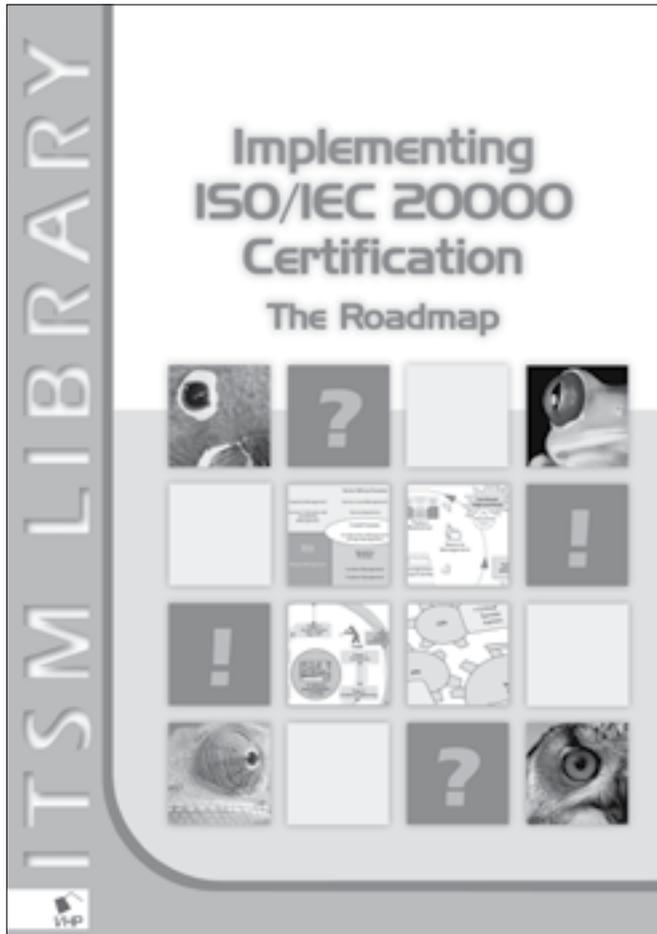


Implementing ISO/IEC 20000 Certification

The Roadmap





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Implementing ISO/IEC 20000 Certification: The Roadmap



Gaining certification to ISO 20000 should really be the side effect of an organization wide Service Management improvement culture that continually strives to improve on the existing capability, and adheres to best practice at all times within the confines of the requirements of the standard.
(David Clifford - FISM)

Colophon

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ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization, to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, also take part in the work, in liaison with ISO and IEC. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication of an International Standard requires approval by at least 75 % of the national bodies casting a vote.

ISO/IEC 20000 is the official name of the standard. In the field, the standard is referred to as '**ISO 20000**'. For practical reasons, the shorter and more practical title for the standard has been used.

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¹ FISM - Fellow of the Institute of IT Service Management - ISM

Foreword

By John Stewart, Director of Procurement Policy and Standards in the UK Government's Office of Government Commerce (OGC), who was responsible, with the late Pete Skinner, for the ITIL concept. John led the early development of ITIL and once again has lead responsibility for it in OGC.

“Business increasingly depends on technology-enabled services”. These are the first words in section 1.1 of this book. They were also the words we used twenty years ago to make the case to develop ITIL. Little did we know at the time that there would be personal computers on nearly every desk, with the potential for networked access to computers anywhere else in the world. We only had the vaguest idea of how dependent organizations would become on IT, and how “stuck” we would become if the system or the network were down.

We didn't have the terminology to express it then but the idea of *service quality management* permeated our early thinking. That was exactly the medicine, packaged as ITIL, that organizations were needing to tame the technology on which their success and smooth running would increasingly depend.

And as project developers we took our own medicine: we were among the very first organizations in the UK government to obtain ISO 9001 certification for the way we ran ITIL and related developments.

We knew it wasn't just UK government that was becoming dependent on IT, so we took steps to make ITIL available to the widest possible audience internationally. We talked from the earliest days about the idea of an international standard complementing ITIL and based on it. How gratifying that the community has made it happen.

ITIL's success is a result of the hard work of many people. I would like to signal OGC's encouragement to the many organizations around the world, offering products and services based on ITIL. They provide the channels through which the wider community can reap the benefits of businesses effectively deploying IT.

On that endeavour may you all have success.

John Stewart

Acknowledgements and project layout

ISO/IEC 20000, the international standard for IT Service Management, attracts much of attention in the field. Many organizations and individuals are looking into the opportunities offered by the standard, and get together to discuss this. The Dutch ISO/IEC 20000 Early Adopter Group, a working group that emerged as a result of this growing interest, was used as an initial review board for the structure of this book.

The idea to develop this roadmap book for an ISO/IEC 20000 certification project initially emerged from the editorial team of itSMF International's ITSM Library. The fact that this standard was so closely related to the core readership of the ITSM Library, combined with the lack of practical guidance, made it very clear that a roadmap publication would serve the itSMF community very well.

The basic structure for this publication was the result of a study by Selma Polter and Jan van Bon, of the ITSM Library team, and was derived from existing quality management literature, editorial principles used in the ITSM Library, and interviews in the field. This basic structure was then reviewed by the ISO/IEC 20000 Early Adopter Group and a number of individual experts, which resulted in a further improvement of the book's design.

