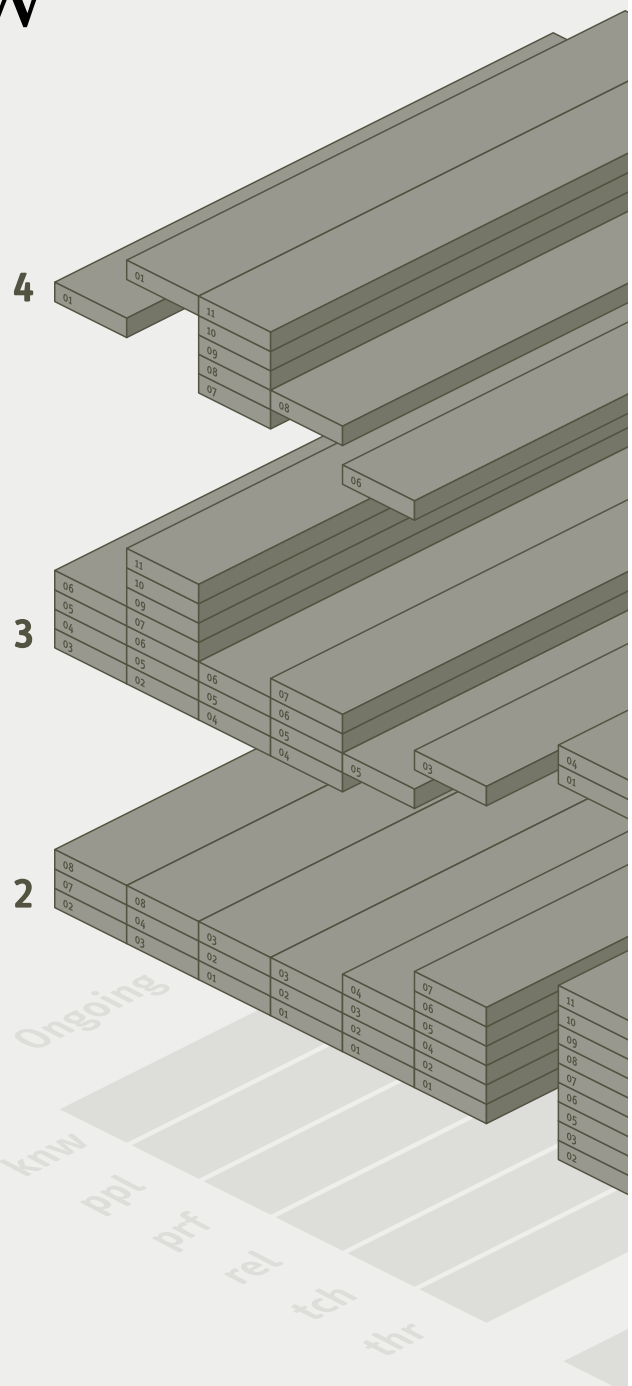
PART 1

The eSCM-SP v2:

THE eSOURCING CAPABILITY MODEL FOR SERVICE PROVIDERS (eSCM-SP) v2

Model Overview



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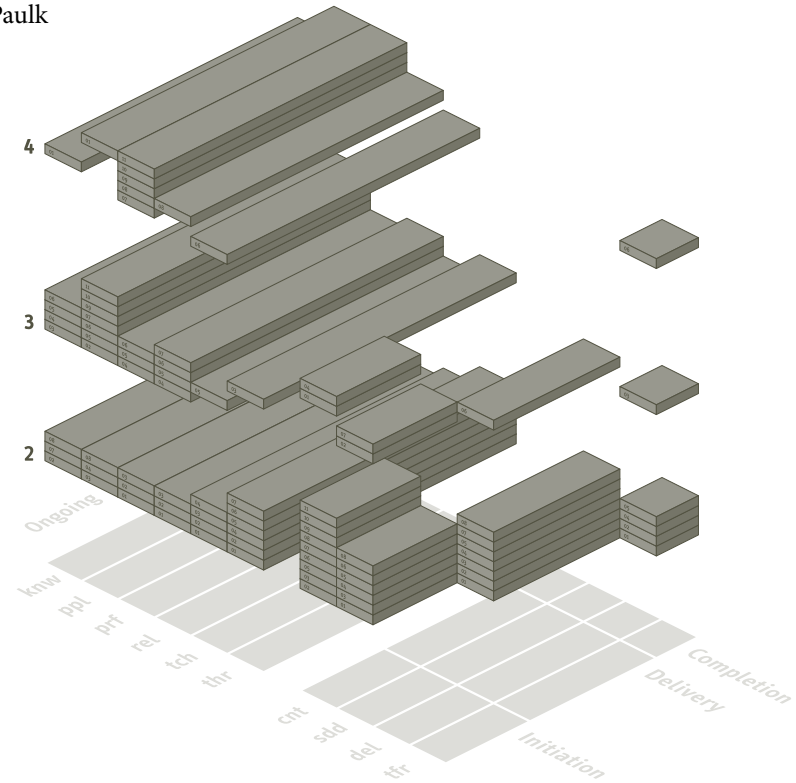

Abstract

Organizations are increasingly delegating their information technology (IT) intensive business activities to external service providers to take advantage of the rapid evolution of the global telecommunications infrastructure. The business processes being outsourced range from routine and non-critical tasks, which are resource intensive and operational, to strategic processes that directly impact revenues. Managing and meeting client expectations is a major challenge in sourcing of IT-enabled services, and examples of failure abound.

The eSourcing Capability Model for Service Providers (eSCM-SP) is a "best practices" capability model with three purposes: (1) to give service providers guidance that will help them improve their capability across the sourcing life-cycle, (2) to provide clients with an objective means of evaluating the capability of service providers, and (3) to offer service providers a standard to use when differentiating themselves from competitors.

The eSCM-SP was developed by a consortium led by Carnegie Mellon University's Information Technology Services Qualification Center (ITsqc). In November 2001 the eSCM v1.0 was released. After significant evaluation and revision, the eSCM for Service Providers (eSCM-SP) v1.1 was released in October 2002. The current version, the eSCM-SP v2, is composed of 84 Practices that address the critical capabilities needed by IT-enabled service providers. This document provides valuable information about the eSCM-SP, its implementation, and methods to evaluate and certify service providers.

Keywords: eSCM, eSourcing Capability Model, service provider model, quality models and systems, capability models, business process outsourcing, IT-enabled outsourcing services, IT-enabled services, outsourcing, outsourcing models, sourcing.

Contributors

ITsqc colleagues who contributed to the development of this document include Dr. Jane Siegel and Jeff Perdue who provided material on Capability Determination Methods, and Subrata Guha (Visiting Scholar from Satyam Computers, Ltd.) and Majid Iqbal who helped develop the model comparisons. The overall document design was done by Paul Burke and Ken Mohnkern; the graphics were designed by Paul Burke. Editorial and technical writing support was provided by Ken Mohnkern.

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Introduction

Allocating business activities to an outside organization in order to derive cost and quality benefits is not a new concept to organizations; outsourcing has been widely used since the mid-twentieth century. Initially outsourcing was used primarily for the manufacturing of industrial components, as well as for some non-core services such as facilities management. Outsourcing in information technology (IT) started in the 1960s when organizations commonly used time-sharing as a way to manage costs. In the 1970s organizations started to outsource parts of their data processing operations to external service providers in an effort to achieve significant cost savings. The 1980s and 1990s witnessed the establishment of some landmark outsourcing agreements that involved the shifting of entire IT operations to external service providers.

The rapid globalization of business, and the increased focus on core competencies in the late 1980s and the 1990s also led organizations to extend the concept of outsourcing to IT-intensive business processes. These business processes included customer care, financial and payment services, human resource services, information services, and logistics. More recently, IT-intensive projects and tasks, including engineering services, geographical information systems, multimedia content development, and transcription services are also being increasingly outsourced. The primary drivers for this trend are increasing competitive pressures, a need to access world-class capabilities, and a desire to share risks.

CHAPTER 1

eSourcing

IT-enabled sourcing, or eSourcing, uses information technology as a key component of service delivery or as an enabler for delivering services. eSourcing is often provided remotely, using telecommunication or data networks. These services currently range from routine and non-critical tasks that are resource intensive and operational in nature to strategic processes that directly impact revenues.

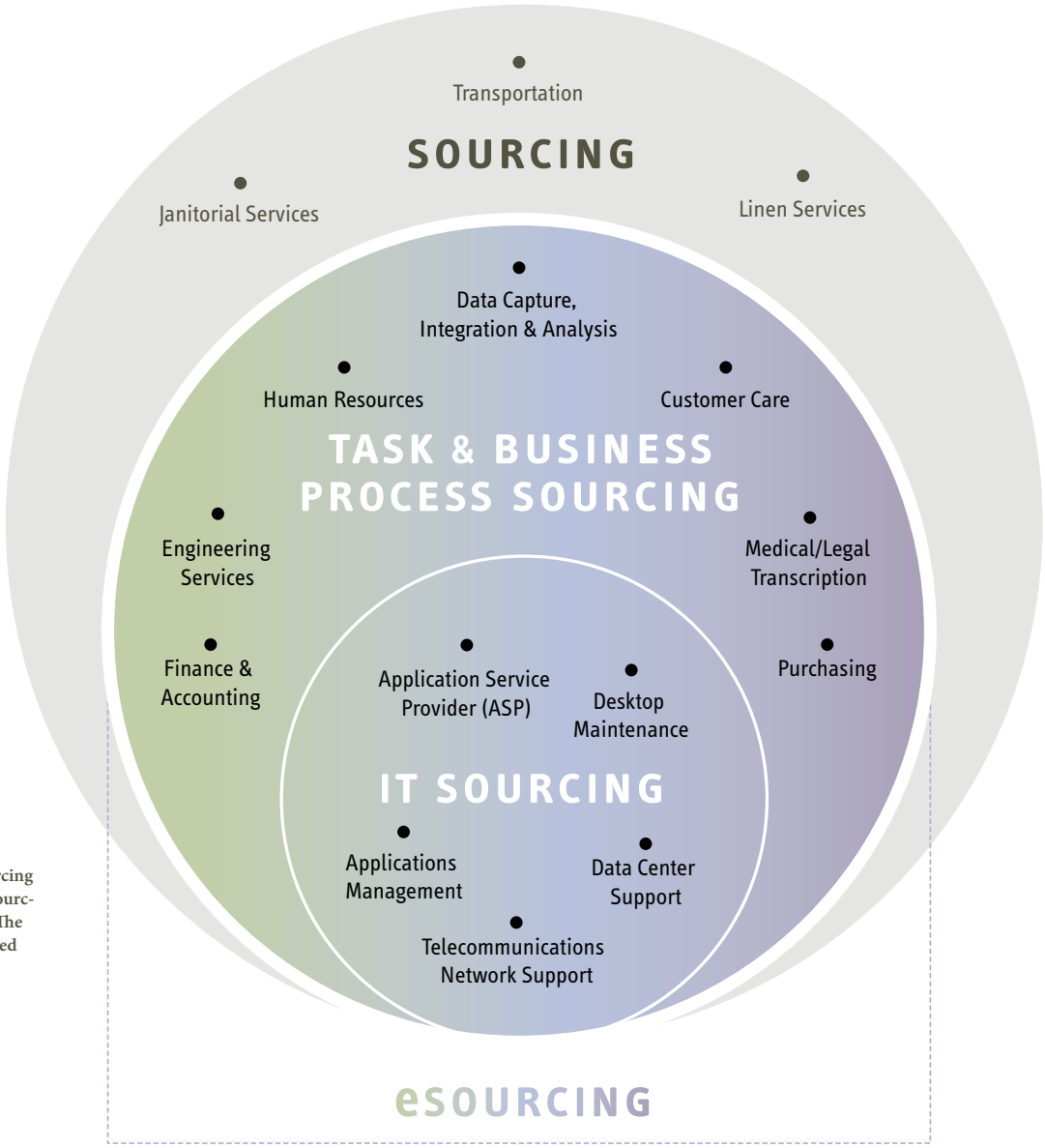


Figure 1.
Types of sourcing services
The middle two circles, IT Sourcing and Task & Business Process Sourcing, are covered by eSourcing. The outer circle, Sourcing, is excluded from eSourcing.

There are several common characteristics of eSourcing. Service design and deployment activities focus on designing the delivery processes, setting up a technology infrastructure, and managing the skills needed for service delivery. The client may transfer personnel, knowledge, and the service delivery infrastructure to the service provider. The service delivery phase typically spans multiple years, and often includes continuous or repetitive tasks. The service provider may transfer personnel, knowledge, and the service delivery infrastructure to the client at the completion of the contract.

Figure 1 shows examples of the types of sourcing services, highlighting the differences between sourcing as a whole, traditional IT sourcing, and task and business process sourcing. eSourcing includes the two middle circles: traditional IT sourcing, and task and business process sourcing. eSourcing typically excludes services such as janitorial services, which are not delivering technology or using technology as an enabler for delivering service.

Types of Sourcing Relationships

The rapid evolution of the Internet and the increased availability of bandwidth have facilitated the formation of geographically dispersed organizations. This ability to extend past geographical boundaries has contributed to the growth of eSourcing and has made possible the formation of a wide variety of sourcing relationships. These relationships typically fall broadly into one of the following categories:

- Traditional: a single service provider delivers service to a single client.
- Co-sourcing: two service providers work together to deliver service to a single client. Often, one of these providers is internal and the other is external to the client.
- Multi-sourcing: multiple service providers provide services to a single client. The client takes responsibility for managing and integrating the services of the various service providers.
- Alliance: multiple service providers collaborate to serve one or more clients. Often, one of the service providers has a primary role in interfacing with the client on behalf of the alliance.
- Joint Venture: multiple service providers form a collaborative business venture to serve one or more clients. Often, the first client may be part of the joint venture.

- In-sourcing: a group within the client organization is selected as a service provider, but is largely managed as an external entity. Often this group must compete with external suppliers or service providers for work.

"*Sourcing,*" as used in this report, refers to any and all of these types of relationships. Figure 2 provides a graphic depiction of these sourcing relationships.

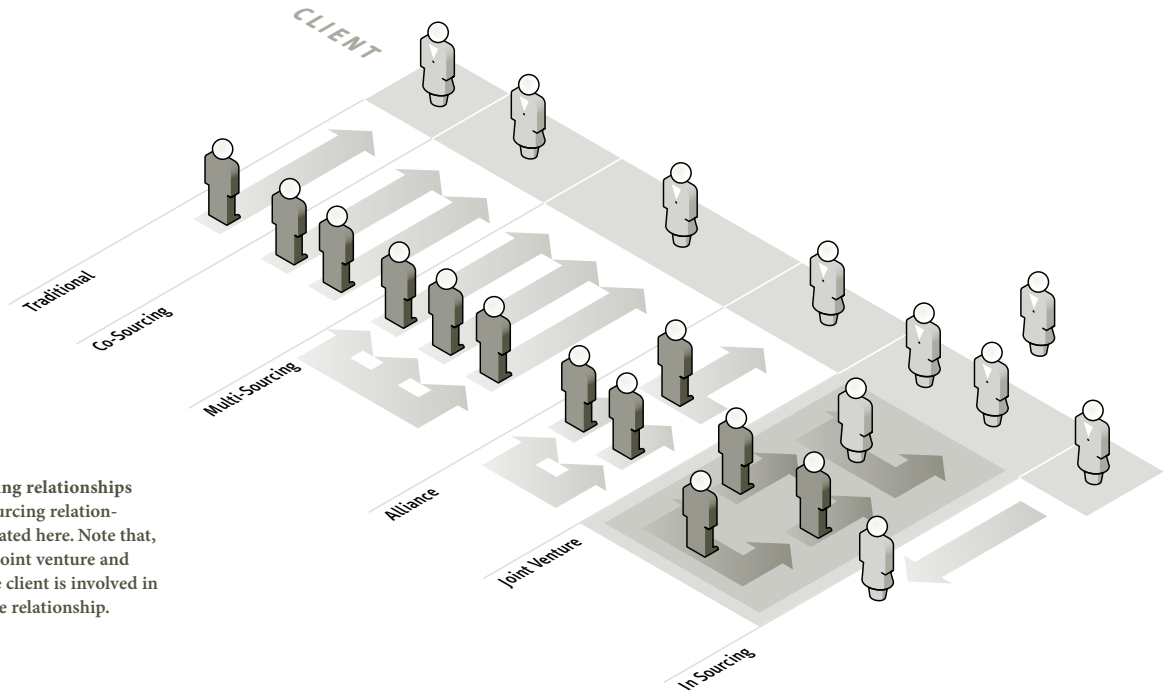


Figure 2.
Types of sourcing relationships
The types of sourcing relationships are illustrated here. Note that, in some cases (joint venture and insourcing), the client is involved in both sides of the relationship.

Types of Sourcing

Sourcing can be broadly divided into three categories. (1) Selective sourcing is where a portion of a business function is sourced. This ranges from a single task (e.g., check printing) to an entire process (e.g., payroll processing) within a business function. (2) Total sourcing occurs when an entire business function is sourced (e.g., Human Resources). (3) Transitional sourcing is the practice of temporarily sourcing during a period of transition. For example, sourcing legacy payroll systems while a new payroll system is being developed. The intent of transitional sourcing is not to source the function long-term, but only for the duration of the transition period.

CHAPTER 2

Sourcing Issues and a Solution

Growth of eSourcing

IT-enabled services are being sourced at a rapid rate. The evolution of the Internet and the global telecommunications infrastructure has provided client organizations with a choice of service providers located anywhere in the world. Simultaneously, competitive pressures have driven organizations to find the most cost-effective way to get the IT-enabled services they need while maintaining or improving their quality of service.

Many studies confirm outsourcing's current rapid growth path. According to a study by AMR Research, 50 percent of IT companies will outsource a portion of their business in 2006, up from 20 percent in 2003 [Gardner 2003]. State and local government spending on IT outsourcing are projected to reach $23 billion by fiscal year 2008, more than doubling the amount in 2003 [Chabrow 2003]. New outsourcing opportunities are also opening for finance and accounting functions. Approximately 30 percent of the companies that participated in a 2003 survey by Accenture and the Economist Intelligence Unit reported that they currently outsource finance and accounting functions, with two-thirds of those characterizing the arrangement as successful or very successful [Business Wire 2003].

Perhaps the most obvious reason for the growth of outsourcing is cost savings. Outsourcing certain business functions often costs less than hiring, maintaining, and training in-house staff, and acquiring the necessary technology and infrastructure to handle these functions, many of which are highly-regulated [TrainExcel 2002].

Outsourcing operational and administrative functions that do not generate revenue enables companies and departments to focus on their core business and on their customers' needs. For example, by outsourcing human resources (HR) tasks like payroll administration, and data-entry and maintenance of employees' information, the HR department is free to focus on being the company's employee advocate, business change agent, and strategic business partner [TrainExcel 2002].

In addition to these factors, recent advances in network security, leased lines, and storage have made it technically easy to outsource [Gardner 2003]. Technological barriers to outsourcing are being diminished.

Companies that are considering significant technology upgrades often find outsourcing a beneficial alternative. Service providers invest in the technologies, methodologies, and people required to excel in their area of expertise. They work with many clients facing similar challenges, and become experts in solving those particular problems. The clients also gain experience and an ability to innovate by taking advantage of the service providers' expertise and capable people.

Business Process Outsourcing (BPO) is a special class of outsourcing that deals with business functions that are more central to the client's business than those that are traditionally outsourced. These may even include strategic processes that have otherwise been kept in-house. According to a 2003 Forrester report [Ferrell 2003], four business segments are excellent candidates for successful and effective BPO:

- Straightforward bulk transactions, including credit card and stock transactions, are expected to reach $57 billion of annual BPO market space by 2008.
- Broad shared-services outsourcing, including finance, administration, human resources, and indirect procurement, are also expected to reach $57 billion of the annual BPO market space by 2008.
- High-volume vertical processes, including policy administration, claims, and loan applications, are expected to reach $6 billion of the annual BPO market space by 2008.
- More complex and specialized vertical applications, including monitoring chemical control processes and environmental data reporting, are expected to reach $5 billion of the annual BPO market space by 2008.

An International Data Corp. (IDC) study of over 175 senior executives from a wide range of industries found that organizations are expanding beyond traditional IT outsourcing, delegating business processes that are closer to their core competencies, including some human resources processes (19 percent of the respondents), call center or customer care activities (18 percent), and some logistics and supply chain management processes (16 percent). An even greater number of respondents said they are likely to outsource more of these business-related functions and processes in the future [Canada Newswire 2003].

Critical Issues for eSourcing

The advantages of sourcing do not come without risk. The 2003 study released by Accenture and the Economist Intelligence Unit [Business Wire 2003] cited the three risks most often considered:

- the risk of valuable data falling into competitors' hands (52 percent)
- the risk that the cost of outsourcing will exceed expectations (48 percent)
- the erosion of in-house knowledge (45 percent)

Even after overcoming these initial concerns and contracting with a service provider, clients often find that sourcing is not fully meeting their needs. Twenty percent of respondents to an InformationWeek survey said that their outsourcing experiences had not met their expectations. In addition, many clients need to renegotiate sourcing contracts and reevaluate their choice in service providers. [InfoWeek]

According to a Dataquest study, more than half of all sourcing customers report having renegotiated a contract, and in nearly one-quarter of these renegotiations the original service provider lost the account [Gartner 2000]. In Dun & Bradstreet's Barometer of Global Outsourcing, companies reported that between 20% and 25% of all outsourcing relationships fail in any two-year period. Some 50% of the relationships fail within five years. The reasons cited for failure are remarkably similar across all types of relationships. Nearly 70% of the respondents noted that the outsourcing supplier "didn't understand what they were supposed to do" and "the cost was too high and they provided poor service." [Ozanne 2000]

In spite of the problems reported by many respondents, clients continue to plan to increase their outsourcing in the years beyond 2000. Over 30% of the companies presently outsourcing functions of their businesses are actively engaged in searching for outsourcing opportunities in additional functional areas. [Ozanne 2000]

Sourcing failures are largely related to a core set of critical issues affecting sourcing relationships. Based on literature review [Kumar 2001] and interviews with IT-enabled sourcing service providers and clients, 23 issues have been identified as critical for successful eSourcing:

Establishing and maintaining trust with stakeholders.

Building a trusting relationship with stakeholders is critical to success, especially in global sourcing, where engagements often span multiple years. This is particularly the case between clients and service providers, but is also important for all suppliers and partners involved in the sourcing relationship. By managing expectations and effectively responding to personnel, clients, and end-users, the service provider establishes trust with its stakeholders to help establish long-term relationships.

Managing stakeholder expectations.

A common source of failure in sourcing engagements is a difference in expectations between the client, the service provider, and the suppliers and partners. Identifying and managing those expectations helps to ensure a common understanding of what is necessary for success.

Translating implicit and explicit needs into defined requirements with agreed-upon levels of quality.

A frequent cause of failure in sourcing is that the service provider does not fully understand the needs of the client. This may be due to the inability of clients to adequately express their needs, as well as by a lack of rigor by the service provider in gathering and analyzing those needs. Successful service providers rigorously gather and analyze the stated and unstated needs, then translate those needs into a set of documented requirements. Successful providers also recognize that needs change over time and establish provisions for gathering and analyzing modifications to their services.

Establishing well-defined contracts with stakeholders, including clients, suppliers, and partners.

Poorly written contracts are a common cause of failure in sourcing, resulting in a significant number of contracts being renegotiated. Sourcing arrangements are typically long-term in nature and require contracts that are clear and detailed, as well as being flexible enough to account for business changes. Formal mechanisms are required in order for the provider to identify changing needs, modify services based on those changes, and amend contracts to reflect the current requirements and commitments.

Reviewing service design and deployment to ensure an adequate coverage of the requirements.

Frequently, failure in sourcing is caused by the service provider not fully addressing the needs of the client. To ensure that the service delivery will meet the client's needs,

successful engagements include rigorous reviews of the service design and deployment activities by the clients and the service provider prior to service delivery.

Ensuring the effectiveness of interactions with stakeholders.

Global sourcing often involves a combination of face-to-face and remote interactions. Interactions with clients need to be managed in order to effectively understand their needs; clear communications with all stakeholders can have a strong positive impact on the ability to effectively perform work.

Managing supplier and partner relationships to ensure that commitments are met.

Sourcing engagements often include multiple service providers working together to meet the client's needs. Regardless of the type of relationship (such as alliance, joint venture, subcontractor, and supplier), suppliers and partners can have a significant impact on the effectiveness of the service delivery and they must be actively managed.

Ensuring compliance with statutory and regulatory requirements.

In global sourcing, service providers are often faced with the need to comply with a large variety of laws and regulations, including laws in unfamiliar countries or regions. Effectively operating in this environment requires rigorous analysis and management of all applicable legal requirements to protect themselves and their clients.

Managing clients' security.

Managing security and controlling critical data and assets are critical to establishing trust. Security management includes protection of intellectual property, confidentiality, and privacy concerns. Breakdowns, such as security breaches, can impact the service provider's ability to provide adequate service and can irreparably damage the relationship with the client.

