a collection of proven practices organized into processes, a process being a set of ordered activities designed to achieve a goal. In addition to processes, ITIL also describes functions. In ITIL terminology a function is an organizational unit that may use one or more processes - the Service Desk is a ready example of a function. The processes and functions in ITIL can be implemented in their entirety or selectively, depending on the needs of the organization.

1.2. Structure of ITIL

From a structural standpoint ITIL interprets IT Service Management as operating through a series of lifecycle phases with service maturity moving through a sequence of managed stages. For each stage there is a varying mix of processes, functions, and activities an IT organization should consider for each service it builds and moves towards production. In the Service Strategy phase, the organization views new or enhanced services in light of what exists in its IT portfolio already. The focus here is on complementary and value-added expansion. The Service Design phase introduces processes that deal with the kinds of scope and performance considerations that need to be accounted for as services are being designed. Service Transition includes those preparatory activities that need to be done in order to move a service from development into production. Service Operation features those processes and functions that guide how services are managed and maintained while they are being delivered to customers. Running through all four of these phases is Continual Service Improvement. This is the process improvement phase and it is here that ITIL presents practices for improving service features, performance, and quality.

In the next sections we'll take a brief look at these lifecycle phases and explore what processes ITIL defines for each. This will provide the context we need to investigate the core components of ITIL and view those areas with an angle on how to build them for use in your IT organization.

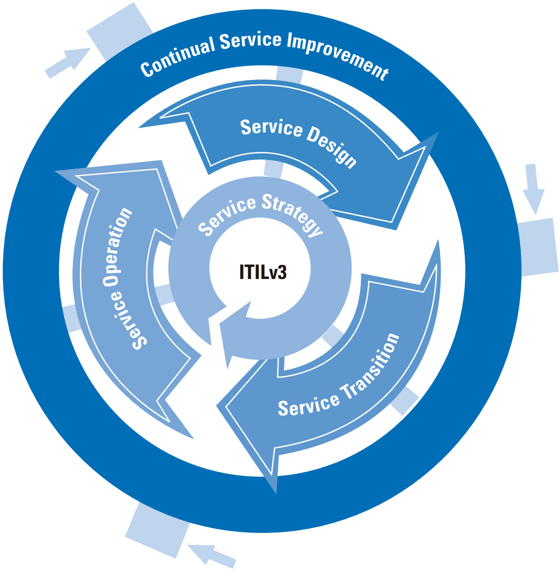

Figure 1.1 The five ITIL lifecycle phases

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ITIL bases its structure on five lifecycle phases: Service Strategy, Service Design, Service Transition, Service Operation, and Continual Service Improvement.

Service Strategy

The Service Strategy phase is designed to provide an organization with processes useful for directing the form and function of an IT Service Management program. The scope of this direction includes evolving the shape of the infrastructure as well as applying techniques for designing, transitioning, and operating IT services. It is here that elements are set into place to support what might best be described as competitive service delivery, service delivery that combines cost effectiveness with maximized efficiency. At the same time, Service Strategy helps the organization frame its service offerings in a manner appropriate for its customer base. Five processes are presented here. They are:

- Strategy Management for IT Services
- Service Portfolio Management
- Demand Management
- Financial Management for IT Services
- Business Relationship Management

Strategy Management for IT Services. This process assesses the service provider's offerings and capabilities, together with an assessment of competitors, current and potential market spaces to develop a strategy for services to customers. Once the strategy has been defined, Strategy Management for IT Services is also responsible for ensuring the implementation of the strategy.

Process scope:
- Assessment of current offerings and capabilities
- Assessment of competitors and market space
- Definition of strategy for services to customers
- Implementation of strategy

Service Portfolio Management. The purpose of Service Portfolio Management is to strategically manage all the assets that make up the organization's infrastructure in a way that contributes to business success. Service Portfolio Management takes a holistic view of the organization's full suite of IT service offerings. The portfolio itself can be seen as consisting of three types of assets: those services that are available for customer use, those that are in the process of being newly released (the pipeline), and those that have been retired. Each of these represents in its own way a tangible value to the organization. The focus of Service Portfolio Management is on maximizing this value. Its practices work to make sure that the service mix is not redundant, that its components are complementary and not in conflict, and that plans and designs for new services take as much advantage as possible of what is already in place in the portfolio.

Process scope:
- Establishing the Service Catalogue
- Managing the service pipeline and overseeing service delivery
- Defining and analyzing new and enhanced services
- Chartering new and enhanced services

Demand Management. Demand Management is structured to ensure that the Service Portfolio is sized and configured in the most effective way as to balance demand (present and future) with operating costs. This process is closely associated with Financial Management and thus helps shape subsequent Service Design, Transition, Operation and Continual Service Improvement lifecycles. The purpose of Demand Management is to help the organization understand the level of demand associated with any particular service. High demand services will be likely to warrant robust and feature-rich designs and therefore significant levels of investment – with expectations for high returns. Low demand services will be likely to require less rigor and lower investment. The aim of Demand Management is to match the investment to the demand, and in doing so ensure that the infrastructure operates without a surplus or deficit of capacity, availability, and continuity as it grows and evolves over time.

Process scope:
- Provisioning service packages
- Managing lines of business

Financial Management for IT Services. The Financial Management for IT Services process is designed to ensure that investments made to create or enhance services are appropriately balanced against potential Return on Investment (ROI), demand, and the market needs of the organization. The design, delivery, and operation of IT services is the primary mission of IT Service Management. In order to do this the organization is required to invest in all the various components necessary for those activities to occur. That is where Financial Management for IT Services comes in. Financial Management for IT Services introduces a series of practices that guide how service provision is supported financially. This support is balanced between two criteria: investments appropriate to the needs of the marketplace and investments appropriate to the maturity of the organization. Effective Financial Management for IT Services results in cost-effective IT services that carry in them the potential for a positive ROI.

Process scope:
- Conducting business impact analyses
- Classifying and categorizing costs
- Budgeting
- Financial Management

Business Relationship Management. The purpose of this process is to maintain a positive and proactive relationship with customers; its primary concern is customer satisfaction. Business Relationship Management identifies the needs of existing and potential customers and ensures that appropriate services are developed to meet their evolving needs.

Process scope:
- Establishing and maintaining relationships with customers
- Identifying customers' evolving service requirements
- Improving customer satisfaction and handling of complaints

Service Design

Service Design provides a set of processes intended to ensure that core service attributes are accounted for and that they meet both the technical and business needs of the organization. This second phase in ITIL's lifecycle contains a series of eight processes that focus on considerations that go into designing a new service or enhancing an existing one. The emphasis across the seven processes is on production reliability, assuring that once a service is deployed it is appropriately secure, that it is consistently available, it is dependably capable of handling the required capacity, and it is quickly recoverable. The processes in this lifecycle phase are:
- Design Coordination
- Service Catalogue Management
- Service Level Management
- Availability Management
- Capacity Management
- IT Service Continuity Management

- Information Security Management
- Supplier Management

Design Coordination. This process aims to coordinate all service design activities, processes and resources. Design Coordination ensures the consistent and effective design of new or changed IT services, Service Management information systems, architectures, technology, processes, information and metrics.