Based on this first design, Jan van Bon and Tienke Verheijen invited a number of ISO/IEC 20000 certified organizations to describe their practical certification experience in a case document, along the logic of the book's design. They tried to reach as many certified organizations as they could find, and found six organizations who were happy to participate. We wish to thank all organizations for their contributions and willingness to share their experiences. We also wish to thank a number of people who have generously provided time and information for the different case descriptions. They are, starting from the first case study in this book:

- Jan Boogers (Quality Manager EDS-ITO, the Netherlands), who was interviewed by Tienke Verheijen
- Johan van Middelkoop (Quality Manager EDS-ITO, the Netherlands), who was interviewed by Tienke Verheijen
- Masumi Taira (ITSM Manager Fujitsu FIP Corporation, Japan), who authored the Fujitsu FIP Corporation case study
- Kumi Yasui (Japanese Quality Association, Japan), who put us in touch with Masumi Taira from Fujitsu FIP Corporation
- Jaap van Staalduine (CEO ING Service Centre Budapest, Hungary), who co-authored the ING Service Centre Budapest case study
- Gábor Patay (CIO ING Service Centre Budapest, Hungary), who co-authored the ING Service Centre Budapest case study
- Manisha Champaneri (IT Service Management and ISO 20000 Consultant, Marval, United Kingdom), who authored the Marval case study
- Paul Breslin (ICT Sector Leader DNV Industry BeNeLux, United Kingdom), who put us in touch with Manisha Champaneri from Marval

- Foo Nian Chou, (Chief IMS, Infrastructure Management and Solutions, NCS Pte Ltd, Singapore), who co-authored the NCS case study
- Chew Hwee Hong, (Senior Manager PQM, Process & Quality Management, NCS Pte Ltd, Singapore), who co-authored the NCS case study
- Christiane Chung Ah Pong, (Lead Consultant PQM, Process & Quality Management, NCS Pte Ltd, Singapore), who co-authored and coordinated the NCS case study
- Tsuneo Noda - (ISO 20000 training course director, IP innovations inc., Japan), who co-authored the Nippon Securities Technology case study
- Masahiko Tsumura (ISO 20000 Consultant, IP innovations inc., Japan), who co-authored the Nippon Securities Technology case study
- Ryoji Nakamura (Executive Officer, Operation Division, Nippon Securities Technology Co., Ltd., Japan), who was interviewed by Tsuneo Noda and Masahiko Tsumura
- Shingo Yagi (Manager, Operation Division, Nippon Securities Technology Co., Ltd., Japan), who was interviewed by Tsuneo Noda and Masahiko Tsumura
- Takehisa Makino (Engineer, Operation Division, Nippon Securities Technology Co., Ltd., Japan), who was interviewed by Tsuneo Noda and Masahiko Tsumura

During the development of these case documents, several improvements were made to the initial book design. This ensured that ‘the roadmap’ was valid in practice, and was illustrated by the structure of several case descriptions.

Having finalized the case descriptions, the next step was the development of a generic roadmap for other organizations facing a certification project. This required very practical insight into such a certification project, and a significant helicopter view. We were very happy to find **David Clifford** (FISM), Head of Consulting Practice at PRO-ATTIVO, willing to spend his energy on this project. David had the required practical experience, with many years’ experience as a worldwide consultant, lecturer and conference speaker on the topic of ISO/IEC 20000, its forerunners, related frameworks and methods. He is the President Elect of the Institute of IT Service Management. And very important: David was willing to share his knowledge with the rest of the market. With the support of his family: Denise, Emily and Francesca, he was able to spend a significant number of hours on the development of this publication.

A very important role was also played by the Review Team. This team was composed of a wide variety of professionals from various countries:

- Pierre Bernard - Pink Elephant Inc - Canada
- André Bogert - Infor - The Netherlands
- Koen Brand - Steenbok Adviesgroep - The Netherlands
- Hartger Brasjen - Ideas to Interconnect - The Netherlands
- Bernd Broksch - Siemens AG - Germany
- Rob van der Burg - Microsoft - The Netherlands
- Matthew Burrows - BSMimpact.com - United Kingdom
- Christiane Chung Ah Pong - NCS Pte Ltd - Singapore
- Edwin Eichelsheim - Quint Wellington Redwood - The Netherlands
- Rosario Fondacaro - Quint Wellington Redwood - Italy
- Simone Fuchs - SAP - Germany

- Marcus Giese - TÜV SÜD Management Service GmbH - Germany
- Andreas Gräf - Hewlett-Packard - Germany
- Alex Hernandez - Plexent - USA
- Kevin Holland - NHS England - United Kingdom
- Matiss Horodishtiano - Amdocs - Israel
- Wim Hoving - BHVB - The Netherlands
- Brian Johnson - CA - USA
- David Jones (FISM) - Plan-Net Plc - United Kingdom
- Henk Keijzer - KEMA Quality - The Netherlands
- Larry Killingsworth - Pultorak & Associates, Ltd - USA
- Maggie Kneller (FISM) - United Kingdom
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- Roger Purdie - Q-Venture - Australia
- Claudio Restaino - BITIL.COM - Italy
- Mart Rovers - InterProm USA - USA
- Leo van Selm - Vaseom b.v. - The Netherlands
- Cheryl E. Simpson - Independent - USA
- Masumi Taira - Fujitsu FP - Japan
- Madeleine Townsend - Foster-Melliard - South Africa
- Ray Tricker - Herne European Consultancy Ltd - United Kingdom
- Tony Verlaan - GetronicsPinkRocade - The Netherlands
- Flip van de Waerdt - HP - The Netherlands
- Stuart Wright (MISM) - PRO-ATTIVO - United Kingdom

The members of the Review Team delivered a large number of improvement issues, which ultimately made this book into what it was meant to be: a very practical roadmap for your ISO/IEC 20000 certification project. All of this work wouldn't have been possible without the extremely dedicated and professional contribution of **Tieneke Verheijen**, the managing editor, who made sure that another top quality publication could be added to the ITSM Library.