Managing cultural differences between stakeholders.

In global sourcing there are many potential cultural differences between service providers, clients, end-users, suppliers, and partners. These include differences between country, region, and organizational culture. These differences need to be identified and addressed in order to guard against breakdowns in communication.

Monitoring and controlling activities to consistently meet the service delivery commitments.

Successful service providers rigorously monitor their service delivery activities to ensure that the client's commitments are being met. Actions are taken to resolve and

prevent problems, thereby escalating issues as appropriate to ensure that they are addressed in a timely basis.

Monitoring and managing clients' and end-users' satisfaction.

Success is not always defined in terms of meeting the agreed-upon commitments, because clients and end-users may be unsatisfied even when commitments are being met. Successful sourcing engagements monitor the satisfaction levels of the stakeholders to identify problems and take action.

Building and maintaining the competencies that enable personnel to effectively perform their roles and responsibilities.

Sourcing is often highly dependant on specialized competencies, without which personnel cannot effectively perform the work assigned to them. Service providers need to manage the competencies of individuals as well as the workforce as a whole, in order to ensure that work is effectively performed and that the client's requirements are met.

Managing employee satisfaction, motivation, and retention.

IT-enabled sourcing often involves challenges during transition and deployment, and service delivery. High employee turnover jeopardizes the service provider's ability to meet its clients' requirements, and undermines their expected gains and performance levels. Proactively monitoring and managing employee satisfaction and motivation can improve personnel retention and effectiveness.

Establishing and maintaining an effective work environment.

A work environment that is well suited to the service being delivered enables personnel to effectively perform their work. It also contributes to employee satisfaction and retention.

Maintaining a competitive advantage.

Service providers need to effectively demonstrate their capabilities relative to competitors. This is initially done to differentiate the service provider from the competition in such a way that they will be chosen over other providers. On an ongoing basis, this is done to continually improve the organization's capabilities and demonstrate to clients that the current service provider is the organization best equipped to meet clients' changing needs. An important aspect of being competitive is demonstrating financial stability and longevity.

Innovating, building flexibility, and increasing responsiveness to meet unique and evolving client requirements.

The most successful sourcing engagements are those where the service provider is able to be flexible and responsive to clients' changing needs. Adopting innovations is one way to add value and meet new needs. Another is to actively manage the performance of the organization and continuously improve its capabilities.

Managing rapid technological shifts and maintaining the availability, reliability, accessibility, and security of technology.

By definition, technology is a key component of eSourcing. Major challenges for the service provider include keeping pace with rapid changes in technology and effectively managing the technology infrastructure while changes are incorporated.

Capturing and using knowledge.

Managing knowledge is critical to a service provider's ability to avoid rework and improve the consistency and quality of work performed by personnel. This includes the effective storage, retrieval, and use of knowledge gained on engagements.

Smoothly transferring services and resources.

A common cause of failure in sourcing is the ineffective management of the transfer of services and resources to and from the service provider, leading to service delivery problems. Successful service providers rigorously control the transfer of services and resources to ensure that the new service provider is able to adequately deliver the service and that service continuity is maintained.

Maintaining continuity of the service delivery.

Effectiveness of sourcing is related to the service provider's ability to maintain service continuity despite any problems that arise. Successful providers manage service continuity by effectively controlling and preventing problems during service delivery, preparing and responding to threats (e.g., disasters and risks), and coordinating the transfer of service during periods of transition (e.g., during contract completion).

Capturing and transferring knowledge gained to the client during contract completion.

A frequent concern of clients who consider sourcing is that in-house knowledge will be eroded, making it impossible to bring sourced services back in-house. Successful service providers address this concern by making provisions for capturing and transferring knowledge back to the client during contract completion.

Measuring and analyzing the reasons for termination, to prevent reoccurrence.

Termination may happen for a number of reasons, including an inability of the service provider to meet changing client needs, resolve problems, meet commitments, or match the capabilities of competitors. Rigorously analyzing the reasons for termination and taking action based on the findings helps to prevent issues from recurring with other clients and ensure the long-term success of the service provider.

Applying frameworks to eSourcing

The combination of high growth and significant failures in eSourcing highlights a growing need: both clients and service providers need to be able to address the critical issues in sourcing in order to increase their probability of success. Historically there has been no quality model that has focused on sourcing issues as a whole, so clients and service providers have attempted—with varying success—to apply other quality frameworks to address these issues.

In recent years a number of frameworks have been developed to provide a coherent way to apply principles from Total Quality Management (TQM) and industrial engineering to various domains and business contexts. While the philosophies of Deming [Deming 1986, Deming 1994], Juran [Juran 1992], and Crosby [Crosby 1979] have driven significant organizational improvement initiatives, there are a number of variants inspired by TQM that focus on specific aspects of improvement or on specific targets. Six Sigma® is probably the best known of the current general TQM strategies [Harry 2000].

In addition, a number of quality awards have been established to recognize quality and performance excellence and to encourage the adoption of improvement concepts: the Deming Prize in Japan [Deming], the Malcolm Baldrige National Quality Award in the United States [Baldrige], and the European Quality Award [EQA]. These standards include criteria that can be used to guide improvement efforts, and they provide the reference model for assessing award applicants.

ISO 9001:2001, which identifies the requirements for an acceptable quality management system, is a relevant general-purpose quality standard [ISO9001-1 2000]. Other standards that have been recently released or under development that may be pertinent to IT-enabled services include the following:

- ISO/IEC 12207 (Software Life Cycle Processes) [ISO12207 2002]
- ISO/IEC 15288, (System Life Cycle Processes) [ISO15288 2002]
- ISO/IEC 15504 (Software Process Assessment) [ISO15504-2 1998]
- ISO17799 (Information Technology—Code of Practice for Information Security Management) [ISO17799 2000]

The Software Engineering Institute (SEI℠) at Carnegie Mellon University has been at the forefront of applying TQM concepts to systems and software engineering via capability maturity models. The earliest and best-known of these models is the Capability Maturity Model for Software (Software CMM) [Paulk 1995]. The success of the Software CMM inspired a number of other maturity models, including the Systems Engineering CMM [Bate 1995], the Software Acquisition CMM [Ferguson 1996], and the People CMM [Curtis 2001]. The most recent SEI work has focused on integrating systems engineering, software engineering, integrated process and product development, and acquisition into a single model called CMM Integration℠ (CMMI®) [Chrissis 2003].

In addition to these frameworks, which are focused on quality or IT-related topics, a number of other frameworks address business or specific outsourcing topics. BS 15000 is a British standard for IT service management [BS 15000-1 2000, BS 15000-2 2003], which is aligned with the best practice guidelines of the IT Infrastructure Library (ITIL®) of the U.K. [ITIL]. The Customer Operations Performance Center (COPC-2000®) provides a comprehensive, measurement-driven, performance management system for customer-centric service operations such as customer contact centers and transaction processing centers [COPC 2000]. Control OBjectives for Information and related Technology (COBIT®) is an international set of generally accepted IT control objectives for day-to-day use by business managers as well as security practitioners and auditors [COBIT 2000].

As can be readily observed from this lengthy—but hardly comprehensive—list of frameworks, service providers have an abundance of resources to aid them in quality and process improvement. Perhaps more daunting is the observation that clients may impose a variety of these frameworks on their service providers. Even if each of these frameworks provides a significant value-added increment to a service provider's capability, the diversity of emphases and perspectives could be counter-productive.

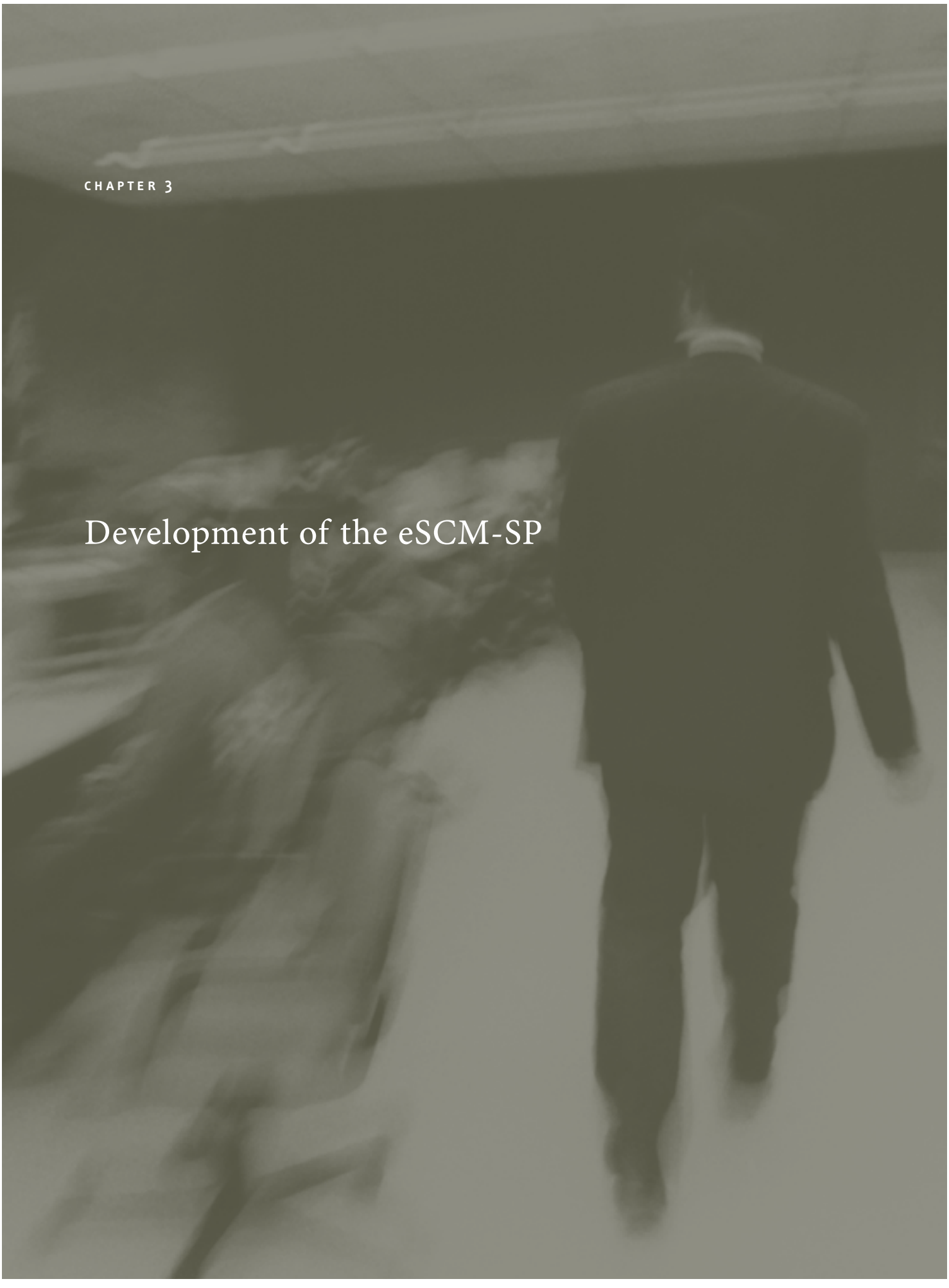
The Intent of the eSCM-SP

Individually and as a whole, the existing frameworks discussed above do not address all of the critical issues in eSourcing. Also, while these frameworks have been applied to sourcing, they do not readily provide methods to assess the capabilities of IT-enabled service providers to establish, manage, and improve relationships with clients. Some of these frameworks emphasize a level of structure that may interfere with success in a long-term sourcing engagement, where flexibility and adaptability are important. Some frameworks are so generic that their interpretation and usage varies considerably. Other frameworks provide more specific direction, but focus on a particular service or process. A more detailed description of the comparative coverage of several other frameworks with the eSourcing Capability Model for Service Providers (eSCM-SP) Practices is provided in Chapter 5, "Using the eSCM-SP."

The eSCM-SP has three purposes: (1) to give service providers guidance that will help them improve their capability across the sourcing life-cycle, (2) to provide clients with an objective means of evaluating the capability of service providers, and (3) to provide a standard that service providers can use when differentiating themselves from competitors. The ultimate success of the model will be demonstrated when model adopters see fewer sourcing relationships that end due to deficiencies in service providers' performance, more effective and efficient provision of services, and better relationships between service providers and their clients and partners. Table 1 lists the services and market sectors for which the eSCM-SP is expected to be particularly useful due to their potential for high growth.

Table 1. High Growth Market Sectors and Services

	MARKET SECTORS	SERVICE AREAS
PROJECTED FOR GROWTH	Banking, Financial Services, and Insurance	Application Service Provider
	Consumer Goods	Applications management
	Health Care	Customer care
	Hospitality	Data capture, integration, and analysis
	Manufacturing	Data center support
	Telecommunications	Desktop maintenance
	Transportation	Engineering services
	Utilities/Energy	Finance & Accounting
		Human resources
		Purchasing
		Telecommunications network support
		Transcription



CHAPTER 3

Development of the eSCM-SP

The eSourcing Capability Model for Service Providers (eSCM-SP) was developed by a consortium led by Carnegie Mellon University's Information Technology Services Qualification Center (ITsqc). In November 2001 the eSCM v1.0 was released and contained 100 Practices. In October 2002 the eSCM-SP v1.1 was released and contained 93 practices. The eSCM-SP v2 contains 84 Practices that address the critical capabilities needed by IT-enabled sourcing service providers. Each version of the model was developed and revised based on a variety of inputs: extensive literature reviews, interviews with sourcing clients and service providers, reviews of existing frameworks, pilot tests of model and certification methods, training offerings, early adopter feedback, and technical review by a board of experts.

An extensive literature review [Kumar 2001] identified a set of categories of best practices that represent critical issues for IT-enabled service providers: vendor selection, relationship management across the sourcing process, negotiations, contract management, pricing, performance measurement, and transition and completion of sourcing relationships. While most of the literature review was conducted during the development of v1.0, literature is reviewed on an ongoing basis to inform further model development.

Sourcing clients and service providers identified a set of critical issues that cover the formation, management, and expansion of sourcing relationships. Through interviews and feedback, experienced service providers and technical experts (e.g., security experts) provided vital information about each phase of the model revision.

Existing quality models and standards were analyzed to understand their intent and scope, and to identify their potential applicability to the sourcing process and critical issues of sourcing. This analysis was conducted to determine the need for a sourcing model and to identify and confirm critical issues. As other frameworks are revised or introduced, their impact on the eSCM-SP is analyzed.

Based on the literature reviews, interviews, and analyses of other frameworks, two dimensions were originally identified for the eSCM-SP: Sourcing Phases and Organizational Elements. The Sourcing Phases represented the temporality of the Practices; some Practices were relevant to a particular Sourcing Phase, while others covered multiple Phases. The Organizational Elements were Practice groupings that represented the need for the Practices to work as a system across the sourcing process, ensuring the establishment, management and expansion of sourcing relationships. This initial framework enabled analysis of Practice coverage and provided a structure for communicating the eSCM-SP to various audiences.

The draft Practices and framework for each version were reviewed and discussed with a Technical Advisory Board. Based on feedback from the December 2000 Technical Advisory Board meeting, the Practices were grouped into Capability Levels that provide a conceptual structure for continuously improving organizational performance and client relationships.

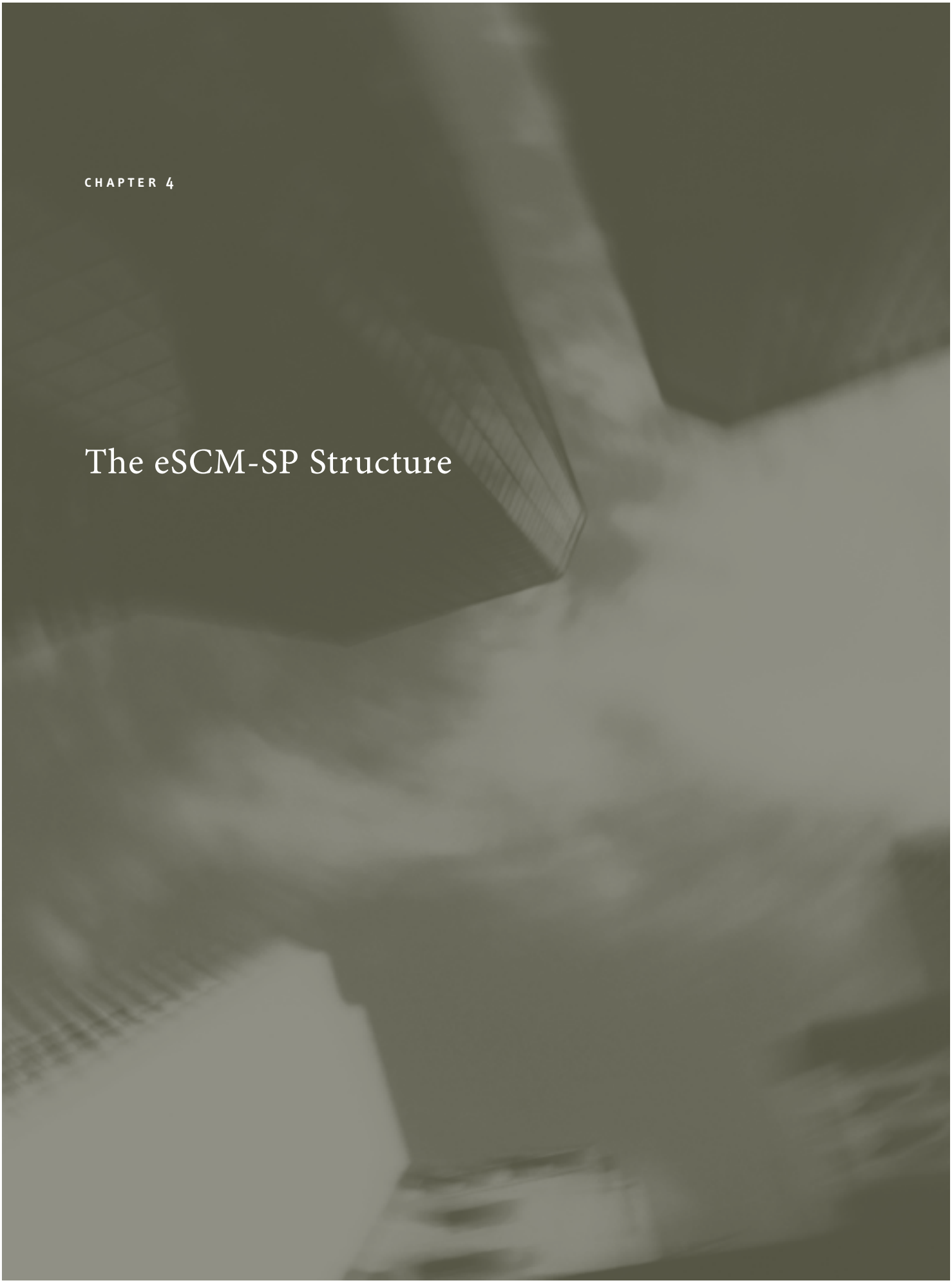
Valuable feedback from pilots and Evaluations for Certification has come from three countries, six service areas (application service provider, applications management, customer care, data center support, desktop maintenance, and engineering services), and four market sectors (banking and finance, consumer goods, health care, and utilities). Pilot evaluations of the Model and the certification method, and the certification of two organizations have provided information that was used to further refine the eSCM-SP and certification method. These refinements have not only improved the capability determination methods, but have also helped make the Model easier to understand and apply. Additional vital feedback has come from 24 training courses—with over 300 students—and their evaluations have been used to clarify and improve the model.

Two workshops were held to review and discuss the Model's framework and Practices. At the first, an invitational workshop conducted at Carnegie Mellon University in Fall 2001, participants confirmed the need for the Model and provided input to improve it. As a result of this workshop, a formal change control process was introduced with the release of v1.0. In Summer 2003 the second invitational workshop was held at Carnegie Mellon University to gather feedback from organizations that had made significant progress in implementing the eSCM-SP. The participants of this workshop reviewed several major changes being considered for v2 and provided information on their experiences in implementing the eSCM-SP.

Proposed changes to the eSCM-SP go through a rigorous change control process. Recommended changes are logged as change requests. The eSCM-SP Development Team, composed of ITsqc staff and consortium members, review the change requests to determine reasonableness and potential impact. Since the release of v1.1, eSCM-SP users have submitted over 200 formal change requests. After reviewing the requests, the Model Development Team proposes to the eSCM-SP Change Control Board (CCB) that the change requests be approved, rejected, or modified. The CCB makes a formal decision on the dispensation of the request. For any potentially significant change, the CCB investigates the impact with consortium members and other early adopters (e.g., through an Early Adopter's Workshop). Major changes are made available for public review before being finalized.

As a result of feedback from four major sources—formal change requests, Early Adopter's Workshops, evaluation pilots, and training—major changes were made to v2, including structural changes (how the Practices are organized and presented in the Model), and Practice changes (adding, deleting, merging, and splitting Practices). For a summary of Practice-level changes from v1.1 to v2, see *The eSourcing Capability Model for Service Providers (eSCM-SP) v2, Part 2: Practice Details.*

The eSCM-SP is a "best practices" model, and best practices evolve over time, especially in a dynamic area like IT-enabled services. The model has evolved, and will continue to evolve as data is collected from pilots, certifications, and improvement efforts. The current release of the eSCM-SP v2, will not change for at least four years to ensure a stable baseline for certification and data collection, but the eSCM-SP is a living model that can be expected to grow and adapt to the changing needs of the sourcing community.



CHAPTER 4

The eSCM-SP Structure

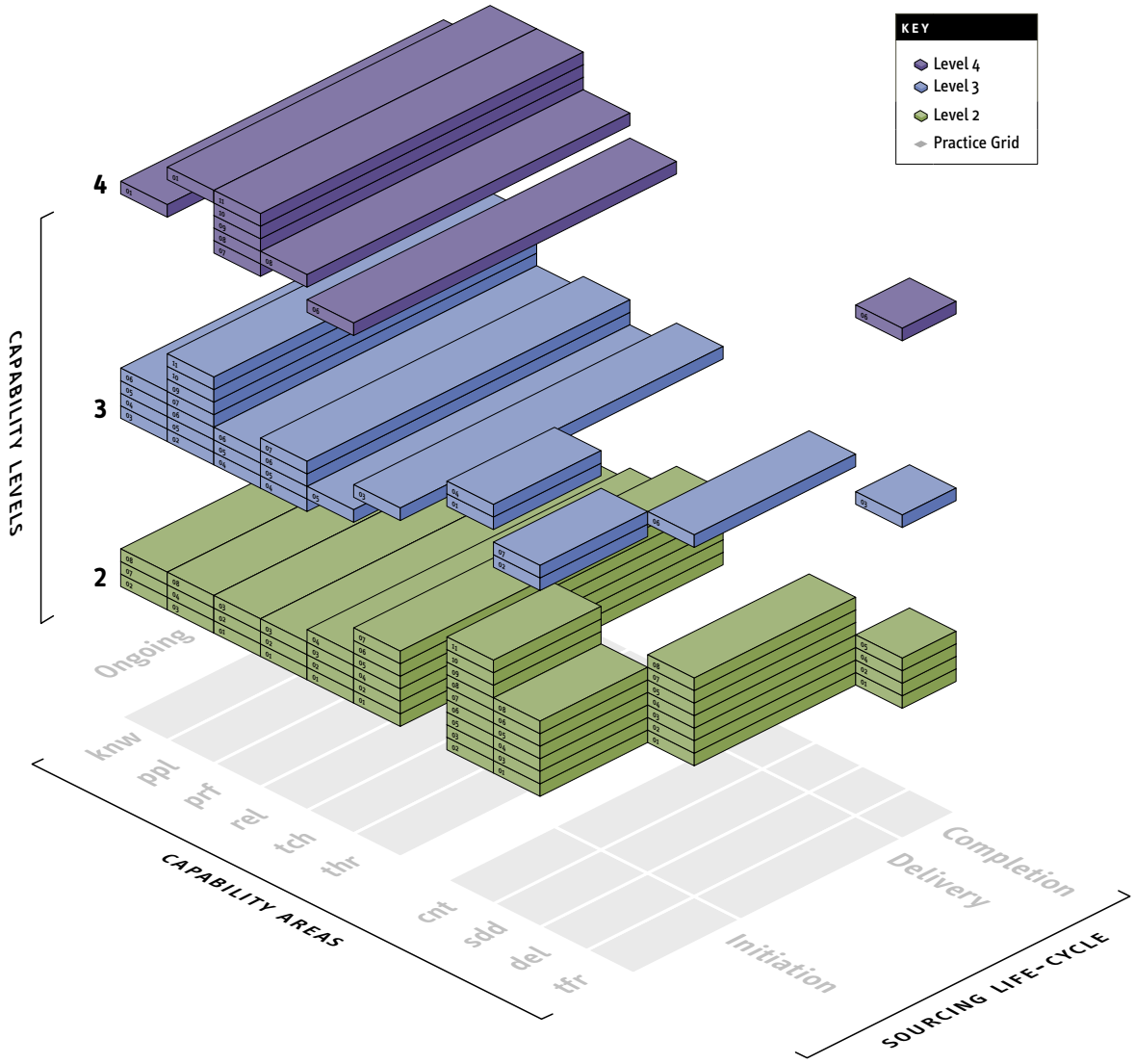


Figure 3.
The eSCM-SP v2
The eighty-four eSCM-SP v2 Practices are arranged within three dimensions: Sourcing Life-cycle, Capability Area, and Capability Level.