Process scope:
- Design coordination support
- Service design planning, coordination and monitoring
- Technical and organizational service design
- Service Design review and Request for Change submission

Service Catalogue Management. The aim of Service Catalogue Management is to define, publish, and distribute a catalogue of current service offerings. The Service Catalogue is a subset of the Service Portfolio. The Service Catalogue contains descriptions of those business and technical services that the organization is prepared to deliver to a customer. This includes services already in production as well as new ones being prepared for production. Because IT services change over time, managing and maintaining the Service Catalogue is an important ongoing activity. Its service descriptions need to be kept current so that delivery commitments can be honored. And its component contents need to be kept current so that the right mix of offerings can be presented. (There may be some services scheduled for retirement in the Service Catalogue; when fully retired they will be located in the Service Portfolio and withdrawn from the Service Catalogue.) The practices that ITIL sets for this process help achieve both of these aims.

Process scope:
- Defining the Business Service Catalogue
- Defining the Technical Services Catalogue
- Publishing and distributing the Service Catalogue
- Maintaining the Service Catalogue

Service Level Management. Service Level Management is in place to establish agreements between IT and its customers about the scope of services and the quality of service delivery. Service Level Management is a cornerstone ITIL process. It is through Service Level Management that Service Level Agreements (SLAs) are put in place. SLAs define the performance thresholds that each service must meet in order to be deemed acceptable. Both parties (customer and service provider) participate in negotiating SLAs; the result is a mutually agreed definition of service levels. This definition provides an unambiguous and objective view of what quality means to both sides. The practices defined for this process help set service requirements, document SLAs, and provide for periodic reviews of both over time.

Process scope:
- Establishing service level requirements
- Establishing Service Level Agreements
- Monitoring service performance
- Measuring customer satisfaction
- Reporting on service performance and customer satisfaction
- Maintaining customer relationships

NOTE: Service Level Management is covered in detail in Chapter 4 of this book.

Availability Management. This process is designed to help ensure that services are designed in such a manner that the customer's availability needs are accounted for and met. Availability is a key characteristic of any service. The practices ITIL recommends for Availability Management promote the definition and implementation of availability requirements. However, any one service may be made up of any number of infrastructure components; determining availability requirements and designing them can be a complex undertaking. To facilitate this, ITIL promotes the early identification of vital business functions (VBFs). VBFs account for the major business processes that a service supports. By focusing on these VBFs first, a design team is more likely to effectively identify and realize critical requirements, and successfully incorporate them into services.

Process scope:
- Accounting for throughput, uptime, serviceability, maintainability, redundancy
- Identifying Vital Business Functions
- Establishing availability designs
- Implementing availability designs
- Analyzing and assessing availability performance

NOTE: Availability Management is covered in detail in Chapter 5 of this book.

Capacity Management. This process is structured to ensure that services are designed in such a manner that the customer's capacity needs (people, data and throughput) are accounted for and met, now and in the future. Capacity Management is closely associated with Availability Management. In the same way that services operate under certain availability requirements, so too they have capacity requirements. The concept of capacity involves a number of considerations. Among these are storage space, processing power, response time, and throughput. As with Availability Management, designing for Capacity Management can be quite complex. The practices recommended here by ITIL guide design teams through steps for identifying capacity requirements at the business, service, and service component levels. They also include testing performance against those requirements, and monitoring capacity performance in the field.

Process scope:
- Accounting for data storage, concurrency, service data
- Establishing capacity designs
- Implementing capacity designs
- Analyzing and assessing capacity performance

NOTE: Capacity Management is covered in detail in Chapter 6 of this book.

IT Service Continuity Management. This process is in place to ensure that technical service continuity is maintained if there are disruptive events so that business activity may be protected. The role of IT Service Continuity Management deals with designing (and deploying) services so that factors such as redundancy, failover, and restores are matched with reliability and dependability. A particular issue is the requirement to maintain availability, capacity, etc, even in the event of a disaster. In fact, in many organizations the term Continuity Management is synonymous with disaster recovery. The practices ITIL recommends for this process cover a spectrum of considerations, from ensuring a service's ability to forestall service interruptions to establishing pre-defined response actions so that services, once interrupted, can quickly recover. In this light, IT Service Continuity Management can be seen as a strategic extension of Availability Management.

Process scope:
- Defining continuity needs
- Establishing continuity plans
- Implementing continuity plans
- Periodically testing continuity plans

NOTE: IT Service Continuity Management is covered in detail in Chapter 7 of this book.

Information Security Management. Information Security Management ensures that the integrity of business data, services, and service components are protected from threats through appropriate access and configuration schemes. This process addresses the security requirements of a service. The practices recommended here cover such topics as system security, data security, identity profiles, security monitoring, and security policies. Since each kind of service is likely to have its own security needs, Information Security Management may be either a straightforward process or one that is intricately involved. The goal here, however, is not merely one of security; more fully it is one of security completeness: verifying that all facets of system and service security have been considered as a routine part of service design.

Process scope:
- Identifying information security needs
- Establishing security policies and methods
- Implementing security policies and methods
- Monitoring system access and use

NOTE: Information Security Management is covered in detail in Chapter 8 of this book.

Supplier Management. The intention of this process is to help select and manage suppliers in a way that promotes a partnership between IT management and its IT service providers, one that contributes to meeting defined service levels. Supplier Management deals with the coordination and collaboration activities necessary when working with third party suppliers. The focus is selecting and then engaging with those suppliers most qualified to realize service requirements as they relate to customer needs. Practices under this process have been established to help the organization identify and document supplier-related requirements, identify suitably qualified suppliers, select suppliers using verifiable criteria, regulate contracts and agreements, manage supplier work and deliverables, and evaluate supplier performance. As with the other components of ITIL, Supplier Management stresses a cooperative relationship, one in which both parties work to define common performance and quality expectations.

Process scope:
- Identifying qualified suppliers
- Negotiating with suppliers
- Establishing underpinning contracts
- Monitoring supplier performance

Service Transition

Service Transition provides a set of processes intended to ensure that new or enhanced services are deployed to the operational environment in such a way as to minimize downtime and protect infrastructure operability. Service Transition is the third phase in the service lifecycle. At this point a service is ready to move from concept into production. The idea of 'transition' provides that this move is made in a coordinated and controlled manner, one that minimizes risk to the operational environment. Seven processes are included here, which cover the progression from transition planning to change management through to performance evaluation. A brief description of each of these seven processes follows.