Being a very young standard, we expect that further improvements of this ISO/IEC 20000 Roadmap will be possible. We therefore invite all readers to comment on this book, and provide us with any issues that would further enhance its value. Comments can be sent to the chief editor, at j.van.bon@inform-it.org.

Jan van Bon
Managing Editor ITSM Library

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PART I:
**GENERAL GUIDELINES
ON ISO 20000
IMPLEMENTATION AND
CERTIFICATION**



Chapter 1

Introduction to ISO 20000

1.1 Why is this subject relevant?

Business increasingly depends on technology-enabled services. Business, as well as IT success, depends more than ever on how well it can deliver against the expectations of an increasingly demanding client base. Well-publicized corporate governance scandals and new regulatory requirements, such as the US Sarbanes-Oxley Act, have led businesses to insist that the IT sector should adopt a *service quality management* (SQM) culture.

ISO/IEC 20000 (abbreviated to ISO 20000 in this book, as explained previously) is an international standard, specifically aiming to establish such service quality management systems in IT organizations. It is increasingly being used as buying criteria in IT outsourcing decisions. ISO 20000 certification is becoming a differentiator, providing competitive advantage for both external, commercially-focused, service providers and internal service providers, who are wishing to demonstrate their capability.

ISO 20000 is based on demonstrating capability. The service provider can therefore only be either conformant (able to show tangible evidence to confirm that the requirement is being satisfied) to the capability requirements, or non-conformant to the requirements. This is different to maturity, where a service provider is normally assessed against best practice and rated based on five levels.

As Section 1.3.3 explains, with the introduction of the ISO 20000 standard, an IT service provider can, for the first time in history, obtain an independent qualification level that recognizes Service Management capability. Certifying IT staff in ITIL® is a first step, which many IT organizations have taken; the next step is to move up from individual certifications, to an organizational certification, ISO 20000.

The standard promotes the adoption of an integrated process approach for the management of IT services. The standard is quite demanding in what it requires service providers to do, as it addresses a wide array of processes (see Figure 1.1). Most readers of this publication will be

familiar with ITIL® version 2 and the Service Support and Service Delivery publications. ISO 20000 documents requirements for the processes covered by these publications, and introduces other management processes which are not addressed by them. Section 1.3.6 provides details of the overarching management processes.

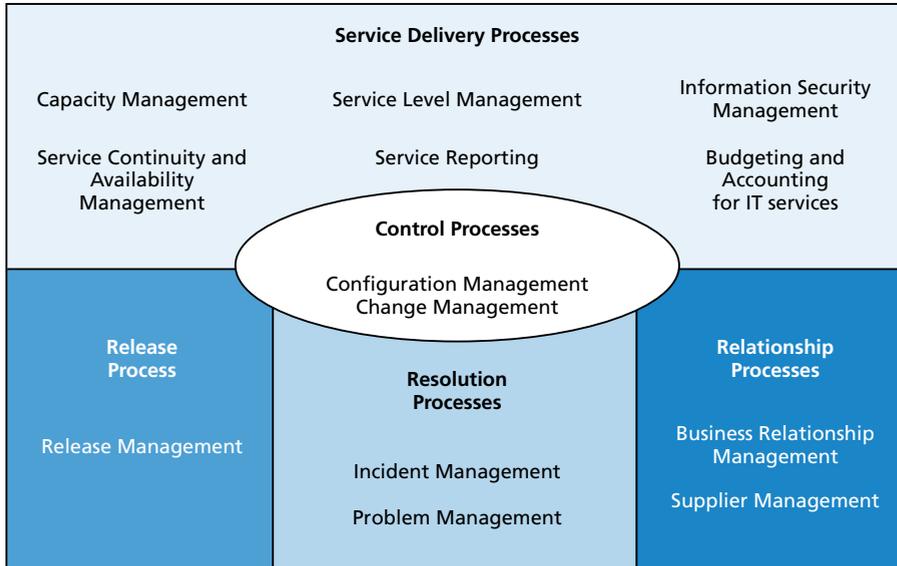


Figure 1.1 IT Service Management (ITSM) according to DISC PD0005 and ISO 20000

ISO 20000 sets out to provide the basic requirements for good and professional practice and quality. The standard does not address organization-specific requirements; for example, legislation of particular interest to an IT service provider, who is providing services in a specific industry, such as financial and banking.

The ISO 9000 family⁴ is a generic standard for quality management systems. For an organization that has already been certified against ISO 9001:2000, has implemented all ITIL® service delivery and service support processes, and may be working on adapting the ITIL® version 3 lifecycle approach, certification to ISO 20000 will be easier to achieve. This is because ISO 20000 builds ITSM-specific requirements onto the generic requirements of ISO 9001.

This implementation guide contains practical advice on ISO 20000 certification. It is intended to guide the reader through the requirements and details of the standard, the scoping, the project approach, the certification procedure and the management of the certification process. The first part is a step-by-step description of the ISO 20000 implementation. The second part contains six case studies from ISO 20000 certified organizations. They have shared their experiences, based on a detailed logging structure, including fixed questions following the certification track. This consistent format helps to ensure that all relevant information has been included in these case

⁴ See Section 7.5 for more explanation on how ISO 9000 is composed.

studies. In the first part of this guide, reference to these case studies will be made, to illustrate the information given with practical examples.