The eSCM-SP v2 is composed of 84 Practices, which can be thought of as the "best practices" that are associated with successful sourcing relationships. Each Practice is distributed along three dimensions: Sourcing Life-cycle, Capability Area, and Capability Level.

Practices

Each of the 84 Practices in the eSCM-SP contains information about a sourcing best practice. This information includes a statement summarizing the best practice, a description of the best practice, a list of activities needing to be performed, and supplemental information that helps clarify those activities. For more information on the structure of the 84 Practices, see *The eSourcing Capability Model for Service Providers, Part 2: Practice Details.* (For a one page summary of the Practices, see Appendix A.)

Sourcing Life-cycle

Although most quality models focus only on delivery capabilities, in eSourcing there are also critical issues associated with initiation and completion of the contract. For this reason the first dimension of the eSCM-SP Practices highlights where in the Sourcing Life-cycle each Practice is most relevant.

The Sourcing Life-cycle is divided into Ongoing, Initiation, Delivery, and Completion. Ongoing Practices span the entire Sourcing Life-cycle, while Initiation, Delivery, and Completion occur in specific phases of that Life-cycle. During Initiation the organization negotiates with the client, agrees on requirements, designs the service that will be provided, and deploys (transitions) that service. Initiation may also include transfer of personnel, technology infrastructure, and intellectual property. During Delivery the organization delivers service according to the agreed-upon commitments. During Completion the organization transfers resources, and the responsibility for service delivery, back to the client, or to the client's designee.

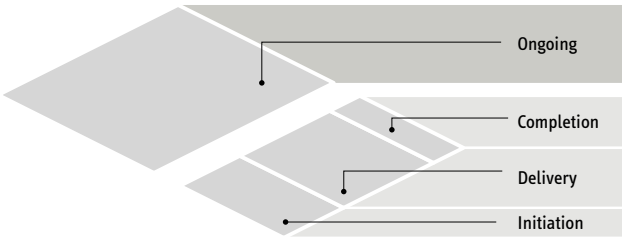


Figure 4.
The Sourcing Life-cycle
All of the Ongoing Practices are contained within six Capability Areas. The other four Capability Areas are associated with one or more phases.

Ongoing

Ongoing Practices represent management functions that need to be performed during the entire Sourcing Life-cycle. In order to meet the intent of these Practices, it is important to perform them across the whole Life-cycle; an organization that only performs an Ongoing Practice during Delivery is not meeting the intent of the Practice.

Some Ongoing Practices typically take place at the engagement level, crossing all phases of the Sourcing Life-cycle for that engagement. These are usually performed

on a periodic or as-needed basis, with the frequency being defined by the needs of the client and organization. For example, prf01, "Engagement Objectives," addresses defining and communicating engagement objectives. This Practice is engagement-specific and happens during all phases of an engagement. Each engagement has its own objectives, which need to be defined and communicated. When the engagement is completed its objectives are typically completed as well, and are no longer needed or tracked.

Other Ongoing Practices are implemented across engagements, at the organization level. For example, prf04, "Organizational Objectives," addresses defining and communicating organizational objectives. These objectives are not specific to any engagement (e.g., achieve a 10% profit margin, or attain eSCM-SP Level 3 certification). There is only one set of these organizational objectives, however, they may be translated into objectives for lower level parts of the service provider, like departments, groups, teams, or individuals, that may or may not correspond to whole engagements. These objectives can exist, and be communicated and tracked independent of any engagements. As long as the service provider exists then the organizational objectives need to exist.

Ongoing Practices cover the following:

- Managing and motivating personnel to effectively deliver services.
- Managing relationships with clients, suppliers, and business partners.
- Measuring and reviewing the organization's performance and taking action to improve its performance.
- Managing information and knowledge systems so that personnel have efficient access to the knowledge needed to effectively perform their work.
- Identifying and controlling threats to the organization's ability to meet its objectives and client requirements.
- Managing the technology infrastructure used to support delivery of service.

Initiation

Practices in Initiation focus on the capabilities needed to effectively prepare for service delivery. These Practices are concerned with gathering requirements, negotiating, contracting, and designing and deploying the service, including transferring the necessary resources. Initiation Practices cover the following:

- Preparing for negotiation by having an organizational position on pricing and other topics that need to be negotiated.
- Understanding the client's requirements by gathering information about the client and its stated and unstated needs.

- Analyzing the organization's ability to meet the client's requirements and defining an approach for positioning the organization's capabilities. Using the defined approach as the basis for responding to the client.
- Working with the client to confirm the assumptions that impact the agreed-upon commitments.
- Establishing a formal agreement with the client that clearly articulates the organization's and client's responsibilities and commitments.
- Managing the effective transfer of resources needed for service delivery, including personnel, technology infrastructure, and work environment.
- Clearly articulating, in a service specification, what services are being contracted, and using the service specification as the foundation for service design and deployment.
- Obtaining and using feedback on the service design in order to ensure that the services are meeting the client's requirements and the agreed-upon commitments.
- Effectively managing service design and deployment.

Delivery

Practices in Delivery focus on service delivery capabilities, including the ongoing management of service delivery, verification that commitments are being met, and management of the finances associated with the service provision. They cover the following:

- Planning and tracking the service delivery activities.
- Delivering services according to the agreed-upon commitments.
- Providing adequate training to clients and end-users to enable them to effectively use the services being delivered.
- Managing the finances associated with the service delivery.
- Identifying and controlling modifications to the services being provided or to the associated service commitments.
- Identifying problems that impact the service delivery and taking both preventive and corrective actions.

Completion

Practices in Completion focus on the capabilities needed to effectively close down an engagement at the end of the Sourcing Life-cycle. They mainly include the transition of resources to the client, or to a third party, from the service provider. They cover the following:

- Managing the effective transfer of resources to the new service provider, whether it is to the client or to another service provider. This includes the

potential transfer of people, technology infrastructure, and intellectual property, (e.g., source code or processes).
- Ensuring service continuity during the transfer of responsibilities for service provision.
- Identifying and transferring the knowledge capital critical for the delivery of service.

Capability Areas

eSourcing is delivered through a series of interdependent functions that enables service providers to effectively deliver service. The second dimension of the eSCM-SP, Capability Areas, provides logical groupings of Practices to help users better remember and intellectually manage the content of the model. These groupings allow service providers to build or demonstrate capabilities in each critical sourcing function, addressing all of the critical sourcing issues discussed above.

All of the Ongoing Practices are contained within six of the ten Capability Areas: Knowledge Management, People Management, Performance Management, Relationship Management, Technology Management, and Threat Management. The Ongoing Capability Areas are presented alphabetically. The other four Capability Areas are temporal and are typically associated with a single phase of the Sourcing Life-cycle: Initiation, Delivery, or Completion. The exception is Service Transfer, which includes both Initiation and Completion Practices. In addition to Service Transfer, these temporal Capability Areas are Contracting, Service Design & Deployment, and Service Delivery. These four Capability Areas are presented in temporal order. (Appendix B contains a list of Practices by Capability Area.)

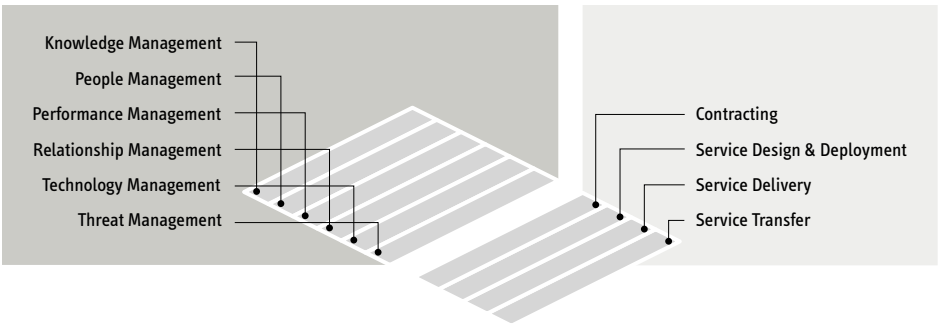


Figure 5.
The Capability Areas
All of the Ongoing Practices are contained within six Capability Areas. The other four Capability Areas are associated with one or more phases.

Knowledge Management (knw)

These eight Practices focus on managing information and knowledge systems so that personnel have easy access to the knowledge needed to effectively perform their work. All Knowledge Management Practices are Ongoing. This Capability Area addresses the critical issues of capturing and using knowledge, and measuring and analyzing reasons for termination. Knowledge Management covers the following issues:

- Demonstrating a commitment to knowledge sharing through formal policies.
- Providing the information needed by personnel in a knowledge system that allows controlled but efficient access.
- Effectively managing the use of process assets across the organization, ensuring consistency as appropriate. Reusing process assets to improve the effectiveness of personnel and to take advantage of expert practices.
- Controlling changes to work products through formal version control and change control.
- Maintaining information on resource usage and lessons learned to improve current and future performance.

People Management (ppl)

These eleven Practices focus on managing and motivating personnel to effectively deliver services. They address understanding the organization's needs for personnel and skills, filling those needs, and encouraging the appropriate behaviors to effectively deliver service. All People Management Practices are Ongoing. This Capability Area addresses the critical issues of establishing and maintaining an effective work environment, building and maintaining competencies, and managing employee satisfaction, motivation, and retention. People Management covers the following issues:

- Demonstrating a commitment to people through formal policies covering the participation of personnel in decision-making and career development, and encouraging innovation.
- Providing an adequate work environment.
- Clearly defining and communicating roles and responsibilities to personnel.
- Identifying workforce and personnel competency needs, and developing (i.e., training) or acquiring personnel with the necessary competencies.
- Providing feedback on personnel performance on a timely basis and providing appropriate rewards and recognition to encourage desired performance.

Performance Management (prf)

These eleven Practices focus on managing the organization's performance to ensure that the client's requirements are being met, that the organization is continually

learning from its experience, and that the organization is continually improving across engagements. These Practices address the effective capture, analysis, and use of data, including data on the organization's capabilities relative to its competitors. All Performance Management Practices are Ongoing. This Capability Area primarily addresses the critical issues of maintaining competitive advantage, innovating, building flexibility, and increasing responsiveness. It also addresses monitoring and controlling activities to consistently meet service delivery commitments. Performance Management covers the following issues:

- Defining engagement and organizational objectives and reviewing the organization's performance against those objectives.
- Establishing organization-wide programs to meet its objectives.
- Identifying and implementing performance improvements.
- Measuring the organization's capabilities and benchmarking its performance as the basis for improvements.
- Providing adequate resources to enable personnel to effectively perform their work.
- Deploying innovations across the organization in order to broadly improve its performance.

Relationship Management (rel)

These eight Practices focus on actively managing relationships with stakeholders, including the client, as well as suppliers and partners who are integral to the delivery of services to the client. All Relationship Management Practices are Ongoing. Relationship Management primarily addresses the critical issues of managing stakeholder expectations, establishing and maintaining trust and ensuring the effectiveness of interactions with stakeholders, managing supplier and partner relationships, managing the cultural differences between stakeholders, and monitoring and managing the client's and end-users' satisfaction. This Capability Area also addresses innovating, building flexibility, increasing responsiveness, establishing well-defined contracts with stakeholders, and maintaining a competitive advantage. Relationship Management covers the following issues:

- Managing interactions with clients to ensure their effectiveness and to capture critical information that is uncovered during these interactions.
- Formally managing relationships with clients, suppliers, and partners by establishing relationship objectives and tracking progress against those objectives.
- Selecting suppliers and partners based on their ability to meet the identified requirements, and managing their performance against the agreed-upon commitments.

- Obtaining feedback from all stakeholders, including clients, end-users, employees, suppliers, and partners. Using this feedback to improve performance and relationships with those stakeholders.
- Proactively identifying opportunities that will provide added value to clients or to the service provider.

Technology Management (tch)

These six Practices focus on managing the availability and adequacy of the technology infrastructure used to support the delivery of the services. Their focus covers controlling the existing technology, managing changes to that technology, and appropriately integrating the technology infrastructure with the client, suppliers, and partners to effectively deliver service. All Technology Management Practices are Ongoing. This Capability Area addresses the critical issue of managing rapid technological shifts and maintaining technology availability, reliability, accessibility, and security. It also addresses innovating, building flexibility, and increasing responsiveness. Technology Management covers the following issues:

- Managing the acquisition and deployment of technology.
- Integrating the organization's technology infrastructure with that of the client and other service providers, as appropriate.
- Managing the licensing of technology.
- Optimizing the performance of the technology infrastructure.

Threat Management (thr)

These seven Practices focus on identifying and actively managing threats to the organization's ability to meet its objectives and the requirements of the client. They focus on active risk management, paying particular attention to the risks associated with security, confidentiality, infrastructure, and disasters that may disrupt service or fail to meet the requirements of the client. All Threat Management Practices are Ongoing. This Capability Area addresses the critical issues of managing clients' security, and ensuring compliance with statutory and regulatory requirements. It also addresses maintaining the continuity of service delivery, managing rapid technological shifts, and maintaining the availability, reliability, accessibility, and security of the technology. Threat Management covers the following issues:

- Demonstrating management's commitment to risk management through formal policies.
- Identifying, assessing, and controlling risks.
- Managing security, confidentiality, and intellectual property threats.
- Preparing for and managing recovery from disasters.
- Monitoring statutes and regulations to ensure compliance.

Contracting (cnt)

These eleven Practices focus on effectively managing the process of gathering client requirements, analyzing them, and negotiating a formal agreement that describes how the service provider will meet those requirements. A critical component of contracting is understanding the client's expectations and needs, and agreeing with the client on how the organization will meet those requirements. All Contracting Practices are in Initiation. This Capability Area addresses the critical issues of translating implicit and explicit needs into the defined requirements, and establishing well-defined contracts with stakeholders. It also addresses maintaining competitive advantage. Contracting covers the following issues:

- Preparing for negotiation by having an organizational position on pricing and other topics that need to be negotiated.
- Understanding clients' requirements by gathering information about the clients and their stated and unstated needs.
- Analyzing the organization's ability to meet clients' requirements and defining an approach for positioning the organization's capabilities. Using the defined approach as the basis for responding to clients.
- Working with clients to confirm the assumptions that impact commitments.
- Establishing a formal agreement with clients that clearly articulates the service provider's and clients' responsibilities and commitments.

Service Design & Deployment (sdd)

These eight Practices focus on translating the client's requirements and the contract language of what will be provided into a detailed design for how it will be provided, and on effectively deploying (transitioning) that design. This Capability Area is closely related to the Contracting Capability Area. All Service Design & Deployment Practices are in Initiation. This Capability Area addresses the critical issue of reviewing service design and deployment to ensure adequate coverage of the requirements. It also addresses developing procedures for monitoring and controlling activities to consistently meet service delivery commitments. Service Design & Deployment covers the following issues:

- Clearly articulating the services being contracted in a service specification. Using the service specification as the foundation for service design and deployment.
- Obtaining and using feedback about the service design in order to ensure that the services are meeting client requirements and agreed-upon commitments.
- Effectively managing service design and deployment.

Service Delivery (del)

These eight Practices focus on the continued delivery of services according to commitments made to clients and based on service designs. They include planning and tracking of the service delivery activities. The Service Delivery Practices are the only ones in Delivery. This Capability Area addresses the critical issues of monitoring and controlling activities to consistently meet service delivery commitments, and maintaining continuity of service delivery. It also addresses establishing well-defined contracts with stakeholders, and maintaining a competitive advantage. Service Delivery covers the following issues:

- Planning and tracking service delivery activities.
- Delivering services according to agreed-upon commitments.
- Providing adequate training to clients and end-users to enable them to effectively use the services being delivered.
- Managing the finances associated with the service delivery.
- Identifying and controlling modifications to the services being provided or to the associated service commitments.
- Identifying problems that impact service delivery and taking both preventive and corrective actions.

Service Transfer (tfr)

These six Practices focus on transferring resources between service providers and clients or other service providers. In Initiation the resources are transferred to the organization as it takes responsibility for service delivery. This transfer may include people, processes, technology, and knowledge needed to effectively perform that service delivery. In Completion the organization transfers resources to the new service provider (either the client or an external service provider) in a manner that ensures continued service to the client during the transfer period. This Capability Area addresses the critical issues of smoothly transferring services and resources, and capturing and transferring the knowledge gained during the engagement to the client during contract completion. It also addresses maintaining continuity of service delivery. Service Transfer covers the following issues:

- Managing the effective transfer of resources needed for the service delivery, including personnel, technology infrastructure, and work environment.
- Managing the effective transfer of resources to the new service provider, whether the client or another service provider. This may include transfer of people, technology infrastructure, and work environment.

- Ensuring continuity of service during the transfer of the service provision responsibilities.
- Identifying and transferring knowledge capital critical for the delivery of service.

Table 2. Mapping Critical Issues to Capability Areas

CRITICAL ISSUE	PRIMARY
Establishing and maintaining trust with stakeholders.	rel
Managing stakeholder expectations.	rel
Translating implicit and explicit needs into defined requirements with agreed-upon levels of quality.	cnt, del
Establishing well-defined contracts with stakeholders, including clients, suppliers, and partners.	rel, cnt
Reviewing service design and deployment to ensure an adequate coverage of the requirements.	sdd
Ensuring the effectiveness of interactions with stakeholders.	rel
Managing supplier and partner relationships to ensure that commitments are met.	rel
Ensuring compliance with statutory and regulatory requirements.	thr
Managing clients' security.	thr
Managing cultural differences between stakeholders.	rel
Monitoring and controlling activities to consistently meet the service delivery commitments.	prf, sdd, del
Monitoring and managing clients' and end-users' satisfaction.	rel
Building and maintaining the competencies that enable personnel to effectively perform their roles and responsibilities.	ppl
Managing employee satisfaction, motivation, and retention.	ppl
Establishing and maintaining an effective work environment.	ppl
Maintaining a competitive advantage.	prf, rel, cnt
Innovating, building flexibility, and increasing responsiveness to meet unique and evolving client requirements.	prf, rel
Managing rapid technological shifts and maintaining the availability, reliability, accessibility, and security of technology.	tch, thr
Capturing and using knowledge.	knw
Smoothly transfer services and resources.	tfr
Maintaining continuity of the service delivery.	thr, del, tfr
Capturing and transferring knowledge gained to the client during contract completion.	tfr
Measuring and analyzing the reasons for termination, to prevent reoccurrence.	knw

Mapping Capability Areas to Critical Issues

There are a number of issues in eSourcing that are critical to success (see "Critical Issues for eSourcing" in Chapter 2). The eSCM-SP is intended to address each of these critical issues in one or more Practices. Table 2 provides a summary of which Capability Areas contain Practices that primarily address each critical issue. In several cases, multiple Capability Areas include Practices that significantly contribute to addressing a given critical issue.

Capability Levels

The third dimension in the eSCM-SP is Capability Levels. The five Capability Levels of the eSCM-SP describe an improvement path that clients should expect service providers to travel. This path starts from a desire to provide eSourcing services, and continues to the highest level, demonstrating an ability to sustain excellence.

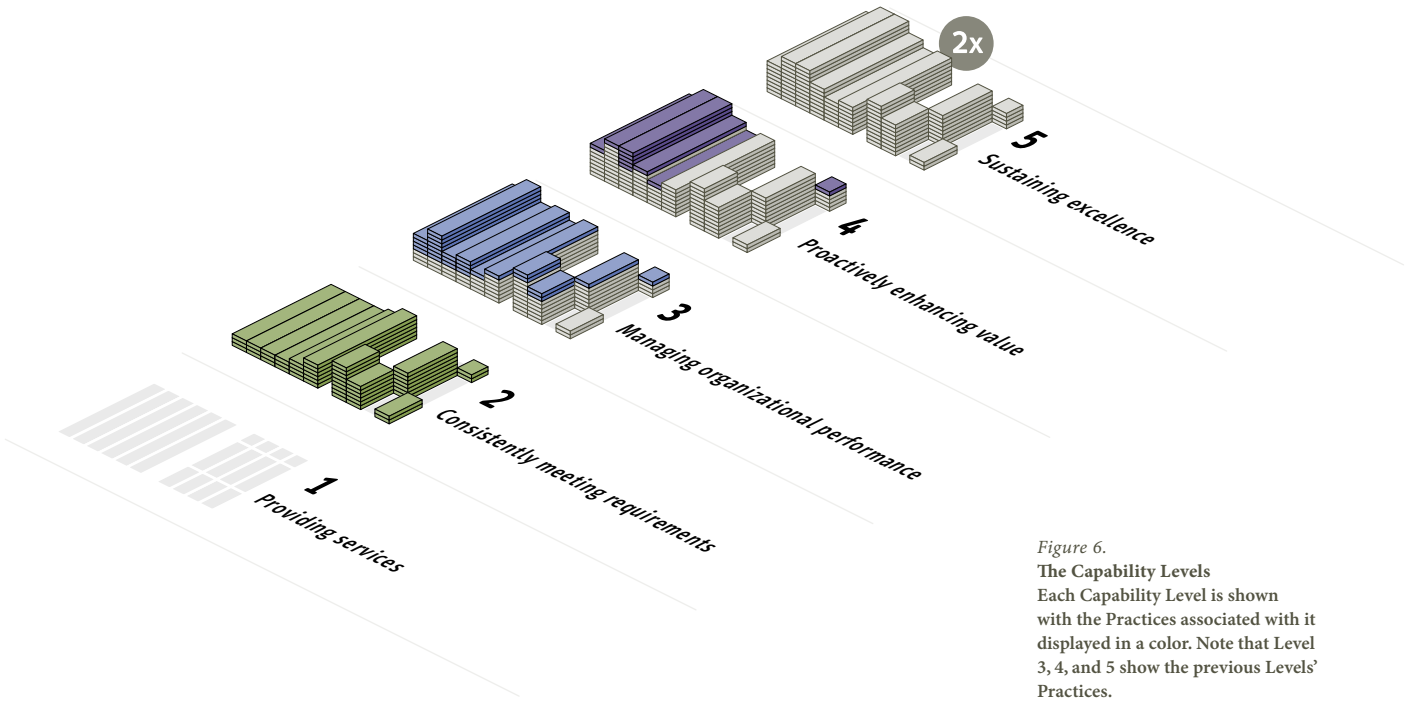


Figure 6.
The Capability Levels
Each Capability Level is shown with the Practices associated with it displayed in a color. Note that Level 3, 4, and 5 show the previous Levels' Practices.

Figure 7.
Level 1: Providing Services
Level 1 has no Practices associated with it.

Level 1: Providing Services

The capabilities of Level 1 service providers vary widely. Some may have almost none of the eSCM-SP Practices implemented. These providers are very likely to be a high risk to work with because they often promise more than they deliver. Other service providers may have many of the eSCM-SP Practices implemented, including some Practices at Capability Levels 3 and 4. Because these service providers have not fully implemented all of the Level 2 Practices, they may meet many client's needs successfully, but they will still be at risk of failure in areas where they have not implemented the necessary eSCM-SP Practices.

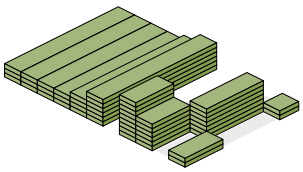


Figure 8.
Level 2: Consistently Meeting Requirements
Level 2 has 48 Practices, distributed throughout the Sourcing Life-cycle.

Level 2: Consistently Meeting Requirements

Service providers at Capability Level 2 have formalized procedures for capturing requirements and delivering the services according to commitments made to clients and other stakeholders. Providers are able to deliver specific services according to stated client expectations, provided the services do not significantly vary from the provider's experiences. At Level 2 the service provider is able to systematically capture and understand requirements, design and deploy services to meet the requirements, and successfully deliver the services according to agreed upon service levels.

The infrastructure (e.g., work environment, training, technology, and information) is in place to support consistent performance of work that meets the service provider's commitments. Level 2 service providers have implemented all of the Level 2 Practices and can demonstrate their effective usage.

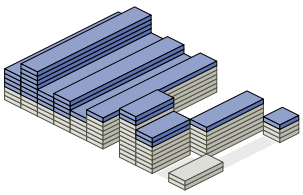


Figure 9.
Level 3: Managing Organizational Performance
Level 3 has 26 Practices. To achieve Level 3, a service providers must implement all Level 2 and 3 Practices.

Level 3: Managing Organizational Performance

Service providers at Capability Level 3 are able to deliver services according to stated requirements, even if the required services differ significantly from the provider's experience. At Level 3, the service provider is able to manage its performance across the organization; understand targeted market services and their varying requirements, including specific cultural attributes; identify and manage risks across engagements; and design and deliver services based on established procedures. The service provider supports this capability through sharing and using knowledge gained from previous engagements, objectively measuring and rewarding personnel performance, and monitoring and controlling technology infrastructure.