- Transition Planning and Support
- Change Management
- Service Asset and Configuration Management
- Release and Deployment Management
- Service Validation and Testing
- Change Evaluation
- Knowledge Management

Transition Planning and Support. ITIL provides this process to establish a management capability within the organization for transitioning services from design to live operational service. Here the organization establishes an overall transition strategy, then provides its teams with scheduling and coordination methods and tools. These teams are tasked with following through on transition activities so that service deployment occurs in a consistent, planned, and controlled manner, one that emphasizes the efficient use of capital outlay and resource allocation.

Process scope:
- Establishing a transition strategy
- Setting up a release approach
- Implementing the release approach
- Monitoring release management performance

Change Management. Change Management provides the organization with a method for introducing change in a coordinated and collaborative manner. This process deals with providing mechanisms to control change in the organization, particularly changes to the IT infrastructure. ITIL recommends a series of activities to support this. These include providing a way for users to submit requests for change, establishing a change control authority to assess and approve requests, and implementing a method to track active change requests. When integrated with other transition activities, these activities promote accountability and responsibility so that change can be made in a responsive and effective way.

Process scope:
- Coordinating the submission of Requests for Change (RFCs)
- Assessing the impact of RFCs
- Decision-making regarding RFCs
- Incorporating approved changes into releases

NOTE: Change Management is covered in detail in Chapter 9 of this book.

Service Asset and Configuration Management. This process helps ensure that the organization's operational assets are tracked in a way that reflects their current states and configurations. It provides practices for two areas: the identification of the components that make up the infrastructure – the assets; and documentation of the configuration of those items. An important starting point for this process is to plan for the configuration management activity, including the scope of work, and then to create an inventory of all those assets the organization currently owns (or controls). Next is establishing a baseline of the proper configurations of that inventory. Once these are in place the baselines should be protected; that is, changes to either the records or the actual components cannot be made without organizational approval. There are also periodic audits to verify that the descriptions of the inventory and corresponding configurations precisely match those in the operational environment. Through these practices the organization is better able to plan for and manage infrastructure growth and change.

Process scope:
- Planning configuration management activity
- Identifying configuration items (CIs)
- Controlling CIs

- Accounting for CI status
- Auditing and verifying CI status

NOTE: Service Asset and Configuration Management is covered in detail in Chapter 10 of this book.

Release and Deployment Management. ITIL provides this process to ensure that adequate plans exist for moving new or enhanced services into production. The focus here is on establishing an organizational release capability, then providing methods for smoothly deploying services under that capability. As part of this, ITIL recommends practices that ensure release packages meet the criteria for moving to the live operational environment; that is, that they have been inspected, tested, and validated. There are also practices that relate to how releases should be scheduled and coordinated so that deployment work has the least impact on operational uptime. And then there are practices that deal with the activities that implementation teams should undertake when installing services. The overriding goal of Release and Deployment Management is to make the transition from service potential to service performance as transparent and trouble-free as possible.

Process scope:
- Scheduling releases
- Planning deployments
- Deploying releases
- Conducting Post Implementation Reviews (PIRs)
- Providing Early Life Support (ELS)

NOTE: Release and Deployment Management is covered in detail in Chapter 11 of this book.

Service Validation and Testing. The purpose of Service Validation and Testing is to ensure that new or enhanced services are thoroughly tested and verified against operating requirements before deployment. This facet of ITIL is sometimes called a process and sometimes a function. It is often integrated with other ITIL processes, such as Release and Deployment Management or Evaluation. But wherever it resides, its mission remains the same. The job here is to document fitness-for-purpose and fitness-for-use, to validate that a service, has been properly tested before deployment, and that those test results demonstrate production readiness. Fitness-for-purpose means that the service (or service component) as designed meets the customer's original requirements. Fitness-for-use means that the service has been shown to work properly (that it integrates well) in the operating environment. Taken together these two traits help ensure service integrity and provide for anticipated service performance.

Process scope:
- Configuring test environments
- Establishing test plans

- Executing test plans
- Reviewing and assessing test results

Change Evaluation. The Change Evaluation process provides a way to verify that a service's performance meets the intended operating parameters and contributes to business missions as intended. This process can be seen as an extension of Service Validation and Testing. Here the organization is concerned with measuring the service's potential to deliver on an expected ROI. This is done in two steps. First, the service is run in a pre-production environment where its performance is measured and evaluated. If it hits ROI targets, it is next moved into live operational service. There, and for a limited time, its performance is once again measured and evaluated. If the returns continue to materialize, the service is left to fulfill its mission. If the operational targets are not met, management can then establish options to reconfigure, redeploy, or perhaps redesign the service. The practices under this process help management gain an objective understanding of service performance so that service commitments can be made with confidence.

Process scope:
- Planning evaluation activity
- Evaluating pre-production performance
- Evaluating operational performance
- Reviewing and assessing evaluation results

Knowledge Management. Knowledge Management is designed to provide the organization with a repository of knowledge that can be referenced as an aid to managing the infrastructure in an effective manner. Knowledge management introduces the concept of the knowledge-base. The acronym DIKW is at the heart of this process: Data, Information, Knowledge, and Wisdom. This is the evolutionary path a knowledge-based organization moves through as it seeks to collect, organize, and distribute the kinds of informative articles and performance statistics that contribute to effective Service Management. The knowledge-base can be used by analysis teams wishing to gain insight into service design and performance considerations. Transition teams can access the repository to acquire support for service enhancements and new releases. Operations personnel can use the repository as they deal with problems and incidents, and perform regular maintenance. A knowledge management program typically covers three areas. The first area is a knowledge strategy, which deals with defining the kinds of information needed to support IT services. The second is the collection approach that specifies how information will be amassed and organized. And the third is the method for knowledge transfer, implementing ways for people to access the knowledge-base promptly and efficiently.

Process scope:
- Establishing a knowledge content strategy
- Establishing a distribution strategy
- Establishing a knowledge management system
- Publishing knowledge articles

Service Operation

Service Operation provides a set of processes and functions to ensure IT services are managed in production in a manner that results in expected service performance - that is, high levels of quality, consistency, and reliability. This fourth ITIL lifecycle phase deals with the day-to-day management, operation, and maintenance of IT services. Here is the culmination of the activities that occur under Service Strategy, Service Design, and Service Transition. And it is here in operations that the tangible value of IT service delivery and service quality is practically realized.

Five processes are defined for this phase. They are:
- Event Management
- Incident Management
- Problem Management
- Request Fulfilment
- Access Management

There are also four functions defined for this phase:
Service Desk
Technical Management
Application Management
IT Operations Management

Event Management. In the domain of ITIL, an event is any change of state with regard to a service or a service component. Many events naturally occur within an IT environment. Some may be ignored. Some may simply be noted and logged. Others require intervention and attention. Incidents and problems are events that require such intervention and attention. The goal of ITIL's Event Management process is to ensure that events in the operational environment are properly tracked, assessed, and managed as necessary. A key activity here is event filtering. An effective Event Management program will filter those events that need attention away from those that do not require attention. This way, Event Management provides a point of triage so that support teams may focus on those incidents and problems that should be addressed in priority order. Event Management is a process usually managed by IT Operation teams.