This is an implementation guide and, as such, takes a high level approach to process theory and guidelines. For further detail, please refer to the ITSM Library publication *ISO/IEC 20000 - an Introduction*, which is to be published in 2008.

1.2 What is ISO 20000's history?

The International Organization for Standardization published the ISO 20000 standard on 15 December 2005. On this date it was promoted from the British Standard 15000 (BS 15000) to an international standard. BS 15000 described a management system based on the approach used for ISO 9000, but with a specific focus on the management controls required for effective Service Management aligned with ITIL® version 2. The move to ISO 20000 recognized the international nature of IT Service Management (ITSM), by ensuring that the language used in the standard was consistent with other ISO standards. Work continues to bring the language in line with other standards.

BS 15000 was initially introduced in November 2000 by the British Standard Institution (BSI). This British Standard introduced requirements for an ITSM quality management system, in addition to requirements for the quality of the separate ITSM processes. In the early years, itSMF UK received numerous requests from companies wishing to become certified to the standard; this prompted them to introduce a worldwide certification scheme. Global interest continued to grow, and this resulted in the recognized need for an international standard.

BS 15000 originated from DISC PD 0005, A Code of Practice for IT Service Management. DISC PD 0005 was defined by BSI, working with a group of British experts at the end of the 1990s. The standard was designed to bridge the gaps which had not been addressed by ITIL®. The ITIL® books lacked guidance on the design of IT Service Management processes. DISC PD 0005 offered clear guidance on requirements and recommendations.

ITIL® was a starting point which was adjusted and augmented with additional processes, in order to clarify the relationship between them. Figure 1.1 shows the service delivery, service support and security management processes from ITIL® version 2 in a somewhat new grouping. Furthermore, relationship processes and a service reporting process - now included in ITIL® version 3 - have been added⁵. The DISC PD 0005 model was not changed when it evolved to BS 15000 and to ISO 20000.

1.2.1 What is ISO 20000's current context?

As ISO 20000 partly has its roots in ISO 9000, it should be noted that the current version of the ISO 9000 standard was published in the year 2000 (ISO 9001:2000, which is usually abbreviated to 'ISO 9001'). The former 1994 version of ISO 9000 had the reputation of being

⁵ These ITIL-books had not been published at that time and DISC PD0005 was ahead with, for example, acknowledging incident- and release management as separate processes. The names of the processes continuity management and financial management for IT services at the ITIL updates in 2000 and 2001 have also been inspired by DISC PD0005.

‘paper intensive’, as it led to many documented procedures, but little improvement in the quality services provided by many businesses.

With ISO 9001:2000 this has changed. ISO 9001 has a focus on performance, on continual improvement and customer satisfaction. The extent of documentation can be reduced from the requirements of the previous edition of the standard, depending on the organization, the complexity of its processes and the competence levels of the employees. As the documentation guidelines on the ISO website (www.ISO.org) state, ISO 9001:2000 requires a documented quality management system, and not a system of documents⁶.

In May 2007, ITIL[®] version 3 was published, presenting an umbrella lifecycle model grouping all ITIL[®] processes into the categories Service Strategy, Service Design, Service Transition, Service Operation and Continual Service Improvement. The concept of continual improvement, based on Deming’s PDCA cycle⁷, was adopted from ITIL[®] version 2 into ISO 20000, and given an important position. As a matter of simplification, the service lifecycle phases of ITIL version 3 can be mapped on to the phases of Deming’s PDCA cycle. The Service Strategy and Service Design phases can be mapped to the Plan phase, and the Service Transition and Service Operation phases can be mapped to the Do phase. Continual Service Improvement (CSI) embodies the Check and Act phase, while monitoring and reporting on process performance (see Figure 1.2). Of course, each lifecycle phase should also be continually improving itself.

Although ISO 20000 is not formally related to ITIL[®], and there is no control defined or implied between the two, it was clear that it was strongly aligned to the ITIL[®] version 2 books. This means that the changes in content, scope and terminology in ITIL[®] version 3 are not yet reflected in ISO 20000. However, aligning the new version of ITIL[®] to ISO 20000 was one of the many briefs given to the authors of ITIL[®] version 3. Although there are still some differences between the standard and ITIL[®], they have never been more aligned.

As an example, ISO 20000 treats service requests as incidents, in the same way that ITIL[®] version 2 did, while ITIL[®] version 3 formally separates this into incident management and request fulfillment. It is to be expected that the next update of ISO 20000 will reflect the contents of ITIL[®] version 3 ‘best practice’. This may take some time, since ISO standards go through a rigorous change process to ensure that a quality product is produced. It is not recommended, however, that readers wait for the next version of the standard, as this will be some time away from issue, and significant benefits can be achieved with the current version. The case studies in Part 2 show how companies can benefit from the current version, and indeed, much can be gained from this version. Moreover, an auditor would be likely to accept version 3 practice as supporting the progression towards ISO 20000, as the standard recognizes that a service provider may be using one of any number of the many different Service Management frameworks in existence.

6 ISO (2001). *Introduction and Support Package. Guidance on the Documentation Requirements of iso 9001:2000*. Document: ISO/TC 176/SC 2/N525R. Available through: www.iso.org/iso/en/iso9000-14000/explore/transition/2000rev7.html

7 Edwards Deming has been inspired by Walter Shewhart, one of his teachers already advocating a ‘learning and improvement cycle’. The P-D-C-A cycle of Edwards Deming is also known as the PDSA-cycle, which stands for ‘Plan-Do -Study-Act’. In this case, the results are studied instead of checked.