Having established systems for forming and managing client relationships, providers at Capability Level 3 continuously aim to improve the services delivered. Improvements are reactive and are typically generated from the defined measurement and verification activities. The Level 3 service provider demonstrates measurable improvement with respect to organizational objectives. Organizational learning improves performance with respect to organizational objectives and across engagements. Level 3 providers have effectively implemented all of the Level 2 and 3 Practices.

Level 4: Proactively Enhancing Value

Service providers at Capability Level 4 are able to continuously innovate to add statistically and practically significant value to the services they provide to their clients and other stakeholders. At Level 4 the service provider is able to customize its approach and service for clients and prospective clients, understand client perceptions, and predict its performance based on previous experiences. The service provider supports this capability through systematically evaluating and incorporating technology advances and setting performance goals from a comparative analysis of its current performance as well as from internal and external benchmarks.

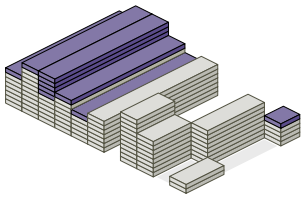


Figure 10.
Level 4: Proactively Enhancing Value
Level 4 has 10 Practices. To achieve Level 4, a service provider must implement all Level 2, 3, and 4 Practices.

Level 4 providers systematically plan, implement, and control their own improvement, typically generating these plans from their own performance benchmarks. They have effectively implemented all of the Level 2, 3, and 4 Practices.

Level 5: Sustaining Excellence

Service providers at Capability Level 5 have demonstrated measurable, sustained, and consistent performance excellence and improvement by effectively implementing all of the Level 2, 3, and 4 practices for two or more consecutive Certification Evaluations covering a period of at least two years. There are no additional Practices required to reach Level 5; effective, continued, implementation of all the eSCM-SP Practices in a rapidly changing environment shows an ability to sustain excellence throughout the organization over time.

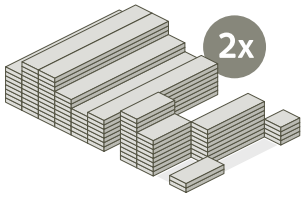


Figure 11.
Level 5: Sustaining Excellence
Level 5 has no new Practices associated with it. It requires sustained implementation of every Practice over the course of two consecutive Evaluations for Certification.

The eSCM-SP Focus by Capability Level

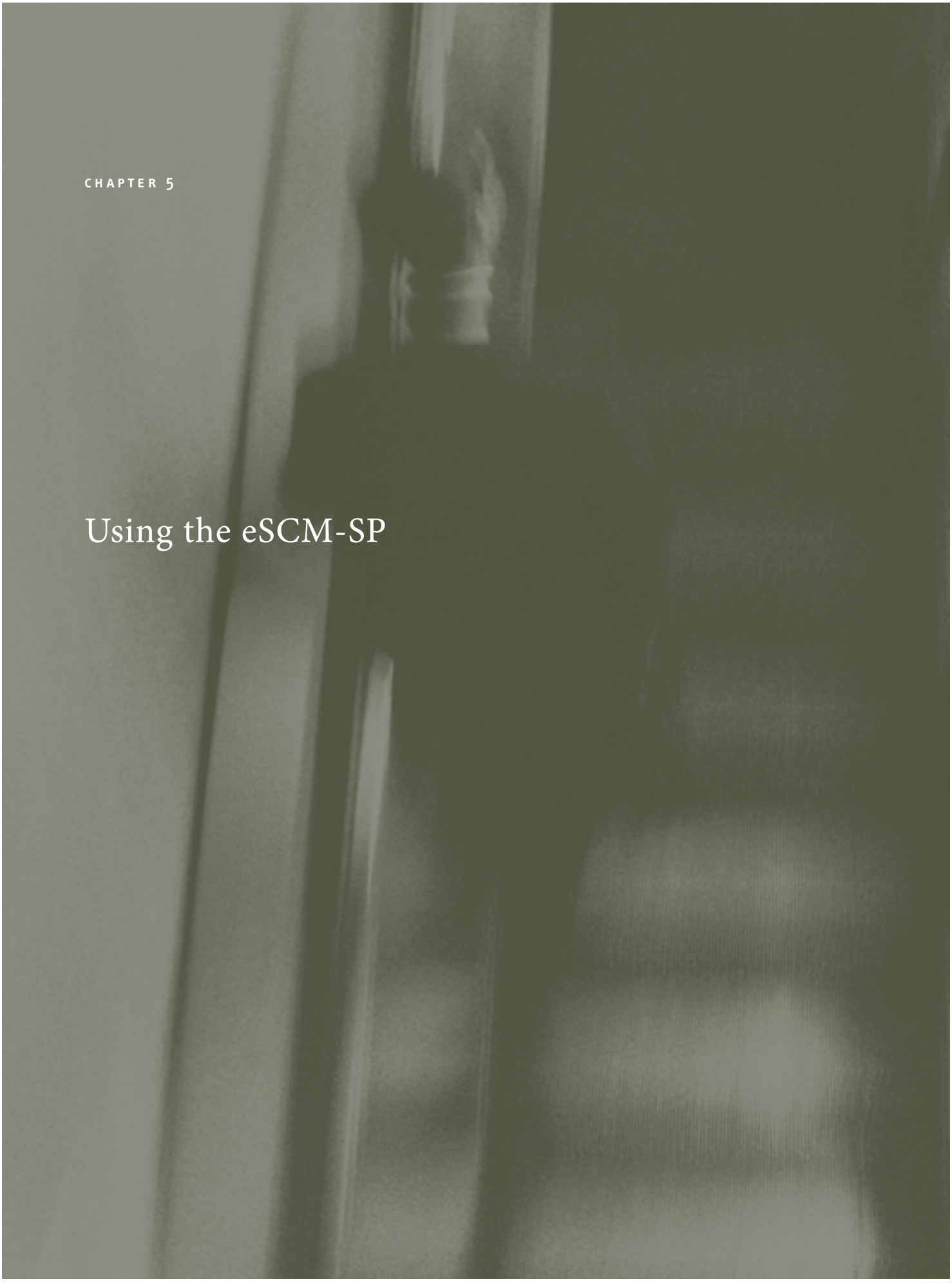
Each of the Capability Levels in the eSCM-SP focuses on a particular aspect of client service and organizational management, with higher capabilities required at higher levels.

For client services, Level 2 focuses on ensuring that client needs are understood and met on each engagement. Level 3 uses capabilities in organizational management, and takes advantage of economies of scale, to improve the quality and effectiveness of service across client engagements. Level 4 adds a focus on using innovation to proactively enhance service delivery.

With respect to organizational management, Level 2 focuses on effectively managing a single engagement to meet the engagement objectives and client needs. Level 3 expands on this to focus on effective management across engagements to achieve long-term organizational objectives. This focus also results in the organization's ability to take advantage of its experience gained from each engagement for use across a portfolio of engagements. Level 4 further expands this focus to managing programs that statistically improve performance by applying innovation and organizational learning across the organization.

Table 3. The eSCM-SP focus by Capability Level

	LEVEL 2	LEVEL 3	LEVEL 4
LEVEL TAG	Consistently meeting requirements	Managing organizational performance	Proactively enhancing value
CLIENT FOCUS (BENEFIT TO CLIENT)	Requirements are consistently understood and met.	Take advantage of economies of scale and organizational improvement of the service provider.	Take advantage of innovation and industry-leading practices of the service provider.
ORGANIZATIONAL FOCUS (BENEFIT TO ORGANIZATION)	Meet engagement objectives by achieving success with the client. Client requirements form basis of defining success.	Meet organizational objectives by measuring and optimizing performance across engagements.	Meet organizational objectives by systematically innovating and establishing programs to measure and optimize performance compared to the industry.
ORGANIZATION SIZE	One or more engagements.	Two or more engagements under one management structure.	Two or more engagements under one management structure.



CHAPTER 5

Using the eSCM-SP

The eSCM-SP has three purposes: (1) evaluation of potential service providers, (2) improvement, and (3) competitive differentiation. The Model provides clients with an objective, consistent means of evaluating the capability of potential service providers. It offers guidance to service providers that will help them improve their capabilities across the Sourcing Life-cycle. It gives service providers a publicly available standard to use to differentiate themselves from their competitors.

Evaluating Service Provider Capabilities

A set of capability determination methods has been developed to rigorously diagnose the capabilities of a service provider. Diagnosis of a service provider's capabilities assures potential clients that the service provider has an appropriate set of capabilities in place to meet its commitments. Clients can also use the results of the diagnosis to understand the risks associated with working with a particular service provider. The service provider may use the results of the diagnosis to address problems and guide improvement actions. An evaluation process is in place for those service providers who wish to pursue formal certification of their capabilities. Evaluation for Certification is described in Chapter 7, "Certification."

Implementing the eSCM-SP

There are two major strategies for improvement of a service provider: framework-based and measurement-based. The eSCM-SP has features of both. A framework-based strategy uses models and standards as frameworks to identify what processes and systems should be implemented in a successful organization. Improvement based on the eSCM-SP is an example of this strategy. Certification in some framework-based strategies, including ISO 9001, is binary; an organization is either compliant with the standard or not. Models such as the eSCM-SP measure organizations or processes using a form of ordinal scale (e.g., maturity levels or capability levels). Assessments using a framework identify what to do, but do not usually describe how to do it. Frameworks typically do not specify performance levels for specific tasks (e.g., 5500 transactions per quarter).

The second strategy is measurement-based. The service provider's processes and systems are measured and compared to objectives set by management in order to identify which ones need to be improved. Measurement trends are used to confirm and quantify improvements.

Framework-based strategies include measurement components: establishing objectives, planning how to achieve those objectives, measuring their effectiveness and efficiency, and taking corrective and/or preventive action. The eSCM-SP includes Practices that cover all of these measurement components.

Although frameworks such as the eSCM-SP focus on what processes and systems should be in place, a measurement system that supports management by fact is integral to building more capable organizations. Framework-based strategies naturally evolve toward measurement-based strategies tailored to the business needs of the organization as the foundational capabilities described by the framework are successfully put in place.

A continuous improvement cycle is a critical part of any improvement strategy, and includes six steps. (1) Identify the need for change. (2) Establish sponsorship for improvement. (3) Diagnose problems and opportunities for improvement. (4) Act on the diagnosis. (5) Monitor the results. (6) Loop back to continue the improvement cycle.

Although the eSCM-SP does not explicitly describe a continuing improvement cycle, both the framework-based and measurement-based strategies operate within the context of the cycle. Examples of the continuing improvement cycle include the PDCA (Plan-Do-Check-Act) [Deming 1986, Deming 1994] and IDEAL[SM] (Initiate-Diagnose-Establish-Act-Learn) [McFeeley 1996] cycles. Service providers may employ a number of improvement frameworks (the eSCM-SP, for example) as they implement a continuing improvement cycle.

Many factors may affect the success of improvements. Research [Emam 1999] indicates that the most important factors include the following:

- management's commitment to and support of the improvement of the processes.
- involvement of the organization's staff in the process improvement effort.

- the staff's understanding of the current processes and their relationships to other business activities.
- clear process improvement goals that are understood by the staff.
- customization of the improvement initiatives.
- a respected process-improvement staff.

Successful improvement based on the eSCM-SP must be driven by the business objectives of the service provider, not simply by a desire to be certified using the Model. By explicitly basing an organization's improvement actions on its business objectives, senior management is able to maintain consistent sponsorship of the improvement initiative. The service provider can maintain a tactical focus on its near-term business needs by treating the improvement process as a project (that is, measuring its progress and using management-by-fact to control the improvement). Both strategic vision and tactical actions are needed to stay the course of continuous improvement.

Other frameworks used by the organization may impact the improvement actions based on the eSCM-SP. By focusing on its business objectives, the organization can leverage its existing work on other improvement initiatives, allowing it to develop an integrated improvement strategy. Understanding the relationships between the eSCM-SP and other related models and standards can help the organization to complement or supplement its eSCM-SP implementation strategy.

Using the eSCM-SP with Other Frameworks

A number of models and standards exist that are focused on quality or IT-related topics. These frameworks have a variety of issuing bodies, scopes, architectures, and rating methods:

- General Total Quality Management (TQM) philosophies, such as those of Deming [Deming 1986, Deming 1994], Juran [Juran 1992], and Crosby [Crosby 1979].
- Performance excellence strategies such as Six Sigma [Harry 2000].
- The criteria for quality awards such as the Deming Prize in Japan [Deming], the Malcolm Baldrige National Quality Award in the United States [Baldrige], and the European Quality Award [EQA].
- Standards such as the following:

    - ISO 9001 (Quality Management Systems-Requirements) [ISO9001 2000]
    - Control OBjectives for Information and related Technology (COBIT) [COBIT 2000]
    - ISO/IEC 12207 (Software Life Cycle Processes) [ISO12207 2002]
    - ISO/IEC 15288 (System Life Cycle Processes) [ISO15288 2002]
    - ISO/IEC 15504 (Software Process Assessment) [ISO15504-2 1998]
    - ISO 17799 (Information Security Management Systems—Code of Practice for Information Security Management) [ISO 17799 2000]
    - BS 15000 (IT Service Management) [BS15000-1:2002, BS15000-2:2003]
    - COPC
- Process improvement models such as the following:
    - the Capability Maturity Model (CMM) for Software [Paulk 1995]
    - the Systems Engineering CMM [Bate 1995]
    - the Software Acquisition CMM [Ferguson 1996]
    - the People CMM [Curtis 2001]
    - CMM Integration (CMMI) [Chrissis 2003]

An overview of the relationships between the eSCM-SP and five frameworks that are frequently used in IT-enabled sourcing is provided in this chapter. At this writing, there are no known conceptual conflicts between eSCM-SP v2 and the frameworks listed above, although there are significant differences in scope and detail. Table 4 shows a quick comparison of all five frameworks described in this section.

Table 4. Comparison of Frameworks

	eSCM-SP v2 *itsqc.cs.cmu.edu/escm*	**CobiT v3** *www.isaca.org*	**ISO 9001:2000** *www.iso.ch*	**BS 15000:2002** *www.itsmf.com*	**CMMI v1.1** *www.sei.cmu.edu/cmmi*	**COPC r3.3** *www.copc.com*
AUDIENCE	Service providers of IT-enabled sourcing services	IT organizations	Manufacturer and providers of all types of products and services	Service organizations	Organizations developing software intensive systems	Customer Service Providers of customer-centric service operations
PURPOSE	Building and improving service providers' capability to meet customer needs throughout the sourcing life cycle.	Information systems audit and control; IT alignment and governance.	Requirements for establishing a quality management system.	Specifying industry best practice for IT service management.	Providing best practices for systems engineering, software engineering, integrated product and process development, and acquisition.	Establishing performance management system for providers of customer-centric service.
SIZE	84 Practices in 10 Capability Areas	34 IT processes and 318 detailed control objectives organized into four domains	51 clauses	18 clauses	628 practices in 25 process areas (continuous representation)	33 items in 4 categories
COVERAGE	**10** Capability Areas **4** Sourcing Life-cycles • Ongoing • Initiation • Delivery • Completion **5** Levels	**11** Processes in Planning and Organization **6** Processes in Acquisition and Implementation **13** Processes in Delivery and Support **4** Processes in Monitoring Assessed against seven criteria for information Generic process maturity model with 6 levels	**5** Clauses in quality management system **11** Clauses in management responsibility **5** Clauses in resource management **20** Clauses in product realization **10** Clauses in measurement, analysis, and improvement	**13** Service management processes **3** Planning and organization (policies and framework)	**25** Process Areas **17** Generic Practices per Process Area **199** Specific Practices **2** Architectures (continuous and staged) **5** Maturity Levels **6** Capability Levels	**5** Items in leadership & planning **11** Items in processes **7** Items in people **10** Items in performance
RECOGNITION	Certification by Carnegie Mellon University at one of four capability levels (above Level 1).	Auditor's report; no formal certification.	Certification by registrars authorized by national bodies of compliance to ISO 9001.	Certification by registered certification bodies of compliance to BS 15000.	Assessment or evaluation report; no formal certification.	Certification by COPC at two levels: • gold standard for high performing organizations • base standard for others.

Comparison of the eSCM-SP v2 with Five Frameworks

The five sections that follow compare the eSCM-SP to COBIT, ISO 9001:2000, BS 15000, CMMI, and COPC. Each comparison contains (1) a description of the framework, (2) the framework's structure, and (3) a high-level analysis of the differences in coverage between the eSCM-SP and the other framework.

These tables are organized by eSCM-SP Capability Areas; the last row contains "other" requirements that are not addressed in the eSCM-SP. Each table has three columns. The first column deals with topics that are addressed by both frameworks. The second column is for the comparison model or standard, showing how it covers the Capability Area and what the degree of coverage is. "Largely covered" means that the greater part of the Capability Area is addressed from the appropriate perspective; "partially covered" means roughly half of the Capability Area is addressed. These are not precise numbers because subjective judgment is involved in deciding how well requirements at different levels of abstraction and with different scopes correspond. This information is followed by any requirements where additional information is provided. The third column notes unique and additional requirements in the eSCM-SP.

1. Comparing the eSCM-SP to COBIT

Control Objectives for Information and Related Technology (COBIT) represents a set of widely adopted best practices and guidelines published by the IT Governance Institute. The focus of COBIT is to support management's needs in determining and monitoring the appropriate level of IT security and control for their organizations. COBIT provides management and business process owners with an IT governance model useful in assessing and managing the risks associated with IT, while ensuring the integrity of information and information systems required to support business processes. COBIT-based controls reduce risk in operations and instill confidence among internal and external stakeholders, particularly clients and regulatory authorities. This may be a particular concern for service providers dealing with the requirements of the Sarbanes-Oxley Act of 2002, which mandate that certain financial and reporting processes are in place at companies traded on the U.S. Stock exchanges [COBIT].

COBIT is not specifically targeted to external service providers as it does not discuss whether the service is provided internally or externally. As a result, while it does provide guidance on supplier management, it does not address all of the formal agreements or relationships a service provider may have with external organizations. COBIT defines control objectives for acquisition of systems and for managing suppliers and third-party services, but its perspective is largely limited to the management of internal IT organizations.

COBIT specifies 34 IT processes spread across four domains: Planning and Organization, Acquisition and Implementation, Delivery and Support, and Monitoring. For these processes, COBIT defines high-level objectives, management guidelines, and detailed control objectives to measure and control the success of the processes. It also provides comprehensive guidelines for auditors to assess the processes and report on them. Each process highlights the resources upon which the control objectives need to be applied. The corresponding business requirements for information can then be met under one or more of the following categories: effectiveness, efficiency, confidentiality, integrity, availability, compliance, and reliability.

Table 5. COBIT framework

	HIGH-LEVEL DESCRIPTION OF DOMAIN	IT PROCESSES UNDER DOMAIN
PO	**Planning & Organization** Covers strategy and tactics, and definition of value contributed by IT toward achievement of the business objectives. Translation of strategic vision into plans and objectives communicated and managed at different levels and perspectives. Organization of capabilities and resources, including technological infrastructure and architecture.	**PO1:** Define the Strategic IT Plan **PO2 :** Define the Information Architecture. **PO3:** Determine the Technological Direction **PO4:** Define the IT Organization and Relationships **PO5:** Manage the IT Investment **PO6:** Communicate Management Aims and Direction **PO7:** Manage Human Resources **PO8:** Ensure Compliance with External Requirements **PO9:** Assess Risks **PO10:** Manage Projects **PO11:** Manage Quality
AI	**Acquisition & Implementation** Covers identification, development or acquisition, and integration of systems and solutions with business processes. Maintenance and enhancement of systems under proper change management to ensure value delivered throughout the lifecycle.	**AI1:** Identify Automated Solutions **AI2:** Acquire and Maintain Application Software **AI3:** Acquire and Maintain Technology Infrastructure **AI4:** Develop and Maintain Procedures **AI5:** Install and Accredit Systems **AI6:** Manage Changes
DS	**Delivery & Support** Covers actual delivery and support of required services, including associated security, service continuity, and training. Support processes required to manage resources and infrastructure, including managing incidents and problems. Also covers the actual processing of data by application systems.	**DS1:** Define and Manage Service Levels **DS2:** Manage Third-Party Services **DS3:** Manage Performance and Capacity **DS4:** Ensure Continuous Service **DS5:** Ensure Systems Security **DS6:** Identify and Allocate Costs **DS7:** Educate and Train Users **DS8:** Assist and Advise Customers **DS9:** Manage the Configuration **DS10:** Manage Problems and Incidents **DS11:** Manage Data **DS12:** Manage Facilities **DS13:** Manage Operations
MO	**Monitoring** Covers monitoring and assessment of all IT processes to ensure quality and compliance with control requirements. Management oversight over control processes and independent assurance through internal and external audits.	**M1:** Monitor the Processes **M2:** Assess Internal Control Adequacy **M3:** Obtain Independent Assurance **M4:** Provide for Independent Audit

COBIT addresses many requirements in the Capability Areas of the eSCM-SP, while not addressing some that are likely to be critical to a service provider. Table 6 shows the overlap of issues addressed by the eSCM-SP and COBIT, as well as the unique value added required by each framework.

Table 6. Comparison of the eSCM-SP with COBIT

CA	Overlap	COBIT	eSCM-SP
knw	Version and change control.	Partially covered by AI4, PO5, and DS6. Additional requirements on change control are defined in AI6.	Development, management, provision, sharing, reuse, and transfer of knowledge among stakeholders.
ppl	Defining roles and responsibilities, providing training, meeting competency needs, and carry out performance appraisals.	Largely covered by PO4 and PO7. Partially covered by DS12, PO4, and PO7.	Innovation, participation in decisions, career development, and rewards and recognition. Additional requirements on developing competencies and the work environment.
prf	Organizational objectives, performance and review, and preventive action.	Largely covered by PO1, PO6, DS3 and DS10. Partially covered by PO1, PO3, DS1, DS3, and MO1. Additional requirements on assessing the adequacy of internal control (MO2), obtaining independent assurance (MO3) and independent audits (MO4). Management guidelines on Critical success factors, Key performance indicators and key goal indicators for each process.	Engagement objectives, and deploying innovations. Additional requirements for resource management, engagement-specific performance, capability improvement, and benchmarking.
rel	Managing supplier performance.	Largely covered in DS2. Partially covered in PO1, AI1, and DS2.	Management of customer relationships, cultural fit between organizations, and mandates for value creation. Additional requirements for managing suppliers.
tch	Management of technology licenses, and integration and optimization of technology.	Largely covered in PO2, PO8, PO11, AI1, AI2, AI3, AI5, AI6, DS1, DS3, and DS9. Partially covered in PO3 and AI1. Additional requirements on acquiring and controlling technology, assets, and infrastructure are defined in PO2, PO3, PO11, AI1, AI2, AI3, AI6, and DS9.	Additional requirements on the identification and adoption of new technology as mandated by contractual commitments.
thr	Statutory and regulatory compliance.	Largely covered in PO3, PO8, PO9, DS4, DS5, DS11, and DS12. Additional requirements on enterprise-level, application-level and data security, and fiduciary requirements and adequacy of internal controls are defined in DS5, DS11, and DS12. IT service continuity and disaster recovery are defined in PO3, PO9, and DS4.	Additional requirements on security and risks specific to sourcing arrangements and contracts, particularly in cases involving external service providers.
cnt	Business requirements, service level agreements, and supplier contracts.	Partially addressed in PO4, PO5, PO10, PO11, AI1, AI2, AI4, DS1, and DS6.	Negotiation guidelines, market information, contract roles. Additional requirements on pricing guidelines, confirming existing conditions, gathering and reviewing requirements, and contract management.
sdd	Project-based development life-cycle, design considerations for supporting systems and processes.	Partially covered in PO2, PO10, PO11, AI1, AI2, AI5, DS1, DS2, DS3, DS4, DS5, and MO3.	Additional requirements for design and development lifecycle, requirements management, and client interaction in development of new services.
del	Manage the delivery and support of services.	Largely covered in PO5, PO10, AI4, and DS1-DS13 (entire domain). Partially covered in PO1, PO10, AI6, DS1, DS3, DS4, and DS9. Additional requirements on problem management.	Additional requirements on planning service delivery, service modifications, and contract amendments.
tfr			Processes involving transfer of assets, resources, and service personnel during contract initiation and completion.
other		Requirements for internal control adequacy, independent assurance and audit, configuration management, fiduciary requirements for reliability of information.	

2. Comparing eSCM-SP to ISO 9001:2000

ISO 9001 specifies the requirements for a Quality Management System (QMS) that can be used for internal use, certification, or contractual purposes. It focuses on the effectiveness of the QMS and is applicable to any type of organization, regardless of type, size, or product provided.

ISO 9001:2000 adopts a process approach, emphasizing the importance of understanding and meeting requirements, considering processes in terms of value added, measuring process performance and effectiveness, and continuous process improvement based on objective measurement. It follows Deming's concept of the Plan-Do-Check-Act (PDCA) cycle for continuous improvement of the QMS. Although the standard is written in terms of a "product," the term is used to refer to any product or service.