Process scope:
- Detecting and filtering events
- Classifying and correlating events
- Triggering response actions
- Reviewing response effectiveness
- Closing event tickets

Incident Management. ITIL defines an incident as an event that causes an interruption to an IT service or degrades the quality of that service. An incident may also be an event that has the *potential* to do either. The purpose of Incident Management is to ensure that service interruptions are minimized through proactive and reactive management and response mechanisms. For two reasons Incident Management is closely associated with the Service Desk. First, incidents are usually experienced by users, and so the first course of action is to contact the Service Desk. Second, incidents typically require prompt attention, and the support staff at the Service Desk are prepared to provide that attention. The aim of Incident Management is not to correct what may be the underlying cause of the trouble - that is the purpose of Problem Management. The purpose of Incident Management is to simply return the normal state of IT operation to the user as quickly as possible, in the most expedient manner possible.

Process scope:
- Identifying and registering incidents
- Classifying and prioritizing incidents
- Investigating and diagnosing incidents
- Escalating incidents as necessary
- Resolving incidents
- Closing incident tickets

NOTE: Incident Management is covered in detail in Chapter 12 of this book.

Problem Management. In ITIL terms, a problem is the source of one or more incidents, or a set of related incidents. Because problems arise from endemic defects in the environment, the purpose of Problem Management is to ensure that the underlying root causes of service disruptions are identified and addressed as necessary. The goal is to remove problems so that incidents do not recur. Problems can be addressed in two ways. A permanent fix – a correction – can be applied. When this is not technically practical or economically feasible, a workaround – a patch – can be set into place. When compared to Incident Management (an urgent real-time process), Problem Management can be thought of as a process that is done at a more considered pace. The main activity here is the performance of root cause analyses (RCA) to identify the source of the problem and then propose alternative solutions. This typically requires careful investigation and diagnosis, and may require the participation of a broad spectrum of stakeholders.

Process scope:
- Detecting and registering problems
- Classifying and prioritizing problems
- Investigating and diagnosing problems
- Establishing workarounds
- Implementing resolutions
- Closing problem tickets

NOTE: Problem Management is covered in detail in Chapter 13 of this book.

Request Fulfillment. Like Incident Management, Request Fulfillment is a key customer-facing process under Service Operation. This process is intended to provide the user community with a mechanism for submitting requests for service to IT support teams. These requests are typically of such a nature that they may (but not necessarily always) circumvent the change control process. In this light they are usually considered ‘standard changes,’ many of which are pre-approved. Request Fulfillment is responsible for providing some form of menu system so that users may self-submit service requests. Fulfillment teams (often members of the Service Desk) are responsible for tracking current request tickets, coordinating any financial authorizations associated with a request, and obtaining formal request approvals. They are then responsible for fulfilling the requests, verifying fulfillment as being successful, and finally, closing out completed request tickets.

Process scope:
- Providing an end-user menu system
- Coordinating financial authorizations
- Fulfilling requests
- Closing request tickets

Access Management. This process is designed to provide customers with appropriate, authorized, and controlled access to services, systems, system components, and data. Access Management is often included as a responsibility under Request Fulfillment, but it carries enough operational significance for ITIL to treat it independently. Access Management is strongly related to the ITIL design process, Information Security Management. Information Security Management sets the strategic approach and operational boundaries for systems, data, and users, and Access Management provides the tactical implementation of that approach. Access Management deals with managing access requests, verifying the appropriateness of such requests, granting rights and setting up security profiles, monitoring access status, monitoring user traffic, and modifying rights as appropriate for changing business conditions.

Process scope:
- Managing access requests
- Verifying access need
- Granting rights
- Monitoring access status
- Tracking access traffic
- Modifying access profiles as required

Service Desk. The Service Desk exists to provide a primary point of contact to the customer community for users seeking technical support, status, and advice. This function serves, in many ways, as the ‘face’ of Service Management. It is here that customers most often engage with IT personnel. For this reason the Service Desk performs not only a valuable technical support function but also has a significant impact on customer satisfaction levels. Service Desk teams own two main customer-facing responsibilities and two back-end responsibilities. The customer-facing responsibilities include Incident Management and Request Fulfillment. The back-end duties include ticket escalation (when needed) to Tier 2 and Tier 3 teams, and participating in Problem Management activities.

Functional scope:
- Managing incidents
- Managing service requests
- Escalating to specialist teams
- Participating in problem resolution

NOTE: Service Desk is covered in detail in Chapter 14 of this book.

Technical Management. Technical Management is the specialist technical function for IT infrastructure. It is a supporting function to other processes, both in Infrastructure Management and Service Management, providing: research and evaluation, market intelligence (particularly for design and planning and capacity management), proof of concept and pilot engineering, specialist technical expertise (particularly to operations and problem management), creation of documentation (eg for the operational documentation library or known error database).

Functional scope:
- Technical support for IT infrastructure
- Provides specialist expertise and insight on wide range of IT infrastructure issues
- Market intelligence relating to technical aspects
- Responsible for producing technical documentation

Application Management. This function covers a set of best practices to improve the overall quality of IT software development and support through the life cycle of software development projects, with particular attention to gathering and defining requirements that meet business objectives.

Functional scope:
- IT software development support
- Gathering and defining business requirements
- IT software lifecycle support

IT Operations Management. The focus of IT Operations Management is to provide for day-to-day management and maintenance of the IT infrastructure. IT Operations Management resources make up the teams who provide this routine maintenance. These teams typically participate in the Event Management, Incident Management, and Problem Management processes. In terms of regular duties they are responsible for scheduling and running jobs, providing print reports and data outputs, making backups and, when needed, performing restore operations.

Functional scope:
- Scheduling jobs
- Providing print and output
- Performing backups
- Performing restores

Continual Service Improvement

The Continual Service Improvement lifecycle phase provides processes intended to position the organization so that it can develop an ongoing focus on Service Management improvement. Note that this fifth phase in the ITIL service lifecycle is labeled 'Continual'. 'Continual' is different from 'continuous.' Continual Service Improvement is a regular but periodic activity under ITIL and it lies at the philosophic heart of the framework. The idea here is to make conscientious efforts to refine and improve service delivery and service quality over time, and to make these efforts a routine part of how the organization conducts business. With any process program like ITIL this concept of improvement is key. Improved services and Service Management techniques lead to more productive and efficient services. That translates into better support for the business, heightened customer satisfaction levels, and more assured market success.

Four processes are defined for this phase. They are:
- Service Review
- Process Evaluation
- Definition of CSI Initiatives
- Monitoring of CSI Initiatives

Service Review. This process exists to establish a focus on continual improvement across the entire IT organization. This focus includes the service mix, service design, service performance (delivery and quality), and the assets that govern Service Management. Improvement begins with understanding what is essential to business success and this begins with identification of critical success factors. From these a key set is selected and the IT organization begins to measure how it performs. Over time this measurement data is used to make objective and quantifiable judgments as to where services and processes are strong and where opportunities for improvement exist. Once that is understood, IT management can take action – refining, enhancing, maybe even trimming. By following this process in controlled incremental steps, the IT Service Management program should get stronger and stronger over time.