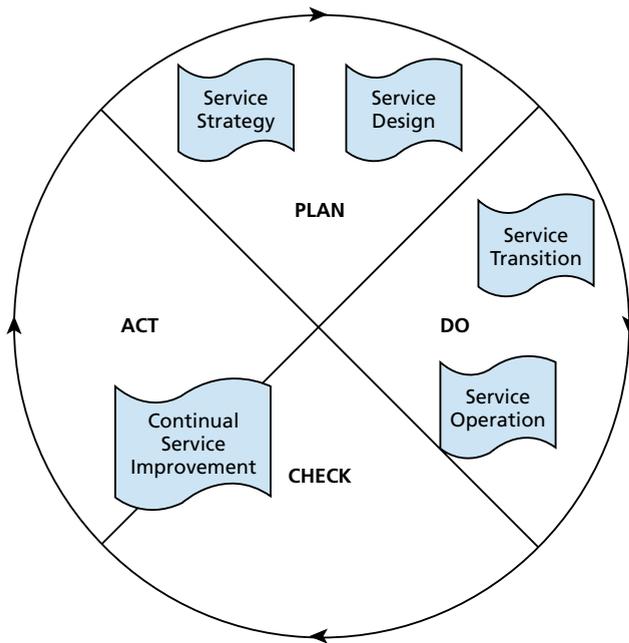


Figure 1.2 Mapping of the ITIL® lifecycle versus Deming's PDCA cycle

1.3 What is ISO 20000?

1.3.1 Targets/goals

ISO 20000 has four primary goals that need to be demonstrated throughout the IT Service Management system; these are:

1. **Customer-Focused** - Throughout the lifecycle of IT Service Management consideration of the customer needs will need to shine through, examples are provided later in this book.
2. **Integrated Processes** - Processes do not work in isolation, and there are clear links between common processes, with information flowing through the management system in a controlled way.
3. **End-to-End Service Management** - An emphasis on managing the supply chain, ensures alignment to the customer commitments that have been made by the service provider.
4. **Continual Service Improvement** - Improvement is applied consistently throughout the management system.

1.3.2 Specification

The ISO 20000 standard is composed of two parts, under the general title Information Technology - Service Management:

- **Part 1: Specification:** Published as ISO/IEC 20000-1: 2005. This is the formal specification of the standard.

- **Part 2: Code of practice:** Published as ISO/IEC 20000-2: 2005. This describes best practices in more detail, and provides guidance and recommendations for the Service Management processes within the scope of the formal standard.

In general, Part 1 of the standard contains a list of mandatory controls, ‘shalls’ that IT service providers must comply with, in order to become certified. Part 2 contains a list of guidelines and suggestions that ‘should’ be addressed by IT service providers wishing to become certified.

The list of objectives and controls that ISO 20000-1 provides is not intended to be exhaustive. An organization may need additional objectives and controls to meet its particular business needs, and may find them in supporting frameworks such as ITIL®. ISO 20000-1 states that “the nature of the business relationship between the IT service provider and business will determine how the requirements in ISO 20000-1 are implemented in order to meet the overall objective.”

As a process standard, ISO 20000 follows the process approach of ISO 9001:2000 and focuses on continual improvement. As for requirements for management review and internal audit, ISO 20000 draws heavily from ISO 9001. All eight quality management principles of ISO 9000 are found within ISO 20000:

1. customer focus
2. leadership
3. involvement of people
4. process approach
5. systematic approach to management
6. continual improvement
7. factual approach to decision-making
8. mutually beneficial supplier relationships

ISO 9000 describes only general processes, for organization management, for the management of resources, for the realization of the product or service and for measurement, analysis and improvement. It is the international standard for quality management systems. A management system describes the practices that an organization uses to manage its business. A quality management system defines the way in which an organization manages the quality of its products and services.

Table 1.1 summarizes all processes of ISO 9000, ISO 20000 and ITIL® version 2 and 3. Processes in one row of the table are very alike and overlap. ISO 9000 clearly leaves a gap as far as the product realization processes are concerned. This gap is being bridged by the ITIL® Service Management processes and the ISO 20000 requirements (see Figure 1.3).

1.3.3 Accreditation and certification

By collecting the core information of the ITIL® Service Management processes in an international formalized standard, BSI, and now ISO, have the ability to certify IT service providers against compliancy to a sub-set of these best practices. Until BS 15000 was created, the formal certification was focused on individuals (ITIL® Foundation, ITIL® Practitioner and ITIL® Service Manager), rather than on organizations. ISO 20000 certification now provides a certification option that is independent from any other framework.

As has been indicated, the contents of ITIL® can easily be derived from the standard. With ISO 20000, an IT service provider can obtain an international organization-focused certificate for IT Service Management. Service providers can be audited for conformity with ISO 20000 and - if the audit is positive - they can be awarded the certificate by Registered Certification Bodies (RCBs). Certification bodies get their accreditation using ISO/IEC 17021:2006. The itSMF UK also recognizes this accreditation for their independent scheme.

Although service providers can claim their compliance with the specifications of the ISO 20000 standard, a formal audit and certification will carry significantly more weight. This certification already is a default requirement in many contractual agreements, especially in larger outsourcing deals.

IT service providers who want to become certified against the ISO 20000 standard can contact one of the Registered Certification Bodies (RCBs) anywhere in the world, and apply for certification.