The requirements stated in ISO 9001 are often at a high level of abstraction. ISO provides separate guidance documents to help interpret the standard for specific sectors (e.g., ISO/IEC 9000-3:2004, Guideline for application of ISO 9001 for computer software). The clauses in ISO 9001 are listed in Table 7.

Table 7. ISO 9001:200 framework

	CLAUSES	SUBCLAUSES
4	**Quality management system**	**4.1** General requirements **4.2** Documentation requirements **4.2.1** General **4.2.2** Quality manual **4.2.3** Control of documents **4.2.4** Control of records
5	**Management responsibility**	**5.1** Management commitment **5.2** Customer focus **5.3** Quality policy **5.4** Planning **5.4.1** Quality objectives **5.4.2** Quality management system planning **5.5** Responsibility, authority and communication **5.5.1** Responsibility and authority **5.5.2** Management representative **5.5.3** Internal communication **5.6** Management review **5.6.1** General **5.6.2** Review input **5.6.3** Review output

	CLAUSES	SUBCLAUSES
6	**Resource management**	**6.1** Provision of resources **6.2** Human resources **6.2.1** General **6.2.2** Competence, awareness and training **6.3** Infrastructure **6.4** Work environment
7	**Product Realization**	**7.1** Planning of product realization **7.2** Customer-related processes **7.2.1** Determination of requirements related to the product **7.2.2** Review of requirements related to product **7.2.3** Customer communication **7.3** Design and development **7.3.1** Design and development planning **7.3.2** Design and development inputs **7.3.3** Design and development outputs **7.3.4** Design and development review **7.3.5** Design and development verification **7.3.6** Design and development validation **7.3.7** Control of design and development changes **7.4** Purchasing **7.4.1** Purchasing process **7.4.2** Purchasing information **7.4.3** Verification of purchased product **7.5** Production and service provision **7.5.1** Control of production and service provision **7.5.2** Validation of processes for production and service provision **7.5.3** Identification and traceability **7.5.4** Customer property **7.5.5** Preservation of product **7.6** Control of monitoring and measuring devices
8	**Measurement, analysis and improvement**	**8.1** General **8.2** Monitoring and measurement **8.2.1** Customer satisfaction **8.2.2** Internal audit **8.2.3** Monitoring and measurement of processes **8.2.4** Monitoring and measurement of product **8.3** Control of nonconforming product **8.4** Analysis of data **8.5** Improvement **8.5.1** Continual improvement **8.5.2** Corrective action **8.5.3** Preventive action

ISO 9001 addresses many requirements in the Capability Areas of eSCM-SP, while not addressing some that are likely to be critical to a service provider. Table 8 shows the overlap of issues addressed by the eSCM-SP and ISO 9001, as well as the unique value added by each framework.

Table 8. Comparison of the eSCM-SP v2 with ISO 9001: 2000

CA	Overlap	ISO	eSCM-SP
knw	Sharing knowledge, provide required information, process assets, engagement knowledge, reuse, version and change control, resource consumption.	Largely covered by quality system (4.1), control of documents (4.2.3) and records (4.2.4), internal communication (5.5.3), design and development input (7.3.2), identification and traceability (7.5.3), monitoring and measurement (8.2.3), and analysis of data (8.4).	Knowledge system. Additional requirements on process assets, analysis of resource consumption, reuse.
ppl	Assigning responsibilities, defining roles, work environment, workforce competencies, participation in decision making, training, performance review, rewards and career development.	Largely covered by responsibility , authority, and communication (5.5), human resources (6.2), infrastructure (6.3), and work environment (6.4).	Innovation. Additional requirements on participation in decisions, training, performance feedback, career development, and rewards and recognition.
prf	Objectives, process verification, organizational performance review, improvement, preventive action, adequate resource, capability baselines, and preventive action.	Largely covered by management commitment (5.1), quality policy (5.3), planning (5.4), management review (5.6), provision of resources (6.1), infrastructure (6.3), monitoring and measurement (8.2), analysis of data (8.4), and improvement (8.5).	Benchmarking and deploy innovation. Additional requirements on organizational objectives, programs to achieve objectives, and capability baselines.
rel	Managing client relationships, select suppliers and manage suppliers, cultural fit, and stakeholder information.	Largely covered by customer-related processes (7.2), purchasing (7.4), and customer satisfaction (8.2.1).	Managing relationships with suppliers and partners, and value creation. Additional requirements on selecting and managing suppliers, and cultural fit.
tch	Technology acquisition, licenses, and integrating infrastructure.	Partially covered by infrastructure (6.3) and determination of requirements (7.2.1).	Optimizing technology and proactively identifying and introducing new technology. Additional requirements on technology acquisition, licenses, and integrating infrastructure.
thr	Statutory and regulatory compliance, intellectual property, and security.	Partially covered by management commitment (5.1), determination of requirements related to the product (7.2.1), and customer property (7.5.4).	Risk management, disaster recovery, and security of technology infrastructure. Additional requirements on security.
cnt	Gathering and reviewing requirements, market information, responding to requirements, and contracts.	Partially covered by responsibility, authority, and communication (5.5), customer focus (5.2), and customer-related processes (7.2).	Negotiating, pricing, and confirming existing conditions. Additional requirements on market information, responding to requirements, and contracts.
sdd	Communicating requirements, planning, designing and deploying services, and verifying design.	Covered by product realization (7).	Additional requirements on design feedback and deploying services.
del	Corrective action, planning service delivery, training requirements, verifying service commitments, and service modifications.	Covered by product realization (7), monitoring and measurement (8.2), and improvement (8.5).	Financial management. Additional requirements on service delivery.
tfr	Resources transferred to, and from, the service provider.	Partially covered by customer property (7.5.4).	Personnel and knowledge transferred, and service continuity.
other		Management representative (5.5.2), design & development validation (7.3.6), process validation (7.5.2), preservation of product (7.5.5), and control of monitoring and measuring device (7.6)	

3. Comparing the eSCM-SP to CMMI

Capability Maturity Model Integration (CMMI) addresses four disciplines formerly covered by separate models developed by the Software Engineering Institute: systems engineering, software engineering, integrated product and process development (IPPD), and supplier sourcing [Chrissis 2003]. CMMI models are designed to describe discrete levels of process improvement and can be targeted toward either organizations (the staged representation) or processes (the continuous representation).

Staged models are intended to transform an organization's behavior. Continuous models are intended to describe a processes capability in detail. While the underlying principles are similar, the targets and intents are different. In the staged representation, five maturity levels, numbered 1 through 5, provide a recommended order for approaching process improvement. The maturity level of an organization provides a way to predict the future performance of an organization within a given discipline or set of disciplines. Capability levels, which belong to the continuous representation, apply to an organization's process-improvement achievements for each process area. There are six capability levels, numbered 0 through 5.

A process area is a cluster of related practices in an area that, when performed collectively, satisfy a set of goals considered important for making significant improvement in that area. CMMI process areas are common to both the continuous and staged representations. Process areas can be grouped into four categories: Process Management, Project Management, Engineering, and Support.

Process Management process areas contain the cross-project activities related to defining, planning, resourcing, deploying, implementing, monitoring, controlling, appraising, measuring, and improving processes. Project Management process areas cover the project management activities related to planning, monitoring, and controlling the project. Engineering process areas cover the development and maintenance activities that are shared across engineering disciplines (e.g., systems engineering and software engineering). Support process areas cover the activities that support product development and maintenance. The Support process areas address processes that are used in the context of performing other processes. The process areas, listed by category, are listed in Table 9.

Table 9. CMMI framework

PROCESS CATEGORIES	PROCESS AREAS
Process Management	Organizational Process Focus Organizational Process Definition Organizational Training Organizational Process Performance Organizational Innovation and Deployment
Project Management	Project Planning Project Monitoring and Control Supplier Agreement Management Integrated Project Management for IPPD Risk Management Integrated Teaming Integrated Supplier Management Quantitative Project Management
Engineering	Requirements Development Requirements Management Technical Solution Product Integration Verification Validation
Support	Configuration Management Process and Product Quality Assurance Measurement and Analysis Organizational Environment for Integration Decision Analysis and Resolution Causal Analysis and Resolution

CMMI addresses many requirements in the various Capability Areas of eSCM-SP, while not addressing some that are likely to be critical to a service provider. Table 10 shows the overlap of issues addressed by the eSCM-SP and CMMI as well as the unique value added by each framework.

Table 10. Comparison eSCM-SP v2 with CMMI

CA	Overlap	CMMI v1.1	eSCM-SP v2
knw	Process assets and version and change control.	Partially covered by Organization Process Focus and Organization Process Definition for process knowledge. Additional requirements on configuration management.	Knowledge system and reuse. Additional requirements on providing information and analysis of resource consumption.
ppl	Innovation, participation in decisions, work environment, assigning responsibilities, roles, workforce competency, and training.	Partially covered for training in Organizational Training, decision making in Decision Analysis and Resolution, and roles in Organization Process Definition, and work environment in Organizational Environment for Integration.	Performance feedback, career development, and rewards and recognition.
prf	Objectives, process verification, resources, improvement, capability baselines, preventive action, deploying innovations, benchmarking, organizational performance review, and programs to achieve objectives,	Partially covered by Organization Process Focus, Organization Process Definition, Organizational Process Performance, Causal Analysis and Resolution, and Organizational Innovation and Deployment. Quantitative control of the project, process, and product are addressed in Quantitative Project Management and the Level 4 and higher Engineering process areas.	Additional requirements on benchmarking, organizational performance review, and programs to achieve objectives
rel	Managing client and supplier relationships, selecting suppliers, and stakeholder information.	Partially covered by Requirements Management, Supplier Agreement Management, Integrated Project Management for IPPD, and Organizational Environment for Integration.	Cultural fit and value creation. Additional requirements on stakeholder information.
tch	Technology acquisition, and proactively identifying and introducing new technology.	Partially covered by Technology Change Management.	Licenses, integrating infrastructure, and optimizing technology.
thr	Risk management.	Partially covered by Risk Management.	Statutory and regulatory compliance, intellectual property, security, and disaster recovery.
cnt	Gathering and reviewing requirements, responding to requirements, and contracts.	Partially covered by Requirements Development and Project Planning.	Negotiating, pricing, confirming existing conditions, and market information. Additional requirements on responding to requirements and contracts.
sdd	Communicating requirements, planning, designing and deploying services, design feedback, verifying design, and deploying services.	Largely covered by the Engineering process areas.	Additional requirements on deploying services.
del	Corrective action, planning service delivery, training clients, verifying service commitments, and service modifications.	Partially covered by Project Monitoring and Control, although there is no good analog in CMMI for service delivery.	Financial management and service delivery.
tfr		Not covered.	Service transfer.
other		CMMI Process Areas that do not have good analogs in the eSCM-SP include Integrated Project Management, Integrated Teaming, Product Integration, Measurement and Analysis, Decision Analysis and Resolution.	

4. Comparing the eSCM-SP to BS 15000

The BS 15000 standard for IT service management (BS 15000-1:2002) was developed by the British Standards Institution (BSI) to enable organizations to understand how to enhance the quality of IT services delivered to their customers at a justifiable cost. The standard specifies formal requirements for IT service management processes that service providers could implement to effectively meet customer and business requirements.

The specification BS 15000-1 (Part 1) is recommended for use in conjunction with BS 15000-2 (Part 2), a Code of Practice on IT service management that provides guidance to auditors assessing service management processes. It also offers guidance and recommendations to organizations planning service improvements or those planning to be audited using BS 15000-1. The BS 15000 series is aligned with the IT Infrastructure Library (ITIL) developed by the United Kingdom Office of Government Commerce and promoted by the IT Service Management Forum (itSMF). Both ITIL and the BSI publications on service management form parts of the same logical structure. While organizations are not required to implement the guidelines and definitions of ITIL to comply with BS 15000, they typically do so because of the alignment and integration between the standard and the library. BS 15000-1 provides a concise set of requirements that are to be fulfilled by organizations seeking certificates of conformance. ITIL provides the detailed definitions of processes and activities that need to be established for an organization to achieve conformance. An overview of the BS 15000 clauses follows in Table 11.

Table 11. BS-15000 framework

	CLAUSES	SUBCLAUSES
3	**Requirements for a management system**	**3.1** Management responsibility **3.2** Documentation requirements **3.3** Competence, awareness, and training
4	**Planning and implementing service management**	**4.1** Plan service management (Plan) **4.2** Implement service management and provide the services (Do) **4.3** Monitoring, measuring, and reviewing (Check) **4.4** Continuous improvement (Act)
5	**Planning and implementing new and changed services**	

	CLAUSES	SUBCLAUSES
6	**Service delivery process**	**6** Service delivery process **6.1** Service level management **6.2** Service reporting **6.3** Availability and service continuity management **6.4** Budgeting and accounting for IT services **6.5** Capacity management **6.6** Information security management
7	**Relationship processes**	**7.1** Business relationship management **7.2** Supplier management
8	**Resolution processes**	**8.1** Incident management **8.2** Problem management
9	**Control processes**	**9.1** Configuration management **9.2** Change management
10	**Release process**	**10.1** Release management

BS 15000-1 addresses many requirements in the Capability Areas of eSCM-SP, while not addressing some that are likely to be critical to a service provider. Table 12 shows the overlap of issues addressed by the eSCM-SP and BS 15000, as well as the unique value added by each framework.

Table 12. Comparison of eSCM-SP v2 with BS 15000

CA	Overlap	BS 15000	eSCM-SP v2
knw	Providing information to workers and resource consumption.	Additional requirements on version and change control. The integrated approach to service management recommended by BSI is expected to facilitate sharing of knowledge between processes and therefore those managing them.	Reuse. Additional requirements on sharing knowledge, knowledge system, process assets, and engagement knowledge.
ppl	Assigning responsibilities, roles, and training.		Innovation, participation in decisions, training, performance feedback, career development, and rewards and recognition. Additional requirements on work environment and workforce competencies.
prf	Engagement objectives, process verification, resources, organizational improvement, and capability baselines.	Additional requirements on preventive action. Performance management issues are covered under the management system and planning and implementation (Plan-Do-Check-Act cycle) processes.	Deploying innovations. Additional requirements on organizational objectives, performance review, and benchmarking.
rel	Managing client relationships, and managing relationships with suppliers and partners.		Cultural fit. Additional requirements on value creation.
tch	Optimizing technology and proactively identifying and introducing new technology.		Integrating infrastructure. Additional requirements on technology acquisition and licenses.
thr	Managing security and disaster recovery.	Additional requirements on risk management and intellectual property. BS-15000 does not emphasize contractual issues including intellectual property and regulatory compliance because these are considered to be mandated by law.	Statutory and regulatory compliance.
cnt	Gathering and reviewing requirements.		Negotiating and market information. Additional requirements on pricing, confirming existing conditions, responding to requirements, roles, and contracts.
sdd	Communicating requirements, planning, and designing and deploying services.	Additional requirements on service specification.	Additional requirements on design feedback and verifying design.
del	Training requirements.	Additional requirements on planning service delivery, verifying service commitments, corrective action, preventive action, and service modifications.	
tfr		Not covered.	Service transfer.
other		No additional coverage.	

5: Comparing the eSCM-SP to COPC

The COPC-2000 r3.3 framework, from the Customer Operations Performance Center Inc. (COPC), focuses on establishing a performance management framework for customer-centric service operations. The types of service operations covered include customer contact centers (e.g., call centers), business process outsourcing operations, transaction processing centers, fulfillment centers, remittance processing centers, field service operations, returns processing centers, and collections/recovery services. It has two variants: a Base Standard and a Gold Standard that includes more stringent requirements.

The foundation of the COPC standard is the criteria and framework of the Malcolm Baldrige National Quality Award (MBQNA). As summarized in Table 13, the category "Leadership and Planning" provides direction and sets performance targets. The categories "Process" and "People" are enablers of achieving performance targets. The category "Performance" states the goals of the performance management system through a balanced set of performance and satisfaction measures. Since COPC is based on the MBNQA, achieving targeted performance levels is of paramount importance to this standard.

Table 13. COPC framework

1.0	**Leadership and Planning**	**1.1** Statement of direction **1.2** Strategic and annual planning **1.3** Business strategies and plan **1.4** Reviewing performance **1.5** Management system review
2.0	**Process**	**2.1** Developing new capabilities **2.2** Implement new products, services **2.3** Process control **2.4** Process improvement **2.5** Process audits **2.6** Transaction monitoring **2.7** Staffing and scheduling **2.8** Contingency planning **2.9** CUIKA[1] **2.10** Data security **2.11** Data and information availability

3.0	**People**	**3.1** Defining jobs **3.2** Recruiting and hiring **3.3** Training and development **3.4** Verifying skills **3.5** Staff performance management **3.6** Compensation and recognition **3.7** Work environment
4.0	**Performance**	**4.1** Client satisfaction **4.2** End user satisfaction **4.3** Service and quality performance **4.4** Key supplier performance **4.5** Process level efficiency **4.6** Resource utilization **4.7** Staff attrition **4.8** Staff satisfaction **4.9** Achieving results **4.10** Cost of poor quality

The focus of COPC is on the service delivery stage of the sourcing process. It provides specific recommendations about key customer-related processes, key support processes, measures, sample sizes, and periodicity of measures for applicable business operations. The specific recommendations are provided in appendices to the standard. Operational definitions of measures will differ depending on the types of business operations. Recommending specific measures for different service types is helpful for implementation, but it limits the scope of the applications to only those specific services.

The Gold Standard variant of COPC-2000 r3.3 addresses many requirements in the various Capability Areas of eSCM-SP, while not addressing some that are likely to be critical for a successful service provider. Table 14 shows the overlap of issues addressed by the eSCM-SP and COPC, as well as the unique value added by each framework.

Table 14. Comparing the eSCM-SP v2 with COPC

CA	Overlap	COPC	eSCM-SP
knw	Providing information, engagement knowledge, resource consumption, process assets.	Partially covered by Collection, Usability, Integrity, Knowledge and Action (CUIKA) (2.9), data and information availability (2.11), client satisfaction (4.1), end-user satisfaction (4.2), and resource utilization (4.6).	Policy for sharing knowledge, knowledge system, reuse, and version and change control. Additional requirements on process assets.
ppl	Work environment, assigning responsibilities, personnel competencies, rewards and recognition, defining roles, workforce competency, training, and career development.	Largely covered by people (3.0) and staff satisfaction (4.8).	Innovation and participation in decisions. Additional requirements on defining roles, workforce competency, training, and career development.
prf	Engagement objectives, process verification, organizational performance review, improvement, capability baselines, organizational objectives, resources, programs to achieve objectives, and benchmarking.	Largely covered by leadership and planning (1.0), process improvement (2.4), process audits(2.5), staffing and scheduling (2.7), CUIKA (2.9), and performance (4.0). Additional requirements on organizational objectives.	Preventive action and deploying innovations. Additional requirements on resources, programs to achieve objectives, and benchmarking.
rel	Managing suppliers, client relationship, stakeholder information, and value creation.	Partially covered by developing new capabilities (2.1), client satisfaction (4.1), end user satisfaction (4.2), and key supplier performance (4.4).	Managing interactions with clients and partners, selecting suppliers, cultural fit. Additional requirements on managing suppliers, stakeholder information, and value creation.
tch	Acquiring technology and proactively identifying and introducing new technology	Partially covered by developing new capabilities (2.1).	Licenses, integrating infrastructure, controlling changes, and optimizing technology. Additional requirements on acquiring technology, proactively identifying and introducing new technology.
thr	Security, intellectual property, and disaster recovery.	Largely covered by contingency planning (2.8) and data security (2.10).	Risk management, statutory and regulatory compliance. Additional requirements on security.
cnt	Market information, gathering and reviewing requirements, and responding to requirements.	Partially covered by developing new capabilities (2.1).	Negotiating, pricing, confirming existing conditions, contract roles, and creating contracts. Additional requirements on market information, gathering and reviewing requirements, and responding to requirements.
sdd	Verifying design, deploying services, communicating requirements, and planning and designing services.	Largely covered by developing new capabilities (2.1) and implementing new products and services (2.2).	Service specification and design feedback. Additional requirements on communicating requirements, and planning and designing services.
del	Corrective action, planning service delivery, delivery, service modifications, and financial management.	Largely covered by developing new capabilities (2.1), process control (2.3), transaction monitoring (2.6), staffing and scheduling (2.7), contingency planning (2.8), CUIKA (2.9), and achieving results (4.9). Additional requirements on service verification.	Training clients and amending contracts. Additional requirements on planning service delivery, delivery, service modifications, and financial management.
tfr		Not covered.	Service transfer.
other		Staff attrition (4.7) and cost of poor quality (4.10).	

Measurement in the eSCM-SP

Measuring the organization's progress in implementing the eSCM-SP provides a firm foundation for effective management from several perspectives. Measurement is necessary to define and track the organization's service levels, thereby providing objective criteria for establishing and managing customer-supplier agreements. Cost and schedule measurements support the effective and efficient allocation of resources. Performance trends, which enable proactive management, depend on measurement and analysis. Continual, measured improvement is derived by identifying opportunities for improvement and the associated return-on-investment (ROI). Industry studies based on valid data provide a foundation for making informed trade-offs in selecting and monitoring suppliers, establishing service level agreements, and doing risk management.

While it is possible to measure multiple attributes of every Practice in the eSCM-SP, the measurement effort should be focused on the business objectives that add value to the service provider and its clients. The fundamental principle for a measurement effort should be to support the achievement of business objectives.

The philosophy underlying the use of measurement in an eSCM-SP context is goal-driven measurement. That is, there should be a direct logical link between the business objectives of the organization and the measures collected and analyzed [ISO 15939, Park 1996, McGarry 2002]. Measures should be derived from both engagement and organizational needs. These needs are driven by, for example, client requirements (typically captured in service level agreements), business objectives (such as growth and profitability), improvement objectives, statutory and regulatory requirements.

Goal-driven measurement is not based on a pre-defined set of measures. A service provider may decide to use a subset of the recommended measures, define additional measures, or tailor the recommended measures. Whichever course the service provider decides to take, it needs to determine the set of measures to be collected based on the engagement and organizational objectives, and then collect and use the measures consistently.

Measurement drives behavior, and poorly selected measures will drive dysfunctional behavior [Austin 1996]. Measures should therefore reflect a balanced and

comprehensive set of business objectives. One popular tool for this is the Balanced Scorecard [Kaplan 1996], which translates a service provider's business objectives into a "balanced" set of performance measures. Using the Balanced Scorecard framework enables service providers to develop an effective performance management system with measurements that look at service delivery, cost, and quality.

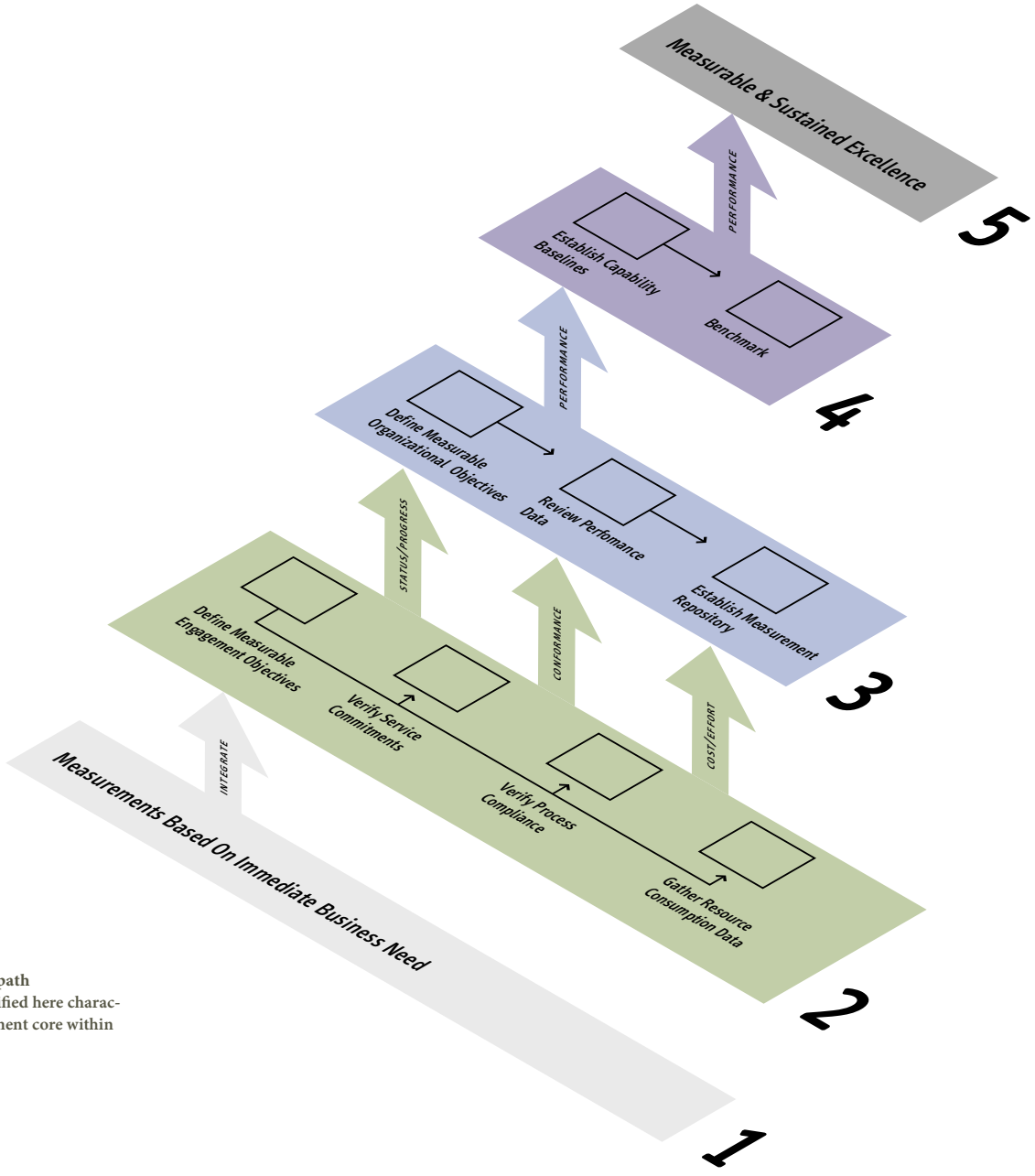


Figure 13.
The measurement path
The Practices identified here characterize the measurement core within the eSCM-SP.