Process scope:
- Establishing improvement plans
- Monitoring service performance and management data
- Analyzing service performance and management data
- Identifying opportunities for improvement
- Implementing improvements
- Assessing improvement effectiveness

NOTE: Service Review is covered in detail in Chapter 15 of this book.

Process Evaluation The objective of this process is to evaluate processes on a regular basis. This includes identifying areas where the targeted process metrics are not reached, and conducting regular benchmarks, audits, maturity assessments and reviews.

Process scope:
- Ongoing evaluation of processes
- Benchmarking and maturity assessments
- Identifying problem areas where target performance is not reached
- Ongoing review of processes

Definition of CSI Initiatives. The objective of this process is to define specific initiatives aimed at improving services and processes, based on the results of service reviews and process evaluations. The resulting initiatives are either internal initiatives pursued by the service provider on their own behalf, or initiatives that require the customer's cooperation.

Process scope:
- Definition of CSI initiatives that are:
  - Internal to the service provider
  - Initiatives requiring customer input

Monitoring of CSI Initiatives. The objective of this process is to verify if improvement initiatives are proceeding according to plan, and to introduce corrective measures where necessary.

Process scope:
- Verifying progress of improvement initiatives
- Introducing corrective measures if required

Service Reporting is a supporting activity. The purpose of this activity is to provide the means to report on service and Service Management performance. Service Reporting is subordinate to Service Improvement. As the organization begins to measure the performance of its IT services and the effectiveness of IT Service Management activities, it will want to share analyses of this data with key stakeholders across the organization and selected customer groups. This is accomplished through Service Reporting. The stakeholders, in the context of their experience, expertise, and responsibility, can use the reports as a foundation for generating ideas and strategies for IT Service Management improvement.

Activity scope:
- Developing performance and improvement reports
- Distributing performance and improvement reports
- Analyzing performance and improvement reports
- Selecting opportunities for improvement
- Planning improvement implementations

NOTE: Service Reporting is covered in detail in Chapter 15 of this book.

1.3. Core components of IT Service Management

As can be seen from the overview above, ITIL covers a wide field of information and offers a broad range of best practices. This volume of information leads us to the first consideration one encounters when beginning an ITIL-based Service Management initiative. This consideration is: what parts of ITIL should be adopted first? There are two general answers to that question, one practical, one practiced.

The practical answer is simple and is endorsed by many practitioners in the field. It is this: implement those components of ITIL that will serve your organization best.

The practiced answer is a little more involved (but equally recognized): implement those components of ITIL-based practices that will serve your organization best in the long term. Include some 'quick wins' to encourage support for the journey to the long-term goals.

Both points of view start from the same mark - that is, ITIL is in place to help IT organizations improve their abilities to deliver high quality IT services. Results in this regard are the only things that count. Comprehensiveness and other such factors must take a back seat to that end. But the practiced view extends this, and as it does so it asks something specific of the organization. With the practiced view there is the understanding that adopting ITIL as a way to manage an IT infrastructure necessarily requires a long-term commitment. And so creating such a program should be begun in a way that sets a solid foundation in place, one that will support that long-term commitment.

Here we come to the topic of 'key processes', the subtitle of this book.

When implementing an ITIL–based program, one designed for the long term, there are certain processes that ought to be considered first. These processes have demonstrated their effectiveness in the short term for strengthening operational control, and they have demonstrated their effectiveness in the long term for establishing a sound base upon which a program might grow.

This book promotes the practiced view, and in doing so focuses on areas common to both ITIL V3 and its more formalized companion ISO/IEC 20000. For the sake of convenience these areas might be grouped into six mini-categories: core processes related to relationship, service design, control, release, resolution, and improvement.[2]

Core Relationship Processes are the processes that act as the 'face of the service provider' and assures that at a strategic level the service provider understands the business and its current and future needs, understands the capabilities and restraints and finally understands the responsibilities and obligations. One key process is included here:

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[2] These are not formal ITIL categories, but neither are they arbitrary. These reflect the breakdown used by the ISO/IEC 20000 standard to group its IT Service Management processes.

- Business Relationship Management

Core design processes are those processes essential for planning, structuring, developing, and managing IT services. It is here that consideration is given to such factors as capacity, availability, security, and continuity, addressed both from the viewpoint of performance expectations (defined service levels) and operational integrity. Five key processes are included here:

- Service Level Management
- Capacity Management
- Availability Management
- Information Security Management
- IT Service Continuity Management

Core control processes are those processes essential for protecting the integrity of IT services across the full lifecycle. The scope of this area is two-fold: to manage the activities around which IT services are developed over time, and then to control configurations in operational service to ensure predictable and manageable performance. Two key processes are identified here:

- Change Management
- Service Asset and Configuration Management

The single core release process is an extension of the control processes and is used to ensure that transitioning services from development into operation is handled in a manner that is planned and coordinated, poses little risk to environmental integrity, and has minimal impact to ongoing service delivery. The single key process here is:

- Release and Deployment Management

Core resolution processes are the processes designed to protect users' ability to access those IT services essential for the work of the business. It is here that service interruptions are mitigated, environmental improvements are identified, and – perhaps most significantly – it is here that customer interactions tend to be high. Two key processes and a single function are identified for this process:

- Incident Management
- Problem Management, with
- Service Desk

Core improvement processes are those processes essential for the growth and development not of IT services *per se* but rather of the governing Service Management program. As with any process-based management framework ITIL carries with it an underlying theme of continual improvement. For IT Service Management to realize its full potential in the long run, management must be committed to the program's ongoing development and growth. Just as IT services need to change and evolve over

time in order to meet changing conditions, so too should the methods for managing those services. One key proces is identified here:
- Service Management and Service Improvement

With these core components now identified, let's take a strategic look at the global considerations most organizations will be likely to face when they begin an ITIL adoption effort.

2. Steps towards implementing an ITIL-based IT Service Management program

In the previous chapter we took a high-level look at the scope of ITIL V3, with all of its major processes and functions. In the following chapters we will look at the core ITIL components that usually serve as the foundation for an IT Service Management program. In this chapter we'll take a brief pause from our examination of ITIL's contents and focus on some incremental steps that organizations might consider when they are setting up an IT Service Management program for the first time. These steps are important to consider for three reasons. Implementing an IT Service Management program will require the organization to provide focused resources and assets over a span of time; this will require managerial control and oversight. Then, if the implementation program is not approached in an ordered way, the risks of program failure will rise. And because the resulting program will be a reflection of the organization's culture, it is important that it is carefully designed and implemented in a way that both supports and enhances that culture.