Certification bodies are assessed and approved (accredited) by an accreditation organization in any country of their choice, in accordance with ISO/IEC 17021:2006. These accreditation organizations are appointed by governments, to be the sole organization in a country that can accredit certification bodies. The accreditation organization will screen the certification body thoroughly for independency and competence. The itSMF UK, in the UK, but operating internationally, will accept certification body applications only when they originate from certification bodies who are already accredited by their relevant national accreditation body. They can then become a Registered Certification Body (RCB) for ISO 20000 for the independent itSMF UK scheme. Note that an RCB cannot provide specific consultancy advice, as there could be a conflict of interest; an audit must be independent, hence the need to separate audit from consultancy services. The lists of accredited RCBs are available from the accreditation bodies and – for the itSMF UK scheme – from the ISO 20000 website: www.isoiec20000certification.com. Please note, it is the intention of the itSMF UK to migrate accreditation to the National Accreditation Bodies over time; this process has already started.

The RCB will audit IT service providers against the requirements of the standard and issue a certificate. The certification is only valid for three years. Therefore, certified IT service providers will be re-audited on a regular basis to confirm their compliance to ISO 20000. This means surveillance audits every six months and re-certification audits every three years.

Certified IT service providers are permitted to use the provided logo, in accordance with specified restrictions and requirements. They may also opt to be listed on a public web page. For the itSMF UK scheme, additional information on the procedure, the RCBs, the certified IT service providers, and the latest news on ISO 20000 certification can be found on the website www.isoiec20000certification.com.

It is common for an organization to have an assessment, to determine whether it is ready for an audit, before initiating an ISO 20000 audit. This could be done by an external party, but there is also a self-assessment option. To this end, BSI published the *IT Service Management Self-assessment Workbook* (published as BIP 0015). This book contains a checklist that complements

ITIL® version 3	ITIL® version 2	ISO 20000	ISO 9000
		Requirements for a management system Management responsibility, documentation requirements, competence, awareness and training.	Processes for organization management and improvement Strategic planning, establishing policies, setting objectives, providing communication, ensuring availability of resources needed and management reviews (Plan and Do phase PDCA).
			Processes for managing resources Provision of resources needed for processes for organization management, realization and measurement.
Continual Service Improvement	Planning to implement Service Management	Planning and implementing Service Management Plan Service Management (Plan) Implement Service Management and provide the services (Do) Monitoring, measuring and reviewing (Check) Continual improvement (Act)	
CSI Improvement Process			
Service Strategy		Planning and implementing new or changed services	Planning of product realization
Service Portfolio Management			
Service Design, Service Operation	The business perspective series (+ VI Customer liaison) (VI Managing facilities + third party relationships)	Relationship processes Business relationship management Supplier management	Customer-related processes
Supplier management			
Service desk (first overlap)	Service management		Realization processes All processes that provide the intended output of the organization
Service Strategy, Service Design, Continual Service Improvement	Service delivery	Service delivery processes	
Service level management	Service level management	Service level management	
Service reporting	Service reporting (not an autonomous process, but part of service level management)	Service reporting	
Service Catalogue Management			

ITIL® version 3	ITIL® version 2	ISO 20000	ISO 9000
Financial Management	Financial management for IT services	Budgeting and accounting for IT services	
IT service continuity management	IT service continuity management	Service continuity and availability management	
Availability management	Availability management	Capacity management	
Capacity management	Capacity management	Capacity management	
Demand management	Demand management (not an autonomous process, but part of capacity management)	Information security management	
Information security management	Security management		
Service Operation	Service support	Resolution processes	
Incident management	Incident management	Incident management	
Request Fulfillment	Service desk		
Service desk (second overlap)	Problem management	Problem management	
Problem management	Configuration management	Control processes	
Service Transition, Service Operation	Configuration management	Configuration management	
Service Asset & Configuration management	Change management	Change management	
Change management	Change management		
Transition Planning and Support (first overlap)	Service desk		
Service Validation and Testing	Release management	Release process	
Evaluation	Release management	Release management	
Service Transition	Release management		
Release and Deployment Management	Release management		
Transition Planning and Support (second overlap)	Out of ISO 20000 scope:		
Access management	ICT infrastructure management		
Event management	Applications management		
IT Operations			
Knowledge Management			
Monitoring and Control			

Table 1.1 Processes in ITIL® version 2 and 3, ISO 20000 and ISO 9000

the standard. It has been designed to assist organizations to assess the extent to which their IT services conform to the specified requirements. It is recommended that properly qualified staff execute the assessment, as the questions are subjectively based.

As far as personal certification is concerned, the standard is quite succinct on the requirements that staff providing the services should meet. The introduction of Part 1 says:

It is assumed that the execution of the provisions of this part of ISO 20000 is entrusted to appropriately qualified and competent people.

Currently, itSMF UK, ISEB and EXIN are developing exams for individuals to become proficient in the practices of ISO 20000, including consulting and auditing around the standard. The previously mentioned ITSM Library publication *ISO/IEC 20000 - An Introduction* provides thorough preparation for these exams.

For more information on Accredited Course Providers (ACPs), please check the websites of EXIN, ISEB and itSMF UK.

1.3.4 Most important terms and definitions

In its first section on the scope of the standard, ISO 20000-2 states:

The variety of terms used for the same process, and between processes and functional groups (and job titles) can make the subject of Service Management confusing to the new manager. Failure to understand the terminology can be a barrier to establishing effective processes. Understanding the terminology is a tangible and significant benefit from ISO 20000. ISO 20000-2 recommends that service providers should adopt common terminology and a more consistent approach to Service Management. It gives a common basis for improvements in services. It also provides a framework for use by suppliers of Service Management tools.