An effective Balanced Scorecard reflects the objectives of the organization by measuring its performance from four key perspectives: Financial, Customer, Internal Processes, and Learning and Growth. These different perspectives allow for a balance between short- and long-term objectives, leading and lagging measures, and they include different types of measures, such as service level agreements and process and product measures. The service provider needs to not only closely monitor the performance in each of the four perspectives, but also determine how the performance in each of the perspectives affects the others. Monitoring the performance in each of the perspectives, and the cause-and-effect relationships between the measures, will result in a full, balanced picture of what is occurring within the organization.

Focusing on achieving the business objectives, the eSCM-SP provides a progressive measurement path through the Capability Levels, with the Practices at each Level building on the foundation established at the previous Levels. Figure 13 illustrates this path. Although a Level 1 organization could have theoretically implemented 83 of the 84 Practices (and failed to satisfy a single Level 2 Practice), in practice the norm is likely to be that there are major gaps at each Level. Measurement initiatives in Level 1 organizations are often ad hoc, driven by the immediate business needs of the service provider and its clients.

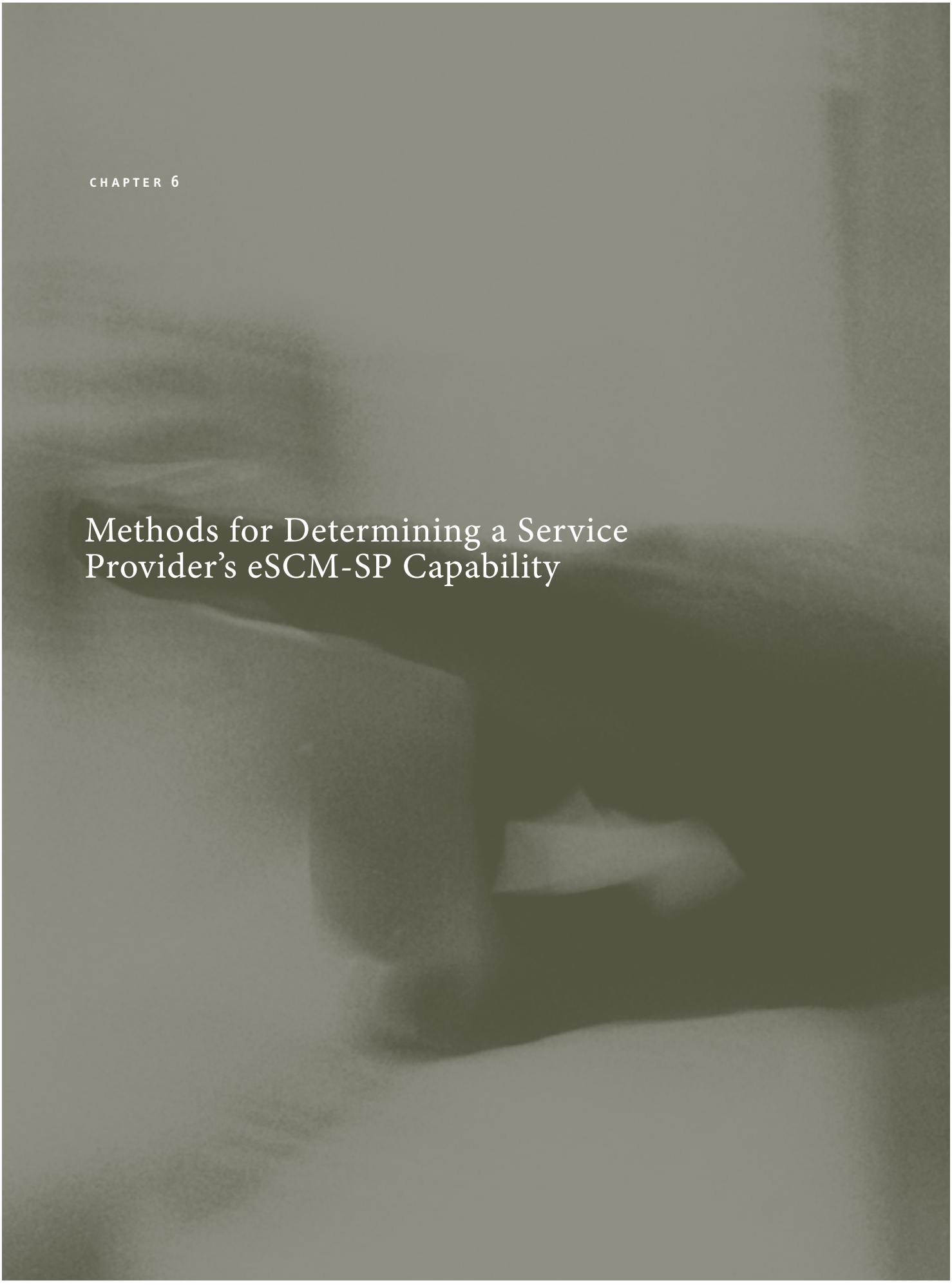
At Level 2 a service provider is expected to define measurable engagement objectives and define the measures needed to track its progress toward achieving those objectives until it can be verified that the objectives have been satisfied. Level 2 measurement therefore addresses fundamental management issues of status, progress, cost, effort, and (non)conformance. Where measurement at Level 1 may have been ad hoc, measurement at Level 2 provides a reasonably comprehensive picture of engagement performance.

At Level 3 measurement is done across multiple engagements and directly addresses organizational issues, including organizational objectives and performance. Performance is measured relative to organizational objectives, although most of the data is collected at the engagement level and aggregated for use at the organizational level.

At Level 4 the analysis of data for the engagements and organization is statistically sophisticated since capability baselines and benchmarks of organizational perfor-

mance are defined. The measurement focus of Level 4 is understanding the impact of change on performance and variation since the long-term goal is to improve performance and decrease variation. In the short term, the learning curve associated with adopting innovative technologies and processes may lead to decreased performance and increased variability, so it is crucial to monitor the ultimate impact of an innovation as it is adopted and deployed.

Service providers at Capability Level 5 demonstrate measurable, sustained, and consistent performance excellence throughout the organization over time. While there may be some question about the effect of an innovation in the short term for a Level 4 organization, the Level 5 organization can demonstrate the long-term effect of multiple innovations as measurable improvements in performance.



CHAPTER 6

Methods for Determining a Service Provider's eSCM-SP Capability

ITsqc provides four Capability Determination methods that service providers and their clients can use to determine the capability of the provider relative to the eSCM-SP. All four methods determine this capability by systematically analyzing evidence of the provider's implementation of the eSCM-SP v2 Practices. These methods allow providers to determine their current capabilities and to define targets for self-improvement.

The methods result in a report, which includes the service provider's strengths, its opportunities for improvement, and the status of its improvement efforts relative to the eSCM-SP. This information can support, guide, and encourage a service provider's commitment to continuous self-improvement.

The methods also provide a consistent way for clients to evaluate their current service providers, or to compare multiple potential providers. Information from a determination may be used to assess risks and provide decision inputs for a client when it is selecting a service provider.

Table 15. Capability Determination Methods

		EVALUATION	SELF-APPRAISAL
FULL	PURPOSE	For certification	To prepare for a Full Evaluation or launch or validate an improvement effort. No certification.
	TEAM	External, trained & authorized by Carnegie Mellon University	Internal, external, or combination
	LEAD EVALUATOR	Required	Strongly Recommended
	SPONSOR	Client or service provider	Service provider
	MODEL SCOPE	All eSCM-SP Practices	All eSCM-SP Practices
MINI	PURPOSE	To prepare for a Full Evaluation or as part of a provider selection process. No certification.	To launch or validate an improvement effort . No certification.
	TEAM	External, trained & authorized by Carnegie Mellon University	Internal, external, or combination
	LEAD EVALUATOR	Required	Recommended
	SPONSOR	Client or service provider	Service provider
	MODEL SCOPE	Subset of eSCM-SP Practices	Subset of eSCM-SP Practices

The four Capability Determination methods that are available from ITsqc are: (1) Full Evaluation; (2) Full Self-appraisal; (3) Mini Evaluation; and, (4) Mini Self-appraisal. The five major differences among these methods are (1) their purpose and outcome, (2) who does them, (3) who leads them, (4) who sponsors them, and (5) the number of eSCM-SP Practices that are analyzed (i.e., the model scope). Table 15 summarizes the four methods.

The *Full Evaluation* is a third-party external evaluation of a service provider's capability. It is the only Capability Determination method that can lead to certification by the ITsqc. It is based on evidence of the provider's implementation of all the Practices in the eSCM-SP, and is sponsored by the service provider or by its client(s). Members of the evaluation team must be trained by Carnegie Mellon and authorized to perform external evaluations of service providers. An authorized Lead Evaluator must head the evaluation effort. The evaluation data is rigorously reviewed by a certification board at Carnegie Mellon and, when warranted, results in certification by Carnegie Mellon of the provider's capability. The certificate is issued with a Capability Level and a Capability Profile. Results of Full Evaluations are provided to the service provider, the sponsor, if different from the service provider, and the ITsqc. Unless otherwise specified by the sponsor, the certification level, summary of the coverage of the service provider, and any ratings exceptions of the evaluation are published on the ITsqc website (http://itsqc.cs.cmu.edu).

The *Full Self-appraisa*l is a full appraisal using all of the eSCM-SP Practices, though it does not result in certification. It supports capability improvement in a service provider by comparing performance with eSCM-SP requirements and indicating gaps that need to be addressed. It may also be used to prepare for a Full Evaluation for certification. Members of the appraisal team may be either internal or external to the service provider, or a combination. It is strongly recommended that an authorized Lead Evaluator head the appraisal to provide the necessary understanding of both the Model and this method. Authorized Lead Evaluators are individuals who have successfully completed the required training and mentoring program needed to lead Capability Determination teams. The focus of this method is to identify areas of improvement based on the eSCM-SP. Results of this method include ratings and observations for every Practice in the eSCM-SP, providing an analysis of the gap between the Practices and the provider's implementation of them. Results of Full Self-appraisals are provided to the service provider and to the ITsqc.

The *Mini Evaluation* is a third-party external evaluation of an organization's capability using a subset of the Practices in the eSCM-SP that does not result in certification. It is used to rapidly and economically determine a provider's capability to provide IT-enabled services. This method provides a consistent means of checking the status and progress of various capability improvement efforts in a service provider. A Mini Evaluation is sponsored by the service provider or by its client(s). Members of the evaluation team must be trained by Carnegie Mellon and authorized to perform external evaluations of service providers. An authorized Lead Evaluator must head the evaluation effort. The model scope of a Mini Evaluation is usually limited to a subset of Practices in the eSCM-SP (e.g., the Practices for one Capability Level of the model or for one Capability Area). Results are provided to the service provider, sponsor, if different from the service provider, and the ITsqc.

The *Mini Self-appraisal* is an appraisal, usually addressing a subset of the eSCM-SP Practices, that does not result in certification. It is used to rapidly and economically check the status of the service provider's improvement efforts. It can also be used as a means of determining gaps between actual and desired capabilities, and for initiating improvement efforts to address those gaps using the eSCM-SP. A Mini Self-appraisal is sponsored by the service provider and should be led by an authorized Lead Evaluator. Members of the appraisal team may be either internal or external to the service provider, or a combination. The model scope of a Mini Self-appraisal is usually limited to a subset of Practices in the eSCM-SP (e.g., the Practices for one Capability Level of the model, the Practices for one Capability Area). Results are provided to the service provider and to the ITsqc.

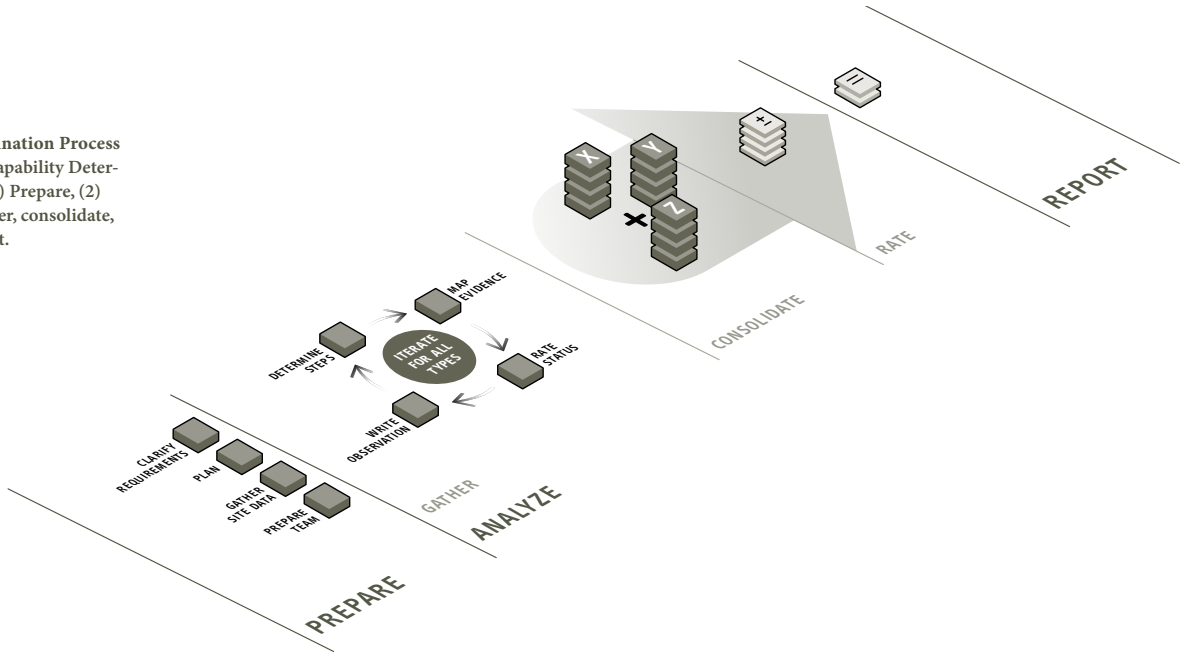


Figure 14.
The Capability Determination Process
The three parts of the Capability Determination process are: (1) Prepare, (2) Analyze (including gather, consolidate, and rate), and (3) Report.

The process for all four of the Capability Determination methods is composed of three major parts: (1) preparing for a determination, (2) gathering and analyzing evidence, and (3) reporting results. The breakdown of these parts is shown at a high level in Figure 14.

There are several sources of data gathered and analyzed for a Capability Determination. An organizational questionnaire provides an overview of the service provider and is used to help determine the scope of the determination. Capability questionnaires are given to a sample of service provider personnel to gain an initial assessment of the organization's capabilities. Guidance documents (e.g., policies, procedures, templates) and artifacts (e.g., reports, plans) are collected and analyzed for evidence of Practice implementation. Interviews, demonstrations, and observations are used to verify implementation of the Practices. A determination team uses all of these different types of data to produce the following:

- A Capability Rating for each of the eSCM-SP Practices within the organizational span of the determination. A rating for a Practice is typically Satisfied or Not Satisfied.
- An observation for each Practice providing a high-level description of evidence found, or not found, for Practice Satisfaction.
- Findings about the service provider's areas of strength.
- Findings about the capabilities that the service provider needs to improve.
- For Evaluations for Certification, a recommendation for a Capability Level.

A Capability Determination is usually conducted for a single service provider. The Capability Determination will include the evaluation of any critical pieces of the sourced service that are provided by suppliers and partners (e.g., joint ventures and alliances). The Capability Determination may involve one or more projects, engagements, or sites. It also addresses one or more specific services (e.g., customer care or engineering services). The coverage of the service provider included in a Capability Determination is called the organizational span.

The time and effort required to conduct a Capability Determination varies greatly depending on the size and organizational span of the service provider to be included in the determination, the model scope (i.e., number of eSCM-SP practices analyzed), and the size of the determination team. Figure 15 shows a sample time

line for Capability Determinations using a five-person team. It provides a basic idea of the time and effort involved in a typical Full Evaluation or Full Self-Appraisal, based on current ITsqc data. For a Full Evaluation, the timeline is extended for a further 2 to 4 weeks to cover the submission to, and interactions with, the ITsqc Certification Board (see Chapter 7, "Certification," for more information).

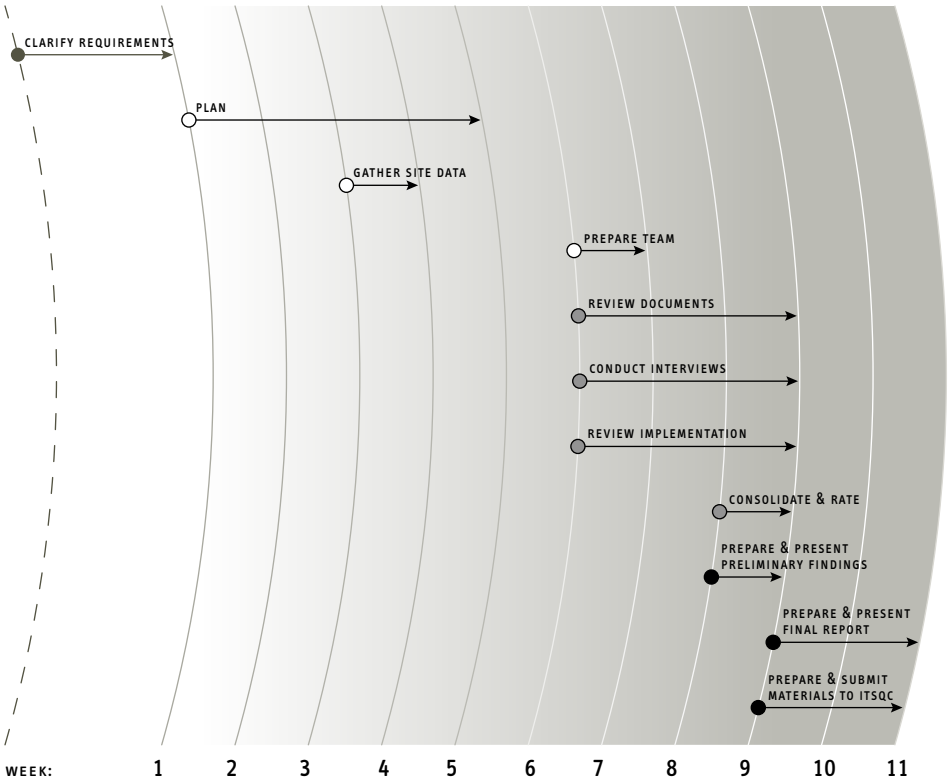
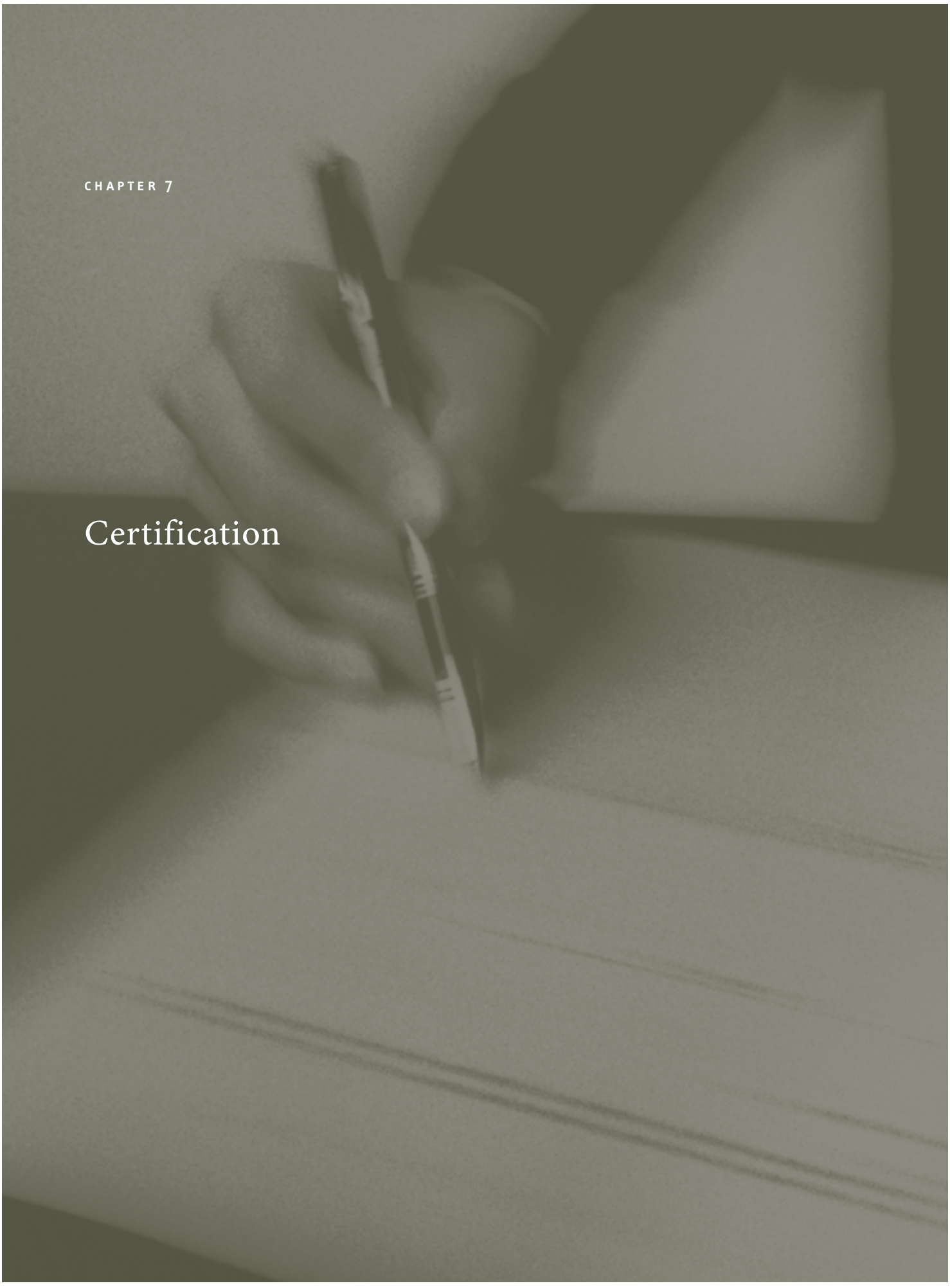


Figure 15.
Capability Detemination timeline
This sample timeline shows how a team of five Evaluators might perform a typical Capability Determination.

The process for deciding on the organizational span of a determination is addressed in the training and materials provided for Lead Evaluators. This and other training required to be authorized to use eSCM-SP methods are available from ITsqc. A list of authorized Lead Evaluators and Evaluators is maintained on the ITsqc website (http://itsqc.cs.cmu.edu).



CHAPTER 7

Certification

The purpose of the eSCM-SP certification program is to provide a credible, independent, and reliable way to determine compliance of a service provider with the eSCM-SP. Certification can be used by clients to evaluate potential service providers, and by service providers to differentiate themselves from their competitors. Evaluations may only be performed by Lead Evaluators and Evaluators from ITsqc-authorized organizations.

In order to ensure the reliability of its certificates, the ITsqc has created a rigorous training program for evaluators: classroom training, multiple tests, and observations of evaluator behavior in simulated and actual Capability Determinations. It also enforces a Code of Professional Practice that it has developed for all evaluators and their organizations, and it may provide on-site observers while evaluations are underway. The ITsqc established a Certification Board composed of senior professionals from the Center who have Lead Evaluator status. The ITsqc Certification Board conducts a rigorous review of all Full Evaluation plans and results before certification occurs. Full Evaluations must be performed by an ITsqc-authorized organization and led by a Lead Evaluator.