But perhaps the most important reason, above those three, is simply this: implementing an ITIL-based IT Service Management program is an exercise in organizational change, and change is a challenge for any organization, whether it is large or small, mature or immature. Rolling your program through a series of ordered steps is a way to control how change is introduced into the organization. It provides a series of guideposts and checkpoints along the way to ensure that your program, as you build, provides an effective and valuable contribution to the mission of the company.

The nine implementation steps – in their generally accepted order – are:
- Know the model
- Appreciate the value
- Obtain commitment
- Select the scope
- Assess the organization
- Create your ITIL-based IT Service Management program
- Implement the program
- Establish a service-based organization
- Support the program

Here is a brief description of each.

2.1. Know the model

Curiously enough, this first step is sometimes overlooked when an organization sets out to adopt ITIL. The feeling is (and this typically comes from senior management) that someone else can be appointed to get into the nuts and bolts of the task. That is a misleading position to take. ITIL and IT Service Management are not *technical* frameworks as is often thought; they are *managerial* frameworks. They require management to think and act in new ways, much more so than technical teams. And so it is important (even a prerequisite) that your managers understand what ITIL is, what falls under its scope, and how it is structured. They do not need to become experts, but they will need to become comfortable with the model. Without this level of comfort they may have difficulty when they are called on to contribute to the shape and purpose of the program.

2.2. Appreciate the value

Here is another step that is often neglected in IT organizations. Many times an ITIL program (or any other process management initiative for that matter) is initiated by executive command, without an underlying appreciation for why, in tangible terms, such a program might be good for the company. In the absence of this appreciation it becomes difficult to establish the levels of commitment and energy necessary to move such an initiative from concept to execution. It also makes it hard to shape the program if you begin without knowing what it can do for you. ITIL enjoys now a pre-eminent international reputation as the de facto infrastructure management system of choice. However, impressive as that is, it does not tell you much about why your IT organization should adopt it. This is something that you and your managers will need to figure out on your own, because every organization is different and seeks different combinations of business benefits. Toward this end it is helpful to become familiar with how other companies have used ITIL and to gain a picture of how a process-centric approach to IT management can benefit your business customers. It is also helpful to begin thinking about your program's expected return on investment (ROI): what areas are you looking to improve, where do you need to get better? How will those improvements help to achieve the mission of the organization? How will ITIL be able to help in those areas? Without faith that ITIL can indeed bring you the competitive advantages you seek, no amount of energy expenditure will turn out a successful program.

2.3. Obtain commitment

Now that the organization is oriented to the purpose and scope of ITIL and you have identified how it can help your organization, you can work to establish executive commitment. Such commitment is the cornerstone of any ITIL-based initiative; without it no such initiative should be considered. Executive commitment over the long term is required for the success of all programs like this, but it is particularly important early on. Senior business management (where appropriate) and senior IT management should see the value of such a program and understand clearly how its use will help realize business goals. Then two types of commitment should materialize. The first comes in the form of resources; a commitment here is an inescapable aspect of setting up an ITIL program. You are, after all, making an investment in the future state of the company. The size of that investment will naturally vary from IT organization to IT organization but the list of considerations remains fairly constant. You will need funding, facilities, and human resources. These must then be organized into a coordinated force. This brings us to the second type of commitment: the creation of a formal, chartered project. In the same way that strategic and significant IT projects within the IT organization are handled as controlled projects, so too should the ITIL-based effort be treated as a formal project within the organization, with the aim to embed initial best practices. It should be carefully planned with identified deliverables, milestones, and expected outcomes; it should be managed through a formal project management methodology; and it should be tracked, controlled and monitored, reported on, and held accountable to senior management.

2.4. Establish a service-based organization

This step may represent the biggest challenge for IT organizations, and the topic cannot be fully addressed in a couple of paragraphs. At the same time, however, it is important to note, because treating IT as a set of integrated services lies at the heart of ITIL. We touched on this theme in the Introduction and Chapter 1 of this book, so we will just briefly revisit it here. Managing IT as a service often requires an IT organization to willingly make a cultural shift, moving away from a component-based, product-oriented view of IT. This can be a tough shift to make; after all, infrastructure technicians and analysts can spend most of their time looking at components. But in a way that is beside the point. What ITIL strives for is to have *management* view things differently.

Considering the purchase and maintenance of a car might make a good analogy. Any car is a collection of complex systems: ignition system, cooling system, sound system, transmission system, etc. Owners of cars certainly care about these systems but usually are not particularly concerned with what individual parts are required to make up each system. They just want the cars to start, to not run hot, and to shift smoothly. A good car manufacturer will work to recognize its customers' desires and needs and supply cars designed to meet both. They will then warrant such performance, and provide qualified technical support when service is needed. That is the approach ITIL would like to see with IT organizations. How you achieve that will depend largely on your culture, on your industry, and on the customer base you serve. But you will certainly want to provide an organizational design that focuses on the customer-IT relationship. This includes identifying those services you do provide and ensuring their innate capabilities, establishing service level agreements (SLAs) with customers about expected performance, and appointing service managers to ensure that service quality and delivery consistently meet performance expectations.

2.5. Select the program’s scope

Once you are able to view your IT organization as a service-based organization you will want to select the scope of your ITIL program, and then decide which parts of the service mix you will manage under ITIL recommendations. The scope should reflect the business and technical needs of the organization in light of the resources available to the initiative. Decide which of the core ITIL processes you will adopt first (they are described in the following chapters of this book). Strike a balance between need and resources; seek out high value activities first; work to identify opportunities for quick wins and visible returns. To do this you should engage with those stakeholders who will be most affected by the scope you are working to select. Communicate to them the purpose, goals, and shape of the program; ask for their input and assistance. And let them know that the program scope can always be adjusted later if needed.

2.6. Assess the organization

Here is what you have done so far. You have learned about the scope and focus of ITIL. You see value in what it can do for your organization. You have received executive commitment to sponsor a program initiative. You have added a Service Management component to your organizational design. And you have selected the scope of your program. Now it is time for a *gap analysis*. A gap analysis is an assessment that compares ITIL practices with those practices you are currently performing. In process terms you are comparing the ‘as-is’ to the ‘to-be’ state. The purpose is to identify any gaps that exist, which will need to be filled in – accounted for, created – in order to achieve ITIL best practice. You will want to look at your current policies, processes, procedures, work products, and job roles; not just processes but also people-aspects and technology aspects. Note your strengths and weaknesses; then use the weaknesses as the basis for creating a Program Completion Plan. This is the plan to fill the gaps. Obtain executive commitment to the Completion Plan and then execute it.

2.7. Create your ITIL-based IT Service Management program

This is one of the major efforts in a new IT Service Management initiative. It is with this step that you create your program, and in doing this you create the program’s *assets*. The major objective of this book is to assist you with this step, to describe what kinds of assets you might need and describe how they might be structured. These assets include all those things that will make up your program. This includes policies, processes, procedures, checklists, forms, templates, work instructions and so on.