ISO 20000-1 specifies the following terms and definitions:

- **Availability** - Ability of a component or service to perform its required function at a stated instant or over a stated period of time.
NOTE: Availability is usually expressed as a ratio of the time that the service is actually available for use by the business to the agreed service hours.
- **Baseline** - Snapshot of the state of a service or individual configuration items at a point in time (see configuration item).
- **Change record** - Record containing details of which configuration items (see configuration item) are affected and how they are affected by an authorized change.
- **Configuration item (CI)** - Component of an infrastructure or an item which is, or will be, under the control of configuration management.
NOTE: Configuration items may vary widely in complexity, size and type, ranging from an entire system including all hardware, software and documentation, to a single module or a minor hardware component.
- **Configuration management database (CMDB)** - Database containing all the relevant details of each configuration item and details of the important relationships between them.
- **Document** - Information and its supporting medium.

NOTE 1: In this standard, records (see record) are distinguished from documents by the fact that they function as evidence of activities, rather than evidence of intentions.

NOTE 2: Examples of documents include policy statements, plans, procedures, service level agreements and contracts.

- **Incident** - Any event which is not part of the standard operation of a service and which causes or may cause an interruption to, or a reduction in, the quality of that service.
- **Problem** - Unknown underlying cause of one or more incidents.
- **Record** - Document stating results achieved or providing evidence of activities performed.
NOTE 1: In this standard, records are distinguished from documents by the fact that they function as evidence of activities, rather than evidence of intentions.
NOTE 2: Examples of records include audit reports, requests for change, incident reports, individual training records and invoices sent to customers.⁸
- **Release** - Collection of new and/or changed configuration items which are tested and introduced into the live environment together.
- **Request for change** - Form or screen used to record details of a request for a change to any configuration item within a service or infrastructure.
- **Service desk** - Customer facing support group who do a high proportion of the total support work.
- **Service level agreement (SLA)** - Written agreement between a service provider and a customer that documents services and agreed service levels.
- **Service Management** - Management of services to meet the business requirements.
- **Service provider** - The organization aiming to achieve ISO 20000.

In this book, when using the term ‘service provider’, we automatically mean ‘IT service provider’, as ISO 20000 defines.

1.3.5 Scope

The service provider can demonstrate their ability to provide services that meet customer requirements by standardizing Service Management processes according to broadly accepted standards. The specification as applied in ISO 20000 represents an industry consensus on quality standards for IT Service Management processes. Part 1 of the standard defines what requirements a service provider shall meet in order to deliver managed services of an acceptable quality to customers.

Businesses may use it to:

- tender for services
- monitor if all service providers in a supply chain follow a consistent approach
- manage risk
- evaluate (the value of) services

Service providers can use it to:

- reduce the cost of their services
- monitor and improve their service quality
- benchmark their IT management Service Management activities

⁸ These records do not need to be paper records; they can be on digital media or other media as well.

- serve as the basis for an independent assessment
- demonstrate the ability to provide services that meet customer requirements
- improve service delivery through the effective application of processes to monitor and improve service quality

As ISO 20000 is process-based, it is not intended for product assessment. “However, organizations developing service management tools, products and systems may use both part 1 and 2 to help them develop tools, products and systems that support best practice service management”, ISO 20000-1 states.

1.3.6 The quality management system process model

Subsection 1 of ISO 20000-1 contains a picture that shows “a number of closely related service management processes” (see Figure 1.1). These are the Service Management processes of ISO 20000, and constitute the product realization processes of the generic quality management systems standard ISO 9001:2000 (see Figure 1.3).

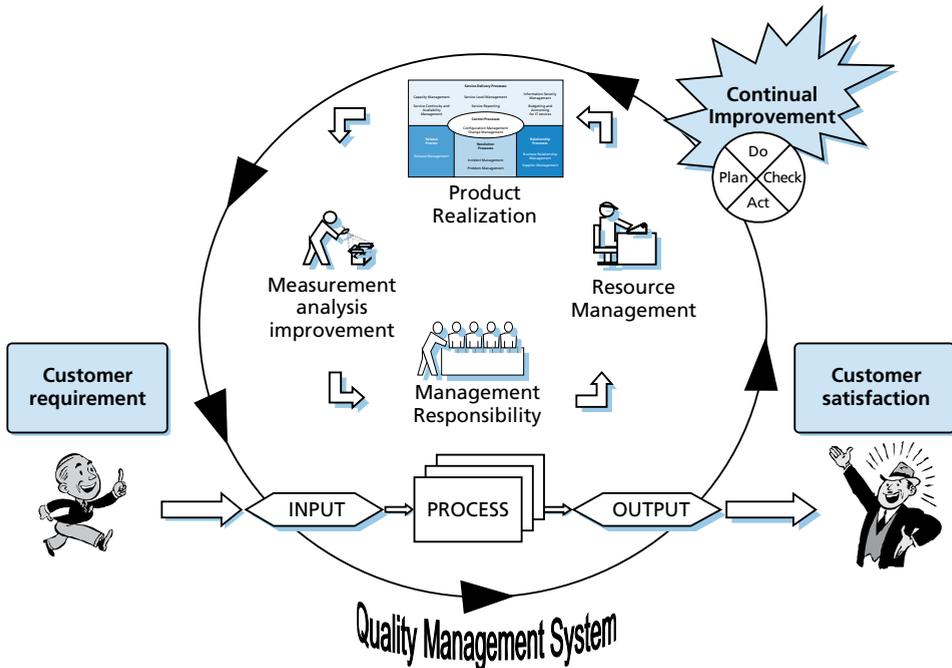


Figure 1.3 ISO 20000 in ISO 9000

Although ISO 20000-1 does address process interfaces, the standard does not specify relationships between the processes. One reason that the standard gives for this is that these relationships depend on the usage within an organization. The use of process modeling tools can aid the definition of process interfaces and the validation that the correct information is flowing through the process. Any framework may be used to integrate these processes; besides ITIL, which is the best known, proprietary models can also be used.