There are four Determination methods that can be used to determine compliance with eSCM-SP v2. Service providers will typically follow one of two paths in using the Determination methods to prepare for Evaluation for Certification. The two certification paths are shown in Figure 16.

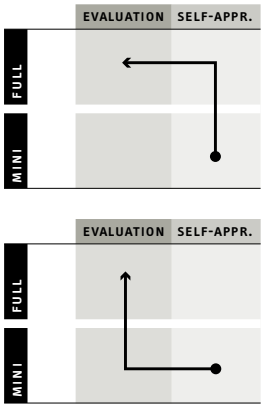


Figure 16.
Paths to Evaluation for Certification
Both paths to certification begin with a Mini Self-appraisal as a gap analysis, and end with an Evaluation for Certification. One path does this via a Full Self-appraisal, while the other does it via a Mini Evaluation.

For the first path the service provider may conduct a Mini Self-appraisal as a gap analysis. This analysis identifies Practices the organization needs to fully implement in order to reach a particular Capability Level. It can also be used to identify Practices that need to be fully implemented in order to satisfy client and service provider business objectives.

After improvement efforts are well established, usually in six months to a year, the service provider may sponsor a Full Self-appraisal. This is used to determine whether the service provider is fully prepared to undergo an Evaluation for Certification.

The second path to certification also begins with a Mini-Self appraisal to provide the service provider with the gap analysis described above. After improvement efforts are well established, service providers may decide to undergo a Mini Evaluation as a means to provide objective, external evidence of their eSCM-SP capabilities. This option allows the service provider to demonstrate to clients their compliance with specific parts of the eSCM-SP, prior to a Full Evaluation.

Prior to an Evaluation, an Evaluation plan must be reviewed and approved by ITsqc. Along with this plan, conflict of interest disclosure forms are submitted and reviewed for each proposed Evaluation team member. Upon completion, the Lead Evaluator submits to ITsqc the standard Capability Determination reports, the detailed evaluation observations, and selected documents from the service provider. The ITsqc Certification Board then reviews the evaluation data, requests additional data or clarifications as required, and issues a Certificate of Capability.

Certificates last for at most two years. Certificates may be revoked or suspended before they expire for a number of reasons. Major changes in the service provider's ownership, staffing, or processes may trigger some form of confirmation by ITsqc to verify the provider's continued eSCM-SP compliance. This verification may take the form of a mini-audit that follows the Mini Evaluation process as outlined in Chapter 6: "Methods for Determining a Service Provider's eSCM-SP Capability."

The certificate provides proof of the service provider's compliance with the eSCM-SP at a particular Capability Level. It also contains important information about the boundaries of the certification, including who is certified and what is the organizational span of the certification. It also lists any qualifications on the Practice Ratings.

As discussed earlier in the description of Capability Determination methods, the organizational span is established prior to the evaluation and specifies how much of the service provider is being analyzed (for example, which sites, market sectors and services). This information is provided on the certificate so that clients can compare certification results and know precisely what has been certified.

A Full Evaluation produces a Rating for each of the 84 eSCM-SP Practices. In order to be certified at a Capability Level, all Practices for that Level and lower must be

satisfied. Exceptions are possible, and must be made by the Capability Determination Team and thoroughly reviewed by the ITsqc Certification Board, prior to or during the Evidence Gathering phase of the Evaluation. One acceptable exception would be that a Completion Practice has been established, but the provider has had no opportunity to use it since no engagement or contract has completed since the Practice was deployed. Any such exceptions are noted on the Certification.

The ITsqc web site (http://itsqc.cs.cmu.edu) contains the official list of the certified service providers, and the authorized Evaluators, Lead Evaluators, and Authorized Organizations that provide Capability Determination services.

CHAPTER 8

Interpreting the Intent of the eSCM-SP

There are several topics that will aid in understanding the intent of the model:

- The type of model: capability vs. maturity model.
- The types of Practices: what it means to be a policy, procedure, guideline, program, plan, or other Practice, and what is expected for each type.
- Other Documentation Requirements in the eSCM-SP: besides the emphasized requirements for policy, procedure, guideline, program, or plan, other documentation is expected in order to be compliant with the intent of the Practices.
- Support Practices: a set of thirteen Practices are referenced in every Practice in the Model.

Capability vs. Maturity Models

The eSCM-SP is structured as a capability model rather than a maturity model. The distinction is an important one in order to understand the expected use of the model, what it means for a Practice to be defined at a specific Capability Level, and what it means for a service provider to be certified at a specific Capability Level.

The key difference is that, while process capability is about the predictability of the process and its outcomes, process maturity is about the growth in the process capability and about building on one set of processes to establish another higher-maturity set of processes. The following, taken from the CMM for Software, helps illustrate that point:

> Process capability describes the range of expected results that can be achieved by following a process. The process capability of an organization provides one means of predicting the most likely outcomes to be expected from the next project the organization undertakes [Paulk 1995, pg. 9].
>
> A maturity level is a well-defined evolutionary plateau toward achieving a mature process. Each maturity level provides a layer in the foundation for continuous process improvement. Each level comprises a set of process goals that, when satisfied,

> stabilize an important component of the process. Achieving each level of the maturity framework establishes a different component in the process, resulting in an increase in the process capability of the organization [Paulk 1995, pg. 15].

Since the eSCM-SP is a capability model, each Capability Level has Practices that, together, define a predictable set of processes and outcomes. An organization at Capability Level 2, for example, is predictably able to meet requirements, provided those requirements do not vary significantly from the organization's experience. An organization at Level 3 is predictably able to meet requirements and manage its performance across multiple client engagements. An organization at Level 4 is predictably able to respond to changing business environments and deliver enhanced value.

Since maturity models have well-defined plateaus of process maturity, organizations are expected to implement all lower level practices before beginning to implement higher-level practices. Capability models, on the other hand, allow organizations to implement practices from different levels simultaneously. For instance, an organization using the eSCM-SP may decide to create a capability baseline, a Level 4 Capability, for its service delivery processes before it has implemented all of the Level 2 Practices. The organization may choose to do this for a variety of reasons, including competitive pressures or specific client requirements for demonstrating measurable improvement. The important thing for users of the eSCM-SP to recognize is that, since it is a capability model and not a maturity model, it is possible to implement Practices in a higher Capability Level before implementing all Practices in a lower Capability Level. Service providers' business goals and considerations seem to be the critical factors that specify which eSCM-SP Practices they implement, based on ITsqc data from 10 pilot determinations.

Practice Types

The content and structure of each of the eSCM-SP Practices is based on the type of documentation used when implementing that Practice. Most Practices explicitly refer to establishing a policy, procedure, guideline, program, or plan. This reference has an impact on how the Activities are structured, as well as what type of documentation needs to be in place in order to satisfy the intent of the Practice.

The level of detail required in a Practice's documentation depends on the type of that documentation. Procedures are the most detailed documents since they need to describe step-by-step instructions for how to perform a given task. Guidelines are less detailed and are typically used for quick reference. Policies are high-level documents used to state guiding principles and demonstrate management's commitment to a topic. Plans are documents used to help execute and control work. Programs are groups of related projects that are described primarily in plans and business cases.

Policy Practices

A policy is "a guiding principle, typically established by senior management, which is adopted by an organization or project to influence and determine decisions" [Paulk 1995]. Policies should be brief, high-level descriptions of senior management's expectations in a specific area. Senior management commissions the development and maintenance of policies, approves them, communicates them to their organization, and most importantly, enforces them.

Procedure Practices

A procedure is "a written description of a course of action to be taken to perform a given task" [IEEE-STD-610 1990]. Procedures are detailed documents that show step-by-step instructions on how to perform a particular activity or set of activities. They typically provide information such as inputs, outputs, diagrams that show the steps to be followed, textual descriptions of each diagrammed step, and an indication of roles and responsibilities.

Guideline Practices

A guideline is "a rule or principle that provides guidance to appropriate behavior" [Wordnet]. Guidelines are high-level documents that provide rules of thumb, expert advice, or other kinds of guidance that would be helpful in standardizing the way that personnel perform a Practice. Some types of guidelines (e.g., estimating guidelines) are normally implemented through a tool or database that captures expert knowledge in a way that can be easily reused by others.

Program Practices

A program is "a group of related projects managed in a coordinated way." [PMBOK] Programs are generally implemented through a series of related projects that are managed to achieve a common objective. Each program includes a program plan

that documents the scope, assumptions, dependencies, costs, effort, due dates, tasks, and work assignments for the program. It also includes a business case that clearly indicates the objectives and the expected benefits of the program.

Plan Practices

A plan is "a formal, approved document used to guide both execution and control. The primary uses of the plan are to document planning assumptions and decisions, to facilitate communication among stakeholders, and to document approved scope, cost, and schedule baselines" [PMBOK]. Plans should include both descriptive information as well as a schedule of tasks. Descriptive information typically includes objectives, scope, assumptions, dependencies, and other details used to communicate the critical pieces of information to the stakeholders.

Other Practices

Several Practices in the eSCM-SP do not explicitly mention the use of a specific type of document. These Practices relate to tasks that are critical to success, but are not required to be documented in a policy, procedure, guideline, program, or plan. Although a specific type of documentation is not mentioned, every Practice should be supported by documentation that provides guidance on how to perform that Practice. This guidance enables personnel to consistently and repeatedly perform the Practice. The work products and tasks required for these Practices, and how each of those will be documented, are determined by the business judgment of the organization. Based on this business judgment, the organization may determine that the most appropriate guidance for the Practice is documented in a policy, procedure, guideline, program, plan, or other type of document.

For some organizations, these Practices may not lend themselves to being documented as a policy, procedure, or guideline. However, they will often be documented as part of a plan and will also have guidance documents that describe the roles and responsibilities of personnel who manage the work.

Other Documentation Requirements in the eSCM-SP

Every Practice in the model should be supported by some type of documentation that provides guidance to personnel on how to perform that Practice. For policy, procedure, guideline, program, and plan Practices, the eSCM-SP sets a minimum standard for the type of documentation required. For other Practices, the eSCM-SP allows business judgment to be used to determine the appropriate level and type of documentation needed.

Within a Practice, individual Activities often require other types of documentation. Many Activities have explicit references to documentation requirements, by indicating a common name for a document that is expected (e.g., disaster recovery plan). In these cases the organization must have one or more documents covering that activity in order to meet the intent of the activity.

Many Activities have implicit references to documentation; although a common document name is not provided, the wording of the Activity implies that a document must be created. For example, the phrase "Identify and document x" implies that a document will be created, but the nature of that document is left to the business judgment of the organization. Whenever Practice Activities use the following verbs, there is an implicit requirement for documentation: create, define, develop, document, gather, or plan.

Supporting the Institutionalization of the eSCM-SP Practices

Institutionalization is the process of building infrastructure and culture that support an organization's methods, practices, and procedures so that they become the standard way of doing business. Colloquially, institutionalization captures the concept that "this is the way we do business." The intent of institutionalization is to perform work in a consistent and repeatable manner so that the expectations of managers, workers, clients, and other stakeholders can be met.

There are thirteen Support Practices in the eSCM-SP that provide the means for the institutionalization of any eSCM-SP Practice. The type of support provided by these Practices is discussed below. For the detail on the set of Support Practices please see *The eSourcing Capability Model for Service Providers (eSCM-SP) v2, Part 2: Practice Details.*

Four aspects of institutionalization must be addressed. Each of these four aspects of institutionalization should be considered in the context of the business environment in which the service provider is operating.

The first aspect of institutionalization is the particular approach to doing the work, which is captured in documented processes. A process is a set of actions that is performed to achieve a given purpose, along with the assets that support that performance, such as tools and other resources. Practices in the eSCM-SP support

consistent work by describing processes in terms of policies, procedures, guidelines, plans, programs, and other work products and activities that provide a foundation for both consistency and improvement. Support Practices in the model describe the creation and maintenance of process assets that are particularly important to support institutionalization.

The second aspect is the particular deployment of the documented processes. Support Practices in the eSCM-SP support deployment by communication, training, resource provision, and process verification. If these process assets have been successfully deployed, it is expected that they will be used on new engagements and adopted for existing engagements as appropriate. Note that, for existing engagements, there may be valid reasons for not adopting these new processes, and even for new engagements, the client's requirements may specify that other processes be used.

The third aspect of institutionalization is the act of demonstrating that the provider's behavior matches their documented process. Processes are not considered fully institutionalized until they have been in place for a sufficient amount of time for them to become "the way we do things." A service provider cannot expect to define a process one week and get full credit for it the next. How much longer than a week (or the number of executions of the process) is needed to demonstrate that it is institutionalized? There is no absolute rule. Fundamentally, a process is what you do. It is not a document. A reasonable heuristic for judging institutionalization is 6 to 12 months of frequently performed processes, and many evaluators are only comfortable with a year or more of behavioral evidence. The answer, however, depends on the organization's management support, frequency of execution, training, and other infrastructure issues. For instance, a process only executed annually may take several years to institutionalize, where a process executed daily may be considered to be institutionalized within only a few months.

The fourth aspect is the challenge of demonstrating continuous improvement. Organizations that have institutionalized a process have had the opportunity to fine-tune it and determine its effectiveness. The process being used today should be at least incrementally improved over the process used a year ago; it may be radically different if a new technology has been adopted. Does the adoption of innovations imply a drop in capability? In terms of measured performance, a learning curve

effect is expected, even when a process change does not affect the fundamental discipline of the process. Institutionalization means establishing a culture of following disciplined processes, even though those processes will systematically change in a controlled fashion over time. One implication, therefore, for an institutionalized process is that it has been improved.

CHAPTER 9

Summary

The eSourcing Capability Model for Service Providers (eSCM-SP) is a "best practices" capability model that gives service providers guidance in improving their capability across the sourcing life-cycle, and gives clients an objective means of evaluating the capability of service providers, and provides a standard for service providers to use when differentiating themselves from competitors.

Each Practice in the eSCM-SP is associated with a value along each of three dimensions: Sourcing Life-cycle, Capability Area, and Capability Level. These specify when the Practice is most applicable, what area of service it supports, and to what level of capability it applies. *The eSourcing Capability Model for Service Providers (eSCM-SP) v2, Part 2: Practice Details* provides detailed information on the model's Practices.

The Activities for each of its 84 Practice are used as the basis for model-based Capability Determinations. Using the Full Evaluation Determination method, a service provider can pursue certification for compliance with the eSCM-SP. Training on the use of the eSCM-SP and its methods is available through courses offered by ITsqc.

More information on the eSCM-SP is available at http://itsqc.cs.cmu.edu.

Glossary

Activity	One of the steps taken to implement a Practice. Activities are labeled with a number or letter within the text of the Practice details (a, a1, a2, b, etc.). See also Major Activity, Sub-activity, Required Activity, and Recommended Activity.
Artifact	A document that is generated as a result of performing the activities of the organization. Artifacts include records, reports, and work products. Most artifacts are linked to a guidance document that describes how that artifact is to be created and used.
Benchmark	(1) To measure or compare an entity to a reference standard. (2) A reference standard used for comparison.
Best practice	An accepted and customary way of doing something that is expected to significantly improve the ability to meet objectives, typically expressed in terms of improved productivity, costs, schedule, quality, user satisfaction, or predictability.
Business case	A structured proposal for business improvement that functions as a decision package for organizational decision makers. A business case includes an analysis of business process performance and the associated needs or problems, proposed alternative solutions, assumptions, constraints, and a risk-adjusted cost-benefit analysis [GAO].
Business objectives	An informal set of business goals that are used to set long-term direction. Business objectives are similar to organizational objectives, but they are typically not formally stated and may not be quantified. For example, an organizational objective may be to increase market share by 2%, and a business objective may be to increase market share.
Business Process Outsourcing (BPO)	The delegation of one or more IT-intensive business processes to an external provider that, in turn, owns, administers, and manages the selected processes, based upon defined and measurable performance metrics [Gartner 2000].
Capability Area	One of ten logical groupings of eSCM-SP Practices that represent critical sourcing functions.
Capability Determination	A set of four methods (Full Evaluation, Full Self-Appraisal, Mini Evaluation, Mini Self-Appraisal) used to determine the compliance of an organization with the eSCM-SP.
Capability baseline	A statistical description of the capability of a process at a point in time. It is derived from the analysis of measures of performance used by the organization in order to provide a measurement benchmark.
Capability Level	One of the five Capability Levels of the eSCM-SP that describes an improvement path for a service provider : Level 1–Providing services; Level 2–Consistently meeting requirements; Level 3–Managing organizational performance; Level 4–Proactively enhancing value; Level 5–Sustaining excellence.

Change control Making changes to selected work products by evaluating proposed changes, coordinating with relevant stakeholders, approving or disapproving the proposals, and implementing the approved changes.

Client A person or organization who obtains sourcing services from a service provider.

Client interaction team A team of personnel from the service provider, ideally representing multiple functions, established to interact with the client. The client interaction team may be formed before a formal relationship with the client exists and will remain in existence as long as the relationship with the client or potential client exists. The client interaction team may be only one of the teams interacting with the client (for example, the design team may interact with the client during design reviews), but the client interaction team is responsible for verifying that interaction is managed when it takes place.

Commitment A pact that is freely assumed, visible, and expected to be kept by all parties [Paulk 1995].

Competency The combination of experience, knowledge, and skills required to perform a task or role. Personnel competency is the competency of an individual employee. Workforce competency is the set of personnel competencies that exist in the organization.

Completion The phase of the Sourcing Life-cycle that focuses on ending the engagement. Completion occurs after the fulfillment of the contract obligations, at the end of the contract period, or upon termination (for cause or convenience) before the planned contract completion date.

Confidentiality (1) Assurance that information is not disclosed to unauthorized persons, processes, or devices. (2) The protection of sensitive information from unauthorized disclosure and sensitive facilities from physical, technical or electronic penetration or exploitation. [CIAO]

Contracting Capability Area (cnt) The group of eSCM-SP Practices that focuses on the effective management of collection and analysis of client requirements, and the negotiation of a formal agreement that describes how the organization will meet those requirements.

Cultural attributes Characteristics of the clients, end-users, suppliers, and partners that can impact the quality and acceptance of the service being delivered. Cultural attributes can be either national or corporate, such as ethnicity, language, and behavioral norms.

Cultural fit The extent of the cultural compatibility between the client and the service provider. Similarities and differences influence how effectively the provider can deliver service according to agreed-upon service levels.

Delivery The phase of the Sourcing Life-cycle that focuses on service delivery capabilities. The Practices in this phase cover ongoing management of service delivery, verification that commitments are being met, and management of finances associated with service provision.

Dimensions	The eSCM-SP has three dimensions: Sourcing Life-cycle, Capability Areas, and Capability Levels. All eSCM-SP Practices have a value along each of these dimensions.
Document	Any lasting information used by the organization. It can be in either physical (i.e., hard copy) or electronic (i.e., soft copy) form. There are two types of documents: guidance documents and artifacts.
eSourcing	A type of sourcing that uses information technology in the processing and delivery of the service. These services are delivered through a telecommunications or data network or other electronic media.
End-user	The ultimate consumer of services provided by the service provider or client. For example, in the case of a software company sourcing its customer service call center, end-users are the customers who call into the call center run by the service provider. End-users may be part of the client organization, or may be customers of the client.
Engagement	The relationship between the service provider and a current or prospective client that spans the entire Sourcing Life-cycle.
Engagement objectives	A set of goals that are used to set direction in the sourcing engagement. Engagement objectives should be measurable so that progress against them can be tracked. They are typically based on client relationship factors (for example, increase client satisfaction by x%) or on operational factors (for example, improve productivity by y%).
Establish and implement	To define, document, train personnel, provide resources, and put to use a procedure, policy, or guideline, with an aim of achieving intended outcomes.
Framework	A general term including models, standards, and award criteria.
Guidance document	A lasting record that provides guidance on how work should be performed. These include policies, procedures, guidelines, job aids, templates, and checklists. They can be electronic (e.g., soft copy, software) or paper (e.g., printed, bound).
Guideline	A rule or principle that provides guidance to appropriate behavior. [Wordnet]
Initiation	The phase of the Sourcing Life-cycle that focuses on the capabilities needed to effectively prepare for service delivery. The Practices in this phase cover requirements gathering, negotiation, contracting, and service design and deployment.
Innovation	Innovation implies a major change in the way work is done to improve performance; it is a change major enough to require that it be planned and managed as a program. The change needs to be actively managed because of the learning curve associated with it. In some cases, major changes may be driven by customer or regulatory requirements rather than by innovation.

Insourcing A sourcing relationship where a group within the client organization is selected to provide service but is largely managed as a separate entity.

Institutionalization The process of building infrastructure and corporate culture that support an organization's methods and procedures so that they become the standardized way of doing business. Colloquially, institutionalization captures the concept that "this is the way we do business." There are thirteen Support Practices in the eSCM-SP that provide support for the institutionalization of any eSCM-SP Practice.

Intellectual property Products of the intellect that have commercial value. Intellectual property may include proprietary software, hardware, designs, methodologies, service-related documents, data, training, trademarks, copyrights, drawings, layouts, processes, procedures, policies, and other proprietary technology or materials.

IT-enabled sourcing See *eSourcing*.

Knowledge Management Capability Area (knw) The group of eSCM-SP Practices that focuses on the effective management of information and knowledge systems so personnel have easy access to the knowledge needed to effectively perform their work.

Knowledge system A system that allows the organization to control and maintain relevant information and knowledge and allows personnel to easily locate required information. A knowledge system does not mean that the organization must have a central electronic repository of information but rather that it has a coordinated method for managing and communicating needed information. A system may be implemented through one or more databases, file systems, physical storage media, or other appropriate methods for systematically providing needed access and controlling information.

Lessons learned The results of an analysis of the positive and negative experiences in engagements or other organizational activities that are used as the basis for learning and improvement in future performance.

Major activity One of the three labeled Practice Activities at the highest level of the Activity hierarchy. (a, b, c).

Model scope The eSCM-SP Practices to be analyzed in a Capability Determination.

Organization As used in the eSCM-SP Practices, an organization is an entity that provides sourcing services to one or more clients. Depending on its size or complexity, a single company may have one or more service provision organizations.

Organizational objectives A formal set of objective or quantified business goals that are used to set long-term direction. Examples of organizational objectives include increasing client satisfaction by 5% based on feedback forms, maintaining client satisfaction, growing market share by 8%, and improving performance by 12%.

Organizational span The coverage of the service provider's organizational structure to be analyzed in a Capability Determination.

Outsourcing	The procurement of services, which have historically been provided in-house, from an outside supplier. See also *IT-enabled sourcing, Sourcing.*
Ongoing	A classification of eSCM-SP Practices that are performed throughout the entire Sourcing Life-cycle. The Practices are typically performed on a periodic or as-needed basis, with the frequency being defined by client and organizational needs.
Partner	See *Supplier or partner.*
People Management Capability Area (ppl)	The group of eSCM-SP Practices that focuses on the effective management and motivation of personnel to effectively deliver services. This includes understanding the organization's needs for personnel and skills, filling those needs, and encouraging appropriate behaviors in personnel to effectively deliver services.
Performance Management Capability Area (prf)	The group of eSCM-SP Practices that focuses on the effective management of the organization's performance. Performance is managed to ensure that the client's requirements are being met, that the organization is continually learning from its experience, and that the organization is continually improving. Effective performance management is dependent upon effective capture, analysis, and use of data, including data on the organization's capabilities relative to its competitors.
Personnel	The individuals and teams in an organization.
Personnel competency	The combination of experience, knowledge, and skills an individual possesses, which may be related to performing tasks or roles for the organization. See also Competency, Workforce Competency.
Plan	A formal, approved document used to guide both execution and control. The primary uses of the plan are to document planning assumptions and decisions, to facilitate communication among stakeholders, and to document approved scope, cost, and schedule baselines [PMBOK 2000].
Policy	A guiding principle, typically established by senior management, which is adopted by an organization to influence and determine decisions [Paulk 1995].
Practice	A set of actions that should be performed by an IT-enabled Service Provider to have successful sourcing relationships. The eSCM-SP v2 is composed of 84 Practices that are arranged along each of three dimensions: Sourcing Life-cycle, Capability Area, and Capability Level.
Practice Rating	A Practice Rating indicates the effectiveness of a service provider's implementation and institutionalization of an eSCM-SP Practice. Practice Ratings are determined as part of a Capability Determination.
Privacy	For individuals, freedom from unauthorized intrusion and the ability to limit who has access to personal information. For organizations, privacy involves determining what information is gathered, how it is used, and how customers are informed and involved in this process.