Reference the individual chapters in this book for recommended program components. This will help you decide what range of assets is right for your organization.

In creating your program you may decide that you need to acquire (or perhaps reconfigure) some support tools. Tools such as a configuration management database system (CMDB) and an incident tracking system are typically employed in an ITIL program. In light of this you will need to identify what kinds of tools you need, evaluate available options, acquire the right products, and then configure them to your needs. You will want to make sure that your tools and processes are aligned to work well together, to complement and support one another. Once the tools are configured you will want to make sure that your staff members are trained in their use and comfortable with their operation.

2.8. Implement the program

As a general rule, when an organization's ITIL-based program falls short of expected performance it is usually because management paid too little attention to implementation. It is curious that many organizations willing to invest heavily in program completion seem to lose interest at implementation and pay the effort little attention. The better approach of course is to pay proper attention to this effort. It is absolutely essential to program success, both short-term and long-term. Toward this end management should strive to make implementation a focused and visible activity. It should be treated as a formal activity, and a high-end one at that. It should be thoroughly planned and managed in a formal way, and ensure that the right set of assets is in place and ready for deployment. During implementation executive management should seek regular feedback from users and line managers about how the rollout is proceeding. Central to an effective deployment is attention paid to carefully training users in the purpose, scope, and use of the program. This is a cornerstone implementation activity, the goal of which is to help individuals see where they fit into the program and what responsibilities they will be accountable for. When users are comfortable with their areas of activity, program effectiveness can be maximized. To support this the organization should supplement training with coaching and mentoring. Mentors can help people to further adopt the program, establish its use, and promote its institutionalization.

2.9. Support program use

Implementing a Service Management program based on ITIL is not a finite initiative. It is an ongoing way of doing business; it is an evolutionary process of growth and development. Management's job does not end with a successful deployment; in fact this is really where it begins. Management's real job is to promote (and ensure) the ongoing use of the program in support of IT and business missions. This involves three things: working to see that the program becomes institutionalized over time, periodically assessing the program to gain insight into performance and achievement of best practice, and then initiating a continual improvement capability across organizational teams.

Institutionalization

Institutionalization occurs when the activities of the ITIL program have become embedded into the corporate culture; that is, they have become the accepted way of doing business; they have become habit. This is the ultimate achievement of any process program and the end state you should desire for your program. And so, as an extension of implementation, you should work to embed the program activities into the other daily routines of IT activities. You should also promote the concept that the ITIL/IT Service Management program really is an extension of the organization's culture; after all, it has been based on what is important to the company in terms of managing IT services. It is helpful to understand that institutionalization takes time, so remember to give the program the time and attention it needs to become the normal way of doing business for the company.

Assessment

Another aspect of program support is the periodic assessing of the design and operation teams. The purpose of this quality assurance activity is two-fold. First, it gauges how effectively the program is working in light of the IT mission and its goals. Second, it gauges how well teams are using the program; that is, how readily they are operating within the boundaries of policies and standards. Assessment is a way for senior management to gain objective insight into program performance; assessments should be seen as an improvement and coaching exercise. Assessment results should be shared with relevant stakeholders and used as a way to move the program forward. Performance and quality issues should be addressed in a positive manner and assessment trends tracked over time to measure how well the program is moving toward institutionalization.

Continual improvement

Continual improvement is at the center of any ITIL-based program. It is how the program is managed over time. The idea with continual improvement is to always have an eye open for how your IT organization is operating, and to strive to raise that performance level when technology or market needs present viable opportunities. Management should ensure that the organization conscientiously solicits improvement advice from customers, from service users, from IT managers, and from technology staff. They should also ensure that measures of program performance are collected on a regular basis, and then they should use all this information to assess how the IT organization can become better at what it does. As needed, the IT organization can then periodically re-align its Service Management focus with evolving business goals and objectives, then plan and implement improvements so the program becomes what its potential promises: a valuable organizational asset.

2.10. The ongoing care and maintenance of your program: Plan-Do-Check-Act

In the process improvement industry there is an iterative development method known as PDCA, Plan-Do-Check-Act, which was made popular by Edwards Deming (though he always referred to it as the Shewart Cycle after the quality expert, Walter Shewart). The cycle of PDCA helps to improve a process over time through a series of four discrete steps. Once a program (such as ITIL-based IT Service Management) is in place in an organization, PDCA can be used as a means to manage the program's lifecycle. The ISO/IEC 20000 specification, the official IT Service Management standard and closely related to ITIL, specifies PDCA as a means to manage ITSM programs, so this is a good place to take a quick look at it. (For more on this topic, see Chapter 15, Service Improvement.)

PLAN: Plan Service Management

The first step in managing an ITIL-based IT Service Management program is to develop a plan by which it will be managed. In other words, approach the program's management in a controlled way. This is typically realized by what's known as a Service Improvement Plan (SIP) but it can take any form that seems best for your organization. The purpose of this step is to plan the implementation and delivery of Service Management over the course of a set period (usually annually). The plan defines the scope of the Service Management program; establishes the objectives and requirements that are to be achieved by Service Management; identifies the processes that are to be executed in support of the program; identifies the various management roles and responsibilities, including the senior executive ownership and service process owners. The plan also details the interfaces between Service Management processes and the manner in which the service activities are to be coordinated. Budgets, timelines, deliverables, communication routes, and assigned resources are all also specified in the plan. Once in place and approved, the plan is used as the master tool by which the program is managed.

DO: Implement Service Management

The purpose of the 'do' step is to implement the Sservice Management objectives and plan. The service provider conducts all the oversight activities necessary to ensure that the Service Management program becomes and remains an active organizational asset, one that supports the business and IT missions of the organization. This includes allocating funds and budgets; assigning and provisioning roles and responsibilities; documenting and maintaining policies, plans, procedures and definitions for the sets of ITIL processes; identifying and mitigating service risks; managing teams and recruiting and developing appropriate staff; managing facilities and budget outlays; managing specialized teams including Service Desk and operations staff; and reporting progress against the plans. 'Do' can be thought of as the day-to-day activities required to keep the Service Management program running (as opposed to the services themselves).

CHECK: Monitor, measure, and review

With ‘check’ the organization does three things. It periodically monitors the sustained performance of the Service Management program against plan objectives. It measures specific attributes of performance in both a quantitative and qualitative way. And it ensures that nonconformance issues are dealt with in a corrective way. All three of these are commonly addressed through a Process Quality Assurance function in which technical and managerial teams and activities are assessed according to a set schedule. The assessment program is a planned activity and takes into consideration the status and importance of the processes and areas to be assessed, as well as the results of previous assessments. The objectives of Service Management reviews and assessments are documented together with any identified remedial actions. Any significant areas of concern or incompatibility are then communicated to relevant stakeholders.