ISO 20000 describes three overarching management processes (see Figure 1.4):

- **management system:**
 - management responsibility (the standard's Section 3.1)
 - documentation requirements (the standard's Section 3.2)
 - competence, awareness and training (the standard's Section 3.3)
- **planning and implementing Service Management** (the standard's Section 4)
- **planning and implementing new or changed services** (the standard's Section 5)

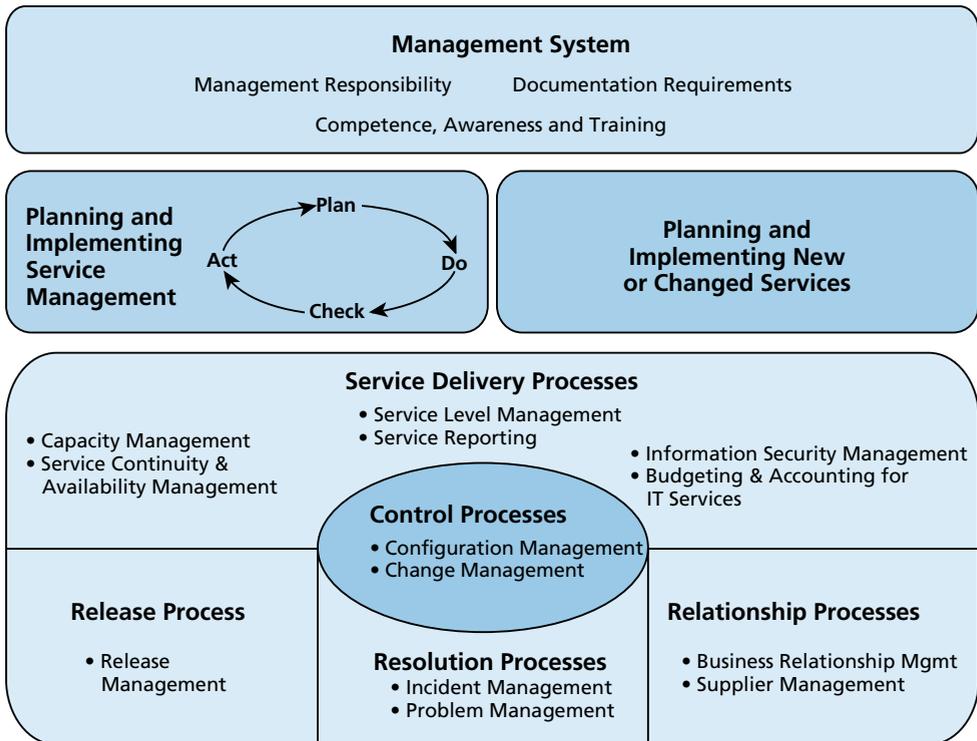


Figure 1.4 Overview ISO 20000 Service Management system

1.3.7 Requirements and objectives

This section summarizes the main objective, 'shalls' and 'shoulds' for each ISO 20000 process. The use of an imperative also indicates a 'shall'.

ISO 20000-1 requires a number of activities. It defines 170 'shalls', while ISO 9001 contains only 135 'shalls'. This publication concludes with a brief overview of the required documents and records.

Requirements for a management system

ISO 20000-1 requires "a management system, including policies and a framework to enable the effective management and implementation of all IT services". Management shall facilitate the

framework needed to implement and maintain IT services. Their role and responsibilities shall be clear, and proper documentation shall be guaranteed. Furthermore, management shall:

- agree policies, goals and plans for IT management
- communicate the importance of the Service Management objectives
- ensure customer requirements are met
- appoint a member of management to be responsible for the co-ordination and management of all services (*senior responsible owner*); this role is responsible for ensuring that there is evidence of Service Management policies, plans and procedures
- provide resources to plan, implement, monitor, review and improve service delivery
- manage risks, and conduct Service Management reviews

For the *competence, awareness and training* part of the standard, staff shall be aware of their relevance within the wider business context, and how they contribute to the achievement of quality objectives. Determine the required competencies and responsibilities for each role and provide adequate training where required.

Planning and implementing Service Management

To develop a quality management system, an organization has to identify its purpose, define the policies and objectives, determine the processes and determine the sequence of these processes. This is called *Planning and implementing Service Management*.

To plan a process, an organization has to define the activities of the process according to the Plan-Do-Check-Act (PDCA) cycle (see Figure 1.5). The model assumes that to provide appropriate quality, the following steps must be undertaken repeatedly:

- **Plan** - Establish the objectives and processes necessary to deliver the results. This stage is completed with agreements that are measurable and realistic, and a plan of how they are to be achieved.
- **Do** - Implement the processes.
- **Check** - Monitor and measure processes and services against policies, objectives and requirements.
- **Act** - Identify actions to continually improve performance.

By iteratively progressing through this cycle, it can be assured that business and IT continue to align better (see Figure 1.6).

Documentation is important in successful application of the PDCA model. As the output of each activity is the input of the next activity in the model, a constant feedback is realized, and transparency in relationships between processes is created. 'Documentation' should not, however, be interpreted straight into more paperwork or be associated with more red tape. In essence, it is important that the information flow between the processes is defined, agreed upon, measurable and clear.