Problem	Problem is broadly defined in the eSCM-SP as a state of difficulty that needs to be resolved [Wordnet]. Problems can range from simple human errors to system-wide failures.
Procedure	A documented description of a course of action to be taken to perform a given task [IEEE-STD-610 1990].
Process	A set of actions that is performed to achieve a given purpose, along with the assets that support that performance, such as tools and other resources.
Process assets	Any guidance documentation (e.g., processes, policies, procedures, guidelines, job aids, templates, checklists), or infrastructure needed to perform the work described in the guidance documentation (e.g., repositories, training, and tools). See also Guidance Document
Process capability	The range of expected results that can be achieved by following a process. The process capability of an organization provides one means of predicting the most likely outcomes to be expected from the next project the organization undertakes [Paulk 1995].
Program	A group of related projects that are managed in a coordinated way, and are described primarily in plans and business cases.
Quality specification	A document created as part of service design that describes the quality attributes to be monitored and the service levels that have been agreed upon for each of those attributes.
Recommended Activity	Any sub-activity two levels below a Major Activity (for example, a2b). While Recommended Activities are not required, it is suggested that the organization implement them. Only Major Activity b contains Recommended Activities.
Relationship Management Capability Area (rel)	The group of eSCM-SP Practices that focuses on the active management of relationships with stakeholders, including the client and suppliers and partners who are integral to the delivery of services to the client.
Required Activity	Any sub-activity one level below a Major Activity (for example, a1, a2). For an Evaluation for Certification there must be positive evidence of all the Required Activities in order for the organization to be compliant with the eSCM-SP.
Requirement	(1) A condition or capability needed by a user to solve a problem or achieve an objective. (2) A condition or capability that must be met or possessed by a product or product component to satisfy a contract, standard, specification, and/or other formally imposed documents. (3) A documented representation of a condition or capability as in (1) or (2) [IEEE-STD-610 1990].
Resources	Resources include all of the following: people, skills, experience, knowledge assets, intellectual property, processes and guidelines, repository, solutions, documents, infrastructure, computers, storage, networks, data, applications, facilities, financial [IEEE-STD-610 1990].

Risk	Exposure to loss, injury, or destruction. Risks are potential problems, which may be associated with security, privacy, confidentiality, protection of intellectual property, or disasters.
Security	Security provides four types of control: confidentiality, integrity, availability, and accountability. Confidentiality means that only authorized users can access information. Integrity means that the accuracy and completeness of information is maintained and not changed without authorization. Availability means that the service or information is available to authorized users when needed. Accountability means being able to trace the source of changes in controlled resources. Security management covers the security of people, technology, work environment, and information.
Service component	Any item that is used in the delivery of service. Components can include specific user interfaces, customized software, data storage mechanisms, work instructions, process specifications, quality specifications, and privacy or security mechanisms. These components can change during the delivery of service. A service component is a type of work product.
Service Delivery Capability Area (del)	The group of eSCM-SP Practices that focuses on ongoing delivery of service according to the commitments made to the client and based on the service design. This includes ongoing planning and tracking of service delivery activities.
Service deployment	The process of putting services or assets and related support infrastructure in place so that service delivery can begin. This includes putting in place an adequate physical environment, personnel structure, training, technology infrastructure, and process assets such as policies, procedures, and guidelines to enable personnel to effectively deliver service.
Service Design & Deployment Capability Area (sdd)	The group of eSCM-SP Practices that focuses on translating the client requirements and contract language of "what" will be provided into a detailed design for "how" it will be provided and for effectively deploying that design. This is closely related to the Contracting Capability Area.
Service levels	The performance values expected by a client for service delivery during an engagement. For example, service levels are often determined for bandwidth availability, response times for routine and ad hoc queries, response time for problem resolution such as network downtime and machine failure, and client satisfaction levels.
Service modification	The controlled change to a service, regardless of the size of the change.
Service provider	An entity that provides IT-enabled sourcing services to a client. The service provider is managed as a separate entity from the client organization.
Service specification	A comprehensive document that describes the services that the organization provides to the client and how end-users request services. It describes all services available, any agreed-upon service levels for those services, and the interfaces between the organization, clients, and end-users.

Service Transfer Capability Area (tfr) The group of eSCM-SP Practices that focuses on transferring resources between the organization and the client, or its designee.

Sourcing The procurement of services, which have historically been provided in-house, from another provider. The provider can be external to the organization (i.e., outsourcing), internal (i.e., insourcing), or a combination of the two. See also Outsourcing, Insourcing.

Sourcing Life-cycle The eSCM-SP dimension that indicates when a Practice is performed. This dimension is divided into Ongoing, Initiation, Delivery, and Completion. Ongoing Practices span the entire Sourcing Life-cycle, while Initiation, Delivery, and Completion occur in specific phases of the life-cycle.

Stakeholders The group of individuals who are affected by, or are in some way accountable for, the outcome of an undertaking. Stakeholders can include clients, prospective clients, end-users, shareholders, suppliers and partners, and employees of all organizations involved in an engagement.

Sub-activity Any Practice Activity at a level below a Major Activity (for example, a1, b2c, c1). See also Major Activity, Required Activity, and Recommended Activity.

Supplier or partner One or more entities that are working with the organization to provide support or to deliver service. This includes subcontractors, vendors, alliances, joint ventures, co-sourcing, multi-sourcing, or combinations of these. Suppliers and partners may become involved at any time during the sourcing process, depending on the relationship between the organization, supplier or partner, and client. The focus of the eSCM-SP is on suppliers or partners that are considered to be critical for the client engagement or contract. For example, under the eSCM-SP, a paper clip supplier is not considered a critical relationship for most service providers whereas a technology infrastructure supplier is likely to be considered critical for most service providers.

Supplemental Information A section within an eSCM-SP Practice that provides explanatory information that is intended to help convey the intent of the Activities and provide examples of how those Activities could be implemented.

Support Practices The thirteen Practices in the eSCM-SP that provide support for Practice institutionalization. These Practices are referenced by the Required Activities under Major Activities a and c.

Tailoring Customizing process assets to meet the needs of a particular group

Technology infrastructure The technological facilities, services, and installations needed for the functioning of an organization, including email servers, internet access, telecommunications, computers, and local networks.

Technology Management Capability Area (tch) The group of eSCM-SP Practices that focuses on managing the availability and adequacy of the technology infrastructure used to support delivery of service. This includes control of existing technology, managing changes to that technology, and appropriately integrating the technology infrastructure with the client and suppliers and partners to effectively deliver service.

Technology separation	The process of separating the service provider's technological assets from those of the client and other stakeholders. This usually happens during Completion.
Threat Management Capability Area (thr)	The group of eSCM-SP Practices that focuses on identifying, and actively managing, threats to the organization's ability to meet its objectives and the client's requirements. This includes an active focus on risk management, with a particular focus on risks associated with security, confidentiality, infrastructure, and disasters that may disrupt service or cause the organization to fail to meet the client's requirements.
Transfer	To change responsibility for providing the personnel, and/or other assets, including intellectual property, technology, and other infrastructures from the client, or its designee, to the service provider, or vice versa.
Value creation	An opportunity to increase the business benefit to the client or other stakeholders.
Verification	The process of ensuring that tasks are performed in compliance with the established process, or ensuring that service commitments are being satisfied. Verification typically encompasses review and audits by management or designated personnel.
Version control	An informal level of configuration management in which a work product is changed in a controlled manner and the version of the work product in use at a given time (past or present) is known.
Work environment	The physical and cultural surrounding within which an organization works. The work environment includes issues with workspace as well as corporate culture.
Work product	Any asset produced by performing work, or in order to help perform work. It is either produced as a final work product delivered to the customer (e.g., a software application for an application service provider) or an interim work product that is purely internal (e.g., a software design). Work product most often refers to written documentation, but could also be used to refer to tools and software.
Workforce competency	The set of personnel competencies that the organization has or needs in order to meet organizational objectives.

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Appendices

Appendix A: One Page Practice Summary

KNOWLEDGE MGMT	**knw01**	o	4		Policy	Share knowledge
	knw02	o	2	S		Provide required information
	knw03	o	3	S		Knowledge system
	knw04	o	3	S		Process assets
	knw05	o	3			Engagement knowledge
	knw06	o	3			Reuse
	knw07	o	2	S	Procedure	Version & change control
	knw08	o	2		Procedure	Resource consumption
PEOPLE MGMT	**ppl01**	o	4		Policy	Encourage innovation
	ppl02	o	3		Policy	Participation in decisions
	ppl03	o	2	S		Work environment
	ppl04	o	2	S		Assign responsibilities
	ppl05	o	3	S		Define roles
	ppl06	o	3			Workforce competencies
	ppl07	o	3	S	Procedure	Plan & deliver training
	ppl08	o	2	S		Personnel competencies
	ppl09	o	3		Procedure	Performance feedback
	ppl10	o	3		Procedure	Career development
	ppl11	o	3			Rewards
PERFORMANCE MGMT	**prf01**	o	2			Engagement objectives
	prf02	o	2	S	Procedure	Verify processes
	prf03	o	2	S		Adequate resources
	prf04	o	3			Organizational objectives
	prf05	o	3		Procedure	Review organizational performance
	prf06	o	3			Make improvements
	prf07	o	4		Program	Achieve organizational objectives
	prf08	o	4			Capability baselines
	prf09	o	4			Benchmark
	prf10	o	4		Program	Prevent potential problems
	prf11	o	4		Program	Deploy innovations
RELATIONSHIP MGMT	**rel01**	o	2		Procedure	Client interactions
	rel02	o	2		Procedure	Select suppliers & partners
	rel03	o	2			Manage suppliers & partners
	rel04	o	3			Cultural fit
	rel05	o	3	S		Stakeholder information
	rel06	o	3		Procedure	Client relationships
	rel07	o	3		Procedure	Supplier & partner relationships
	rel08	o	4			Value creation
TECHNOLOGY MGMT	**tch01**	o	2	S	Procedure	Acquire technology
	tch02	o	2		Procedure	Technology licenses
	tch03	o	2		Procedure	Control technology
	tch04	o	2		Procedure	Technology integration
	tch05	o	3			Optimize technology
	tch06	o	4		Procedure	Proactively introduce technology
THREAT MGMT	**thr01**	o	2		Policy	Risk management
	thr02	o	2			Engagement risk
	thr03	o	3		Procedure	Risk across engagements
	thr04	o	2		Procedure	Security
	thr05	o	2		Procedure	Intellectual property
	thr06	o	2		Procedure	Statutory & regulatory compliance
	thr07	o	2		Procedure	Disaster recovery

CONTRACTING	**cnt01**	i	3		Guideline	Negotiations
	cnt02	i	2		Guideline	Pricing
	cnt03	i	2		Guideline	Confirm existing conditions
	cnt04	i	3			Market information
	cnt05	i	2		Plan	Plan negotiations
	cnt06	i	2		Procedure	Gather requirements
	cnt07	i	2			Review requirements
	cnt08	i	2		Procedure	Respond to the requirements
	cnt09	i	2			Contract roles
	cnt10	i	2		Procedure	Create contracts
	cnt11	i	2		Procedure	Amend contracts
SERVICE DESIGN & DEPLOYMENT	**sdd01**	i	2		Procedure	Communicate requirements
	sdd02	i	3		Procedure	Design & deploy services
	sdd03	i	2		Plan	Plan design & deployment
	sdd04	i	2			Service specification
	sdd05	i	2			Service design
	sdd06	i	2		Procedure	Design feedback
	sdd07	i	3		Procedure	Verify design
	sdd08	i	2			Deploy service
SERVICE DELIVERY	**del01**	d	2		Plan	Plan service delivery
	del02	d	2		Procedure	Train clients
	del03	d	2			Deliver service
	del04	d	2		Procedure	Verify service commitments
	del05	d	2		Procedure	Correct problems
	del06	d	3		Procedure	Prevent known problems
	del07	d	2		Procedure	Service modifications
	del08	d	2		Procedure	Financial management
SERVICE TRANSFER	**tfr01**	i	2		Procedure	Resources transferred in
	tfr02	i	2		Procedure	Personnel transferred in
	tfr03	c	3		Procedure	Service continuity
	tfr04	c	2		Procedure	Resources transferred out
	tfr05	c	2		Procedure	Personnel transferred out
	tfr06	c	4		Procedure	Knowledge transferred out

KEY	
o	= ongoing
i	= initiation
d	= delivery
c	= completion

Appendix B: Practices by Capability Area (CA)

The following table lists the eSCM-SP Practices, grouped by Capability Area. Each Practice is listed with its Practice ID, its associated part of the Sourcing Life-cycle, its Capability Level, its type, its short description, and its Practice statement.

CA	ID	LIFE-CYCLE	L		TYPE	SHORT DESCRIPTION	PRACTICE STATEMENT
KNOWLEDGE MANAGEMENT	**knw01**	Ongoing	4		Policy	Share knowledge	Establish and implement a policy to share knowledge among stakeholders.
	knw02	Ongoing	2	S		Provide required information	Identify, control, and provide the information that personnel need to perform their work.
	knw03	Ongoing	3	S		Knowledge system	Establish and maintain a knowledge system to identify, control, and provide information.
	knw04	Ongoing	3	S		Process assets	Establish and maintain a set of process assets for use across the organization.
	knw05	Ongoing	3			Engagement knowledge	Analyze and use knowledge gained from client engagements.
	knw06	Ongoing	3			Reuse	Identify and reuse work products.
	knw07	Ongoing	2	S	Procedure	Version & change control	Establish and implement procedures to apply version control and change control to work products.
	knw08	Ongoing	2		Procedure	Resource consumption	Establish and implement procedures to analyze and use information on resources consumed.
PEOPLE MANAGEMENT	**ppl01**	Ongoing	4		Policy	Encourage innovation	Establish and implement a policy to encourage and support innovation across the organization.
	ppl02	Ongoing	3		Policy	Participation in decisions	Establish and implement a policy on the participation of personnel in decisions that affect their work commitments.
	ppl03	Ongoing	2	S		Work environment	Establish and maintain a work environment that enables personnel to work effectively.
	ppl04	Ongoing	2	S		Assign responsibilities	Assign roles and responsibilities to personnel based on appropriate personnel competencies.
	ppl05	Ongoing	3	S		Define roles	Define and communicate the roles, responsibilities, and authority of personnel in the organization.
	ppl06	Ongoing	3			Workforce competencies	Develop the workforce competencies needed to achieve organizational objectives.
	ppl07	Ongoing	3	S	Procedure	Plan & deliver training	Establish and implement procedures to plan and deliver training.
	ppl08	Ongoing	2	S		Personnel competencies	Meet identified personnel competency needs by providing training.
	ppl09	Ongoing	3		Procedure	Performance feedback	Establish and implement procedures to provide feedback on performance to personnel.
	ppl10	Ongoing	3		Procedure	Career development	Establish and implement procedures to provide personnel with opportunities for career development.
	ppl11	Ongoing	3			Rewards	Provide rewards and recognition that encourage the achievement of organizational objectives.

CA	ID	LIFE-CYCLE	L		TYPE	SHORT DESCRIPTION	PRACTICE STATEMENT
PERFORMANCE MANAGEMENT	**prf01**	Ongoing	2			Engagement objectives	Define, communicate, and track engagement objectives.
	prf02	Ongoing	2	S	Procedure	Verify processes	Establish and implement procedures to verify that processes are consistently performed as defined.
	prf03	Ongoing	2	S		Adequate resources	Identify and provide adequate resources that personnel need to perform their work.
	prf04	Ongoing	3			Organizational objectives	Define, communicate, and track organizational objectives.
	prf05	Ongoing	3		Procedure	Review organizational performance	Establish and implement procedures to review organizational performance.
	prf06	Ongoing	3			Make improvements	Make improvements based on reviews of organizational performance.
	prf07	Ongoing	4		Program	Achieve organizational objectives	Establish and implement programs to achieve organizational objectives.
	prf08	Ongoing	4			Capability baselines	Define capability baselines for the organization by analyzing performance data.
	prf09	Ongoing	4			Benchmark	Benchmark organizational performance to identify opportunities for improvement.
	prf10	Ongoing	4		Program	Prevent potential problems	Establish and implement programs to take preventive action on potential problems.
	prf11	Ongoing	4		Program	Deploy innovations	Establish and implement programs to deploy innovations across the organization.
RELATIONSHIP MANAGEMENT	**rel01**	Ongoing	2		Procedure	Client interactions	Establish and implement procedures to manage interactions with clients.
	rel02	Ongoing	2		Procedure	Select suppliers & partners	Establish and implement procedures to select suppliers and partners based on their ability to meet identified requirements.
	rel03	Ongoing	2			Manage suppliers & partners	Manage the performance of suppliers and partners against their commitments.
	rel04	Ongoing	3			Cultural fit	Identify cultural attributes that impact the service, and implement actions to achieve a cultural fit.
	rel05	Ongoing	3	S		Stakeholder information	Analyze and use client and other stakeholder information.
	rel06	Ongoing	3		Procedure	Client relationships	Establish and implement procedures to manage client relationships.
	rel07	Ongoing	3		Procedure	Supplier & partner relationships	Establish and implement procedures to manage relationships with suppliers and partners.
	rel08	Ongoing	4			Value creation	Proactively identify value creation opportunities and communicate them to the client.
TECHNOLOGY MANAGEMENT	**tch01**	Ongoing	2	S	Procedure	Acquire technology	Establish and implement procedures to acquire and deploy technology.
	tch02	Ongoing	2		Procedure	Technology licenses	Establish and implement procedures to manage technology licenses.
	tch03	Ongoing	2		Procedure	Control technology	Establish and implement procedures to track and control changes to the technology infrastructure.
	tch04	Ongoing	2		Procedure	Technology integration	Establish and implement procedures to manage integration of the organization's technology infrastructure.
	tch05	Ongoing	3			Optimize technology	Optimize the overall performance of the technology infrastructure needed to deliver all services.
	tch06	Ongoing	4		Procedure	Proactively introduce technology	Establish and implement procedures to proactively identify and introduce appropriate technology.

CA	ID	LIFE-CYCLE	L	TYPE	SHORT DESCRIPTION	PRACTICE STATEMENT
THREAT MANAGEMENT	**thr01**	Ongoing	2	Policy	Risk management	Establish and implement a policy on risk management.
	thr02	Delivery	2		Engagement risk	Identify, assess, and manage risks specific to the client engagement.
	thr03	Ongoing	3	Procedure	Risk across engagements	Establish and implement procedures to manage risks across client engagements.
	thr04	Ongoing	2	Procedure	Security	Establish and implement procedures to meet security requirements.
	thr05	Ongoing	2	Procedure	Intellectual property	Establish and implement procedures to protect the intellectual property of stakeholders.
	thr06	Ongoing	2	Procedure	Statutory & regulatory compliance	Establish and implement procedures to comply with statutory and regulatory requirements.
	thr07	Ongoing	2	Procedure	Disaster recovery	Establish and implement disaster recovery procedures.
CONTRACTING	**cnt01**	Initiation	3	Guideline	Negotiations	Establish and implement guidelines for negotiations with current or prospective clients.
	cnt02	Initiation	2	Guideline	Pricing	Establish and implement guidelines for pricing services.
	cnt03	Initiation	2	Guideline	Confirm existing conditions	Establish and implement guidelines for confirming existing conditions about potential engagements.
	cnt04	Initiation	3		Market information	Analyze and use market information about prospective clients.
	cnt05	Initiation	2	Plan	Plan negotiations	Plan and track negotiations with current or prospective clients.
	cnt06	Initiation	2	Procedure	Gather requirements	Establish and implement procedures to gather a client's requirements.
	cnt07	Initiation	2		Review requirements	Prior to committing to the prospective client, review requirements and verify that the organization can meet them.
	cnt08	Initiation	2	Procedure	Respond to requirements	Establish and implement procedures to respond to the requirements of a prospective client.
	cnt09	Initiation	2		Contract roles	Define the roles and responsibilities of the organization and the client with respect to the proposed contract.
	cnt10	Initiation	2	Procedure	Create contracts	Establish and implement procedures to create contracts.
	cnt11	Initiation	2	Procedure	Amend contracts	Establish and implement procedures to amend contracts.
SERVICE DESIGN & DEPLOYMENT	**sdd01**	Initiation	2	Procedure	Communicate requirements	Establish and implement procedures to communicate the client's requirements to the service design and deployment team.
	sdd02	Initiation	3	Procedure	Design & deploy service	Establish and implement procedures to design and deploy the service to meet client requirements.
	sdd03	Initiation	2	Plan	Plan design & deployment	Plan and track the design and deployment of the service.
	sdd04	Initiation	2		Service specification	Create the service specification.
	sdd05	Initiation	2		Service design	Create the service design based on the service specification.
	sdd06	Initiation	2	Procedure	Design feedback	Establish and implement procedures to obtain feedback from the client on the designed service, and to incorporate necessary changes.
	sdd07	Initiation	3	Procedure	Verify design	Establish and implement procedures to review and verify the service design.
	sdd08	Initiation	2		Deploy service	Deploy the service based on the service design.

CA	ID	LIFE-CYCLE	L	TYPE	SHORT DESCRIPTION	PRACTICE STATEMENT
SERVICE DELIVERY	**del01**	Delivery	2	Plan	Plan service delivery	Plan and track the service delivery according to the service design.
	del02	Delivery	2	Procedure	Train clients	Establish and implement procedures to train clients and end-users.
	del03	Delivery	2		Deliver service	Deliver service according to the service delivery plans.
	del04	Delivery	2	Procedure	Verify service commitments	Establish and implement procedures to measure and verify that service commitments are being met.
	del05	Delivery	2	Procedure	Correct problems	Establish and implement procedures to correct problems.
	del06	Delivery	3	Procedure	Prevent known problems	Establish and implement procedures to take preventive action for known problems.
	del07	Delivery	2	Procedure	Service modifications	Establish and implement procedures to make modifications to services.
	del08	Delivery	2	Procedure	Financial management	Establish and implement procedures for financial management of the engagement.
SERVICE TRANSFER	**tfr01**	Initiation	2	Procedure	Resources transferred in	Establish and implement procedures to verify and account for resources transferred to the organization.
	tfr02	Initiation	2	Procedure	Personnel transferred in	Establish and implement procedures to manage the transfer of personnel to the organization.
	tfr03	Completion	3	Procedure	Service continuity	Establish and implement procedures to ensure the continuity of service during Completion.
	tfr04	Completion	2	Procedure	Resources transferred out	Establish and implement procedures to transfer resources from the organization.
	tfr05	Completion	2	Procedure	Personnel transferred out	Establish and implement procedures to manage the transfer of personnel from the organization.
	tfr06	Completion	4	Procedure	Knowledge transferred out	Establish and implement procedures to transfer to the client, during Completion, the knowledge gained from the specific client engagement.

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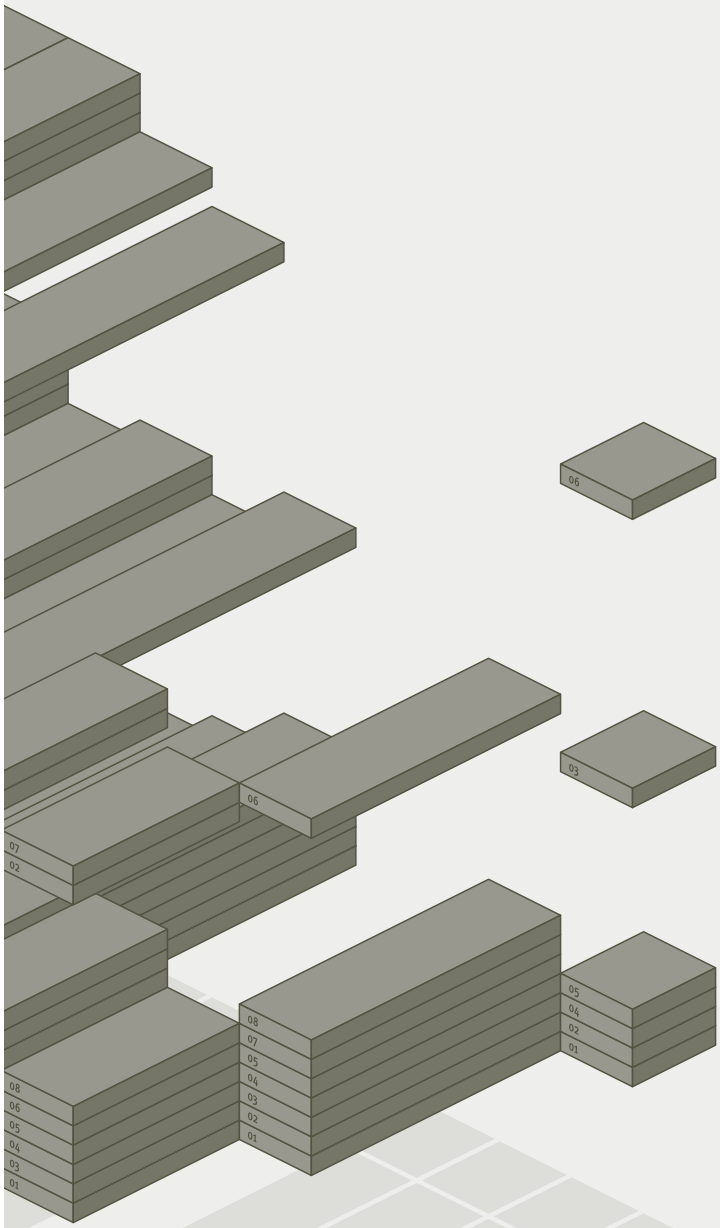

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