ACT: Work to continually improve

With ‘act’ the organization sets into place the capabilities needed to identify and coordinate improvements to its service set. This domain includes service features, service delivery quality, and Service Management effectiveness. To do this, the organization sets a program in place where it periodically, on a regular basis, assesses data collected in the ‘check’ phase above. Using this to establish a performance baseline and benchmark, the organization consults with relevant parties to solicit inputs about improvements from all the Service Management process areas. From this input the organization then identifies a series of potential improvement opportunities and assigns to them targets for quality, costs, resource utilization, ROI, etc. The next step is to select a set of improvements to implement. This is done through improvement planning, deployment, and verification. The effectiveness of the improvements is measured, assessed, and reported on. The process then starts over.

The cycle of Plan-Do-Check-Act combines with the nine initial implementation steps described at the start of this chapter to give you a managed approach for initiating, creating, deploying, and maintaining an ITIL-based IT Service Management program. Finally, here is a brief series of practical tips…

2.11. Some practical tips

In addition to the nine implementation steps described above and the quick review of Plan-Do-Check-Act there are some practical tips you may wish to consider that can help make your program as successful as it might be. These tips are based on on-the-job lessons learned, the result of working on a variety of ITIL projects, some large, and some small, but all requiring each organization to adopt new practices and, to one extent or another, embrace change. Here are eight readily applicable tips.

Keep it light at first. Your initial program does not need to address every aspect of ITIL or IT Service Management right out of the gate. Keep it light in the beginning and then grow it over time. You will find with this approach that your people will be able to adopt components quicker, use them appropriately, and learn from experience in which direction growth should proceed.

Put the organization's values into the program. Build your program so that it reflects and supports what is important to the organization. Work with senior management early on in order to determine this. When your ITIL-based program is able to demonstrably move business and IT missions forward you will find that management will back the program's continued growth and development.

Commit to ongoing training and mentoring. Over time your program will change and it is highly likely that your people may change, too. That is why it is important to embed the element of training/mentoring into the regimen of program management. By providing a continual resource of education you can ensure that people remain comfortable working within the program as the program's components change, as job roles change, and as new people come on board.

Periodically review performance. This is a tip for senior IT management. These people should periodically meet and review the program's performance and effectiveness. This review should be conducted from two perspectives: understanding how to refine the program to make it more effective and understanding how to shape the program so that it remains at the service of changing IT and business missions.

Reward adoption. IT Service Management may be an executive responsibility but it will not prove effective without adoption by your various IT team members. Performance may be the single most important factor in program success. Management needs to be aware of this and conscientiously promote adoption. This should include rewarding people and teams who contribute an early effort to make the program successful. The rewards need not be extravagant but they should be visible and valuable. When such signs of commitment are clear others will join in the effort.

Keep the message alive. This has to do with on-going commitment. It is important that senior IT management continues to promote the program after it is up and running. This will be a reminder to the organization that the program is still an important and valuable management asset. Without such communication it is possible that the program's operation may slip under the radar and dissipate over time. By keeping the message alive the program will be able to remain in the forefront of management considerations, and thus developed with focused attention.

Welcome change. There are two points to consider here. The first is to remember that your ITIL –based program will by necessity change with time – it will change as you refine it and add to it, and it will change to remain aligned with IT and business missions. And so you should welcome change into the program. It is a natural element to any process improvement initiative. At the same time it is wise to avoid constant change and flux; too much of that and your people may have a hard time fixing on a solid baseline, one they can become comfortable using. Instead, periodic, planned change is the best way to grow and develop a program.

Be patient. The ultimate goal for any ITIL-based IT Service Management program is that it becomes embedded; it becomes habitual within the organization. But understand that this will not happen overnight. It takes time and focused attention. So be patient, especially here at the outset of the journey. Give it time and give it the attention it deserves and your program will be successful.

The ITIL components described above constitute the core of an IT Service Management program. And they make up the heart of this book. At this point we can move deeper into the model, looking at these core components individually, with a view to how each might be effectively implemented in an IT organization. Let's begin this with a look at a key strategic ITIL consideration, one that will by necessity influence the shape and tone of any implementation effort. This is Business Relationship Management.

2.12. Implementation checklist

The material presented in this book covers a range of information concerning aspects of an ITIL-based Service Management program. Most of this material is focused on implementation. The following table extends this a step further. It presents a list of activities that may be helpful when you move to set up such a program in your IT organization. These activities take you from initiating the effort to maintaining adoption. And while the steps are presented in something of a chronological order there is no rule that says they have to be executed in this order.

Table 2.1 Implementation checklist for Service Management

Initiate	Understand the organization's need for a Service Management program. Understand the value an ITIL-based program will bring to the organization; document this value. Build the business case for a Service Management program. Document Critical Success Factors (CSFs) and performance targets for the program. Seek and acquire IT management approval of this material. Seek and acquire business management approval of this material.
	Seek and acquire executive commitment to the Service Management program. Acquire necessary program resources (funding, personnel, tools, etc.). Establish the program's strategic goals and objectives. Establish the program's executive policy.
Assign	Work with HR to establish Service Management process owner job descriptions. Adopt the job descriptions as official. Appoint Service Management process owners. Provision the positions as necessary.
Assess	Based on ITIL's practice recommendations, select the scope of Service Management for your program. Perform a Gap Analysis against this scope: • Assess the organization's existing processes against ITIL recommendations. • Assess personnel knowledge and skill sets. • Assess existing artifacts and work products. • Analyze and communicate the results of the Gap Analysis.

Plan and execute	Establish a Program Completion Plan to fill identified gaps. Acquire organization approval of the plan. Execute the plan.
	Establish Service Management policies. Establish Service Management process program assets. Determine methods to develop business service requirements, technical service requirements, and service component requirements. Develop service design, transition, and operation guidelines. Define Service Management work products. Establish a Process Asset Library (PAL). Place program assets under version control.
	Establish program measures – Key Performance Indicators (KPIs). Define collection and analysis techniques. Document reporting and distribution requirements. Identify and implement service monitoring tools and techniques.
	Establish Service Knowledge Management System (SKMS) requirements. Evaluate available SKMS solutions. Select an SKMS solution. Configure the SKMS solution. Implement the SKMS solution. Train personnel on the purpose and use of the SKMS system.
Support	Develop collaboration guidelines with management teams. Develop collaboration guidelines with IT technical teams. Develop collaboration guidelines with user communities.
Implement	Train relevant personnel on the use of the program. Implement the program across relevant organizational groups. Mentor and coach as necessary.
	Periodically assess the program for operational performance. Periodically assess the program for process performance. Report assessment results to management.
	Establish Service-related Service Level Agreements (SLAs) with customer groups. Establish Operational Level Agreements (OLAs) with support teams. Establish Underpinning Contracts (UCs) with third party providers.
Measure	As planned, collect program performance measures. Analyze program performance measures. Interpret program performance measures. Report on Service Management program effectiveness.
Improve	Periodically assess program performance to identify improvement opportunities. Elicit improvement opportunities from staff and customers. Select improvements. Design and implement improvements. Monitor program performance.